

November 6, 2014

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  
Third Quarter, 2014  
Retail Complex, Active Sub-Slab Depressurization System  
Former Gorham Manufacturing Facility  
333 Adelaide Avenue, Providence, Rhode Island  
AMEC Project No. 3650080114**

Dear Mr. Martella:

This letter report presents the results of quarterly compliance sampling and analysis conducted by AMEC Environment and Infrastructure, Inc. (AMEC) at the retail complex located at the Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, Rhode Island (the Site). The reporting period is from July 2014 through September 2014 and includes one quarterly compliance sampling event (September 12th, 2014).

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.

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 September 12th, 2014.

Table 1 summarizes the analytical results at the small retail spaces for the baseline sampling event conducted prior to system start-up and all subsequent sampling events conducted after system start-up. 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 (14I0610) associated with the September 12th, 2014 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 north of the property, upwind of the small retail space. 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 were in compliance with action levels for the September 12th, 2014 quarterly sampling event in the small retail space (sample locations IA-5 through IA-7).
- The eastern small retail space (indoor air sample location IA-5) is intermittently occupied in early August 2014 for a political candidate's branch office. The lease will end soon after the election in November 2014.
- The center small retail space (sample location IA-6) remains unoccupied.
- The western small retail space (sample location IA-7) is intermittently occupied.
- 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 September 12th, 2014. 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. 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 (14I0610) associated with September 12th, 2014 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 at an outdoor upwind location. 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 (sample locations IA-1 through IA-4). The concentration of chloroform in the samples collected from location IA-2 and IA-4 during the quarterly sampling was slightly above the action level. Chloroform is not one of the compounds for which the vapor mitigation system was installed. The chloroform appears to be unrelated to the vapor intrusion pathway and the concentrations of chloroform above the action level do not constitute a violation of the action levels contained in the order.
- The mitigation system is functioning as designed and is achieving desired results with respect to indoor air quality in the large retail space.
- 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 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 and maintained monthly by Clean Harbors Environmental Services. A shutdown of the large retail space system was reported by the remote monitor on September 2nd at 13:52 and confirmed on 14:16. The alarm could not be reset remotely. The system remained down until September 3rd at 16:52. There was no identified cause for the alarm and associated shutdown other than possible power loss due to inclement weather. There were several low flow conditions reported on radon fan 2 during the period. Upon inspection, there were no identified causes for the alarms and the alarms were successfully reset remotely each time by Clean Harbors. Clean Harbors verified that radon fan 2 was operational during every monthly maintenance visit. It is suspected that the current relay

sensor for radon fan 2 was likely the cause for the alarms. Clean Harbors will continue to monitor radon fan 2 during each maintenance visit.

### **Next Reporting Period**

The next quarterly report (fourth quarter 2014) will cover the monitoring period from October 2014 through December 2014. The report will be prepared and submitted to the Rhode Island Department of Environmental Management (RIDEM) in January 2014.

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 Environment & Infrastructure, Inc.**



Mark Maggiore  
Environmental Scientist



Charles Collet, P.E.  
Senior Principal/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 Gralmek, City of Providence  
         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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## **TABLES**

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

Parameter (ug/m <sup>3</sup> )	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
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								
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	0.24 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								
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								
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								
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	0.75 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	
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								
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								
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								
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								
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								
1,3,5-Trimethylbenzene	0.25 U	0.25 U	0.25 U	0.50	0.25 U	0.25 U	0.25 U	0.18 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	0.080 U	0.11 U	0.11 U	0.11 U	0.23 U	0.23 U	0.23 U	0.23 U	0.11 U	0.23 U	0.23 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								
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								
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
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
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								
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	0.34								
Acetone	7.3	8.0	15	22	8.4	5.9	12	1.1	27	9.5	10	10	9.6	5.4	17	11	3.5	
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	
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								
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								
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								
Bromomethane	0.19 U	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								
Carbon disulfide	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.12 U	0.16 U	0.28	0.16 U							
Carbon tetrachloride	0.38	0.44	0.52	0.56	0.43	0.61	0.47	0.22 U	0.41	0.78	0.43	0.40	0.40	0.43	0.46	0.39	0.42	0.39
Chlorobenzene	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								
Chloroethane	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								
Chloroform	0.24 U	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								
Chloromethane	1.1	0.90	1.4	1.5	1.1	1.1	1.3	1.1	1.2	1.1	1.2	0.85	1.1	0.97	0.96	1.6	1.1	
cis-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								
cis-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								
Cyclohexane	0.17 U	0.17 U	0.35	1.1	0.17 U	0.17 U	0.17 U	0.12 U	0.17 U	0.17 U								
Dibromochloromethane	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.31 U	0.43 U	0.43 U								
Dichlorodifluoromethane	2.0	2.2	2.6	2.7	2.6	2.6	2.8	2.0	2.5	2.7	2.6	2.1	2.1	2.2	2.1	2.1	2.4	
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	
Ethyl acetate	0.37 U	0.37 U																

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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
Methyl methacrylate	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
Methylene chloride	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	0.20 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	0.26	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	
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	
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								
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					
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					
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
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								
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								
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	0.30								
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
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
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	
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								

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

		Outdoor Air Reference Locations																					
Parameter (ug/m³)	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	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
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	0.29	0.082 U	0.10	0.19 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	0.19 U	0.055 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	0.44 U	0.42 U	0.44 U	0.44 U	0.44 U	0.25 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	0.34 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	
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	0.16 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	0.18 U	0.19 U	0.19 U	0.11 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	0.20 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	
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	0.12 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	0.14 U	0.04 U	
1,2,4-Trichlorobenzene	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	0.62	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	0.15 U	
1,2,4-Trimethylbenzene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.94	0.25 U	1.1	0.25 U	0.25 U	0.16	0.15 U	0.26	0.17 U	0.069	0.21	0.17 U	0.19	0.17 U	0.17 U	0.51	0.069 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	0.38 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	0.26 U	0.27 U	0.27 U	0.077 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	0.30 U	0.30 U	0.34	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.20 U	0.21 U	0.21 U	0.12 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	0.20 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	
1,2-Dichloropropane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 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	
1,2-Dichlorotetrafluoroethane	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 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	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	0.28	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	0.17 U	0.17 U	0.17 U	0.098 U	
1,3-Butadiene	0.23 U	0.11 U	0.23 U	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	0.078 U	0.078 U	0.078 U	0.078 U	0.044 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	0.30 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	0.21 U	0.21 U	0.20 U	0.21 U	0.21 U	0.12 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	0.30 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	0.21 U	0.21 U	0.20 U	0.21 U	0.21 U	0.12 U	
1,4-Dioxane																							
2-Butanone	0.88	1.5	1.4	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
2-Hexanone	0.20 U	0.29	0.29	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
4-Ethyltoluene	0.25 U	0.25 U	0.25 U	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	0.098 U	
4-Methyl-2-pentanone	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	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	0.2036 J	
Acetone	3.7	9.5	12	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
Benzene	0.41	0.69	0.35	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
Benzyl chloride	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	0.18 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	
Bromodichloromethane	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	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	
Bromoform	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.52 U	0.52 U	0.52 U	0.52 U	0.31 U	0.31 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 ( $\mu\text{g}/\text{m}^3$ )	Outdoor Air Reference Locations																						
	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	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
Methyl methacrylate																							
Methylene chloride	0.70 U	0.70 U	0.70 U	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		
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	0.11 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	0.13 U	0.072 U		
n-Heptane	0.20 U	0.20 U	0.20 U	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
o-Xylene	0.22 U	0.22 U	0.22 U	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
Propylene (Propene)	0.35 U	0.35 U	0.35 U	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	1.3	1.4 U	
Styrene	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 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
Tetrachloroethene	0.34 U	0.34 U	0.34 U	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	0.24 U	0.4	0.07
Tetrahydrofuran	0.19	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	0.057	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
Toluene	0.46	1.1	0.75	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
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	0.12 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	
trans-1,3-Dichloropropene	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	0.16 U	0.15 U	0.16 U	0.16 U	0.16 U	0.045 U	
Trichloroethene	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	0.67	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
Trichlorofluoromethane	1.5	1.5	1.2	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
Trichlorotrifluoroethane	0.54	0.62	0.45	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
Vinyl acetate	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	0.25 U	0.25 U	2.5 U	2.5 U	2.4 U	2.5 U	2.5 U	1.4 U	
Vinyl chloride	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 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	0.087 U	0.090 U	0.090 U	0.090 U	0.026 U	

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

Parameter (ug/m <sup>3</sup> )	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
1,1,1-Trichloroethane	190000	41000	17000	7100	1800	2600	3100	1900	3500	920	540	550	460	210	400	340	430	130
1,1,1,2-Tetrachloroethane																		25 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	6.8 U	3.4 U	6.8 U	1.4 U	1.4 U	6.9 U	14 U	3.4 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	
1,1-Dichloroethane	11000	1900	890	770	190	360	450	430	230	100	50	53	42	29	34	33	44	16
1,1-Dichloroethene	2500	290	130	190	61	160	160	160	98	30	18	21	15	13	15	11	14	5.0
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	
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	
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	
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	
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	
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	
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	
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	2.2 U	0.44 U	0.44 U	2.2 U	4.4 U	1.1 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	
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	
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
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-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-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	
Acetone	530	32	52	29	460	5600	14000	6900	9200	1700	3200	6000	4500	2000 B	1800 B	2200 B	3400	710
Benzene	13	12	6.2	4.8	5.6	32 U	11	7.1	11	6.3	5.5	8.2	5.0	4.2	4.5	4.2	6.4 U	2.8
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	
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	
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	
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	3.8 U	0.78 U	0.78 U	3.9 U	7.8 U	1.9 U	
Carbon disulfide	3.2 U	3.2 U	3.2 U	3.2 U	0.80 U	230	4.0	5.4	8.2	2.9	5.7	12	14	8	15	22	62 U	13
Carbon tetrachloride	6.2 U	6.2 U	6.2 U	6.2 U	1.6 U	62 U	3.1 U	3.1 U	3.1 U	6.2 U	3.1 U	6.2 U	1.3 U	1.3 U	6.3 U	13 U	1.2	
Chlorobenzene	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	
Chloroethane	260	23	16	11	4.5	26 U	11	15	7.0	6.5	3.5	3.6	5.5	3.1	3.4	2.6 U	7.5	1.3 U
Chloroform	83	32	20	16	2.8	48 U	7.2	6.5	5.8	2.6	4.8 U	2.4 U	4.8 U	1.1	1.2	4.9 U	9.8 U	1.1
Chloromethane	2.0 U	2.0 U	2.0 U	2.0 U	0.50 U	20 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	2.0 U	0.41 U	0.41 U	2.1 U	4.1 U	1.0 U	
cis-1,2-Dichloroethene	2900	710	400	410	100	150	270	250	170	58	32	43	31	17	27	35	11	
cis-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	
Cyclohexane	3.4 U	3.4 U	3.4 U	3.4 U	0.85 U	34 U	1.7 U	1.7 U	1.7 U	3.4 U	1.7 U	3.4 U	0.69 U	0.69 U	3.4 U	6.9 U	1.7 U	
Dibromochloromethane	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	8.5 U	17 U	4.3 U	
Dichlorodifluoromethane	5.0 U	5.0 U	5.0 U	5.0 U	2.7	50 U	3.0	3.2	2.5 U	2.5 U	5.0							

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

Parameter (ug/m <sup>3</sup> )	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
Methyl methacrylate																		
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
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	
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	
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	
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
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
Tetrachloroethene	210	310	190	97	8.0	68 U	21	25	19	8.9	6.8 U	6.7	6.8 U	4	4100	6.8 U	14 U	3.5
Tetrahydrofuran	16	110	69	140	2200	42000	61000	150000	94000	9700	23000	37000	29000	8200	11000	30000	41000	11000
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	0.90
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
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	
Trichloroethene	51000	20000	14000	8900	2400	3800	4400	2700	6800	1600	1100	1200	1100	410	660	790	940	290
Trichlorofluoromethane	3500	200	120	67	16	56 U	27	41	2.8 U	53	7.0	7.4	5.8	5.1	5.8	5.6 U	11 U	3.4
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	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
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
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	3.0	3.4	3.1	4.3	2.4	3.7	3.3	6.2	1.3 U

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

Parameter ( $\mu\text{g}/\text{m}^3$ )	Extraction Well - Eastern Small Retail Space										Extraction Well - Center Small Retail Space												
	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	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-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
1,1,1-Trichloroethane	81	100	190	0.55 U	0.55 U	59	180	40	68	54	74	69000	32000	21000	16000	16000	5600	8200	5700	5400	1100	430	390
1,1,1,2-Tetrachloroethane	12 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.39 J	1.2 U	1.2 U	1.2 U	2.5 U												
1,1,2,2-Tetrachloroethane	3.4 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.32 U	0.69 U	0.69 U	0.69 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	68 U	3.4 U	6.8 U					
1,1,2-Trichloroethane	2.7 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.26 U	0.55 U	0.55 U	0.55 U	1.1 U	5.4 U	5.4 U	5.4 U	5.4 U	54 U	2.7 U	5.4 U					
1,1-Dichloroethane	11	12	21	0.40 U	0.40 U	6.4	20	4.8	7.0	7.4	9.3	5200	2500	2100	2200	1600	780	1200	1100	930	580	47	38
1,1-Dichloroethene	4.5	4.5	6.9	0.40 U	0.40 U	1.7	4.7	1.5	1.8	2	2.4	850	210	100	110	55	74	87	83	80	6.4	3.5	4.0 U
1,2,4-Trichlorobenzene	15 U	1.5 U	1.5 U	1.5 U	1.5 U	0.74 U	0.35 U	0.74 U	0.74 U	0.74 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	
1,2,4-Trimethylbenzene	4.9 U	0.20	0.63	0.49 U	0.49 U	0.37	0.49 U	0.49 U	0.49 U	0.49 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
1,2-Dibromoethane (EDB)	3.8 U	0.77 U	0.77 U	0.77 U	0.77 U	0.36 U	0.77 U	0.77 U	0.77 U	0.77 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		
1,2-Dichlorobenzene	6.0 U	0.60 U	0.60 U	0.60 U	0.60 U	0.28 U	0.60 U	0.60 U	0.60 U	0.60 U	1.2 U	6.0 U	6.0 U	6.0 U	6.0 U	60 U	3.0 U	6.0 U					
1,2-Dichloroethane	2.0 U	0.17	0.40 U	0.40 U	0.40 U	0.19 U	0.40 U	0.40 U	0.40 U	0.40 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	40 U	2.0 U	4.0 U					
1,2-Dichloropropane	2.3 U	0.46 U	0.46 U	0.46 U	0.46 U	0.22 U	0.46 U	0.46 U	0.46 U	0.46 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	46 U	2.3 U	4.6 U					
1,2-Dichlorotetrafluoroethane											7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	70 U	3.5 U	7.0 U					
1,3,5-Trimethylbenzene	4.9 U	0.49 U	0.19	0.49 U	0.49 U	0.23 U	0.49 U	0.49 U	0.49 U	0.49 U	5.0 U	5.0 U	5.0 U	7.3	5.0 U	50 U	2.5 U	5.0 U					
1,3-Butadiene	2.2 U	0.22 U	0.22 U	0.22 U	0.22 U	0.10 U	0.22 U	0.22 U	0.22 U	0.22 U	2.2 U	2.2 U	2.2 U	2.2 U	22 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	2.2 U	
1,3-Dichlorobenzene	6.0 U	0.60 U	0.60 U	0.60 U	0.60 U	0.28 U	0.60 U	0.60 U	0.60 U	0.60 U	1.2 U	6.0 U	6.0 U	6.0 U	6.0 U	60 U	3.0 U	6.0 U					
1,4-Dichlorobenzene	6.0 U	0.60 U	0.60 U	0.60 U	0.60 U	0.28 U	0.60 U	0.60 U	0.60 U	0.60 U	1.2 U	6.0 U	6.0 U	6.0 U	6.0 U	60 U	3.0 U	6.0 U					
1,4-Dioxane																							
2-Butanone	1800	870	840	9.5	1.7	1900	31000	680	1200	2100	3800	120	280	300	130	97	160	37	65	8.7	23	1800	110
2-Hexanone	4.1 U	0.43	0.41 U	0.41 U	0.41 U	0.41 U	0.49	0.41 U	0.53	0.41 U	0.82 U	4.0 U	4.0 U	4.0 U	4.0 U	40 U	2.0 U	4.0 U					
4-Ethyltoluene	4.9 U	0.49 U	0.18	0.49 U	0.49 U	0.23 U	0.49 U	0.49 U	0.49 U	0.49 U	0.98 U	5.0 U	5.0 U	5.0 U	5.0 U	50 U	2.5 U	5.0 U					
4-Methyl-2-pentanone	4.1 U	0.27	0.34	0.41 U	0.41 U	0.41 U	0.41 U	0.56	0.41 U	0.41 U	0.46	0.82 U	4.0 U	4.0 U	4.0 U	40 U	2.0 U	4.0 U					
Acetone	400	440	670	11	8.5	610	6800	210	380	610	500	580	64	81	33	22	410	16	20	4.8 U	27	490	70
Benzene	2.0	1.1	3.7	0.54	0.47	1.0	7.1	2.4	3.8	3	2.7	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	3.2 U
Benzyl chloride	5.2 U	0.52 U	0.52 U	0.52 U	0.52 U	0.24 U	0.52 U	0.52 U	0.52 U	0.52 U	5.2 U	5.2 U	5.2 U	5.2 U	52 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	5.2 U		
Bromodichloromethane	3.4 U	0.67 U	0.67 U	0.67 U	0.67 U	0.31 U	0.67 U	0.67 U	0.67 U	0.67 U	6.6 U	6.6 U	6.6 U	6.6 U	66 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	6.6 U		
Bromoform	10 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.48 U	1.0 U	1.0 U	1.0 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	11 U	
Bromomethane	3.9 U	0.39 U	0.39 U	0.39 U	0.39 U	0.18 U	0.39 U	0.39 U	0.39 U	0.39 U	0.78 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		
Carbon disulfide	11	25	49	3.1 U	3.1 U	19	77	8.9	26	35	46	3.2 U	3.2 U	3.2 U	3.2 U</td								

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

Parameter (ug/m <sup>3</sup> )	Extraction Well - Eastern Small Retail Space												Extraction Well - Center Small Retail Space												
	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	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-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		
Methyl methacrylate	4.1 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.19 U	0.41 U	0.41 U	0.41 U	0.82 U														
Methylene chloride	15	11	2.5	1.8	6.9	1.1	3.4	1.1	0.79	0.99	1.6 J	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		
Methyl-t-butyl ether	3.6 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.17 U	0.36 U	0.36 U	0.36 U	0.72 U	3.6 U	3.6 U	3.6 U	3.6 U	36 U	1.8 U	1.8 U	3.6 U						
n-Heptane	4.1 U	0.41 U	0.52	0.41 U	0.41 U	0.41 U	0.19 U	0.41 U	0.41 U	0.41 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						
o-Xylene	4.3 U	0.14	0.73	0.43 U	0.43 U	0.43 U	0.50	0.43 U	0.43 U	0.43 U	0.87 U	4.4 U	4.4 U	4.4 U	4.4 U	44 U	2.2 U	2.2 U	4.4 U						
Propylene (Propene)	15	6.9 U	3.9	6.9 U	6.9 U	6.9 U	2.3	6.9 U	6.9 U	6.9 U	14 U	3.5 U	1.8 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		
Styrene	4.3 U	0.46	0.38	0.43 U	0.43 U	0.43 U	0.35	0.43 U	0.43 U	0.43 U	0.85 U	4.2 U	4.2 U	4.2 U	4.2 U	42 U	2.1 U	2.1 U	4.2 U						
Tetrachloroethene	3.4 U	0.92	2.1	0.68 U	0.68 U	0.71	1.7	0.68 U	0.69	1.2	1.2	330	290	130	290	190	300	190	210	250	68	34	23		
Tetrahydrofuran	4500	7700	1000	0.29 U	0.29 U	2300	26000	1000	2900	2600	3300	75	480	260	730	570	130	110	87	9.1	31	42000	53000		
Toluene	37	0.58	5.6	0.66	0.40	0.43	4.2	0.44	1.4	1.7	1.1	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	1.9 U	3.8 U	
trans-1,2-Dichloroethene	2.0 U	0.40 U	0.18	0.40 U	0.40 U	0.40 U	0.19 U	0.40 U	0.40 U	0.40 U	0.4 U	12	6.3	4.2	6.4	4.0 U	40 U	2.6	2.7	2.0	2.1	2.0 U	4.0 U		
trans-1,3-Dichloropropene	2.3 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.21 U	0.45 U	0.45 U	0.45 U	0.45 U	4.4 U	4.4 U	4.4 U	4.4 U	44 U	2.2 U	2.2 U	4.4 U						
Trichloroethene	170	220	400	0.54 U	0.54 U	150	770	80	190	160	200	12000	6900	4200	4400	4800	3900	5400	4700	6100	2000	730	650		
Trichlorofluoromethane	5.6 U	4.9	8.5	2.4	1.4	2.9	4.6	3.6	2.7	3.4	4.1	2300	870	630	350	250	150	230	440	700	320	6.7	25		
Trichlorotrifluoroethane	3.8 U	0.77 U	0.57	0.77 U	0.61	0.77 U	0.64	0.77 U	0.77 U	0.77 U	1.5 U	7.6 U	7.6 U	7.6 U	7.6 U	76 U	3.8 U	3.8 U	7.6 U						
Vinyl acetate	7.0 U	0.70 U	0.70 U	0.70 U	0.70 U	7.0 U	3.3 U	7.0 U	7.0 U	7 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		
Vinyl chloride	1.3 U	2.9	4.7	0.26 U	0.26 U	0.26 U	3.5	0.26 U	1.1	1.3	0.26 U	2.6 U	2.6 U	2.6 U	2.6 U	26 U	1.3 U	1.3 U	2.9						

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

Parameter ( $\mu\text{g}/\text{m}^3$ )	Extraction Well - Center Small Retail Space															Extraction Well - Western Small Retail Space							
	EW-6-120710 12/7/2010	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-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
1,1,1-Trichloroethane	130	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	5600	8500	7800	8200	8100	1600	3600
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								
1,1,2,2-Tetrachloroethane	0.69 U	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	6.8 U	1.4 U	1.7 U	1.7 U	1.7 U	6.8 U	3.4 U	
1,1,2-Trichloroethane	0.55 U	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	5.4 U	1.1 U	1.4 U	1.4 U	1.4 U	5.4 U	2.7 U	
1,1-Dichloroethane	21	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	1700	1800	1600	2100	1700	590	1000
1,1-Dichloroethene	0.40 U	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	14	15	8.5	9.4	6.6	4.0 U	4.2	
1,2,4-Trichlorobenzene	0.74 U	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	7.4 U	1.5 U	1.9 U	1.9 U	1.9 U	7.4 U	3.7 U	
1,2,4-Trimethylbenzene	0.49 U	0.49 U	4.9 U	9.8 U	2.5 U	0.49 U	0.26	0.60	0.49 U	0.49 U	0.59	0.49 U	0.49 U	0.49 U	0.98 U	5.0 U	1.0 U	1.3 U	1.3 U	1.3 U	5.0 U	2.5 U	
1,2-Dibromoethane (EDB)	0.77 U	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	7.6 U	1.6 U	1.9 U	1.9 U	1.9 U	7.6 U	3.8 U	
1,2-Dichlorobenzene	0.60 U	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	6.0 U	1.2 U	1.5 U	1.5 U	1.5 U	6.0 U	3.0 U	
1,2-Dichloroethane	0.40 U	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	4.0 U	0.80 U	1.0 U	1.0 U	1.0 U	4.0 U	2.0 U	
1,2-Dichloropropane	0.46 U	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	4.6 U	0.92 U	1.2 U	1.2 U	1.2 U	4.6 U	2.3 U	
1,2-Dichlortetrafluoroethane																7.0 U	1.4 U	1.8 U	1.8 U	1.8 U	7.0 U	3.5 U	
1,3,5-Trimethylbenzene	0.49 U	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	0.30	0.49 U	0.49 U	0.49 U	0.98 U	5.0 U	1.0 U	1.3 U	1.3 U	1.3 U	5.0 U	2.5 U	
1,3-Butadiene	0.22 U	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	2.2 U	0.44 U	0.55 U	0.55 U	0.55 U	2.2 U	1.1 U	
1,3-Dichlorobenzene	0.60 U	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	6.0 U	1.2 U	1.5 U	1.5 U	1.5 U	6.0 U	3.0 U	
1,4-Dichlorobenzene	0.60 U	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	6.0 U	1.2 U	1.5 U	1.5 U	1.5 U	6.0 U	3.0 U	
1,4-Dioxane						7.2 U																	
2-Butanone	20	1.9 B	59 U	240 U	13	2.1	200	3.7	0.84	1.9	120	95	4.0	4.0	6.8	11 J	8.7	12	7.3	8.5	5.5	4.5	7.1
2-Hexanone	0.41 U	0.41 U	82 U	8.2 U	2.0 U	0.41 U	0.70	0.52	0.41 U	0.41 U	0.38	0.41 U	0.41 U	0.41 U	0.82 U	4.0 U	0.80 U	1.0 U	1.0 U	1.0 U	4.0 U	2.0 U	
4-Ethyltoluene	0.49 U	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	5.0 U	1.0 U	1.3 U	1.3 U	1.3 U	5.0 U	2.5 U	
4-Methyl-2-pentanone	0.41 U	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	4.0 U	0.80 U	1.0 U	1.0 U	1.0 U	4.0 U	2.0 U	
Acetone	15 B	15 B	48 U	190 U	21	9.9	36	25	6.4	6.3	42	35	17	16	27	36	580	38	58	30	24	15	24
Benzene	0.92	1.1	3.2 U	6.4 U	1.6 U	0.31	1.2	0.77	0.39	0.40	0.32 U	1.2	0.42	0.96	0.73	1.1	3.2 U	3.9	4.5	1.9	2.3	3.2 U	2.6
Benzyl chloride	0.52 U	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	5.2 U	1.1 U	1.3 U	1.3 U	1.3 U	5.2 U	2.6 U	
Bromodichloromethane	0.67 U	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	6.6 U	1.4 U	1.7 U	1.7 U	1.7 U	6.6 U	3.3 U	
Bromoform	1.0 U	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	1.0 U	1.0 U	1.0 U	11 U	2.1 U	2.6 U	2.6 U	2.6 U	11 U	5.1 U	
Bromomethane	0.39 U	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	3.8 U	0.76 U	0.95 U	0.95 U	0.95 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 ( $\mu\text{g}/\text{m}^3$ )	Extraction Well - Center Small Retail Space															Extraction Well - Western Small Retail Space							
	EW-6-120710 12/7/2010	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-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
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								
Methylene chloride	1.3	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	9.3	2.6	8.0	1.8	1.8 U	20	29
Methyl-t-butyl ether	0.36 U	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	0.13 U	0.36 U	0.36 U	0.36 U	0.72 U	3.6 U	3.5	2.9	4.9	3.1	3.6 U	1.8 U	
n-Heptane	0.41 U	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	0.45	0.41 U	0.41 U	0.41 U	0.82 U	4.0 U	1.4	1.0 U	1.0 U	1.0 U	4.0 U	2.0 U	
o-Xylene	0.43 U	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	0.87 U	4.4 U	0.88 U	1.1 U	1.1 U	1.1 U	4.4 U	2.2 U	
Propylene (Propene)	0.69 U	1.7 U	17 U	140 U	3.8	6.9 U	2.8	6.9 U	6.9 U	6.9 U	2.4 U	6.9 U	6.9 U	1	2.1 J	3.5 U	160	110	0.87 U	0.45 U	3.5 U	0.90 U	
Styrene	0.43 U	0.43 U	4.3 U	8.5 U	2.1 U	0.43 U	0.20	0.35	0.43 U	0.43 U	0.28	0.43 U	0.43 U	0.43 U	0.85 U	4.2 U	0.84 U	1.1 U	1.1 U	1.1 U	4.2 U	2.1 U	
Tetrachloroethene	8.1	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	66	69	56	84	69	40	140
Tetrahydrofuran	480	0.29 U	13000	32000	3900	3.7	8100	0.29 U	0.29 U	0.27	58	35000	650	54	1200	4100	41	23	12	14	7.5	3.0 U	5.6
Toluene	0.38 U	2.4	3.8 U	9.8	1.9 U	0.36	0.70	5.3	0.46	0.31	0.50	2.5	0.38 U	1.0	1.0	0.68 J	14	2.9	3.6	1.7	0.95 U	3.8 U	1.9 U
trans-1,2-Dichloroethene	0.4 U	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	0.14 U	0.40 U	0.40 U	0.40 U	0.4 U	150	140	90	90	80	48	120	
trans-1,3-Dichloropropene	0.45 U	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	0.16 U	0.45 U	0.45 U	0.45 U	0.45 U	4.4 U	0.88 U	1.1 U	1.1 U	1.1 U	4.4 U	2.2 U	
Trichloroethene	250	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	230	210	180	180	200	110	330
Trichlorofluoromethane	28	1.7	11	34	11	1.0	15	2.0	1.9	1.3	4.7	6.2	12	6.9	14	21	1800	1400	900	690	640	190	310
Trichlorotrifluoroethane	0.77 U	0.86	7.7 U	15 U	3.8 U	0.38 U	0.77 U	0.60	0.77 U	0.63	0.77 U	0.72	0.77 U	0.77 U	1.5 U	7.6 U	1.6 U	1.9 U	1.9 U	1.9 U	7.6 U	3.8 U	
Vinyl acetate	0.7 U	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	2.5 U	7.0 U	7.0 U	7.0 U	2.1 J	15 U	0.72 U	0.90 U	3.6 U	0.90 U	15 U	1.8 U	
Vinyl chloride	0.26 U	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	2.2	0.26 U	0.26 U	0.26 U	0.65	1.3	280	370	180	48	21	2.6 U	2.7

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

Parameter (ug/m <sup>3</sup> )	Extraction Well - Western Small Retail Space																							
	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	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	
1,1,1-Trichloroethane	2600	1400	340	51	250	290	160	110	5.5 U	110	66	11	47	95	0.55 U	3.1	15	76	52	41	30	15	52	
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	1.2 U	1.2 U	1.2 U	2.5 U
1,1,2,2-Tetrachloroethane	3.4 U	3.4 U	3.4 U	0.68 U	0.68 U	0.68 U	0.69 U	0.69 U	6.9 U	1.4 U	0.69 U	3.4 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	
1,1,2-Trichloroethane	2.7 U	2.7 U	2.7 U	0.54 U	0.54 U	0.54 U	0.55 U	0.55 U	5.5 U	1.1 U	0.55 U	2.7 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	0.55 U	0.55 U	1.1 U	
1,1-Dichloroethane	1100	970	470	85	320	340	220	150	45	150	80	6.4	42	100	0.40 U	2.0	7.0	51	25	12	6.9	5.4	20	
1,1-Dichloroethylene	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	0.14 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.4 U	
1,2,4-Trichlorobenzene	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	0.74 U	0.26 U	0.74 U	0.74 U	0.74 U	0.74 U	1.5 U	
1,2,4-Trimethylbenzene	2.5 U	2.5 U	2.5 U	2.5	0.50 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	0.30	0.49 U	0.50	0.77	0.58	0.49 U	0.49 U	0.98 U	
1,2-Dibromoethane (EDB)	3.8 U	3.8 U	3.8 U	0.76 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	0.27 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	
1,2-Dichlorobenzene	3.0 U	3.0 U	3.0 U	0.60 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	0.21 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	1.2 U	
1,2-Dichloroethane	2.0 U	2.0 U	2.0 U	0.40 U	0.40 U	0.40 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	0.14 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.4 U	
1,2-Dichloropropane	2.3 U	2.3 U	2.3 U	0.46 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	0.16 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	
1,2-Dichlorotetrafluoroethane	3.5 U	3.5 U	3.5 U	0.70 U	0.70 U	0.70 U																		
1,3,5-Trimethylbenzene	2.5 U	2.5 U	2.5 U	1.1	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	0.50	0.49 U	0.49 U	0.24	0.32	0.49 U	0.49 U	0.49 U	0.49 U	0.98 U	
1,3-Butadiene	1.1 U	2.3 U	1.1 U	0.22 U	0.22 U	0.22 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	0.078 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.44 U	
1,3-Dichlorobenzene	3.0 U	3.0 U	3.0 U	0.60 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	0.21 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	1.2 U	
1,4-Dichlorobenzene	3.0 U	3.0 U	3.0 U	0.60 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	0.21 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	1.2 U	
1,4-Dioxane											0.72 U													
2-Butanone	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	12	8.5	5.9	3.8	9.3	7.2 J	
2-Hexanone	2.0 U	2.0 U	2.0 U	0.40 U	1.0	0.40 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	0.51	0.41 U	0.41 U	0.41 U	0.49	0.82 U	
4-Ethyltoluene	2.5 U	2.5 U	2.5 U	0.50 U	0.50 U	0.49 U	0.49 U	0.49 U	4.9 U	0.98 U	0.49 U	4.9 U	0.21	0.49 U	0.49 U	0.17 U	0.27	0.49 U	0.49 U	0.49 U	0.49 U	0.98 U		
4-Methyl-2-pentanone	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	0.13	4.1 U	1.6	0.31	0.55	0.41 U	0.41 U	0.14 U	0.41 U	0.41 U	0.41 U	0.82 U		
Acetone	24	7.9	49	26	25	12	42 B	35 B	48 U	23	12	46	31	17	23	55	28	24	35	14	6.9	19	18 J	
Benzene	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	0.89	0.54	0.61	1.9	1.9	0.86	1.3	1.1	0.59 J	
Benzyl chloride	2.6 U	2.6 U	2.6 U	0.52 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	0.18 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	
Bromodichloromethane	3.3 U	3.3 U	3.3 U	0.66 U	0.66 U	0.66 U	0.67 U	0.67 U	6.7 U	1.3 U	0.67 U	3.4 U	3.2	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
Bromoform	5.1 U	5.1 U	5.1 U	1.1 U	1.1 U	1.1 U	1.0 U	1.0 U	10 U	2.1 U	1.0 U	10 U	1.0 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	1.0 U	2.1 U
Bromomethane	1.9 U	1.9 U	1.9 U	0.38 U	0.38 U	0.38 U	0.3																	

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

Parameter (ug/m <sup>3</sup> )	Extraction Well - Western Small Retail Space																						
	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	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
Methyl methacrylate																							
Methylene chloride	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	1.7	1.1	0.82	0.85	1.3 J	
Methyl-t-butyl ether	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	0.36 U	0.36 U	0.36 U	0.36 U	0.72 U	
n-Heptane	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	0.59	1.1	0.41 U	0.44	2.2	0.57 J
o-Xylene	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	0.40	0.73	0.43 U	0.43 U	0.43 U	0.87 U
Proplyene (Propene)	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	2.4 U	6.9 U	6.9 U	6.9 U	1.1	14 U	
Styrene	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	0.41	0.45	0.43 U	0.43 U	0.45	0.85 U
Tetrachloroethene	230	410	130	74	510	610	190	110	120	450	170	5.6	130	200	1.3	3.0	100	410	150	140	81	110	370
Tetrahydrofuran	15	4.1	1.5 U	2800	0.70	18	6.1	2.7	3900	7.9	9.9	1000	13	1.1	8.2	120	2000	10	4.6	2100	1400	2100	4.6
Toluene	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	3.1	6.5	1.0	1.2	1.4	0.59 J
trans-1,2-Dichloroethene	140	150	84	22	120	110	78	58	4.0 U	82	54	3.8	37	45	0.40 U	2.1	7.1	64	32	13	9.2	7.7	28
trans-1,3-Dichloropropene	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	0.16 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	
Trichloroethene	420	920	420	190	690	730	440	310	260	680	310	53	320	450	1.1	17	170	740	350	280	210	190	440
Trichlorofluoromethane	660	1400	620	210	690	700	530	740	330	2500	1000	180	1300	2000	3.5	91	280	1500	990	1100	690	300	1100
Trichlorotrifluoroethane	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	1.0	3.8 U	0.78	0.57	0.77 U	0.71	0.77 U	1.1	1.1	0.9	0.77 U	0.77 U	1 J
Vinyl acetate	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	7.0 U	2.5 U	7.0 U	7.0 U	7 U	1.2 J	
Vinyl chloride	3.2	1.3 U	1.6	1.0	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	0.90	0.090 U	0.26 U	0.26 U	1.5	1.8	0.26 U

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

Parameter ( $\mu\text{g}/\text{m}^3$ )	CT IACTIND 2003 ( $\mu\text{g}/\text{m}^3$ )	Indoor Air - Eastern Small Retail Space																		
		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	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	
1,1,1-Trichloroethane	500	48	0.92	0.27 U	0.27 U	0.27 U	0.27 U	0.98	0.27 U	0.27 U	0.27 U	0.38	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	1.1																		0.62 U	
1,1,2,2-Tetrachloroethane	0.14	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	
1,1,2-Trichloroethane	12	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	
1,1-Dichloroethane	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	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
1,1-Dichloroethene	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	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	NA	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	0.75 U	0.75 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.74 U	
1,2,4-Trimethylbenzene	52	0.25 U	0.32	0.33	0.36	0.25 U	0.25 U	0.20	0.25 U	0.35	0.25 U	0.25 U	0.25 U	0.73	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dibromoethane (EDB)	0.038	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	0.38 U	0.38 U	0.38 U	0.38 U	
1,2-Dichlorobenzene	410	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	0.30 U	0.30 U	0.30 U	0.30 U	
1,2-Dichloroethane	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	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
1,2-Dichloropropane	0.42	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	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	0.35 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	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	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	
1,3-Butadiene	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	0.23 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
1,3-Dichlorobenzene	410	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	0.30 U	0.30 U	0.30 U	0.30 U	
1,4-Dichlorobenzene	24	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	0.30 U	0.30 U	0.30 U	0.30 U	
1,4-Dioxane	NA																	0.18 U	0.18 U	
2-Butanone	500	7.2	2.4	2.7	2.6	0.75	0.45	3.8	1.9	5.3	2.1	0.79	1.5	2.1	1.4	0.78	0.78 B	3.6	5.9 U	
2-Hexanone	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	0.23	0.44	0.20 U	0.20 U	0.20 U	4.1 U	0.20 U	
4-Ethyltoluene	NA	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	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	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	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	
Acetone	500	32	11	21	20	9.5	6.5	14	14	46	16	15	11	18	17	6.4 B	9.5 B	24 B	15	
Benzene	3.3	0.79	0.60	0.99	1.6	0.41	0.55	0.62	0.49	0.53	0.35	0.45	0.65	0.16 U	1.1	0.26	1.1	0.33	0.29	
Benzyl chloride	NA	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	
Bromodichloromethane	0.46	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	
Bromoform	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	0.51 U	0.51 U	0.51 U	0.52 U	0.52 U	0.52 U	0.52 U	
Bromomethane	NA	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.14 U	0.23	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	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.12 U	0.16 U	0.27	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	
Carbon tetrachloride	0.54	0.33	0.44	0.50	0.55 [a]	0.47	0.61 [a]	0.44	0.64 [a]	0.46	0.39	0.41	0.48	0.53	0.44	0.54	0.6 [a]	0.59 [a]	0.48	
Chlorobenzene	200	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	0.23 U	0.23 U	0.23 U	0.23 U	
Chloroethane	500	0.13 U	0.13 U	0.13 U</																

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

Parameter ( $\mu\text{g}/\text{m}^3$ )	CT IACTIND 2003 ( $\mu\text{g}/\text{m}^3$ )	Indoor Air - Eastern Small Retail Space																	
		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	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
Methyl methacrylate	NA																		
Methylene chloride	17	2.0	3.6	5.2	1.1	1.2	0.74	2.5	2.9	2.0	0.70 U	4.3	2.2	1.3	0.75	0.65	2.8	4.2	7.7
Methyl-t-butyl ether	190	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	0.18 U	
n-Heptane	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	0.20 U	0.20 U	0.21	0.20 U	0.33	0.20 U	0.20 U
o-Xylene	500	0.23	0.27	0.35	0.47	0.22 U	0.22 U	0.23	0.32	0.22 U	0.22 U	0.22 U	0.31	0.87	0.22 U	0.30	0.26	0.22 U	
Propylene (Propene)	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	0.35 U	0.87 U	0.35 U	0.86 U	0.86 U	0.86 U	3.4 U
Styrene	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	1.5	0.30	0.21 U	0.35	0.32	0.58	0.21 U	0.21 U	0.21 U	0.21 U
Tetrachloroethene	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	0.34 U	0.34 U	0.39	2.4	0.34 U	0.58	
Tetrahydrofuran	NA	3.2	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	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Toluene	500	1.3	1.1	3.0	3.3	0.65	0.51	1.5	2.8	2.8	1.5	0.54	1.5	0.70	6.2	0.19 U	1.8	0.90	0.97
trans-1,2-Dichloroethene	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	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	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	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Trichloroethene	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	0.27 U	0.27 U	0.28	0.27 U	0.27 U	0.27 U	0.27 U
Trichlorofluoromethane	500	3.0	1.3	1.7	1.8	1.5	1.7	1.2	1.3	2.0	1.2	1.8	1.4	1.5	6.3	1.3	1.7	1.4	1.7
Trichlorotrifluoroethane	NA	0.62	0.54	0.48	0.45	0.64	0.48	0.53	0.61	0.54	0.50	0.54	0.55	0.55	0.43	0.52	0.66	0.69	0.63
Vinyl acetate	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	0.36 U	0.18 U	0.36 U	0.43	0.18 U	3.5 U	0.18 U
Vinyl chloride	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	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	

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

Parameter ( $\mu\text{g}/\text{m}^3$ )	Indoor Air - Eastern Small Retail Space												Indoor Air - Center Small Retail Space												
	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-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		
1,1,1-Trichloroethane	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	0.079	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	0.27 U	
1,1,1,2-Tetrachloroethane		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	0.25 U													
1,1,2,2-Tetrachloroethane	<b>0.16</b>	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	0.069 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	
1,1,2-Trichloroethane	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	0.11 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	
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	0.04 U	3.9	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
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	0.14 U	0.04 U	1.2	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
1,2,4-Trichlorobenzene	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	0.15 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	0.75 U	
1,2,4-Trimethylbenzene	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	0.19	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		
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	0.27 U	0.077 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	
1,2-Dichlorobenzene	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	0.12 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	
1,2-Dichloroethane	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	0.04	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	
1,2-Dichloropropane	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	0.046 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	
1,2-Dichlorotetrafluoroethane													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	
1,3,5-Trimethylbenzene	0.39	0.15 U	0.077	0.11	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.19	0.17 U	0.057 J	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	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	0.58	0.078 U	0.044 U	0.11 U	0.11 U	0.11 U	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	
1,3-Dichlorobenzene	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	0.12 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	
1,4-Dichlorobenzene	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	0.12 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	
1,4-Dioxane																									
2-Butanone	0.98	2.0	0.94	2.3	1.3	1.3	3.2	2.4	2.2	1.8	3.7	2.1 J	120	10	3.2	2.9	2.4	2.3	1.0	2.5	4.1	2.4	1.8		
2-Hexanone	0.13	0.32	0.081	0.17	0.16	0.16	0.48	0.44	0.14 U	0.32	0.52	0.29	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		
4-Ethyltoluene	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	0.09 J	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		
4-Methyl-2-pentanone	0.13	0.18	0.34	0.22	0.14 U	0.14 U	0.19	0.14 U	0.14 U	0.24	0.35	0.17	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		
Acetone	6.6	11	13	13	9.0	9.7	24	19	40	12	25	14	44	14	25	11	8.5	6.1	11	28	20	14			
Benzene	0.38	0.34	0.20	0.53	0.53	0.80	0.27	0.68	0.55	2.9	0.55	0.25	1.0	0.60	0.98	<b>4.1 [a]</b>	0.41	0.70	0.59	0.47	0.43	0.31	0.40		
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	0.18 U	0.052 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		

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

Parameter (ug/m <sup>3</sup> )	Indoor Air - Eastern Small Retail Space												Indoor Air - Center Small Retail Space											
	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-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	
Methyl methacrylate	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												
Methylene chloride	1.6	1.6	1.1	2.3	5.2	2.0	3.0	1.1	0.83	0.67	0.73	0.66 J	2.5	5.2	0.59	1.6	0.83	0.69	2.0	2.0	2.6	0.70 U	2.9	
Methyl-t-butyl ether	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	0.072 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	
n-Heptane	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	0.21	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	
o-Xylene	1.0	0.13 U	0.14	0.35	0.19	0.10	0.17	0.33	0.15 U	0.75	0.32	0.11	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	
Proplylene (Propene)	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	2.4 U	1.1	1.4 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	0.35 U	
Styrene	1.0	0.13 U	0.76	0.24	0.15 U	0.15 U	0.15 U	0.20	0.15 U	0.18	0.15 U	0.089	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	
Tetrachloroethene	5.7	0.15	0.15	1.6	0.24 U	0.12	0.24 U	0.24 U	0.24 U	0.39	0.54	0.24	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	
Tetrahydrofuran	0.10	0.088 U	0.10	0.10 U	0.10 U	0.10 U	0.14	0.10 U	0.10 U	0.10 U	0.10 U	0.1	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	
Toluene	1.9	0.28	0.78	2.0	0.56	0.61	0.95	2.6	0.89	3.8	2.2	0.65	1.8	1.3	2.5	11	0.65	0.71	1.3	0.81	2.0	1.1	0.49	
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	0.04 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		
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	0.045 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		
Trichloroethene	0.63	0.081 U	0.045	0.10	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.23	0.19 U	0.075	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	
Trichlorofluoromethane	1.1	0.98	1.7	1.6	1.8	1.3	2.1	1.6	1.6	1.7	1.4	1.3	4.8	1.3	1.7	2.5	1.5	1.7	1.4	1.2	2.2	1.2	1.7	
Trichlorotrifluoroethane	0.69	0.46	0.53	0.60	0.61	0.60	1.4	0.63	0.54	0.47	0.58	0.54	0.64	0.51	0.48	0.45	0.64	0.48	0.53	0.74	0.63	0.48	0.51	
Vinyl acetate	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	1.4 U	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.18 U	0.18 U	0.50 U	0.18 U	0.18 U	0.71 U	0.36 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	0.026 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		

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**Former Gorham Manufacturing Site**  
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**Former Gorham Manufacturing Site**  
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Parameter ( $\mu\text{g}/\text{m}^3$ )	Indoor Air - Center Small Retail Space																		
	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	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
Methyl methacrylate																			
Methylene chloride	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	1.1	1.3	1.1	0.71	0.64	0.83	0.64 J
Methyl-t-butyl ether	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	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.072 U
n-Heptane	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	0.10	0.14	0.47	0.14 U	0.71	1.1	0.16
o-Xylene	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	0.13	0.21	0.32	0.15 U	0.64	0.24	0.14
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	2.4 U	0.81	1.4 U
Styrene	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	0.15 U	0.15 U	0.22	0.15 U	0.16	0.15 U	0.077 J
Tetrachloroethene	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	0.12	0.24 U	0.24 U	0.24 U	0.24	0.32	0.49
Tetrahydrofuran	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	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.17	0.046 J
Toluene	1.6	1.7	2.6	0.40	2.9	0.93	1.2	1.2	1.4	1.1	1.5	0.56	0.65	1.1	2.6	0.49	3.4	1.3	0.72
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	0.04 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	0.045 U
Trichloroethene	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	0.072	0.19 U	0.19 U	0.19 U	0.21	0.19 U	0.12
Trichlorofluoromethane	1.3	1.5	3.1	1.1	1.6	1.1	1.7	1.4	1.0	1.6	1.7	2.0	1.3	2.1	1.7	1.5	1.7	1.3	1.3
Trichlorotrifluoroethane	0.55	0.55	0.42	0.52	0.69	0.67	0.56	0.68	0.44	0.57	0.62	0.61	0.65	1.0	0.66	0.58	0.46	0.53	0.54
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	2.5 U	2.5 U	2.5 U	1.4 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	0.33	0.090 U	0.090 U	0.090 U	0.090 U	0.084	

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**Former Gorham Manufacturing Site**  
**Providence, Rhode Island**

Parameter ( $\mu\text{g}/\text{m}^3$ )	Indoor Air - Western Small Retail Space																				
	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	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
1,1,1-Trichloroethane	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	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	
1,1,1,2-Tetrachloroethane																		0.62 U	0.37 U	0.37 U	
1,1,2,2-Tetrachloroethane	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.24 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	0.21 U	0.10 U	0.21 U	
1,1,2-Trichloroethane	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	0.16 U	0.082 U	0.16 U	
1,1-Dichloroethane	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	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	
1,1-Dichloroethene	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	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.059 U	0.12 U		
1,2,4-Trichlorobenzene	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	0.75 U	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	
1,2,4-Trimethylbenzene	0.25 U	0.34	0.34	0.99	0.25 U	0.25 U	0.18 U	0.25 U	0.29	0.39	0.25 U	0.35	0.36	0.25 U	0.25 U	0.56	0.41	0.32	0.36	0.21	
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 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	
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 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	
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 U	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	
1,2-Dichloropropane	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	0.30	0.23 U	0.23 U	0.63	0.23 U	0.14 U	0.069 U	0.14 U	
1,2-Dichlorotetrafluoroethane	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	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	0.18 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	0.10	0.15	0.083	
1,3-Butadiene	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	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	
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 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	
1,4-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 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.18 U	0.065		
1,4-Dioxane																					
2-Butanone	70	6.5	3.9	5.2	2.2	1.3	1.3	2.3	7.3	2.2	0.49	2.1	4.3	1.8	0.42	1.7 B	4.7	5.9 U	2.1	0.97	1.1
2-Hexanone	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	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
4-Ethyltoluene	0.25 U	0.25 U	0.25 U	0.27	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	0.074	0.097	0.065	
4-Methyl-2-pentanone	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	0.20 U	0.43	0.61	0.20 U	0.20 U	0.53	0.36	0.15	0.13	1.4
Acetone	29	12	13	32	7.8	6.6	6.5	10	31	22	31	12	41	27	12 B	15 B	48 B	38	17	13	18
Benzene	0.95	0.75	1.1	3.2	0.67	0.73	0.42	0.35	0.52	0.43	0.52	0.53	0.27	0.56	0.45	1.1	0.41	0.34	0.44	0.36	0.20
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 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	
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 U	0.33 U	0.33 U	0.33 U	0.33 U	0.34 U	0.34 U	0.20 U	0.20 U		
Bromoform	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	0.51 U	0.51 U	0.51 U	0.51 U	0.52 U	0.52 U	0.31 U	0.31 U	0.31 U	
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 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	
Carbon disulfide	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.26	0.16 U	0.16 U	0.26	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.27	1.6 U	0.93 U	0.93 U
Carbon tetrachloride	0.32	0.44	0.52	0.56 [a]	0.48	0.6 [a]	0.43	0.65 [a]	0.43	0.42	0.44	0.43	0.50	0.47	0.45	0.56 [a]	0.69 [a]	0.50	0.45		

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

Parameter (ug/m <sup>3</sup> )	Indoor Air - Western Small Retail Space																				
	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	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
Methyl methacrylate	1.9	5.7	0.92	1.5	6.3	1.4	4.2	2.3	5.7	0.70 U	2.9	0.70 U	1.3	0.60	1.3	2.5	1.1	1.7 U	13	2.8	1.4
Methylene chloride	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	0.11 U	0.11 U	0.11 U	0.11 U	
n-Heptane	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	0.29	0.50	0.68	0.33	0.47	2.0	1.1	0.46	0.47	0.65
o-Xylene	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	0.28	0.43	0.43	0.22 U	0.22 U	0.69	0.41	0.30	0.17	0.20
Propylene (Propene)	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	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	
Styrene	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	0.26	0.70	0.39	0.21 U	0.21 U	0.97	0.63	0.18	0.097	0.26
Tetrachloroethene	1.6	0.34 U	0.65	0.63	0.34 U	0.34 U	0.48	0.34 U	0.34 U	1.0	0.34 U	0.34 U	0.36	0.34 U	1.7	0.34 U	0.62	0.66	0.14	0.15	
Tetrahydrofuran	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	0.15 U	0.15 U	0.15 U	0.15 U	0.24	0.18	0.088 U	0.088 U	0.088	
Toluene	1.5	1.6	2.7	7.5	1.5	0.76	0.48	0.61	2.3	4.0	0.57	7.2	8.4	3.5	0.48	1.6	6.6	3.7	1.2	0.48	1.4
trans-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 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	
trans-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 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	
Trichloroethene	4.6	1.1	0.28	0.58	0.27 U	0.27 U	0.30	0.27 U	0.27 U	0.40	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	
Trichlorofluoromethane	4.7	1.4	1.7	3.1	1.6	1.7	1.3	1.1	1.9	1.3	1.7	1.3	1.3	2.9	1.2	1.6	1.3	1.6	1.3	1.1	1.7
Trichlorotrifluoroethane	0.62	0.57	0.47	0.44	0.66	0.45	0.54	0.69	0.57	0.51	0.54	0.64	0.54	0.43	0.55	0.67	0.76	0.54	0.67	0.44	0.53
Vinyl acetate	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
Vinyl chloride	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	0.077 U	0.038 U	0.077 U	

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

Parameter ( $\mu\text{g}/\text{m}^3$ )	Indoor Air - Western Small Retail Space									
	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
1,1,1-Trichloroethane	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
1,1,1,2-Tetrachloroethane	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
1,1,2,2-Tetrachloroethane	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
1,1,2-Trichloroethane	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	0.11 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	0.14 U	0.14 U	0.04 U
1,1-Dichloroethene	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	0.04 U
1,2,4-Trichlorobenzene	0.52 U	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
1,2,4-Trimethylbenzene	0.46	0.17 U	0.10	0.58	0.40	0.70	0.25	0.38	0.31	0.37
1,2-Dibromoethane (EDB)	0.27 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
1,2-Dichlorobenzene	0.21 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
1,2-Dichloroethane	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.11	0.14 U	0.14 U	0.14 U	0.15
1,2-Dichloropropane	0.094	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.085
1,2-Dichlorotetrafluoroethane										
1,3,5-Trimethylbenzene	0.26	0.17 U	0.17 U	0.17 U	0.17 U	0.23	0.17 U	0.17 U	0.17 U	0.057 J
1,3-Butadiene	0.078 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
1,3-Dichlorobenzene	0.21 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
1,4-Dichlorobenzene	0.063	0.21 U	0.21 U	0.21 U	0.21 U	0.086	0.21 U	0.21 U	0.21 U	0.12 U
1,4-Dioxane										
2-Butanone	2.8	1.9	1.9	1.7	1.6	3.8	0.69	1.5	3	2.2 J
2-Hexanone	0.41	0.20	0.35	0.14 U	0.15	1.1	0.14 U	0.37	0.35	0.41
4-Ethyltoluene	0.16	0.17 U	0.17 U	0.17 U	0.17 U	0.20	0.17 U	0.17 U	0.17 U	0.065 J
4-Methyl-2-pentanone	0.29	0.18	0.14 U	0.21	0.20	0.44	0.14 U	0.14 U	0.34	0.18
Acetone	24	14	15	49	46	46	20	15	30	41
Benzene	0.49	0.58	0.87	0.32	0.43	1.8	0.54	1.9	0.57	0.36
Benzyl chloride	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
Bromodichloromethane	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	0.067 U
Bromoform	0.36 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
Bromomethane	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	0.056 J
Carbon disulfide	0.090	1.1 U	1.1 U	0.16	0.60	0.14	1.1 U	1.1 U	0.15	0.11 J
Carbon tetrachloride	0.38	0.51	0.39	0.55 [a]	0.46	0.45	0.49	0.42	0.45	0.46
Chlorobenzene	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
Chloroethane	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.089 U	0.093 U	0.093 U	0.093 U	0.053 U
Chloroform	0.20	0.17 U	0.082	0.21	0.47	0.17	0.24	0.17 U	0.18	0.12
Chloromethane	1.3	1.1	1.4	1.5	1.3	1.2	1.2	1.4	1.4	0.76
cis-1,2-Dichloroethene	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	0.04 U
cis-1,3-Dichloropropene	0.16 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
Cyclohexane	0.23	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.30	0.12 U	0.069 U
Dibromochloromethane	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.29 U	0.30 U	0.30 U	0.30 U	0.085 U
Dichlorodifluoromethane	2.9	2.6	1.7	3.1	2.1	1.5	2.7	1.5	2.1	2.2
Ethanol	60	52	11	45	21	40	25	50	79	96
Ethyl acetate	0.57	0.77	0.13 U	5.5	1.3	1.9	0.34	0.56	0.41	0.37
Ethylbenzene	0.45	0.19	0.14	0.36	0.48	0.62	0.15 U	0.43	0.35	0.2
Hexachlorobutadiene	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
Hexane	0.97	0.86	0.87	2.9	1.3	0.97	0.39	1.1	0.9	0.37 J
Isopropyl alcohol	22	3.3	3.4 U	3.4 U	3.4 U	6.0	40	1.9	11.0	2 U
m,p-Xylene	1.4	0.71	0.40	1.1	1.2	1.8	0.25	1.2	1.1	0.54

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

Parameter (ug/m <sup>3</sup> )	Indoor Air - Western Small Retail Space									
	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
Methyl methacrylate	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
Methylene chloride	2.3	2.6	1.4	6.1	1.3	1.1	0.76	0.68	0.74	0.63 J
Methyl-t-butyl ether	0.11	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
n-Heptane	0.99	0.14 U	0.16	0.42	1.1	1.6	0.45	1.3	4.6	1.9
o-Xylene	0.56	0.24	0.15	0.40	0.44	0.85	0.15 U	0.44	0.39	0.19
Propylene (Propene)	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
Styrene	0.89	0.15 U	0.081	0.29	2.6	0.37	0.15 U	0.17	0.29	0.24
Tetrachloroethene	1.7	0.24 U	0.15	0.24 U	<b>5.5</b>	0.22	0.24 U	0.40	0.34	0.13
Tetrahydrofuran	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
Toluene	2.4	0.99	1.0	3.8	4.7	7.8	1.1	2.8	2.2	1.3
trans-1,2-Dichloroethene	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	0.04 U
trans-1,3-Dichloropropene	0.16 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
Trichloroethene	0.15	0.19 U	0.068	0.19 U	0.53	0.14	0.19 U	0.28	0.19 U	0.077
Trichlorofluoromethane	1.8	1.8	1.5	2.5	1.8	1.9	1.6	1.7	1.4	1.3
Trichlorotrifluoroethane	0.58	0.60	0.87	1.0	0.63	0.52	0.60	0.45	0.52	0.58
Vinyl acetate	0.25 U	0.25 U	0.25 U	2.5 U	2.5 U	2.4 U	2.5 U	2.5 U	2.5 U	1.4 U
Vinyl chloride	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

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.

Prepared by / Date: AKN 10/08/14  
 Checked by / Date: MAM 10/27/14

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

ug/m<sup>3</sup> - micrograms per cubic meter

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

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

Date	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

\*\* ASD system offline.

NM = Not Measured

Prepared by/Date: MAM 10/27/14

Checked by/Date: KRM 10/27/14

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

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

Parameter (ug/m <sup>3</sup> )	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
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								
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
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
Proplylene (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
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							
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	0.34 U	0.52	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
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				
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
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							
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							
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							
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
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
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	0.71 U	0.36 U	0.71 U	0.71 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							

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

Parameter (ug/m <sup>3</sup> )	Outdoor Air Reference Locations																							
	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	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 12/13/2013	AA-1-030714 03/07/14	AA-1-061314 6/13/2014	AA-1-091214 9/12/2014	
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	0.29	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	0.19 U	0.055 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	0.44 U	0.25 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	0.34 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	0.24 U	0.069 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	0.27 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	0.19 U	0.11 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	0.20 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	
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	0.059 U	0.12 U	0.14 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 U	0.04 U	
1,2,4-Trichlorobenzene	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	0.62	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	0.26 U	0.15 U	
1,2,4-Trimethylbenzene	0.25 U	0.25 U	0.25 U	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	
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	0.38 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	0.27 U	0.077 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	0.30 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	0.12 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	0.20 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	
1,2-Dichloropropane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 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	
1,2-Dichlorotetrafluoroethane	0.35 U	0.35 U	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	0.28	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	0.17 U	0.047	0.17 U	0.17 U	0.18	0.098 U	
1,3-Butadiene	0.23 U	0.11 U	0.23 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	0.078 U	0.075 U	0.078 U	0.078 U	0.078 U	0.078 U	0.044 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	0.30 U	0.30 U	0.18 U	0.18 U	0.21 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	0.12 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	0.30 U	0.30 U	0.18 U	0.18 U	0.21 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	0.12 U		
1,4-Dioxane										0.18 U														
2-Butanone	0.88	1.5	1.4	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	
2-Hexanone	0.20 U	0.29	0.29	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	
4-Ethyltoluene	0.25 U	0.25 U	0.25 U	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 U	0.098 U	
4-Methyl-2-pentanone	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	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	0.14 U	0.036 J	
Acetone	3.7	9.5	12	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	
Benzene	0.41	0.69	0.35	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	
Benzyl chloride	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	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.052 U	
Bromodichloromethane	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	0.34 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	0.23 U	0.24 U	0.24 U	0.24 U	0.067 U	
Bromoform	0.51 U	0.51 U	0.51 U																					

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

Parameter (ug/m <sup>3</sup> )	Outdoor Air Reference Locations																						
	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	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 12/13/2013	AA-1-030714 03/07/14	AA-1-061314 6/13/2014	AA-1-091214 9/12/2014
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	0.11 U	0.11 U	0.13 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	0.13 U	0.072 U
n-Heptane	0.20 U	0.20 U	0.20 U	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
o-Xylene	0.22 U	0.22 U	0.22 U	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
Propylene (Propene)	0.35 U	0.35 U	0.35 U	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	2.4 U	2.3 U	2.4 U	2.4 U	1.3	1.4 U
Styrene	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 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
Tetrachloroethene	0.34 U	0.34 U	0.34 U	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	0.24 U	0.40	0.07
Tetrahydrofuran	0.19	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.057	0.088 U	0.088 U	0.43	0.10 U	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
Toluene	0.46	1.1	0.75	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
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	0.12 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
trans-1,3-Dichloropropene	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	0.23 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	0.16 U	0.045 U
Trichloroethene	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	0.67	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
Trichlorofluoromethane	1.5	1.5	1.2	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
Trichlorotrifluoroethane	0.54	0.62	0.45	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
Vinyl acetate	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	0.25 U	0.25 U	2.5 U	2.5 U	2.4 U	2.5 U	2.5 U	2.5 U	1.4 U
Vinyl chloride	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 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	0.087 U	0.090 U	0.090 U	0.090 U	0.026 U	

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

Parameter ( $\mu\text{g}/\text{m}^3$ )	Extraction Well - Large Retail Space																
	EW-Combined-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-COMBINE 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
1,1,1-Trichloroethane	190000	91000	73000	32000	3500	19000	11000	8100	7900	6800	1500	2500	150	1200	1400	1700	2000
1,1,1,2-Tetrachloroethane																	
1,1,2,2-Tetrachloroethane	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	6.8 U	0.68 U
1,1,2-Trichloroethane	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	5.4 U	0.54 U
1,1-Dichloroethane	19000	7800	5300	4800	390	2200	1600	1900	1900	1700	280	370	31	310	200	270	290
1,1-Dichloroethene	7800	1800	1000	630	73	420	310	250	260	280	52	66	7.3	62	30	40	52
1,2,4-Trichlorobenzene	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	7.4 U	0.74 U
1,2,4-Trimethylbenzene	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	5.0 U	0.50 U
1,2-Dibromoethane (EDB)	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	7.6 U	0.76 U
1,2-Dichlorobenzene	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	6.0 U	0.60 U
1,2-Dichloroethane	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
1,2-Dichloropropane	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	4.6 U	0.46 U
1,2-Dichlorotetrafluoroethane	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	7.0 U	0.70 U
1,3,5-Trimethylbenzene	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	5.0 U	0.50 U
1,3-Butadiene	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	2.2 U	0.22 U
1,3-Dichlorobenzene	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	6.0 U	0.60 U
1,4-Dichlorobenzene	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	6.0 U	0.60 U
1,4-Dioxane																	
2-Butanone	37	32	48	60	21	40	7.8	31	30	21	4.0	11	10	9.0	12	22	22
2-Hexanone	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	4.0 U	0.40 U
4-Ethyltoluene	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	5.0 U	0.50 U
4-Methyl-2-pentanone	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	4.0 U	0.40 U
Acetone	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	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	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	5.2 U	0.52 U
Bromodichloromethane	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	6.6 U	0.66 U
Bromoform	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	11 U	1.1 U
Bromomethane	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	3.8 U	0.38 U
Carbon disulfide	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	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	0.62 U	6.2 U	0.73
Chlorobenzene	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	7.2	0.46 U
Chloroethane	3400	1700	1200	450	42	220	110	94	92	88	9.8	11	1.3	9.9	4.8	7.2	9.4
Chloroform	27	17	20	17	4.8 U	8.8	12	14	11	11	4.1	5.8	0.49	6.2	6.0	7.9	8.0
Chloromethane	2.0 U	2.0 U	4.0 U	4.0 U	2.0 U	8.2	1.0 U	2.0 U	4.0 U	4.0 U	0.20 U	2.0 U	0.10 U	0.20 U	0.20 U	2.0 U	0.20 U
cis-1,2-Dichloroethene	14000	4700	6300	4200	300	1600	1600	1500	1300	1200	190	280	21	240	180	260	260
cis-1,3-Dichloropropene	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
Cyclohexane	3.4 U	3.4 U	6.8 U	6.8 U	3.4 U	0.17 U	1.7 U	3.4 U	6.8 U	6.8 U	0.34 U	3.4 U	0.17 U	0.34 U	0.34 U	3.4 U	0.34 U
Dibromochloromethane	8.6 U	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	0.43 U	0.86 U	0.86 U	8.6 U	0.86 U
Dichlorodifluoromethane	5.0 U	5.0 U	10 U	110	5.0 U												

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

Parameter (ug/m <sup>3</sup> )	Extraction Well - Large Retail Space																
	EW-Combined-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-COMBINE 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
Methyl-t-butyl ether	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	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	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)	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	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	140	60	430	540	47	110	110	260	67	72	4.6	200	4.8	45	450	1300	640
Tetrahydrofuran	77	77	150	180	66	110	1.5 U	96	85	67	15	32	28	43	34	54	65
Toluene	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	110	61	47	47	4.6	33	29	34	30	26	3.4	4.6	0.36	4.1	3.0	4.6	5.5
trans-1,3-Dichloropropene	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	36000	17000	26000	13000	1400	6200	4000	3600	4000	4300	390	1400	58	460	1200	2000	1700
Trichlorofluoromethane	9900	2300	1800	1000	98	600	1800	1400	1500	1500	260	230	29	230	210	300	440
Trichlorotrifluoroethane	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	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	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 <sup>3</sup> )	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-1-030609 3/6/2009	EW-1-033109 3/31/2009
1,1,1-Trichloroethane	4700	280	2500	2400	340	1100	1800	2800	1800	610	850	1900	1500	780	770	1300	59000	66000
1,1,1,2-Tetrachloroethane				2.5 U		12 U	1.2 U	0.44 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	6.8 U	6.8 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	0.55 U	0.19 U	0.55 U	0.55 U	0.55 U	1.1 U	6.4	10
1,1-Dichloroethane	330	36	170	200	70	78	130	200	99	59	68	150	62	53	68	130	4100	4400
1,1-Dichloroethene	81	7.3	58	44	21	34	42	15	28	24	38	56	24	27	40	52	570	1200
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	1.5 U	7.4 U	7.4 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	5.0 U	5.0 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	0.27 U	0.77 U	0.77 U	0.77 U	7.6 U	7.6 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	0.60 U	0.21 U	0.60 U	0.60 U	0.60 U	1.2 U	6.0 U	6.0 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	0.14 U	0.40 U	0.40 U	0.40 U	0.4 U	4.0 U	4.0 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	0.16 U	0.46 U	0.46 U	0.46 U	4.6 U	4.6 U					
1,2-Dichlorotetrafluoroethane	0.70 U																7.0 U	7.0 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	5.0 U	5.0 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	0.078 U	0.22 U	0.22 U	0.44 U	2.2 U	2.2 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	6.0 U	6.0 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	6.0 U	6.0 U
1,4-Dioxane					0.72 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	3.5	8.9
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	4.0 U	4.0 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	5.0 U	5.0 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	4.0 U	4.0 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	35	16
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	5.3	11
Benzyl chloride	0.52 U	0.52 U	0.52 U	1.0 U	0.52 U	5.2 U	0.52 U	0.18 U	0.52 U	0.52 U	0.52 U	0.52 U	5.2 U	5.2 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	6.6 U	6.6 U
Bromoform	1.1 U	1.0 U	1.0 U	2.1 U	1.0 U	10 U	1.0 U	0.36 U	1.0 U	1.0 U	1 U	2.1 U	11 U	11 U				
Bromomethane	0.38 U	0.39 U	0.39 U	0.78 U	0.39 U	3.9 U	0.39 U	0.14 U	0.39 U	0.39 U	0.39 U	0.78 U	3.8 U	3.8 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	3.2 U	3.2 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	0.63 U	0.68	0.63 U	0.63 U	0.63 U	0.58 J	6.2 U	6.2 U
Chlorobenzene	0.46 U	0.46 U	0.46 U	0.92 U	0.46 U	4.6 U	0.46 U	0.16 U	0.46 U	0.46 U	0.46 U	4.6 U	4.6 U					
Chloroethane	17	1	3.6	6.7	2.1	2.6 U	3.0	5.3	1.5	1.1	1.4	3.3	1.2	1.0	1.5	1.8	170	250
Chloroform	8.3	1.6	6.9	7.6	2.7	3.2	6.3	8.5	4.7	3.5	2.3	7.0	1.5	3.1	3.4	4.9	20	34
Chloromethane	0.20 U	0.21 U	0.21 U	0.41 U	0.21 U	2.1 U	20	0.21 U	0.21 U	0.21 U	0.41 U	0.14 U	0.41 U	0.41 U	0.41 U	0.83 U	2.0 U	2.0 U
cis-1,2-Dichloroethene	360	28	120	160	38	47	75	150	66	30	24	93	12	25	30	57	2000	2200
cis-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	4.4 U	4.4 U				
Cyclohexane	0.55	0.34 U	0.34 U	0.69 U	0.34													

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

Parameter (ug/m <sup>3</sup> )	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-1-030609 3/6/2009	EW-1-033109 3/31/2009
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	0.17	0.36 U	0.36 U	0.36 U	0.36 U	0.72 U	3.6 U	3.6 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	4.0 U	4.0 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	4.4 U	4.4 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	6.9 U	2.4 U	6.9 U	6.9 U	6.9 U	14 U	1.8 U	1.8 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	4.2 U	4.2 U
Tetrachloroethene	750	160	920	440	8.1	170	530	910	850	60	23	250	7.0	260	82	230	600	1200
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	6.3	21
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	3.8 U	3.8 U
trans-1,2-Dichloroethene	6.6	0.6	1.9	3.5	1.1	2.0 U	1.7	1.9	1.0	0.86	0.62	2.6	0.40 U	0.59	0.89	1.4	9.2	23
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	0.45 U	0.45 U	0.45 U	0.16 U	0.45 U	0.45 U	0.45 U	0.45 U	4.4 U	4.4 U	
Trichloroethene	3200	240	1800	1900	97	730	1500	2600	2000	380	280	1200	160	560	560	800	31000	42000
Trichlorofluoromethane	410	71	200	610	200	150	260	100	230	130	140	410	200	98	160	360	520	540
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	0.77 U	0.86 J	7.6 U	7.6 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	7.0 U	14 U	3.6 U	3.6 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	2.7	4.8				

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

Parameter (ug/m <sup>3</sup> )	Extraction Well - Large Retail Space						Post Treatment - Large Retail Space						CT IACTIND 2003 (ug/m <sup>3</sup> )	Indoor Air - Large Retail Space						
	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	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						
1,1,2,2-Tetrachloroethane	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	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	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	0.27	0.32
1,1-Dichloroethene	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
1,2,4-Trichlorobenzene	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	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	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	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	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	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-Dichlorotetrafluoroethane	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	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	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	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	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														NA						
2-Butanone	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	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	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	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	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	5.6	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	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	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	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	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	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Carbon disulfide	27	25	3.2 U	3.2 U	1.8	3.2 U	0.16 U	0.80 U	4.1	27	250	0.16 U	0.20	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Carbon tetrachloride	6.2 U	6.2 U	6.2 U	6.2 U	1.6 U	6.2 U	0.38	1.6 U	0.62 U	0.62 U	62 U	0.31 U	0.31 U	0.54	0.35	0.41	0.52	0.55 [a]	0.46	0.59 [a]
Chlorobenzene	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	200	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Chloroethane	700	590	41	44	17	33	0.13 U	5100	1800	480	64	19	10	500	0.13 U	0.13 U	0.42	0.13 U	0.13 U	0.13 U
Chloroform	9.6	15	13	23	3.6	7.5	0.24 U	1.2 U	0.48 U	0.67	48 U	0.								

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

Parameter (ug/m <sup>3</sup> )	Extraction Well - Large Retail Space						Post Treatment - Large Retail Space						CT IACTIND 2003 (ug/m <sup>3</sup> )	Indoor Air - Large Retail Space						
	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	
Methyl-t-butyl ether	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	
n-Heptane	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	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	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	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	2300	2500	73	310	31	170	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	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	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	4.0	5.7	2.3	0.93
trans-1,2-Dichloroethene	69	180	4.0 U	8.8	2.5	8.0	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	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	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	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	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	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	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 <sup>3</sup> )	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
1,1,1-Trichloroethane	1.5	1.4	2.0	0.27 U	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
1,1,1,2-Tetrachloroethane																				
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					
1,1,2-Trichloroethane	0.27 U	0.19 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	0.27 U	
1,1-Dichloroethane	0.20 U	0.14 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	
1,1-Dichloroethene	0.20 U	0.14 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	
1,2,4-Trichlorobenzene	0.37 U	0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.52 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	0.37 U	0.37 U	0.37 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
1,2-Dibromoethane (EDB)	0.38 U	0.27 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	
1,2-Dichlorobenzene	0.30 U	0.21 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	
1,2-Dichloroethane	0.20 U	0.14 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	
1,2-Dichloropropane	0.23 U	0.17 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	
1,2-Dichlortetrafluoroethane	0.35 U	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	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	0.18	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	0.17	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	0.30 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	
1,4-Dichlorobenzene	0.30 U	0.21 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	
1,4-Dioxane																				
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-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	4.1 U
4-Ethyltoluene	0.25 U	0.18 U	0.25 U	0.25 U	0.25 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	
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	0.22	0.20 U	0.20 U	0.20 U	0.28	0.35	0.35	0.20 U	0.20 U	0.20 U
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	11 B
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
Benzyl chloride	0.26 U	0.19 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	0.26 U	
Bromodichloromethane	0.33 U	0.24 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	0.33 U	0.33 U	0.33 U	0.34 U	
Bromoform	0.51 U	0.36 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	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.52 U	
Bromomethane	0.19 U	0.14 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 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	0.16 U	0.16 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	
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	0.53
Chlorobenzene	0.23 U	0.17 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	
Chloroethane	0.13 U	0.10 U	0.1																	

**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-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
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					
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	0.20 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	
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	0.87 U	0.87 U	0.35 U	0.86 U	0.86 U	0.86 U	
Styrene	0.21 U	0.15 U	0.24	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	
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]	
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	0.22	0.15 U	0.15 U	0.15 U	0.24	0.16	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	0.80	1.3	0.91	0.99	2.5	0.44	3.0	0.58
trans-1,2-Dichloroethene	0.20 U	0.14 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	0.20 U	
trans-1,3-Dichloropropene	0.22 U	0.16 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	0.22 U	0.22 U	0.22 U	0.22 U	0.23 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
Trichlorofluoromethane	1.2	1.2	1.5	1.4	1.3	1.2	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
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
Vinyl acetate	0.18 U	0.50 U	0.71 U	0.71 U	0.71 U	0.71 U	0.25 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
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	0.14	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 <sup>3</sup> )	Indoor Air - Large Retail Space																				
	IA-1 091511 9/15/2011	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-2 011609 1/16/2009	IA-2- 020309 2/3/2009	IA-2- 021109 2/11/2009	IA-2- 021809 2/18/2009	IA-2- 022609 2/26/2009	IA-2- 041409 4/14/2009	IA-2- 042409 4/24/2009	IA-2- 091709 9/17/2009
1,1,1-Trichloroethane	0.27 U	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	9.9	0.63	1.1	1.1	0.44	1.4	2.1	0.27 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	0.35 J	0.44 U	0.44 U	0.37 U									
1,1,2,2-Tetrachloroethane	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	0.24 U	0.24 U	0.1 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	0.27 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	0.19 U	0.19 U	0.16 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	0.20 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	0.061 U	0.72	0.20 U	0.20 U	0.20 U	0.32	0.14 U	0.20 U	
1,1-Dichloroethene	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	0.059 U	0.41	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	0.74 U	0.45 U	0.45 U	0.52 U	0.52 U	0.26 U	0.26 U	0.26 U	0.26 U	0.22 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.26 U	0.37 U	0.26 U	0.37 U		
1,2,4-Trimethylbenzene	0.25 U	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	0.25 U	0.37	0.70	0.65	0.30	0.18 U	0.25 U	0.29
1,2-Dibromoethane (EDB)	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	0.12 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	0.30 U	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	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U	0.30 U		
1,2-Dichloroethane	0.20 U	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	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U		
1,2-Dichloropropane	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	0.069 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U		
1,2-Dichlortetrafluoroethane														0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	0.35 U	0.35 U	
1,3,5-Trimethylbenzene	0.25 U	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	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	
1,3-Butadiene	0.11 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	0.11 U	0.11 U	0.30	0.66	0.11 U	0.08 U	0.11 U	0.23 U	
1,3-Dichlorobenzene	0.30 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	0.21 U	0.18 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U	0.30 U		
1,4-Dichlorobenzene	0.30 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	0.21 U	0.18 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U	0.30 U		
1,4-Dioxane																					
2-Butanone	5.9 U	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	21	4.1	4.6	3.0	2.9	0.95	1.6	1.1
2-Hexanone	0.62	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	0.20 U	0.20 U	0.35	0.26	0.20 U	0.14 U	0.20 U	0.25
4-Ethyltoluene	0.25 U	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	0.17 U	0.15 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	0.23	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	0.20 U	0.20 U	0.35	0.20 U	0.20 U	0.14 U	0.20 U	0.20 U
Acetone	18	8.0	6.0	12	16	7.0	5.0	21	35	19	13	23	13	17	9.6	14	18	9.7	13	39	6.2
Benzene	0.32	0.47	0.34	0.19	0.67	0.51	0.72	0.28	0.75	0.54	2.3	0.46	0.39	1.0	0.67	1.8	3.0	0.77	0.58	0.44	0.41
Benzyl chloride	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	0.078 U	0.26 U	0.26 U	0.26 U	0.26 U	0.19 U	0.26 U	0.26 U		
Bromodichloromethane	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	0.1 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	0.33 U	0.33 U		
Bromoform	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	0.31 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	0.19 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	0.12	0.19 U	0.19 U	0.19 U	0.19 U	0.14 U	0.19 U	0.19 U		
Carbon disulfide	1.6 U	0.93 U	0.93 U	0.93 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	0.16 U	0.16 U	0.16 U	0.16 U	0.12 U	0.16 U	0.16 U	
Carbon tetrachloride	0.57 [a]	0.49	0.46	0.46	0.39	0.54	0.44	0.53	0.53	0.54	0.41	0.42	0.4	0.33	0.41	0.55 [a]	0.57 [a]	0.48	0.41	0.44	

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

Parameter (ug/m <sup>3</sup> )	Indoor Air - Large Retail Space																				
	IA-1 091511 9/15/2011	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-2 011609 1/16/2009	IA-2- 020309 2/3/2009	IA-2- 021109 2/11/2009	IA-2- 021809 2/18/2009	IA-2- 022609 2/26/2009	IA-2- 041409 4/14/2009	IA-2- 042409 4/24/2009	IA-2- 091709 9/17/2009
Methyl-t-butyl ether	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	0.11 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	
n-Heptane	0.20 U	0.079	0.12 U	0.093	0.44	0.14 U	0.14 U	0.14 U	0.81	0.14 U	0.67	0.44	0.53	0.23	0.20 U	0.58	0.73	0.22	0.15	0.20 U	0.20 U
o-Xylene	0.22 U	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	0.30	0.34	0.76	0.89	0.34	0.22	0.22	0.27
Propylene (Propene)	3.4 U	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	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	0.21 U	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	0.21 U	0.21 U	0.21 U	0.23	0.21 U	0.15 U	0.21 U	0.21 U
Tetrachloroethene	0.47	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	<b>7.5 [a]</b>	0.64	4.2	3.2	3.3	2.2	<b>7.6 [a]</b>	0.34 U
Tetrahydrofuran	0.15 U	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	12	1.2	1.2	0.49	0.41	0.21	0.28	0.15 U
Toluene	0.93	1.6	0.30	0.64	2.8	0.47	0.49	1.0	4.2	0.62	3.2	1.9	2.7	1.7	1.3	4.0	5.5	2.3	1.0	1.2	1.1
trans-1,2-Dichloroethene	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	0.059 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	0.23 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	0.068 U	0.22 U	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.22 U	
Trichloroethene	0.27 U	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	<b>4.4</b>	0.56	<b>1.6</b>	<b>1.4</b>	0.91	0.77	<b>1.9</b>	0.27 U
Trichlorofluoromethane	1.8	1.0	0.89	1.8	1.7	1.6	1.3	1.9	2.4	1.4	1.6	1.4	1.3	2.0	1.2	1.7	2.8	1.6	1.3	1.3	1.2
Trichlorotrifluoroethane	0.59	0.69	0.40	0.59	0.57	0.55	0.79	1.1	0.63	0.54	0.45	0.57	0.58	0.69	0.58	0.49	0.46	0.64	0.56	0.74	0.50
Vinyl acetate	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	2.5 U	2.5 U	2.1 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	
Vinyl chloride	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	0.09 U	0.038 U	0.27	0.13 U	0.18	0.20	0.13 U	0.10 U	0.18	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 <sup>3</sup> )	Indoor Air - Large Retail Space										Indoor Air - Large Retail Space									
	IA-2-092409 9/24/2009	IA-2-100109 10/1/2009	IA-2-100809 10/8/2009	IA-2-012810 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	IA-2-061412 6/14/2012	IA-2-091312 9/13/2012
1,1,1-Trichloroethane	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	0.27 U	0.13	0.082 U	0.16 U	0.08
1,1,1,2-Tetrachloroethane																	0.62 U	0.37 U	0.37 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	0.34 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	
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 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
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 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	0.043
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 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	0.045
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	0.75 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	0.52 U	
1,2,4-Trimethylbenzene	0.39	0.27	0.52	0.55	0.25 U	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	0.19	0.48
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	0.38 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
1,2-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 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
1,2-Dichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 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	0.051	0.08
1,2-Dichloropropane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 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	0.14 U	0.16 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	0.35 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	0.25 U	0.25 U	0.59	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	0.15 U	0.15 U	0.080	0.26
1,3-Butadiene	0.23 U	0.23 U	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	0.11 U	0.11 U	0.066 U	0.066 U	0.066 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	0.30 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	0.08
1,4-Dichlorobenzene	0.30 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	0.30 U	0.30 U	0.30 U	0.18 U	0.18 U	0.18 U	0.093
1,4-Dioxane																	0.18 U			
2-Butanone	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	1.4	2.8
2-Hexanone	0.54	0.20 U	0.26	0.51	0.20 U	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	0.15	0.32
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 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	0.086	0.19
4-Methyl-2-pentanone	0.39	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.28	0.49	0.34	0.20 U	0.20 U	0.24	0.10	0.11	0.12	0.19	
Acetone	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	14	17
Benzene	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	0.24	0.62
Benzyl chloride	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	0.26 U	0.26 U	0.26 U	0.16 U	0.16 U	0.16 U	0.18 U
Bromodichloromethane	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	0.33 U	0.33 U	0.33 U	0.34 U	0.34 U	0.20 U	0.10 U	0.20 U	0.24 U
Bromoform	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	0.51 U	0.51 U	0.52 U	0.52 U	0.52 U	0.31 U	0.31 U	0.31 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	0.19 U	0.19 U	0.19 U	0.22	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
Carbon disulfide	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	0.16 U	0.16 U	0.16 U	0.93 U	0.93 U	0.93 U	1.1 U
Carbon tetrachloride	0.40	0.46	0.42	0.31 U	0.40	0.31 U	0.31 U	0.43	0.47	0.50	0.52	0.50	0.48	0.31 U	0.62 [a]	0.52	0.49	0.48	0.45	0.43
Chlorobenzene	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	0.23 U	0.23 U	0.23 U	0.14 U	0.14 U	0.14 U	0.16 U
Chloroethane</																				

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

Parameter (ug/m <sup>3</sup> )	Indoor Air - Large Retail Space										Indoor Air - Large Retail Space									
	IA-2-092409 9/24/2009	IA-2-100109 10/1/2009	IA-2-100809 10/8/2009	IA-2-012810 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	IA-2-061412 6/14/2012	IA-2-091312 9/13/2012
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	0.18	
n-Heptane	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	0.80	0.34	0.20 U	0.48	0.20 U	0.20 U	0.091	0.12 U	0.11	0.40
o-Xylene	0.42	0.30	0.44	0.46	0.40	0.22 U	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	0.17	0.55
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	0.87 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	0.21 U	0.21 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	0.097	0.19
Tetrachloroethene	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	0.090	2.0
Tetrahydrofuran	0.15 U	0.15 U	0.15 U	1.6	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.27	0.15 U	0.15 U	0.15 U	0.15 U	0.097	0.088 U	0.048	0.10 U	
Toluene	1.1	1.2	1.5	2.4	0.93	0.64	0.19 U	0.80	1.3	0.91	1.3	2.2	0.41	2.9	0.55	0.99	1.6	0.24	0.90	2.6
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	0.12 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	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	
Trichloroethene	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	0.081 U	0.16 U	0.20
Trichlorofluoromethane	1.2	1.2	1.2	1.2	1.3	1.4	1.4	1.3	1.3	1.3	1.6	2.5	1.2	1.8	1.2	1.9	1.1	0.94	1.8	2.6
Trichlorotrifluoroethane	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	0.57	0.64
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	0.35 U	0.18 U	3.5 U	0.18 U	0.11 U	0.21 U	0.21 U	0.25 U
Vinyl chloride	0.13 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	0.14	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.090 U

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

Parameter (ug/m <sup>3</sup> )	Indoor Air - Large Retail Space																				
	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 12/13/2013	IA-2-030714 03/07/14	IA-2-061314 6/13/2014	IA-2-091214 9/12/2014	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	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
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	0.055 U	9.8	0.57	1.1	1.1	0.28	1.5	2.2	0.27 U	0.27 U	0.27 U	0.27 U	0.45	0.71
1,1,2-Tetrachloroethane	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.25 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	0.34 U	0.34 U	0.34 U	0.34 U	0.24 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	0.27 U	0.27 U	0.27 U	0.27 U	0.19 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	0.68	0.20 U	0.20 U	0.20 U	0.20 U	0.14 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	0.15	0.04 U	0.35	0.20 U	0.20 U	0.20 U	0.14 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	0.15 U	0.37 U	0.37 U	0.37 U	0.37 U	0.26 U	0.37 U								
1,2,4-Trimethylbenzene	0.98	0.13	0.43	0.20	0.17 U	0.57	0.27	0.2	0.25 U	0.36	0.68	0.61	0.25 U	0.18 U	0.25 U	0.29	0.40	0.25 U	0.39	0.44	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	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.27 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	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U							
1,2-Dichloroethane	0.16	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 U	0.20 U							
1,2-Dichloropropane	0.16 U	0.11	0.16 U	0.16 U	0.16 U	0.16 U	0.046 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U							
1,2-Dichlortetrafluoroethane									0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	0.25 U	0.35 U						
1,3,5-Trimethylbenzene	0.28	0.17 U	0.17 U	0.17 U	0.17 U	0.17	0.17 U	0.059 J	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.42	0.25 U					
1,3-Butadiene	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.44	0.11	0.044 U	0.11 U	0.11 U	0.3	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	0.12 U	0.30 U	0.30 U	0.30 U	0.30 U	0.21 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	0.30 U	0.30 U	0.30 U	0.30 U	0.21 U	0.30 U								
1,4-Dioxane																					
2-Butanone	5.1	2.4	4.2	2.1	1.2	1.8	1.6	4.9	20	4.2	4.6	4.0	1.7	1.6	2.5	2.0	2.6	0.70	1.5	1.9	2.0
2-Hexanone	0.17	0.22	0.51	0.41	0.14 U	0.39	0.14 U	0.16	0.20 U	0.26	0.33	0.3	0.20 U	0.14 U	0.38	0.51	0.58	0.20 U	0.37	0.52	0.39
4-Ethyltoluene	0.24	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.18	0.17 U	0.049 J	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U						
4-Methyl-2-pentanone	3.6	0.14 U	0.54	0.46	0.18	0.57	1.1	1.3	0.20 U	0.20 U	0.29	0.34	0.20 U	0.14 U	0.22	0.20 U	0.42	0.20 U	0.20 U	0.20 U	0.20 U
Acetone	19	46	32	22	32	32	29	37	18	12	17	24	9.7	7.5	50	11	19	6.7	11	14	21
Benzene	0.65	0.91	0.56	0.32	0.66	2.0	0.62	0.30	1.0	0.71	1.9	3.1	0.69	0.6	0.46	0.41	0.5	0.39	0.46	1.3	0.86
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	0.26 U	0.26 U	0.26 U	0.26 U	0.19 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	0.33 U	0.33 U	0.33 U	0.33 U	0.24 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	0.36 U	0.21 U	0.51 U	0.51 U	0.51 U	0.36 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	0.078 U	0.19 U	0.19 U	0.19 U	0.19 U	0.14 U	0.19 U							
Carbon disulfide	1.9	0.47	0.39	0.33	0.17	0.17	0.56	0.49 J	0.16 U	0.16 U	0.16 U	0.16 U	0.12 U	0.16 U							
Carbon tetrachloride	0.56 [a]	0.45	0.58	0.45	0.46	0.41	0.42	0.43	0.34	0.45	0.52	0.6 [a]	0.43	0.22 U	0.42	0.4	0.43	0.4	0.42</		

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**Providence, Rhode Island**

Parameter ( $\mu\text{g}/\text{m}^3$ )	Indoor Air - Large Retail Space																				
	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-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	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
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	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U							
n-Heptane	3.1	0.33	0.41	0.2	0.14 U	0.64	0.39	0.18	0.22	0.20 U	0.61	0.77	0.20 U	0.14 U	0.20 U	0.20 U	0.20 U	0.20 U	0.24	0.73	0.20 U
o-Xylene	5.1	0.33	0.52	0.2	0.15 U	0.66	0.34	0.17	0.28	0.33	0.79	0.86	0.23	0.22	0.24	0.26	0.45	0.27	0.34	0.44	0.26
Propylene (Propene)	2.4 U	2.4 U	2.4 U	0.7	2.4 U	2.4 U	2.7	1.4 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	0.35 U	0.18 U	0.35 U	0.35 U	0.35 U
Styrene	0.45	0.12	0.15 U	0.17	0.15 U	0.20	0.35	0.40	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.15 U	0.21 U	0.40	0.21 U				
Tetrachloroethene	0.24	0.18	0.64	0.25	0.24 U	0.28	0.34	0.13	6.1 [a]	0.56	4.3	3.3	1.9	2.2	7.1 [a]	0.34 U	0.34 U	2.0	1.1	2.2	0.34 U
Tetrahydrofuran	0.24	0.10 U	0.10 U	0.10 U	0.10 U	0.058	0.12	0.09	12	1.1	1.3	0.49	0.15 U	0.24	0.15 U	0.15 U	0.15 U	0.15 U	0.40	0.15 U	0.78
Toluene	5.6	1.5	2.8	1.3	1.0	3.2	1.9	1.6	1.7	1.5	4.7	5.8	2.1	1.0	1.2	1.2	1.1	0.73	1.1	2.5	0.78
trans-1,2-Dichloroethene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.14 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	0.045 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U							
Trichloroethene	0.19 U	0.053	0.19 U	0.19 U	0.19 U	0.23	0.19 U	0.064	3.9	0.49	1.7	1.5	0.53	0.77	1.8	0.27 U	0.27 U	1.1	0.54	0.75	0.27 U
Trichlorofluoromethane	2.7	1.3	2.0	1.3	1.6	1.2	1.3	1.3	1.9	1.3	1.8	2.8	1.8	1.2	1.3	1.4	1.2	1.2	1.2	1.2	1.3
Trichlorotrifluoroethane	0.56	0.70	1.7	0.60	0.57	0.46	0.54	0.56	0.60	0.58	0.49	0.44	0.69	0.53	0.74	0.51	0.46	0.49	0.47	0.49	0.52
Vinyl acetate	0.25 U	0.25 U	2.5 U	1.4 U	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.50 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	0.23	0.13 U	0.19	0.21	0.13 U	0.10 U	0.17	0.13 U	0.13 U	0.18	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 <sup>3</sup> )	Indoor Air - Large Retail Space																			
	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-3-201711 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	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 12/13/2013
1,1,1-Trichloroethane	0.29	0.86	0.27 U	1.2	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.11	0.082 U	0.16 U	0.19 U	0.19 U	0.19 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	0.46	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	0.34 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	0.24 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	0.27 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	0.19 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	0.20 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	
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	0.12 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	
1,2,4-Trichlorobenzene	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	0.52 U	0.52 U	0.52 U	0.26 U	0.26 U	0.26 U	
1,2,4-Trimethylbenzene	0.25 U	0.25 U	0.25 U	0.26	0.34	0.46	0.60	0.25 U	0.49	0.25 U	0.25 U	0.071	0.10	0.19	0.47	0.17 U	0.076	0.26	0.33	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	0.38 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	
1,2-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 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	0.21 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	0.20 U	0.20 U	0.20 U	0.20 U	0.056	0.061 U	0.051	0.14 U	0.14 U	0.14 U	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	0.23 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	
1,2-Dichlorotetrafluoroethane	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 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	0.074	0.22	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	
1,3-Butadiene	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	0.066 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	
1,3-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 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	0.21 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	0.30 U	0.30 U	0.30 U	0.18 U	0.18 U	0.059	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	
1,4-Dioxane																				
2-Butanone	1.2	1.6	0.51	1.0	2.2	3.3	0.95	0.39	0.76 B	2.9 U	5.9 U	1.2	0.45	2.4	2.7	0.93	2.2	2.0	2.9	0.66
2-Hexanone	0.22	0.39	0.20 U	0.29	0.52	0.67	0.20 U	0.20 U	0.20 U	4.1 U	0.24	0.093	0.12 U	0.33	0.22	0.14 U	0.32	0.28	0.31	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 U	0.25 U	0.25 U	0.15 U	0.15 U	0.074	0.15	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	
4-Methyl-2-pentanone	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.38	0.34	0.20 U	0.20 U	0.20 U	0.20 U	0.084	0.12 U	0.19	0.21	0.14 U	0.14 U	0.19	0.36	0.14 U
Acetone	6.7	7.3	3.8	7.7	15	21	11	9.7 B	9.7 B	11 B	13	7.2	3.9	13	12	6.7	12	28	16	14
Benzene	0.67	0.53	0.6	0.67	0.47	0.51	0.72	0.47	1.4	0.29	0.30	0.39	0.35	0.23	0.66	0.53	0.75	0.23	0.75	0.54
Benzyl chloride	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	0.18 U	0.18 U	0.18 U	0.18 U	
Bromodichloromethane	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	0.34 U	0.20 U	0.20 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	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.52 U	0.52 U	0.52 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	
Bromomethane	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	0.31	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	
Carbon disulfide	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	1.6 U	0.93 U	0.93 U	0.93 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	
Carbon tetrachloride	0.31 U	0.43	0.43	0.49	0.54	0.57 [a]	0.41	0.45	0.6 [a]	0.64 [a]	0.51	0.50	0.49	0.43	0.38	0.32	0.39	0.42	0.47	0.47
Chlorobenzene	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	0.14 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	
Chloroethane	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	0.079 U	0.079 U	0.079 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	
Chloroform	0.48	0.24 U	0.24 U	0.24 U	0.24 U															

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

Parameter (ug/m <sup>3</sup> )	Indoor Air - Large Retail Space																			
	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	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
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	0.11 U	0.11 U	0.11 U	0.22	0.13 U	0.13 U	0.13 U	0.13 U		
n-Heptane	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	0.14 U	0.083	0.15	0.83	0.14 U
o-Xylene	0.22 U	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	0.35	0.13	0.26	0.46	0.15 U
Propylene (Propene)	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	2.1 U	2.1 U	1.3	1.8	2.4 U	1.1	2.4 U	2.4 U	2.4 U
Styrene	0.21 U	0.21 U	0.21 U	0.21 U	0.23	0.34	0.26	0.21 U	0.21 U	0.21 U	0.041	0.13 U	0.10	0.14	0.15 U	0.15 U	0.15 U	0.15 U	0.3	0.15 U
Tetrachloroethene	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	0.25	0.095	0.30	0.24 U	0.24 U
Tetrahydrofuran	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	0.15 U	0.08	0.088 U	0.088 U	0.072	0.10 U	0.10 U	0.14	0.73	0.10 U
Toluene	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	0.62	0.56	0.90	4.6	0.66
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	0.12 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	
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	0.23 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	
Trichloroethylene	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	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Trichlorofluoromethane	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	1.2	1.3	1.5	1.6	1.4
Trichlorotrifluoroethane	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	0.59	0.65	0.65	0.62	0.61
Vinyl acetate	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	0.25 U	0.25 U	2.5 U	2.5 U	2.5 U
Vinyl chloride	0.13 U	0.13 U	0.13 U	0.14	0.13 U	0.13 U	0.13 U	0.13	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

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

Parameter (ug/m <sup>3</sup> )	Indoor Air - Large Retail Space																					
	IA-3-030714 03/07/14	IA-3-061314 6/13/2014	IA-3-091214 9/12/2014	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	IA-4-092409 9/24/2009	IA-4-100109 10/1/2009	IA-4-100809 10/8/2009	IA-4-12810 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	
1,1,1-Trichloroethane	0.19 U	0.19 U	0.19	10	0.62	1.1	1.1	0.45	1.5	2.2	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.29	0.89	0.27 U	1.1	0.28
1,1,1,2-Tetrachloroethane	0.44 U	0.44 U	0.25 U																			
1,1,2,2-Tetrachloroethane	0.24 U	0.24 U	0.069 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	0.19 U	0.19 U	0.11 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	0.14 U	0.14 U	0.04 U	0.73	0.20 U	0.20 U	0.20 U	0.31	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	0.14 U	0.14 U	0.04 U	0.42	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	0.26 U	0.26 U	0.15 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	0.75 U	0.37 U	0.37 U						
1,2,4-Trimethylbenzene	0.53	0.23	0.32	0.26	0.37	0.74	0.65	0.29	0.18 U	0.25 U	0.25 U	0.41	0.28	0.41	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.34	
1,2-Dibromoethane (EDB)	0.27 U	0.27 U	0.077 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	0.21 U	0.21 U	0.12 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	0.14 U	0.14 U	0.032 J	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	0.16 U	0.16 U	0.046 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																						
1,3,5-Trimethylbenzene	0.17 U	0.17 U	0.069 J	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	0.25 U	0.25 U	0.25 U						
1,3-Butadiene	0.55	0.078 U	0.044 U	0.11 U	0.11 U	0.33	0.77	0.11 U	0.08 U	0.11 U	0.23 U	0.23 U	0.23 U	0.23 U	0.11 U	0.23 U	0.11 U					
1,3-Dichlorobenzene	0.21 U	0.21 U	0.12 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	0.21 U	0.21 U	0.12 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-Dioxane																						
2-Butanone	1.1	1.5	2.1 J	21	4.4	6.0	3.2	2.5	1.1	1.6	1.5	2.0	1.3	1.2	0.30 U	0.69	1.2	0.50	1.6	1.5	2.2	
2-Hexanone	0.14 U	0.14 U	0.21	0.20 U	0.33	0.73	0.39	0.20 U	0.14 U	0.20 U	0.29	0.45	0.32	0.27	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.39	
4-Ethyltoluene	0.18	0.17 U	0.051 J	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	0.25 U	0.25 U	0.25 U						
4-Methyl-2-pentanone	0.17	0.35	0.26	0.20 U	0.20 U	0.43	0.28	0.20 U	0.14 U	0.20 U	0.20 U	0.32	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	
Acetone	11	15	42	17	10	15	20	7.8	7.9	20	9.3	16	9.3	10	2.3	4.9	5.9	2.5	6.9	8.7	15	
Benzene	2.4	0.41	0.29	1.1	0.68	1.8	3.0	0.76	0.59	0.44	0.40	0.43	0.37	0.48	0.16 U	0.88	0.66	0.54	0.57	0.64	0.48	
Benzyl chloride	0.18 U	0.18 U	0.052 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						
Bromodichloromethane	0.24 U	0.24 U	0.067 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						
Bromoform	0.36 U	0.36 U	0.21 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	0.51 U	0.51 U	0.51 U						
Bromomethane	0.14 U	0.16	0.099	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 U	0.19 U	0.19 U	0.19 U						
Carbon disulfide	1.1 U	0.15	0.16 J	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 U	0.16 U	0.16 U	0.31						
Carbon tetrachloride	0.45	0.44	0.42	0.40																		

**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-3-030714 03/07/14	IA-3-061314 6/13/2014	IA-3-091214 9/12/2014	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	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
Methyl-t-butyl ether	0.13 U	0.13 U	0.072 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								
n-Heptane	0.65	0.43	0.52	0.23	0.20 U	0.58	0.79	0.21	0.14 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	0.20 U	0.20 U	
o-Xylene	0.62	0.30	0.22	0.27	0.33	0.78	0.87	0.33	0.22	0.22 U	0.22 U	0.42	0.28	0.4	0.22 U	0.31	0.22 U	0.22 U	0.22 U	0.30	0.44
Propylene (Propene)	2.4 U	2.4 U	1.8	0.18 U	0.18 U	0.090 U	0.090 U	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	0.35 U	0.87 U
Styrene	0.18	0.16	0.15	0.21 U	0.21 U	0.22	0.23	0.21 U	0.15 U	0.21 U	0.21 U	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
Tetrachloroethene	0.24 U	0.30	0.12	7.3 [a]	0.58	4.4	3.4	3.4	2.4	7.9 [a]	0.75	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
Tetrahydrofuran	0.10 U	0.13	0.16	13	1.2	1.3	0.47	0.34	0.21	0.25	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.19				
Toluene	3.4	1.8	2.5	1.8	1.3	4.3	5.8	2.3	1.0	1.0	1.1	1.3	0.76	1.2	0.19 U	0.79	0.63	0.47	0.83	1.4	0.98
trans-1,2-Dichloroethene	0.14 U	0.14 U	0.04 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	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	
trans-1,3-Dichloropropene	0.16 U	0.16 U	0.045 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							
Trichloroethene	0.26	0.19 U	0.075	4.7	0.48	1.7	1.5	0.88	0.78	2.0	0.27 U	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
Trichlorofluoromethane	1.7	1.4	1.3	2.0	1.3	1.6	3.0	1.7	1.3	1.3	1.2	1.5	1.2	1.2	0.93	1.3	1.4	1.6	1.5	1.3	1.3
Trichlorotrifluoroethane	0.51	0.59	0.57	0.72	0.59	0.51	0.45	0.57	0.54	0.61	0.49	0.48	0.47	0.50	0.38 U	0.55	0.58	0.55	1.3	0.48	0.51
Vinyl acetate	2.5 U	2.5 U	1.4 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	0.36 U	0.71 U	0.18 U							
Vinyl chloride	0.090 U	0.09 U	0.026 U	0.29	0.13 U	0.20	0.22	0.13 U	0.10 U	0.20	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	

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

Parameter (ug/m <sup>3</sup> )	Indoor Air - Large Retail Space																	
	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	IA-4-060713 6/7/2013	IA-4-090613 9/6/2013	IA-4-121313 12/13/13	IA-4-030714 3/07/14	IA-4-061314 6/13/2014	IA-4-091214 9/12/2014
1,1,1-Trichloroethane	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	0.055 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	0.44 U	0.44 U	0.25 U	
1,1,2,2-Tetrachloroethane	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.21 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	0.069 U	
1,1,2-Trichloroethane	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	0.19 U	0.19 U	0.19 U	0.11 U	
1,1-Dichloroethane	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	
1,1-Dichloroethene	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	0.14 U	0.14 U	0.14 U	0.04 U	
1,2,4-Trichlorobenzene	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.74 U	0.45 U	0.45 U	0.52 U	0.52 U	0.52 U	0.52 U	0.26 U	0.26 U	0.26 U	0.26 U	0.15 U	
1,2,4-Trimethylbenzene	0.41	0.44	0.25 U	0.49	0.25 U	0.25 U	0.094	0.15 U	0.19	0.38	0.90	0.13	0.47	0.20	0.17 U	0.56	0.26	0.17
1,2-Dibromoethane (EDB)	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	0.077 U	
1,2-Dichlorobenzene	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.30 U	0.18 U	0.18	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	
1,2-Dichloroethane	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	0.16	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 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	0.046 U	
1,2-Dichlorotetrafluoroethane	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	0.15 U	0.15 U	0.080	0.12	0.27	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.098 U	
1,3-Butadiene	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	0.47	0.11	0.044 U	
1,3-Dichlorobenzene	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	0.21 U	0.21 U	0.21 U	0.12 U	
1,4-Dichlorobenzene	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	0.21 U	0.21 U	0.21 U	0.12 U	
1,4-Dioxane						0.18 U												
2-Butanone	4.8	2.4	0.96	1.0 B	2.9 U	5.9 U	1.0	1.5	0.97	2.3	4.7	2.3	3.9	0.95	1.2	1.1	2.9	4.6
2-Hexanone	1.0	0.59	0.20 U	0.20 U	0.21 J	0.35	0.086	0.32	0.098	0.18	0.19	0.25	0.51	0.14 U	0.14 U	0.15	0.36	0.2
4-Ethyltoluene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.15 U	0.15 U	0.068	0.12	0.22	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.098 U	
4-Methyl-2-pentanone	0.43	0.45	0.20 U	0.20 U	0.20 U	0.20 U	0.098	0.15	0.13	0.14 U	3.3	0.28	0.56	0.47	0.16	0.48	1.3	1
Acetone	31	19	13 B	12 B	12 B	15	7.4	6.8	9.1	12	17	44	36	18	29	29	37	38
Benzene	0.47	0.66	0.49	1.4	0.31	0.30	0.38	0.35	0.23	0.64	0.67	0.82	0.55	0.47	0.56	2.2	0.68	0.39
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	0.052 U	
Bromodichloromethane	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	0.067 U	
Bromoform	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	0.21 U	
Bromomethane	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.12 U	0.12 U	0.24	0.14 U	0.14 U	0.13	0.14 U	0.14 U	0.14 U	0.14 U	0.078 U	
Carbon disulfide	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	1.6 U	0.93 U	0.93 U	0.052	1.1 U	1.6	0.52	0.38	0.39	0.15	0.19	0.62	0.46 J
Carbon tetrachloride	0.48	0.44	0.46	0.57 [a]	0.68 [a]	0.52	0.48	0.47	0.43	0.36	0.54	0.41	0.65 [a]	0.45	0.46	0.45	0.40	0.39
Chlorobenzene	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.14 U	0.14 U	0.16 U	0.47	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.046 U	
Chloroethane	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.079 U	0.079 U	0.079 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.053 U	
Chloroform	0.24 U	3.3	0.24 U	0.24 U	0.24 U	0.24 U	0.085	0.073 U	0.13	0.19	0.17 U	0.11	0.17 U	0.27	0.44	0.46	0.84	1.2
Chloromethane	1.2	1.0	0.95	0.95	1.1	1.5	1.4	1.0	1.3	1.3	1.1	1.3	1.6	1.0	1.1	1.4	1.2	0.89
cis-1,2-Dichloroethene	0.44	0.20 U	1.8	0.20 U	0.20 U	0.20 U	0.19	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.18	0.14 U	0.14 U	0.14 U	0.04 U	
cis-1,3-Dichloropropene	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14											

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

Parameter (ug/m <sup>3</sup> )	Indoor Air - Large Retail Space																	
	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	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
Methyl-t-butyl ether	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	0.13 U	0.13 U	0.13 U	0.13 U	0.072 U	
n-Heptane	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	0.53	0.16	0.14 U	0.66	0.39	0.17
o-Xylene	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	0.57	0.23	0.15 U	0.66	0.33	0.16
Propylene (Propene)	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	2.4 U	2.4 U	2.4 U	2.4 U	3.0	1.4 U
Styrene	0.29	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.077	0.092	0.55	0.093	0.52	0.099	0.15 U	0.15 U	0.15 U	0.23	0.46	0.4
Tetrachloroethene	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	0.45	0.30	0.24 U	0.31	0.32	0.23
Tetrahydrofuran	0.24	0.15 U	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	0.10 U	0.10 U	0.10 U	0.10 U	0.12	0.094
Toluene	1.0	2.0	0.43	2.7	0.56	0.95	1.6	0.32	0.80	2.9	4.8	1.5	3.0	1.4	0.75	3.4	1.9	1.4
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	0.14 U	0.14 U	0.14 U	0.04 U	
trans-1,3-Dichloropropene	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	0.045 U	
Trichloroethene	0.44	0.27 U	1.8	0.27 U	0.27 U	0.27 U	0.35	0.15	0.052	0.12	0.19 U	0.057	0.19 U	0.19 U	0.19 U	0.24	0.19 U	0.054 U
Trichlorofluoromethane	1.9	2.4	1.2	1.8	1.4	1.8	1.3	0.87	1.5	1.7	2.8	1.2	2.2	1.3	1.5	1.3	1.4	1.3
Trichlorotrifluoroethane	0.59	0.43	0.54	0.70	0.71	0.52	0.71	0.44	0.56	0.59	0.60	0.66	1.6	0.65	0.58	0.49	0.54	0.55
Vinyl acetate	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	0.25 U	2.5 U	1.4 U				
Vinyl chloride	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	0.090 U	0.090 U	0.090 U	0.090 U	0.09 U	0.026 U

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

Parameter (ug/m <sup>3</sup> )	Indoor Air - Large Retail Space									
	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	0.45	0.52	0.65	0.57	0.51	0.44	0.69	0.50	0.49	0.53
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
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
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
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
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	0.37 U	0.37 U	0.37 U
1,2,4-Trimethylbenzene	0.25 U	0.25 U	0.25 U	0.29	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	0.38 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	0.30 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	0.20 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	0.23 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	0.35 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	0.25 U	0.25 U	0.25 U
1,3-Butadiene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 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	0.30 U	0.30 U	0.30 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	0.30 U	0.30 U	0.30 U
1,4-Dioxane										
2-Butanone	3.3	3.4	2.1	2.6	2.0	1.6	3.1	2.5	2.6	1.4
2-Hexanone	0.73	0.66	0.38	0.51	0.37	0.38	0.61	0.48	0.43	0.29
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 U	0.25 U	0.25 U
4-Methyl-2-pentanone	0.42	0.39	0.32	0.36	0.54	0.27	0.32	0.30	0.61	0.23
Acetone	12	13	10	11	8.5	7.7	13	11	9.8	6.9
Benzene	0.54	0.60	0.67	0.55	0.56	0.51	0.53	0.60	0.51	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	0.26 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	0.33 U	0.33 U	0.33 U
Bromoform	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	0.19 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	0.16 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
Carbon tetrachloride	0.7 [a]	0.68 [a]	0.71 [a]	0.68 [a]	0.68 [a]	0.63 [a]	0.68 [a]	0.7 [a]	0.64 [a]	0.66 [a]
Chlorobenzene	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	0.13 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
Chloroform	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
Chloromethane	1.0	0.98	1.0	0.95	1.0	1.0	0.92	1.1	0.91	1.2
cis-1,2-Dichloroethene	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.21	0.20 U	0.20 U	0.20 U
cis-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
Cyclohexane	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
Dibromochloromethane	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
Dichlorodifluoromethane	2.5	2.3	2.6	2.4	2.7	2.4	2.4	2.8	2.3	2.7
Ethanol	65	9.0	6.5	5.9	6.0	5.6	5.9	14	44	14
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
Ethylbenzene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.27	0.22 U
Hexachlorobutadiene	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	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	3.3	3.4	3.7	3.5	3.6	3.4	4.4	3.6	2.8	3.2
m,p-Xylene	0.58	0.57	0.58	0.55	0.49	0.50	0.48	0.53	1.0	0.50
Methyl methacrylate										
Methylene chloride	5.9	1.5	1.5	1.6	1.9	1.6	1.5	1.6	1.6	1.4

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

Parameter (ug/m <sup>3</sup> )	Indoor Air - Large Retail Space									
	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
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
n-Heptane	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
o-Xylene	0.28	0.28	0.27	0.27	0.25	0.26	0.25	0.27	0.34	0.26
Propylene (Propene)	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	0.23	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	0.47	0.47	0.54	0.66	0.64	0.60	0.73	0.53	0.46	0.46
Tetrahydrofuran	0.15 U	0.15 U	0.15 U	0.15 U	0.20	0.15 U				
Toluene	0.73	0.7	0.58	0.59	0.51	0.53	0.57	0.53	0.54	0.47
trans-1,2-Dichloroethene	0.20 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	0.22 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	0.28	0.27	0.29	0.34	0.27	0.28	0.27 U	0.27 U	0.27 U
Trichlorofluoromethane	1.3	1.3	1.2	1.1	1.4	1.3	1.1	1.4	1.0	1.4
Trichlorotrifluoroethane	0.63	0.60	0.65	0.62	0.64	0.57	0.59	0.68	0.62	0.58
Vinyl 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
Vinyl chloride	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

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.

Prepared by / Date: AKN 10/08/14  
 Checked by / Date: MAM 10/27/14

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

ug/m<sup>3</sup> - micrograms per cubic meter

**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**

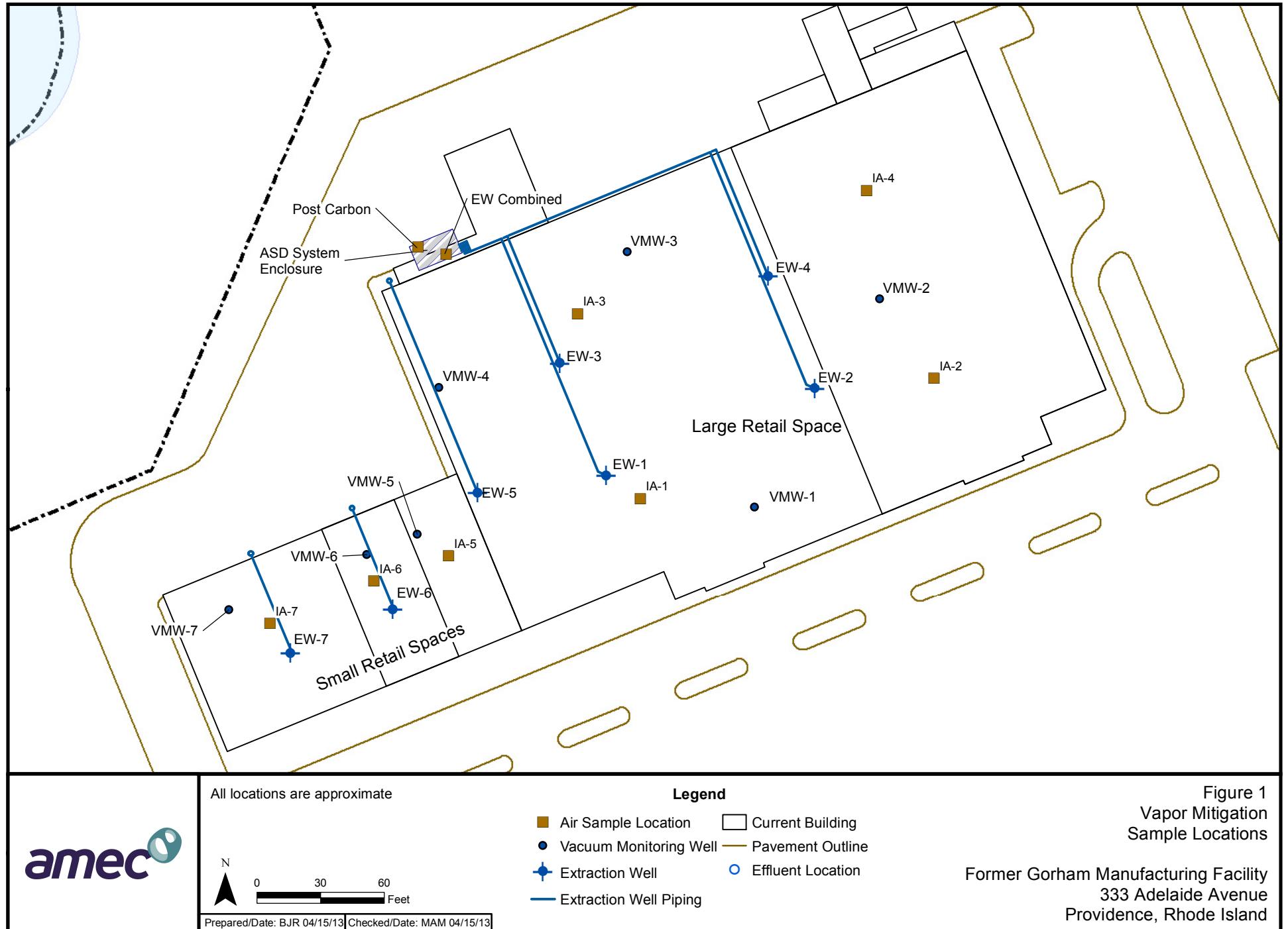
Date	Pressure Differential (inches of water)			
	VMW-1	VMW-2	VMW-3	VMW-4
2/3/2009	-0.20	-0.62	-0.15	-0.12
2/18/2009	-0.509	-0.738	-0.650	-0.253
2/26/2009	-0.511	-0.710	-0.665	-0.273
3/6/2009	-0.507	-0.610	-0.715	-0.251
3/6/2009*	-0.120	-0.195	-0.230	-0.028
3/31/2009	-0.148	-0.221	-0.244	-0.072
4/14/2009	-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

\* vacuum reduced at extraction wells

\*\* ASD system offline

Prepared by/Date: MAM 10/27/14  
Checked by/Date: KRM 10/27/14

## **FIGURES**



**amec**

## **APPENDIX A**

### **Laboratory Reports**

September 19, 2014

Andrew Nelson  
AMEC E&I, Inc.  
271 Mill Road  
Chelmsford, MA 01824

Project Location: Providence, RI  
Client Job Number:  
Project Number: 3650080117  
Laboratory Work Order Number: 14I0610

Enclosed are results of analyses for samples received by the laboratory on September 12, 2014. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



James M. Georgantas  
Project Manager

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

REPORT DATE: 9/19/2014

AMEC E&I, Inc.  
271 Mill Road  
Chelmsford, MA 01824  
ATTN: Andrew Nelson

PURCHASE ORDER NUMBER: C012203270

PROJECT NUMBER: 3650080117

#### ANALYTICAL SUMMARY

WORK ORDER NUMBER: 14I0610

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-1-091214	14I0610-01	Air		EPA TO-15	
IA-2-091214	14I0610-02	Air		EPA TO-15	
IA-3-091214	14I0610-03	Air		EPA TO-15	
IA-4-091214	14I0610-04	Air		EPA TO-15	
IA-5-091214	14I0610-05	Air		EPA TO-15	
IA-6-091214	14I0610-06	Air		EPA TO-15	
IA-7-091214	14I0610-07	Air		EPA TO-15	
AA-1-091214	14I0610-08	Air		EPA TO-15	
EW-5-091214	14I0610-09	Air		EPA TO-15	
EW-6-091214	14I0610-10	Air		EPA TO-15	
EW-7-091214	14I0610-11	Air		EPA TO-15	
EW-Combined-091214	14I0610-12	Air		EPA TO-15	

**CASE NARRATIVE SUMMARY**

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

**EPA TO-15**

**Qualifications:**

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:**

**1,2,4-Trichlorobenzene, 1,2-Dichloropropane, 2-Hexanone (MBK), Chloromethane, Isopropanol**

14I0610-01[IA-1-091214], 14I0610-02[IA-2-091214], 14I0610-03[IA-3-091214], 14I0610-04[IA-4-091214], 14I0610-05[IA-5-091214], 14I0610-06[IA-6-091214],  
14I0610-07[IA-7-091214], 14I0610-08[AA-1-091214], 14I0610-09[EW-5-091214], 14I0610-10[EW-6-091214], 14I0610-11[EW-7-091214],  
14I0610-12[EW-Combined-091214], B105204-BLK1, B105204-BS1, 14I0610-05RE1[IA-5-091214], B105206-BLK1, B105206-BS1

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:**

**1,2-Dichloropropane, 2-Hexanone (MBK), Benzene, Chloromethane, Ethanol, Vinyl Chloride**

14I0610-01[IA-1-091214], 14I0610-02[IA-2-091214], 14I0610-03[IA-3-091214], 14I0610-04[IA-4-091214], 14I0610-05[IA-5-091214], 14I0610-06[IA-6-091214],  
14I0610-07[IA-7-091214], 14I0610-08[AA-1-091214], 14I0610-09[EW-5-091214], 14I0610-10[EW-6-091214], 14I0610-11[EW-7-091214],  
14I0610-12[EW-Combined-091214], B105204-BLK1, B105204-BS1, 14I0610-04RE1[IA-4-091214], 14I0610-05RE1[IA-5-091214], 14I0610-06RE1[IA-6-091214],  
B105206-BLK1, B105206-BS1

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.



Tod E. Kopyscinski  
Laboratory Director

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #:** IA-1-091214

**Sample ID:** 14I0610-01

Sample Matrix: Air

Sampled: 9/12/2014 08:21

Sample Description/Location:

Sub Description/Location:

Canister ID: 1139

Canister Size: 6 liter

Flow Controller ID: 4186

Sample Type: 30 min

**Work Order:** 14I0610

Initial Vacuum(in Hg): -28

Final Vacuum(in Hg): -10

Receipt Vacuum(in Hg): -10

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			ug/m3			Date/Time		
		RL	MDL	Flag	Results	RL	Dilution	Analyzed	Analyst	
Acetone	5.6	1.2	0.42		13	2.9	0.6	9/16/14 0:57	WSD	
Benzene	0.12	0.030	0.016	V-05	0.39	0.096	0.6	9/16/14 0:57	WSD	
Benzyl chloride	ND	0.015	0.0058		ND	0.078	0.6	9/16/14 0:57	WSD	
Bromodichloromethane	ND	0.015	0.0065		ND	0.10	0.6	9/16/14 0:57	WSD	
Bromoform	ND	0.030	0.0058		ND	0.31	0.6	9/16/14 0:57	WSD	
Bromomethane	0.031	0.030	0.021		0.12	0.12	0.6	9/16/14 0:57	WSD	
1,3-Butadiene	ND	0.030	0.015		ND	0.066	0.6	9/16/14 0:57	WSD	
2-Butanone (MEK)	0.93	1.2	0.022	J	2.8	3.5	0.6	9/16/14 0:57	WSD	
Carbon Disulfide	0.034	0.30	0.010	J	0.11	0.93	0.6	9/16/14 0:57	WSD	
Carbon Tetrachloride	0.064	0.015	0.0073		0.40	0.094	0.6	9/16/14 0:57	WSD	
Chlorobenzene	ND	0.015	0.010		ND	0.069	0.6	9/16/14 0:57	WSD	
Chloroethane	ND	0.030	0.011		ND	0.079	0.6	9/16/14 0:57	WSD	
Chloroform	0.055	0.015	0.0070		0.27	0.073	0.6	9/16/14 0:57	WSD	
Chloromethane	0.37	0.060	0.013	L-03, V-05	0.76	0.12	0.6	9/16/14 0:57	WSD	
Cyclohexane	ND	0.030	0.017		ND	0.10	0.6	9/16/14 0:57	WSD	
Dibromochloromethane	ND	0.015	0.0080		ND	0.13	0.6	9/16/14 0:57	WSD	
1,2-Dibromoethane (EDB)	ND	0.015	0.0067		ND	0.12	0.6	9/16/14 0:57	WSD	
1,2-Dichlorobenzene	ND	0.030	0.0080		ND	0.18	0.6	9/16/14 0:57	WSD	
1,3-Dichlorobenzene	ND	0.030	0.0067		ND	0.18	0.6	9/16/14 0:57	WSD	
1,4-Dichlorobenzene	ND	0.030	0.0076		ND	0.18	0.6	9/16/14 0:57	WSD	
Dichlorodifluoromethane (Freon 12)	0.45	0.030	0.013		2.2	0.15	0.6	9/16/14 0:57	WSD	
1,1-Dichloroethane	ND	0.015	0.0085		ND	0.061	0.6	9/16/14 0:57	WSD	
1,2-Dichloroethane	ND	0.015	0.0083		ND	0.061	0.6	9/16/14 0:57	WSD	
1,1-Dichloroethylene	ND	0.015	0.0073		ND	0.059	0.6	9/16/14 0:57	WSD	
cis-1,2-Dichloroethylene	ND	0.015	0.011		ND	0.059	0.6	9/16/14 0:57	WSD	
trans-1,2-Dichloroethylene	ND	0.015	0.0079		ND	0.059	0.6	9/16/14 0:57	WSD	
1,2-Dichloropropane	ND	0.015	0.010	L-03, V-05	ND	0.069	0.6	9/16/14 0:57	WSD	
cis-1,3-Dichloropropene	ND	0.015	0.0080		ND	0.068	0.6	9/16/14 0:57	WSD	
trans-1,3-Dichloropropene	ND	0.015	0.0080		ND	0.068	0.6	9/16/14 0:57	WSD	
Ethanol	18	1.2	0.54		34	2.3	0.6	9/16/14 0:57	WSD	
Ethyl Acetate	0.13	0.030	0.022		0.46	0.11	0.6	9/16/14 0:57	WSD	
Ethylbenzene	0.038	0.030	0.0083		0.17	0.13	0.6	9/16/14 0:57	WSD	
4-Ethyltoluene	ND	0.030	0.0068		ND	0.15	0.6	9/16/14 0:57	WSD	
Heptane	0.13	0.030	0.0097		0.53	0.12	0.6	9/16/14 0:57	WSD	
Hexachlorobutadiene	ND	0.030	0.011		ND	0.32	0.6	9/16/14 0:57	WSD	
Hexane	0.16	1.2	0.053	J	0.55	4.2	0.6	9/16/14 0:57	WSD	
2-Hexanone (MBK)	0.061	0.030	0.0077	L-03, V-05	0.25	0.12	0.6	9/16/14 0:57	WSD	
Isopropanol	1.6	1.2	0.037	L-03	4.0	2.9	0.6	9/16/14 0:57	WSD	

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #: IA-1-091214**
**Sample ID: 14I0610-01**

Sample Matrix: Air

Sampled: 9/12/2014 08:21

Sample Description/Location:

Sub Description/Location:

Canister ID: 1139

Canister Size: 6 liter

Flow Controller ID: 4186

Sample Type: 30 min

**Work Order: 14I0610**

Initial Vacuum(in Hg): -28

Final Vacuum(in Hg): -10

Receipt Vacuum(in Hg): -10

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			Flag	ug/m3			Date/Time	
		RL	MDL			Results	RL	Dilution	Analyzed	Analyst
Methyl tert-Butyl Ether (MTBE)	ND	0.030	0.0092			ND	0.11	0.6	9/16/14 0:57	WSD
Methylene Chloride	0.26	0.30	0.036	J		0.90	1.0	0.6	9/16/14 0:57	WSD
Methyl methacrylate	0.037	0.030	0.0092			0.15	0.12	0.6	9/16/14 0:57	WSD
4-Methyl-2-pentanone (MIBK)	0.082	0.030	0.0072			0.33	0.12	0.6	9/16/14 0:57	WSD
Propene	ND	1.2	0.092			ND	2.1	0.6	9/16/14 0:57	WSD
Styrene	0.025	0.030	0.0058	J		0.11	0.13	0.6	9/16/14 0:57	WSD
1,1,1,2-Tetrachloroethane	ND	0.055	0.020			ND	0.37	0.6	9/16/14 0:57	WSD
1,1,2,2-Tetrachloroethane	ND	0.015	0.0071			ND	0.10	0.6	9/16/14 0:57	WSD
Tetrachloroethylene	0.019	0.015	0.0085			0.13	0.10	0.6	9/16/14 0:57	WSD
Tetrahydrofuran	0.049	0.030	0.013			0.14	0.088	0.6	9/16/14 0:57	WSD
Toluene	0.70	0.030	0.0093			2.7	0.11	0.6	9/16/14 0:57	WSD
1,2,4-Trichlorobenzene	ND	0.030	0.011	L-03		ND	0.22	0.6	9/16/14 0:57	WSD
1,1,1-Trichloroethane	0.037	0.015	0.0054			0.20	0.082	0.6	9/16/14 0:57	WSD
1,1,2-Trichloroethane	ND	0.030	0.0091			ND	0.16	0.6	9/16/14 0:57	WSD
Trichloroethylene	0.015	0.015	0.0089			0.081	0.081	0.6	9/16/14 0:57	WSD
Trichlorofluoromethane (Freon 11)	0.23	0.030	0.010			1.3	0.17	0.6	9/16/14 0:57	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.076	0.030	0.0084			0.58	0.23	0.6	9/16/14 0:57	WSD
1,2,4-Trimethylbenzene	0.028	0.030	0.0074	J		0.14	0.15	0.6	9/16/14 0:57	WSD
1,3,5-Trimethylbenzene	0.014	0.030	0.0060	J		0.068	0.15	0.6	9/16/14 0:57	WSD
Vinyl Acetate	ND	0.60	0.015			ND	2.1	0.6	9/16/14 0:57	WSD
Vinyl Chloride	ND	0.015	0.013	V-05		ND	0.038	0.6	9/16/14 0:57	WSD
m&p-Xylene	0.14	0.060	0.015			0.59	0.26	0.6	9/16/14 0:57	WSD
o-Xylene	0.050	0.030	0.0086			0.22	0.13	0.6	9/16/14 0:57	WSD

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	106	70-130	9/16/14 0:57
4-Bromofluorobenzene (2)	120	70-130	9/16/14 0:57

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #: IA-2-091214**
**Sample ID: 14I0610-02**

Sample Matrix: Air

Sampled: 9/12/2014 10:32

Sample Description/Location:

Sub Description/Location:

Canister ID: 1465

Canister Size: 6 liter

Flow Controller ID: 4195

Sample Type: 30 min

**Work Order: 14I0610**

Initial Vacuum(in Hg): -30

Final Vacuum(in Hg): -5

Receipt Vacuum(in Hg): -5.6

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
		RL	MDL	Flag	Results	RL				
Acetone	16	0.80	0.28		37	1.9	0.4	9/15/14 19:18	WSD	
Benzene	0.095	0.020	0.010	V-05	0.30	0.064	0.4	9/15/14 19:18	WSD	
Benzyl chloride	ND	0.010	0.0039		ND	0.052	0.4	9/15/14 19:18	WSD	
Bromodichloromethane	ND	0.010	0.0044		ND	0.067	0.4	9/15/14 19:18	WSD	
Bromoform	ND	0.020	0.0038		ND	0.21	0.4	9/15/14 19:18	WSD	
Bromomethane	ND	0.020	0.014		ND	0.078	0.4	9/15/14 19:18	WSD	
1,3-Butadiene	ND	0.020	0.010		ND	0.044	0.4	9/15/14 19:18	WSD	
2-Butanone (MEK)	1.7	0.80	0.015		4.9	2.4	0.4	9/15/14 19:18	WSD	
Carbon Disulfide	0.16	0.20	0.0069	J	0.49	0.62	0.4	9/15/14 19:18	WSD	
Carbon Tetrachloride	0.069	0.010	0.0048		0.43	0.063	0.4	9/15/14 19:18	WSD	
Chlorobenzene	ND	0.010	0.0069		ND	0.046	0.4	9/15/14 19:18	WSD	
Chloroethane	ND	0.020	0.0076		ND	0.053	0.4	9/15/14 19:18	WSD	
Chloroform	0.21	0.010	0.0047		1.0	0.049	0.4	9/15/14 19:18	WSD	
Chloromethane	0.34	0.040	0.0088	L-03, V-05	0.71	0.083	0.4	9/15/14 19:18	WSD	
Cyclohexane	ND	0.020	0.011		ND	0.069	0.4	9/15/14 19:18	WSD	
Dibromochloromethane	ND	0.010	0.0053		ND	0.085	0.4	9/15/14 19:18	WSD	
1,2-Dibromoethane (EDB)	ND	0.010	0.0045		ND	0.077	0.4	9/15/14 19:18	WSD	
1,2-Dichlorobenzene	ND	0.020	0.0053		ND	0.12	0.4	9/15/14 19:18	WSD	
1,3-Dichlorobenzene	ND	0.020	0.0044		ND	0.12	0.4	9/15/14 19:18	WSD	
1,4-Dichlorobenzene	ND	0.020	0.0050		ND	0.12	0.4	9/15/14 19:18	WSD	
Dichlorodifluoromethane (Freon 12)	0.42	0.020	0.0087		2.1	0.099	0.4	9/15/14 19:18	WSD	
1,1-Dichloroethane	ND	0.010	0.0056		ND	0.040	0.4	9/15/14 19:18	WSD	
1,2-Dichloroethane	0.010	0.010	0.0056		0.040	0.040	0.4	9/15/14 19:18	WSD	
1,1-Dichloroethylene	ND	0.010	0.0049		ND	0.040	0.4	9/15/14 19:18	WSD	
cis-1,2-Dichloroethylene	ND	0.010	0.0076		ND	0.040	0.4	9/15/14 19:18	WSD	
trans-1,2-Dichloroethylene	ND	0.010	0.0053		ND	0.040	0.4	9/15/14 19:18	WSD	
1,2-Dichloropropane	ND	0.010	0.0069	L-03, V-05	ND	0.046	0.4	9/15/14 19:18	WSD	
cis-1,3-Dichloropropene	ND	0.010	0.0053		ND	0.045	0.4	9/15/14 19:18	WSD	
trans-1,3-Dichloropropene	ND	0.010	0.0054		ND	0.045	0.4	9/15/14 19:18	WSD	
Ethanol	73	0.80	0.36		140	1.5	0.4	9/15/14 19:18	WSD	
Ethyl Acetate	0.097	0.020	0.015		0.35	0.072	0.4	9/15/14 19:18	WSD	
Ethylbenzene	0.032	0.020	0.0055		0.14	0.087	0.4	9/15/14 19:18	WSD	
4-Ethyltoluene	0.010	0.020	0.0045	J	0.049	0.098	0.4	9/15/14 19:18	WSD	
Heptane	0.043	0.020	0.0065		0.18	0.082	0.4	9/15/14 19:18	WSD	
Hexachlorobutadiene	ND	0.020	0.0075		ND	0.21	0.4	9/15/14 19:18	WSD	
Hexane	0.16	0.80	0.035	J	0.56	2.8	0.4	9/15/14 19:18	WSD	
2-Hexanone (MBK)	0.040	0.020	0.0051	L-03, V-05	0.16	0.082	0.4	9/15/14 19:18	WSD	
Isopropanol	1.8	0.80	0.025	L-03	4.4	2.0	0.4	9/15/14 19:18	WSD	

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #: IA-2-091214**
**Sample ID: 14I0610-02**

Sample Matrix: Air

Sampled: 9/12/2014 10:32

Sample Description/Location:

Sub Description/Location:

Canister ID: 1465

Canister Size: 6 liter

Flow Controller ID: 4195

Sample Type: 30 min

**Work Order: 14I0610**

Initial Vacuum(in Hg): -30

Final Vacuum(in Hg): -5

Receipt Vacuum(in Hg): -5.6

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			Flag	ug/m3			Dilution	Date/Time Analyzed	Analyst
		RL	MDL	Results		RL					
Methyl tert-Butyl Ether (MTBE)	ND	0.020	0.0062			ND	0.072		0.4	9/15/14 19:18	WSD
Methylene Chloride	0.16	0.20	0.024	J		0.56	0.69		0.4	9/15/14 19:18	WSD
Methyl methacrylate	ND	0.020	0.0061			ND	0.082		0.4	9/15/14 19:18	WSD
4-Methyl-2-pentanone (MIBK)	0.31	0.020	0.0048			1.3	0.082		0.4	9/15/14 19:18	WSD
Propene	ND	0.80	0.061			ND	1.4		0.4	9/15/14 19:18	WSD
Styrene	0.094	0.020	0.0039			0.40	0.085		0.4	9/15/14 19:18	WSD
1,1,1,2-Tetrachloroethane	ND	0.036	0.013			ND	0.25		0.4	9/15/14 19:18	WSD
1,1,2,2-Tetrachloroethane	ND	0.010	0.0048			ND	0.069		0.4	9/15/14 19:18	WSD
Tetrachloroethylene	0.019	0.010	0.0057			0.13	0.068		0.4	9/15/14 19:18	WSD
Tetrahydrofuran	0.030	0.020	0.0084			0.090	0.059		0.4	9/15/14 19:18	WSD
Toluene	0.42	0.020	0.0062			1.6	0.075		0.4	9/15/14 19:18	WSD
1,2,4-Trichlorobenzene	ND	0.020	0.0076	L-03		ND	0.15		0.4	9/15/14 19:18	WSD
1,1,1-Trichloroethane	ND	0.010	0.0036			ND	0.055		0.4	9/15/14 19:18	WSD
1,1,2-Trichloroethane	ND	0.020	0.0061			ND	0.11		0.4	9/15/14 19:18	WSD
Trichloroethylene	0.012	0.010	0.0059			0.064	0.054		0.4	9/15/14 19:18	WSD
Trichlorofluoromethane (Freon 11)	0.22	0.020	0.0070			1.3	0.11		0.4	9/15/14 19:18	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.074	0.020	0.0056			0.56	0.15		0.4	9/15/14 19:18	WSD
1,2,4-Trimethylbenzene	0.041	0.020	0.0049			0.20	0.098		0.4	9/15/14 19:18	WSD
1,3,5-Trimethylbenzene	0.012	0.020	0.0040	J		0.059	0.098		0.4	9/15/14 19:18	WSD
Vinyl Acetate	ND	0.40	0.010			ND	1.4		0.4	9/15/14 19:18	WSD
Vinyl Chloride	ND	0.010	0.0086	V-05		ND	0.026		0.4	9/15/14 19:18	WSD
m&p-Xylene	0.10	0.040	0.010			0.44	0.17		0.4	9/15/14 19:18	WSD
o-Xylene	0.040	0.020	0.0058			0.17	0.087		0.4	9/15/14 19:18	WSD

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	112	70-130	9/15/14 19:18
4-Bromofluorobenzene (2)	123	70-130	9/15/14 19:18

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #: IA-3-091214**
**Sample ID: 14I0610-03**

Sample Matrix: Air

Sampled: 9/12/2014 08:24

Sample Description/Location:

Sub Description/Location:

Canister ID: 1161

Canister Size: 6 liter

Flow Controller ID: 4187

Sample Type: 30 min

**Work Order: 14I0610**

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -5

Receipt Vacuum(in Hg): -5.8

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
		RL	MDL	Flag	Results	RL				
Acetone	18	0.80	0.28		42	1.9		0.4	9/15/14 20:15	WSD
Benzene	0.092	0.020	0.010	V-05	0.29	0.064		0.4	9/15/14 20:15	WSD
Benzyl chloride	ND	0.010	0.0039		ND	0.052		0.4	9/15/14 20:15	WSD
Bromodichloromethane	ND	0.010	0.0044		ND	0.067		0.4	9/15/14 20:15	WSD
Bromoform	ND	0.020	0.0038		ND	0.21		0.4	9/15/14 20:15	WSD
Bromomethane	0.026	0.020	0.014		0.099	0.078		0.4	9/15/14 20:15	WSD
1,3-Butadiene	ND	0.020	0.010		ND	0.044		0.4	9/15/14 20:15	WSD
2-Butanone (MEK)	0.72	0.80	0.015	J	2.1	2.4		0.4	9/15/14 20:15	WSD
Carbon Disulfide	0.050	0.20	0.0069	J	0.16	0.62		0.4	9/15/14 20:15	WSD
Carbon Tetrachloride	0.067	0.010	0.0048		0.42	0.063		0.4	9/15/14 20:15	WSD
Chlorobenzene	ND	0.010	0.0069		ND	0.046		0.4	9/15/14 20:15	WSD
Chloroethane	ND	0.020	0.0076		ND	0.053		0.4	9/15/14 20:15	WSD
Chloroform	0.057	0.010	0.0047		0.28	0.049		0.4	9/15/14 20:15	WSD
Chloromethane	0.35	0.040	0.0088	L-03, V-05	0.73	0.083		0.4	9/15/14 20:15	WSD
Cyclohexane	ND	0.020	0.011		ND	0.069		0.4	9/15/14 20:15	WSD
Dibromochloromethane	ND	0.010	0.0053		ND	0.085		0.4	9/15/14 20:15	WSD
1,2-Dibromoethane (EDB)	ND	0.010	0.0045		ND	0.077		0.4	9/15/14 20:15	WSD
1,2-Dichlorobenzene	ND	0.020	0.0053		ND	0.12		0.4	9/15/14 20:15	WSD
1,3-Dichlorobenzene	ND	0.020	0.0044		ND	0.12		0.4	9/15/14 20:15	WSD
1,4-Dichlorobenzene	ND	0.020	0.0050		ND	0.12		0.4	9/15/14 20:15	WSD
Dichlorodifluoromethane (Freon 12)	0.44	0.020	0.0087		2.2	0.099		0.4	9/15/14 20:15	WSD
1,1-Dichloroethane	ND	0.010	0.0056		ND	0.040		0.4	9/15/14 20:15	WSD
1,2-Dichloroethane	0.0080	0.010	0.0056	J	0.032	0.040		0.4	9/15/14 20:15	WSD
1,1-Dichloroethylene	ND	0.010	0.0049		ND	0.040		0.4	9/15/14 20:15	WSD
cis-1,2-Dichloroethylene	ND	0.010	0.0076		ND	0.040		0.4	9/15/14 20:15	WSD
trans-1,2-Dichloroethylene	ND	0.010	0.0053		ND	0.040		0.4	9/15/14 20:15	WSD
1,2-Dichloropropane	ND	0.010	0.0069	L-03, V-05	ND	0.046		0.4	9/15/14 20:15	WSD
cis-1,3-Dichloropropene	ND	0.010	0.0053		ND	0.045		0.4	9/15/14 20:15	WSD
trans-1,3-Dichloropropene	ND	0.010	0.0054		ND	0.045		0.4	9/15/14 20:15	WSD
Ethanol	22	0.80	0.36		41	1.5		0.4	9/15/14 20:15	WSD
Ethyl Acetate	0.070	0.020	0.015		0.25	0.072		0.4	9/15/14 20:15	WSD
Ethylbenzene	0.040	0.020	0.0055		0.17	0.087		0.4	9/15/14 20:15	WSD
4-Ethyltoluene	0.010	0.020	0.0045	J	0.051	0.098		0.4	9/15/14 20:15	WSD
Heptane	0.13	0.020	0.0065		0.52	0.082		0.4	9/15/14 20:15	WSD
Hexachlorobutadiene	ND	0.020	0.0075		ND	0.21		0.4	9/15/14 20:15	WSD
Hexane	0.12	0.80	0.035	J	0.43	2.8		0.4	9/15/14 20:15	WSD
2-Hexanone (MBK)	0.051	0.020	0.0051	L-03, V-05	0.21	0.082		0.4	9/15/14 20:15	WSD
Isopropanol	1.9	0.80	0.025	L-03	4.8	2.0		0.4	9/15/14 20:15	WSD

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #: IA-3-091214**
**Sample ID: 14I0610-03**

Sample Matrix: Air

Sampled: 9/12/2014 08:24

Sample Description/Location:

Sub Description/Location:

Canister ID: 1161

Canister Size: 6 liter

Flow Controller ID: 4187

Sample Type: 30 min

**Work Order: 14I0610**

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -5

Receipt Vacuum(in Hg): -5.8

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			Flag	ug/m3			Dilution	Date/Time Analyzed	Analyst
		RL	MDL	Results		RL					
Methyl tert-Butyl Ether (MTBE)	ND	0.020	0.0062			ND	0.072		0.4	9/15/14 20:15	WSD
Methylene Chloride	0.17	0.20	0.024	J		0.58	0.69		0.4	9/15/14 20:15	WSD
Methyl methacrylate	0.038	0.020	0.0061			0.16	0.082		0.4	9/15/14 20:15	WSD
4-Methyl-2-pentanone (MIBK)	0.063	0.020	0.0048			0.26	0.082		0.4	9/15/14 20:15	WSD
Propene	1.1	0.80	0.061			1.8	1.4		0.4	9/15/14 20:15	WSD
Styrene	0.035	0.020	0.0039			0.15	0.085		0.4	9/15/14 20:15	WSD
1,1,1,2-Tetrachloroethane	ND	0.036	0.013			ND	0.25		0.4	9/15/14 20:15	WSD
1,1,2,2-Tetrachloroethane	ND	0.010	0.0048			ND	0.069		0.4	9/15/14 20:15	WSD
Tetrachloroethylene	0.018	0.010	0.0057			0.12	0.068		0.4	9/15/14 20:15	WSD
Tetrahydrofuran	0.053	0.020	0.0084			0.16	0.059		0.4	9/15/14 20:15	WSD
Toluene	0.67	0.020	0.0062			2.5	0.075		0.4	9/15/14 20:15	WSD
1,2,4-Trichlorobenzene	ND	0.020	0.0076	L-03		ND	0.15		0.4	9/15/14 20:15	WSD
1,1,1-Trichloroethane	0.034	0.010	0.0036			0.19	0.055		0.4	9/15/14 20:15	WSD
1,1,2-Trichloroethane	ND	0.020	0.0061			ND	0.11		0.4	9/15/14 20:15	WSD
Trichloroethylene	0.014	0.010	0.0059			0.075	0.054		0.4	9/15/14 20:15	WSD
Trichlorofluoromethane (Freon 11)	0.23	0.020	0.0070			1.3	0.11		0.4	9/15/14 20:15	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.074	0.020	0.0056			0.57	0.15		0.4	9/15/14 20:15	WSD
1,2,4-Trimethylbenzene	0.066	0.020	0.0049			0.32	0.098		0.4	9/15/14 20:15	WSD
1,3,5-Trimethylbenzene	0.014	0.020	0.0040	J		0.069	0.098		0.4	9/15/14 20:15	WSD
Vinyl Acetate	ND	0.40	0.010			ND	1.4		0.4	9/15/14 20:15	WSD
Vinyl Chloride	ND	0.010	0.0086	V-05		ND	0.026		0.4	9/15/14 20:15	WSD
m&p-Xylene	0.14	0.040	0.010			0.62	0.17		0.4	9/15/14 20:15	WSD
o-Xylene	0.052	0.020	0.0058			0.22	0.087		0.4	9/15/14 20:15	WSD

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	112	70-130	9/15/14 20:15
4-Bromofluorobenzene (2)	125	70-130	9/15/14 20:15

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #: IA-4-091214**
**Sample ID: 14I0610-04**

Sample Matrix: Air

Sampled: 9/12/2014 10:33

Sample Description/Location:

Sub Description/Location:

Canister ID: 1315

Canister Size: 6 liter

Flow Controller ID: 4194

Sample Type: 30 min

**Work Order: 14I0610**

Initial Vacuum(in Hg): -30

Final Vacuum(in Hg): -5

Receipt Vacuum(in Hg): -5.8

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
		RL	MDL	Flag	Results	RL				
Acetone	16	0.80	0.28		38	1.9		0.4	9/16/14 11:04	WSD
Benzene	0.12	0.020	0.010	V-05	0.39	0.064		0.4	9/16/14 11:04	WSD
Benzyl chloride	ND	0.010	0.0039		ND	0.052		0.4	9/16/14 11:04	WSD
Bromodichloromethane	ND	0.010	0.0044		ND	0.067		0.4	9/16/14 11:04	WSD
Bromoform	ND	0.020	0.0038		ND	0.21		0.4	9/16/14 11:04	WSD
Bromomethane	ND	0.020	0.014		ND	0.078		0.4	9/16/14 11:04	WSD
1,3-Butadiene	ND	0.020	0.010		ND	0.044		0.4	9/16/14 11:04	WSD
2-Butanone (MEK)	1.6	0.80	0.015		4.6	2.4		0.4	9/16/14 11:04	WSD
Carbon Disulfide	0.15	0.20	0.0069	J	0.46	0.62		0.4	9/16/14 11:04	WSD
Carbon Tetrachloride	0.062	0.010	0.0048		0.39	0.063		0.4	9/16/14 11:04	WSD
Chlorobenzene	ND	0.010	0.0069		ND	0.046		0.4	9/16/14 11:04	WSD
Chloroethane	ND	0.020	0.0076		ND	0.053		0.4	9/16/14 11:04	WSD
Chloroform	0.24	0.010	0.0047		1.2	0.049		0.4	9/16/14 11:04	WSD
Chloromethane	0.43	0.040	0.0088	L-03, V-05	0.89	0.083		0.4	9/16/14 11:04	WSD
Cyclohexane	ND	0.020	0.011		ND	0.069		0.4	9/16/14 11:04	WSD
Dibromochloromethane	ND	0.010	0.0053		ND	0.085		0.4	9/16/14 11:04	WSD
1,2-Dibromoethane (EDB)	ND	0.010	0.0045		ND	0.077		0.4	9/16/14 11:04	WSD
1,2-Dichlorobenzene	ND	0.020	0.0053		ND	0.12		0.4	9/16/14 11:04	WSD
1,3-Dichlorobenzene	ND	0.020	0.0044		ND	0.12		0.4	9/16/14 11:04	WSD
1,4-Dichlorobenzene	ND	0.020	0.0050		ND	0.12		0.4	9/16/14 11:04	WSD
Dichlorodifluoromethane (Freon 12)	0.42	0.020	0.0087		2.1	0.099		0.4	9/16/14 11:04	WSD
1,1-Dichloroethane	ND	0.010	0.0056		ND	0.040		0.4	9/16/14 11:04	WSD
1,2-Dichloroethane	ND	0.010	0.0056		ND	0.040		0.4	9/16/14 11:04	WSD
1,1-Dichloroethylene	ND	0.010	0.0049		ND	0.040		0.4	9/16/14 11:04	WSD
cis-1,2-Dichloroethylene	ND	0.010	0.0076		ND	0.040		0.4	9/16/14 11:04	WSD
trans-1,2-Dichloroethylene	ND	0.010	0.0053		ND	0.040		0.4	9/16/14 11:04	WSD
1,2-Dichloropropane	ND	0.010	0.0069	L-03, V-05	ND	0.046		0.4	9/16/14 11:04	WSD
cis-1,3-Dichloropropene	ND	0.010	0.0053		ND	0.045		0.4	9/16/14 11:04	WSD
trans-1,3-Dichloropropene	ND	0.010	0.0054		ND	0.045		0.4	9/16/14 11:04	WSD
Ethanol	77	40	18	V-05	150	75		20	9/16/14 16:53	WSD
Ethyl Acetate	0.11	0.020	0.015		0.38	0.072		0.4	9/16/14 11:04	WSD
Ethylbenzene	0.028	0.020	0.0055		0.12	0.087		0.4	9/16/14 11:04	WSD
4-Ethyltoluene	ND	0.020	0.0045		ND	0.098		0.4	9/16/14 11:04	WSD
Heptane	0.040	0.020	0.0065		0.17	0.082		0.4	9/16/14 11:04	WSD
Hexachlorobutadiene	ND	0.020	0.0075		ND	0.21		0.4	9/16/14 11:04	WSD
Hexane	0.17	0.80	0.035	J	0.58	2.8		0.4	9/16/14 11:04	WSD
2-Hexanone (MBK)	0.048	0.020	0.0051	L-03, V-05	0.20	0.082		0.4	9/16/14 11:04	WSD
Isopropanol	2.0	0.80	0.025	L-03	4.8	2.0		0.4	9/16/14 11:04	WSD

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #: IA-4-091214**
**Sample ID: 14I0610-04**

Sample Matrix: Air

Sampled: 9/12/2014 10:33

Sample Description/Location:

Sub Description/Location:

Canister ID: 1315

Canister Size: 6 liter

Flow Controller ID: 4194

Sample Type: 30 min

**Work Order: 14I0610**

Initial Vacuum(in Hg): -30

Final Vacuum(in Hg): -5

Receipt Vacuum(in Hg): -5.8

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
		RL	MDL	Flag	Results	RL				
Methyl tert-Butyl Ether (MTBE)	ND	0.020	0.0062		ND	0.072		0.4	9/16/14 11:04	WSD
Methylene Chloride	0.18	0.20	0.024	J	0.64	0.69		0.4	9/16/14 11:04	WSD
Methyl methacrylate	ND	0.020	0.0061		ND	0.082		0.4	9/16/14 11:04	WSD
4-Methyl-2-pentanone (MIBK)	0.25	0.020	0.0048		1.0	0.082		0.4	9/16/14 11:04	WSD
Propene	ND	0.80	0.061		ND	1.4		0.4	9/16/14 11:04	WSD
Styrene	0.094	0.020	0.0039		0.40	0.085		0.4	9/16/14 11:04	WSD
1,1,1,2-Tetrachloroethane	ND	0.036	0.013		ND	0.25		0.4	9/16/14 11:04	WSD
1,1,2,2-Tetrachloroethane	ND	0.010	0.0048		ND	0.069		0.4	9/16/14 11:04	WSD
Tetrachloroethylene	0.034	0.010	0.0057		0.23	0.068		0.4	9/16/14 11:04	WSD
Tetrahydrofuran	0.032	0.020	0.0084		0.094	0.059		0.4	9/16/14 11:04	WSD
Toluene	0.36	0.020	0.0062		1.4	0.075		0.4	9/16/14 11:04	WSD
1,2,4-Trichlorobenzene	ND	0.020	0.0076	L-03	ND	0.15		0.4	9/16/14 11:04	WSD
1,1,1-Trichloroethane	ND	0.010	0.0036		ND	0.055		0.4	9/16/14 11:04	WSD
1,1,2-Trichloroethane	ND	0.020	0.0061		ND	0.11		0.4	9/16/14 11:04	WSD
Trichloroethylene	ND	0.010	0.0059		ND	0.054		0.4	9/16/14 11:04	WSD
Trichlorofluoromethane (Freon 11)	0.23	0.020	0.0070		1.3	0.11		0.4	9/16/14 11:04	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.071	0.020	0.0056		0.55	0.15		0.4	9/16/14 11:04	WSD
1,2,4-Trimethylbenzene	0.034	0.020	0.0049		0.17	0.098		0.4	9/16/14 11:04	WSD
1,3,5-Trimethylbenzene	ND	0.020	0.0040		ND	0.098		0.4	9/16/14 11:04	WSD
Vinyl Acetate	ND	0.40	0.010		ND	1.4		0.4	9/16/14 11:04	WSD
Vinyl Chloride	ND	0.010	0.0086	V-05	ND	0.026		0.4	9/16/14 11:04	WSD
m&p-Xylene	0.093	0.040	0.010		0.40	0.17		0.4	9/16/14 11:04	WSD
o-Xylene	0.038	0.020	0.0058		0.16	0.087		0.4	9/16/14 11:04	WSD

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	109	70-130	9/16/14 16:53
4-Bromofluorobenzene (1)	105	70-130	9/16/14 11:04
4-Bromofluorobenzene (2)	120	70-130	9/16/14 11:04

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #: IA-5-091214**
**Sample ID: 14I0610-05**

Sample Matrix: Air

Sampled: 9/12/2014 10:57

Sample Description/Location:

Sub Description/Location:

Canister ID: 1220

Canister Size: 6 liter

Flow Controller ID: 4192

Sample Type: 30 min

**Work Order: 14I0610**

Initial Vacuum(in Hg): -30

Final Vacuum(in Hg): -5

Receipt Vacuum(in Hg): -5.6

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
		RL	MDL	Flag	Results	RL				
Acetone	6.0	0.80	0.28		14	1.9	0.4	9/15/14 22:10	WSD	
Benzene	0.077	0.020	0.010	V-05	0.25	0.064	0.4	9/15/14 22:10	WSD	
Benzyl chloride	ND	0.010	0.0039		ND	0.052	0.4	9/15/14 22:10	WSD	
Bromodichloromethane	ND	0.010	0.0044		ND	0.067	0.4	9/15/14 22:10	WSD	
Bromoform	ND	0.020	0.0038		ND	0.21	0.4	9/15/14 22:10	WSD	
Bromomethane	ND	0.020	0.014		ND	0.078	0.4	9/15/14 22:10	WSD	
1,3-Butadiene	ND	0.020	0.010		ND	0.044	0.4	9/15/14 22:10	WSD	
2-Butanone (MEK)	0.73	0.80	0.015	J	2.1	2.4	0.4	9/15/14 22:10	WSD	
Carbon Disulfide	0.013	0.20	0.0069	J	0.041	0.62	0.4	9/15/14 22:10	WSD	
Carbon Tetrachloride	0.071	0.010	0.0048		0.45	0.063	0.4	9/15/14 22:10	WSD	
Chlorobenzene	ND	0.010	0.0069		ND	0.046	0.4	9/15/14 22:10	WSD	
Chloroethane	ND	0.020	0.0076		ND	0.053	0.4	9/15/14 22:10	WSD	
Chloroform	0.024	0.010	0.0047		0.12	0.049	0.4	9/15/14 22:10	WSD	
Chloromethane	0.33	0.040	0.0088	L-03, V-05	0.67	0.083	0.4	9/15/14 22:10	WSD	
Cyclohexane	ND	0.020	0.011		ND	0.069	0.4	9/15/14 22:10	WSD	
Dibromochloromethane	ND	0.010	0.0053		ND	0.085	0.4	9/15/14 22:10	WSD	
1,2-Dibromoethane (EDB)	ND	0.010	0.0045		ND	0.077	0.4	9/15/14 22:10	WSD	
1,2-Dichlorobenzene	ND	0.020	0.0053		ND	0.12	0.4	9/15/14 22:10	WSD	
1,3-Dichlorobenzene	ND	0.020	0.0044		ND	0.12	0.4	9/15/14 22:10	WSD	
1,4-Dichlorobenzene	ND	0.020	0.0050		ND	0.12	0.4	9/15/14 22:10	WSD	
Dichlorodifluoromethane (Freon 12)	0.41	0.020	0.0087		2.0	0.099	0.4	9/15/14 22:10	WSD	
1,1-Dichloroethane	ND	0.010	0.0056		ND	0.040	0.4	9/15/14 22:10	WSD	
1,2-Dichloroethane	0.010	0.010	0.0056		0.040	0.040	0.4	9/15/14 22:10	WSD	
1,1-Dichloroethylene	ND	0.010	0.0049		ND	0.040	0.4	9/15/14 22:10	WSD	
cis-1,2-Dichloroethylene	ND	0.010	0.0076		ND	0.040	0.4	9/15/14 22:10	WSD	
trans-1,2-Dichloroethylene	ND	0.010	0.0053		ND	0.040	0.4	9/15/14 22:10	WSD	
1,2-Dichloropropane	ND	0.010	0.0069	L-03, V-05	ND	0.046	0.4	9/15/14 22:10	WSD	
cis-1,3-Dichloropropene	ND	0.010	0.0053		ND	0.045	0.4	9/15/14 22:10	WSD	
trans-1,3-Dichloropropene	ND	0.010	0.0054		ND	0.045	0.4	9/15/14 22:10	WSD	
Ethanol	82	40	18	V-05	160	75	20	9/16/14 17:30	WSD	
Ethyl Acetate	0.16	0.020	0.015		0.56	0.072	0.4	9/15/14 22:10	WSD	
Ethylbenzene	0.030	0.020	0.0055		0.13	0.087	0.4	9/15/14 22:10	WSD	
4-Ethyltoluene	0.018	0.020	0.0045	J	0.090	0.098	0.4	9/15/14 22:10	WSD	
Heptane	0.051	0.020	0.0065		0.21	0.082	0.4	9/15/14 22:10	WSD	
Hexachlorobutadiene	ND	0.020	0.0075		ND	0.21	0.4	9/15/14 22:10	WSD	
Hexane	0.093	0.80	0.035	J	0.33	2.8	0.4	9/15/14 22:10	WSD	
2-Hexanone (MBK)	0.071	0.020	0.0051	L-03, V-05	0.29	0.082	0.4	9/15/14 22:10	WSD	
Isopropanol	73	40	1.2	L-03	180	98	20	9/16/14 17:30	WSD	

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #: IA-5-091214**
**Sample ID: 14I0610-05**

Sample Matrix: Air

Sampled: 9/12/2014 10:57

Sample Description/Location:

Sub Description/Location:

Canister ID: 1220

Canister Size: 6 liter

Flow Controller ID: 4192

Sample Type: 30 min

**Work Order: 14I0610**

Initial Vacuum(in Hg): -30

Final Vacuum(in Hg): -5

Receipt Vacuum(in Hg): -5.6

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			ug/m3			Date/Time	
		RL	MDL	Flag	Results	RL	Dilution	Analyzed	Analyst
Methyl tert-Butyl Ether (MTBE)	ND	0.020	0.0062		ND	0.072	0.4	9/15/14 22:10	WSD
Methylene Chloride	0.19	0.20	0.024	J	0.66	0.69	0.4	9/15/14 22:10	WSD
Methyl methacrylate	ND	0.020	0.0061		ND	0.082	0.4	9/15/14 22:10	WSD
4-Methyl-2-pentanone (MIBK)	0.042	0.020	0.0048		0.17	0.082	0.4	9/15/14 22:10	WSD
Propene	ND	0.80	0.061		ND	1.4	0.4	9/15/14 22:10	WSD
Styrene	0.021	0.020	0.0039		0.089	0.085	0.4	9/15/14 22:10	WSD
1,1,1,2-Tetrachloroethane	ND	0.036	0.013		ND	0.25	0.4	9/15/14 22:10	WSD
1,1,2,2-Tetrachloroethane	ND	0.010	0.0048		ND	0.069	0.4	9/15/14 22:10	WSD
Tetrachloroethylene	0.036	0.010	0.0057		0.24	0.068	0.4	9/15/14 22:10	WSD
Tetrahydrofuran	0.036	0.020	0.0084		0.10	0.059	0.4	9/15/14 22:10	WSD
Toluene	0.17	0.020	0.0062		0.65	0.075	0.4	9/15/14 22:10	WSD
1,2,4-Trichlorobenzene	ND	0.020	0.0076	L-03	ND	0.15	0.4	9/15/14 22:10	WSD
1,1,1-Trichloroethane	0.014	0.010	0.0036		0.079	0.055	0.4	9/15/14 22:10	WSD
1,1,2-Trichloroethane	ND	0.020	0.0061		ND	0.11	0.4	9/15/14 22:10	WSD
Trichloroethylene	0.014	0.010	0.0059		0.075	0.054	0.4	9/15/14 22:10	WSD
Trichlorofluoromethane (Freon 11)	0.23	0.020	0.0070		1.3	0.11	0.4	9/15/14 22:10	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.071	0.020	0.0056		0.54	0.15	0.4	9/15/14 22:10	WSD
1,2,4-Trimethylbenzene	0.038	0.020	0.0049		0.19	0.098	0.4	9/15/14 22:10	WSD
1,3,5-Trimethylbenzene	0.012	0.020	0.0040	J	0.057	0.098	0.4	9/15/14 22:10	WSD
Vinyl Acetate	ND	0.40	0.010		ND	1.4	0.4	9/15/14 22:10	WSD
Vinyl Chloride	ND	0.010	0.0086	V-05	ND	0.026	0.4	9/15/14 22:10	WSD
m&p-Xylene	0.070	0.040	0.010		0.30	0.17	0.4	9/15/14 22:10	WSD
o-Xylene	0.026	0.020	0.0058		0.11	0.087	0.4	9/15/14 22:10	WSD

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	106	70-130	9/16/14 17:30
4-Bromofluorobenzene (1)	112	70-130	9/15/14 22:10
4-Bromofluorobenzene (2)	123	70-130	9/15/14 22:10

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #: IA-6-091214**
**Sample ID: 14I0610-06**

Sample Matrix: Air

Sampled: 9/12/2014 11:03

Sample Description/Location:

Sub Description/Location:

Canister ID: 1301

Canister Size: 6 liter

Flow Controller ID: 4193

Sample Type: 30 min

**Work Order: 14I0610**

Initial Vacuum(in Hg): -28

Final Vacuum(in Hg): -5

Receipt Vacuum(in Hg): -6.2

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
		RL	MDL	Flag	Results	RL				
Acetone	3.9	0.80	0.28		9.2	1.9	0.4	9/15/14 23:07	WSD	
Benzene	0.083	0.020	0.010	V-05	0.26	0.064	0.4	9/15/14 23:07	WSD	
Benzyl chloride	ND	0.010	0.0039		ND	0.052	0.4	9/15/14 23:07	WSD	
Bromodichloromethane	ND	0.010	0.0044		ND	0.067	0.4	9/15/14 23:07	WSD	
Bromoform	ND	0.020	0.0038		ND	0.21	0.4	9/15/14 23:07	WSD	
Bromomethane	ND	0.020	0.014		ND	0.078	0.4	9/15/14 23:07	WSD	
1,3-Butadiene	ND	0.020	0.010		ND	0.044	0.4	9/15/14 23:07	WSD	
2-Butanone (MEK)	0.22	0.80	0.015	J	0.66	2.4	0.4	9/15/14 23:07	WSD	
Carbon Disulfide	0.018	0.20	0.0069	J	0.057	0.62	0.4	9/15/14 23:07	WSD	
Carbon Tetrachloride	0.067	0.010	0.0048		0.42	0.063	0.4	9/15/14 23:07	WSD	
Chlorobenzene	ND	0.010	0.0069		ND	0.046	0.4	9/15/14 23:07	WSD	
Chloroethane	ND	0.020	0.0076		ND	0.053	0.4	9/15/14 23:07	WSD	
Chloroform	0.023	0.010	0.0047		0.11	0.049	0.4	9/15/14 23:07	WSD	
Chloromethane	0.51	0.040	0.0088	L-03, V-05	1.0	0.083	0.4	9/15/14 23:07	WSD	
Cyclohexane	ND	0.020	0.011		ND	0.069	0.4	9/15/14 23:07	WSD	
Dibromochloromethane	ND	0.010	0.0053		ND	0.085	0.4	9/15/14 23:07	WSD	
1,2-Dibromoethane (EDB)	ND	0.010	0.0045		ND	0.077	0.4	9/15/14 23:07	WSD	
1,2-Dichlorobenzene	ND	0.020	0.0053		ND	0.12	0.4	9/15/14 23:07	WSD	
1,3-Dichlorobenzene	ND	0.020	0.0044		ND	0.12	0.4	9/15/14 23:07	WSD	
1,4-Dichlorobenzene	ND	0.020	0.0050		ND	0.12	0.4	9/15/14 23:07	WSD	
Dichlorodifluoromethane (Freon 12)	0.42	0.020	0.0087		2.1	0.099	0.4	9/15/14 23:07	WSD	
1,1-Dichloroethane	ND	0.010	0.0056		ND	0.040	0.4	9/15/14 23:07	WSD	
1,2-Dichloroethane	0.0096	0.010	0.0056	J	0.039	0.040	0.4	9/15/14 23:07	WSD	
1,1-Dichloroethylene	ND	0.010	0.0049		ND	0.040	0.4	9/15/14 23:07	WSD	
cis-1,2-Dichloroethylene	ND	0.010	0.0076		ND	0.040	0.4	9/15/14 23:07	WSD	
trans-1,2-Dichloroethylene	ND	0.010	0.0053		ND	0.040	0.4	9/15/14 23:07	WSD	
1,2-Dichloropropane	ND	0.010	0.0069	L-03, V-05	ND	0.046	0.4	9/15/14 23:07	WSD	
cis-1,3-Dichloropropene	ND	0.010	0.0053		ND	0.045	0.4	9/15/14 23:07	WSD	
trans-1,3-Dichloropropene	ND	0.010	0.0054		ND	0.045	0.4	9/15/14 23:07	WSD	
Ethanol	86	40	18	V-05	160	75	20	9/16/14 18:08	WSD	
Ethyl Acetate	0.47	0.020	0.015		1.7	0.072	0.4	9/15/14 23:07	WSD	
Ethylbenzene	0.040	0.020	0.0055		0.18	0.087	0.4	9/15/14 23:07	WSD	
4-Ethyltoluene	0.015	0.020	0.0045	J	0.073	0.098	0.4	9/15/14 23:07	WSD	
Heptane	0.040	0.020	0.0065		0.16	0.082	0.4	9/15/14 23:07	WSD	
Hexachlorobutadiene	ND	0.020	0.0075		ND	0.21	0.4	9/15/14 23:07	WSD	
Hexane	0.10	0.80	0.035	J	0.35	2.8	0.4	9/15/14 23:07	WSD	
2-Hexanone (MBK)	0.010	0.020	0.0051	L-03, V-05, J	0.043	0.082	0.4	9/15/14 23:07	WSD	
Isopropanol	1.4	0.80	0.025	L-03	3.4	2.0	0.4	9/15/14 23:07	WSD	

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #:** IA-6-091214

**Sample ID:** 14I0610-06

Sample Matrix: Air

Sampled: 9/12/2014 11:03

Sample Description/Location:

Sub Description/Location:

Canister ID: 1301

Canister Size: 6 liter

Flow Controller ID: 4193

Sample Type: 30 min

**Work Order:** 14I0610

Initial Vacuum(in Hg): -28

Final Vacuum(in Hg): -5

Receipt Vacuum(in Hg): -6.2

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			Flag	ug/m3			Dilution	Date/Time Analyzed	Analyst
		RL	MDL	Results		RL					
Methyl tert-Butyl Ether (MTBE)	ND	0.020	0.0062			ND	0.072		0.4	9/15/14 23:07	WSD
Methylene Chloride	0.18	0.20	0.024	J		0.64	0.69		0.4	9/15/14 23:07	WSD
Methyl methacrylate	ND	0.020	0.0061			ND	0.082		0.4	9/15/14 23:07	WSD
4-Methyl-2-pentanone (MIBK)	0.022	0.020	0.0048			0.092	0.082		0.4	9/15/14 23:07	WSD
Propene	ND	0.80	0.061			ND	1.4		0.4	9/15/14 23:07	WSD
Styrene	0.018	0.020	0.0039	J		0.077	0.085		0.4	9/15/14 23:07	WSD
1,1,1,2-Tetrachloroethane	ND	0.036	0.013			ND	0.25		0.4	9/15/14 23:07	WSD
1,1,2,2-Tetrachloroethane	ND	0.010	0.0048			ND	0.069		0.4	9/15/14 23:07	WSD
Tetrachloroethylene	0.073	0.010	0.0057			0.49	0.068		0.4	9/15/14 23:07	WSD
Tetrahydrofuran	0.016	0.020	0.0084	J		0.046	0.059		0.4	9/15/14 23:07	WSD
Toluene	0.19	0.020	0.0062			0.72	0.075		0.4	9/15/14 23:07	WSD
1,2,4-Trichlorobenzene	ND	0.020	0.0076	L-03		ND	0.15		0.4	9/15/14 23:07	WSD
1,1,1-Trichloroethane	0.022	0.010	0.0036			0.12	0.055		0.4	9/15/14 23:07	WSD
1,1,2-Trichloroethane	ND	0.020	0.0061			ND	0.11		0.4	9/15/14 23:07	WSD
Trichloroethylene	0.022	0.010	0.0059			0.12	0.054		0.4	9/15/14 23:07	WSD
Trichlorofluoromethane (Freon 11)	0.23	0.020	0.0070			1.3	0.11		0.4	9/15/14 23:07	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.071	0.020	0.0056			0.54	0.15		0.4	9/15/14 23:07	WSD
1,2,4-Trimethylbenzene	0.058	0.020	0.0049			0.29	0.098		0.4	9/15/14 23:07	WSD
1,3,5-Trimethylbenzene	0.014	0.020	0.0040	J		0.071	0.098		0.4	9/15/14 23:07	WSD
Vinyl Acetate	ND	0.40	0.010			ND	1.4		0.4	9/15/14 23:07	WSD
Vinyl Chloride	0.033	0.010	0.0086	V-05		0.084	0.026		0.4	9/15/14 23:07	WSD
m&p-Xylene	0.084	0.040	0.010			0.36	0.17		0.4	9/15/14 23:07	WSD
o-Xylene	0.032	0.020	0.0058			0.14	0.087		0.4	9/15/14 23:07	WSD

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	106	70-130	9/16/14 18:08
4-Bromofluorobenzene (1)	107	70-130	9/15/14 23:07
4-Bromofluorobenzene (2)	121	70-130	9/15/14 23:07

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #: IA-7-091214**
**Sample ID: 14I0610-07**

Sample Matrix: Air

Sampled: 9/12/2014 10:48

Sample Description/Location:

Sub Description/Location:

Canister ID: 1494

Canister Size: 6 liter

Flow Controller ID: 4197

Sample Type: 30 min

**Work Order: 14I0610**

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -4

Receipt Vacuum(in Hg): -4.5

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			ug/m3			Date/Time	
		RL	MDL	Flag	Results	RL	Dilution	Analyzed	Analyst
Acetone	17	0.80	0.28		41	1.9	0.4	9/16/14 0:05	WSD
Benzene	0.11	0.020	0.010	V-05	0.36	0.064	0.4	9/16/14 0:05	WSD
Benzyl chloride	ND	0.010	0.0039		ND	0.052	0.4	9/16/14 0:05	WSD
Bromodichloromethane	ND	0.010	0.0044		ND	0.067	0.4	9/16/14 0:05	WSD
Bromoform	ND	0.020	0.0038		ND	0.21	0.4	9/16/14 0:05	WSD
Bromomethane	0.014	0.020	0.014	J	0.056	0.078	0.4	9/16/14 0:05	WSD
1,3-Butadiene	ND	0.020	0.010		ND	0.044	0.4	9/16/14 0:05	WSD
2-Butanone (MEK)	0.74	0.80	0.015	J	2.2	2.4	0.4	9/16/14 0:05	WSD
Carbon Disulfide	0.035	0.20	0.0069	J	0.11	0.62	0.4	9/16/14 0:05	WSD
Carbon Tetrachloride	0.073	0.010	0.0048		0.46	0.063	0.4	9/16/14 0:05	WSD
Chlorobenzene	ND	0.010	0.0069		ND	0.046	0.4	9/16/14 0:05	WSD
Chloroethane	ND	0.020	0.0076		ND	0.053	0.4	9/16/14 0:05	WSD
Chloroform	0.025	0.010	0.0047		0.12	0.049	0.4	9/16/14 0:05	WSD
Chloromethane	0.37	0.040	0.0088	V-05, L-03	0.76	0.083	0.4	9/16/14 0:05	WSD
Cyclohexane	ND	0.020	0.011		ND	0.069	0.4	9/16/14 0:05	WSD
Dibromochloromethane	ND	0.010	0.0053		ND	0.085	0.4	9/16/14 0:05	WSD
1,2-Dibromoethane (EDB)	ND	0.010	0.0045		ND	0.077	0.4	9/16/14 0:05	WSD
1,2-Dichlorobenzene	ND	0.020	0.0053		ND	0.12	0.4	9/16/14 0:05	WSD
1,3-Dichlorobenzene	0.010	0.020	0.0044	J	0.060	0.12	0.4	9/16/14 0:05	WSD
1,4-Dichlorobenzene	ND	0.020	0.0050		ND	0.12	0.4	9/16/14 0:05	WSD
Dichlorodifluoromethane (Freon 12)	0.45	0.020	0.0087		2.2	0.099	0.4	9/16/14 0:05	WSD
1,1-Dichloroethane	ND	0.010	0.0056		ND	0.040	0.4	9/16/14 0:05	WSD
1,2-Dichloroethane	0.036	0.010	0.0056		0.15	0.040	0.4	9/16/14 0:05	WSD
1,1-Dichloroethylene	ND	0.010	0.0049		ND	0.040	0.4	9/16/14 0:05	WSD
cis-1,2-Dichloroethylene	ND	0.010	0.0076		ND	0.040	0.4	9/16/14 0:05	WSD
trans-1,2-Dichloroethylene	ND	0.010	0.0053		ND	0.040	0.4	9/16/14 0:05	WSD
1,2-Dichloropropane	0.018	0.010	0.0069	L-03, V-05	0.085	0.046	0.4	9/16/14 0:05	WSD
cis-1,3-Dichloropropene	ND	0.010	0.0053		ND	0.045	0.4	9/16/14 0:05	WSD
trans-1,3-Dichloropropene	ND	0.010	0.0054		ND	0.045	0.4	9/16/14 0:05	WSD
Ethanol	51	0.80	0.36		96	1.5	0.4	9/16/14 0:05	WSD
Ethyl Acetate	0.10	0.020	0.015		0.37	0.072	0.4	9/16/14 0:05	WSD
Ethylbenzene	0.045	0.020	0.0055		0.20	0.087	0.4	9/16/14 0:05	WSD
4-Ethyltoluene	0.013	0.020	0.0045	J	0.065	0.098	0.4	9/16/14 0:05	WSD
Heptane	0.45	0.020	0.0065		1.9	0.082	0.4	9/16/14 0:05	WSD
Hexachlorobutadiene	ND	0.020	0.0075		ND	0.21	0.4	9/16/14 0:05	WSD
Hexane	0.10	0.80	0.035	J	0.37	2.8	0.4	9/16/14 0:05	WSD
2-Hexanone (MBK)	0.10	0.020	0.0051	L-03, V-05	0.41	0.082	0.4	9/16/14 0:05	WSD
Isopropanol	ND	0.80	0.025	L-03	ND	2.0	0.4	9/16/14 0:05	WSD

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #: IA-7-091214**
**Sample ID: 14I0610-07**

Sample Matrix: Air

Sampled: 9/12/2014 10:48

Sample Description/Location:

Sub Description/Location:

Canister ID: 1494

Canister Size: 6 liter

Flow Controller ID: 4197

Sample Type: 30 min

**Work Order: 14I0610**

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -4

Receipt Vacuum(in Hg): -4.5

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			Flag	ug/m3			Dilution	Date/Time Analyzed	Analyst
		RL	MDL	Results		RL					
Methyl tert-Butyl Ether (MTBE)	ND	0.020	0.0062			ND	0.072		0.4	9/16/14 0:05	WSD
Methylene Chloride	0.18	0.20	0.024	J		0.63	0.69		0.4	9/16/14 0:05	WSD
Methyl methacrylate	ND	0.020	0.0061			ND	0.082		0.4	9/16/14 0:05	WSD
4-Methyl-2-pentanone (MIBK)	0.044	0.020	0.0048			0.18	0.082		0.4	9/16/14 0:05	WSD
Propene	ND	0.80	0.061			ND	1.4		0.4	9/16/14 0:05	WSD
Styrene	0.056	0.020	0.0039			0.24	0.085		0.4	9/16/14 0:05	WSD
1,1,1,2-Tetrachloroethane	ND	0.036	0.013			ND	0.25		0.4	9/16/14 0:05	WSD
1,1,2,2-Tetrachloroethane	ND	0.010	0.0048			ND	0.069		0.4	9/16/14 0:05	WSD
Tetrachloroethylene	0.019	0.010	0.0057			0.13	0.068		0.4	9/16/14 0:05	WSD
Tetrahydrofuran	0.045	0.020	0.0084			0.13	0.059		0.4	9/16/14 0:05	WSD
Toluene	0.33	0.020	0.0062			1.3	0.075		0.4	9/16/14 0:05	WSD
1,2,4-Trichlorobenzene	ND	0.020	0.0076	L-03		ND	0.15		0.4	9/16/14 0:05	WSD
1,1,1-Trichloroethane	ND	0.010	0.0036			ND	0.055		0.4	9/16/14 0:05	WSD
1,1,2-Trichloroethane	ND	0.020	0.0061			ND	0.11		0.4	9/16/14 0:05	WSD
Trichloroethylene	0.014	0.010	0.0059			0.077	0.054		0.4	9/16/14 0:05	WSD
Trichlorofluoromethane (Freon 11)	0.24	0.020	0.0070			1.3	0.11		0.4	9/16/14 0:05	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.076	0.020	0.0056			0.58	0.15		0.4	9/16/14 0:05	WSD
1,2,4-Trimethylbenzene	0.074	0.020	0.0049			0.37	0.098		0.4	9/16/14 0:05	WSD
1,3,5-Trimethylbenzene	0.012	0.020	0.0040	J		0.057	0.098		0.4	9/16/14 0:05	WSD
Vinyl Acetate	ND	0.40	0.010			ND	1.4		0.4	9/16/14 0:05	WSD
Vinyl Chloride	ND	0.010	0.0086	V-05		ND	0.026		0.4	9/16/14 0:05	WSD
m&p-Xylene	0.12	0.040	0.010			0.54	0.17		0.4	9/16/14 0:05	WSD
o-Xylene	0.044	0.020	0.0058			0.19	0.087		0.4	9/16/14 0:05	WSD

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	107	70-130	9/16/14 0:05
4-Bromofluorobenzene (2)	121	70-130	9/16/14 0:05

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #:** AA-1-091214

**Sample ID:** 14I0610-08

Sample Matrix: Air

Sampled: 9/12/2014 10:39

Sample Description/Location:

Sub Description/Location:

Canister ID: 1163

Canister Size: 6 liter

Flow Controller ID: 4188

Sample Type: 30 min

**Work Order:** 14I0610

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -4

Receipt Vacuum(in Hg): -4.5

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
		RL	MDL	Flag	Results	RL				
Acetone	10	0.80	0.28		25	1.9	0.4	9/15/14 18:20	WSD	
Benzene	0.062	0.020	0.010	V-05	0.20	0.064	0.4	9/15/14 18:20	WSD	
Benzyl chloride	ND	0.010	0.0039		ND	0.052	0.4	9/15/14 18:20	WSD	
Bromodichloromethane	ND	0.010	0.0044		ND	0.067	0.4	9/15/14 18:20	WSD	
Bromoform	ND	0.020	0.0038		ND	0.21	0.4	9/15/14 18:20	WSD	
Bromomethane	ND	0.020	0.014		ND	0.078	0.4	9/15/14 18:20	WSD	
1,3-Butadiene	ND	0.020	0.010		ND	0.044	0.4	9/15/14 18:20	WSD	
2-Butanone (MEK)	0.37	0.80	0.015	J	1.1	2.4	0.4	9/15/14 18:20	WSD	
Carbon Disulfide	0.032	0.20	0.0069	J	0.098	0.62	0.4	9/15/14 18:20	WSD	
Carbon Tetrachloride	0.072	0.010	0.0048		0.45	0.063	0.4	9/15/14 18:20	WSD	
Chlorobenzene	ND	0.010	0.0069		ND	0.046	0.4	9/15/14 18:20	WSD	
Chloroethane	ND	0.020	0.0076		ND	0.053	0.4	9/15/14 18:20	WSD	
Chloroform	0.017	0.010	0.0047		0.082	0.049	0.4	9/15/14 18:20	WSD	
Chloromethane	0.31	0.040	0.0088	L-03, V-05	0.64	0.083	0.4	9/15/14 18:20	WSD	
Cyclohexane	ND	0.020	0.011		ND	0.069	0.4	9/15/14 18:20	WSD	
Dibromochloromethane	ND	0.010	0.0053		ND	0.085	0.4	9/15/14 18:20	WSD	
1,2-Dibromoethane (EDB)	ND	0.010	0.0045		ND	0.077	0.4	9/15/14 18:20	WSD	
1,2-Dichlorobenzene	ND	0.020	0.0053		ND	0.12	0.4	9/15/14 18:20	WSD	
1,3-Dichlorobenzene	ND	0.020	0.0044		ND	0.12	0.4	9/15/14 18:20	WSD	
1,4-Dichlorobenzene	ND	0.020	0.0050		ND	0.12	0.4	9/15/14 18:20	WSD	
Dichlorodifluoromethane (Freon 12)	0.44	0.020	0.0087		2.2	0.099	0.4	9/15/14 18:20	WSD	
1,1-Dichloroethane	ND	0.010	0.0056		ND	0.040	0.4	9/15/14 18:20	WSD	
1,2-Dichloroethane	0.0092	0.010	0.0056	J	0.037	0.040	0.4	9/15/14 18:20	WSD	
1,1-Dichloroethylene	ND	0.010	0.0049		ND	0.040	0.4	9/15/14 18:20	WSD	
cis-1,2-Dichloroethylene	ND	0.010	0.0076		ND	0.040	0.4	9/15/14 18:20	WSD	
trans-1,2-Dichloroethylene	ND	0.010	0.0053		ND	0.040	0.4	9/15/14 18:20	WSD	
1,2-Dichloropropane	ND	0.010	0.0069	L-03, V-05	ND	0.046	0.4	9/15/14 18:20	WSD	
cis-1,3-Dichloropropene	ND	0.010	0.0053		ND	0.045	0.4	9/15/14 18:20	WSD	
trans-1,3-Dichloropropene	ND	0.010	0.0054		ND	0.045	0.4	9/15/14 18:20	WSD	
Ethanol	1.6	0.80	0.36		2.9	1.5	0.4	9/15/14 18:20	WSD	
Ethyl Acetate	0.048	0.020	0.015		0.17	0.072	0.4	9/15/14 18:20	WSD	
Ethylbenzene	0.011	0.020	0.0055	J	0.047	0.087	0.4	9/15/14 18:20	WSD	
4-Ethyltoluene	ND	0.020	0.0045		ND	0.098	0.4	9/15/14 18:20	WSD	
Heptane	0.013	0.020	0.0065	J	0.054	0.082	0.4	9/15/14 18:20	WSD	
Hexachlorobutadiene	ND	0.020	0.0075		ND	0.21	0.4	9/15/14 18:20	WSD	
Hexane	0.055	0.80	0.035	J	0.19	2.8	0.4	9/15/14 18:20	WSD	
2-Hexanone (MBK)	0.039	0.020	0.0051	L-03, V-05	0.16	0.082	0.4	9/15/14 18:20	WSD	
Isopropanol	0.25	0.80	0.025	L-03, J	0.61	2.0	0.4	9/15/14 18:20	WSD	

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #:** AA-1-091214

**Sample ID:** 14I0610-08

Sample Matrix: Air

Sampled: 9/12/2014 10:39

Sample Description/Location:

Sub Description/Location:

Canister ID: 1163

Canister Size: 6 liter

Flow Controller ID: 4188

Sample Type: 30 min

**Work Order:** 14I0610

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -4

Receipt Vacuum(in Hg): -4.5

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
		RL	MDL	Flag	Results	RL				
Methyl tert-Butyl Ether (MTBE)	ND	0.020	0.0062		ND	0.072		0.4	9/15/14 18:20	WSD
Methylene Chloride	0.15	0.20	0.024	J	0.54	0.69		0.4	9/15/14 18:20	WSD
Methyl methacrylate	ND	0.020	0.0061		ND	0.082		0.4	9/15/14 18:20	WSD
4-Methyl-2-pentanone (MIBK)	0.0088	0.020	0.0048	J	0.036	0.082		0.4	9/15/14 18:20	WSD
Propene	ND	0.80	0.061		ND	1.4		0.4	9/15/14 18:20	WSD
Styrene	ND	0.020	0.0039		ND	0.085		0.4	9/15/14 18:20	WSD
1,1,1,2-Tetrachloroethane	ND	0.036	0.013		ND	0.25		0.4	9/15/14 18:20	WSD
1,1,2,2-Tetrachloroethane	ND	0.010	0.0048		ND	0.069		0.4	9/15/14 18:20	WSD
Tetrachloroethylene	0.010	0.010	0.0057		0.071	0.068		0.4	9/15/14 18:20	WSD
Tetrahydrofuran	ND	0.020	0.0084		ND	0.059		0.4	9/15/14 18:20	WSD
Toluene	0.089	0.020	0.0062		0.33	0.075		0.4	9/15/14 18:20	WSD
1,2,4-Trichlorobenzene	ND	0.020	0.0076	L-03	ND	0.15		0.4	9/15/14 18:20	WSD
1,1,1-Trichloroethane	ND	0.010	0.0036		ND	0.055		0.4	9/15/14 18:20	WSD
1,1,2-Trichloroethane	ND	0.020	0.0061		ND	0.11		0.4	9/15/14 18:20	WSD
Trichloroethylene	0.0096	0.010	0.0059	J	0.052	0.054		0.4	9/15/14 18:20	WSD
Trichlorofluoromethane (Freon 11)	0.23	0.020	0.0070		1.3	0.11		0.4	9/15/14 18:20	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.075	0.020	0.0056		0.57	0.15		0.4	9/15/14 18:20	WSD
1,2,4-Trimethylbenzene	0.014	0.020	0.0049	J	0.069	0.098		0.4	9/15/14 18:20	WSD
1,3,5-Trimethylbenzene	ND	0.020	0.0040		ND	0.098		0.4	9/15/14 18:20	WSD
Vinyl Acetate	ND	0.40	0.010		ND	1.4		0.4	9/15/14 18:20	WSD
Vinyl Chloride	ND	0.010	0.0086	V-05	ND	0.026		0.4	9/15/14 18:20	WSD
m&p-Xylene	0.031	0.040	0.010	J	0.14	0.17		0.4	9/15/14 18:20	WSD
o-Xylene	0.012	0.020	0.0058	J	0.054	0.087		0.4	9/15/14 18:20	WSD

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	109	70-130	9/15/14 18:20
4-Bromofluorobenzene (2)	119	70-130	9/15/14 18:20

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #: EW-5-091214**
**Sample ID: 14I0610-09**

Sample Matrix: Air

Sampled: 9/12/2014 08:55

Sample Description/Location:

Sub Description/Location:

Canister ID: 1212

Canister Size: 6 liter

Flow Controller ID: 4189

Sample Type: 30 min

**Work Order: 14I0610**

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	Results	ppbv			ug/m3			Date/Time	
		RL	MDL	Flag	Results	RL	Dilution	Analyzed	Analyst
Acetone	210	8.0	2.8		500	19	4	9/16/14 1:36	WSD
Benzene	0.83	0.20	0.10	V-05	2.7	0.64	4	9/16/14 1:36	WSD
Benzyl chloride	ND	0.10	0.039		ND	0.52	4	9/16/14 1:36	WSD
Bromodichloromethane	ND	0.10	0.044		ND	0.67	4	9/16/14 1:36	WSD
Bromoform	ND	0.20	0.038		ND	2.1	4	9/16/14 1:36	WSD
Bromomethane	ND	0.20	0.14		ND	0.78	4	9/16/14 1:36	WSD
1,3-Butadiene	ND	0.20	0.10		ND	0.44	4	9/16/14 1:36	WSD
2-Butanone (MEK)	1300	40	0.75		3800	120	20	9/16/14 18:46	WSD
Carbon Disulfide	15	2.0	0.069		46	6.2	4	9/16/14 1:36	WSD
Carbon Tetrachloride	ND	0.10	0.048		ND	0.63	4	9/16/14 1:36	WSD
Chlorobenzene	ND	0.10	0.069		ND	0.46	4	9/16/14 1:36	WSD
Chloroethane	0.61	0.20	0.076		1.6	0.53	4	9/16/14 1:36	WSD
Chloroform	0.17	0.10	0.047		0.82	0.49	4	9/16/14 1:36	WSD
Chloromethane	29	0.40	0.088	L-03, V-05	61	0.83	4	9/16/14 1:36	WSD
Cyclohexane	ND	0.20	0.11		ND	0.69	4	9/16/14 1:36	WSD
Dibromochloromethane	ND	0.10	0.053		ND	0.85	4	9/16/14 1:36	WSD
1,2-Dibromoethane (EDB)	ND	0.10	0.045		ND	0.77	4	9/16/14 1:36	WSD
1,2-Dichlorobenzene	ND	0.20	0.053		ND	1.2	4	9/16/14 1:36	WSD
1,3-Dichlorobenzene	ND	0.20	0.044		ND	1.2	4	9/16/14 1:36	WSD
1,4-Dichlorobenzene	ND	0.20	0.050		ND	1.2	4	9/16/14 1:36	WSD
Dichlorodifluoromethane (Freon 12)	0.46	0.20	0.087		2.3	0.99	4	9/16/14 1:36	WSD
1,1-Dichloroethane	2.3	0.10	0.056		9.3	0.40	4	9/16/14 1:36	WSD
1,2-Dichloroethane	ND	0.10	0.056		ND	0.40	4	9/16/14 1:36	WSD
1,1-Dichloroethylene	0.60	0.10	0.049		2.4	0.40	4	9/16/14 1:36	WSD
cis-1,2-Dichloroethylene	1.3	0.10	0.076		5.0	0.40	4	9/16/14 1:36	WSD
trans-1,2-Dichloroethylene	ND	0.10	0.053		ND	0.40	4	9/16/14 1:36	WSD
1,2-Dichloropropane	ND	0.10	0.069	L-03, V-05	ND	0.46	4	9/16/14 1:36	WSD
cis-1,3-Dichloropropene	ND	0.10	0.053		ND	0.45	4	9/16/14 1:36	WSD
trans-1,3-Dichloropropene	ND	0.10	0.054		ND	0.45	4	9/16/14 1:36	WSD
Ethanol	8.1	8.0	3.6		15	15	4	9/16/14 1:36	WSD
Ethyl Acetate	0.99	0.20	0.15		3.6	0.72	4	9/16/14 1:36	WSD
Ethylbenzene	ND	0.20	0.055		ND	0.87	4	9/16/14 1:36	WSD
4-Ethyltoluene	ND	0.20	0.045		ND	0.98	4	9/16/14 1:36	WSD
Heptane	ND	0.20	0.065		ND	0.82	4	9/16/14 1:36	WSD
Hexachlorobutadiene	ND	0.20	0.075		ND	2.1	4	9/16/14 1:36	WSD
Hexane	ND	8.0	0.35		ND	28	4	9/16/14 1:36	WSD
2-Hexanone (MBK)	ND	0.20	0.051	L-03, V-05	ND	0.82	4	9/16/14 1:36	WSD
Isopropanol	3.4	8.0	0.25	L-03, J	8.4	20	4	9/16/14 1:36	WSD

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #:** EW-5-091214

**Sample ID:** 14I0610-09

Sample Matrix: Air

Sampled: 9/12/2014 08:55

Sample Description/Location:

Sub Description/Location:

Canister ID: 1212

Canister Size: 6 liter

Flow Controller ID: 4189

Sample Type: 30 min

**Work Order:** 14I0610

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	Results	ppbv			Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
		RL	MDL	Results		RL	Results			
Methyl tert-Butyl Ether (MTBE)	ND	0.20	0.062			ND	0.72	4	9/16/14 1:36	WSD
Methylene Chloride	0.47	2.0	0.24	J		1.6	6.9	4	9/16/14 1:36	WSD
Methyl methacrylate	ND	0.20	0.061			ND	0.82	4	9/16/14 1:36	WSD
4-Methyl-2-pentanone (MIBK)	ND	0.20	0.048			ND	0.82	4	9/16/14 1:36	WSD
Propene	ND	8.0	0.61			ND	14	4	9/16/14 1:36	WSD
Styrene	ND	0.20	0.039			ND	0.85	4	9/16/14 1:36	WSD
1,1,1,2-Tetrachloroethane	ND	0.36	0.13			ND	2.5	4	9/16/14 1:36	WSD
1,1,2,2-Tetrachloroethane	ND	0.10	0.048			ND	0.69	4	9/16/14 1:36	WSD
Tetrachloroethylene	0.17	0.10	0.057			1.2	0.68	4	9/16/14 1:36	WSD
Tetrahydrofuran	1100	1.0	0.42			3300	2.9	20	9/16/14 18:46	WSD
Toluene	0.30	0.20	0.062			1.1	0.75	4	9/16/14 1:36	WSD
1,2,4-Trichlorobenzene	ND	0.20	0.076	L-03		ND	1.5	4	9/16/14 1:36	WSD
1,1,1-Trichloroethane	14	0.10	0.036			74	0.55	4	9/16/14 1:36	WSD
1,1,2-Trichloroethane	ND	0.20	0.061			ND	1.1	4	9/16/14 1:36	WSD
Trichloroethylene	38	0.10	0.059			200	0.54	4	9/16/14 1:36	WSD
Trichlorofluoromethane (Freon 11)	0.73	0.20	0.070			4.1	1.1	4	9/16/14 1:36	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.20	0.056			ND	1.5	4	9/16/14 1:36	WSD
1,2,4-Trimethylbenzene	ND	0.20	0.049			ND	0.98	4	9/16/14 1:36	WSD
1,3,5-Trimethylbenzene	ND	0.20	0.040			ND	0.98	4	9/16/14 1:36	WSD
Vinyl Acetate	ND	4.0	0.10			ND	14	4	9/16/14 1:36	WSD
Vinyl Chloride	ND	0.10	0.086	V-05		ND	0.26	4	9/16/14 1:36	WSD
m&p-Xylene	ND	0.40	0.10			ND	1.7	4	9/16/14 1:36	WSD
o-Xylene	ND	0.20	0.058			ND	0.87	4	9/16/14 1:36	WSD

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	105	70-130	9/16/14 18:46
4-Bromofluorobenzene (1)	107	70-130	9/16/14 1:36
4-Bromofluorobenzene (2)	121	70-130	9/16/14 1:36

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #:** EW-6-091214

**Sample ID:** 14I0610-10

Sample Matrix: Air

Sampled: 9/12/2014 11:31

Sample Description/Location:

Sub Description/Location:

Canister ID: 1218

Canister Size: 6 liter

Flow Controller ID: 4191

Sample Type: 30 min

**Work Order:** 14I0610

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -6

Receipt Vacuum(in Hg): -7.2

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			ug/m3			Date/Time	
		RL	MDL	Flag	Results	RL	Dilution	Analyzed	Analyst
Acetone	15	8.0	2.8		36	19	4	9/16/14 2:14	WSD
Benzene	0.33	0.20	0.10	V-05	1.1	0.64	4	9/16/14 2:14	WSD
Benzyl chloride	ND	0.10	0.039		ND	0.52	4	9/16/14 2:14	WSD
Bromodichloromethane	ND	0.10	0.044		ND	0.67	4	9/16/14 2:14	WSD
Bromoform	ND	0.20	0.038		ND	2.1	4	9/16/14 2:14	WSD
Bromomethane	ND	0.20	0.14		ND	0.78	4	9/16/14 2:14	WSD
1,3-Butadiene	ND	0.20	0.10		ND	0.44	4	9/16/14 2:14	WSD
2-Butanone (MEK)	3.8	8.0	0.15	J	11	24	4	9/16/14 2:14	WSD
Carbon Disulfide	23	2.0	0.069		71	6.2	4	9/16/14 2:14	WSD
Carbon Tetrachloride	ND	0.10	0.048		ND	0.63	4	9/16/14 2:14	WSD
Chlorobenzene	ND	0.10	0.069		ND	0.46	4	9/16/14 2:14	WSD
Chloroethane	0.41	0.20	0.076		1.1	0.53	4	9/16/14 2:14	WSD
Chloroform	0.21	0.10	0.047		1.0	0.49	4	9/16/14 2:14	WSD
Chloromethane	2.1	0.40	0.088	L-03, V-05	4.4	0.83	4	9/16/14 2:14	WSD
Cyclohexane	ND	0.20	0.11		ND	0.69	4	9/16/14 2:14	WSD
Dibromochloromethane	ND	0.10	0.053		ND	0.85	4	9/16/14 2:14	WSD
1,2-Dibromoethane (EDB)	ND	0.10	0.045		ND	0.77	4	9/16/14 2:14	WSD
1,2-Dichlorobenzene	ND	0.20	0.053		ND	1.2	4	9/16/14 2:14	WSD
1,3-Dichlorobenzene	ND	0.20	0.044		ND	1.2	4	9/16/14 2:14	WSD
1,4-Dichlorobenzene	ND	0.20	0.050		ND	1.2	4	9/16/14 2:14	WSD
Dichlorodifluoromethane (Freon 12)	0.46	0.20	0.087		2.3	0.99	4	9/16/14 2:14	WSD
1,1-Dichloroethane	2.0	0.10	0.056		8.2	0.40	4	9/16/14 2:14	WSD
1,2-Dichloroethane	ND	0.10	0.056		ND	0.40	4	9/16/14 2:14	WSD
1,1-Dichloroethylene	0.13	0.10	0.049		0.52	0.40	4	9/16/14 2:14	WSD
cis-1,2-Dichloroethylene	0.28	0.10	0.076		1.1	0.40	4	9/16/14 2:14	WSD
trans-1,2-Dichloroethylene	ND	0.10	0.053		ND	0.40	4	9/16/14 2:14	WSD
1,2-Dichloropropane	ND	0.10	0.069	L-03, V-05	ND	0.46	4	9/16/14 2:14	WSD
cis-1,3-Dichloropropene	ND	0.10	0.053		ND	0.45	4	9/16/14 2:14	WSD
trans-1,3-Dichloropropene	ND	0.10	0.054		ND	0.45	4	9/16/14 2:14	WSD
Ethanol	ND	8.0	3.6		ND	15	4	9/16/14 2:14	WSD
Ethyl Acetate	ND	0.20	0.15		ND	0.72	4	9/16/14 2:14	WSD
Ethylbenzene	ND	0.20	0.055		ND	0.87	4	9/16/14 2:14	WSD
4-Ethyltoluene	ND	0.20	0.045		ND	0.98	4	9/16/14 2:14	WSD
Heptane	ND	0.20	0.065		ND	0.82	4	9/16/14 2:14	WSD
Hexachlorobutadiene	ND	0.20	0.075		ND	2.1	4	9/16/14 2:14	WSD
Hexane	ND	8.0	0.35		ND	28	4	9/16/14 2:14	WSD
2-Hexanone (MBK)	ND	0.20	0.051	L-03, V-05	ND	0.82	4	9/16/14 2:14	WSD
Isopropanol	2.4	8.0	0.25	L-03, J	5.9	20	4	9/16/14 2:14	WSD

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #:** EW-6-091214

**Sample ID:** 14I0610-10

Sample Matrix: Air

Sampled: 9/12/2014 11:31

Sample Description/Location:

Sub Description/Location:

Canister ID: 1218

Canister Size: 6 liter

Flow Controller ID: 4191

Sample Type: 30 min

**Work Order:** 14I0610

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -6

Receipt Vacuum(in Hg): -7.2

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
		RL	MDL	Results		RL	Results			
Methyl tert-Butyl Ether (MTBE)	ND	0.20	0.062			ND	0.72	4	9/16/14 2:14	WSD
Methylene Chloride	0.46	2.0	0.24	J		1.6	6.9	4	9/16/14 2:14	WSD
Methyl methacrylate	ND	0.20	0.061			ND	0.82	4	9/16/14 2:14	WSD
4-Methyl-2-pentanone (MIBK)	ND	0.20	0.048			ND	0.82	4	9/16/14 2:14	WSD
Propene	1.2	8.0	0.61	J		2.1	14	4	9/16/14 2:14	WSD
Styrene	ND	0.20	0.039			ND	0.85	4	9/16/14 2:14	WSD
1,1,1,2-Tetrachloroethane	ND	0.36	0.13			ND	2.5	4	9/16/14 2:14	WSD
1,1,2,2-Tetrachloroethane	ND	0.10	0.048			ND	0.69	4	9/16/14 2:14	WSD
Tetrachloroethylene	0.87	0.10	0.057			5.9	0.68	4	9/16/14 2:14	WSD
Tetrahydrofuran	1400	1.0	0.42			4100	2.9	20	9/16/14 19:24	WSD
Toluene	0.18	0.20	0.062	J		0.68	0.75	4	9/16/14 2:14	WSD
1,2,4-Trichlorobenzene	ND	0.20	0.076	L-03		ND	1.5	4	9/16/14 2:14	WSD
1,1,1-Trichloroethane	11	0.10	0.036			58	0.55	4	9/16/14 2:14	WSD
1,1,2-Trichloroethane	ND	0.20	0.061			ND	1.1	4	9/16/14 2:14	WSD
Trichloroethylene	20	0.10	0.059			110	0.54	4	9/16/14 2:14	WSD
Trichlorofluoromethane (Freon 11)	3.7	0.20	0.070			21	1.1	4	9/16/14 2:14	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.20	0.056			ND	1.5	4	9/16/14 2:14	WSD
1,2,4-Trimethylbenzene	ND	0.20	0.049			ND	0.98	4	9/16/14 2:14	WSD
1,3,5-Trimethylbenzene	ND	0.20	0.040			ND	0.98	4	9/16/14 2:14	WSD
Vinyl Acetate	0.60	4.0	0.10	J		2.1	14	4	9/16/14 2:14	WSD
Vinyl Chloride	0.50	0.10	0.086	V-05		1.3	0.26	4	9/16/14 2:14	WSD
m&p-Xylene	ND	0.40	0.10			ND	1.7	4	9/16/14 2:14	WSD
o-Xylene	ND	0.20	0.058			ND	0.87	4	9/16/14 2:14	WSD

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	106	70-130	9/16/14 19:24
4-Bromofluorobenzene (1)	106	70-130	9/16/14 2:14
4-Bromofluorobenzene (2)	119	70-130	9/16/14 2:14

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #:** EW-7-091214

**Sample ID:** 14I0610-11

Sample Matrix: Air

Sampled: 9/12/2014 10:47

Sample Description/Location:

Sub Description/Location:

Canister ID: 1466

Canister Size: 6 liter

Flow Controller ID: 4196

Sample Type: 30 min

**Work Order:** 14I0610

Initial Vacuum(in Hg): -30

Final Vacuum(in Hg): -4

Receipt Vacuum(in Hg): -4

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
		RL	MDL	Flag	Results	RL				
Acetone	7.4	8.0	2.8	J	18	19		4	9/16/14 2:53	WSD
Benzene	0.18	0.20	0.10	V-05, J	0.59	0.64		4	9/16/14 2:53	WSD
Benzyl chloride	ND	0.10	0.039		ND	0.52		4	9/16/14 2:53	WSD
Bromodichloromethane	ND	0.10	0.044		ND	0.67		4	9/16/14 2:53	WSD
Bromoform	ND	0.20	0.038		ND	2.1		4	9/16/14 2:53	WSD
Bromomethane	ND	0.20	0.14		ND	0.78		4	9/16/14 2:53	WSD
1,3-Butadiene	ND	0.20	0.10		ND	0.44		4	9/16/14 2:53	WSD
2-Butanone (MEK)	2.4	8.0	0.15	J	7.2	24		4	9/16/14 2:53	WSD
Carbon Disulfide	ND	2.0	0.069		ND	6.2		4	9/16/14 2:53	WSD
Carbon Tetrachloride	ND	0.10	0.048		ND	0.63		4	9/16/14 2:53	WSD
Chlorobenzene	ND	0.10	0.069		ND	0.46		4	9/16/14 2:53	WSD
Chloroethane	ND	0.20	0.076		ND	0.53		4	9/16/14 2:53	WSD
Chloroform	0.78	0.10	0.047		3.8	0.49		4	9/16/14 2:53	WSD
Chloromethane	ND	0.40	0.088	L-03, V-05	ND	0.83		4	9/16/14 2:53	WSD
Cyclohexane	ND	0.20	0.11		ND	0.69		4	9/16/14 2:53	WSD
Dibromochloromethane	ND	0.10	0.053		ND	0.85		4	9/16/14 2:53	WSD
1,2-Dibromoethane (EDB)	ND	0.10	0.045		ND	0.77		4	9/16/14 2:53	WSD
1,2-Dichlorobenzene	ND	0.20	0.053		ND	1.2		4	9/16/14 2:53	WSD
1,3-Dichlorobenzene	ND	0.20	0.044		ND	1.2		4	9/16/14 2:53	WSD
1,4-Dichlorobenzene	ND	0.20	0.050		ND	1.2		4	9/16/14 2:53	WSD
Dichlorodifluoromethane (Freon 12)	0.51	0.20	0.087		2.5	0.99		4	9/16/14 2:53	WSD
1,1-Dichloroethane	4.9	0.10	0.056		20	0.40		4	9/16/14 2:53	WSD
1,2-Dichloroethane	ND	0.10	0.056		ND	0.40		4	9/16/14 2:53	WSD
1,1-Dichloroethylene	ND	0.10	0.049		ND	0.40		4	9/16/14 2:53	WSD
cis-1,2-Dichloroethylene	4.5	0.10	0.076		18	0.40		4	9/16/14 2:53	WSD
trans-1,2-Dichloroethylene	6.9	0.10	0.053		28	0.40		4	9/16/14 2:53	WSD
1,2-Dichloropropane	ND	0.10	0.069	L-03, V-05	ND	0.46		4	9/16/14 2:53	WSD
cis-1,3-Dichloropropene	ND	0.10	0.053		ND	0.45		4	9/16/14 2:53	WSD
trans-1,3-Dichloropropene	ND	0.10	0.054		ND	0.45		4	9/16/14 2:53	WSD
Ethanol	9.7	8.0	3.6		18	15		4	9/16/14 2:53	WSD
Ethyl Acetate	ND	0.20	0.15		ND	0.72		4	9/16/14 2:53	WSD
Ethylbenzene	ND	0.20	0.055		ND	0.87		4	9/16/14 2:53	WSD
4-Ethyltoluene	ND	0.20	0.045		ND	0.98		4	9/16/14 2:53	WSD
Heptane	0.14	0.20	0.065	J	0.57	0.82		4	9/16/14 2:53	WSD
Hexachlorobutadiene	ND	0.20	0.075		ND	2.1		4	9/16/14 2:53	WSD
Hexane	ND	8.0	0.35		ND	28		4	9/16/14 2:53	WSD
2-Hexanone (MBK)	ND	0.20	0.051	L-03, V-05	ND	0.82		4	9/16/14 2:53	WSD
Isopropanol	ND	8.0	0.25	L-03	ND	20		4	9/16/14 2:53	WSD

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #:** EW-7-091214

**Sample ID:** 14I0610-11

Sample Matrix: Air

Sampled: 9/12/2014 10:47

Sample Description/Location:

Sub Description/Location:

Canister ID: 1466

Canister Size: 6 liter

Flow Controller ID: 4196

Sample Type: 30 min

**Work Order:** 14I0610

Initial Vacuum(in Hg): -30

Final Vacuum(in Hg): -4

Receipt Vacuum(in Hg): -4

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
		RL	MDL	Flag	Results	RL				
Methyl tert-Butyl Ether (MTBE)	ND	0.20	0.062		ND	0.72		4	9/16/14 2:53	WSD
Methylene Chloride	0.38	2.0	0.24	J	1.3	6.9		4	9/16/14 2:53	WSD
Methyl methacrylate	ND	0.20	0.061		ND	0.82		4	9/16/14 2:53	WSD
4-Methyl-2-pentanone (MIBK)	ND	0.20	0.048		ND	0.82		4	9/16/14 2:53	WSD
Propene	ND	8.0	0.61		ND	14		4	9/16/14 2:53	WSD
Styrene	ND	0.20	0.039		ND	0.85		4	9/16/14 2:53	WSD
1,1,1,2-Tetrachloroethane	ND	0.36	0.13		ND	2.5		4	9/16/14 2:53	WSD
1,1,2,2-Tetrachloroethane	ND	0.10	0.048		ND	0.69		4	9/16/14 2:53	WSD
Tetrachloroethylene	54	0.10	0.057		370	0.68		4	9/16/14 2:53	WSD
Tetrahydrofuran	1.6	0.20	0.084		4.6	0.59		4	9/16/14 2:53	WSD
Toluene	0.16	0.20	0.062	J	0.59	0.75		4	9/16/14 2:53	WSD
1,2,4-Trichlorobenzene	ND	0.20	0.076	L-03	ND	1.5		4	9/16/14 2:53	WSD
1,1,1-Trichloroethane	9.5	0.10	0.036		52	0.55		4	9/16/14 2:53	WSD
1,1,2-Trichloroethane	ND	0.20	0.061		ND	1.1		4	9/16/14 2:53	WSD
Trichloroethylene	83	0.10	0.059		440	0.54		4	9/16/14 2:53	WSD
Trichlorofluoromethane (Freon 11)	190	0.20	0.070		1100	1.1		4	9/16/14 2:53	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.13	0.20	0.056	J	1.0	1.5		4	9/16/14 2:53	WSD
1,2,4-Trimethylbenzene	ND	0.20	0.049		ND	0.98		4	9/16/14 2:53	WSD
1,3,5-Trimethylbenzene	ND	0.20	0.040		ND	0.98		4	9/16/14 2:53	WSD
Vinyl Acetate	0.33	4.0	0.10	J	1.2	14		4	9/16/14 2:53	WSD
Vinyl Chloride	ND	0.10	0.086	V-05	ND	0.26		4	9/16/14 2:53	WSD
m&p-Xylene	ND	0.40	0.10		ND	1.7		4	9/16/14 2:53	WSD
o-Xylene	ND	0.20	0.058		ND	0.87		4	9/16/14 2:53	WSD

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	106	70-130	9/16/14 2:53
4-Bromofluorobenzene (2)	117	70-130	9/16/14 2:53

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #: EW-Combined-091214**
**Sample ID: 14I0610-12**

Sample Matrix: Air

Sampled: 9/12/2014 10:41

Sample Description/Location:

Sub Description/Location:

Canister ID: 1217

Canister Size: 6 liter

Flow Controller ID: 4190

Sample Type: 30 min

**Work Order: 14I0610**

Initial Vacuum(in Hg): -30

Final Vacuum(in Hg): -4

Receipt Vacuum(in Hg): -4.3

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			ug/m3			Date/Time	
		RL	MDL	Flag	Results	RL	Dilution	Analyzed	Analyst
Acetone	ND	8.0	2.8		ND	19	4	9/16/14 3:32	WSD
Benzene	0.11	0.20	0.10	V-05, J	0.35	0.64	4	9/16/14 3:32	WSD
Benzyl chloride	ND	0.10	0.039		ND	0.52	4	9/16/14 3:32	WSD
Bromodichloromethane	ND	0.10	0.044		ND	0.67	4	9/16/14 3:32	WSD
Bromoform	ND	0.20	0.038		ND	2.1	4	9/16/14 3:32	WSD
Bromomethane	ND	0.20	0.14		ND	0.78	4	9/16/14 3:32	WSD
1,3-Butadiene	ND	0.20	0.10		ND	0.44	4	9/16/14 3:32	WSD
2-Butanone (MEK)	1.1	8.0	0.15	J	3.3	24	4	9/16/14 3:32	WSD
Carbon Disulfide	0.17	2.0	0.069	J	0.52	6.2	4	9/16/14 3:32	WSD
Carbon Tetrachloride	0.092	0.10	0.048	J	0.58	0.63	4	9/16/14 3:32	WSD
Chlorobenzene	ND	0.10	0.069		ND	0.46	4	9/16/14 3:32	WSD
Chloroethane	0.70	0.20	0.076		1.8	0.53	4	9/16/14 3:32	WSD
Chloroform	1.0	0.10	0.047		4.9	0.49	4	9/16/14 3:32	WSD
Chloromethane	ND	0.40	0.088	L-03, V-05	ND	0.83	4	9/16/14 3:32	WSD
Cyclohexane	ND	0.20	0.11		ND	0.69	4	9/16/14 3:32	WSD
Dibromochloromethane	ND	0.10	0.053		ND	0.85	4	9/16/14 3:32	WSD
1,2-Dibromoethane (EDB)	ND	0.10	0.045		ND	0.77	4	9/16/14 3:32	WSD
1,2-Dichlorobenzene	ND	0.20	0.053		ND	1.2	4	9/16/14 3:32	WSD
1,3-Dichlorobenzene	ND	0.20	0.044		ND	1.2	4	9/16/14 3:32	WSD
1,4-Dichlorobenzene	ND	0.20	0.050		ND	1.2	4	9/16/14 3:32	WSD
Dichlorodifluoromethane (Freon 12)	0.50	0.20	0.087		2.5	0.99	4	9/16/14 3:32	WSD
1,1-Dichloroethane	32	0.10	0.056		130	0.40	4	9/16/14 3:32	WSD
1,2-Dichloroethane	ND	0.10	0.056		ND	0.40	4	9/16/14 3:32	WSD
1,1-Dichloroethylene	13	0.10	0.049		52	0.40	4	9/16/14 3:32	WSD
cis-1,2-Dichloroethylene	14	0.10	0.076		57	0.40	4	9/16/14 3:32	WSD
trans-1,2-Dichloroethylene	0.36	0.10	0.053		1.4	0.40	4	9/16/14 3:32	WSD
1,2-Dichloropropane	ND	0.10	0.069	L-03, V-05	ND	0.46	4	9/16/14 3:32	WSD
cis-1,3-Dichloropropene	ND	0.10	0.053		ND	0.45	4	9/16/14 3:32	WSD
trans-1,3-Dichloropropene	ND	0.10	0.054		ND	0.45	4	9/16/14 3:32	WSD
Ethanol	8.1	8.0	3.6		15	15	4	9/16/14 3:32	WSD
Ethyl Acetate	ND	0.20	0.15		ND	0.72	4	9/16/14 3:32	WSD
Ethylbenzene	ND	0.20	0.055		ND	0.87	4	9/16/14 3:32	WSD
4-Ethyltoluene	ND	0.20	0.045		ND	0.98	4	9/16/14 3:32	WSD
Heptane	ND	0.20	0.065		ND	0.82	4	9/16/14 3:32	WSD
Hexachlorobutadiene	ND	0.20	0.075		ND	2.1	4	9/16/14 3:32	WSD
Hexane	ND	8.0	0.35		ND	28	4	9/16/14 3:32	WSD
2-Hexanone (MBK)	ND	0.20	0.051	L-03, V-05	ND	0.82	4	9/16/14 3:32	WSD
Isopropanol	1.1	8.0	0.25	L-03, J	2.7	20	4	9/16/14 3:32	WSD

**ANALYTICAL RESULTS**

Project Location: Providence, RI

Date Received: 9/12/2014

**Field Sample #:** EW-Combined-091214

**Sample ID:** 14I0610-12

Sample Matrix: Air

Sampled: 9/12/2014 10:41

Sample Description/Location:

Sub Description/Location:

Canister ID: 1217

Canister Size: 6 liter

Flow Controller ID: 4190

Sample Type: 30 min

**Work Order:** 14I0610

Initial Vacuum(in Hg): -30

Final Vacuum(in Hg): -4

Receipt Vacuum(in Hg): -4.3

Flow Controller Type: Fixed-Orifice

Flow Controller Calibration

RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
		RL	MDL	Flag	Results	RL				
Methyl tert-Butyl Ether (MTBE)	ND	0.20	0.062		ND	0.72		4	9/16/14 3:32	WSD
Methylene Chloride	0.40	2.0	0.24	J	1.4	6.9		4	9/16/14 3:32	WSD
Methyl methacrylate	ND	0.20	0.061		ND	0.82		4	9/16/14 3:32	WSD
4-Methyl-2-pentanone (MIBK)	ND	0.20	0.048		ND	0.82		4	9/16/14 3:32	WSD
Propene	ND	8.0	0.61		ND	14		4	9/16/14 3:32	WSD
Styrene	ND	0.20	0.039		ND	0.85		4	9/16/14 3:32	WSD
1,1,1,2-Tetrachloroethane	ND	0.36	0.13		ND	2.5		4	9/16/14 3:32	WSD
1,1,2,2-Tetrachloroethane	ND	0.10	0.048		ND	0.69		4	9/16/14 3:32	WSD
Tetrachloroethylene	34	0.10	0.057		230	0.68		4	9/16/14 3:32	WSD
Tetrahydrofuran	0.99	0.20	0.084		2.9	0.59		4	9/16/14 3:32	WSD
Toluene	ND	0.20	0.062		ND	0.75		4	9/16/14 3:32	WSD
1,2,4-Trichlorobenzene	ND	0.20	0.076	L-03	ND	1.5		4	9/16/14 3:32	WSD
1,1,1-Trichloroethane	240	2.0	0.36		1300	11		40	9/16/14 20:01	WSD
1,1,2-Trichloroethane	ND	0.20	0.061		ND	1.1		4	9/16/14 3:32	WSD
Trichloroethylene	150	2.0	0.59		800	11		40	9/16/14 20:01	WSD
Trichlorofluoromethane (Freon 11)	64	0.20	0.070		360	1.1		4	9/16/14 3:32	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.11	0.20	0.056	J	0.86	1.5		4	9/16/14 3:32	WSD
1,2,4-Trimethylbenzene	ND	0.20	0.049		ND	0.98		4	9/16/14 3:32	WSD
1,3,5-Trimethylbenzene	ND	0.20	0.040		ND	0.98		4	9/16/14 3:32	WSD
Vinyl Acetate	ND	4.0	0.10		ND	14		4	9/16/14 3:32	WSD
Vinyl Chloride	ND	0.10	0.086	V-05	ND	0.26		4	9/16/14 3:32	WSD
m&p-Xylene	ND	0.40	0.10		ND	1.7		4	9/16/14 3:32	WSD
o-Xylene	ND	0.20	0.058		ND	0.87		4	9/16/14 3:32	WSD

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	105	70-130	9/16/14 20:01
4-Bromofluorobenzene (1)	105	70-130	9/16/14 3:32
4-Bromofluorobenzene (2)	115	70-130	9/16/14 3:32

**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
14I0610-01 [IA-1-091214]	B105204	1.5	1	N/A	1000	400	1000	09/15/14
14I0610-02 [IA-2-091214]	B105204	1	1	N/A	1000	400	1000	09/15/14
14I0610-03 [IA-3-091214]	B105204	1	1	N/A	1000	400	1000	09/15/14
14I0610-04 [IA-4-091214]	B105204	1	1	N/A	1000	400	1000	09/15/14
14I0610-05 [IA-5-091214]	B105204	1	1	N/A	1000	400	1000	09/15/14
14I0610-06 [IA-6-091214]	B105204	1	1	N/A	1000	400	1000	09/15/14
14I0610-07 [IA-7-091214]	B105204	1	1	N/A	1000	400	1000	09/15/14
14I0610-08 [AA-1-091214]	B105204	1	1	N/A	1000	400	1000	09/15/14
14I0610-09 [EW-5-091214]	B105204	1.5	1	N/A	1000	400	150	09/15/14
14I0610-10 [EW-6-091214]	B105204	1.5	1	N/A	1000	400	150	09/15/14
14I0610-11 [EW-7-091214]	B105204	1.5	1	N/A	1000	400	150	09/15/14
14I0610-12 [EW-Combined-091214]	B105204	1.5	1	N/A	1000	400	150	09/15/14

**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
14I0610-04RE1 [IA-4-091214]	B105206	1	1	N/A	1000	400	20	09/15/14
14I0610-05RE1 [IA-5-091214]	B105206	1	1	N/A	1000	400	20	09/16/14
14I0610-06RE1 [IA-6-091214]	B105206	1	1	N/A	1000	400	20	09/16/14
14I0610-09RE1 [EW-5-091214]	B105206	1	1	N/A	1000	400	20	09/16/14
14I0610-10RE1 [EW-6-091214]	B105206	1	1	N/A	1000	400	20	09/16/14
14I0610-12RE1 [EW-Combined-091214]	B105206	1	1	N/A	1000	400	10	09/16/14

**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
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**Batch B105204 - TO-15 Prep**

<b>Blank (B105204-BLK1)</b>	Prepared & Analyzed: 09/15/14									
Acetone	0.43	1.0								J
Benzene	ND	0.025								V-05
Benzyl chloride	ND	0.025								
Bromodichloromethane	ND	0.025								
Bromoform	ND	0.025								
Bromomethane	ND	0.025								
1,3-Butadiene	ND	0.025								
2-Butanone (MEK)	0.075	1.0								J
Carbon Disulfide	ND	0.25								
Carbon Tetrachloride	ND	0.025								
Chlorobenzene	ND	0.025								
Chloroethane	ND	0.025								
Chloroform	ND	0.025								
Chloromethane	ND	0.050								L-03, V-05
Cyclohexane	ND	0.025								
Dibromochloromethane	ND	0.025								
1,2-Dibromoethane (EDB)	ND	0.025								
1,2-Dichlorobenzene	ND	0.025								
1,3-Dichlorobenzene	ND	0.025								
1,4-Dichlorobenzene	ND	0.025								
Dichlorodifluoromethane (Freon 12)	ND	0.025								
1,1-Dichloroethane	ND	0.025								
1,2-Dichloroethane	ND	0.025								
1,1-Dichloroethylene	ND	0.025								
cis-1,2-Dichloroethylene	ND	0.025								
trans-1,2-Dichloroethylene	ND	0.025								
1,2-Dichloropropane	ND	0.025								L-03, V-05
cis-1,3-Dichloropropene	ND	0.025								
trans-1,3-Dichloropropene	ND	0.025								
Ethanol	ND	1.0								
Ethyl Acetate	ND	0.025								
Ethylbenzene	ND	0.025								
4-Ethyltoluene	ND	0.025								
Heptane	ND	0.025								
Hexachlorobutadiene	ND	0.025								
Hexane	ND	1.0								
2-Hexanone (MBK)	ND	0.025								L-03, V-05
Isopropanol	ND	1.0								L-03
Methyl tert-Butyl Ether (MTBE)	ND	0.025								
Methylene Chloride	0.066	0.25								J
Methyl methacrylate	ND	0.025								
4-Methyl-2-pentanone (MIBK)	ND	0.025								
Propene	ND	1.0								
Styrene	ND	0.025								
1,1,1,2-Tetrachloroethane	ND	0.046								
1,1,2,2-Tetrachloroethane	ND	0.025								

**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
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**Batch B105204 - TO-15 Prep**

<b>Blank (B105204-BLK1)</b>	Prepared & Analyzed: 09/15/14							
Tetrachloroethylene	ND	0.025						
Tetrahydrofuran	ND	0.025						
Toluene	ND	0.025						
1,2,4-Trichlorobenzene	ND	0.025						L-03
1,1,1-Trichloroethane	ND	0.025						
1,1,2-Trichloroethane	ND	0.025						
Trichloroethylene	ND	0.025						
Trichlorofluoromethane (Freon 11)	ND	0.025						
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.025						
1,2,4-Trimethylbenzene	ND	0.025						
1,3,5-Trimethylbenzene	ND	0.025						
Vinyl Acetate	ND	0.50						
Vinyl Chloride	ND	0.025						V-05
m&p-Xylene	ND	0.050						
o-Xylene	ND	0.025						
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	8.45		8.00		106	70-130		
<i>Surrogate: 4-Bromofluorobenzene (2)</i>	9.24		8.00		116	70-130		

<b>LCS (B105204-BS1)</b>	Prepared & Analyzed: 09/15/14						
Acetone	4.64		5.00		92.8	70-130	
Benzene	3.66		5.00		73.3	70-130	
Benzyl chloride	4.89		5.00		97.8	70-130	
Bromodichloromethane	3.87		5.00		77.4	70-130	
Bromoform	4.68		5.00		93.7	70-130	
Bromomethane	3.96		5.00		79.2	70-130	
1,3-Butadiene	3.70		5.00		74.0	70-130	
2-Butanone (MEK)	4.82		5.00		96.4	70-130	
Carbon Disulfide	3.91		5.00		78.2	70-130	
Carbon Tetrachloride	4.32		5.00		86.3	70-130	
Chlorobenzene	4.15		5.00		83.1	70-130	
Chloroethane	3.85		5.00		77.1	70-130	
Chloroform	4.37		5.00		87.5	70-130	
Chloromethane	3.13		5.00		62.5 *	70-130	L-03, V-05
Cyclohexane	3.71		5.00		74.2	70-130	
Dibromochloromethane	4.40		5.00		88.1	70-130	
1,2-Dibromoethane (EDB)	3.89		5.00		77.9	70-130	
1,2-Dichlorobenzene	4.51		5.00		90.2	70-130	
1,3-Dichlorobenzene	4.61		5.00		92.3	70-130	
1,4-Dichlorobenzene	4.57		5.00		91.3	70-130	
Dichlorodifluoromethane (Freon 12)	4.50		5.00		90.0	70-130	
1,1-Dichloroethane	4.17		5.00		83.5	70-130	
1,2-Dichloroethane	4.26		5.00		85.2	70-130	
1,1-Dichloroethylene	4.30		5.00		86.0	70-130	
cis-1,2-Dichloroethylene	4.16		5.00		83.3	70-130	
trans-1,2-Dichloroethylene	4.08		5.00		81.5	70-130	
1,2-Dichloropropane	3.40		5.00		68.0 *	70-130	L-03, V-05

**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
<b>Batch B105204 - TO-15 Prep</b>											
<b>LCS (B105204-BS1)</b>											
Prepared & Analyzed: 09/15/14											
cis-1,3-Dichloropropene	4.01		5.00		80.2	70-130					
trans-1,3-Dichloropropene	4.20		5.00		83.9	70-130					
Ethanol	3.74		5.00		74.9	70-130					
Ethyl Acetate	4.67		5.00		93.5	70-130					
Ethylbenzene	4.30		5.00		85.9	70-130					
4-Ethyltoluene	4.57		5.00		91.5	70-130					
Heptane	4.00		5.00		80.0	70-130					
Hexachlorobutadiene	3.67		5.00		73.4	70-130					
Hexane	4.13		5.00		82.6	70-130					
2-Hexanone (MBK)	2.88		5.00		57.7 *	70-130					L-03, V-05
Isopropanol	3.14		5.00		62.8 *	70-130					L-03
Methyl tert-Butyl Ether (MTBE)	4.50		5.00		90.1	70-130					
Methylene Chloride	3.99		5.00		79.7	70-130					
Methyl methacrylate	3.79		5.00		75.8	70-130					
4-Methyl-2-pentanone (MIBK)	3.67		5.00		73.5	70-130					
Propene	4.50		5.00		90.1	70-130					
Styrene	4.29		5.00		85.8	70-130					
1,1,1,2-Tetrachloroethane	1.05		0.910		115	70-130					
1,1,2,2-Tetrachloroethane	3.62		5.00		72.4	70-130					
Tetrachloroethylene	4.54		5.00		90.7	70-130					
Tetrahydrofuran	4.50		5.00		89.9	70-130					
Toluene	4.16		5.00		83.3	70-130					
1,2,4-Trichlorobenzene	3.50		5.00		70.0	70-130					L-03
1,1,1-Trichloroethane	4.00		5.00		80.1	70-130					
1,1,2-Trichloroethane	3.85		5.00		77.0	70-130					
Trichloroethylene	3.80		5.00		76.0	70-130					
Trichlorofluoromethane (Freon 11)	4.56		5.00		91.3	70-130					
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	4.68		5.00		93.6	70-130					
1,2,4-Trimethylbenzene	4.32		5.00		86.4	70-130					
1,3,5-Trimethylbenzene	4.52		5.00		90.5	70-130					
Vinyl Acetate	4.92		5.00		98.5	70-130					
Vinyl Chloride	3.85		5.00		77.0	70-130					V-05
m&p-Xylene	9.13		10.0		91.3	70-130					
o-Xylene	4.31		5.00		86.3	70-130					
Surrogate: 4-Bromofluorobenzene (1)	8.60		8.00		108	70-130					
Surrogate: 4-Bromofluorobenzene (2)	9.77		8.00		122	70-130					

**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
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**Batch B105206 - TO-15 Prep**
**Blank (B105206-BLK1)**

Prepared: 09/16/12 Analyzed: 09/16/14

Acetone	ND	0.80									
Benzene	ND	0.020									
Benzyl chloride	ND	0.020									
Bromodichloromethane	ND	0.020									
Bromoform	ND	0.020									
Bromomethane	ND	0.020									
1,3-Butadiene	ND	0.020									
2-Butanone (MEK)	ND	0.80									
Carbon Disulfide	ND	0.20									
Carbon Tetrachloride	ND	0.020									
Chlorobenzene	ND	0.020									
Chloroethane	ND	0.020									
Chloroform	ND	0.020									
Chloromethane	ND	0.040									
Cyclohexane	ND	0.020									
Dibromochloromethane	ND	0.020									
1,2-Dibromoethane (EDB)	ND	0.020									
1,2-Dichlorobenzene	ND	0.020									
1,3-Dichlorobenzene	ND	0.020									
1,4-Dichlorobenzene	ND	0.020									
Dichlorodifluoromethane (Freon 12)	ND	0.020									
1,1-Dichloroethane	ND	0.020									
1,2-Dichloroethane	ND	0.020									
1,1-Dichloroethylene	ND	0.020									
cis-1,2-Dichloroethylene	ND	0.020									
trans-1,2-Dichloroethylene	ND	0.020									
1,2-Dichloropropane	ND	0.020									
cis-1,3-Dichloropropene	ND	0.020									
trans-1,3-Dichloropropene	ND	0.020									
Ethanol	ND	0.80									V-05
Ethyl Acetate	ND	0.020									
Ethylbenzene	ND	0.020									
4-Ethyltoluene	ND	0.020									
Heptane	ND	0.020									
Hexachlorobutadiene	ND	0.020									
Hexane	ND	0.80									
2-Hexanone (MBK)	ND	0.020									
Isopropanol	ND	0.80									L-03
Methyl tert-Butyl Ether (MTBE)	ND	0.020									
Methylene Chloride	ND	0.20									
Methyl methacrylate	ND	0.020									
4-Methyl-2-pentanone (MIBK)	ND	0.020									
Propene	ND	0.80									
Styrene	ND	0.020									
1,1,1,2-Tetrachloroethane	ND	0.036									
1,1,2,2-Tetrachloroethane	ND	0.020									

**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
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**Batch B105206 - TO-15 Prep**

<b>Blank (B105206-BLK1)</b>	Prepared: 09/16/12 Analyzed: 09/16/14										
Tetrachloroethylene	ND	0.020									
Tetrahydrofuran	ND	0.020									
Toluene	ND	0.020									
1,2,4-Trichlorobenzene	ND	0.020									
1,1,1-Trichloroethane	ND	0.020									
1,1,2-Trichloroethane	ND	0.020									
Trichloroethylene	ND	0.020									
Trichlorofluoromethane (Freon 11)	ND	0.020									
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.020									
1,2,4-Trimethylbenzene	ND	0.020									
1,3,5-Trimethylbenzene	ND	0.020									
Vinyl Acetate	ND	0.40									
Vinyl Chloride	ND	0.020									
m&p-Xylene	ND	0.040									
o-Xylene	ND	0.020									
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	8.35		8.00		104		70-130				
<i>Surrogate: 4-Bromofluorobenzene (2)</i>	9.22		8.00		115		70-130				

<b>LCS (B105206-BS1)</b>	Prepared: 09/16/12 Analyzed: 09/16/14							
Acetone	4.27		5.00		85.4		70-130	
Benzene	3.60		5.00		71.9		70-130	
Benzyl chloride	4.63		5.00		92.6		70-130	
Bromodichloromethane	3.72		5.00		74.5		70-130	
Bromoform	4.56		5.00		91.3		70-130	
Bromomethane	3.89		5.00		77.7		70-130	
1,3-Butadiene	3.48		5.00		69.7	*	70-130	
2-Butanone (MEK)	4.89		5.00		97.8		70-130	
Carbon Disulfide	3.98		5.00		79.6		70-130	
Carbon Tetrachloride	4.22		5.00		84.3		70-130	
Chlorobenzene	4.15		5.00		83.1		70-130	
Chloroethane	3.69		5.00		73.8		70-130	
Chloroform	4.34		5.00		86.7		70-130	
Chloromethane	3.00		5.00		60.1	*	70-130	
Cyclohexane	3.72		5.00		74.5		70-130	
Dibromochloromethane	4.32		5.00		86.5		70-130	
1,2-Dibromoethane (EDB)	3.84		5.00		76.8		70-130	
1,2-Dichlorobenzene	4.38		5.00		87.5		70-130	
1,3-Dichlorobenzene	4.52		5.00		90.3		70-130	
1,4-Dichlorobenzene	4.45		5.00		89.1		70-130	
Dichlorodifluoromethane (Freon 12)	4.48		5.00		89.6		70-130	
1,1-Dichloroethane	4.18		5.00		83.6		70-130	
1,2-Dichloroethane	4.21		5.00		84.1		70-130	
1,1-Dichloroethylene	4.30		5.00		85.9		70-130	
cis-1,2-Dichloroethylene	4.16		5.00		83.1		70-130	
trans-1,2-Dichloroethylene	4.09		5.00		81.7		70-130	
1,2-Dichloropropane	3.33		5.00		66.7	*	70-130	

**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
<b>Batch B105206 - TO-15 Prep</b>											
<b>LCS (B105206-BS1)</b>											
Prepared: 09/16/12 Analyzed: 09/16/14											
cis-1,3-Dichloropropene	3.92				5.00		78.4	70-130			
trans-1,3-Dichloropropene	4.06				5.00		81.1	70-130			
Ethanol	3.71				5.00		74.2	70-130			V-05
Ethyl Acetate	4.68				5.00		93.5	70-130			
Ethylbenzene	4.20				5.00		84.0	70-130			
4-Ethyltoluene	4.54				5.00		90.7	70-130			
Heptane	4.00				5.00		80.0	70-130			
Hexachlorobutadiene	3.61				5.00		72.3	70-130			
Hexane	4.08				5.00		81.7	70-130			
2-Hexanone (MBK)	2.73				5.00		54.6 *	70-130			
Isopropanol	3.00				5.00		59.9 *	70-130			L-03
Methyl tert-Butyl Ether (MTBE)	4.51				5.00		90.2	70-130			
Methylene Chloride	3.93				5.00		78.7	70-130			
Methyl methacrylate	3.72				5.00		74.5	70-130			
4-Methyl-2-pentanone (MIBK)	3.49				5.00		69.8 *	70-130			
Propene	4.52				5.00		90.5	70-130			
Styrene	4.16				5.00		83.2	70-130			
1,1,1,2-Tetrachloroethane	ND	0.091		0.62				70-130			
1,1,2,2-Tetrachloroethane	3.48				5.00		69.6 *	70-130			
Tetrachloroethylene	4.54				5.00		90.7	70-130			
Tetrahydrofuran	4.58				5.00		91.6	70-130			
Toluene	4.08				5.00		81.6	70-130			
1,2,4-Trichlorobenzene	3.53				5.00		70.6	70-130			
1,1,1-Trichloroethane	3.90				5.00		78.0	70-130			
1,1,2-Trichloroethane	3.79				5.00		75.9	70-130			
Trichloroethylene	3.75				5.00		75.0	70-130			
Trichlorofluoromethane (Freon 11)	4.48				5.00		89.5	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	4.78				5.00		95.5	70-130			
1,2,4-Trimethylbenzene	4.19				5.00		83.8	70-130			
1,3,5-Trimethylbenzene	4.37				5.00		87.4	70-130			
Vinyl Acetate	4.80				5.00		96.0	70-130			
Vinyl Chloride	3.66				5.00		73.2	70-130			
m&p-Xylene	8.85				10.0		88.5	70-130			
o-Xylene	4.18				5.00		83.7	70-130			
Surrogate: 4-Bromofluorobenzene (1)	8.63				8.00		108	70-130			
Surrogate: 4-Bromofluorobenzene (2)	9.93				8.00		124	70-130			

**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

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

- J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
- 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.
- 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.

## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<b>EPA TO-15 in Air</b>	
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
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
Methyl methacrylate	AIHA,NJ,NY,VA,ME
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY,ME
Propene	AIHA
Styrene	AIHA,FL,NJ,NY,VA,ME
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY,VA,ME
Tetrachloroethylene	AIHA,FL,NJ,NY,VA,ME
Tetrahydrofuran	AIHA

**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<b>EPA TO-15 in Air</b>	
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	06/30/2015
CT	Connecticut Department of Public Health	PH-0567	09/30/2015
NY	New York State Department of Health	10899 NELAP	04/1/2015
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2015
RI	Rhode Island Department of Health	LAO00112	12/30/2014
NC	North Carolina Div. of Water Quality	652	12/31/2014
NJ	New Jersey DEP	MA007 NELAP	06/30/2015
FL	Florida Department of Health	E871027 NELAP	06/30/2015
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2015
WA	State of Washington Department of Ecology	C2065	02/23/2015
ME	State of Maine	2011028	06/9/2015
VA	Commonwealth of Virginia	460217	12/14/2014
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2015



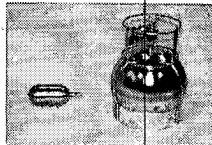


Page 2 of 2  
**Login Sample Receipt Checklist**  
(Rejection Criteria Listing - Using Sample Acceptance Policy)  
**Any False statement will be brought to the attention of Client**

<u>Question</u>	<u>Answer (True/False)</u>		<u>Comment</u>
	T/F/NA		
1) The cooler's custody seal, if present, is intact.	NA		
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) There are no discrepancies between the sample IDs on the container and the COC.	T		
10) Samples are received within Holding Time.	T		
11) Sample containers have legible labels.	T		
12) Containers are not broken or leaking.	T		
13) Air Cassettes are not broken/open.	NA		
14) Sample collection date/times are provided.	T		
15) Appropriate sample containers are used.	T		
16) Proper collection media used.	T		
17) No headspace sample bottles are completely filled.	NA		
18) There is sufficient volume for all requested analyses, including any requested MS/MSDs.	T		
19) Trip blanks provided if applicable.	NA		
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	NA		
21) Samples do not require splitting or compositing.	T		

Who notified of False statements?  
Log-In Technician Initials: PB

Date/Time:  
Date/Time: 9.12.14  
17:00



[www.contestlabs.com](http://www.contestlabs.com)



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: AMC

RECEIVED BY: PR

DATE: 9.12.14

1) Was the chain(s) of custody relinquished and signed?

Yes       No

2) Does the chain agree with the samples?

Yes       No

If not, explain:

3) Are all the samples in good condition?

Yes       No

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:   

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?

### Containers received at Con-Test

		# of Containers	Types (Size, Duration)
Summa Cans (TO-14/TO-15/APH)		<u>12</u>	<u>6 Lit</u>
Tedlar Bags			
TO-17 Tubes			
Regulators		<u>13</u>	<u>30 min</u>
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:

1015

Unused Regulators:

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:	1139	1220	1212	4098	4189	4191	4194
	1465	1301	1218	4186	4196	4192	4195
	1161	1494	1466	4187	4197	4193	
	1315	1163	1217	4188	4190		

## **APPENDIX B**

### **Analytical Laboratory Detection Limits**



39 Spruce Street, 2nd Floor  
East Longmeadow, MA 01028  
413.525.2332  
413.525.6405 (fax)

**Analyte:**

TO-14 / TO-15	PPBv	UG/M3	PPBv	UG/M3	MW NIST	UG/M3	PPBv
1,1,1-Trichloroethane	ND	ND	0.050	<b>0.27</b>	133.40	1	0.18
1,1,2,2-Tetrachloroethane	ND	ND	0.050	0.34	167.85	1	0.15
1,1,2-Trichloroethane	ND	ND	0.050	0.27	133.40	1	0.18
1,1,2-Trichlorotrifluoroethane (freon 113)	ND	ND	0.050	0.38	187.37	1	0.13
1,1-Dichloroethane	ND	ND	0.050	0.20	98.96	1	0.25
1,1-Dichloroethene	ND	ND	0.050	0.20	96.94	1	0.25
1,2,4-Trichlorobenzene	ND	ND	0.050	0.37	181.45	1	0.13
1,2,4-Trimethylbenzene	ND	ND	0.050	0.25	120.19	1	0.20
1,2-Dibromoethane	ND	ND	0.050	0.38	187.86	1	0.13
1,2-Dichlorobenzene	ND	ND	0.050	0.30	147.00	1	0.17
1,2-Dichloroethane	ND	ND	0.050	0.20	98.96	1	0.25
1,2-Dichloropropane	ND	ND	0.050	0.23	112.99	1	0.22
1,2-Dichlorotetrafluoroethane (freon 114)	ND	ND	0.050	0.35	170.92	1	0.14
1,3 - Butadiene	ND	ND	0.050	0.11	54.09	1	0.45
1,3,5-Trimethylbenzene	ND	ND	0.050	0.25	120.19	1	0.20
1,3-Dichlorobenzene	ND	ND	0.050	0.30	147.00	1	0.17
1,4-Dichlorobenzene	ND	ND	0.050	0.30	147.00	1	0.17
1,4-Dioxane	ND	ND	0.050	0.18	88.11	1	0.28
2-Butanone (MEK)	ND	ND	0.050	0.15	72.11	1	0.34
2-Hexanone (MBK)	ND	ND	0.050	0.20	100.16	1	0.24
4-Ethyltoluene	ND	ND	0.050	0.25	120.19	1	0.20
4-Methyl-2-pentanone(MIBK)	ND	ND	0.050	0.20	100.16	1	0.24
Acetone	ND	ND	0.050	0.12	58.08	1	0.42
Acrolein	ND	ND	0.050	0.11	56.06	1	0.44
Benzene	ND	ND	0.050	0.16	78.11	1	0.31
Benzyl Chloride	ND	ND	0.050	0.26	126.58	1	0.19
Bromodichloromethane	ND	ND	0.050	0.34	163.83	1	0.15
Bromoform	ND	ND	0.050	0.52	252.73	1	0.10
Bromomethane	ND	ND	0.050	0.19	94.94	1	0.26
Carbon Disulfide	ND	ND	0.050	0.16	76.14	1	0.32
Carbon Tetrachloride	ND	ND	0.050	<b>0.31</b>	153.82	1	0.16



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Chlorobenzene	ND	ND	0.050	0.23	112.56	1	0.22
Chloroethane	ND	ND	0.050	0.13	64.51	1	0.38
Chloroform	ND	ND	0.050	0.24	119.38	1	0.20
Chloromethane	ND	ND	0.050	0.10	50.49	1	0.48
cis-1,2-Dichloroethene	ND	ND	0.050	0.20	96.94	1	0.25
cis-1,3-Dichloropropene	ND	ND	0.050	0.23	110.97	1	0.22
Cyclohexane	ND	ND	0.050	0.17	84.16	1	0.29
Dibromochloromethane	ND	ND	0.050	0.43	208.28	1	0.12
Dichlorodifluoromethane (freon 12)	ND	ND	0.050	0.25	120.91	1	0.20
Ethanol	ND	ND	0.050	0.09	46.07	1	0.53
Ethyl Acetate	ND	ND	0.050	0.18	88.11	1	0.28
Ethylbenzene	ND	ND	0.050	0.22	106.17	1	0.23
Heptane	ND	ND	0.050	0.20	100.20	1	0.24
Hexachlorobutadiene	ND	ND	0.050	0.53	260.76	1	0.09
Hexane	ND	ND	0.050	0.18	86.18	1	0.28
Isopropyl Alcohol	ND	ND	0.050	0.12	60.10	1	0.41
M/P Xylenes	ND	ND	0.050	0.22	106.17	1	0.23
Methylene Chloride	ND	ND	0.050	0.17	84.93	1	0.29
Methylmethacrylate	ND	ND	0.050	0.20	100.12	1	0.24
MTBE	ND	ND	0.050	0.18	88.15	1	0.28
O-Xylene	ND	ND	0.050	0.22	106.17	1	0.23
Propene	ND	ND	0.050	0.09	42.08	1	0.58
Styrene	ND	ND	0.050	0.21	104.15	1	0.23
Tetrachloroethene	ND	ND	0.050	0.34	165.83	1	0.15
Tetrahydrofuran	ND	ND	0.050	0.15	72.11	1	0.34
Toluene	ND	ND	0.050	0.19	92.14	1	0.27
trans-1,2-Dichloroethene	ND	ND	0.050	0.20	96.94	1	0.25
trans-1,3-Dichloropropene	ND	ND	0.050	0.23	110.97	1	0.22
Trichloroethene	ND	ND	0.050	0.27	131.39	1	0.19
Trichlorofluoromethane (freon 11)	ND	ND	0.050	0.28	137.37	1	0.18
Vinyl Acetate	ND	ND	0.050	0.18	86.09	1	0.28
Vinyl Chloride	ND	ND	0.050	0.13	62.50	1	0.39



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## APH COMPOUNDS

1,2,3-Trimethylbenzene	ND	ND	0.94	4.62	120.19	1	0.20
1,3 Butadiene	ND	ND	0.94	2.08	54.09	1	0.45
1,3,5-Trimethylbenzene	ND	ND	0.94	4.62	120.19	1	0.20
1-Ethyl-3-Methylbenzene	ND	ND	0.94	4.62	120.19	1	0.20
1-Methylnaphthalene	ND	ND	0.94	5.47	142.20	1	0.17
2,3-Dimethylheptane	ND	ND	0.94	4.93	128.26	1	0.19
2,3-Dimethylpentane	ND	ND	0.94	3.85	100.20	1	0.24
2-Methylnaphthalene	ND	ND	0.94	5.47	142.20	1	0.17
Benzene	ND	ND	0.94	3.00	78.11	1	0.31
Butyl Cyclohexane	ND	ND	0.94	5.39	140.27	1	0.17
Cyclohexane	ND	ND	0.94	3.24	84.16	1	0.29
Decane	ND	ND	0.94	5.47	142.28	1	0.17
Dodecane	ND	ND	0.94	6.55	170.33	1	0.14
Ethylbenzene	ND	ND	0.94	4.08	106.17	1	0.23
Heptane	ND	ND	0.94	3.85	100.20	1	0.24
Hexane	ND	ND	0.94	3.31	86.18	1	0.28
Hexyl Cyclohexane	ND	ND	0.94	6.47	168.32	1	0.15
Indene	ND	ND	0.94	4.47	116.16	1	0.21
Isopentane	ND	ND	0.94	2.77	72.15	1	0.34
Isopropylbenzene(Cumene)	ND	ND	0.94	4.62	120.19	1	0.20
m/p -Xylenes	ND	ND	0.94	4.08	106.17	1	0.23
Methyl-tert-butylether	ND	ND	0.94	3.39	88.15	1	0.28
Naphthalene	ND	ND	0.94	4.93	128.17	1	0.19
Nonane	ND	ND	0.94	4.93	128.26	1	0.19
Octane	ND	ND	0.94	4.39	114.23	1	0.21
o-Xylene	ND	ND	0.94	4.08	106.17	1	0.23
P-Iso-Propyl Toluene	ND	ND	0.94	5.16	134.22	1	0.18
Toluene	ND	ND	0.94	3.54	92.14	1	0.27
Toluene-D8	ND	ND	0.94	3.85	100.19	1	0.24
Undecane	ND	ND	0.94	6.01	156.31	1	0.16



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## EXTRA COMPOUNDS

1,1,1,2-tetrachloroethane	ND	ND	0.091	0.6247	167.85	1	0.15
1,2-Dibromo-3-chloropropane	ND	ND	0.065	0.6283	236.33	1	0.10
1,3-Dichloropropane	ND	ND	0.135	0.6238	112.99	1	0.22
1-Methylnaphthalene	ND	ND	0.107	0.6223	142.20	1	0.17
2,2,4-Trimethylpentane	ND	ND	0.134	0.6260	114.23	1	0.21
2-Methylnaphthalene	ND	ND	0.107	0.6223	142.20	1	0.17
Acrylonitrile	ND	ND	0.288	0.6250	53.06	1	0.46
Butylbenzene	ND	ND	0.114	0.6258	134.22	1	0.18
Cumene	ND	ND	0.127	0.6243	120.19	1	0.20
Hexylcyclohexane	ND	ND	0.091	0.6265	168.32	1	0.15
Indane	ND	ND	0.129	0.6235	118.18	1	0.21
Indene	ND	ND	0.132	0.6271	116.16	1	0.21
Metyl Acetate	ND	ND	0.206	0.6241	74.08	1	0.33
Metylcylohexane	ND	ND	0.156	0.6265	98.19	1	0.25
Naphthalene	ND	ND	0.119	0.6238	128.17	1	0.19
P-cymene	ND	ND	0.114	0.6258	134.22	1	0.18
Propylbenzene	ND	ND	0.127	0.6243	120.19	1	0.20
Sec-butylbenzene	ND	ND	0.114	0.6258	134.22	1	0.18
Tert-butylbenzene	ND	ND	0.114	0.6258	134.22	1	0.18
Thiophene	ND	ND	0.182	0.6263	84.14	1	0.29

## OTHER COMPOUNDS

2-Chloro-pyridine	ND	ND	0.20	0.93	113.54	1	0.22
2,6-Dichloro-pyridine	ND	ND	0.20	1.19	144.97	1	0.17
tert-Butyl Alcohol	ND	ND	0.20	0.61	74.10	1	0.33