



November 15, 2012

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, 2012  
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 E&I, Inc. 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 2012 through September 2012 and includes one quarterly compliance sampling event (September 13, 2012).

The sampling and analysis and this reporting were 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 13, 2012.

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 (1210395) associated with the September 13, 2012 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 on the Northwest corner 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 are in compliance with action levels for the September 13, 2012 quarterly sampling event in the three small retail spaces (sample locations IA-5, IA-6, and IA-7).
- The eastern small retail space (sample location IA-5) remained unoccupied until early September when E.T. & L. Corp (Construction subcontractor for Textron, Inc.) began leasing the space as an construction office for the Remedial Action Work Plan (RAWP) Phase I Soil Capping of Parcel C-1 .
- 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 13, 2012. 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 (12I0395) associated with the September 13, 2012 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 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 were in compliance with action levels for the September 13, 2012 quarterly sampling event in the large retail space (sample locations IA-1 through IA-4).
- The mitigation system is functioning as designed and is achieving desired results with respect to indoor air quality in the large retail space.
- The retail space is in the process of being subdivided for future tenants. Construction of the eastern end of the former Stop & Shop space is scheduled to begin in early November 2012. The eastern end of the retail space will contain indoor air sample locations IA-2 and IA-4 and sub-slab vacuum monitoring VMW-2. The western side of the former large retail space will remain vacant until an occupant has been identified for the space. 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 will not be impacted by the proposed construction.
- Before construction begins, Textron has requested permission from Stop & Shop to collect indoor air samples prior to the start of construction and again at the completion of the construction for the new commercial space at the eastern end of the former large retail space to ensure that the operation of the ASD system and the indoor air quality has not been impacted by the construction. The sampling event conducted September 13, 2012 will serve as the pre -construction sampling event.

### **ASD System Monitoring**

The ASD system performance is monitored and maintained monthly by Clean Harbors Environmental Services. There was a low flow condition on radon fan 1 on July 1<sup>st</sup> and July 12<sup>th</sup>. There was no identified cause for the alarm. A Clean Harbors technician was on-site July 12<sup>th</sup> to assess the alarm. The fan was operational and the alarm was reset. Clean Harbors will continue to monitor the issue with each monthly system inspection. On July 25<sup>th</sup>, Clean Harbors replaced the UPS battery which powers the PLC and autodialer



when the main power supply is lost. There was a low flow condition on radon fan 2 on September 13th and September 14<sup>th</sup>. Clean Harbors reset the alarm on September 14, 2012. An issue with the current relay sensor for radon 2 was likely the cause for the alarm. Clean Harbors will review during next maintenance visit.

### Next Reporting Period

The next quarterly report (fourth quarter 2012) will include monitoring from October 2012 through December 2012. The report will be prepared and submitted to the Rhode Island Department of Environmental Management (RIDEM) in January 2013.

Please contact the undersigned at 781-245-6606 if we can provide additional information or answer any questions concerning these monitoring events and system adjustments.

Sincerely,  
**AMEC Environment & Infrastructure, Inc.**

A handwritten signature in black ink, appearing to read "Mark Maggiore".

Mark Maggiore  
Environmental Scientist

A handwritten signature in black ink, appearing to read "Charles Collet".

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: Stuart MacDonald, City of Providence  
G. Simpson, Textron, Inc. (Electronic)  
Knight Memorial Library Repository  
G. Wilson, Kimco Realty Corporation (including tenants)  
J. Morgan, The Stop & Shop Supermarket Co., LLC  
AMEC Project File

[P:\old\\_Wakefield\\_Data\projects\3650080114 - Textron Gorham Vapor Mitigation System\4.0 Project Deliverables\4.1 Reports\2012\QTR\\_3\\_2012](P:\old_Wakefield_Data\projects\3650080114 - Textron Gorham Vapor Mitigation System\4.0 Project Deliverables\4.1 Reports\2012\QTR_3_2012)



## **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
1,1,1-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
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	0.34 U	0.34 U	0.34 U
1,1,2-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,1-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
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	0.3	0.25 U
1,2-Dibromoethane (EDB)	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2-Dichlorotetrafluoroethane	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,3,5-Trimethylbenzene	0.25 U	0.25 U	0.25 U	0.5	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	0.11 U	0.11 U	0.17	1.3	0.11 U	0.11 U	0.11 U	0.08 U	0.11 U	0.11 U	0.11 U	0.23 U	0.23 U
1,3-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.53	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 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
2-Hexanone	0.2 U	0.22	0.57	0.35	0.2 U	0.2 U	0.2 U	0.14 U	0.26	0.39	0.2 U	0.34	0.2 U
4-Ethyltoluene	0.25 U	0.25 U	0.25 U	0.6	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-Methyl-2-pentanone	0.2 U	0.2 U	0.27	0.63	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	7.3	8	15	22	8.4	5.9	12	1.1	27	9.5	10	10	9.6
Benzene	0.69	0.62	1.3	4.7	0.43	0.69	0.46	0.12 U	0.3	0.4	0.49	0.38	0.35
Benzyl chloride	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.19 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Bromodichloromethane	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Bromoform	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.36 U	0.51 U	0.51 U	0.51 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	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	0.12 U	0.16 U	0.16 U	0.16 U	0.16 U	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	0.4	0.4
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	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	0.1 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	0.17 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Chloromethane	1.1	0.9	1.4	1.5	1.1	1.1	1.3	1.1	1.2	1.1	1.2	0.85	1.1
cis-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 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	0.22 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	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	0.31 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
Dichlorodifluoromethane	2	2.2	2.6	2.7	2.6	2.6	2.8	2	2.5	2.7	2.6	2.1	2.1
Ethanol	4	5.4	10	47	4.3	3.5	4.7	0.81	4.9	4.8	8.6	6.6	4.6
Ethyl acetate	0.37 U	0.37 U	0.18 U	0.31	0.37 U	0.18 U	0.18 U	0.26 U	0.37 U	0.18 U	0.18 U	0.18 U	0.18 U
Ethylbenzene	0.22 U	0.25	0.52	2	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.22 U	0.24	0.22 U	0.23
Hexachlorobutadiene	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.75 U	1.1 U	1.1 U	1.1 U	0.53 U	0.53 U
Hexane	1.5	0.75	1.1	2.9	0.38	2.8	2.2	0.13 U	0.56	0.37	0.59	0.48	1.4
Isopropyl alcohol	1.4	1.4	1.8	4.3	1.4	0.67	1.4	0.18 U	14	1	2.5	2.8	0.87
m,p-Xylene	0.43 U	0.72	1.4	6.4	0.44	0.43 U	0.43 U	0.31 U	0.43 U	0.49	0.73	0.62	0.59

**Table 1.  
Summary of Analytical Results - Air Sampling for Small Retail Spaces  
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Methyl methacrylate													
Methylene chloride	5.5	3.1	0.65	1.5	0.78	7.4	15	2.1	2.8	1.7	1.9	0.7 U	4.2
Methyl-t-butyl ether	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
n-Heptane	0.2 U	0.27	0.92	1.6	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.4	0.23	0.2 U	0.2 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
Propylene (Propene)	0.18 U	0.18 U	0.09 U	0.09 U	0.18 U	0.09 U	0.09 U	0.13 U	0.18 U	0.09 U	0.09 U	0.35 U	0.35 U
Styrene	0.21 U	0.21 U	0.21 U	0.28	0.21 U	0.21 U	0.21 U	0.15 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
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
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	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
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Trichloroethene	0.27 U	0.27 U	0.27 U	0.39	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Trichlorofluoromethane	1.3	1.2	1.7	2.4	1.5	2	1.7	0.92	1.3	1.5	2	1.1	1.4
Trichlorotrifluoroethane	0.68	0.53	0.5	0.47	0.64	0.48	0.51	0.27 U	0.64	0.67	0.56	0.47	0.49
Vinyl acetate	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.18 U	0.18 U	0.5 U	0.71 U	0.18 U	0.18 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	0.1 U	0.13 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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Parameter (ug/m <sup>3</sup> )	Outdoor Air Reference Locations																			
	AA-1-100109 10/1/2009	AA-1-100809 10/8/2009	AA-1-122909 12/29/2009	AA-1-012810 1/28/2010	AA-1-020510 2/5/2010	AA-1-021210 2/12/2010	AA-1-021910 2/19/2010	AA-1-032610 3/26/2010	AA-1-043010 4/30/2010	AA-1-052810 5/28/2010	AA-1-070110 7/1/2010	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
1,1,1-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.29	0.082 U	0.1	0.19 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	0.34 U	0.21 U	0.1 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	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.063	0.061 U	0.12 U	0.14 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.059 U	0.12 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	0.75 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
1,2,4-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	0.25 U	0.94	0.25 U	1.1	0.25 U	0.25 U	0.16	0.15 U	0.15 U	0.26
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	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.34	0.18 U	0.18 U	0.21 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.066	0.061 U	0.046	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	0.23 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								
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	0.25 U	0.28	0.25 U	0.33	0.25 U	0.25 U	0.068	0.15 U	0.15 U	0.16
1,3-Butadiene	0.23 U	0.23 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	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
1,3-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U
1,4-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U
1,4-Dioxane																0.18 U				
2-Butanone	1.2	1.2	2	0.81	1.6	1.6	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
2-Hexanone	0.33	0.23	0.2 U	0.2 U	0.32	0.2 U	0.2 U	0.29	0.29	0.49	0.49	0.41	0.2 U	0.2 U	4.1 U	0.67	0.12 U	0.34	0.14	0.27
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	0.3	0.25 U	0.34	0.25 U	0.25 U	0.053	0.15 U	0.15 U	0.093
4-Methyl-2-pentanone	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.34	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2.8	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.12 U	0.23	0.1
Acetone	5.4	17	11	3.5	7.6	5	3.7	9.5	12	20	13	14	5.7 B	19 B	8.7 B	20	4.9	9.4	10	12
Benzene	0.25	0.2	0.42	0.79	0.68	0.63	0.41	0.69	0.35	0.19	0.16 U	1.2	0.28	2.3	0.16 U	0.19	0.4	0.29	0.2	0.68
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	0.34 U	0.34 U	0.34 U	0.34 U	0.2 U	0.1 U	0.2 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	0.52 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	0.19 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	0.14 U
Carbon disulfide	0.16 U	0.16 U	0.16 U	0.28	0.16 U	0.16 U	0.44	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.38	0.16 U	0.16 U	1.6 U	0.058	0.93 U	0.11	1.1 U
Carbon tetrachloride	0.43	0.46	0.39	0.42	0.39	0.31 U	0.43	0.49	0.47	0.52	0.51	0.43	0.42	0.48	0.53	0.48	0.49	0.43	0.43	0.36
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	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.079 U	0.079 U	0.093 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	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.094	0.073 U	0.067	0.096
Chloromethane	0.97	0.96	1.6	1.1	1.2	1.3	1.1	1.4	0.78	1.1	0.96	0.99	0.94	1	0.96	1.4	0.062 U	1.1	1.5	1.1
cis-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12	0.059 U	0.12 U	0.14 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	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 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	0.17 U	0.46	0.17 U	0.17 U	0.17 U	0.17 U	0.1 U	0.1 U	0.1 U	0.12 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	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.26 U	0.13 U	0.26 U	0.3 U
Dichlorodifluoromethane	2.2	2.1	2.1	2.3	2.4	2.5	2.9	1.8	2.1	2.5	2.4	2.9	1.9	3.1	1.9	1.7	2.5	2	2.4	2.8
Ethanol	3.9	4.9	3.8	5.4	5.1	7.2	1.2	4.9	4	3.3	4	14	2.3	12	2.7	5.8	1.5	4.1	7.4	5.2
Ethyl acetate	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	1.1	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.46	0.56	0.43	0.67
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	0.22 U	0.22 U	0.82	1.4	0.22 U	1.1	0.22 U	0.22 U	0.31	0.13 U	0.065	0.19
Hexachlorobutadiene	0.53 U	0.53 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	0.32 U	0.37 U
Hexane	0.45	4.5	0.62	0.36	0.53	0.91	0.24	0.23	1.1	0.51	0.37	1.2	0.35 U	3.3	0.88	7.0 U	0.47	0.54	1.3	0.67
Isopropyl alcohol	0.63	0.25 U	0.54	0.56	2.7	1.5	0.8	0.73	0.69	1.6	0.79	0.25 U	0.29	2.4	1.2 U	4.9 U	0.6	0.88	2.9 U	0.58
m,p-Xylene	0.43 U	0.43 U	0.43 U	0.43 U	0.5	0.47	0.43 U	0.49	0.43 U	0.43 U	2.2	3.7	0.43 U	3.3	0.43 U	0.43 U	0.41	0.17	0.18	0.64



**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-1-100109 10/1/2009	AA-1-100809 10/8/2009	AA-1-122909 12/29/2009	AA-1-012810 1/28/2010	AA-1-020510 2/5/2010	AA-1-021210 2/12/2010	AA-1-021910 2/19/2010	AA-1-032610 3/26/2010	AA-1-043010 4/30/2010	AA-1-052810 5/28/2010	AA-1-070110 7/1/2010	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
Methyl methacrylate													0.2 U	0.48	0.2 U	0.20 U	0.12 U	0.12 U	0.12 U	0.14 U
Methylene chloride	0.7 U	23	4.6	1.3	1.9	1.7	0.7 U	0.7 U	0.7 U	0.35 U	1.1	1.1	0.66	3	2.3	1.7 U	1.5	1.6	3	2.1
Methyl-t-butyl ether	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 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	0.13 U
n-Heptane	0.2 U	0.2 U	0.2 U	0.26	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.91	0.2 U	0.95	0.2 U	0.20 U	0.12	0.089	0.11
o-Xylene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.46	1.2	0.22 U	1.1	0.22 U	0.22 U	0.22	0.086	0.078	0.31
Propylene (Propene)	0.18 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.87 U	0.87 U	1.9	0.86 U	0.86 U	0.86 U	3.4 U	2.1 U	2.1 U	0.77	1.3
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	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.37	0.13 U	0.1	0.13
Tetrachloroethene	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	0.49	0.34 U	5.3	0.34 U	0.34 U	0.73	0.1 U	0.2 U	0.87
Tetrahydrofuran	1.2	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	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
Toluene	0.61	0.5	0.78	0.94	0.64	0.97	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
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 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	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U
Trichloroethene	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.3	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
Trichlorofluoromethane	1.2	1.5	2.2	1.2	1.2	1.6	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
Trichlorotrifluoroethane	0.45	0.46	0.54	0.49	0.55	0.54	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
Vinyl acetate	0.71 U	0.71 U	0.36 U	0.71 U	0.71 U	0.71 U	0.71 U	0.36 U	0.71 U	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	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.09 U

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

Parameter (ug/m <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	EW-5-030812 3/8/2012	EW-5-061412 6/14/2012	EW-5-091312 9/13/2012
1,1,1-Trichloroethane	190000	41000	17000	7100	1800	2600	3100	1900	3500	920	540	550	460	210 D	400 D	340 D	430	130	81	100	190
1,1,2,2-Tetrachloroethane	6.8 U	6.8 U	6.8 U	6.8 U	1.7 U	6.8 U	3.4 U	3.4 U	3.4 U	3.4 U	6.8 U	3.4 U	6.8 U	1.4 UD	1.4 UD	6.9 UD	14 U	3.4 U	3.4 U	0.69 U	0.69 U
1,1,2-Trichloroethane	5.4 U	5.4 U	5.4 U	5.4 U	1.4 U	5.4 U	2.7 U	2.7 U	2.7 U	2.7 U	5.4 U	2.7 U	5.4 U	1.1 UD	1.1 UD	5.5 UD	11 U	2.7 U	2.7 U	0.55 U	0.55 U
1,1-Dichloroethane	11000	1900	890	770	190	360	450	430	230	100	50	53	42	29 D	34 D	33 D	44	16	11	12	21
1,1-Dichloroethene	2500	290	130	190	61	160	160	160	98	30	18	21	15	13 D	15 D	11 D	14	5	4.5	4.5	6.9
1,2,4-Trichlorobenzene	7.4 U	7.4 U	7.4 U	7.4 U	1.9 U	7.4 U	3.7 U	3.7 U	3.7 U	7.5 U	15 U	3.7 U	7.4 U	1.5 UD	1.5 UD	7.4 UD	30 U	7.4 U	15 U	1.5 U	1.5 U
1,2,4-Trimethylbenzene	5 U	5 U	5 U	5 U	1.3 U	5 U	2.5 U	2.5 U	2.5 U	2.5 U	5 U	2.5 U	5 U	0.98 UD	0.98 UD	4.9 UD	9.8 U	2.5 U	4.9 U	0.2	0.63
1,2-Dibromoethane (EDB)	7.6 U	7.6 U	7.6 U	7.6 U	1.9 U	7.6 U	3.8 U	3.8 U	3.8 U	3.8 U	7.6 U	3.8 U	7.6 U	1.5 UD	1.5 UD	7.7 UD	15 U	3.8 U	3.8 U	0.77 U	0.77 U
1,2-Dichlorobenzene	6 U	6 U	6 U	6 U	1.5 U	6 U	3 U	3 U	3 U	3 U	6 U	3 U	6 U	1.2 UD	1.2 UD	6 UD	12 U	3 U	6 U	0.6 U	0.6 U
1,2-Dichloroethane	4 U	4 U	4 U	4 U	1 U	4 U	2 U	2 U	2 U	2 U	4 U	2 U	4 U	0.81 UD	0.81 UD	4 UD	8.1 U	2 U	2 U	0.17	0.4 U
1,2-Dichloropropane	4.6 U	4.6 U	4.6 U	4.6 U	1.2 U	4.6 U	2.3 U	2.3 U	2.3 U	2.3 U	4.6 U	2.3 U	4.6 U	0.92 UD	0.92 UD	4.6 UD	9.2 U	2.3 U	2.3 U	0.46 U	0.46 U
1,2-Dichlorotetrafluoroethane	7 U	7 U	7 U	7 U	1.8 U	7 U	3.5 U	3.5 U	3.5 U	3.5 U	7 U	3.5 U	7 U								
1,3,5-Trimethylbenzene	5 U	5 U	5 U	5 U	1.3 U	5 U	2.5 U	2.5 U	2.5 U	2.5 U	5 U	2.5 U	5 U	0.98 UD	0.98 UD	4.9 UD	9.8 U	2.5 U	4.9 U	0.49 U	0.19
1,3-Butadiene	2.2 U	2.2 U	2.2 U	2.2 U	0.55 U	2.2 U	1.1 U	1.1 U	2.3 U	1.1 U	2.2 U	1.1 U	2.2 U	0.44 UD	0.44 UD	2.2 UD	4.4 U	1.1 U	2.2 U	0.22 U	0.22 U
1,3-Dichlorobenzene	6 U	6 U	6 U	6 U	1.5 U	6 U	3 U	3 U	3 U	3 U	6 U	3 U	6 U	1.2 UD	1.2 UD	6 UD	12 U	3 U	6 U	0.6 U	0.6 U
1,4-Dichlorobenzene	6 U	6 U	6 U	6 U	1.5 U	6 U	3 U	3 U	3 U	3 U	6 U	3 U	6 U	1.2 UD	1.2 UD	6 UD	12 U	3 U	6 U	0.6 U	0.6 U
1,4-Dioxane																	7.2 U				
2-Butanone	6.3	89	75	170	3700	64000	100000	230000	110000	7800	18000	28000	15000	4000 D	7200 BD	17000 D	13000	2700	1800	870	840
2-Hexanone	4 U	4 U	4 U	4 U	1 U	4 U	2 U	2 U	2 U	2 U	4 U	2 U	4 U	0.82 UD	0.82 UD	82 UD	8.2 U	2 U	4.1 U	0.43	0.41 U
4-Ethyltoluene	5 U	5 U	5 U	5 U	1.3 U	5 U	2.5 U	2.5 U	2.5 U	2.5 U	5 U	2.5 U	5 U	0.98 UD	0.98 UD	4.9 UD	9.8 U	2.5 U	4.9 U	0.49 U	0.18
4-Methyl-2-pentanone	4 U	4 U	4 U	4 U	1 U	4 U	2 U	2 U	2 U	2 U	4 U	2 U	4 U	0.82 UD	0.82 UD	4.1 UD	8.2 U	2 U	4.1 U	0.27	0.34
Acetone	530	32	52	29	460	5600	14000	6900	9200	1700	3200	6000	4500	2000 BD	1800 BD	2200 BD	3400	710	400	440	670
Benzene	13	12	6.2	4.8	5.6	32 U	11	7.1	11	6.3	5.5	8.2	5	4.2 D	4.5 D	4.2 D	6.4 U	2.8	2	1.1	3.7
Benzyl chloride	5.2 U	5.2 U	5.2 U	5.2 U	1.3 U	5.2 U	2.6 U	2.6 U	2.6 U	2.6 U	5.2 U	2.6 U	5.2 U	1 UD	1 UD	5.2 UD	10 U	2.6 U	5.2 U	0.52 U	0.52 U
Bromodichloromethane	6.6 U	6.6 U	6.6 U	6.6 U	1.7 U	6.6 U	3.3 U	3.3 U	3.3 U	3.3 U	6.6 U	3.3 U	6.6 U	1.3 UD	1.3 UD	6.7 UD	13 U	3.4 U	3.4 U	0.67 U	0.67 U
Bromoform	11 U	11 U	11 U	11 U	2.6 U	11 U	5.1 U	5.1 U	5.1 U	5.1 U	11 U	5.1 U	11 U	2.1 UD	2.1 UD	10 UD	21 U	5.2 U	10 U	1 U	1 U
Bromomethane	3.8 U	3.8 U	3.8 U	3.8 U	0.95 U	3.8 U	1.9 U	1.9 U	1.9 U	1.9 U	3.8 U	1.9 U	3.8 U	0.78 UD	0.78 UD	3.9 UD	7.8 U	1.9 U	3.9 U	0.39 U	0.39 U
Carbon disulfide	3.2 U	3.2 U	3.2 U	3.2 U	0.8 U	3.2 U	1.6 U	1.6 U	1.6 U	1.6 U	3.2 U	1.6 U	3.2 U	0.8 UD	0.8 UD	3.2 UD	6.4 U	1.6 U	3.2 U	0.64 U	0.64 U
Carbon tetrachloride	6.2 U	6.2 U	6.2 U	6.2 U	1.6 U	6.2 U	3.1 U	3.1 U	3.1 U	3.1 U	6.2 U	3.1 U	6.2 U	1.3 UD	1.3 UD	6.3 UD	13 U	1.2	3.1 U	0.4	0.38
Chlorobenzene	4.6 U	4.6 U	4.6 U	4.6 U	1.2 U	4.6 U	2.3 U	2.3 U	2.3 U	2.3 U	4.6 U	2.3 U	4.6 U	0.92 UD	0.92 UD	4.6 UD	9.2 U	2.3 U	4.6 U	0.46 U	0.46 U
Chloroethane	260	23	16	11	4.5	26 U	11	15	7	6.5	3.5	3.6	5.5	3.1 D	3.4 D	2.6 UD	7.5	1.3 U	2.6 U	2.9	5.3
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 D	1.2 D	4.9 UD	9.8 U	1.1	2.4 U	0.98	1.1
Chloromethane	2 U	2 U	2 U	2 U	0.5 U	2 U	1 U	1 U	1 U	1 U	2 U	1 U	2 U	0.41 UD	0.41 UD	2.1 UD	4.1 U	1 U	2.1 U	0.21 U	0.21 U
cis-1,2-Dichloroethene	2900	710	400	410	100	150	270	250	170	58	32	43	31	17 D	27 D	27 D	35	11	6.9	8.6	14
cis-1,3-Dichloropropene	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	4.4 U	2.2 U	2.2 U	2.2 U	2.2 U	4.4 U	2.2 U	4.4 U	0.91 UD	0.91 UD	4.5 UD	9.1 U	2.3 U	2.3 U	0.45 U	0.45 U
Cyclohexane	3.4 U	3.4 U	3.4 U	3.4 U	0.85 U	3.4 U	1.7 U	1.7 U	1.7 U	1.7 U	3.4 U	1.7 U	3.4 U	0.69 UD	0.69 UD	3.4 UD	6.9 U	1.7 U	3.4 U	0.34 U	0.34 U
Dibromochloromethane	8.6 U	8.6 U	8.6 U	8.6 U	2.2 U	8.6 U	4.3 U	4.3 U	4.3 U	4.3 U	8.6 U	4.3 U	8.6 U	1.7 UD	1.7 UD	8.5 UD	17 U	4.3 U	4.3 U	0.85 U	0.85 U
Dichlorodifluoromethane	5 U	5 U	5 U	5 U	2.7 U	5 U	3	3.2	2.5 U	2.5 U	5 U	2.5 U	5 U	2.4 D	3.7 D	4.9 UD	9.9 U	2.8	4.9 U	2.9	2.6
Ethanol	320	36	46	33	22	130	30	26	3.8 U	45	28	68	89	23 D	19 D	24 JD	150 U	12	290	14	100
Ethyl acetate	7.3 U	3.6 U	3.6 U	7.3 U	0.9 U	7.3 U	1.8 U	1.8 U	1.8 U	1.8 U	3.6 U	1.8 U	6.8	3.4 D	0.72 UD	3.8 D	7.2 U	3.6	26	4.2	30
Ethylbenzene	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	4.4 U	2.2 U	2.2 U	2.2 U	2.2 U	4.4 U	2.2 U	4.4 U	0.87 UD	0.87 UD	4.3 UD	8.7 U	2.2 U	4.3 U	0.12	0.69
Hexachlorobutadiene	22 U	22 U	22 U	22 U	5.4 U	22 U	11 U	11 U	5.3 U	11 U	22 U	5.3 U	11 U	2.1 UD	2.1 UD	11 UD	21 U	4.2	11 U	1.1 U	1.1 U
Hexane	5	3.6 U	3.6 U	3.6 U	2.3	36 U	3.3	1.8 U	1.8 U	1.8 U	3.6 U	1.8 U	7.1 U	1.4 UD	0.7 UD	3.5 UD	280 U	70 U	9.4	4.3	2
Isopropyl alcohol	190	5.1	4.6	5 U	4.6	290	24	57	35	2.5 U	20	54	59	11 D	13 D	25 UD	200 U	49 U	13	9.8 U	11
m,p-Xylene	8.6 U	8.6 U	8.6 U	8.6 U	2.2 U	8.6 U	4.3 U	4.3 U	4.3 U	4.3 U	8.6 U	4.3 U	8.6 U	1.7 UD	1.7 UD	8.7 UD	17 U	4.3 U	5.4	0.87 U	1.9

**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	EW-5-030812 3/8/2012	EW-5-061412 6/14/2012	EW-5-091312 9/13/2012
Methyl methacrylate															0.82 UD	4.1 UD	8.2 U	2 U	4.1 U	0.41 U	0.41 U
Methylene chloride	7.8	7 U	9.6	7 U	12	720	21	15	7 U	25	14 U	8.6	7 U	1.4 UD	2 D	6.9 UD	69 U	4.2	15	11	2.5
Methyl-t-butyl ether	3.6 U	3.6 U	3.6 U	3.6 U	0.9 U	36 U	1.8 U	1.8 U	1.8 U	1.8 U	3.6 U	1.8 U	3.6 U	0.72 UD	0.72 UD	3.6 UD	7.2 U	1.8 U	3.6 U	0.36 U	0.36 U
n-Heptane	4 U	4 U	4 U	4 U	1 U	40 U	2 U	2 U	2 U	2 U	4 U	2 U	4 U	0.82 UD	0.82 UD	4.1 UD	8.2 U	2 U	4.1 U	0.41 U	0.52
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	2.2 U	4.4 U	2.2 U	4.4 U	0.87 UD	0.87 UD	4.3 UD	8.7 U	2.2 U	4.3 U	0.14	0.73
Propylene (Propene)	3.5 U	1.8 U	1.8 U	3.5 U	0.45 U	35 U	0.9 U	0.9 U	3.5 U	3.5 U	6.9 U	8.7 U	6.9 U	1.4 UD	3.4 UD	17 UD	140 U	4.1	15	6.9 U	3.9
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 UD	0.85 UD	4.3 UD	8.5 U	2.1 U	4.3 U	0.46	0.38
Tetrachloroethene	210	310	190	97	8	68 U	21	25	19	8.9	6.8 U	6.7	6.8 U	4 D	4100 D	6.8 UD	14 U	3.5	3.4 U	0.92	2.1
Tetrahydrofuran	16	110	69	140	2200	42000	61000	150000	94000	9700	23000	37000	29000	8200 D	11000 D	30000 D	41000	11000	4500	7700	1000
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 UD	1.6 D	3.8 UD	7.5 U	0.9	37	0.58	5.6
trans-1,2-Dichloroethene	26	6.1	4 U	4.7	1 U	40 U	2.6	2.8	2 U	2 U	4 U	2 U	4 U	0.79 UD	0.79 UD	4 UD	7.9 U	2 U	2 U	0.4 U	0.18
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	2.2 U	4.4 U	2.2 U	4.4 U	0.91 UD	0.91 UD	4.5 UD	9.1 U	2.3 U	2.3 U	0.45 U	0.45 U
Trichloroethene	51000	20000	14000	8900	2400	3800	4400	2700	6800	1600	1100	1200	1100	410 D	660 D	790 D	940	290	170	220	400
Trichlorofluoromethane	3500	200	120	67	16	56 U	27	41	2.8 U	53	7	7.4	5.8	5.1 D	5.8 D	5.6 UD	11 U	3.4	5.6 U	4.9	8.5
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 UD	1.5 UD	7.7 UD	15 U	3.8 U	3.8 U	0.77 U	0.57
Vinyl acetate	15 U	3.6 U	3.6 U	15 U	0.9 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 UD	0.7 UD	70 UD	7.0 U	1.8 U	7 U	0.7 U	0.7 U
Vinyl chloride	2.6 U	2.6 U	2.6 U	2.6 U	0.65 U	26 U	1.3 U	5.3	1.3 U	3	3.4	3.1	4.3	2.4 D	3.7 D	3.3 D	6.2	1.3 U	1.3 U	2.9	4.7

**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 - Center Small Retail Space																			
	EW-6-020309 2/3/2009	EW-6-021109 2/11/2009	EW-6-021809 2/18/2009	EW-6-022609 2/26/2009	EW-6-030609 3/6/2009	EW-6-041409 4/14/2009	EW-6-051509 5/15/2009	EW-6-061109 6/11/2009	EW-6-091709 9/17/2009	EW-6-122909 12/29/2009	EW-6-070110 7/1/2010	EW-6-091610 9/16/2010	EW-6-120710 12/7/2010	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
1,1,1-Trichloroethane	69000	32000	21000	16000	16000	5600	8200	5700	5400	1100	430	390	130 D	0.55 UD	80	230	33	0.27 U	75	0.55 U
1,1,2,2-Tetrachloroethane	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	6.8 U	0.69 UD	0.69 UD	6.9 U	14 U	3.4 U	0.34 U	0.69 U
1,1,2-Trichloroethane	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	5.4 U	0.55 UD	0.55 UD	5.5 U	11 U	2.7 U	0.27 U	0.55 U
1,1-Dichloroethane	5200	2500	2100	2200	1600	780	1200	1100	930	580	47	38	21 D	0.4 UD	12	27	6.4	0.2 U	9.6	0.4 U
1,1-Dichloroethene	850	210	100	110	55	74	87	83	80	6.4	3.5	4 U	0.4 UD	0.4 UD	4 U	7.9 U	2 U	0.2 U	0.84	0.4 U
1,2,4-Trichlorobenzene	7.4 U	7.4 U	7.4 U	7.4 U	7.4 U	7.4 U	3.7 U	3.7 U	3.7 U	7.5 U	3.7 U	7.4 U	0.74 UD	0.74 UD	7.4 U	30 U	7.4 U	1.5 U	1.5 U	1.5 U
1,2,4-Trimethylbenzene	5 U	5 U	5 U	16	6.2	50 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5 U	0.49 UD	0.49 UD	4.9 U	9.8 U	2.5 U	0.49 U	0.26	0.6
1,2-Dibromoethane (EDB)	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	7.6 U	0.77 UD	0.77 UD	7.7 U	15 U	3.8 U	0.38 U	0.77 U	0.77 U
1,2-Dichlorobenzene	6 U	6 U	6 U	6 U	6 U	60 U	3 U	3 U	3 U	3 U	3 U	6 U	0.6 UD	0.6 UD	6 U	12 U	3 U	0.6 U	0.6 U	0.6 U
1,2-Dichloroethane	4 U	4 U	4 U	4 U	4 U	40 U	2 U	2 U	2 U	2 U	2 U	4 U	0.4 UD	0.4 UD	4 U	8.1 U	2 U	0.2 U	0.4 U	0.4 U
1,2-Dichloropropane	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	4.6 U	0.46 UD	0.46 UD	4.6 U	9.2 U	2.3 U	0.23 U	0.46 U	0.46 U
1,2-Dichlorotetrafluoroethane	7 U	7 U	7 U	7 U	7 U	70 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	7 U								
1,3,5-Trimethylbenzene	5 U	5 U	5 U	7.3	5 U	50 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5 U	0.49 UD	0.49 UD	4.9 U	9.8 U	2.5 U	0.49 U	0.49 U	0.49 U
1,3-Butadiene	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	22 U	1.1 U	1.1 U	2.3 U	1.1 U	1.1 U	2.2 U	0.22 UD	0.22 UD	2.2 U	4.4 U	1.1 U	0.22 U	0.22 U	0.22 U
1,3-Dichlorobenzene	6 U	6 U	6 U	6 U	6 U	60 U	3 U	3 U	3 U	3 U	3 U	6 U	0.6 UD	0.6 UD	6 U	12 U	3 U	0.6 U	0.6 U	0.6 U
1,4-Dichlorobenzene	6 U	6 U	6 U	6 U	6 U	60 U	3 U	3 U	3 U	3 U	3 U	6 U	0.6 UD	0.6 UD	6 U	12 U	3 U	0.6 U	0.6 U	0.6 U
1,4-Dioxane																7.2 U				
2-Butanone	120	280	300	130	97	160	37	65	8.7	23	1800	110	20 D	1.9 BD	59 U	240 U	13	2.1	200	3.7
2-Hexanone	4 U	4 U	4 U	4 U	4 U	40 U	2 U	2 U	2 U	2 U	2 U	4 U	0.41 UD	0.41 UD	82 U	8.2 U	2 U	0.41 U	0.7	0.52
4-Ethyltoluene	5 U	5 U	5 U	5 U	5 U	50 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	5 U	0.49 UD	0.49 UD	4.9 U	9.8 U	2.5 U	0.49 U	0.49 U	0.28
4-Methyl-2-pentanone	4 U	4 U	4 U	4 U	4 U	40 U	2 U	2 U	2 U	2 U	2 U	4 U	0.41 UD	0.41 UD	4.1 U	8.2 U	2 U	0.41 U	0.35	0.41 U
Acetone	580	64	81	33	22	410	16	20	4.8 U	27	490	70	15 BD	15 BD	48 U	190 U	21	9.9	36	25
Benzene	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	0.92 D	1.1 D	3.2 U	6.4 U	1.6 U	0.31	1.2	0.77
Benzyl chloride	5.2 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	0.52 UD	0.52 UD	5.2 U	10 U	2.6 U	0.52 U	0.52 U	0.52 U
Bromodichloromethane	6.6 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	0.67 UD	0.67 UD	6.7 U	13 U	3.4 U	0.34 U	0.67 U	0.67 U
Bromoform	11 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	1 UD	1 UD	10 U	21 U	5.2 U	1 U	1 U	1 U
Bromomethane	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	38 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	3.8 U	0.39 UD	0.39 UD	3.9 U	7.8 U	1.9 U	0.39 U	0.39 U	0.39 U
Carbon disulfide	3.2 U	3.2 U	3.2 U	3.2 U	3.2 U	180	1.6 U	1.6 U	1.6 U	1.6 U	8	12	0.66 D	0.31 UD	11 D	62 U	7.1	3.1 U	29	3.1 U
Carbon tetrachloride	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	62 U	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	6.2 U	0.63 UD	0.63 UD	6.3 UD	13 U	3.1 U	0.39	0.34	0.4
Chlorobenzene	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	46 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	4.6 U	0.46 UD	0.46 UD	4.6 UD	9.2 U	2.3 U	0.46 U	0.46 U	0.46 U
Chloroethane	140	50	34	18	13	26 U	13	14	11	4	1.3 U	2.8	0.26 UD	0.26 UD	2.6 UD	5.3 U	1.3 U	0.26 U	1.4	0.26 U
Chloroform	42	24	19	29	21	50	14	12	12	7.2	3.7	4.8 U	2.4 D	0.49 UD	4.9 UD	9.8 U	1	0.36	0.92	0.21
Chloromethane	2 U	2 U	2 U	2 U	2 U	34	1 U	1 U	1 U	1 U	38	40	0.21 UD	1 D	16 D	45	2.9	1.5	7.8	1.3
cis-1,2-Dichloroethene	700	360	220	250	150	120	190	170	130	36	11	7.9	2.3 D	0.4 UD	4 UD	7.9 U	0.83	0.2 U	2.8	0.4 U
cis-1,3-Dichloropropene	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	44 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	4.4 U	0.45 UD	0.45 UD	4.5 UD	9.1 U	2.3 U	0.23 U	0.45 U	0.45 U
Cyclohexane	3.4 U	5.3	3.4 U	3.4 U	3.4 U	34 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	3.4 U	0.34 UD	0.34 UD	3.4 UD	6.9 U	1.7 U	0.34 U	0.34 U	0.49
Dibromochloromethane	8.6 U	8.6 U	8.6 U	8.6 U	8.6 U	86 U	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	8.6 U	0.85 UD	0.85 UD	8.5 UD	17 U	4.3 U	0.43 U	0.85 U	0.85 U
Dichlorodifluoromethane	5 U	5 U	5 U	5 U	5 U	50 U	3.6	3.9	2.7	2.5 U	2.5 U	5 U	2.3 D	3.6 D	4.9 UD	9.9 U	3	2.2	2.9	2.9
Ethanol	360	38	73	38	25	110	18	14	6.7	18	15	19 U	4.6 D	11 D	38 UD	150 U	38 U	29	5.8	68
Ethyl acetate	7.3 U	3.6 U	3.6 U	7.3 U	3.6 U	73 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	3.6 U	0.36 UD	0.36 UD	3.6 UD	7.2 U	1.8 U	0.52	1.2	24
Ethylbenzene	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	44 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	4.4 U	0.43 UD	0.43 UD	4.3 UD	8.7 U	2.2 U	0.43 U	0.18	0.66
Hexachlorobutadiene	22 U	22 U	22 U	22 U	22 U	220 U	11 U	11 U	5.3 U	11 U	5.3 U	11 U	1.1 UD	1.1 UD	11 UD	21 U	5.3 U	1.1 U	1.1 U	1.1 U
Hexane	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	36 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	3.6 U	0.7 UD	1.3 D	3.5 UD	280 U	70 U	1.4	1.2	7.6
Isopropyl alcohol	210	18	33	15	10	230	8.2	11	20	2.5 U	1.2 U	9.4	0.49 UD	2.9 D	25 UD	200 U	49 U	1.3	9.8 U	7.6
m,p-Xylene	8.6 U	8.6 U	8.6 U	8.6 U	8.6 U	120	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	8.6 U	0.87 UD	0.94 D	8.7 UD	17 U	4.3 U	0.87 U	0.24	1.9

**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 - Center Small Retail Space																				
	EW-6-020309 2/3/2009	EW-6-021109 2/11/2009	EW-6-021809 2/18/2009	EW-6-022609 2/26/2009	EW-6-030609 3/6/2009	EW-6-041409 4/14/2009	EW-6-051509 5/15/2009	EW-6-061109 6/11/2009	EW-6-091709 9/17/2009	EW-6-122909 12/29/2009	EW-6-070110 7/1/2010	EW-6-091610 9/16/2010	EW-6-120710 12/7/2010	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	
Methyl methacrylate															0.41 UD	4.1 UD	8.2 U	2 U	0.41 U	0.41 U	0.41 U
Methylene chloride	7 U	7 U	7.5	7 U	7 U	780	12	15	7 U	27	10	7 U	1.3 D	2.8 D	6.9 UD	69 U	3.6	4.8	2.5	14	
Methyl-t-butyl ether	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	36 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	3.6 U	0.36 UD	0.36 UD	3.6 UD	7.2 U	1.8 U	0.36 U	0.36 U	0.13	
n-Heptane	4 U	4 U	4 U	4 U	4 U	40 U	2 U	2 U	2 U	2 U	2 U	4 U	0.41 UD	0.41 UD	4.1 UD	8.2 U	2 U	0.41 U	0.41 U	0.41 U	
o-Xylene	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	44 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	4.4 U	0.43 UD	0.43 UD	4.3 UD	8.7 U	2.2 U	0.43 U	0.16	0.73	
Propylene (Propene)	3.5 U	1.8 U	1.8 U	3.5 U	1.8 U	35 U	0.9 U	0.9 U	3.5 U	3.5 U	8.7 U	6.9 U	0.69 UD	1.7 UD	17 UD	140 U	3.8	6.9 U	2.8	6.9 U	
Styrene	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	42 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	4.2 U	0.43 UD	0.43 UD	4.3 UD	8.5 U	2.1 U	0.43 U	0.2	0.35	
Tetrachloroethene	330	290	130	290	190	300	190	210	250	68	34	23	8.1 D	1.2 D	6.8 UD	17	2.4	0.76	4.6	0.88	
Tetrahydrofuran	75	480	260	730	570	130	110	87	9.1	31	42000	53000	480 D	0.29 UD	13000 D	32000	3900	3.7	8100	0.29 U	
Toluene	12	3.8 U	3.8 U	3.8 U	3.8 U	38 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	3.8 U	0.38 UD	2.4 D	3.8 UD	9.8	1.9 U	0.36	0.7	5.3	
trans-1,2-Dichloroethene	12	6.3	4.2	6.4	4 U	40 U	2.6	2.7	2	2.1	2 U	4 U	0.4 UD	0.4 UD	4 UD	7.9 U	2 U	0.2 U	0.4 U	0.4 U	
trans-1,3-Dichloropropene	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	44 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	4.4 U	0.45 UD	0.45 UD	4.5 UD	9.1 U	2.3 U	0.23 U	0.45 U	0.45 U	
Trichloroethene	12000	6900	4200	4400	4800	3900	5400	4700	6100	2000	730	650	250 D	0.54 UD	190 D	390	66	0.27 U	180	0.21	
Trichlorofluoromethane	2300	870	630	350	250	150	230	440	700	320	6.7	25	28 D	1.7 D	11 D	34	11	1	15	2	
Trichlorotrifluoroethane	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	76 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	7.6 U	0.77 UD	0.86 D	7.7 UD	15 U	3.8 U	0.38 U	0.77 U	0.6	
Vinyl acetate	15 U	3.6 U	3.6 U	15 U	3.6 U	150 U	1.8 U	1.8 U	7.1 U	3.6 U	1.8 U	7.1 U	0.7 UD	0.35 UD	70 UD	7.0 U	1.8 U	0.7 U	0.7 U	0.7 U	
Vinyl chloride	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	26 U	1.3 U	1.3 U	1.3 U	1.3 U	1.7	2.9	0.26 UD	0.26 UD	2.6 UD	5.1 U	1.3 U	0.13 U	1.5	0.26 U	

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Summary of Analytical Results - Air Sampling for Small Retail Spaces  
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Extraction Well - Western Small Retail Space																						
Parameter (ug/m <sup>3</sup> )	EW-7-020309 2/3/2009	EW-7-021109 2/11/2009	EW-7-021809 2/18/2009	EW-7-022609 2/26/2009	EW-7-030609 3/6/2009	EW-7-041409 4/14/2009	EW-7-051509 5/15/2009	EW-7-061109 6/11/2009	EW-7-091709 9/17/2009	EW-7-122909 12/29/2009	EW-7-032610 3/26/2010	EW-7-070110 7/1/2010	EW-7-091610 9/16/2010	EW-7-120710 12/7/2010	EW-7-021711 2/17/2011	EW-7-060211 6/2/2011	EW-7-091511 9/15/2011	EW-7-120811 12/8/2011	EW-7-030812 3/8/2012	EW-7-061412 6/14/2012	EW-7-091312 9/13/2012	
1,1,1-Trichloroethane	5600	8500	7800	8200	8100	1600	3600	2600	1400	340	51	250	290	160 D	110 D	5.5 UD	110	66	11	47	95	
1,1,2,2-Tetrachloroethane	6.8 U	1.4 U	1.7 U	1.7 U	1.7 U	1.7 U	6.8 U	3.4 U	3.4 U	3.4 U	3.4 U	0.68 U	0.68 U	0.68 U	0.69 UD	0.69 UD	6.9 UD	1.4 U	0.69 U	3.4 U	0.69 U	0.69 U
1,1,2-Trichloroethane	5.4 U	1.1 U	1.4 U	1.4 U	1.4 U	1.4 U	5.4 U	2.7 U	2.7 U	2.7 U	2.7 U	0.54 U	0.54 U	0.54 U	0.55 UD	0.55 UD	5.5 UD	1.1 U	0.55 U	2.7 U	0.55 U	0.55 U
1,1-Dichloroethane	1700	1800	1600	2100	1700	590	1000	1100	970	470	85	320	340	220 D	150 D	45 D	150	80	6.4	42	100	
1,1-Dichloroethene	14	15	8.5	9.4	6.6	4 U	4.2	4.2	4.5	2 U	0.4 U	0.81	0.94	0.63 D	0.4 UD	4 UD	0.79 U	0.13	2 U	0.4 U	0.4 U	
1,2,4-Trichlorobenzene	7.4 U	1.5 U	1.9 U	1.9 U	1.9 U	7.4 U	3.7 U	3.7 U	3.7 U	7.5 U	1.5 U	0.74 U	0.74 U	0.74 UD	0.74 UD	7.4 UD	3.0 U	1.5 U	15 U	1.5 U	1.5 U	
1,2,4-Trimethylbenzene	5 U	1 U	1.3 U	1.3 U	1.3 U	5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5	0.5 U	0.5 U	0.49 UD	0.49 UD	4.9 UD	0.98 U	0.32	4.9 U	0.32	0.97	
1,2-Dibromoethane (EDB)	7.6 U	1.6 U	1.9 U	1.9 U	1.9 U	7.6 U	3.8 U	3.8 U	3.8 U	3.8 U	0.76 U	0.76 U	0.76 U	0.77 UD	0.77 UD	7.7 UD	1.5 U	0.77 U	3.8 U	0.77 U	0.77 U	
1,2-Dichlorobenzene	6 U	1.2 U	1.5 U	1.5 U	1.5 U	6 U	3 U	3 U	3 U	3 U	0.6 U	0.6 U	0.6 U	0.6 UD	0.6 UD	6 UD	1.2 U	0.6 U	6 U	0.6 U	0.6 U	
1,2-Dichloroethane	4 U	0.8 U	1 U	1 U	1 U	4 U	2 U	2 U	2 U	2 U	0.4 U	0.4 U	0.4 U	0.4 UD	0.4 UD	4 UD	0.81 U	0.4 U	2 U	0.4 U	0.4 U	
1,2-Dichloropropane	4.6 U	0.92 U	1.2 U	1.2 U	1.2 U	4.6 U	2.3 U	2.3 U	2.3 U	2.3 U	0.46 U	0.46 U	0.46 U	0.46 UD	0.46 UD	4.6 UD	0.92 U	0.46 U	2.3 U	0.46 U	0.46 U	
1,2-Dichlorotetrafluoroethane	7 U	1.4 U	1.8 U	1.8 U	1.8 U	7 U	3.5 U	3.5 U	3.5 U	3.5 U	0.7 U	0.7 U	0.7 U									
1,3,5-Trimethylbenzene	5 U	1 U	1.3 U	1.3 U	1.3 U	5 U	2.5 U	2.5 U	2.5 U	2.5 U	1.1	0.5 U	0.5 U	0.49 UD	0.49 UD	4.9 UD	0.98 U	0.49 U	4.9 U	0.49 U	0.5	
1,3-Butadiene	2.2 U	0.44 U	0.55 U	0.55 U	0.55 U	2.2 U	1.1 U	1.1 U	2.3 U	1.1 U	0.22 U	0.22 U	0.22 U	0.22 UD	0.22 UD	2.2 UD	0.44 U	0.22 U	2.2 U	0.22 U	0.22 U	
1,3-Dichlorobenzene	6 U	1.2 U	1.5 U	1.5 U	1.5 U	6 U	3 U	3 U	3 U	3 U	0.6 U	0.6 U	0.6 U	0.6 UD	0.6 UD	6 UD	1.2 U	0.6 U	6 U	0.6 U	0.6 U	
1,4-Dichlorobenzene	6 U	1.2 U	1.5 U	1.5 U	1.5 U	6 U	3 U	3 U	3 U	3 U	0.6 U	0.6 U	0.6 U	0.6 UD	0.6 UD	6 UD	1.2 U	0.6 U	6 U	0.6 U	0.6 U	
1,4-Dioxane																	0.72 U					
2-Butanone	8.7	12	7.3	8.5	5.5	4.5	7.1	16	4.9	3.5	31	3.8	1.8	4.1 D	5.3 BD	59 UD	24 U	6.2	100	14	3.6	
2-Hexanone	4 U	0.8 U	1 U	1 U	1 U	4 U	2 U	2 U	2 U	2 U	0.4 U	1	0.4 U	0.41 UD	0.41 UD	82 UD	0.82 U	0.14	4.1 U	0.28	0.64	
4-Ethyltoluene	5 U	1 U	1.3 U	1.3 U	1.3 U	5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.49 UD	0.49 UD	4.9 UD	0.98 U	0.49 U	4.9 U	0.49 U	0.21	
4-Methyl-2-pentanone	4 U	0.8 U	1 U	1 U	1 U	4 U	2 U	2 U	2 U	2 U	0.4 U	0.4 U	0.4 U	0.41 UD	0.41 UD	4.1 UD	0.82 U	0.13	4.1 U	1.6	0.31	
Acetone	580	38	58	30	24	15	24	24	7.9	49	26	25	12	42 BD	35 BD	48 UD	23	12	46	31	17	
Benzene	3.2 U	3.9	4.5	1.9	2.3	3.2 U	2.6	2.8	3	2.2	1.5	1.7	2.1	1.4 D	1.6 D	3.2 UD	2.5	1.6	3.2 U	1.5	1.2	
Benzyl chloride	5.2 U	1.1 U	1.3 U	1.3 U	1.3 U	5.2 U	2.6 U	2.6 U	2.6 U	2.6 U	0.52 U	0.52 U	0.52 U	0.52 UD	0.52 UD	5.2 UD	1.0 U	0.52 U	5.2 U	0.52 U	0.52 U	
Bromodichloromethane	6.6 U	1.4 U	1.7 U	1.7 U	1.7 U	6.6 U	3.3 U	3.3 U	3.3 U	3.3 U	0.66 U	0.66 U	0.66 U	0.67 UD	0.67 UD	6.7 UD	1.3 U	0.67 U	3.4 U	3.2	0.67 U	
Bromoform	11 U	2.1 U	2.6 U	2.6 U	2.6 U	11 U	5.1 U	5.1 U	5.1 U	5.1 U	1.1 U	1.1 U	1.1 U	1 UD	1 UD	10 UD	2.1 U	1 U	10 U	1 U	1 U	
Bromomethane	3.8 U	0.76 U	0.95 U	0.95 U	0.95 U	3.8 U	1.9 U	1.9 U	1.9 U	1.9 U	0.38 U	0.38 U	0.38 U	0.39 UD	0.39 UD	3.9 UD	0.78 U	0.39 U	3.9 U	0.39 U	0.39 U	
Carbon disulfide	5.7	3.4	2.7	3.7	3.3	3.2 U	3.2	2.7	2.1	1.6 U	1.5	0.93	0.9	0.78 D	0.31 UD	3.1 UD	6.2 U	3.1 U	31 U	0.41	3.1 U	
Carbon tetrachloride	6.2 U	1.3 U	1.6 U	1.6 U	1.6 U	6.2 U	3.1 U	3.1 U	3.1 U	3.1 U	0.62 U	0.62 U	0.62 U	0.63 UD	0.63 UD	6.3 UD	1.3 U	0.34	3.1 U	0.3	0.33	
Chlorobenzene	4.6 U	0.92 U	1.2 U	1.2 U	1.2 U	4.6 U	2.3 U	2.3 U	2.3 U	2.3 U	0.46 U	0.46 U	0.46 U	0.46 UD	0.46 UD	4.6 UD	0.92 U	0.46 U	4.6 U	0.46 U	0.46 U	
Chloroethane	170	150	88	41	33	7.1	9.6	10	8.1	6.5	1.6	2.2	3.6	2 D	0.26 UD	2.6 UD	1.9	0.26 U	2.6 U	0.82	0.26 U	
Chloroform	4.8 U	1	1.2 U	1.3	1.2 U	4.8 U	2.7	2.6	4.6	2.7	1.1	4.2	4.4	3.9 D	3 D	4.9 UD	5	3.8	2.4 U	3.1	4.1	
Chloromethane	2 U	0.4 U	0.5 U	0.5 U	0.5 U	2 U	1 U	1 U	1 U	1 U	0.2 U	0.2 U	0.2 U	0.21 UD	0.21 UD	2.1 UD	0.41 U	0.21 U	2.1 U	0.21 U	0.21 U	
cis-1,2-Dichloroethene	1100	1300	1200	1700	1200	520	1100	1200	1300	680	120	660	490	350 D	250 D	65 D	210	99	5.1	53	120	
cis-1,3-Dichloropropene	4.4 U	0.88 U	1.1 U	1.1 U	1.1 U	4.4 U	2.2 U	2.2 U	2.2 U	2.2 U	0.44 U	0.44 U	0.44 U	0.45 UD	0.45 UD	4.5 UD	0.91 U	0.45 U	2.3 U	0.45 U	0.45 U	
Cyclohexane	3.4 U	5.6	5	3.7	2.1	3.4 U	1.7 U	1.7 U	1.7 U	1.7 U	0.34 U	0.34 U	0.41	0.34 UD	0.34 UD	3.4 UD	0.69 U	0.34 U	3.4 U	0.34 U	0.34 U	
Dibromochloromethane	8.6 U	1.8 U	2.2 U	2.2 U	2.2 U	8.6 U	4.3 U	4.3 U	4.3 U	4.3 U	0.86 U	0.86 U	0.86 U	0.85 UD	0.85 UD	8.5 UD	1.7 U	0.85 U	4.3 U	0.85 U	0.85 U	
Dichlorodifluoromethane	5 U	2.5	3.2	770	2.6	5 U	2.9	3.3	2.5 U	2.5 U	1.5	2.2	1.5	2.1 D	0.49 UD	4.9 UD	2.7	2.6	4.9 U	3	0.49 U	
Ethanol	350	26	29	17	15	3.8 U	19	18	12	18	37	31	1.9 U	1.9 UD	18 D	38 UD	22	23	160	31	140	
Ethyl acetate	7.3 U	0.72 U	0.9 U	1.9 U	0.9 U	7.3 U	1.8 U	1.8 U	1.8 U	1.8 U	0.36 U	0.36 U	0.36 U	0.36 UD	0.36 UD	3.6 UD	0.72 U	0.36 U	11	0.63	0.36 U	
Ethylbenzene	4.4 U	0.88 U	1.1 U	1.1 U	1.1 U	4.4 U	2.2 U	2.2 U	2.2 U	2.2 U	0.57	0.44 U	0.44 U	0.43 UD	0.43 UD	4.3 UD	0.87 U	0.26	4.3 U	0.21	0.47	
Hexachlorobutadiene	22 U	4.3 U	5.4 U	5.4 U	5.4 U	22 U	11 U	11 U	5.3 U	11 U	2.2 U	1.1 U	1.1 U	1.1 UD	1.1 UD	11 UD	2.1 U	1.1 U	11 U	1.1 U	1.1 U	
Hexane	10	10	7.6	5.5	3.1	3.6 U	4	2.1	1.8 U	1.8 U	0.36 U	0.97	0.71 U	0.87 D	0.35 UD	3.5 UD	28 U	14 U	4	0.55	14 U	
Isopropyl alcohol	210	18	21	12	8.5	5 U	12	17	2.5 U	2.5 U	80	2.2	2.6	2.8 D	0.25 UD	25 UD	30	9.8 U	98 U	14	9.8 U	
m,p-Xylene	8.6 U	1.8 U	2.2 U	2.2 U	2.2 U	8.6 U	4.3 U	4.3 U	4.3 U	4.3 U	1.4	0.93	1	0.87 UD	0.87 UD	8.7 UD	1.7 U	0.82	8.7 U	0.45	1.3	

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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-7-020309 2/3/2009	EW-7-021109 2/11/2009	EW-7-021809 2/18/2009	EW-7-022609 2/26/2009	EW-7-030609 3/6/2009	EW-7-041409 4/14/2009	EW-7-051509 5/15/2009	EW-7-061109 6/11/2009	EW-7-091709 9/17/2009	EW-7-122909 12/29/2009	EW-7-032610 3/26/2010	EW-7-070110 7/1/2010	EW-7-091610 9/16/2010	EW-7-120710 12/7/2010	EW-7-021711 2/17/2011	EW-7-060211 6/2/2011	EW-7-091511 9/15/2011	EW-7-120811 12/8/2011	EW-7-030812 3/8/2012	EW-7-061412 6/14/2012	EW-7-091312 9/13/2012
Methyl methacrylate															0.41 UD	4.1 UD	0.82 U	0.41 U	4.1 U	0.41 U	0.41 U
Methylene chloride	9.3	2.6	8	1.8	1.8 U	20	29	16	7 U	27	1.4 U	2.4	0.81	1.9 D	2.4 D	6.9 UD	6.9 U	1.5	33	2.1	5.4
Methyl-t-butyl ether	3.6 U	3.5	2.9	4.9	3.1	3.6 U	1.8 U	1.8 U	1.8 U	1.8 U	0.36 U	0.36 U	0.36 U	0.36 UD	0.36 UD	3.6 UD	0.72 U	0.36 U	3.6 U	0.36 U	0.36 U
n-Heptane	4 U	1.4	1 U	1 U	1 U	4 U	2 U	2 U	2 U	2 U	0.4 U	0.4 U	0.4 U	0.41 UD	0.41 UD	4.1 UD	0.82 U	0.22	4.1 U	0.49	0.75
o-Xylene	4.4 U	0.88 U	1.1 U	1.1 U	1.1 U	4.4 U	2.2 U	2.2 U	2.2 U	2.2 U	0.65	0.44 U	0.44 U	0.43 UD	0.43 UD	4.3 UD	0.87 U	0.38	4.3 U	0.18	0.52
Propylene (Propene)	3.5 U	160	110	0.87 U	0.45 U	3.5 U	0.9 U	0.9 U	3.5 U	3.5 U	0.69 U	1.8 U	0.69 U	0.69 UD	1.7 UD	17 UD	14 U	6.9 U	13	6.9 U	6.9 U
Styrene	4.2 U	0.84 U	1.1 U	1.1 U	1.1 U	4.2 U	2.1 U	2.1 U	2.1 U	2.1 U	0.42 U	0.67	0.47	0.43 UD	0.43 UD	4.3 UD	0.85 U	0.49	4.3 U	0.66	0.41
Tetrachloroethene	66	69	56	84	69	40	140	230	410	130	74	510	610	190 D	110 D	120 D	450	170	5.6	130	200
Tetrahydrofuran	41	23	12	14	7.5	3 U	5.6	15	4.1	1.5 U	2800	0.7	18	6.1 D	2.7 D	3900 D	7.9	9.9	1000	13	1.1
Toluene	14	2.9	3.6	1.7	0.95 U	3.8 U	1.9 U	1.9 U	1.9 U	1.9 U	5.4	4.8	2.2	0.47 D	0.88 D	3.8 UD	1.9	1.1	8.1	1.1	1.9
trans-1,2-Dichloroethene	150	140	90	90	80	48	120	140	150	84	22	120	110	78 D	58 D	4 UD	82	54	3.8	37	45
trans-1,3-Dichloropropene	4.4 U	0.88 U	1.1 U	1.1 U	1.1 U	4.4 U	2.2 U	2.2 U	2.2 U	2.2 U	0.44 U	0.44 U	0.44 U	0.45 UD	0.45 UD	4.5 UD	0.91 U	0.45 U	2.3 U	0.45 U	0.45 U
Trichloroethene	230	210	180	180	200	110	330	420	920	420	190	690	730	440 D	310 D	260 D	680	310	53	320	450
Trichlorofluoromethane	1800	1400	900	690	640	190	310	660	1400	620	210	690	700	530 D	740 D	330 D	2500	1000	180	1300	2000
Trichlorotrifluoroethane	7.6 U	1.6 U	1.9 U	1.9 U	1.9 U	7.6 U	3.8 U	3.8 U	3.8 U	3.8 U	0.76 U	0.76 U	0.76 U	0.89 D	0.77 UD	7.7 UD	1.5 U	1	3.8 U	0.78	0.57
Vinyl acetate	15 U	0.72 U	0.9 U	3.6 U	0.9 U	15 U	1.8 U	1.8 U	7.1 U	3.6 U	0.71 U	0.36 U	0.71 U	0.7 UD	0.35 UD	70 UD	0.70 U	0.35 U	7 U	2.2	0.7 U
Vinyl chloride	280	370	180	48	21	2.6 U	2.7	3.2	1.3 U	1.6	1	0.26 U	1.6	0.41 D	0.26 UD	2.6 UD	0.51 U	0.26 U	1.3 U	0.26 U	0.26 U

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

Parameter (ug/m <sup>3</sup> )	CT IACTIND 2003 (ug/m <sup>3</sup> )	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
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	0.27 U	0.38	0.27 U	0.27 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
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
1,1-Dichloroethane	430	1.8	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	20	0.58	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 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	0.37 U	0.75 U	0.75 U	0.37 U	0.37 U
1,2,4-Trimethylbenzene	52	0.25 U	0.32	0.33	0.36	0.25 U	0.25 U	0.2	0.25 U	0.35	0.25 U	0.25 U	0.25 U	0.25 U	0.73
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
1,2-Dichlorobenzene	410	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-Dichloroethane	0.31	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 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
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
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
1,3-Butadiene	NA	0.11 U	0.11 U	0.11 U	0.25	0.11 U	0.11 U	0.08 U	0.11 U	0.11 U	0.23 U	0.11 U	0.11 U	0.11 U	0.11 U
1,3-Dichlorobenzene	410	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dichlorobenzene	24	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dioxane	NA														
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
2-Hexanone	NA	0.2 U	0.48	0.38	0.27	0.2 U	0.2 U	0.47	0.45	1.1	0.48	0.2 U	0.23	0.44	0.2 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
4-Methyl-2-pentanone	200	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.18	0.2 U	0.68	0.23	0.2 U	0.2 U	0.2 U	1.1
Acetone	500	32	11	21	20	9.5	6.5	14	14	46	16	15	11	18	17
Benzene	3.3	0.79	0.6	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
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
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
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
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
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
Carbon tetrachloride	0.54	0.33	0.44	0.5	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
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
Chloroethane	500	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.1 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Chloroform	0.5	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.17 U	0.24 U	0.55	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Chloromethane	80	1.1	1	1.5	1.4	1.1	1.1	1.1	1	1.4	1	2	1.2	1	1
cis-1,2-Dichloroethene	100	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-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	0.22 U
Cyclohexane	NA	0.17 U	0.17 U	0.38	0.41	0.17 U	0.17 U	0.12 U	0.17 U	0.4	0.17 U	0.17 U	0.17 U	0.17 U	0.45
Dibromochloromethane	NA	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	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
Dichlorodifluoromethane	500	2	2.2	2.5	2.7	2.6	2.6	1.9	2.5	2.2	2.1	1.9	1.8	2.4	1.9
Ethanol	NA	590	12	23	140	85	32	41	180	500	62	51	25	58	150
Ethyl acetate	NA	0.75	0.37 U	0.18 U	0.18 U	0.37 U	0.18 U	0.26 U	0.18 U	0.31	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Ethylbenzene	290	0.22 U	0.25	0.33	0.43	0.22 U	0.22 U	0.24	0.22 U	0.3	0.23	0.22 U	0.22 U	0.44	0.91
Hexachlorobutadiene	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.75 U	1.1 U	1.1 U	0.53 U	1.1 U	1.1 U	0.53 U	0.53 U
Hexane	NA	0.84	0.54	1.1	0.99	0.39	0.5	0.71	0.58	1	0.52	0.57	0.43	0.48	1
Isopropyl alcohol	NA	3.8	3.5	580	2.9	3	1.3	1.7	2	19	3.5	3.8	3.8	1.9	8.2
m,p-Xylene	500	0.6	0.74	0.91	1.2	0.43 U	0.43 U	0.68	0.51	0.88	0.59	0.43 U	0.46	1.2	2.4



**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> )	CT IACTIND 2003 (ug/m <sup>3</sup> )	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
		Methyl methacrylate	NA												
Methylene chloride	17	2	3.6	5.2	1.1	1.2	0.74	2.5	2.9	2	0.7 U	4.3	2.2	1.3	0.75
Methyl-t-butyl ether	190	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
n-Heptane	NA	0.2 U	0.2 U	0.36	0.35	0.2 U	0.2 U	0.23	0.38	0.48	0.2 U	0.2 U	0.2 U	0.2 U	2.1
o-Xylene	500	0.23	0.27	0.35	0.47	0.22 U	0.22 U	0.23	0.23	0.32	0.22 U	0.22 U	0.22 U	0.31	0.87
Propylene (Propene)	NA	0.18 U	0.18 U	0.09 U	0.09 U	0.18 U	0.09 U	0.13 U	0.09 U	0.09 U	0.35 U	0.35 U	0.35 U	0.87 U	0.35 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	0.3	0.21 U	0.35	0.32	0.58
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	0.34 U
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
Toluene	500	1.3	1.1	3	3.3	0.65	0.51	1.5	2.8	2.8	1.5	0.54	1.5	0.7	6.2
trans-1,2-Dichloroethene	200	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 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	0.22 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
Trichlorofluoromethane	500	3	1.3	1.7	1.8	1.5	1.7	1.2	1.3	2	1.2	1.8	1.4	1.5	6.3
Trichlorotrifluoroethane	NA	0.62	0.54	0.48	0.45	0.64	0.48	0.53	0.61	0.54	0.5	0.54	0.55	0.55	0.43
Vinyl acetate	NA	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.18 U	0.5 U	0.18 U	0.18 U	0.71 U	0.36 U	0.36 U	0.18 U	0.36 U
Vinyl chloride	1.9	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.1 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 (ug/m <sup>3</sup> )	Indoor Air - Center Small Retail Space																				
	IA-5-120810 12/8/2010	IA-5-021711 2/17/2011	IA-5-060211 6/2/2011	IA-5-091511 9/15/2011	IA-5-120811 12/8/2011	IA-5-030812 3/8/2012	IA-5-061412 6/14/2012	IA-5-091312 9/13/2012	IA-6-011609 1/16/2009	IA-6-020309 2/3/2009	IA-6-021109 2/11/2009	IA-6-021809 2/18/2009	IA-6-022609 2/26/2009	IA-6-030609 3/6/2009	IA-6-041409 4/14/2009	IA-6-051509 5/15/2009	IA-6-061109 6/11/2009	IA-6-091709 9/17/2009	IA-6-122909 12/29/2009	IA-6-032610 3/26/2010	IA-6-070110 7/1/2010
1,1,1-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.15	0.082 U	0.065	0.19 U	110	3.9	0.27 U	0.29	0.27 U	0.27 U	1.6	0.27 U	0.27 U	0.27 U	0.27 U	0.35	0.27 U
1,1,2,2-Tetrachloroethane	0.34 U	0.34 U	0.34 U	0.34 U	0.16	0.1 U	0.21 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,1,2-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.14	0.082 U	0.16 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,1-Dichloroethane	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.061 U	0.12 U	0.14 U	3.9	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	1.2	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	0.37 U	0.37 U	0.37 U	0.74 U	22	0.45 U	0.45 U	0.52 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	0.75 U	0.75 U	0.37 U
1,2,4-Trimethylbenzene	0.25 U	0.25 U	0.25 U	0.25 U	1.3	0.15 U	0.16	0.29	0.75	0.32	0.29	1.5	0.25 U	0.25 U	0.18 U	0.25 U	0.29	0.34	0.25 U	0.25 U	0.25 U
1,2-Dibromoethane (EDB)	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U	0.27 U	0.38 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
1,2-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.30 U	23	0.18 U	0.18 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.20 U	0.066	0.061 U	0.044	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.069 U	0.067	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
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
1,3,5-Trimethylbenzene	0.25 U	0.25 U	0.25 U	0.25 U	0.39	0.15 U	0.077	0.11	0.25 U	0.25 U	0.25 U	0.38	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3-Butadiene	0.11 U	0.11 U	0.11 U	0.11 U	0.066 U	0.066 U	0.066 U	0.078 U	0.11 U	0.11 U	0.11 U	1.1	0.11 U	0.11 U	0.08 U	0.11 U	0.11 U	0.23 U	0.11 U	0.11 U	0.11 U
1,3-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.30 U	0.076	0.18 U	0.18 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.30 U	0.37	0.18 U	0.18 U	0.21 U	0.3 U	0.3 U	0.3 U	0.41	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dioxane	0.18 U			0.18 U																	
2-Butanone	0.78	0.78 B	3.6	5.9 U	0.98	2	0.94	2.3	120	10	3.2	2.9	2.4	2.3	1	2.5	4.1	2.4	1.8	1.4	1.1
2-Hexanone	0.2 U	0.2 U	4.1 U	0.20 U	0.13	0.2	0.081	0.17	0.2 U	0.42	0.37	0.34	0.2 U	0.37	0.14 U	0.62	0.72	0.7	0.2 U	0.26	0.2 U
4-Ethyltoluene	0.25 U	0.25 U	0.25 U	0.25 U	0.25	0.15 U	0.053	0.097	0.25 U	0.25 U	0.25 U	0.47	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-Methyl-2-pentanone	0.2 U	0.2 U	0.31	0.20 U	0.13	0.18	0.34	0.22	0.2 U	0.2 U	0.2 U	0.36	0.2 U	0.2 U	0.14 U	0.34	0.7	0.29	0.2 U	0.2 U	0.2 U
Acetone	6.4 B	9.5 B	24 B	15	6.6	11	13	13	44	14	14	25	11	8.5	6.1	11	28	20	14	6.5	14
Benzene	0.26	1.1	0.33	0.29	0.38	0.34	0.2	0.53	1	0.6	0.98	4.1 [a]	0.41	0.7	0.59	0.47	0.43	0.31	0.4	0.55	0.19
Benzyl chloride	0.26 U	0.26 U	0.26 U	0.26 U	0.16 U	0.16 U	0.16 U	0.18 U	0.26 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
Bromodichloromethane	0.34 U	0.34 U	0.34 U	0.34 U	0.2 U	0.1 U	0.2 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Bromoform	0.52 U	0.52 U	0.52 U	0.52 U	0.31 U	0.31 U	0.31 U	0.36 U	0.51 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
Bromomethane	0.19 U	0.19 U	0.19 U	0.19 U	0.12 U	0.12 U	0.12 U	0.14 U	0.19 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
Carbon disulfide	0.16 U	0.16 U	0.16 U	1.6 U	0.93 U	0.93 U	0.93 U	0.11	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.12 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Carbon tetrachloride	0.54	0.6	0.59	0.48	0.49	0.46	0.42	0.38	0.39	0.42	0.52	0.59 [a]	0.47	0.6 [a]	0.42	0.77 [a]	0.45	0.42	0.4	0.43	0.55
Chlorobenzene	0.23 U	0.23 U	0.23 U	0.23 U	0.48	0.14 U	0.14 U	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Chloroethane	0.13 U	0.13 U	0.13 U	0.13 U	0.079 U	0.079 U	0.079 U	0.059	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.1 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	0.49	0.073 U	0.14	0.17	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.17 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.36
Chloromethane	0.76	0.96	1.1	1.3	1	1.1	1.4	1.2	1.3	0.9	1.4	1.5	1	1.1	1.1	1.1	1.9	0.97	1.8	1.4	1
cis-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.20 U	0.18	0.059 U	0.12 U	0.14 U	0.4	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,3-Dichloropropene	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.22 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	0.22 U
Cyclohexane	0.17 U	0.17 U	0.46	0.17 U	0.1 U	0.1 U	0.12	0.21	0.17 U	0.17 U	0.25	0.91	0.17 U	0.17 U	0.12 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	0.26 U	0.13 U	0.26 U	0.3 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	0.43 U	0.43 U	0.43 U	0.43 U
Dichlorodifluoromethane	2.3	3.1	1.7	2	2.6	2	2.9	2.8	2	2.1	2.6	2.8	2.6	2.6	2	2.7	2.5	2.2	1.9	1.6	2.4
Ethanol	2.4	14	7.7	7.9	5.4	14	43	11	41	23	12	40	13	12	8.6	51	31	12	10	7.1	18
Ethyl acetate	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.48	0.21	0.66	0.37 U	0.37 U	0.18 U	0.22	0.37 U	0.18 U	0.26 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Ethylbenzene	0.22 U	0.3	0.36	0.22 U	1.2	0.13 U	0.16	0.31	0.29	0.25	0.33	1.6	0.22 U	0.22 U	0.21	0.22 U	0.24	0.23	0.22 U	0.22 U	0.22 U
Hexachlorobutadiene	0.53 U	0.53 U	0.53 U	0.53 U	0.17	0.32 U	0.32 U	0.37 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.75 U	1.1 U	1.1 U	0.53 U	1.1 U	1.1 U	0.53 U
Hexane	0.3	1.3	1.7	7.0 U	0.36	0.48	0.57	1.2	1.2	0.78	0.7	2.6	0.33	0.4	0.63	0.38	0.68	0.45	0.18 U	0.22	1.3
Isopropyl alcohol	0.12 U	1.7	1.2 U	6.4	2.9 U	2.9 U	2.9 U	3.3	4.7	6.6	3.2	4.9	1.7	1.6	0.18 U	4.5	22	7	1.4	4.9	1
m,p-Xylene	0.43 U	0.85	0.57	0.53	3	0.12	0.36	0.97	0.82	0.72	0.84	4.9	0.43 U	0.43 U	0.51	0.43 U	0.67	0.62	0.43 U	0.51	0.58

**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 - Center Small Retail Space																				
	IA-5-120810 12/8/2010	IA-5-021711 2/17/2011	IA-5-060211 6/2/2011	IA-5-091511 9/15/2011	IA-5-120811 12/8/2011	IA-5-030812 3/8/2012	IA-5-061412 6/14/2012	IA-5-091312 9/13/2012	IA-6-011609 1/16/2009	IA-6-020309 2/3/2009	IA-6-021109 2/11/2009	IA-6-021809 2/18/2009	IA-6-022609 2/26/2009	IA-6-030609 3/6/2009	IA-6-041409 4/14/2009	IA-6-051509 5/15/2009	IA-6-061109 6/11/2009	IA-6-091709 9/17/2009	IA-6-122909 12/29/2009	IA-6-032610 3/26/2010	IA-6-070110 7/1/2010
Methyl methacrylate	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.12 U	0.12 U	0.14 U													
Methylene chloride	0.65	2.8	4.2	7.7	1.6	1.6	1.1	2.3	2.5	5.2	0.59	1.6	0.83	0.69	2	2	2.6	0.7 U	2.9	0.7 U	4.5
Methyl-t-butyl ether	0.18 U	0.18 U	0.18 U	0.18 U	0.039	0.11 U	0.11 U	0.18	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
n-Heptane	0.2 U	0.33	0.2 U	0.20 U	0.081	0.089	0.18	0.32	0.27	0.2 U	0.32	1.3	0.2 U	0.2 U	0.21	0.2 U	0.26	0.2 U	0.2 U	0.2 U	1.4
o-Xylene	0.22 U	0.3	0.26	0.22 U	1	0.13 U	0.14	0.35	0.36	0.26	0.34	1.8	0.22 U	0.22 U	0.19	0.22 U	0.25	0.23	0.22 U	0.22 U	0.22 U
Propylene (Propene)	0.86 U	0.86 U	0.86 U	3.4 U	2.1 U	2.1 U	2.1 U	1.4	0.18 U	0.18 U	0.09 U	0.09 U	0.18 U	0.09 U	0.13 U	0.09 U	0.09 U	0.35 U	0.35 U	0.35 U	0.87 U
Styrene	0.21 U	0.21 U	0.21 U	0.21 U	1	0.13 U	0.76	0.24	0.21 U	0.21 U	0.21 U	0.28	0.21 U	0.21 U	0.15 U	0.25	0.21 U	0.23	0.21 U	0.21 U	0.24
Tetrachloroethene	0.39	2.4	0.34 U	0.58	5.7	0.15	0.15	1.6	1.2	0.34 U	0.45	1.2	0.34 U	0.34 U	0.72	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Tetrahydrofuran	0.15 U	0.15 U	0.15 U	0.15 U	0.1	0.088 U	0.1	0.1 U	77	2.8	0.32	0.15 U	0.15 U	0.15 U	0.22	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Toluene	0.19 U	1.8	0.9	0.97	1.9	0.28	0.78	2	1.8	1.3	2.5	11	0.65	0.71	1.3	0.81	2	1.1	0.49	1.6	1.7
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Trichloroethene	0.27 U	0.27 U	0.27 U	0.27 U	0.63	0.081 U	0.045	0.1	13	1.7	0.27 U	0.34	0.27 U	0.27 U	0.6	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Trichlorofluoromethane	1.3	1.7	1.4	1.7	1.1	0.98	1.7	1.6	4.8	1.3	1.7	2.5	1.5	1.7	1.4	1.2	2.2	1.2	1.7	1.3	1.5
Trichlorotrifluoroethane	0.52	0.66	0.69	0.63	0.69	0.46	0.53	0.6	0.64	0.51	0.48	0.45	0.64	0.48	0.53	0.74	0.63	0.48	0.51	0.55	0.55
Vinyl acetate	0.43	0.18 U	3.5 U	0.18 U	0.11 U	0.21 U	0.55	0.25 U	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.18 U	0.5 U	0.18 U	0.18 U	0.71 U	0.36 U	0.36 U	0.18 U
Vinyl chloride	0.13 U	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.09 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.1 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 (ug/m <sup>3</sup> )	Indoor Air - Western Small Retail Space																				
	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-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
1,1,1-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.085	0.082 U	0.072	0.19 U	44	2.4	0.4	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
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	0.1 U	0.21 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,1,2-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.16 U	0.082 U	0.16 U	0.19 U	0.27 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	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.061 U	0.12 U	0.14 U	1.3	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.52	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	0.37 U	0.37 U	0.37 U	0.37 U	0.74 U	0.45 U	0.45 U	2.8	0.52 U	0.37 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	0.75 U	0.75 U
1,2,4-Trimethylbenzene	0.33	0.25 U	0.35	0.25 U	0.25	0.16	0.15 U	0.21	0.17 U	0.25 U	0.34	0.34	0.99	0.25 U	0.25 U	0.18 U	0.25 U	0.29	0.39	0.25 U	0.35
1,2-Dibromoethane (EDB)	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U	0.27 U	0.38 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	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	1.7	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.056	0.061 U	0.056	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.069 U	0.061	0.16 U	0.2 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	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,3,5-Trimethylbenzene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.059	0.15 U	0.091	0.17 U	0.25 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	0.11 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	0.11 U	0.11 U	0.14	0.97	0.11 U	0.11 U	0.08 U	0.11 U	0.11 U	0.23 U	0.11 U	0.11 U
1,3-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.13	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dioxane					0.18 U																
2-Butanone	0.89	0.87	1.9 B	2.9 U	5.9 U	1.3	0.63	1.4	2.8	70	6.5	3.9	5.2	2.2	1.3	1.3	2.3	7.3	2.2	0.49	2.1
2-Hexanone	0.2 U	0.2 U	0.22	4.1 U	0.6	0.15	0.12 U	0.2	0.27	0.2 U	0.29	0.2 U	0.91	0.2 U	0.2 U	0.14 U	0.53	1.5	0.53	0.2 U	0.2 U
4-Ethyltoluene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.15 U	0.15 U	0.08	0.17 U	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
4-Methyl-2-pentanone	0.4	0.2 U	0.2 U	0.28	0.31	0.13	0.12 U	0.92	0.25	0.2 U	0.2 U	0.2 U	0.42	0.2 U	0.2 U	0.14 U	0.22	0.79	0.24	0.2 U	0.2 U
Acetone	13	11 B	14 B	19 B	26	10	7.4	15	18	29	12	13	32	7.8	6.6	6.5	10	31	22	31	12
Benzene	0.6	0.44	1.3	0.29	0.31	0.42	0.39	0.2	0.49	0.95	0.75	1.1	3.2	0.67	0.73	0.42	0.35	0.52	0.43	0.52	0.53
Benzyl chloride	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	0.26 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
Bromodichloromethane	0.33 U	0.34 U	0.34 U	0.34 U	0.34 U	0.2 U	0.1 U	0.2 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Bromoform	0.51 U	0.52 U	0.52 U	0.52 U	0.52 U	0.31 U	0.31 U	0.31 U	0.36 U	0.51 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
Bromomethane	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.12 U	0.12 U	0.12 U	0.14 U	0.19 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
Carbon disulfide	0.16 U	0.16 U	0.16 U	0.16 U	1.6 U	0.93 U	0.93 U	0.93 U	0.2	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
Carbon tetrachloride	0.44	0.46	0.57	0.64	0.52	0.46	0.48	0.44	0.37	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
Chlorobenzene	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.14 U	0.45	0.16 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
Chloroethane	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	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.1 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Chloroform	0.36	0.24 U	0.24 U	0.24 U	0.24 U	0.1	0.073 U	0.24	0.17	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.17 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Chloromethane	1.1	0.95	0.92	1.1	1.4	1.3	1.2	1.4	1.2	1.7	0.98	1.4	1.5	1	1.2	1.1	0.93	1.8	1.2	2.1	1.2
cis-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.098	0.059 U	0.052	0.042	0.29	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14	0.2 U	0.2 U	0.2 U	0.27	0.2 U
cis-1,3-Dichloropropene	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.22 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
Cyclohexane	0.17 U	0.17 U	0.17 U	0.29	0.17 U	0.1 U	0.1 U	0.1 U	0.2	0.17 U	0.17 U	0.32	0.7	0.17 U	0.17 U	0.12 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	0.26 U	0.13 U	0.26 U	0.3 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	0.43 U	0.43 U	0.43 U
Dichlorodifluoromethane	1.6	1.9	3.1	1.8	1.9	2.9	2	2.9	2.8	2.1	2.2	2.6	2.7	2.6	2.6	2	2.4	2.7	2.3	2.1	1.8
Ethanol	36	5.9	10	7.7	14	24	41	67	23	7.3	16	11	26	7.9	8.4	7.1	11	14	11	10	13
Ethyl acetate	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.48	0.69	0.31	1	0.37 U	0.37 U	0.18 U	0.21	0.37 U	0.18 U	0.26 U	0.18 U	0.24	2.6	0.18 U	0.18 U
Ethylbenzene	0.43	0.22 U	0.45	0.22 U	0.22 U	0.15	0.22	0.71	0.23	0.23	0.29	0.36	0.95	0.24	0.22 U	0.16 U	0.22 U	0.25	0.32	0.68	0.32
Hexachlorobutadiene	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	0.32 U	0.37 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.75 U	1.1 U	1.1 U	0.53 U	1.1 U	1.1 U
Hexane	0.69	0.39	1.5	0.41	7.0 U	0.41	0.48	0.73	1	0.9	0.87	0.91	2	1.1	0.6	0.69	0.33	1.5	0.88	0.25	0.33
Isopropyl alcohol	3.2	1.1	2.8	1.2 U	11	2.9 U	2.9 U	2.9 U	6.7	3.7	6.2	3.6	8.3	0.25 U	2.7	0.18 U	7	14	4	1.9	18
m,p-Xylene	1.1	0.43 U	1.2	0.48	0.59	0.45	0.54	0.73	0.38	0.61	0.82	0.94	2.8	0.73	0.43 U	0.31 U	0.43 U	0.72	0.86	2.8	0.82

**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-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-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
Methyl methacrylate		0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.12 U	0.12 U	0.14 U												
Methylene chloride	0.64	0.94	3	1	1.7 U	1.5	1.8	1.5	2.2	1.9	5.7	0.92	1.5	6.3	1.4	4.2	2.3	5.7	0.7 U	2.9	0.7 U
Methyl-t-butyl ether	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U	0.11 U	0.14	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
n-Heptane	0.47	0.2 U	0.35	0.2 U	0.2	0.11	0.15	0.25	0.31	0.2	0.2 U	0.37	1.2	0.2 U	0.2 U	0.17	0.2 U	0.34	0.37	0.2 U	0.29
o-Xylene	0.42	0.22 U	0.4	0.22 U	0.22	0.17	0.13	0.29	0.12	0.24	0.31	0.39	0.97	0.24	0.22 U	0.16 U	0.22 U	0.25	0.31	0.6	0.28
Propylene (Propene)	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	0.18 U	0.18 U	0.09 U	0.09 U	0.18 U	0.09 U	0.13 U	0.09 U	0.09 U	0.35 U	0.35 U	0.35 U
Styrene	0.29	0.21 U	0.21 U	0.27	0.22	0.13	0.13 U	1.2	0.054	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
Tetrachloroethene	0.34 U	0.34 U	1.6	0.34 U	0.58	0.68	0.15	0.57	2.6	1.6	0.34 U	0.65	0.63	0.34 U	0.34 U	0.48	0.34 U	0.34 U	0.34 U	1	0.34 U
Tetrahydrofuran	0.15 U	0.15 U	0.15 U	0.15 U	0.15	0.12	0.088 U	0.088 U	0.1 U	45	2.1	0.74	0.43	0.15 U	0.15 U	0.27	0.15 U	0.15 U	0.51	0.15 U	0.15 U
Toluene	2.6	0.4	2.9	0.93	1.2	1.2	1.4	1.1	1.5	1.5	1.6	2.7	7.5	1.5	0.76	0.48	0.61	2.3	4	0.57	7.2
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.22 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
Trichloroethene	0.3	0.27 U	0.27 U	0.27 U	0.27 U	0.19	0.081 U	0.24	0.2	4.6	1.1	0.28	0.58	0.27 U	0.27 U	0.3	0.27 U	0.27 U	0.27 U	0.4	0.27 U
Trichlorofluoromethane	3.1	1.1	1.6	1.1	1.7	1.4	1	1.6	1.7	4.7	1.4	1.7	3.1	1.6	1.7	1.3	1.1	1.9	1.3	1.7	1.3
Trichlorotrifluoroethane	0.42	0.52	0.69	0.67	0.56	0.68	0.44	0.57	0.62	0.62	0.57	0.47	0.44	0.66	0.45	0.54	0.69	0.57	0.51	0.54	0.64
Vinyl acetate	0.36 U	0.35 U	0.18 U	3.5 U	0.18 U	0.11 U	0.21 U	0.21 U	0.25 U	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.18 U	0.5 U	0.18 U	0.18 U	0.71 U	0.36 U	0.36 U
Vinyl chloride	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.09 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.1 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 (ug/m <sup>3</sup> )	Indoor Air - Western Small Retail Space									
	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 12/8/11	IA-7-030812 3/8/2012	IA-7-061412 6/14/2012	IA-7-091312 9/13/2012
1,1,1-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.069	0.082 U	0.088	0.19 U
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	0.1 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	0.16 U	0.082 U	0.16 U	0.19 U
1,1-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.061 U	0.12 U	0.14 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 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	0.17	0.52 U
1,2,4-Trimethylbenzene	0.36	0.36	0.25 U	0.25 U	0.56	0.41	0.32	0.36	0.21	0.46
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
1,2-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.07	0.061 U	0.051	0.14 U
1,2-Dichloropropane	0.3	0.23 U	0.23 U	0.23 U	0.63	0.23 U	0.14 U	0.069 U	0.14 U	0.094
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	0.1	0.15	0.083	0.26
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
1,3-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U
1,4-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.065	0.063
1,4-Dioxane						0.18 U				
2-Butanone	4.3	1.8	0.42	1.7 B	4.7	5.9 U	2.1	0.97	1.1	2.8
2-Hexanone	0.82	0.55	0.2 U	0.2 U	1.4 J	0.73	0.12 U	0.081	0.23	0.41
4-Ethyltoluene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.074	0.097	0.065	0.16
4-Methyl-2-pentanone	0.43	0.61	0.2 U	0.2 U	0.53	0.36	0.15	0.13	1.4	0.29
Acetone	41	27	12 B	15 B	48 B	38	17	13	18	24
Benzene	0.27	0.56	0.45	1.1	0.41	0.34	0.44	0.36	0.2	0.49
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
Bromodichloromethane	0.33 U	0.33 U	0.34 U	0.34 U	0.34 U	0.34 U	0.2 U	0.1 U	0.2 U	0.24 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
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	0.12 U	0.14 U
Carbon disulfide	0.16 U	0.16 U	0.16 U	0.16 U	0.27	1.6 U	0.93 U	0.93 U	0.93 U	0.09
Carbon tetrachloride	0.5	0.47	0.45	0.56	0.69	0.5	0.45	0.46	0.43	0.38
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
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
Chloroform	0.24 U	0.38	0.24 U	0.24 U	0.24 U	0.34	0.12	0.073 U	0.13	0.2
Chloromethane	1.3	1.4	0.99	1	1.6	1.6	1.3	1.6	1.2	1.3
cis-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.064	0.059 U	0.12 U	0.14 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 U	0.068 U	0.14 U	0.16 U
Cyclohexane	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.1 U	0.1 U	0.1 U	0.23
Dibromochloromethane	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.26 U	0.13 U	0.26 U	0.3 U
Dichlorodifluoromethane	2.7	1.7	2	3.1	2.5	1.8	2.8	2.1	2.7	2.9
Ethanol	39	240	13	14	28	76	60	70	110	60
Ethyl acetate	0.18 U	0.18 U	0.18 U	0.18 U	0.7	0.21	1.8	0.94	0.39	0.57
Ethylbenzene	0.45	0.45	0.22 U	0.22 U	0.68	0.45	0.24	0.12	0.24	0.45
Hexachlorobutadiene	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	0.32 U	0.37 U
Hexane	0.7	0.64	0.5	1.3	0.58	7.0 U	3.9	0.8	0.67	0.97
Isopropyl alcohol	5.8	28	2.8	11	1.2 U	77	2.9 U	2.9 U	48	22
m,p-Xylene	1.2	1.2	0.43 U	0.43 J	1.5	1.1	0.72	0.3	0.54	1.4

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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- 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 12/8/11	IA-7- 030812 3/8/2012	IA-7- 061412 6/14/2012	IA-7- 091312 9/13/2012
Methyl methacrylate			0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.12 U	0.12 U	0.14 U
Methylene chloride	1.3	0.6	1.3	2.5	1.1	1.7 U	13	2.8	1.4	2.3
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	0.11
n-Heptane	0.5	0.68	0.33	0.47	2	1.1	0.46	0.47	0.65	0.99
o-Xylene	0.43	0.43	0.22 U	0.22 U	0.69	0.41	0.3	0.17	0.2	0.56
Propylene (Propene)	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	0.7	0.39	0.21 U	0.21 U	0.97	0.63	0.18	0.097	0.26	0.89
Tetrachloroethene	0.34 U	0.36	0.34 U	1.7	0.34 U	0.62	0.66	0.14	0.15	1.7
Tetrahydrofuran	0.15 U	0.15 U	0.15 U	0.15 U	0.24	0.18	0.088 U	0.088 U	0.088	0.1 U
Toluene	8.4	3.5	0.48	1.6	6.6	3.7	1.2	0.48	1.4	2.4
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 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	0.23 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	0.77	0.27 U	0.27 U	0.27 U	0.27 U	0.16	0.081 U	0.077	0.15
Trichlorofluoromethane	1.3	2.9	1.2	1.6	1.3	1.6	1.3	1.1	1.7	1.8
Trichlorotrifluoroethane	0.54	0.43	0.55	0.67	0.76	0.54	0.67	0.44	0.53	0.58
Vinyl acetate	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	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.09 U

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

NA - not available

U - Not detected, value is the detection limit

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

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

Prepared by / Date: EYM 10/9/12

Checked by / Date: MAM 10/9/12

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

Date	Pressure Differential (inches of water)		
	VMW-5	VMW-6	VMW-7
2/3/2009	-0.25	-0.17	0.00
2/18/2009	-0.212	-0.155	-0.011
2/26/2009	-0.230	-0.120	-0.025
3/6/2009	-0.200	-0.086	-0.012
4/14/2009	-0.108	-0.054	-0.014
5/15/2009	-0.081	-0.073	-0.016
6/11/2009	-0.090	-0.076	-0.098
9/17/2009	-0.110	-0.102	+0.074
12/29/2009**	-0.011	-0.010	-0.061
3/26/2010	-0.245	-0.142	-0.018
7/1/2010	-0.542	-0.114	-0.176
9/16/2010	-0.247	-0.874	-0.013
12/7/2010	-0.044	-0.028	+0.022
2/17/2011	-0.212	-0.599	-0.337
6/2/2011	-0.277	-0.236	-0.138**
9/15/2011	-0.234	-0.212	-0.010
12/8/2011	-0.609	-0.115	-0.009
3/8/2012	-0.003	-0.246	-0.114
6/14/2012	-0.237	-0.103	-0.132
9/13/2012	-0.243	-0.119	-0.210

\*\* ASD system offline.

Prepared by/Date: MAM 10/29/12

Checked by/Date: DLC 10/30/12



**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
1,1,1-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,1,2,2-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	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,1,2-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,1-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
1,2,4-Trimethylbenzene	0.25 U	0.28	0.52	1.8	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.29	0.3	0.25 U	0.25 U	0.25 U
1,2-Dibromoethane (EDB)	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2-Dichlorotetrafluoroethane	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,3,5-Trimethylbenzene	0.25 U	0.25 U	0.25 U	0.5	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	0.11 U	0.11 U	0.17	1.3	0.11 U	0.11 U	0.11 U	0.08 U	0.11 U	0.11 U	0.11 U	0.23 U	0.23 U	0.23 U	0.23 U
1,3-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.53	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 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	0.8	1.2	1.2
2-Hexanone	0.2 U	0.22	0.57	0.35	0.2 U	0.2 U	0.2 U	0.14 U	0.26	0.39	0.2 U	0.34	0.2 U	0.33	0.23
4-Ethyltoluene	0.25 U	0.25 U	0.25 U	0.6	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-Methyl-2-pentanone	0.2 U	0.2 U	0.27	0.63	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	7.3	8	15	22	8.4	5.9	12	1.1	27	9.5	10	10	9.6	5.4	17
Benzene	0.69	0.62	1.3	4.7	0.43	0.69	0.46	0.12 U	0.3	0.4	0.49	0.38	0.35	0.25	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	0.19 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Bromodichloromethane	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Bromoform	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.36 U	0.51 U	0.51 U	0.51 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	0.14 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Carbon disulfide	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	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	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	0.4	0.4	0.43	0.46
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	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	0.1 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	0.17 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Chloromethane	1.1	0.9	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
cis-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 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	0.22 U	0.22 U	0.22 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	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	0.31 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
Dichlorodifluoromethane	2	2.2	2.6	2.7	2.6	2.6	2.8	2	2.5	2.7	2.6	2.1	2.1	2.2	2.1
Ethanol	4	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
Ethyl acetate	0.37 U	0.37 U	0.18 U	0.31	0.37 U	0.18 U	0.18 U	0.26 U	0.37 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 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 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
Ethylbenzene	0.22 U	0.25	0.52	2	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.22 U	0.24	0.22 U	0.23	0.22 U	0.22 U
Hexachlorobutadiene	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.75 U	1.1 U	1.1 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U
Hexane	1.5	0.75	1.1	2.9	0.38	2.8	2.2	0.13 U	0.56	0.37	0.59	0.48	1.4	0.45	4.5
Isopropyl alcohol	1.4	1.4	1.8	4.3	1.4	0.67	1.4	0.18 U	14	1	2.5	2.8	0.87	0.63	0.25 U
m,p-Xylene	0.43 U	0.72	1.4	6.4	0.44	0.43 U	0.43 U	0.31 U	0.43 U	0.49	0.73	0.62	0.59	0.43 U	0.43 U
Methyl methacrylate															
Methylene chloride	5.5	3.1	0.65	1.5	0.78	7.4	15	2.1	2.8	1.7	1.9	0.7 U	4.2	0.7 U	23
Methyl-t-butyl ether	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
n-Heptane	0.2 U	0.27	0.92	1.6	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.4	0.23	0.2 U	0.2 U	0.2 U	0.2 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
Propylene (Propene)	0.18 U	0.18 U	0.09 U	0.09 U	0.18 U	0.09 U	0.09 U	0.13 U	0.18 U	0.09 U	0.09 U	0.35 U	0.35 U	0.18 U	0.35 U
Styrene	0.21 U	0.21 U	0.21 U	0.28	0.21 U	0.21 U	0.21 U	0.15 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	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
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	0.15 U	0.15 U	0.15 U	0.15 U	1.2	0.15 U
Toluene	0.94	1.5	3.2	14	0.71	0.99	0.82	0.14 U	0.72	2.6	2.1	1.9	2	0.61	0.5
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Trichloroethene	0.27 U	0.27 U	0.27 U	0.39	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
Trichlorofluoromethane	1.3	1.2	1.7	2.4	1.5	2	1.7	0.92	1.3	1.5	2	1.1	1.4	1.2	1.5
Trichlorotrifluoroethane	0.68	0.53	0.5	0.47	0.64	0.48	0.51	0.27 U	0.64	0.67	0.56	0.47	0.49	0.45	0.46
Vinyl acetate	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.18 U	0.18 U	0.5 U	0.71 U	0.18 U	0.18 U	0.71 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	0.1 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U

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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-1-122909 12/29/2009	AA-1-012810 1/28/2010	AA-1-020510 2/5/2010	AA-1-021210 2/12/2010	AA-1-021910 2/19/2010	AA-1-032610 3/26/2010	AA-1-043010 4/30/2010	AA-1-052810 5/28/2010	AA-1-070110 7/1/2010	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	
1,1,1-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.29	0.082 U	0.1	0.19 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	0.1 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	0.16 U	0.082 U	0.16 U	0.19 U
1,1-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.063	0.061 U	0.12 U	0.14 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.12 U	0.059 U	0.12 U	0.14 U
1,2,4-Trichlorobenzene	0.75 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	0.62	0.45 U	0.12	0.52 U	
1,2,4-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	0.94	0.25 U	1.1	0.25 U	0.25 U	0.16	0.15 U	0.15 U	0.26	
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	0.23 U	0.12 U	0.23 U	0.27 U
1,2-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.34	0.18 U	0.18 U	0.21 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.066	0.061 U	0.046	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	0.23 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	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	0.28	0.25 U	0.33	0.25 U	0.25 U	0.068	0.15 U	0.15 U	0.16	
1,3-Butadiene	0.11 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	0.29	0.11 U	0.11 U	0.11 U	0.11 U	0.066 U	0.066 U	0.066 U	0.078 U	
1,3-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U
1,4-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U
1,4-Dioxane														0.18 U					
2-Butanone	2	0.81	1.6	1.6	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	
2-Hexanone	0.2 U	0.2 U	0.32	0.2 U	0.2 U	0.29	0.29	0.49	0.49	0.41	0.2 U	0.2 U	4.1 U	0.67	0.12 U	0.34	0.14	0.27	
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	0.3	0.25 U	0.34	0.25 U	0.25 U	0.053	0.15 U	0.15 U	0.093	
4-Methyl-2-pentanone	0.2 U	0.2 U	0.2 U	0.34	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2.8	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.12 U	0.23	0.1	
Acetone	11	3.5	7.6	5.0	3.7	9.5	12	20	13	14	5.7 B	19 B	8.7 B	20	4.9	9.4	10	12	
Benzene	0.42	0.79	0.68	0.63	0.41	0.69	0.35	0.19	0.16 U	1.2	0.28	2.3	0.16 U	0.19	0.4	0.29	0.2	0.68	
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	0.16 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	0.34 U	0.34 U	0.34 U	0.34 U	0.2 U	0.1 U	0.2 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	0.52 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	0.19 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	0.28	0.16 U	0.16 U	0.44	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.38	0.16 U	0.16 U	1.6 U	0.058	0.93 U	0.11	1.1 U
Carbon tetrachloride	0.39	0.42	0.39	0.31 U	0.43	0.49	0.47	0.52	0.51	0.43	0.42	0.48	0.53	0.48	0.49	0.43	0.43	0.36	
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	0.14 U	0.14 U	0.14 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	0.13 U	0.13 U	0.13 U	0.13 U	0.079 U	0.079 U	0.079 U	0.093 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	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.094	0.073 U	0.067	0.096
Chloromethane	1.6	1.1	1.2	1.3	1.1	1.4	0.78	1.1	0.96	0.99	0.94	1	0.96	1.4	0.062 U	1.1	1.5	1.1	
cis-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12	0.059 U	0.12 U	0.14 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	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 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	0.46	0.17 U	0.17 U	0.17 U	0.17 U	0.1 U	0.1 U	0.1 U	0.12 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	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.26 U	0.13 U	0.26 U	0.3 U
Dichlorodifluoromethane	2.1	2.3	2.4	2.5	2.9	1.8	2.1	2.5	2.4	2.9	1.9	3.1	1.9	1.7	2.5	2	2.4	2.8	
Ethanol	3.8	5.4	5.1	7.2	1.2	4.9	4	3.3	4	14	2.3	12	2.7	5.8	1.5	4.1	7.4	5.2	
Ethyl acetate	0.18 U	0.18 U	0.18 U	0.18 U	1.1	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.46	0.56	0.43	0.67	

**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-1-122909 12/29/2009	AA-1-012810 1/28/2010	AA-1-020510 2/5/2010	AA-1-021210 2/12/2010	AA-1-021910 2/19/2010	AA-1-032610 3/26/2010	AA-1-043010 4/30/2010	AA-1-052810 5/28/2010	AA-1-070110 7/1/2010	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
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	0.82	1.4	0.22 U	1.1	0.22 U	0.22 U	0.31	0.13 U	0.065	0.19
Hexachlorobutadiene	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	0.32 U	0.37 U
Hexane	0.62	0.36	0.53	0.91	0.24	0.23	1.1	0.51	0.37	1.2	0.35 U	3.3	0.88	7.0 U	0.47	0.54	1.3	0.67
Isopropyl alcohol	0.54	0.56	2.7	1.5	0.8	0.73	0.69	1.6	0.79	0.25 U	0.29	2.4	1.2 U	4.9 U	0.6	0.88	2.9 U	0.58
m,p-Xylene	0.43 U	0.43 U	0.50	0.47	0.43 U	0.49	0.43 U	0.43 U	2.2	3.7	0.43 U	3.3	0.43 U	0.43 U	0.41	0.17	0.18	0.64
Methyl methacrylate											0.2 U	0.48	0.2 U	0.20 U	0.12 U	0.12 U	0.12 U	0.14 U
Methylene chloride	4.6	1.3	1.9	1.7	0.7 U	0.7 U	0.7 U	0.35 U	1.1	1.1	0.66	3	2.3	1.7 U	1.5	1.6	3	2.1
Methyl-t-butyl ether	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 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
n-Heptane	0.2 U	0.26	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.91	0.2 U	0.95	0.2 U	0.20 U	0.12	0.089	0.11	0.18
o-Xylene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.46	1.2	0.22 U	1.1	0.22 U	0.22 U	0.22	0.086	0.078	0.31
Propylene (Propene)	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.87 U	0.87 U	1.9	0.86 U	0.86 U	0.86 U	3.4 U	2.1 U	2.1 U	0.77	1.3
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	0.21 U	0.21 U	0.21 U	0.21 U	0.37	0.13 U	0.1	0.13
Tetrachloroethene	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	0.49	0.34 U	5.3	0.34 U	0.34 U	0.73	0.1 U	0.2 U	0.87
Tetrahydrofuran	0.15 U	0.15 U	0.15 U	0.15 U	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
Toluene	0.78	0.94	0.64	0.97	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
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 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	0.23 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	0.27 U	0.27 U	0.30	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
Trichlorofluoromethane	2.2	1.2	1.2	1.6	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
Trichlorotrifluoroethane	0.54	0.49	0.55	0.54	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
Vinyl acetate	0.36 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	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.09 U

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

Parameter (ug/m <sup>3</sup> )	Extraction Well - Large Retail Space													
	EW- Combined- 020309 2/3/2009	EW- COMBINED 021109 2/11/2009	EW- COMBINED 021809 2/18/2009	EW- COMBINED 022609 2/26/2009	EW- COMBINED 041409 4/14/2009	EW- COMBINED 042409 4/24/2009	EW- COMBINED 091709 9/17/2009	EW- COMBINED 092409 9/24/2009	EW- COMBINED 100109 10/1/2009	EW- COMBINED 100809 10/8/2009	EW- COMBINED 012810 1/28/2010	EW- COMBINED 020510 2/5/2010	EW- COMBINED 021210 2/12/2010	EW- COMBINED 021910 2/19/2010
1,1,1-Trichloroethane	190000	91000	73000	32000	3500	19000	11000	8100	7900	6800	1500	2500	150	1200
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
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
1,1-Dichloroethane	19000	7800	5300	4800	390	2200	1600	1900	1900	1700	280	370	31	310
1,1-Dichloroethene	7800	1800	1000	630	73	420	310	250	260	280	52	66	7.3	62
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
1,2,4-Trimethylbenzene	5 U	5 U	10 U	10 U	5 U	0.25 U	2.5 U	5 U	10 U	10 U	0.5 U	5 U	0.25 U	0.5 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
1,2-Dichlorobenzene	6 U	6 U	12 U	12 U	6 U	0.3 U	3 U	6 U	12 U	12 U	0.6 U	6 U	0.3 U	0.6 U
1,2-Dichloroethane	4 U	4 U	8 U	8 U	4 U	0.2 U	2 U	4 U	8 U	8 U	0.4 U	4 U	0.2 U	0.4 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
1,2-Dichlorotetrafluoroethane	7 U	7 U	14 U	14 U	7 U	0.35 U	3.5 U	7 U	14 U	14 U	0.7 U	7 U	0.35 U	0.7 U
1,3,5-Trimethylbenzene	5 U	5 U	10 U	10 U	5 U	0.25 U	2.5 U	5 U	10 U	10 U	0.5 U	5 U	0.25 U	0.5 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
1,3-Dichlorobenzene	6 U	6 U	12 U	12 U	6 U	0.3 U	3 U	6 U	12 U	12 U	0.6 U	6 U	0.3 U	0.6 U
1,4-Dichlorobenzene	6 U	6 U	12 U	12 U	6 U	0.3 U	3 U	6 U	12 U	12 U	0.6 U	6 U	0.3 U	0.6 U
1,4-Dioxane														
2-Butanone	37	32	48	60	21	40	7.8	31	30	21	4	11	10	9
2-Hexanone	4 U	4 U	8 U	8 U	4 U	0.5	2 U	4 U	8 U	8 U	0.4 U	4 U	0.2 U	0.4 U
4-Ethyltoluene	5 U	5 U	10 U	10 U	5 U	0.25 U	2.5 U	5 U	10 U	10 U	0.5 U	5 U	0.25 U	0.5 U
4-Methyl-2-pentanone	4 U	4 U	8 U	8 U	4 U	0.59	2 U	4 U	8 U	8 U	0.4 U	4 U	0.28 U	0.4 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
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
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
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
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
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
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
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
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
Chloroethane	3400	1700	1200	450	42	220	110	94	92	88	9.8	11	1.3	9.9
Chloroform	27	17	20	17	4.8 U	8.8	12	14	11	11	4.1	5.8	0.49	6.2
Chloromethane	2 U	2 U	4 U	4 U	2 U	8.2	1 U	2 U	4 U	4 U	0.2 U	2 U	0.1 U	0.2 U
cis-1,2-Dichloroethene	14000	4700	6300	4200	300	1600	1600	1500	1300	1200	190	280	21	240
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
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
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
Dichlorodifluoromethane	5 U	5 U	10 U	110	5 U	2.8	2.5 U	5 U	10 U	10 U	2.4	5 U	2.2	2.7
Ethanol	960	81	120	120	17	21	200	96	32	33	39	60	23	62
Ethyl acetate	7.3 U	3.6 U	7.2 U	15 U	7.3 U	0.37 U	1.8 U	3.6 U	7.2 U	7.2 U	0.36 U	3.6 U	0.18 U	0.36 U

**Table 3.  
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Parameter (ug/m <sup>3</sup> )	Extraction Well - Large Retail Space													
	EW- Combined- 020309 2/3/2009	EW- COMBINED 021109 2/11/2009	EW- COMBINED 021809 2/18/2009	EW- COMBINED 022609 2/26/2009	EW- COMBINED 041409 4/14/2009	EW- COMBINED 042409 4/24/2009	EW- COMBINED 091709 9/17/2009	EW- COMBINED 092409 9/24/2009	EW- COMBINED 100109 10/1/2009	EW- COMBINED 100809 10/8/2009	EW- COMBINED 012810 1/28/2010	EW- COMBINED 020510 2/5/2010	EW- COMBINED 021210 2/12/2010	EW- COMBINED 021910 2/19/2010
Ethylbenzene	9.4	4.4 U	8.8 U	8.8 U	4.4 U	0.22 U	2.2 U	4.4 U	8.8 U	8.8 U	0.44 U	4.4 U	0.22 U	0.44 U
Hexachlorobutadiene	22 U	22 U	43 U	43 U	22 U	1.1 U	5.3 U	11 U	22 U	22 U	1.1 U	11 U	0.53 U	1.1 U
Hexane	16	4.9	270	7.2 U	3.6 U	2.3	1.9	3.6 U	7.2 U	7.2 U	0.36 U	3.6 U	0.74	0.36 U
Isopropyl alcohol	610	2.4 U	15	9.9 U	5 U	0.25 U	22	5 U	9.9 U	9.9 U	2.3	5 U	1.0	0.5 U
m,p-Xylene	25	8.6 U	18 U	18 U	8.6 U	0.43 U	4.3 U	8.6 U	18 U	18 U	0.86 U	8.6 U	0.49	0.86 U
Methyl methacrylate														
Methylene chloride	12	7 U	14 U	14 U	19	2.6	7 U	14 U	28 U	28 U	1.4 U	14 U	2.6	1.4 U
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
n-Heptane	4 U	4 U	8 U	8 U	4 U	0.2 U	2 U	4 U	8 U	8 U	0.4 U	4 U	0.2 U	0.4 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
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
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
Tetrachloroethene	140	60	430	540	47	110	110	260	67	72	4.6	200	4.8	45
Tetrahydrofuran	77	77	150	180	66	110	1.5 U	96	85	67	15	32	28	43
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
trans-1,2-Dichloroethene	110	61	47	47	4.6	33	29	34	30	26	3.4	4.6	0.36	4.1
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
Trichloroethene	36000	17000	26000	13000	1400	6200	4000	3600	4000	4300	390	1400	58	460
Trichlorofluoromethane	9900	2300	1800	1000	98	600	1800	1400	1500	1500	260	230	29	230
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
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
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

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Providence, Rhode Island**

Parameter (ug/m <sup>3</sup> )	Extraction Well - Large Retail Space																		
	EW-COMBINED 043010 4/30/2010	EW-COMBINED 052810 5/28/2010	EW-COMBINED 070110 7/1/2010	EW-COMBINED 091610 9/16/2010	EW-COMBINED 120710 12/7/2010	EW-COMBINED 021711 2/17/2011	EW-COMBINED 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-1- 030609 3/6/2009	EW-1- 033109 3/31/2009	EW-2- 030609 3/6/2009	EW-2- 033109 3/31/2009	EW-3- 030609 3/6/2009	EW-3- 033109 3/31/2009	EW-4- 030609 3/6/2009	EW-4- 033109 3/31/2009
1,1,1-Trichloroethane	1400	1700	2000	4700	280 D	2500 D	2400	340	1100	1800	2800	59000	66000	26000	30000	54000	72000	11000	14000
1,1,2,2-Tetrachloroethane	0.68 U	6.8 U	0.68 U	0.68 U	0.69 UD	0.69 UD	1.4 U	0.69 U	3.4 U	0.69 U	0.69 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	1.7 U	6.8 U
1,1,2-Trichloroethane	0.54 U	5.4 U	0.54 U	0.55	0.55 UD	0.55 UD	1.1 U	0.55 U	2.7 U	0.55 U	0.26	6.4	10	5.4 U	5.4 U	5.4 U	5.4 U	1.4 U	5.4 U
1,1-Dichloroethane	200	270	290	330	36 D	170 D	200	70	78	130	200	4100	4400	5700	7000	1600	2300	690	1400
1,1-Dichloroethene	30	40	52	81	7.3 D	58 D	44	21	34	42	15	570	1200	330	640	340	560	97	210
1,2,4-Trichlorobenzene	0.74 U	7.4 U	0.74 U	0.74 U	0.74 UD	0.74 UD	3.0 U	1.5 U	3800	1.5 U	1.5 U	7.4 U	7.4 U	7.4 U	7.4 U	7.4 U	7.4 U	1.9 U	7.4 U
1,2,4-Trimethylbenzene	0.5 U	5 U	0.5 U	0.5 U	0.49 UD	0.49 UD	0.98 U	1.2	4.9 U	0.57	0.24	5 U	5 U	5 U	5 U	5 U	5 U	1.3 U	5 U
1,2-Dibromoethane (EDB)	0.76 U	7.6 U	0.76 U	0.76 U	0.77 UD	0.77 UD	1.5 U	0.77 U	3.8 U	0.77 U	0.77 U	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	1.9 U	7.6 U
1,2-Dichlorobenzene	0.6 U	6 U	0.6 U	0.6 U	0.6 UD	0.6 UD	1.2 U	0.6 U	7.3	0.6 U	0.6 U	6 U	6 U	6 U	6 U	6 U	6 U	1.5 U	6 U
1,2-Dichloroethane	0.4 U	4 U	0.4 U	0.4 U	0.4 UD	0.4 UD	0.81 U	0.4 U	2 U	0.4 U	0.4 U	4 U	4 U	4 U	4 U	4 U	4 U	1 U	4 U
1,2-Dichloropropane	0.46 U	4.6 U	0.46 U	0.46 U	0.46 UD	0.46 UD	0.92 U	0.46 U	2.3 U	0.46 U	0.46 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	1.2 U	4.6 U
1,2-Dichlorotetrafluoroethane	0.7 U	7 U	0.7 U	0.7 U								7 U	7 U	7 U	7 U	7 U	7 U	1.8 U	7 U
1,3,5-Trimethylbenzene	0.5 U	5 U	0.5 U	0.5 U	0.49 UD	0.49 UD	0.98 U	0.29	4.9 U	0.15	0.49 U	5 U	5 U	5 U	5 U	5 U	5 U	1.3 U	5 U
1,3-Butadiene	0.45 U	2.2 U	0.22 U	0.22 U	0.22 UD	0.22 UD	0.44 U	0.22 U	2.2 U	0.22 U	0.22 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.55 U	2.2 U
1,3-Dichlorobenzene	0.6 U	6 U	0.6 U	0.6 U	0.6 UD	0.6 UD	1.2 U	0.6 U	6 U	0.6 U	0.6 U	6 U	6 U	6 U	6 U	6 U	6 U	1.5 U	6 U
1,4-Dichlorobenzene	0.6 U	6 U	0.6 U	0.6 U	0.6 UD	0.6 UD	1.2 U	0.6 U	6 U	0.6 U	0.6 U	6 U	6 U	6 U	6 U	6 U	6 U	1.5 U	6 U
1,4-Dioxane							0.72 U												
2-Butanone	12.0	22.0	22.0	10.0	4.5 D	4.5 BD	24 U	1.3	120 U	110	16	3.5	8.9	12.0	11	36	10	36	6.4
2-Hexanone	0.4 U	4 U	0.4 U	0.4 U	0.41 UD	0.41 UD	0.82 U	0.16	4.1 U	0.31	0.41 U	4 U	4 U	4 U	4 U	4 U	4 U	1 U	4 U
4-Ethyltoluene	0.5 U	5 U	0.5 U	0.5 U	0.49 UD	0.49 UD	0.98 U	0.27	4.9 U	0.49 U	0.49 U	5 U	5 U	5 U	5 U	5 U	5 U	1.3 U	5 U
4-Methyl-2-pentanone	0.4 U	4 U	0.4 U	0.4 U	0.41 UD	0.41 UD	0.82 U	0.16	4.1 U	0.38	0.41 U	4 U	4 U	4 U	4 U	4 U	4 U	1 U	4 U
Acetone	16	24	16	6.6	11 BD	6.3 BD	19 U	6.6	22	19	14	35	16	9.6 U	9.6 U	53	24	26	12
Benzene	0.74	5.5	0.84	1.7	0.5 D	0.72 D	0.77	0.56	3.2 U	1	0.96	5.3	11	5.6	7.8	3.2 U	6.8	1.4	3.2 U
Benzyl chloride	0.52 U	5.2 U	0.52 U	0.52 U	0.52 UD	0.52 UD	1.0 U	0.52 U	5.2 U	0.52 U	0.52 U	5.2 U	5.2 U	5.2 U	5.2 U	5.2 U	5.2 U	1.3 U	5.2 U
Bromodichloromethane	0.66 U	6.6 U	0.66 U	0.66 U	0.67 UD	0.67 UD	1.3 U	0.67 U	3.4 U	10	0.67 U	6.6 U	6.6 U	6.6 U	6.6 U	6.6 U	6.6 U	1.7 U	6.6 U
Bromoform	1.1 U	11 U	1.1 U	1.1 U	1 UD	1 UD	2.1 U	1 U	10 U	1 U	1 U	11 U	11 U	11 U	11 U	11 U	11 U	2.6 U	11 U
Bromomethane	0.38 U	3.8 U	0.38 U	0.38 U	0.39 UD	0.39 UD	0.78 U	0.39 U	3.9 U	0.39 U	0.39 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	0.95 U	3.8 U
Carbon disulfide	0.77	3.2 U	1.1	1.3	0.31 UD	0.73 D	6.2 U	3.1 U	31 U	1.7	3.6	3.2 U	3.2 U	27	25	3.2 U	3.2 U	1.8	3.2 U
Carbon tetrachloride	0.62 U	6.2 U	0.73	1.1	0.63 UD	0.63 D	1.3 U	0.48	3.1 U	0.5	0.74	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	1.6 U	6.2 U
Chlorobenzene	0.46 U	7.2	0.46 U	0.46 U	0.46 UD	0.46 UD	0.92 U	0.46 U	4.6 U	0.46 U	0.46 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	1.2 U	4.6 U
Chloroethane	4.8	7.2	9.4	17	1 D	3.6 D	6.7	2.1	2.6 U	3	5.3	170	250	700	590	41	44	17	33
Chloroform	6	7.9	8	8.3	1.6 D	6.9 D	7.6	2.7	3.2	6.3	8.5	20	34	9.6	15	13	23	3.6	7.5
Chloromethane	0.2 U	2 U	0.2 U	0.2 U	0.21 UD	0.21 UD	0.41 U	0.21 U	2.1 U	2.1 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U
cis-1,2-Dichloroethene	180	260	260	360	28 D	120 D	160	38	47	75	150	2000	2200	6100	7600	610	1200	560	1300
cis-1,3-Dichloropropene	0.44 U	4.4 U	0.44 U	0.44 U	0.45 UD	0.45 UD	0.91 U	0.45 U	2.3 U	0.45 U	0.45 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	4.4 U
Cyclohexane	0.34 U	3.4 U	0.34 U	0.55	0.34 UD	0.34 UD	0.69 U	0.34 U	3.4 U	0.34 U	0.34 U	3.4 U	5.7	8.4	8.8	3.4 U	3.4 U	0.85 U	3.4 U
Dibromochloromethane	0.86 U	8.6 U	0.86 U	0.86 U	0.85 UD	0.85 UD	1.7 U	0.85 U	4.3 U	0.85 U	0.85 U	8.6 U	8.6 U	8.6 U	8.6 U	8.6 U	8.6 U	2.2 U	8.6 U
Dichlorodifluoromethane	1.7	5 U	2.5	1.6	3 D	4.1 D	2.9	2.9	4.9 U	2.9	2.9	5 U	170	5 U	5 U	5.4	7	2.6	5 U
Ethanol	10	19 U	15	1.9 U	8.2 D	17 D	15 U	9.2	75 U	7.2	12	33	40	12	8.3	39	1.8 U	8.6	1.8 U
Ethyl acetate	0.36 U	3.6 U	0.36 U	0.36 U	0.36 UD	0.36 UD	0.72 U	1.2	3.6 U	1.3	0.36 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	0.9 U	3.6 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 043010 4/30/2010	EW-COMBINED 052810 5/28/2010	EW-COMBINED 070110 7/1/2010	EW-COMBINED 091610 9/16/2010	EW-COMBINED 120710 12/7/2010	EW-COMBINED 021711 2/17/2011	EW-COMBINED 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-1- 030609 3/6/2009	EW-1- 033109 3/31/2009	EW-2- 030609 3/6/2009	EW-2- 033109 3/31/2009	EW-3- 030609 3/6/2009	EW-3- 033109 3/31/2009	EW-4- 030609 3/6/2009	EW-4- 033109 3/31/2009	
Ethylbenzene	0.44 U	4.4 U	0.44 U	0.58	0.43 UD	0.43 UD	0.87 U	0.58	4.3 U	0.28	0.21	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	4.4 U	
Hexachlorobutadiene	1.1 U	11 U	1.1 U	1.1 U	1.1 UD	1.1 UD	2.1 U	1.1 U	11 U	1.1 U	1.1 U	22 U	22 U	22 U	22 U	22 U	22 U	5.4 U	22 U	
Hexane	0.92	3.6 U	0.44	0.71 U	0.7 UD	0.8 D	28 U	0.66	140 U	0.91	1.5	3.6 U	3.6 U	3.6 U	6.6	3.6 U	3.6 U	3.2	3.6 U	
Isopropyl alcohol	2.6	2.4 U	0.24 U	0.5 U	0.84 D	0.25 UD	20 U	9.8 U	98 U	3.1	2.9	28	2.4 U	2.4 U	2.4 U	26	5.9	7.5	7.1	
m,p-Xylene	0.86 U	8.6 U	0.86 U	1.6	0.87 UD	0.87 JD	1.7 U	1.6	8.7 U	0.51	0.59	8.6 U	8.6 U	8.6 U	8.6 U	8.6 U	8.6 U	2.2 U	8.6 U	
Methyl methacrylate						0.41 UD	0.82 U	0.41 U	4.1 U	0.41 U	0.41 U									
Methylene chloride	1.4 U	7 U	2.1	0.9	0.78 D	2.9 D	6.9 U	2.2	8.1	2.3	2.2	7 U	19	7 U	17	7 U	13	19	12	
Methyl-t-butyl ether	0.36 U	3.6 U	0.36 U	0.36 U	0.36 UD	0.36 UD	0.72 U	0.24	3.6 U	1.1	0.17	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	0.9 U	3.6 U	
n-Heptane	0.4 U	4 U	0.4 U	0.4 U	0.41 UD	0.41 UD	0.82 U	0.23	4.1 U	0.41 U	0.41 U	4 U	4 U	4 U	4 U	4 U	4 U	1 U	4 U	
o-Xylene	0.44 U	4.4 U	0.44 U	0.56	0.43 UD	0.43 UD	0.87 U	0.69	4.3 U	0.28	0.25	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	4.4 U	
Propylene (Propene)	0.69 U	18 U	1.8 U	0.69 U	1.8 D	1.7 UD	14 U	6.9 U	13	3.8	6.9 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	0.45 U	1.8 U	
Styrene	0.42 U	4.2 U	0.42 U	0.42 U	0.43 UD	0.43 UD	0.85 U	0.21	4.3 U	0.54	0.39	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	1.1 U	4.2 U	
Tetrachloroethene	450	1300	640	750	160 D	920 D	440	8.1	170	530	910	600	1200	2300	2500	73	310	31	170	
Tetrahydrofuran	34	54	65	31	11 D	11 D	21	0.27	8.3	3800	110	6.3	21	19	3 U	32	14	37	5.1	
Toluene	0.75	3.8 U	0.41	3.5	0.38 D	1.4 D	0.75 U	2.5	3.8 U	1.4	0.87	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	1.4	3.8 U	
trans-1,2-Dichloroethene	3	4.6	5.5	6.6	0.6 D	1.9 D	3.5	1.1	2 U	1.7	1.9	9.2	23	69	180	4 U	8.8	2.5	8	
trans-1,3-Dichloropropene	0.44 U	4.4 U	0.44 U	0.44 U	0.45 UD	0.45 UD	0.91 U	0.45 U	2.3 U	0.45 U	0.45 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	4.4 U	
Trichloroethene	1200	2000	1700	3200	240 D	1800 D	1900	97	730	1500	2600	31000	42000	25000	25000	8600	19000	2700	5500	
Trichlorofluoromethane	210	300	440	410	71 D	200 D	610	200	150	260	100	520	540	1300	1800	430	840	240	370	
Trichlorotrifluoroethane	0.76 U	7.6 U	0.76 U	0.76 U	0.77 UD	0.77 UD	1.5 U	0.89	3.8 U	0.77 U	0.37	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	1.9 U	7.6 U	
Vinyl acetate	1.5 U	3.6 U	0.36 U	0.71 U	0.7 UD	0.35 UD	0.70 U	0.35 U	7 U	1.4	0.7 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	0.9 U	3.6 U	
Vinyl chloride	0.26 U	2.6 U	0.26 U	0.4	0.26 UD	0.26 UD	0.51 U	0.26 U	1.3 U	0.26 U	0.26 U	2.7	4.8	9.4	8.1	2.6 U	2.6 U	0.65	2.6 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> )	Post Treatment - Large Retail Space						
	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
1,1,1-Trichloroethane	1	15	45	1.9	13000	0.56	450
1,1,2,2-Tetrachloroethane	0.34 U	1.7 U	0.68 U	0.68 U	68 U	0.34 U	0.34 U
1,1,2-Trichloroethane	0.27 U	1.4 U	0.54 U	0.54 U	54 U	0.27 U	0.27 U
1,1-Dichloroethane	0.2 U	1 U	5.4	11000	490	370	610
1,1-Dichloroethene	0.2 U	1 U	0.4 U	6400	96	78	87
1,2,4-Trichlorobenzene	0.37 U	1.9 U	0.74 U	0.74 U	74 U	0.37 U	0.37 U
1,2,4-Trimethylbenzene	0.25 U	1.3 U	0.5 U	0.5 U	50 U	0.25 U	0.25 U
1,2-Dibromoethane (EDB)	0.38 U	1.9 U	0.76 U	0.76 U	76 U	0.38 U	0.38 U
1,2-Dichlorobenzene	0.3 U	1.5 U	0.6 U	0.6 U	60 U	0.3 U	0.3 U
1,2-Dichloroethane	0.2 U	1 U	0.4 U	0.4 U	40 U	0.2 U	0.2 U
1,2-Dichloropropane	0.23 U	1.2 U	0.46 U	0.46 U	46 U	0.23 U	0.23 U
1,2-Dichlorotetrafluoroethane	0.35 U	1.8 U	0.7 U	0.7 U	70 U	0.35 U	0.35 U
1,3,5-Trimethylbenzene	2.1	1.3 U	0.5 U	0.5 U	50 U	0.25 U	0.25 U
1,3-Butadiene	0.11 U	0.55 U	0.22 U	0.22 U	22 U	0.23 U	0.23 U
1,3-Dichlorobenzene	2.9	1.5 U	0.6 U	0.6 U	60 U	0.3 U	0.3 U
1,4-Dichlorobenzene	0.3 U	1.5 U	0.6 U	0.6 U	60 U	0.3 U	0.3 U
1,4-Dioxane							
2-Butanone	10	6.3	9.4	5.5	330	1.9	2.0
2-Hexanone	0.2 U	1 U	0.4 U	0.4 U	13000	0.27	0.34
4-Ethyltoluene	2.1	1.3 U	0.5 U	0.5 U	50 U	0.25 U	0.25 U
4-Methyl-2-pentanone	5	1 U	0.4 U	0.4 U	40 U	0.2 U	0.2 U
Acetone	1200	11	19	12	430	3.6	5.7
Benzene	1.3	0.8 U	0.32 U	0.32 U	32 U	0.16 U	0.16 U
Benzyl chloride	0.26 U	1.3 U	0.52 U	0.52 U	52 U	0.26 U	0.26 U
Bromodichloromethane	0.33 U	1.7 U	0.66 U	0.66 U	66 U	0.33 U	0.33 U
Bromoform	0.51 U	2.6 U	1.1 U	1.1 U	110 U	0.51 U	0.51 U
Bromomethane	0.19 U	0.95 U	0.38 U	0.38 U	38 U	0.19 U	0.19 U
Carbon disulfide	0.16 U	0.8 U	4.1	27	250	0.16 U	0.20
Carbon tetrachloride	0.38	1.6 U	0.62 U	0.62 U	62 U	0.31 U	0.31 U
Chlorobenzene	0.23 U	1.2 U	0.46 U	0.46 U	46 U	0.23 U	0.23 U
Chloroethane	0.13 U	5100	1800	480	64	19	10
Chloroform	0.24 U	1.2 U	0.48 U	0.67	48 U	0.24 U	6.8
Chloromethane	0.59	0.5 U	0.2 U	0.2 U	23	0.1 U	0.1 U
cis-1,2-Dichloroethene	0.27	1 U	3.9	5200	820	230	570
cis-1,3-Dichloropropene	0.22 U	1.1 U	0.44 U	0.44 U	44 U	0.22 U	0.22 U
Cyclohexane	0.93	0.85 U	0.34 U	0.34 U	34 U	0.17 U	0.17 U
Dibromochloromethane	0.43 U	2.2 U	0.86 U	0.86 U	86 U	0.43 U	0.43 U
Dichlorodifluoromethane	0.76	4.1	3	2.4	50 U	1.7	1.9
Ethanol	740	36	25	9.8	110	0.38 U	2.8
Ethyl acetate	0.37 U	0.9 U	0.36 U	0.73 U	73 U	0.18 U	0.18 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> )	Post Treatment - Large Retail Space						
	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
Ethylbenzene	10	1.1 U	0.44 U	0.44 U	44 U	0.22 U	0.22 U
Hexachlorobutadiene	1.1 U	5.4 U	2.2 U	2.2 U	220 U	0.53 U	0.53 U
Hexane	3	0.9 U	46	0.36 U	36 U	0.18 U	0.23
Isopropyl alcohol	450	2.9	3.1	47	290	0.25 U	1.4
m,p-Xylene	27	2.2 U	0.86 U	0.86 U	86 U	0.43 U	0.43 U
Methyl methacrylate							
Methylene chloride	20	76	17	3	810	0.7 U	0.72
Methyl-t-butyl ether	0.18 U	0.9 U	0.36 U	0.36 U	36 U	0.18 U	0.18 U
n-Heptane	1.8	1 U	0.4 U	0.4 U	40 U	0.2 U	0.2 U
o-Xylene	9.5	1.1 U	0.44 U	0.44 U	44 U	0.22 U	0.22 U
Propylene (Propene)	0.18 U	98	0.18 U	0.35 U	35 U	0.35 U	0.35 U
Styrene	3.4	1.1 U	0.42 U	0.42 U	42 U	0.21 U	0.21 U
Tetrachloroethene	0.72	1.7 U	1.1	0.68 U	68 U	0.52	1.9
Tetrahydrofuran	6.8	22	40	18	210	4.1	6.5
Toluene	29	0.95 U	0.65	0.38 U	38 U	0.19 U	0.36
trans-1,2-Dichloroethene	0.2 U	1 U	0.4 U	28	40 U	7.7	15
trans-1,3-Dichloropropene	0.22 U	1.1 U	0.44 U	0.44 U	44 U	0.22 U	0.22 U
Trichloroethene	2	11	16	2.7	54 U	1	1.0
Trichlorofluoromethane	0.71	1.4 U	23	6700	84	180	210
Trichlorotrifluoroethane	1.3	1.9 U	0.76 U	0.76 U	76 U	0.38 U	0.51
Vinyl acetate	0.71 U	0.9 U	0.36 U	1.5 U	150 U	0.71 U	0.71 U
Vinyl chloride	0.13 U	30	13	4.5	26 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> )	CT IACTIND 2003 (ug/m <sup>3</sup> )	Indoor Air - Large Retail Space													
		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	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
1,1,1-Trichloroethane	500	10	0.56	1.1	0.99	0.35	1.8	1.5	1.4	2	0.27 U	0.27 U	0.27 U	0.27 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	0.34 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.24 U	
1,1,2-Trichloroethane	12	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	
1,1-Dichloroethane	430	0.71	0.2 U	0.2 U	0.2 U	0.27	0.32	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	
1,1-Dichloroethene	20	0.38	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	
1,2,4-Trichlorobenzene	NA	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.52 U	
1,2,4-Trimethylbenzene	52	0.25 U	0.36	0.7	0.77	0.25 U	0.25 U	0.25 U	0.18 U	0.48	0.29	0.35	0.28	0.51	
1,2-Dibromoethane (EDB)	0.038	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.27 U	
1,2-Dichlorobenzene	410	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	
1,2-Dichloroethane	0.31	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	
1,2-Dichloropropane	0.42	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	
1,2-Dichlorotetrafluoroethane	NA	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	
1,3,5-Trimethylbenzene	52	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	
1,3-Butadiene	NA	0.11 U	0.11 U	0.34	0.84	0.11 U	0.11 U	0.11 U	0.08 U	0.11 U	0.23 U	0.23 U	0.23 U	0.17 U	
1,3-Dichlorobenzene	410	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	
1,4-Dichlorobenzene	24	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	
1,4-Dioxane	NA														
2-Butanone	500	20	3.1	5.8	3.4	2.6	2.2	1.3	1.2	4.4	2	2.6	2.7	1.3	
2-Hexanone	NA	0.2 U	0.2 U	0.6	0.42	0.2 U	0.23	0.2 U	0.14 U	0.48	0.43	0.52	0.73	0.31	
4-Ethyltoluene	NA	0.25 U	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	0.18 U	
4-Methyl-2-pentanone	200	0.2 U	0.2 U	0.43	0.3	0.2 U	0.2 U	0.2 U	0.14 U	0.52	0.21	0.35	0.32	0.2 U	
Acetone	500	18	7.7	19	21	10	8.7	14	12	310	11	18	13	10	
Benzene	3.3	1	0.68	1.9	3	0.69	0.87	0.71	0.56	0.78	0.49	0.47	0.39	0.48	
Benzyl chloride	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.19 U	0.26 U	0.26 U	0.26 U	0.26 U	0.19 U	
Bromodichloromethane	0.46	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	
Bromoform	7.3	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	0.36 U	
Bromomethane	NA	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	0.19 U	0.19 U	0.14 U	
Carbon disulfide	NA	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	0.16 U	0.16 U	0.16 U	0.12 U	
Carbon tetrachloride	0.54	0.35	0.41	0.52	0.55	0.46	0.59	0.53	0.31	0.43	0.48	0.38	0.42	0.43	
Chlorobenzene	200	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	
Chloroethane	500	0.13 U	0.13 U	0.42	0.13 U	0.13 U	0.13 U	0.13 U	0.1 U	0.13 U	0.13 U	0.13 U	0.13 U	0.1 U	
Chloroform	0.5	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	0.24 U	0.24 U	0.17 U	
Chloromethane	80	1.1	1	1.4	1.5	1	1	1.2	1.1	1.3	1.1	1.1	0.98	0.95	
cis-1,2-Dichloroethene	100	2	0.2 U	1	1.1	0.73	1.3	0.5	0.6	1.3	0.2 U	0.2 U	0.83	0.44	
cis-1,3-Dichloropropene	2.9	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.16 U	
Cyclohexane	NA	0.17 U	0.17 U	0.49	0.61	0.17 U	0.17 U	0.17 U	0.12 U	0.34	0.18 U	0.17 U	0.17 U	0.28	
Dibromochloromethane	NA	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	0.43 U	0.43 U	0.31 U	
Dichlorodifluoromethane	500	1.8	2.1	2.6	2.8	2.6	2.6	3.1	2	8.3	2.4	2	2.3	1.6	
Ethanol	NA	5.7	8.3	14	20	9.8	7.5	18	5	39	6.2	7	6.5	8.8	
Ethyl acetate	NA	0.37 U	0.37 U	0.18 U	0.18 U	0.37 U	0.18 U	0.18 U	0.26 U	0.37 U	0.32	0.18 U	0.18 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> )	CT IACTIND 2003 (ug/m <sup>3</sup> )	Indoor Air - Large Retail Space													
		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	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
Ethylbenzene	290	0.26	0.28	0.66	0.85	0.23	0.22 U	0.22 U	0.16 U	0.94	0.23	0.23	0.22 U	0.28	0.46
Hexachlorobutadiene	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.75 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.75 U
Hexane	NA	0.92	0.74	1.2	1.6	1	0.51	0.53	0.65	1.7	0.99	1.3	0.41	0.77	0.78
Isopropyl alcohol	NA	3.4	3.1	5.3	5.8	3.8	2	9.1	0.18 U	240	5.2	5.2	0.25 U	2.7	1.8
m,p-Xylene	500	0.76	0.87	2.1	2.8	0.8	0.43 U	0.63	0.31 U	2.5	0.79	0.91	0.73	1	1.4
Methyl methacrylate	NA														
Methylene chloride	17	2.3	33	2.3	1.8	4.4	1.1	6.7	3.5	4.8	1.6	3.6	0.7 U	0.7 U	2.9
Methyl-t-butyl ether	190	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U
n-Heptane	NA	0.23	0.2 U	0.59	0.75	0.2 U	0.2 U	0.2 U	0.14 U	0.67	0.2 U	0.2 U	0.2 U	0.26	0.42
o-Xylene	500	0.26	0.33	0.76	0.99	0.3	0.22 U	0.22 U	0.16 U	0.7	0.31	0.4	0.28	0.4	0.52
Propylene (Propene)	NA	0.18 U	0.18 U	0.09 U	0.09 U	0.18 U	0.09 U	0.09 U	0.13 U	0.18 U	0.35 U	0.35 U	0.18 U	0.35 U	0.25 U
Styrene	290	0.21 U	0.21 U	0.21	0.28	0.21 U	0.21 U	0.21 U	0.15 U	0.24	0.21 U	0.21 U	0.21 U	0.21 U	0.19
Tetrachloroethene	5	6.6	0.57	4.2	3.2	2.6	4.9	1.5	1.9	6.1	0.34 U	0.34 U	2	1.1	3.2
Tetrahydrofuran	NA	12	1.2	1.3	0.48	0.32	0.15 U	0.15 U	0.23	0.4	0.15 U	0.15 U	0.15 U	0.15 U	0.11 U
Toluene	500	1.7	1.4	4	5.7	2.3	0.93	1.7	0.72	5.7	1.3	1.1	0.78	1.2	2.8
trans-1,2-Dichloroethene	200	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 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	0.22 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.16 U
Trichloroethene	1	4.2	0.46	1.6	1.4	0.65	1.5	0.57	0.74	1.6	0.27 U	0.27 U	1.1	0.56	0.69
Trichlorofluoromethane	500	2.1	1.4	1.7	3.1	1.6	1.7	1.2	1.2	1.5	1.4	1.3	1.2	1.2	1.3
Trichlorotrifluoroethane	NA	0.65	0.64	0.47	0.46	0.67	0.48	0.59	0.54	1.7	0.48	0.44	0.45	0.51	0.52
Vinyl acetate	NA	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.18 U	0.18 U	0.5 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.25 U
Vinyl chloride	1.9	0.26	0.13 U	0.22	0.21	0.13 U	0.19	0.13 U	0.1 U	0.16	0.13 U	0.13 U	0.17	0.13 U	0.1 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-1-010810 1/8/2010	IA-1-012810 1/28/2010	IA-1-020510 2/5/2010	IA-1-021210 2/12/2010	IA-1-021910 2/19/2010	IA-1-032610 3/26/2010	IA-1-043010 4/30/2010	IA-1-052810 5/28/2010	IA-1-070110 7/1/2010	IA-1-091610 9/16/2010	IA-1-120710 12/7/2010	IA-1-021711 2/17/2011	IA-1-060211 6/2/2011	IA-1-091511 9/15/2011	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-2-011609 1/16/2009	IA-2-020309 2/3/2009	
1,1,1-Trichloroethane	0.27 U	0.27 U	0.76	0.30	0.88	0.27 U	1.2	0.33	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.12	0.082 U	0.16 U	0.19 U	9.9	0.63	
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	0.21 U	0.1 U	0.21 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	0.27 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	0.27 U	0.27 U	
1,1-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.061 U	0.12 U	0.14 U	0.72	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.41	0.2 U
1,2,4-Trichlorobenzene	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	0.45 U	0.52 U	0.37 U	0.37 U	
1,2,4-Trimethylbenzene	0.37	0.25 U	0.26	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.4	0.43	0.56	0.25 U	0.55	0.25 U	0.25 U	0.1	0.15 U	0.16	0.55	0.25 U	0.37
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	0.23 U	0.12 U	0.23 U	0.27 U	0.38 U	0.38 U	
1,2-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U	0.3 U	0.3 U	
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.056	0.061 U	0.12 U	0.14 U	0.2 U	0.2 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	0.23 U	0.23 U	0.23 U	0.14 U	0.069 U	0.14 U	0.16 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	0.35 U	0.35 U	0.35 U	0.35 U	0.044	0.15 U	0.059	0.32	0.25 U	0.25 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	0.25 U	0.25 U	0.25 U	0.25 U	0.066 U	0.066 U	0.066 U	0.078 U	0.11 U	0.11 U	
1,3-Butadiene	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	0.11 U	0.066 U	0.066 U	0.066 U	0.078 U	0.11 U	0.11 U
1,3-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U	0.3 U	0.3 U	
1,4-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U	0.3 U	0.3 U	
1,4-Dioxane														0.18 U							
2-Butanone	1.6	0.3 U	2.4	1.1	1.2	1.3	0.78	2.6	3.3	0.85	0.68	1.7 B	2.9 U	5.9 U	1.8	1.2	1.4	3	21	4.1	
2-Hexanone	0.36	0.2 U	0.47	0.2 U	0.27	0.27	0.2 U	0.67	0.75	0.2 U	0.2 U	0.2 U	4.1 U	0.62	0.22	0.26	0.12 U	0.28	0.2 U	0.2 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	0.25 U	0.25 U	0.25 U	0.25 U	0.15 U	0.15 U	0.071	0.19	0.25 U	0.25 U	
4-Methyl-2-pentanone	0.2 U	0.2 U	0.2 U	0.22	0.2 U	0.2 U	0.2 U	0.28	0.35	0.35	0.2 U	0.2 U	0.2 U	0.23	0.39	0.13	0.093	0.26	0.2 U	0.2 U	
Acetone	12	2.0	19	7.3	8.5	7	6.5	18	18	11	12 B	15 B	11 B	18	8	6	12	16	17	9.6	
Benzene	1.2	0.16 U	0.98	0.64	0.53	0.59	0.64	0.5	0.46	0.8	0.49	1.5	0.25	0.32	0.47	0.34	0.19	0.67	1	0.67	
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	0.16 U	0.16 U	0.16 U	0.18 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	0.34 U	0.34 U	0.34 U	0.34 U	0.2 U	0.1 U	0.2 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	0.51 U	0.51 U	0.51 U	0.52 U	0.52 U	0.52 U	0.52 U	0.31 U	0.31 U	0.31 U	0.36 U	0.51 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	0.19 U	0.19 U	0.19 U	0.19 U	0.12 U	0.12 U	0.12 U	0.14 U	0.19 U	0.19 U	
Carbon disulfide	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	0.16 U	0.16 U	1.6 U	0.93 U	0.93 U	0.93 U	1.1 U	0.16 U	0.16 U	
Carbon tetrachloride	0.43	0.31 U	0.40	0.31 U	0.45	0.44	0.48	0.55	0.52	0.5	0.46	0.47	0.53	0.57	0.49	0.46	0.46	0.39	0.33	0.41	
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	0.14 U	0.14 U	0.14 U	0.16 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	0.13 U	0.13 U	0.13 U	0.13 U	0.079 U	0.079 U	0.079 U	0.093 U	0.13 U	0.13 U	
Chloroform	0.26	0.24 U	0.47	0.43	0.24 U	0.24 U	0.25	0.24 U	0.24 U	3.8	0.24 U	0.24 U	0.24 U	0.24 U	0.085	0.073 U	0.097	0.19	0.24 U	0.24 U	
Chloromethane	1.1	1.4	1.3	1.3	1.2	1.3	0.79	1.2	1.2	1.1	0.97	1	0.92	1.3	0.93	1.3	1.6	1.3	1.1	1	
cis-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.56	0.2 U	1.3	0.2 U	0.5	0.2 U	1.7	0.2 U	0.2 U	0.20 U	0.15	0.059 U	0.12 U	0.045	2.1	0.24	
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	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.22 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	0.22	0.17 U	0.17 U	0.17 U	0.17 U	0.1 U	0.1 U	0.1 U	0.27	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	0.43 U	0.43 U	0.43 U	0.43 U	0.26 U	0.13 U	0.26 U	0.3 U	0.43 U	0.43 U	
Dichlorodifluoromethane	3.1	2.4	2.4	2.6	3.0	1.6	2.2	2.3	2.7	1.7	2	3.1	1.5	2	2.6	2.1	2.7	2.7	1.8	2.2	
Ethanol	8.4	7.0	29	19	43	4.6	4.4	6	6.5	9	2.7	9	2.8	6.4	2.2	3.2	4.4	8.5	5.5	8.8	
Ethyl acetate	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.92	0.26	0.57	0.37 U	0.37 U	

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

Indoor Air - Large Retail Space																				
Parameter (ug/m <sup>3</sup> )	IA-1-010810 1/8/2010	IA-1-012810 1/28/2010	IA-1-020510 2/5/2010	IA-1-021210 2/12/2010	IA-1-021910 2/19/2010	IA-1-032610 3/26/2010	IA-1-043010 4/30/2010	IA-1-052810 5/28/2010	IA-1-070110 7/1/2010	IA-1-091610 9/16/2010	IA-1-120710 12/7/2010	IA-1-021711 2/17/2011	IA-1-060211 6/2/2011	IA-1-091511 9/15/2011	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-2-011609 1/16/2009	IA-2-020309 2/3/2009
Ethylbenzene	0.4	0.22 U	0.32	0.22 U	0.22 U	0.22 U	0.23	0.29	0.27	0.51	0.22 U	0.54	0.22 U	0.22 U	0.14	0.1	0.11	0.47	0.26	0.28
Hexachlorobutadiene	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	0.32 U	0.37 U	1.1 U	1.1 U
Hexane	0.74	0.18 U	0.82	1.3	0.45	0.2	1.1	0.8	0.46	0.61	0.35 U	1.9	0.43	7.0 U	0.39	0.72	0.55	1.3	0.88	0.57
Isopropyl alcohol	2.4	0.25 U	9.4	0.25 U	1.6	0.65	3.4	0.12 U	0.74	1.4	0.25 U	1.7	1.2 U	4.9 U	2.9 U	0.64	2.9 U	1.9	3.7	3.1
m,p-Xylene	1.1	0.43 U	1.0	0.43 U	0.43 U	0.5	0.77	1.1	1.2	1.7	0.43 U	1.6	0.42 J	0.51	0.41	0.22	0.36	1.7	0.76	0.88
Methyl methacrylate											0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.12 U	0.12 U	0.14 U		
Methylene chloride	0.7 U	1.4	1.5	1.9	0.7 U	0.7 U	0.7 U	0.35 U	1.2	0.56	0.56	4.8	1.3	1.7 U	1.6	3.3	1.2	1.8	2	30
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	0.11 U	0.11 U	0.11 U	0.13 U	0.18 U	0.18 U
n-Heptane	0.35	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.36	0.2 U	0.5	0.2 U	0.20 U	0.079	0.12 U	0.093	0.44	0.23	0.2 U
o-Xylene	0.44	0.22 U	0.38	0.22 U	0.22 U	0.22 U	0.28	0.46	0.51	0.69	0.22 U	0.56	0.22 U	0.22 U	0.15	0.096	0.14	0.66	0.3	0.34
Propylene (Propene)	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.87 U	0.87 U	0.35 U	0.86 U	0.86 U	0.86 U	3.4 U	2.1 U	2.1 U	1.1	1.7	0.18 U	0.18 U
Styrene	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.25	0.31	0.24	0.21 U	0.21 U	0.21 U	0.21 U	0.85	0.13 U	0.038	0.14	0.21 U	0.21 U
Tetrachloroethene	0.34 U	0.34 U	0.34 U	0.34 U	1.2	0.34 U	4.5	0.55	1.1	0.34 U	3.3	5.6 [a]	0.34 U	0.47	0.84	0.21	0.065	2.7	7.5	0.64
Tetrahydrofuran	0.15 U	0.15 U	0.15 U	0.15 U	0.22	0.15 U	0.15 U	0.15 U	0.24	0.16	0.15 U	0.15 U	0.15 U	0.15 U	0.14	0.088 U	0.088 U	0.1 U	12	1.2
Toluene	2.1	0.19 U	0.82	0.69	0.58	0.8	1.3	0.91	0.99	2.5	0.44	3	0.58	0.93	1.6	0.3	0.64	2.8	1.7	1.3
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.2 U	0.2 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	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.22 U	0.22 U
Trichloroethene	0.27 U	0.27 U	0.27 U	0.31	0.39	0.27 U	1.5	0.27 U	0.4	0.27 U	1.7	0.27 U	0.27 U	0.27 U	0.25	0.081 U	0.16 U	0.21	4.4	0.56
Trichlorofluoromethane	2.5	0.81	1.3	1.5	1.5	1.4	1.2	1.3	1.4	2.7	1.2	1.7	1.1	1.8	1	0.89	1.8	1.7	2	1.2
Trichlorotrifluoroethane	0.63	0.38 U	0.71	0.63	0.55	0.55	0.48	0.59	0.53	0.48	0.57	0.64	0.67	0.59	0.69	0.4	0.59	0.57	0.69	0.58
Vinyl acetate	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	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	0.13 U	0.13 U	0.13 U	0.14	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.09 U	0.27	0.13 U

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

Indoor Air - Large Retail Space															
Parameter (ug/m <sup>3</sup> )	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	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
1,1,1-Trichloroethane	1.1	1.1	0.44	1.4	2.1	0.27 U	0.27 U	0.27 U	0.27 U	0.44	0.73	0.27 U	0.27 U	0.27 U	1
1,1,2,2-Tetrachloroethane	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	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	0.2 U	0.2 U	0.32	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	0.37 U	0.37 U	0.37 U	0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.75 U	0.37 U
1,2,4-Trimethylbenzene	0.7	0.65	0.3	0.18 U	0.25 U	0.29	0.39	0.27	0.52	0.55	0.25 U	0.25 U	0.25 U	0.25 U	0.31
1,2-Dibromoethane (EDB)	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	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	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	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	0.25	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.59	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3-Butadiene	0.3	0.66	0.11 U	0.08 U	0.11 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	0.11 U	0.23 U
1,3-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.34	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dioxane															
2-Butanone	4.6	3	2.9	0.95	1.6	1.1	2.3	0.81	1	2.1	0.70	0.44	0.3 U	0.96	1.3
2-Hexanone	0.35	0.26	0.2 U	0.14 U	0.2 U	0.25	0.54	0.2 U	0.26	0.51	0.2 U	0.2 U	0.2 U	0.2 U	0.26
4-Ethyltoluene	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	0.35	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.39	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	14	18	9.7	13	39	6.2	17	11	8.8	17	7.8	3.1	0.48 U	6.3	8.2
Benzene	1.8	3	0.77	0.58	0.44	0.41	0.47	0.39	0.54	1.2	0.86	0.67	0.16 U	0.58	0.63
Benzyl chloride	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	0.33 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
Bromoform	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
Bromomethane	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
Carbon disulfide	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	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Carbon tetrachloride	0.55	0.57	0.48	0.41	0.41	0.44	0.4	0.46	0.42	0.31 U	0.40	0.31 U	0.31 U	0.43	0.47
Chlorobenzene	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	0.42	0.13 U	0.13 U	0.1 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Chloroform	0.24 U	0.24 U	0.25	0.17 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.47	0.40	0.24 U	0.24 U	0.24 U
Chloromethane	1.3	1.3	1	1.1	1.2	0.91	1.1	0.96	0.98	1.2	1.3	1.3	1.4	1.3	0.8
cis-1,2-Dichloroethene	1.1	1.1	0.95	0.59	1.6	0.2 U	0.2 U	0.79	0.48	0.58	0.2 U	0.2 U	0.2 U	0.2 U	1
cis-1,3-Dichloropropene	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	0.22 U
Cyclohexane	0.44	0.61	0.17 U	0.12 U	0.22	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	0.31 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	0.43 U	0.43 U
Dichlorodifluoromethane	2.6	2.9	2.7	2.1	2.9	2	2.1	2.3	2.1	2.2	2.5	2.6	3.0	1.6	2.0
Ethanol	12	17	7.9	4.9	7.5	4.8	6.7	7.8	6.2	14	35	17	20	4.4	4.9
Ethyl acetate	0.18 U	0.18 U	0.37 U	0.26 U	0.37 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U

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Indoor Air - Large Retail Space															
Parameter (ug/m <sup>3</sup> )	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	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
Ethylbenzene	0.65	0.79	0.3	0.18	0.22 U	0.22 U	0.22	0.22 U	0.31	0.42	0.34	0.22 U	0.22 U	0.22 U	0.23
Hexachlorobutadiene	1.1 U	1.1 U	1.1 U	0.75 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	1.1 U	0.53 U
Hexane	1.3	1.6	0.69	0.72	0.74	0.41	0.42	0.71	1	0.61	0.64	1.4	0.18 U	0.27	1.6
Isopropyl alcohol	4.5	4.5	4.7	5.6	28	340	5.7	3.3	0.25 U	0.25 U	3.6	0.25 U	0.25 U	0.63	3.2
m,p-Xylene	2	2.6	0.93	0.61	0.63	0.71	0.93	0.78	1.1	1.3	1.1	0.43 U	0.43 U	0.47	0.75
Methyl methacrylate															
Methylene chloride	4	1.6	1.8	4	4.2	0.7 U	0.7 U	0.7 U	0.7 U	1.4	0.90	1.9	0.7 U	0.7 U	0.7 U
Methyl-t-butyl ether	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	0.58	0.73	0.22	0.15	0.2 U	0.2 U	0.2 U	0.2 U	0.34	0.83	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
o-Xylene	0.76	0.89	0.34	0.22	0.22	0.27	0.42	0.3	0.44	0.46	0.40	0.22 U	0.22 U	0.22 U	0.29
Propylene (Propene)	0.09 U	0.09 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
Styrene	0.21 U	0.23	0.21 U	0.15 U	0.21 U	0.21 U	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
Tetrachloroethene	4.2	3.2	3.3	2.2	<b>7.6</b>	0.34 U	0.35	1.7	1	2.3	0.34 U	0.34 U	0.34 U	0.34 U	3.6
Tetrahydrofuran	1.2	0.49	0.41	0.21	0.28	0.15 U	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
Toluene	4	5.5	2.3	1	1.2	1.1	1.1	1.2	1.5	2.4	0.93	0.64	0.19 U	0.8	1.3
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	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	0.22 U
Trichloroethene	<b>1.6</b>	<b>1.4</b>	0.91	0.77	<b>1.9</b>	0.27 U	0.27 U	0.99	0.57	0.79	0.27 U	0.27 U	0.27 U	0.27 U	<b>1.2</b>
Trichlorofluoromethane	1.7	2.8	1.6	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.4	1.1	1.4	1.3
Trichlorotrifluoroethane	0.49	0.46	0.64	0.56	0.74	0.5	0.47	0.46	0.54	0.46	0.53	0.61	0.38 U	0.51	0.44
Vinyl acetate	0.18 U	0.18 U	0.71 U	0.5 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.36 U	0.71 U
Vinyl chloride	0.18	0.2	0.13 U	0.1 U	0.18	0.13 U	0.13 U	0.16	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U



**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-2-091610	IA-2-070110	IA-2-091610	IA-2-120710	IA-2-021711	IA-2-060211	IA-2-091511	IA-2-120811	IA-2-030812	IA-2-061412	IA-2-091312	IA-3-011609	IA-3-020309	IA-3-021109	IA-3-021809	IA-3-022609	IA-3-041409	IA-3-042409	IA-3-091709	IA-3-092409
1,1,1-Trichloroethane	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	9.8	0.57	1.1	1.1	0.28	1.5	2.2	0.27 U	0.27 U
1,1,2,2-Tetrachloroethane	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.21 U	0.1 U	0.21 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U
1,1,2-Trichloroethane	0.27 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	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U
1,1-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.061 U	0.12 U	0.043	0.68	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.059 U	0.12 U	0.045	0.35	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.74 U	0.45 U	0.45 U	0.45 U	0.52 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
1,2,4-Trimethylbenzene	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	0.25 U	0.36	0.68	0.61	0.25 U	0.18 U	0.25 U	0.29	0.4
1,2-Dibromoethane (EDB)	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.063	0.061 U	0.051	0.08	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.069 U	0.14 U	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U
1,2-Dichlorotetrafluoroethane	0.35 U	0.35 U	0.35 U									0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U
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	0.15 U	0.15 U	0.08	0.26	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
1,3-Butadiene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.066 U	0.066 U	0.066 U	0.078 U	0.11 U	0.11 U	0.3	0.77	0.11 U	0.08 U	0.11 U	0.23 U	0.23 U
1,3-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.18 U	0.08	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.18 U	0.093	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U
1,4-Dioxane							0.18 U													
2-Butanone	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	20	4.2	4.6	4	1.7	1.6	2.5	2	2.6
2-Hexanone	0.84	0.68	0.2 U	0.2 U	0.24	4.1 U	0.5	0.12 U	0.16	0.15	0.32	0.2 U	0.26	0.33	0.3	0.2 U	0.14 U	0.38	0.51	0.58
4-Ethyltoluene	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	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
4-Methyl-2-pentanone	0.28	0.49	0.34	0.2 U	0.2 U	0.2 U	0.24	0.1	0.11	0.12	0.19	0.2 U	0.2 U	0.29	0.34	0.2 U	0.14 U	0.22	0.2 U	0.42
Acetone	18	20	11	9.8 B	15 B	8.9 B	18	6.2	5.4	14	17	18	12	17	24	9.7	7.5	50	11	19
Benzene	0.47	0.48	0.72	0.48	1.5	0.26	0.3	0.39	0.36	0.24	0.62	1	0.71	1.9	3.1	0.69	0.6	0.46	0.41	0.5
Benzyl chloride	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.16 U	0.16 U	0.16 U	0.18 U	0.26 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
Bromodichloromethane	0.33 U	0.33 U	0.33 U	0.34 U	0.34 U	0.34 U	0.34 U	0.2 U	0.1 U	0.2 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	0.33 U	0.33 U	0.33 U
Bromoform	0.51 U	0.51 U	0.51 U	0.52 U	0.52 U	0.52 U	0.52 U	0.31 U	0.31 U	0.31 U	0.36 U	0.51 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
Bromomethane	0.19 U	0.22	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.12 U	0.12 U	0.12 U	0.14 U	0.19 U	0.19 U	0.19 U	0.19 U	0.14 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	1.6 U	0.93 U	0.93 U	0.93 U	1.1 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.12 U	0.16 U	0.16 U	0.16 U
Carbon tetrachloride	0.5	0.52	0.5	0.48	0.31 U	0.62	0.52	0.49	0.48	0.45	0.43	0.34	0.45	0.52	0.6	0.43	0.22 U	0.42	0.4	0.43
Chlorobenzene	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.14 U	0.14 U	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U
Chloroethane	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	0.13 U	0.13 U	0.43	0.13 U	0.13 U	0.1 U	0.13 U	0.13 U	0.13 U
Chloroform	0.24 U	0.24 U	3.4	0.24 U	0.24 U	0.24 U	0.24 U	0.085	0.073 U	0.14	0.25	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.17 U	0.24 U	0.24 U	0.24 U
Chloromethane	1.2	1.2	1.1	0.96	0.97	0.95	1.2	0.93	1	1.4	1.3	1.1	0.98	1.2	1.4	1.1	1.2	1.2	0.91	1.1
cis-1,2-Dichloroethene	0.2 U	0.61	0.2 U	1.7	0.2 U	0.2 U	0.20 U	0.17	0.059 U	0.12 U	0.064	1.9	0.2 U	1.1	1.1	0.55	0.61	1.5	0.2 U	0.2 U
cis-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	0.22 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
Cyclohexane	0.17 U	0.17 U	0.2	0.17 U	0.17 U	0.17 U	0.17 U	0.1 U	0.1 U	0.1 U	0.26	0.17 U	0.17 U	0.46	0.6	0.17 U	0.15	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	0.26 U	0.13 U	0.26 U	0.3 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	0.43 U
Dichlorodifluoromethane	2.4	2.6	1.7	1.9	3.2	1.6	2	2.7	2.1	2.7	2.8	1.9	2.3	2.5	2.9	2.6	2	2.9	2.1	2.1
Ethanol	5	7.6	9	2.7	10	2.5	8.5	2.1	2.1	10	9.8	5.5	9.2	13	18	7.9	4.2	9	6.2	7.5
Ethyl acetate	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.22	0.24	3.5	0.71	0.37 U	0.37 U	0.18 U	0.18 U	0.37 U	0.26 U	0.37 U	0.18 U	0.18 U

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

Indoor Air - Large Retail Space																				
Parameter (ug/m <sup>3</sup> )	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	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
Ethylbenzene	0.24	0.29	0.46	0.22 U	0.5	0.22 U	0.22 U	0.13	0.13 U	0.13 U	0.41	0.25	0.29	0.64	0.77	0.22 U	0.16	0.22 U	0.22 U	0.23
Hexachlorobutadiene	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	0.32 U	0.37 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.75 U	1.1 U	0.53 U	0.53 U
Hexane	0.51	0.49	0.53	0.35 U	1.6	0.31	7.0 U	0.32	0.34	2.6	2.4	0.94	0.87	1.3	1.9	3.7	0.37	0.77	0.96	0.47
Isopropyl alcohol	0.12 U	1.2	0.25 U	0.25 U	2	1.2 U	4.9 U	2.9 U	0.76	2.9 U	2.8	3.5	4.1	5.5	4.9	3.1	0.18 U	33	180	5.9
m,p-Xylene	0.96	1.3	1.5	0.43 U	1.5	0.36 J	0.57	0.39	0.18	0.38	1.3	0.75	0.9	2	2.6	0.65	0.57	0.66	0.7	0.99
Methyl methacrylate				0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.12 U	0.12 U	0.14 U									
Methylene chloride	0.35 U	1.3	0.53	0.61	4.2	1	7.5	1.1	1.2	6.6	6.4	2.2	31	3.1	3.5	33	1.2	3.6	2.4	0.7 U
Methyl-t-butyl ether	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U	0.11 U	0.18	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	0.2 U	0.8	0.34	0.2 U	0.48	0.2 U	0.20 U	0.091	0.12 U	0.11	0.4	0.22	0.2 U	0.61	0.77	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U
o-Xylene	0.44	0.57	0.63	0.22 U	0.56	0.22 U	0.23	0.14	0.083	0.17	0.55	0.28	0.33	0.79	0.86	0.23	0.22	0.24	0.26	0.45
Propylene (Propene)	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	0.18 U	0.18 U	0.09 U	0.09 U	0.18 U	0.13 U	0.18 U	0.35 U	0.35 U
Styrene	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	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.15 U	0.21 U	0.21 U	0.21 U
Tetrachloroethene	0.43	1.4	0.34 U	3.2	5.2 [a]	0.34 U	0.45	0.92	0.23	0.09	2	6.1	0.56	4.3	3.3	1.9	2.2	7.1	0.34 U	0.34 U
Tetrahydrofuran	0.15 U	0.27	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.097	0.088 U	0.048	0.1 U	12	1.1	1.3	0.49	0.15 U	0.24	0.15 U	0.15 U	0.15 U
Toluene	0.91	1.3	2.2	0.41	2.9	0.55	0.99	1.6	0.24	0.9	2.6	1.7	1.5	4.7	5.8	2.1	1	1.2	1.2	1.1
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 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	0.22 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	0.53	0.27 U	1.7	0.27 U	0.27 U	0.27 U	0.27	0.081 U	0.16 U	0.2	3.9	0.49	1.7	1.5	0.53	0.77	1.8	0.27 U	0.27 U
Trichlorofluoromethane	1.3	1.6	2.5	1.2	1.8	1.2	1.9	1.1	0.94	1.8	2.6	1.9	1.3	1.8	2.8	1.8	1.2	1.3	1.4	1.2
Trichlorotrifluoroethane	0.53	0.94	0.45	0.59	0.71	0.71	0.61	0.71	0.42	0.57	0.64	0.6	0.58	0.49	0.44	0.69	0.53	0.74	0.51	0.46
Vinyl acetate	0.18 U	0.18 U	0.36 U	0.35 U	0.18 U	3.5 U	0.18 U	0.11 U	0.21 U	0.21 U	0.25 U	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.5 U	0.71 U	0.71 U	0.71 U
Vinyl chloride	0.13 U	0.13 U	0.13 U	0.14	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.09 U	0.23	0.13 U	0.13 U	0.13 U	0.13 U	0.1 U	0.17	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**

Indoor Air - Large Retail Space																				
Parameter (ug/m <sup>3</sup> )	IA-3-100109 10/1/2009	IA-3-100809 10/8/2009	IA-3-012810 1/28/2010	IA-3-020510 2/5/2010	IA-3-021210 2/12/2010	IA-3-021910 2/19/2010	IA-3-032610 3/26/2010	IA-3-043010 4/30/2010	IA-3-052810 5/28/2010	IA-3-070110 7/1/2010	IA-3-091610 9/16/2010	IA-3-120710 12/7/2010	IA-3-021711 2/17/2011	IA-3-060211 6/2/2011	IA-3-091511 9/15/2011	IA-3-120811 12/8/2011	IA-3-030812 3/8/2012	IA-3-061412 6/14/2012	IA-3-091312 9/13/2012	
1,1,1-Trichloroethane	0.27 U	0.27 U	0.45	0.71	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	0.27 U	0.27 U	0.11	0.082 U	0.16 U	0.19 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	0.1 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	0.16 U	0.082 U	0.16 U	0.19 U	
1,1-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.061 U	0.12 U	0.14 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	
1,2,4-Trichlorobenzene	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.75 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	0.45 U	0.52 U	
1,2,4-Trimethylbenzene	0.25 U	0.39	0.44	0.25 U	0.25 U	0.25 U	0.25 U	0.26	0.34	0.46	0.6	0.25 U	0.49	0.25 U	0.25 U	0.071	0.1	0.19	0.47	
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	0.23 U	0.12 U	0.23 U	0.27 U	
1,2-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U	
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.056	0.061 U	0.051	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	0.23 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	0.15 U	0.15 U	0.074	0.22	
1,3,5-Trimethylbenzene	0.25 U	0.25 U	0.42	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	0.074	0.22	
1,3-Butadiene	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	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U	
1,4-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.18 U	0.059	
1,4-Dioxane															0.18 U					
2-Butanone	0.7	1.5	1.9	2	1.2	1.6	0.51	1	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	
2-Hexanone	0.2 U	0.37	0.52	0.39	0.22	0.39	0.2 U	0.29	0.52	0.67	0.2 U	0.2 U	0.2 U	4.1 U	0.24	0.093	0.12 U	0.33	0.22	
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	0.15 U	0.15 U	0.074	0.15	
4-Methyl-2-pentanone	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.38	0.34	0.2 U	0.2 U	0.2 U	0.20 U	0.084	0.12 U	0.19	0.21	
Acetone	6.7	11	14	21	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	
Benzene	0.39	0.46	1.3	0.86	0.67	0.53	0.6	0.67	0.47	0.51	0.72	0.47	1.4	0.29	0.3	0.39	0.35	0.23	0.66	
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	0.16 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	0.34 U	0.34 U	0.34 U	0.34 U	0.2 U	0.1 U	0.2 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	0.52 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	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.12 U	0.12 U	0.31	0.14 U	
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	1.6 U	0.93 U	0.93 U	0.93 U	1.1 U	
Carbon tetrachloride	0.4	0.42	0.31 U	0.42	0.31 U	0.43	0.43	0.49	0.54	0.57	0.41	0.45	0.6	0.64	0.51	0.5	0.49	0.43	0.38	
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	0.14 U	0.14 U	0.14 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	0.13 U	0.13 U	0.13 U	0.13 U	0.079 U	0.079 U	0.079 U	0.093 U	
Chloroform	0.24 U	0.24 U	0.24 U	0.53	0.48	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	3.7	0.24 U	0.24 U	0.24 U	0.24 U	0.079	0.073 U	0.15	0.19	
Chloromethane	0.97	1	1.2	2.9	1.3	1.2	1.1	0.85	1.2	1.2	1.1	0.98	0.97	1.2	1.4	0.84	1.1	1.4	1.3	
cis-1,2-Dichloroethene	0.94	0.49	0.59	0.2 U	0.2 U	0.59	0.2 U	1.3	0.2 U	0.51	0.2 U	1.7	0.2 U	0.2 U	0.20 U	0.17	0.059 U	0.12 U	0.14 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	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	
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	0.18	0.17 U	0.17 U	0.17 U	0.17 U	0.1 U	0.1 U	0.1 U	0.27	
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	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.26 U	0.13 U	0.26 U	0.3 U	
Dichlorodifluoromethane	2.2	2.2	2.3	2.5	2.5	3	1.6	2.1	2.5	2.7	1.5	2.1	3.1	2.1	1.8	2.6	2.1	2.8	2.8	
Ethanol	4.5	5	13	40	17	38	3.6	5.3	5.5	7	8	2.4	9.4	3.6	5.8	2.1	2.2	4.4	6.6	
Ethyl acetate	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.73	0.37	0.51	

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

Indoor Air - Large Retail Space																			
Parameter (ug/m <sup>3</sup> )	IA-3-100109 10/1/2009	IA-3-100809 10/8/2009	IA-3-012810 1/28/2010	IA-3-020510 2/5/2010	IA-3-021210 2/12/2010	IA-3-021910 2/19/2010	IA-3-032610 3/26/2010	IA-3-043010 4/30/2010	IA-3-052810 5/28/2010	IA-3-070110 7/1/2010	IA-3-091610 9/16/2010	IA-3-120710 12/7/2010	IA-3-021711 2/17/2011	IA-3-060211 6/2/2011	IA-3-091511 9/15/2011	IA-3-120811 12/8/2011	IA-3-030812 3/8/2012	IA-3-061412 6/14/2012	IA-3-091312 9/13/2012
Ethylbenzene	0.22 U	0.24	0.43	0.22 U	0.22 U	0.22 U	0.22 U	0.26	0.23	0.29	0.47	0.22 U	0.47	0.36	0.22 U	0.12	0.11	0.14	0.42
Hexachlorobutadiene	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	0.32 U	0.37 U
Hexane	0.37	0.71	0.55	0.44	1	0.29	0.19	1.4	0.55	0.45	0.58	0.35 U	1.5	2.6	7.0 U	0.35	0.37	0.74	1.4
Isopropyl alcohol	0.25 U	0.25 U	0.25 U	9.9	0.25 U	2	0.64	3.4	0.12 U	0.76	8.8	1.1	1.7	1.2 U	4.9 U	2.9 U	0.56	2.9 U	1.7
m,p-Xylene	0.65	0.87	1.2	0.69	0.43 U	0.43 U	0.46	0.8	0.99	1.3	1.6	0.43 U	1.4	0.55	0.54	0.38	0.24	0.4	1.5
Methyl methacrylate												0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.12 U	0.12 U	0.14 U
Methylene chloride	0.7 U	0.7 U	1.4	0.7 U	2.3	0.7 U	0.7 U	0.7 U	0.35 U	1.2	0.57	0.55	4.6	8	1.7 U	1.5	1.1	1.3	2.7
Methyl-t-butyl ether	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U	0.11 U	0.22
n-Heptane	0.2 U	0.24	0.73	0.2 U	0.2 U	0.2 U	0.2 U	0.36	0.2 U	0.2 U	0.32	0.2 U	0.44	0.2 U	0.20 U	0.074	0.12 U	0.11	0.41
o-Xylene	0.27	0.34	0.44	0.26	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
Propylene (Propene)	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	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
Styrene	0.21 U	0.21 U	0.40	0.21 U	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	0.21 U	0.041	0.13 U	0.1	0.14
Tetrachloroethene	2	1.1	2.2	0.34 U	0.34 U	1.3	0.34 U	4.8	0.35	1.1	0.76	3.2	<b>5.2 [a]</b>	0.34 U	0.47	0.91	0.23	0.16	2.3
Tetrahydrofuran	0.15 U	0.15 U	0.40	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.16	0.24	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.08	0.088 U	0.088 U	0.072
Toluene	0.73	1.1	2.5	0.78	0.61	0.46	0.81	1.5	0.93	1.1	2.3	0.41	2.7	0.58	0.95	1.5	0.27	0.72	2.8
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 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	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U
Trichloroethene	<b>1.1</b>	0.54	0.75	0.27 U	0.27 U	0.4	0.27 U	<b>1.5</b>	0.27 U	0.47	0.27 U	<b>1.7</b>	0.27 U	0.27 U	0.27 U	0.25	0.081 U	0.16 U	0.17
Trichlorofluoromethane	1.2	1.2	1.2	1.3	1.4	1.6	1.3	1.2	1.3	1.5	2.8	1.2	1.7	1.6	1.7	1	0.92	1.6	1.5
Trichlorotrifluoroethane	0.49	0.47	0.49	0.52	0.57	0.52	0.57	0.45	0.52	0.54	0.45	0.55	0.67	0.74	0.54	0.69	0.44	0.56	0.54
Vinyl acetate	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.36 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	0.18	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.14	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.09 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 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
1,1,1-Trichloroethane	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	0.29	0.89
1,1,2,2-Tetrachloroethane	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
1,1,2-Trichloroethane	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
1,1-Dichloroethane	0.73	0.2 U	0.2 U	0.2 U	0.31	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.42	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
1,2,4-Trimethylbenzene	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
1,2-Dibromoethane (EDB)	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
1,2-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 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	0.25 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
1,3,5-Trimethylbenzene	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
1,3-Butadiene	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	0.23 U	0.23 U	0.23 U	0.23 U
1,3-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dioxane															
2-Butanone	21	4.4	6	3.2	2.5	1.1	1.6	1.5	2	1.3	1.2	0.3 U	0.69	1.2	0.5
2-Hexanone	0.2 U	0.33	0.73	0.39	0.2 U	0.14 U	0.2 U	0.29	0.45	0.32	0.27	0.2 U	0.2 U	0.2 U	0.2 U
4-Ethyltoluene	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
4-Methyl-2-pentanone	0.2 U	0.2 U	0.43	0.28	0.2 U	0.14 U	0.2 U	0.2 U	0.32	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Acetone	17	10	15	20	7.8	7.9	20	9.3	16	9.3	10	2.3	4.9	5.9	2.5
Benzene	1.1	0.68	1.8	3	0.76	0.59	0.44	0.4	0.43	0.37	0.48	0.16 U	0.88	0.66	0.54
Benzyl chloride	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
Bromodichloromethane	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	0.33 U
Bromoform	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	0.51 U
Bromomethane	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
Carbon disulfide	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	0.16 U	0.16 U	0.16 U
Carbon tetrachloride	0.4	0.43	0.5	0.58	0.46	0.22 U	0.45	0.41	0.4	0.46	0.4	0.31 U	0.43	0.31 U	0.42
Chlorobenzene	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
Chloroethane	0.13 U	0.13 U	0.41	0.13 U	0.13 U	0.1 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	0.26	0.17 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.46	0.39	0.24 U
Chloromethane	1.2	0.99	1.4	1.3	1	1.1	1.2	0.9	1.1	1	1	1.3	1.3	1.3	1.2
cis-1,2-Dichloroethene	2.4	0.2 U	1.1	1.1	0.98	0.61	1.7	0.2 U	0.2 U	0.84	0.48	0.2 U	0.2 U	0.2 U	0.59
cis-1,3-Dichloropropene	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	0.22 U	0.22 U	0.22 U
Cyclohexane	0.17 U	0.17 U	0.44	0.64	0.17 U	0.12 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	0.31 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	1.9	2.2	2.5	2.8	2.6	2.1	2.4	2.1	2	2.2	2.2	2.4	2.5	2.6	3.0
Ethanol	5.3	8.9	12	18	8	5.2	5.5	6	6.5	4.9	5.6	7.7	34	17	31
Ethyl acetate	0.37 U	0.37 U	0.18 U	0.19	0.37 U	0.26 U	0.37 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U

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

Indoor Air - Large Retail Space															
Parameter (ug/m <sup>3</sup> )	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
Ethylbenzene	0.25	0.29	0.65	0.78	0.29	0.16	0.22 U	0.22 U	0.27	0.22 U	0.26	0.22 U	0.26	0.22 U	0.22 U
Hexachlorobutadiene	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.75 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U
Hexane	0.9	0.66	1.2	1.7	0.66	0.43	0.34	0.42	2.2	0.49	0.93	0.18 U	0.37	1.3	0.49
Isopropyl alcohol	3.5	3.3	4.7	4.8	3.9	0.18 U	13	5.6	5.2	0.25 U	0.25 U	0.96	0.25 U	0.25 U	1.9
m,p-Xylene	0.76	0.89	2.1	2.6	0.89	0.58	0.49	0.61	0.93	0.69	1	0.43 U	0.81	0.43 U	0.43 U
Methyl methacrylate															
Methylene chloride	2.3	29	1.7	2.5	1.3	1.9	2.2	0.7 U	9.7	0.7 U	0.7 U	1.5	0.7 U	1.9	0.71
Methyl-t-butyl ether	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
n-Heptane	0.23	0.2 U	0.58	0.79	0.21	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.26	0.2 U	0.2 U	0.2 U	0.2 U
o-Xylene	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
Propylene (Propene)	0.18 U	0.18 U	0.09 U	0.09 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
Styrene	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
Tetrachloroethene	7.3	0.58	4.4	3.4	3.4	2.4	7.9	0.75	0.34 U	2	1.1	0.34 U	0.34 U	0.34 U	1.4
Tetrahydrofuran	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	0.15 U	0.15 U
Toluene	1.8	1.3	4.3	5.8	2.3	1	1	1.1	1.3	0.76	1.2	0.19 U	0.79	0.63	0.47
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	1.1	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	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	0.22 U	0.22 U	0.22 U
Trichloroethene	4.7	0.48	1.7	1.5	0.88	0.78	2	0.27 U	0.27 U	1.10	0.57	0.27 U	0.27 U	0.27 U	0.40
Trichlorofluoromethane	2	1.3	1.6	3	1.7	1.3	1.3	1.2	1.5	1.2	1.2	0.93	1.3	1.4	1.6
Trichlorotrifluoroethane	0.72	0.59	0.51	0.45	0.57	0.54	0.61	0.49	0.48	0.47	0.5	0.38 U	0.55	0.58	0.55
Vinyl acetate	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.5 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
Vinyl chloride	0.29	0.13 U	0.2	0.22	0.13 U	0.1 U	0.2	0.13 U	0.13 U	0.16	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-4-032610 3/26/2010	IA-4-043010 4/30/2010	IA-4-052810 5/28/2010	IA-4-070110 7/1/2010	IA-4-091610 9/16/2010	IA-4-120710 12/7/2010	IA-4-021711 2/17/2011	IA-4-060211 6/2/2011	IA-4-091511 9/15/2011	IA-4-120811 12/8/2011	IA-4-030812 3/8/2012	IA-4-061412 6/14/2012	IA-4-091312 9/13/2012	LRAIR01 5/15/2009	LRAIR02 5/15/2009	LRAIR03 5/15/2009	LRAIR04 5/15/2009	LRAIR05 5/15/2009	LRAIR06 5/15/2009
1,1,1-Trichloroethane	0.27 U	1.1	0.28	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	0.45	0.65	0.57	0.51	0.44	
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	0.1 U	0.21 U	0.24 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	0.16 U	0.082 U	0.16 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,1-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.061 U	0.12 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	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	0.45 U	0.52 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	0.34	0.41	0.44	0.25 U	0.49	0.25 U	0.25 U	0.094	0.15 U	0.19	0.38	0.25 U	0.25 U	0.25 U	0.29	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	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18	0.18 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.063	0.061 U	0.12 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 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	0.14 U	0.069 U	0.14 U	0.16 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	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	0.15 U	0.15 U	0.08	0.12	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	0.23 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	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
1,3-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dioxane								0.18 U											
2-Butanone	1.60	1.50	2.20	4.8	2.4	0.96	1 B	2.9 U	5.9 U	1	1.5	0.97	2.3	3.3	3.4	2.1	2.6	2	1.6
2-Hexanone	0.2 U	0.39	0.54	1	0.59	0.2 U	0.2 U	0.21 J	0.35	0.086	0.32	0.098	0.18	0.73	0.66	0.38	0.51	0.37	0.38
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	0.15 U	0.15 U	0.068	0.12	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-Methyl-2-pentanone	0.2 U	0.2 U	0.2 U	0.43	0.45	0.2 U	0.2 U	0.2 U	0.20 U	0.098	0.15	0.13	0.14 U	0.42	0.39	0.32	0.36	0.54	0.27
Acetone	6.9	8.7	15	31	19	13 B	12 B	12 B	15	7.4	6.8	9.1	12	12	13	10	11	8.5	7.7
Benzene	0.57	0.64	0.48	0.47	0.66	0.49	1.4	0.31	0.3	0.38	0.35	0.23	0.64	0.54	0.6	0.67	0.55	0.56	0.51
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	0.16 U	0.16 U	0.16 U	0.18 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	0.34 U	0.34 U	0.34 U	0.34 U	0.2 U	0.1 U	0.2 U	0.24 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	0.52 U	0.52 U	0.52 U	0.52 U	0.31 U	0.31 U	0.31 U	0.36 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	0.12 U	0.12 U	0.24	0.14 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	0.31	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	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Carbon tetrachloride	0.43	0.47	0.52	0.48	0.44	0.46	<b>0.57</b>	<b>0.68</b>	0.52	0.48	0.47	0.43	0.36	<b>0.7</b>	<b>0.68</b>	<b>0.71</b>	<b>0.68</b>	<b>0.68</b>	<b>0.63</b>
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	0.14 U	0.14 U	0.14 U	0.16 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	0.079 U	0.079 U	0.079 U	0.093 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	<b>3.3</b>	0.24 U	0.24 U	0.24 U	0.24 U	0.085	0.073 U	0.13	0.19	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Chloromethane	1.1	0.77	1.2	1.2	1	0.95	0.95	1.1	1.5	1.4	1	1.3	1.3	1	0.98	1	0.95	1	1
cis-1,2-Dichloroethene	0.2 U	1.3	0.2 U	0.44	0.2 U	1.8	0.2 U	0.2 U	0.20 U	0.19	0.059 U	0.12 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-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	0.14 U	0.068 U	0.14 U	0.16 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	0.1 U	0.1 U	0.1 U	0.26	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	0.26 U	0.13 U	0.26 U	0.3 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
Dichlorodifluoromethane	1.7	2.1	2.5	2.6	1.5	2	3.2	1.8	1.7	2.8	2	2.9	2.8	2.5	2.3	2.6	2.4	2.7	2.4
Ethanol	3.9	4.9	6.1	8.7	9.8	3.4	8.9	5.3	7	2.4	2.5	9.4	7.3	65	9	6.5	5.9	6	5.6
Ethyl acetate	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.26	0.18 U	0.18 U	0.16	0.21	0.38	2.4	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U

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Indoor Air - Large Retail Space																			
Parameter (ug/m <sup>3</sup> )	IA-4-032610 3/26/2010	IA-4-043010 4/30/2010	IA-4-052810 5/28/2010	IA-4-070110 7/1/2010	IA-4-091610 9/16/2010	IA-4-120710 12/7/2010	IA-4-021711 2/17/2011	IA-4-060211 6/2/2011	IA-4-091511 9/15/2011	IA-4-120811 12/8/2011	IA-4-030812 3/8/2012	IA-4-061412 6/14/2012	IA-4-091312 9/13/2012	LRAIR01 5/15/2009	LRAIR02 5/15/2009	LRAIR03 5/15/2009	LRAIR04 5/15/2009	LRAIR05 5/15/2009	LRAIR06 5/15/2009
Ethylbenzene	0.22 U	0.25	0.25	0.29	0.44	0.22 U	0.49	0.22 U	0.22 U	0.16	0.17	0.14	0.38	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Hexachlorobutadiene	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	0.32 U	0.37 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Hexane	0.19	1.3	0.55	2.8	0.61	0.38	1.7	1	7.0 U	0.35	0.55	0.47	5	1.1	0.21	0.18 U	0.18	0.24	0.18 U
Isopropyl alcohol	0.66	3.4	4.4	1.8	8.3	0.48	1.7	1.2 U	4.9 U	2.9 U	2.9 U	2.9 U	1.4	3.3	3.4	3.7	3.5	3.6	3.4
m,p-Xylene	0.49	0.8	0.98	1.1	1.4	0.43 U	1.4	0.41 J	0.53	0.41	0.27	0.38	1.2	0.58	0.57	0.58	0.55	0.49	0.5
Methyl methacrylate						0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.12 U	0.13	0.14 U						
Methylene chloride	0.7 U	0.7 U	0.35 U	7.7	0.68	0.79	5.1	3.2	1.7 U	1.5	2	0.72	12	5.9	1.5	1.5	1.6	1.9	1.6
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	0.11 U	0.11 U	0.11 U	0.19	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
n-Heptane	0.2 U	0.2 U	0.2 U	0.22	0.32	0.2 U	0.51	0.2 U	0.20 U	0.071	0.12 U	0.11	0.41	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
o-Xylene	0.22 U	0.3	0.44	0.5	0.57	0.22 U	0.53	0.22 U	0.22 U	0.15	0.11	0.17	0.41	0.28	0.28	0.27	0.27	0.25	0.26
Propylene (Propene)	0.35 U	0.35 U	0.87 U	1.1	0.35 U	0.86 U	0.86 U	0.86 U	3.4 U	2.1 U	2.1 U	2.1 U	1.7	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Styrene	0.21 U	0.21 U	0.22	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	0.23	0.21 U	0.21 U	0.22	0.21 U	0.21 U
Tetrachloroethene	0.34 U	4.4	0.44	1.1	0.34 U	3.4	5	0.34 U	0.45	1.2	0.31	0.12	1.7	0.47	0.47	0.54	0.66	0.64	0.6
Tetrahydrofuran	0.15 U	0.15 U	0.19	0.24	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.076	0.088 U	0.055	0.1 U	0.15 U	0.15 U	0.15 U	0.15 U	0.2	0.15 U
Toluene	0.83	1.4	0.98	1	2	0.43	2.7	0.56	0.95	1.6	0.32	0.8	2.9	0.73	0.7	0.58	0.59	0.51	0.53
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 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	0.14 U	0.068 U	0.14 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Trichloroethene	0.27 U	1.4	0.27 U	0.44	0.27 U	1.8	0.27 U	0.27 U	0.27 U	0.35	0.15	0.052	0.12	0.27 U	0.28	0.27	0.29	0.34	0.27
Trichlorofluoromethane	1.5	1.3	1.3	1.9	2.4	1.2	1.8	1.4	1.8	1.3	0.87	1.5	1.7	1.3	1.3	1.2	1.1	1.4	1.3
Trichlorotrifluoroethane	1.3	0.48	0.51	0.59	0.43	0.54	0.7	0.71	0.52	0.71	0.44	0.56	0.59	0.63	0.6	0.65	0.62	0.64	0.57
Vinyl acetate	0.36 U	0.71 U	0.18 U	0.18 U	0.36 U	0.38	0.18 U	3.5 U	0.18 U	0.11 U	0.21 U	0.21 U	0.25 U	0.18 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	0.16	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.09 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			
	LRAIR07 5/15/2009	LRAIR08 5/15/2009	LRAIR09 5/15/2009	LRAIR10 5/15/2009
1,1,1-Trichloroethane	0.69	0.5	0.49	0.53
1,1,2,2-Tetrachloroethane	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
1,1-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	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	0.25 U
1,2-Dibromoethane (EDB)	0.38 U	0.38 U	0.38 U	0.38 U
1,2-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	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
1,3,5-Trimethylbenzene	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
1,3-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dichlorobenzene	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dioxane				
2-Butanone	3.1	2.5	2.6	1.4
2-Hexanone	0.61	0.48	0.43	0.29
4-Ethyltoluene	0.25 U	0.25 U	0.25 U	0.25 U
4-Methyl-2-pentanone	0.32	0.3	0.61	0.23
Acetone	13	11	9.8	6.9
Benzene	0.53	0.6	0.51	0.57
Benzyl chloride	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
Bromoform	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
Carbon disulfide	0.16 U	0.16 U	0.16 U	0.16 U
Carbon tetrachloride	<b>0.68</b>	<b>0.7</b>	<b>0.64</b>	<b>0.66</b>
Chlorobenzene	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
Chloroform	0.24 U	0.24 U	0.24 U	0.24 U
Chloromethane	0.92	1.1	0.91	1.2
cis-1,2-Dichloroethene	0.21	0.2 U	0.2 U	0.2 U
cis-1,3-Dichloropropene	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
Dibromochloromethane	0.43 U	0.43 U	0.43 U	0.43 U
Dichlorodifluoromethane	2.4	2.8	2.3	2.7
Ethanol	5.9	14	44	14
Ethyl acetate	0.18 U	0.18 U	0.18 U	0.18 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			
	LRAIR07 5/15/2009	LRAIR08 5/15/2009	LRAIR09 5/15/2009	LRAIR10 5/15/2009
Ethylbenzene	0.22 U	0.22 U	0.27	0.22 U
Hexachlorobutadiene	1.1 U	1.1 U	1.1 U	1.1 U
Hexane	0.19	0.21	0.2	0.18 U
Isopropyl alcohol	4.4	3.6	2.8	3.2
m,p-Xylene	0.48	0.53	1	0.5
Methyl methacrylate				
Methylene chloride	1.5	1.6	1.6	1.4
Methyl-t-butyl ether	0.18 U	0.18 U	0.18 U	0.18 U
n-Heptane	0.2 U	0.2 U	0.2 U	0.2 U
o-Xylene	0.25	0.27	0.34	0.26
Propylene (Propene)	0.09 U	0.09 U	0.09 U	0.09 U
Styrene	0.37	0.21 U	0.21 U	0.21 U
Tetrachloroethene	0.73	0.53	0.46	0.46
Tetrahydrofuran	0.15 U	0.15 U	0.15 U	0.15 U
Toluene	0.57	0.53	0.54	0.47
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.22 U
Trichloroethene	0.28	0.27 U	0.27 U	0.27 U
Trichlorofluoromethane	1.1	1.4	1	1.4
Trichlorotrifluoroethane	0.59	0.68	0.62	0.58
Vinyl acetate	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

[a] Tetrachloroethene are above the target air concentration but are not compliance violations as indoor air concentrations are not significantly higher than outdoor air concentrations that were sampled.

NA - not available

U - Not detected, value is the detection limit

B - Compounds detected in method blank as well

D - Result from diluted analyses

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

**5** Bolded and shaded values are above indoor air concentration for industrial/

**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

\* vacuum reduced at extraction wells

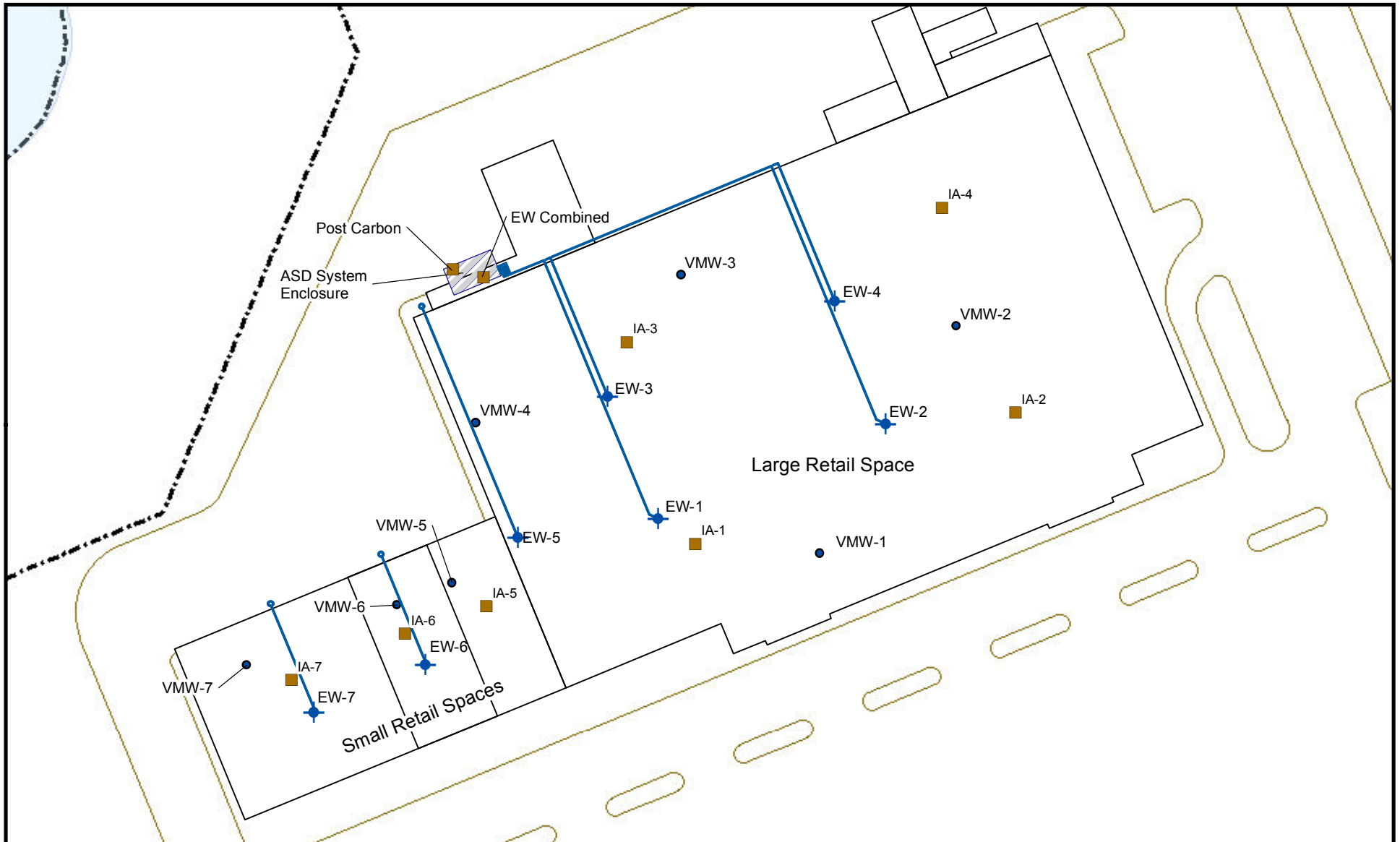
\*\* ASD system offline

Prepared by/Date: MAM 10/29/12

Checked by/Date: DLC 10/30/12



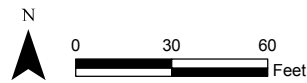
## FIGURES



All locations are approximate

**Legend**

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



Prepared/Date: BJR 08/01/11 | Checked/Date: PJM 08/01/11

Figure 1  
Vapor Mitigation  
Sample Locations

Former Gorham Manufacturing Facility  
333 Adelaide Avenue  
Providence, Rhode Island



Textron, Inc.  
Former Gorham Manufacturing Facility, Providence, RI  
Retail Complex, Active Sub-Slab Depressurization System  
Air Monitoring Report, Third Quarter, 2012  
November 15, 2012

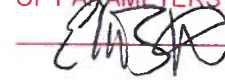


## **APPENDIX A**

### **Laboratory Reports**

September 24, 2012

CHECKED FOR COMPLETENESS  
OF PARAMETERS ORDERED BY:

 9/25/12

Kelly Chatterton  
AMEC E&I, Inc.  
107 Audubon Rd., Bldg. 2, Suite 301  
Wakefield, MA 01880

Project Location: Providence, RI  
Client Job Number:  
Project Number: 3650080114  
Laboratory Work Order Number: 12I0395

Enclosed are results of analyses for samples received by the laboratory on September 13, 2012. 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

AMEC E&I, Inc.  
107 Audubon Rd., Bldg. 2, Suite 301  
Wakefield, MA 01880  
ATTN: Kelly Chatterton

REPORT DATE: 9/24/2012

PURCHASE ORDER NUMBER: C012600896

PROJECT NUMBER: 3650080114

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 1210395

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-1-091312	1210395-01	Indoor air		EPA TO-15	
IA-2-091312	1210395-02	Indoor air		EPA TO-15	
IA-3-091312	1210395-03	Indoor air		EPA TO-15	
IA-4-091312	1210395-04	Indoor air		EPA TO-15	
IA-5-091312	1210395-05	Indoor air		EPA TO-15	
IA-6-091312	1210395-06	Indoor air		EPA TO-15	
IA-7-091312	1210395-07	Indoor air		EPA TO-15	
AA-1-091312	1210395-08	Ambient Air		EPA TO-15	
EW-5-091312	1210395-09	Sub Slab		EPA TO-15	
EW-6-091312	1210395-10	Sub Slab		EPA TO-15	
EW-7-091312	1210395-11	Sub Slab		EPA TO-15	
EW-Combined-091312	1210395-12	Sub Slab		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:**

---

Analyte is found in the associated blank as well as in the sample.

**Analyte & Samples(s) Qualified:**

**Acetone, Methylene Chloride**

12I0395-01[IA-1-091312], 12I0395-02[IA-2-091312], 12I0395-03[IA-3-091312], 12I0395-04[IA-4-091312], 12I0395-05[IA-5-091312], 12I0395-06[IA-6-091312], 12I0395-07[IA-7-091312], 12I0395-08[AA-1-091312], 12I0395-09[EW-5-091312], 12I0395-10[EW-6-091312], 12I0395- 11[EW-7-091312], 12I0395-12[EW-Combined-091312], B059064-BLK1, B059064-BS1

---

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:**

**1,1,1,2-Tetrachloroethane, Ethanol**

12I0395-01[IA-1-091312], 12I0395-02[IA-2-091312], 12I0395-03[IA-3-091312], 12I0395-04[IA-4-091312], 12I0395-05[IA-5-091312], 12I0395-06[IA-6-091312], 12I0395-07[IA-7-091312], 12I0395-08[AA-1-091312], 12I0395-09[EW-5-091312], 12I0395-10[EW-6-091312], 12I0395- 11[EW-7-091312], 12I0395-12[EW-Combined-091312], B059064-BLK1, B059064-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:**

**1,1,1,2-Tetrachloroethane, 2-Hexanone (MBK), 4-Methyl-2-pentanone (MIBK), Styrene**

12I0395-01[IA-1-091312], 12I0395-02[IA-2-091312], 12I0395-03[IA-3-091312], 12I0395-04[IA-4-091312], 12I0395-05[IA-5-091312], 12I0395-06[IA-6-091312], 12I0395-07[IA-7-091312], 12I0395-08[AA-1-091312], 12I0395-09[EW-5-091312], 12I0395-10[EW-6-091312], 12I0395- 11[EW-7-091312], 12I0395-12[EW-Combined-091312], B059064-BLK1, B059064-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.



Michael A. Erickson  
Laboratory Director

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: IA-1-091312**  
**Sample ID: 1210395-01**  
 Sample Matrix: Indoor air  
 Sampled: 9/13/2012 08:47

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1197  
 Canister Size: 6 liter  
 Flow Controller ID: 4177  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -5  
 Receipt Vacuum(in Hg): -5  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv			Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL	MDL		Results	RL		Analyzed		
Acetone	6.9	1.4	0.16	B	16	3.3	0.702	9/16/12	21:12	TPH
Benzene	0.21	0.035	0.018		0.67	0.11	0.702	9/16/12	21:12	TPH
Benzyl chloride	ND	0.035	0.0063		ND	0.18	0.702	9/16/12	21:12	TPH
Bromodichloromethane	ND	0.035	0.0098		ND	0.24	0.702	9/16/12	21:12	TPH
Bromoform	ND	0.035	0.0091		ND	0.36	0.702	9/16/12	21:12	TPH
Bromomethane	ND	0.035	0.034		ND	0.14	0.702	9/16/12	21:12	TPH
1,3-Butadiene	ND	0.035	0.020		ND	0.078	0.702	9/16/12	21:12	TPH
2-Butanone (MEK)	1.0	1.4	0.027	J	3.0	4.1	0.702	9/16/12	21:12	TPH
Carbon Disulfide	ND	0.35	0.0098		ND	1.1	0.702	9/16/12	21:12	TPH
Carbon Tetrachloride	0.062	0.035	0.0098		0.39	0.22	0.702	9/16/12	21:12	TPH
Chlorobenzene	ND	0.035	0.029		ND	0.16	0.702	9/16/12	21:12	TPH
Chloroethane	ND	0.035	0.020		ND	0.093	0.702	9/16/12	21:12	TPH
Chloroform	0.039	0.035	0.013		0.19	0.17	0.702	9/16/12	21:12	TPH
Chloromethane	0.62	0.035	0.018		1.3	0.072	0.702	9/16/12	21:12	TPH
Cyclohexane	0.079	0.035	0.034		0.27	0.12	0.702	9/16/12	21:12	TPH
Dibromochloromethane	ND	0.035	0.0084		ND	0.30	0.702	9/16/12	21:12	TPH
1,2-Dibromoethane (EDB)	ND	0.035	0.0098		ND	0.27	0.702	9/16/12	21:12	TPH
1,2-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.702	9/16/12	21:12	TPH
1,3-Dichlorobenzene	ND	0.035	0.0098		ND	0.21	0.702	9/16/12	21:12	TPH
1,4-Dichlorobenzene	ND	0.035	0.0091		ND	0.21	0.702	9/16/12	21:12	TPH
Dichlorodifluoromethane (Freon 12)	0.55	0.035	0.015		2.7	0.17	0.702	9/16/12	21:12	TPH
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.702	9/16/12	21:12	TPH
1,2-Dichloroethane	ND	0.035	0.012		ND	0.14	0.702	9/16/12	21:12	TPH
1,1-Dichloroethylene	ND	0.035	0.011		ND	0.14	0.702	9/16/12	21:12	TPH
cis-1,2-Dichloroethylene	0.011	0.035	0.0098	J	0.045	0.14	0.702	9/16/12	21:12	TPH
trans-1,2-Dichloroethylene	ND	0.035	0.012		ND	0.14	0.702	9/16/12	21:12	TPH
1,2-Dichloropropane	ND	0.035	0.014		ND	0.16	0.702	9/16/12	21:12	TPH
cis-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	9/16/12	21:12	TPH
trans-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	9/16/12	21:12	TPH
Ethanol	4.5	1.4	0.17	L-03	8.5	2.6	0.702	9/16/12	21:12	TPH
Ethyl Acetate	0.16	0.035	0.018		0.57	0.13	0.702	9/16/12	21:12	TPH
Ethylbenzene	0.11	0.035	0.0098		0.47	0.15	0.702	9/16/12	21:12	TPH
4-Ethyltoluene	0.039	0.035	0.013		0.19	0.17	0.702	9/16/12	21:12	TPH
Heptane	0.11	0.035	0.012		0.44	0.14	0.702	9/16/12	21:12	TPH
Hexachlorobutadiene	ND	0.035	0.013		ND	0.37	0.702	9/16/12	21:12	TPH
Hexane	0.37	1.4	0.031	J	1.3	4.9	0.702	9/16/12	21:12	TPH
2-Hexanone (MBK)	0.067	0.035	0.011	V-05	0.28	0.14	0.702	9/16/12	21:12	TPH
Isopropanol	0.78	1.4	0.021	J	1.9	3.4	0.702	9/16/12	21:12	TPH

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
 Field Sample #: IA-1-091312  
 Sample ID: 1210395-01  
 Sample Matrix: Indoor air  
 Sampled: 9/13/2012 08:47

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1197  
 Canister Size: 6 liter  
 Flow Controller ID: 4177  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -5  
 Receipt Vacuum(in Hg): -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	0.035	0.0098		ND	0.13	0.702	9/16/12 21:12	TPH
Methylene Chloride	0.52	0.35	0.045	B	1.8	1.2	0.702	9/16/12 21:12	TPH
Methyl methacrylate	ND	0.035	0.011		ND	0.14	0.702	9/16/12 21:12	TPH
4-Methyl-2-pentanone (MIBK)	0.064	0.035	0.011	V-05	0.26	0.14	0.702	9/16/12 21:12	TPH
Propene	0.99	1.4	0.027	J	1.7	2.4	0.702	9/16/12 21:12	TPH
Styrene	0.034	0.035	0.0077	V-05, J	0.14	0.15	0.702	9/16/12 21:12	TPH
1,1,1,2-Tetrachloroethane	ND	0.064	0.023	L-03, V-05	ND	0.44	0.702	9/16/12 21:12	TPH
1,1,2,2-Tetrachloroethane	ND	0.035	0.012		ND	0.24	0.702	9/16/12 21:12	TPH
Tetrachloroethylene	0.40	0.035	0.011		2.7	0.24	0.702	9/16/12 21:12	TPH
Tetrahydrofuran	ND	0.035	0.011		ND	0.10	0.702	9/16/12 21:12	TPH
Toluene	0.75	0.035	0.0098		2.8	0.13	0.702	9/16/12 21:12	TPH
1,2,4-Trichlorobenzene	ND	0.070	0.013		ND	0.52	0.702	9/16/12 21:12	TPH
1,1,1-Trichloroethane	ND	0.035	0.012		ND	0.19	0.702	9/16/12 21:12	TPH
1,1,2-Trichloroethane	ND	0.035	0.011		ND	0.19	0.702	9/16/12 21:12	TPH
Trichloroethylene	0.040	0.035	0.0098		0.21	0.19	0.702	9/16/12 21:12	TPH
Trichlorofluoromethane (Freon 11)	0.30	0.035	0.022		1.7	0.20	0.702	9/16/12 21:12	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.074	0.035	0.012		0.57	0.27	0.702	9/16/12 21:12	TPH
1,2,4-Trimethylbenzene	0.11	0.035	0.012		0.55	0.17	0.702	9/16/12 21:12	TPH
1,3,5-Trimethylbenzene	0.065	0.035	0.011		0.32	0.17	0.702	9/16/12 21:12	TPH
Vinyl Acetate	ND	0.070	0.018		ND	0.25	0.702	9/16/12 21:12	TPH
Vinyl Chloride	ND	0.035	0.018		ND	0.090	0.702	9/16/12 21:12	TPH
m&p-Xylene	0.39	0.070	0.018		1.7	0.30	0.702	9/16/12 21:12	TPH
o-Xylene	0.15	0.035	0.0091		0.66	0.15	0.702	9/16/12 21:12	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	103	70-130	9/16/12 21:12
4-Bromofluorobenzene (2)	110	70-130	9/16/12 21:12

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: IA-2-091312**  
**Sample ID: 1210395-02**  
 Sample Matrix: Indoor air  
 Sampled: 9/13/2012 08:51

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1289  
 Canister Size: 6 liter  
 Flow Controller ID: 4174  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -5  
 Receipt Vacuum(in Hg): -5  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv			Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL	MDL		Results	RL			
Acetone	7.1	1.4	0.16	B	17	3.3	0.702	9/16/12 21:55	TPH
Benzene	0.19	0.035	0.018		0.62	0.11	0.702	9/16/12 21:55	TPH
Benzyl chloride	ND	0.035	0.0063		ND	0.18	0.702	9/16/12 21:55	TPH
Bromodichloromethane	ND	0.035	0.0098		ND	0.24	0.702	9/16/12 21:55	TPH
Bromoform	ND	0.035	0.0091		ND	0.36	0.702	9/16/12 21:55	TPH
Bromomethane	ND	0.035	0.034		ND	0.14	0.702	9/16/12 21:55	TPH
1,3-Butadiene	ND	0.035	0.020		ND	0.078	0.702	9/16/12 21:55	TPH
2-Butanone (MEK)	0.96	1.4	0.027	J	2.8	4.1	0.702	9/16/12 21:55	TPH
Carbon Disulfide	ND	0.35	0.0098		ND	1.1	0.702	9/16/12 21:55	TPH
Carbon Tetrachloride	0.068	0.035	0.0098		0.43	0.22	0.702	9/16/12 21:55	TPH
Chlorobenzene	ND	0.035	0.029		ND	0.16	0.702	9/16/12 21:55	TPH
Chloroethane	ND	0.035	0.020		ND	0.093	0.702	9/16/12 21:55	TPH
Chloroform	0.051	0.035	0.013		0.25	0.17	0.702	9/16/12 21:55	TPH
Chloromethane	0.63	0.035	0.018		1.3	0.072	0.702	9/16/12 21:55	TPH
Cyclohexane	0.075	0.035	0.034		0.26	0.12	0.702	9/16/12 21:55	TPH
Dibromochloromethane	ND	0.035	0.0084		ND	0.30	0.702	9/16/12 21:55	TPH
1,2-Dibromoethane (EDB)	ND	0.035	0.0098		ND	0.27	0.702	9/16/12 21:55	TPH
1,2-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.702	9/16/12 21:55	TPH
1,3-Dichlorobenzene	0.013	0.035	0.0098	J	0.080	0.21	0.702	9/16/12 21:55	TPH
1,4-Dichlorobenzene	0.015	0.035	0.0091	J	0.093	0.21	0.702	9/16/12 21:55	TPH
Dichlorodifluoromethane (Freon 12)	0.56	0.035	0.015		2.8	0.17	0.702	9/16/12 21:55	TPH
1,1-Dichloroethane	0.011	0.035	0.011	J	0.043	0.14	0.702	9/16/12 21:55	TPH
1,2-Dichloroethane	0.020	0.035	0.012	J	0.080	0.14	0.702	9/16/12 21:55	TPH
1,1-Dichloroethylene	0.011	0.035	0.011	J	0.045	0.14	0.702	9/16/12 21:55	TPH
cis-1,2-Dichloroethylene	0.016	0.035	0.0098	J	0.064	0.14	0.702	9/16/12 21:55	TPH
trans-1,2-Dichloroethylene	ND	0.035	0.012		ND	0.14	0.702	9/16/12 21:55	TPH
1,2-Dichloropropane	ND	0.035	0.014		ND	0.16	0.702	9/16/12 21:55	TPH
cis-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	9/16/12 21:55	TPH
trans-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	9/16/12 21:55	TPH
Ethanol	5.2	1.4	0.17	L-03	9.8	2.6	0.702	9/16/12 21:55	TPH
Ethyl Acetate	0.20	0.035	0.018		0.71	0.13	0.702	9/16/12 21:55	TPH
Ethylbenzene	0.094	0.035	0.0098		0.41	0.15	0.702	9/16/12 21:55	TPH
4-Ethyltoluene	0.039	0.035	0.013		0.19	0.17	0.702	9/16/12 21:55	TPH
Heptane	0.098	0.035	0.012		0.40	0.14	0.702	9/16/12 21:55	TPH
Hexachlorobutadiene	ND	0.035	0.013		ND	0.37	0.702	9/16/12 21:55	TPH
Hexane	0.67	1.4	0.031	J	2.4	4.9	0.702	9/16/12 21:55	TPH
2-Hexanone (MBK)	0.078	0.035	0.011	V-05	0.32	0.14	0.702	9/16/12 21:55	TPH
Isopropanol	1.1	1.4	0.021	J	2.8	3.4	0.702	9/16/12 21:55	TPH

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: IA-2-091312**  
**Sample ID: 1210395-02**  
 Sample Matrix: Indoor air  
 Sampled: 9/13/2012 08:51

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1289  
 Canister Size: 6 liter  
 Flow Controller ID: 4174  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -5  
 Receipt Vacuum(in Hg): -5  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv			Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL	MDL		Results	RL			
Methyl tert-Butyl Ether (MTBE)	0.049	0.035	0.0098		0.18	0.13	0.702	9/16/12 21:55	TPH
Methylene Chloride	1.8	0.35	0.045	B	6.4	1.2	0.702	9/16/12 21:55	TPH
Methyl methacrylate	ND	0.035	0.011		ND	0.14	0.702	9/16/12 21:55	TPH
4-Methyl-2-pentanone (MIBK)	0.047	0.035	0.011	V-05	0.19	0.14	0.702	9/16/12 21:55	TPH
Propene	ND	1.4	0.027		ND	2.4	0.702	9/16/12 21:55	TPH
Styrene	0.046	0.035	0.0077	V-05	0.19	0.15	0.702	9/16/12 21:55	TPH
1,1,1,2-Tetrachloroethane	ND	0.064	0.023	L-03, V-05	ND	0.44	0.702	9/16/12 21:55	TPH
1,1,2,2-Tetrachloroethane	ND	0.035	0.012		ND	0.24	0.702	9/16/12 21:55	TPH
Tetrachloroethylene	0.30	0.035	0.011		2.0	0.24	0.702	9/16/12 21:55	TPH
Tetrahydrofuran	ND	0.035	0.011		ND	0.10	0.702	9/16/12 21:55	TPH
Toluene	0.69	0.035	0.0098		2.6	0.13	0.702	9/16/12 21:55	TPH
1,2,4-Trichlorobenzene	ND	0.070	0.013		ND	0.52	0.702	9/16/12 21:55	TPH
1,1,1-Trichloroethane	0.015	0.035	0.012	J	0.080	0.19	0.702	9/16/12 21:55	TPH
1,1,2-Trichloroethane	ND	0.035	0.011		ND	0.19	0.702	9/16/12 21:55	TPH
Trichloroethylene	0.037	0.035	0.0098		0.20	0.19	0.702	9/16/12 21:55	TPH
Trichlorofluoromethane (Freon 11)	0.46	0.035	0.022		2.6	0.20	0.702	9/16/12 21:55	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.084	0.035	0.012		0.64	0.27	0.702	9/16/12 21:55	TPH
1,2,4-Trimethylbenzene	0.098	0.035	0.012		0.48	0.17	0.702	9/16/12 21:55	TPH
1,3,5-Trimethylbenzene	0.053	0.035	0.011		0.26	0.17	0.702	9/16/12 21:55	TPH
Vinyl Acetate	ND	0.070	0.018		ND	0.25	0.702	9/16/12 21:55	TPH
Vinyl Chloride	ND	0.035	0.018		ND	0.090	0.702	9/16/12 21:55	TPH
m&p-Xylene	0.31	0.070	0.018		1.3	0.30	0.702	9/16/12 21:55	TPH
o-Xylene	0.13	0.035	0.0091		0.55	0.15	0.702	9/16/12 21:55	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	103	70-130	9/16/12 21:55
4-Bromofluorobenzene (2)	111	70-130	9/16/12 21:55

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: IA-3-091312**  
**Sample ID: 1210395-03**  
 Sample Matrix: Indoor air  
 Sampled: 9/13/2012 08:48

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1320  
 Canister Size: 6 liter  
 Flow Controller ID: 4176  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -5  
 Receipt Vacuum(in Hg): -5  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv			Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL	MDL		Results	RL			
Acetone	5.2	1.4	0.16	B	12	3.3	0.702	9/16/12 22:40	TPH
Benzene	0.21	0.035	0.018		0.66	0.11	0.702	9/16/12 22:40	TPH
Benzyl chloride	ND	0.035	0.0063		ND	0.18	0.702	9/16/12 22:40	TPH
Bromodichloromethane	ND	0.035	0.0098		ND	0.24	0.702	9/16/12 22:40	TPH
Bromoform	ND	0.035	0.0091		ND	0.36	0.702	9/16/12 22:40	TPH
Bromomethane	ND	0.035	0.034		ND	0.14	0.702	9/16/12 22:40	TPH
1,3-Butadiene	ND	0.035	0.020		ND	0.078	0.702	9/16/12 22:40	TPH
2-Butanone (MEK)	0.92	1.4	0.027	J	2.7	4.1	0.702	9/16/12 22:40	TPH
Carbon Disulfide	ND	0.35	0.0098		ND	1.1	0.702	9/16/12 22:40	TPH
Carbon Tetrachloride	0.060	0.035	0.0098		0.38	0.22	0.702	9/16/12 22:40	TPH
Chlorobenzene	ND	0.035	0.029		ND	0.16	0.702	9/16/12 22:40	TPH
Chloroethane	ND	0.035	0.020		ND	0.093	0.702	9/16/12 22:40	TPH
Chloroform	0.038	0.035	0.013		0.19	0.17	0.702	9/16/12 22:40	TPH
Chloromethane	0.61	0.035	0.018		1.3	0.072	0.702	9/16/12 22:40	TPH
Cyclohexane	0.077	0.035	0.034		0.27	0.12	0.702	9/16/12 22:40	TPH
Dibromochloromethane	ND	0.035	0.0084		ND	0.30	0.702	9/16/12 22:40	TPH
1,2-Dibromoethane (EDB)	ND	0.035	0.0098		ND	0.27	0.702	9/16/12 22:40	TPH
1,2-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.702	9/16/12 22:40	TPH
1,3-Dichlorobenzene	ND	0.035	0.0098		ND	0.21	0.702	9/16/12 22:40	TPH
1,4-Dichlorobenzene	0.0098	0.035	0.0091	J	0.059	0.21	0.702	9/16/12 22:40	TPH
Dichlorodifluoromethane (Freon 12)	0.57	0.035	0.015		2.8	0.17	0.702	9/16/12 22:40	TPH
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.702	9/16/12 22:40	TPH
1,2-Dichloroethane	ND	0.035	0.012		ND	0.14	0.702	9/16/12 22:40	TPH
1,1-Dichloroethylene	ND	0.035	0.011		ND	0.14	0.702	9/16/12 22:40	TPH
cis-1,2-Dichloroethylene	ND	0.035	0.0098		ND	0.14	0.702	9/16/12 22:40	TPH
trans-1,2-Dichloroethylene	ND	0.035	0.012		ND	0.14	0.702	9/16/12 22:40	TPH
1,2-Dichloropropane	ND	0.035	0.014		ND	0.16	0.702	9/16/12 22:40	TPH
cis-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	9/16/12 22:40	TPH
trans-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	9/16/12 22:40	TPH
Ethanol	3.5	1.4	0.17	L-03	6.6	2.6	0.702	9/16/12 22:40	TPH
Ethyl Acetate	0.14	0.035	0.018		0.51	0.13	0.702	9/16/12 22:40	TPH
Ethylbenzene	0.097	0.035	0.0098		0.42	0.15	0.702	9/16/12 22:40	TPH
4-Ethyltoluene	0.031	0.035	0.013	J	0.15	0.17	0.702	9/16/12 22:40	TPH
Heptane	0.10	0.035	0.012		0.41	0.14	0.702	9/16/12 22:40	TPH
Hexachlorobutadiene	ND	0.035	0.013		ND	0.37	0.702	9/16/12 22:40	TPH
Hexane	0.39	1.4	0.031	J	1.4	4.9	0.702	9/16/12 22:40	TPH
2-Hexanone (MBK)	0.054	0.035	0.011	V-05	0.22	0.14	0.702	9/16/12 22:40	TPH
Isopropanol	0.70	1.4	0.021	J	1.7	3.4	0.702	9/16/12 22:40	TPH

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: IA-3-091312**  
**Sample ID: 1210395-03**  
 Sample Matrix: Indoor air  
 Sampled: 9/13/2012 08:48

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1320  
 Canister Size: 6 liter  
 Flow Controller ID: 4176  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -5  
 Receipt Vacuum(in Hg): -5  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv			Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL	MDL		Results	RL			
Methyl tert-Butyl Ether (MTBE)	0.061	0.035	0.0098		0.22	0.13	0.702	9/16/12 22:40	TPH
Methylene Chloride	0.78	0.35	0.045	B	2.7	1.2	0.702	9/16/12 22:40	TPH
Methyl methacrylate	ND	0.035	0.011		ND	0.14	0.702	9/16/12 22:40	TPH
4-Methyl-2-pentanone (MIBK)	0.051	0.035	0.011	V-05	0.21	0.14	0.702	9/16/12 22:40	TPH
Propene	1.0	1.4	0.027	J	1.8	2.4	0.702	9/16/12 22:40	TPH
Styrene	0.033	0.035	0.0077	V-05, J	0.14	0.15	0.702	9/16/12 22:40	TPH
1,1,1,2-Tetrachloroethane	ND	0.064	0.023	L-03, V-05	ND	0.44	0.702	9/16/12 22:40	TPH
1,1,2,2-Tetrachloroethane	ND	0.035	0.012		ND	0.24	0.702	9/16/12 22:40	TPH
Tetrachloroethylene	0.33	0.035	0.011		2.3	0.24	0.702	9/16/12 22:40	TPH
Tetrahydrofuran	0.025	0.035	0.011	J	0.072	0.10	0.702	9/16/12 22:40	TPH
Toluene	0.74	0.035	0.0098		2.8	0.13	0.702	9/16/12 22:40	TPH
1,2,4-Trichlorobenzene	ND	0.070	0.013		ND	0.52	0.702	9/16/12 22:40	TPH
1,1,1-Trichloroethane	ND	0.035	0.012		ND	0.19	0.702	9/16/12 22:40	TPH
1,1,2-Trichloroethane	ND	0.035	0.011		ND	0.19	0.702	9/16/12 22:40	TPH
Trichloroethylene	0.032	0.035	0.0098	J	0.17	0.19	0.702	9/16/12 22:40	TPH
Trichlorofluoromethane (Freon 11)	0.27	0.035	0.022		1.5	0.20	0.702	9/16/12 22:40	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.071	0.035	0.012		0.54	0.27	0.702	9/16/12 22:40	TPH
1,2,4-Trimethylbenzene	0.095	0.035	0.012		0.47	0.17	0.702	9/16/12 22:40	TPH
1,3,5-Trimethylbenzene	0.044	0.035	0.011		0.22	0.17	0.702	9/16/12 22:40	TPH
Vinyl Acetate	ND	0.070	0.018		ND	0.25	0.702	9/16/12 22:40	TPH
Vinyl Chloride	ND	0.035	0.018		ND	0.090	0.702	9/16/12 22:40	TPH
m&p-Xylene	0.33	0.070	0.018		1.5	0.30	0.702	9/16/12 22:40	TPH
o-Xylene	0.13	0.035	0.0091		0.57	0.15	0.702	9/16/12 22:40	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	104	70-130	9/16/12 22:40
4-Bromofluorobenzene (2)	112	70-130	9/16/12 22:40

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: IA-4-091312**  
**Sample ID: 12I0395-04**  
 Sample Matrix: Indoor air  
 Sampled: 9/13/2012 08:52

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1159  
 Canister Size: 6 liter  
 Flow Controller ID: 4175  
 Sample Type: 30 min

**Work Order: 12I0395**  
 Initial Vacuum(in Hg): -29  
 Final Vacuum(in Hg): -5  
 Receipt Vacuum(in Hg): -5  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv			Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL	MDL		Results	RL			
Acetone	5.2	1.4	0.16	B	12	3.3	0.702	9/16/12 23:25	TPH
Benzene	0.20	0.035	0.018		0.64	0.11	0.702	9/16/12 23:25	TPH
Benzyl chloride	ND	0.035	0.0063		ND	0.18	0.702	9/16/12 23:25	TPH
Bromodichloromethane	ND	0.035	0.0098		ND	0.24	0.702	9/16/12 23:25	TPH
Bromoform	ND	0.035	0.0091		ND	0.36	0.702	9/16/12 23:25	TPH
Bromomethane	ND	0.035	0.034		ND	0.14	0.702	9/16/12 23:25	TPH
1,3-Butadiene	ND	0.035	0.020		ND	0.078	0.702	9/16/12 23:25	TPH
2-Butanone (MEK)	0.79	1.4	0.027	J	2.3	4.1	0.702	9/16/12 23:25	TPH
Carbon Disulfide	ND	0.35	0.0098		ND	1.1	0.702	9/16/12 23:25	TPH
Carbon Tetrachloride	0.058	0.035	0.0098		0.36	0.22	0.702	9/16/12 23:25	TPH
Chlorobenzene	ND	0.035	0.029		ND	0.16	0.702	9/16/12 23:25	TPH
Chloroethane	ND	0.035	0.020		ND	0.093	0.702	9/16/12 23:25	TPH
Chloroform	0.039	0.035	0.013		0.19	0.17	0.702	9/16/12 23:25	TPH
Chloromethane	0.62	0.035	0.018		1.3	0.072	0.702	9/16/12 23:25	TPH
Cyclohexane	0.075	0.035	0.034		0.26	0.12	0.702	9/16/12 23:25	TPH
Dibromochloromethane	ND	0.035	0.0084		ND	0.30	0.702	9/16/12 23:25	TPH
1,2-Dibromoethane (EDB)	ND	0.035	0.0098		ND	0.27	0.702	9/16/12 23:25	TPH
1,2-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.702	9/16/12 23:25	TPH
1,3-Dichlorobenzene	ND	0.035	0.0098		ND	0.21	0.702	9/16/12 23:25	TPH
1,4-Dichlorobenzene	ND	0.035	0.0091		ND	0.21	0.702	9/16/12 23:25	TPH
Dichlorodifluoromethane (Freon 12)	0.57	0.035	0.015		2.8	0.17	0.702	9/16/12 23:25	TPH
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.702	9/16/12 23:25	TPH
1,2-Dichloroethane	ND	0.035	0.012		ND	0.14	0.702	9/16/12 23:25	TPH
1,1-Dichloroethylene	ND	0.035	0.011		ND	0.14	0.702	9/16/12 23:25	TPH
cis-1,2-Dichloroethylene	ND	0.035	0.0098		ND	0.14	0.702	9/16/12 23:25	TPH
trans-1,2-Dichloroethylene	ND	0.035	0.012		ND	0.14	0.702	9/16/12 23:25	TPH
1,2-Dichloropropane	ND	0.035	0.014		ND	0.16	0.702	9/16/12 23:25	TPH
cis-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	9/16/12 23:25	TPH
trans-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	9/16/12 23:25	TPH
Ethanol	3.9	1.4	0.17	L-03	7.3	2.6	0.702	9/16/12 23:25	TPH
Ethyl Acetate	0.68	0.035	0.018		2.4	0.13	0.702	9/16/12 23:25	TPH
Ethylbenzene	0.087	0.035	0.0098		0.38	0.15	0.702	9/16/12 23:25	TPH
4-Ethyltoluene	0.024	0.035	0.013	J	0.12	0.17	0.702	9/16/12 23:25	TPH
Heptane	0.10	0.035	0.012		0.41	0.14	0.702	9/16/12 23:25	TPH
Hexachlorobutadiene	ND	0.035	0.013		ND	0.37	0.702	9/16/12 23:25	TPH
Hexane	1.4	1.4	0.031		5.0	4.9	0.702	9/16/12 23:25	TPH
2-Hexanone (MBK)	0.044	0.035	0.011	V-05	0.18	0.14	0.702	9/16/12 23:25	TPH
Isopropanol	0.55	1.4	0.021	J	1.4	3.4	0.702	9/16/12 23:25	TPH



**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: IA-4-091312**  
**Sample ID: 12I0395-04**  
 Sample Matrix: Indoor air  
 Sampled: 9/13/2012 08:52

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1159  
 Canister Size: 6 liter  
 Flow Controller ID: 4175  
 Sample Type: 30 min

**Work Order: 12I0395**  
 Initial Vacuum(in Hg): -29  
 Final Vacuum(in Hg): -5  
 Receipt Vacuum(in Hg): -5  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv			Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL	MDL		Results	RL			
Methyl tert-Butyl Ether (MTBE)	0.052	0.035	0.0098		0.19	0.13	0.702	9/16/12 23:25	TPH
Methylene Chloride	3.4	0.35	0.045	B	12	1.2	0.702	9/16/12 23:25	TPH
Methyl methacrylate	ND	0.035	0.011		ND	0.14	0.702	9/16/12 23:25	TPH
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.011	V-05	ND	0.14	0.702	9/16/12 23:25	TPH
Propene	0.97	1.4	0.027	J	1.7	2.4	0.702	9/16/12 23:25	TPH
Styrene	0.022	0.035	0.0077	V-05, J	0.093	0.15	0.702	9/16/12 23:25	TPH
1,1,1,2-Tetrachloroethane	ND	0.064	0.023	L-03, V-05	ND	0.44	0.702	9/16/12 23:25	TPH
1,1,2,2-Tetrachloroethane	ND	0.035	0.012		ND	0.24	0.702	9/16/12 23:25	TPH
Tetrachloroethylene	0.25	0.035	0.011		1.7	0.24	0.702	9/16/12 23:25	TPH
Tetrahydrofuran	ND	0.035	0.011		ND	0.10	0.702	9/16/12 23:25	TPH
Toluene	0.78	0.035	0.0098		2.9	0.13	0.702	9/16/12 23:25	TPH
1,2,4-Trichlorobenzene	ND	0.070	0.013		ND	0.52	0.702	9/16/12 23:25	TPH
1,1,1-Trichloroethane	ND	0.035	0.012		ND	0.19	0.702	9/16/12 23:25	TPH
1,1,2-Trichloroethane	ND	0.035	0.011		ND	0.19	0.702	9/16/12 23:25	TPH
Trichloroethylene	0.022	0.035	0.0098	J	0.12	0.19	0.702	9/16/12 23:25	TPH
Trichlorofluoromethane (Freon 11)	0.31	0.035	0.022		1.7	0.20	0.702	9/16/12 23:25	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.077	0.035	0.012		0.59	0.27	0.702	9/16/12 23:25	TPH
1,2,4-Trimethylbenzene	0.078	0.035	0.012		0.38	0.17	0.702	9/16/12 23:25	TPH
1,3,5-Trimethylbenzene	0.025	0.035	0.011	J	0.12	0.17	0.702	9/16/12 23:25	TPH
Vinyl Acetate	ND	0.070	0.018		ND	0.25	0.702	9/16/12 23:25	TPH
Vinyl Chloride	ND	0.035	0.018		ND	0.090	0.702	9/16/12 23:25	TPH
m&p-Xylene	0.27	0.070	0.018		1.2	0.30	0.702	9/16/12 23:25	TPH
o-Xylene	0.095	0.035	0.0091		0.41	0.15	0.702	9/16/12 23:25	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	103	70-130	9/16/12 23:25
4-Bromofluorobenzene (2)	112	70-130	9/16/12 23:25

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: IA-5-091312**  
**Sample ID: 1210395-05**  
 Sample Matrix: Indoor air  
 Sampled: 9/13/2012 09:26

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1081  
 Canister Size: 6 liter  
 Flow Controller ID: 4172  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -6  
 Receipt Vacuum(in Hg): -6  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv			Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL	MDL		Results	RL		Analyzed		
Acetone	5.4	1.4	0.16	B	13	3.3	0.702	9/17/12	0:10	TPH
Benzene	0.16	0.035	0.018		0.53	0.11	0.702	9/17/12	0:10	TPH
Benzyl chloride	ND	0.035	0.0063		ND	0.18	0.702	9/17/12	0:10	TPH
Bromodichloromethane	ND	0.035	0.0098		ND	0.24	0.702	9/17/12	0:10	TPH
Bromoform	ND	0.035	0.0091		ND	0.36	0.702	9/17/12	0:10	TPH
Bromomethane	ND	0.035	0.034		ND	0.14	0.702	9/17/12	0:10	TPH
1,3-Butadiene	ND	0.035	0.020		ND	0.078	0.702	9/17/12	0:10	TPH
2-Butanone (MEK)	0.77	1.4	0.027	J	2.3	4.1	0.702	9/17/12	0:10	TPH
Carbon Disulfide	0.035	0.35	0.0098	J	0.11	1.1	0.702	9/17/12	0:10	TPH
Carbon Tetrachloride	0.060	0.035	0.0098		0.38	0.22	0.702	9/17/12	0:10	TPH
Chlorobenzene	ND	0.035	0.029		ND	0.16	0.702	9/17/12	0:10	TPH
Chloroethane	0.022	0.035	0.020	J	0.059	0.093	0.702	9/17/12	0:10	TPH
Chloroform	0.036	0.035	0.013		0.17	0.17	0.702	9/17/12	0:10	TPH
Chloromethane	0.58	0.035	0.018		1.2	0.072	0.702	9/17/12	0:10	TPH
Cyclohexane	0.062	0.035	0.034		0.21	0.12	0.702	9/17/12	0:10	TPH
Dibromochloromethane	ND	0.035	0.0084		ND	0.30	0.702	9/17/12	0:10	TPH
1,2-Dibromoethane (EDB)	ND	0.035	0.0098		ND	0.27	0.702	9/17/12	0:10	TPH
1,2-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.702	9/17/12	0:10	TPH
1,3-Dichlorobenzene	ND	0.035	0.0098		ND	0.21	0.702	9/17/12	0:10	TPH
1,4-Dichlorobenzene	ND	0.035	0.0091		ND	0.21	0.702	9/17/12	0:10	TPH
Dichlorodifluoromethane (Freon 12)	0.56	0.035	0.015		2.8	0.17	0.702	9/17/12	0:10	TPH
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.702	9/17/12	0:10	TPH
1,2-Dichloroethane	ND	0.035	0.012		ND	0.14	0.702	9/17/12	0:10	TPH
1,1-Dichloroethylene	ND	0.035	0.011		ND	0.14	0.702	9/17/12	0:10	TPH
cis-1,2-Dichloroethylene	ND	0.035	0.0098		ND	0.14	0.702	9/17/12	0:10	TPH
trans-1,2-Dichloroethylene	ND	0.035	0.012		ND	0.14	0.702	9/17/12	0:10	TPH
1,2-Dichloropropane	ND	0.035	0.014		ND	0.16	0.702	9/17/12	0:10	TPH
cis-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	9/17/12	0:10	TPH
trans-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	9/17/12	0:10	TPH
Ethanol	5.6	1.4	0.17	L-03	11	2.6	0.702	9/17/12	0:10	TPH
Ethyl Acetate	0.18	0.035	0.018		0.66	0.13	0.702	9/17/12	0:10	TPH
Ethylbenzene	0.072	0.035	0.0098		0.31	0.15	0.702	9/17/12	0:10	TPH
4-Ethyltoluene	0.020	0.035	0.013	J	0.097	0.17	0.702	9/17/12	0:10	TPH
Heptane	0.079	0.035	0.012		0.32	0.14	0.702	9/17/12	0:10	TPH
Hexachlorobutadiene	ND	0.035	0.013		ND	0.37	0.702	9/17/12	0:10	TPH
Hexane	0.33	1.4	0.031	J	1.2	4.9	0.702	9/17/12	0:10	TPH
2-Hexanone (MBK)	0.041	0.035	0.011	V-05	0.17	0.14	0.702	9/17/12	0:10	TPH
Isopropanol	1.4	1.4	0.021	J	3.3	3.4	0.702	9/17/12	0:10	TPH

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: IA-5-091312**  
**Sample ID: 1210395-05**  
 Sample Matrix: Indoor air  
 Sampled: 9/13/2012 09:26

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1081  
 Canister Size: 6 liter  
 Flow Controller ID: 4172  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -6  
 Receipt Vacuum(in Hg): -6  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv			Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL	MDL		Results	RL		Analized		
Methyl tert-Butyl Ether (MTBE)	0.051	0.035	0.0098		0.18	0.13	0.702	9/17/12	0:10	TPH
Methylene Chloride	0.65	0.35	0.045	B	2.3	1.2	0.702	9/17/12	0:10	TPH
Methyl methacrylate	ND	0.035	0.011		ND	0.14	0.702	9/17/12	0:10	TPH
4-Methyl-2-pentanone (MIBK)	0.055	0.035	0.011	V-05	0.22	0.14	0.702	9/17/12	0:10	TPH
Propene	0.83	1.4	0.027	J	1.4	2.4	0.702	9/17/12	0:10	TPH
Styrene	0.056	0.035	0.0077	V-05	0.24	0.15	0.702	9/17/12	0:10	TPH
1,1,1,2-Tetrachloroethane	ND	0.064	0.023	L-03, V-05	ND	0.44	0.702	9/17/12	0:10	TPH
1,1,2,2-Tetrachloroethane	ND	0.035	0.012		ND	0.24	0.702	9/17/12	0:10	TPH
Tetrachloroethylene	0.24	0.035	0.011		1.6	0.24	0.702	9/17/12	0:10	TPH
Tetrahydrofuran	ND	0.035	0.011		ND	0.10	0.702	9/17/12	0:10	TPH
Toluene	0.54	0.035	0.0098		2.0	0.13	0.702	9/17/12	0:10	TPH
1,2,4-Trichlorobenzene	ND	0.070	0.013		ND	0.52	0.702	9/17/12	0:10	TPH
1,1,1-Trichloroethane	ND	0.035	0.012		ND	0.19	0.702	9/17/12	0:10	TPH
1,1,2-Trichloroethane	ND	0.035	0.011		ND	0.19	0.702	9/17/12	0:10	TPH
Trichloroethylene	0.019	0.035	0.0098	J	0.10	0.19	0.702	9/17/12	0:10	TPH
Trichlorofluoromethane (Freon 11)	0.29	0.035	0.022		1.6	0.20	0.702	9/17/12	0:10	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.078	0.035	0.012		0.60	0.27	0.702	9/17/12	0:10	TPH
1,2,4-Trimethylbenzene	0.059	0.035	0.012		0.29	0.17	0.702	9/17/12	0:10	TPH
1,3,5-Trimethylbenzene	0.023	0.035	0.011	J	0.11	0.17	0.702	9/17/12	0:10	TPH
Vinyl Acetate	ND	0.070	0.018		ND	0.25	0.702	9/17/12	0:10	TPH
Vinyl Chloride	ND	0.035	0.018		ND	0.090	0.702	9/17/12	0:10	TPH
m&p-Xylene	0.22	0.070	0.018		0.97	0.30	0.702	9/17/12	0:10	TPH
o-Xylene	0.080	0.035	0.0091		0.35	0.15	0.702	9/17/12	0:10	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	104	70-130	9/17/12 0:10
4-Bromofluorobenzene (2)	110	70-130	9/17/12 0:10

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: IA-6-091312**  
**Sample ID: 1210395-06**  
 Sample Matrix: Indoor air  
 Sampled: 9/13/2012 09:24

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1139  
 Canister Size: 6 liter  
 Flow Controller ID: 4173  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -29  
 Final Vacuum(in Hg): -4  
 Receipt Vacuum(in Hg): -5  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv			Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL	MDL		Results	RL		Analyzed		
Acetone	7.6	1.4	0.16	B	18	3.3	0.702	9/17/12	0:54	TPH
Benzene	0.15	0.035	0.018		0.49	0.11	0.702	9/17/12	0:54	TPH
Benzyl chloride	ND	0.035	0.0063		ND	0.18	0.702	9/17/12	0:54	TPH
Bromodichloromethane	ND	0.035	0.0098		ND	0.24	0.702	9/17/12	0:54	TPH
Bromoform	ND	0.035	0.0091		ND	0.36	0.702	9/17/12	0:54	TPH
Bromomethane	ND	0.035	0.034		ND	0.14	0.702	9/17/12	0:54	TPH
1,3-Butadiene	ND	0.035	0.020		ND	0.078	0.702	9/17/12	0:54	TPH
2-Butanone (MEK)	0.95	1.4	0.027	J	2.8	4.1	0.702	9/17/12	0:54	TPH
Carbon Disulfide	0.065	0.35	0.0098	J	0.20	1.1	0.702	9/17/12	0:54	TPH
Carbon Tetrachloride	0.058	0.035	0.0098		0.37	0.22	0.702	9/17/12	0:54	TPH
Chlorobenzene	ND	0.035	0.029		ND	0.16	0.702	9/17/12	0:54	TPH
Chloroethane	ND	0.035	0.020		ND	0.093	0.702	9/17/12	0:54	TPH
Chloroform	0.035	0.035	0.013		0.17	0.17	0.702	9/17/12	0:54	TPH
Chloromethane	0.56	0.035	0.018		1.2	0.072	0.702	9/17/12	0:54	TPH
Cyclohexane	0.058	0.035	0.034		0.20	0.12	0.702	9/17/12	0:54	TPH
Dibromochloromethane	ND	0.035	0.0084		ND	0.30	0.702	9/17/12	0:54	TPH
1,2-Dibromoethane (EDB)	ND	0.035	0.0098		ND	0.27	0.702	9/17/12	0:54	TPH
1,2-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.702	9/17/12	0:54	TPH
1,3-Dichlorobenzene	ND	0.035	0.0098		ND	0.21	0.702	9/17/12	0:54	TPH
1,4-Dichlorobenzene	ND	0.035	0.0091		ND	0.21	0.702	9/17/12	0:54	TPH
Dichlorodifluoromethane (Freon 12)	0.57	0.035	0.015		2.8	0.17	0.702	9/17/12	0:54	TPH
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.702	9/17/12	0:54	TPH
1,2-Dichloroethane	ND	0.035	0.012		ND	0.14	0.702	9/17/12	0:54	TPH
1,1-Dichloroethylene	ND	0.035	0.011		ND	0.14	0.702	9/17/12	0:54	TPH
cis-1,2-Dichloroethylene	0.011	0.035	0.0098	J	0.042	0.14	0.702	9/17/12	0:54	TPH
trans-1,2-Dichloroethylene	ND	0.035	0.012		ND	0.14	0.702	9/17/12	0:54	TPH
1,2-Dichloropropane	ND	0.035	0.014		ND	0.16	0.702	9/17/12	0:54	TPH
cis-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	9/17/12	0:54	TPH
trans-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	9/17/12	0:54	TPH
Ethanol	12	1.4	0.17	L-03	23	2.6	0.702	9/17/12	0:54	TPH
Ethyl Acetate	0.28	0.035	0.018		1.00	0.13	0.702	9/17/12	0:54	TPH
Ethylbenzene	0.052	0.035	0.0098		0.23	0.15	0.702	9/17/12	0:54	TPH
4-Ethyltoluene	ND	0.035	0.013		ND	0.17	0.702	9/17/12	0:54	TPH
Heptane	0.076	0.035	0.012		0.31	0.14	0.702	9/17/12	0:54	TPH
Hexachlorobutadiene	ND	0.035	0.013		ND	0.37	0.702	9/17/12	0:54	TPH
Hexane	0.29	1.4	0.031	J	1.0	4.9	0.702	9/17/12	0:54	TPH
2-Hexanone (MBK)	0.067	0.035	0.011	V-05	0.27	0.14	0.702	9/17/12	0:54	TPH
Isopropanol	2.7	1.4	0.021		6.7	3.4	0.702	9/17/12	0:54	TPH

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: IA-6-091312**  
**Sample ID: 12I0395-06**  
 Sample Matrix: Indoor air  
 Sampled: 9/13/2012 09:24

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1139  
 Canister Size: 6 liter  
 Flow Controller ID: 4173  
 Sample Type: 30 min

**Work Order: 12I0395**  
 Initial Vacuum(in Hg): -29  
 Final Vacuum(in Hg): -4  
 Receipt Vacuum(in Hg): -5  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv			Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL	MDL		Results	RL		Analized		
Methyl tert-Butyl Ether (MTBE)	0.039	0.035	0.0098		0.14	0.13	0.702	9/17/12	0:54	TPH
Methylene Chloride	0.63	0.35	0.045	B	2.2	1.2	0.702	9/17/12	0:54	TPH
Methyl methacrylate	ND	0.035	0.011		ND	0.14	0.702	9/17/12	0:54	TPH
4-Methyl-2-pentanone (MIBK)	0.062	0.035	0.011	V-05	0.25	0.14	0.702	9/17/12	0:54	TPH
Propene	0.84	1.4	0.027	J	1.4	2.4	0.702	9/17/12	0:54	TPH
Styrene	0.013	0.035	0.0077	V-05, J	0.054	0.15	0.702	9/17/12	0:54	TPH
1,1,1,2-Tetrachloroethane	ND	0.064	0.023	L-03, V-05	ND	0.44	0.702	9/17/12	0:54	TPH
1,1,2,2-Tetrachloroethane	ND	0.035	0.012		ND	0.24	0.702	9/17/12	0:54	TPH
Tetrachloroethylene	0.38	0.035	0.011		2.6	0.24	0.702	9/17/12	0:54	TPH
Tetrahydrofuran	ND	0.035	0.011		ND	0.10	0.702	9/17/12	0:54	TPH
Toluene	0.40	0.035	0.0098		1.5	0.13	0.702	9/17/12	0:54	TPH
1,2,4-Trichlorobenzene	ND	0.070	0.013		ND	0.52	0.702	9/17/12	0:54	TPH
1,1,1-Trichloroethane	ND	0.035	0.012		ND	0.19	0.702	9/17/12	0:54	TPH
1,1,2-Trichloroethane	ND	0.035	0.011		ND	0.19	0.702	9/17/12	0:54	TPH
Trichloroethylene	0.038	0.035	0.0098		0.20	0.19	0.702	9/17/12	0:54	TPH
Trichlorofluoromethane (Freon 11)	0.30	0.035	0.022		1.7	0.20	0.702	9/17/12	0:54	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.081	0.035	0.012		0.62	0.27	0.702	9/17/12	0:54	TPH
1,2,4-Trimethylbenzene	ND	0.035	0.012		ND	0.17	0.702	9/17/12	0:54	TPH
1,3,5-Trimethylbenzene	ND	0.035	0.011		ND	0.17	0.702	9/17/12	0:54	TPH
Vinyl Acetate	ND	0.070	0.018		ND	0.25	0.702	9/17/12	0:54	TPH
Vinyl Chloride	ND	0.035	0.018		ND	0.090	0.702	9/17/12	0:54	TPH
m&p-Xylene	0.088	0.070	0.018		0.38	0.30	0.702	9/17/12	0:54	TPH
o-Xylene	0.028	0.035	0.0091	J	0.12	0.15	0.702	9/17/12	0:54	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	104	70-130	9/17/12 0:54
4-Bromofluorobenzene (2)	111	70-130	9/17/12 0:54

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: IA-7-091312**  
**Sample ID: 1210395-07**  
 Sample Matrix: Indoor air  
 Sampled: 9/13/2012 10:45

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1100  
 Canister Size: 6 liter  
 Flow Controller ID: 4170  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -29  
 Final Vacuum(in Hg): -4  
 Receipt Vacuum(in Hg): -6  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv			Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL	MDL		Results	RL		Analyzed		
Acetone	10	1.4	0.16	B	24	3.3	0.702	9/17/12	1:39	TPH
Benzene	0.15	0.035	0.018		0.49	0.11	0.702	9/17/12	1:39	TPH
Benzyl chloride	ND	0.035	0.0063		ND	0.18	0.702	9/17/12	1:39	TPH
Bromodichloromethane	ND	0.035	0.0098		ND	0.24	0.702	9/17/12	1:39	TPH
Bromoform	ND	0.035	0.0091		ND	0.36	0.702	9/17/12	1:39	TPH
Bromomethane	ND	0.035	0.034		ND	0.14	0.702	9/17/12	1:39	TPH
1,3-Butadiene	ND	0.035	0.020		ND	0.078	0.702	9/17/12	1:39	TPH
2-Butanone (MEK)	0.95	1.4	0.027	J	2.8	4.1	0.702	9/17/12	1:39	TPH
Carbon Disulfide	0.029	0.35	0.0098	J	0.090	1.1	0.702	9/17/12	1:39	TPH
Carbon Tetrachloride	0.061	0.035	0.0098		0.38	0.22	0.702	9/17/12	1:39	TPH
Chlorobenzene	ND	0.035	0.029		ND	0.16	0.702	9/17/12	1:39	TPH
Chloroethane	ND	0.035	0.020		ND	0.093	0.702	9/17/12	1:39	TPH
Chloroform	0.041	0.035	0.013		0.20	0.17	0.702	9/17/12	1:39	TPH
Chloromethane	0.61	0.035	0.018		1.3	0.072	0.702	9/17/12	1:39	TPH
Cyclohexane	0.068	0.035	0.034		0.23	0.12	0.702	9/17/12	1:39	TPH
Dibromochloromethane	ND	0.035	0.0084		ND	0.30	0.702	9/17/12	1:39	TPH
1,2-Dibromoethane (EDB)	ND	0.035	0.0098		ND	0.27	0.702	9/17/12	1:39	TPH
1,2-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.702	9/17/12	1:39	TPH
1,3-Dichlorobenzene	ND	0.035	0.0098		ND	0.21	0.702	9/17/12	1:39	TPH
1,4-Dichlorobenzene	0.011	0.035	0.0091	J	0.063	0.21	0.702	9/17/12	1:39	TPH
Dichlorodifluoromethane (Freon 12)	0.59	0.035	0.015		2.9	0.17	0.702	9/17/12	1:39	TPH
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.702	9/17/12	1:39	TPH
1,2-Dichloroethane	ND	0.035	0.012		ND	0.14	0.702	9/17/12	1:39	TPH
1,1-Dichloroethylene	ND	0.035	0.011		ND	0.14	0.702	9/17/12	1:39	TPH
cis-1,2-Dichloroethylene	ND	0.035	0.0098		ND	0.14	0.702	9/17/12	1:39	TPH
trans-1,2-Dichloroethylene	ND	0.035	0.012		ND	0.14	0.702	9/17/12	1:39	TPH
1,2-Dichloropropane	0.020	0.035	0.014	J	0.094	0.16	0.702	9/17/12	1:39	TPH
cis-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	9/17/12	1:39	TPH
trans-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	9/17/12	1:39	TPH
Ethanol	32	1.4	0.17	L-03	60	2.6	0.702	9/17/12	1:39	TPH
Ethyl Acetate	0.16	0.035	0.018		0.57	0.13	0.702	9/17/12	1:39	TPH
Ethylbenzene	0.10	0.035	0.0098		0.45	0.15	0.702	9/17/12	1:39	TPH
4-Ethyltoluene	0.033	0.035	0.013	J	0.16	0.17	0.702	9/17/12	1:39	TPH
Heptane	0.24	0.035	0.012		0.99	0.14	0.702	9/17/12	1:39	TPH
Hexachlorobutadiene	ND	0.035	0.013		ND	0.37	0.702	9/17/12	1:39	TPH
Hexane	0.28	1.4	0.031	J	0.97	4.9	0.702	9/17/12	1:39	TPH
2-Hexanone (MBK)	0.10	0.035	0.011	V-05	0.41	0.14	0.702	9/17/12	1:39	TPH
Isopropanol	8.8	1.4	0.021		22	3.4	0.702	9/17/12	1:39	TPH

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: IA-7-091312**  
**Sample ID: 1210395-07**  
 Sample Matrix: Indoor air  
 Sampled: 9/13/2012 10:45

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1100  
 Canister Size: 6 liter  
 Flow Controller ID: 4170  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -29  
 Final Vacuum(in Hg): -4  
 Receipt Vacuum(in Hg): -6  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv			Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL	MDL		Results	RL		Analized		
Methyl tert-Butyl Ether (MTBE)	0.031	0.035	0.0098	J	0.11	0.13	0.702	9/17/12	1:39	TPH
Methylene Chloride	0.66	0.35	0.045	B	2.3	1.2	0.702	9/17/12	1:39	TPH
Methyl methacrylate	ND	0.035	0.011		ND	0.14	0.702	9/17/12	1:39	TPH
4-Methyl-2-pentanone (MIBK)	0.070	0.035	0.011	V-05	0.29	0.14	0.702	9/17/12	1:39	TPH
Propene	ND	1.4	0.027		ND	2.4	0.702	9/17/12	1:39	TPH
Styrene	0.21	0.035	0.0077	V-05	0.89	0.15	0.702	9/17/12	1:39	TPH
1,1,1,2-Tetrachloroethane	ND	0.064	0.023	L-03, V-05	ND	0.44	0.702	9/17/12	1:39	TPH
1,1,2,2-Tetrachloroethane	ND	0.035	0.012		ND	0.24	0.702	9/17/12	1:39	TPH
Tetrachloroethylene	0.25	0.035	0.011		1.7	0.24	0.702	9/17/12	1:39	TPH
Tetrahydrofuran	ND	0.035	0.011		ND	0.10	0.702	9/17/12	1:39	TPH
Toluene	0.65	0.035	0.0098		2.4	0.13	0.702	9/17/12	1:39	TPH
1,2,4-Trichlorobenzene	ND	0.070	0.013		ND	0.52	0.702	9/17/12	1:39	TPH
1,1,1-Trichloroethane	ND	0.035	0.012		ND	0.19	0.702	9/17/12	1:39	TPH
1,1,2-Trichloroethane	ND	0.035	0.011		ND	0.19	0.702	9/17/12	1:39	TPH
Trichloroethylene	0.027	0.035	0.0098	J	0.15	0.19	0.702	9/17/12	1:39	TPH
Trichlorofluoromethane (Freon 11)	0.31	0.035	0.022		1.8	0.20	0.702	9/17/12	1:39	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.076	0.035	0.012		0.58	0.27	0.702	9/17/12	1:39	TPH
1,2,4-Trimethylbenzene	0.093	0.035	0.012		0.46	0.17	0.702	9/17/12	1:39	TPH
1,3,5-Trimethylbenzene	0.052	0.035	0.011		0.26	0.17	0.702	9/17/12	1:39	TPH
Vinyl Acetate	ND	0.070	0.018		ND	0.25	0.702	9/17/12	1:39	TPH
Vinyl Chloride	ND	0.035	0.018		ND	0.090	0.702	9/17/12	1:39	TPH
m&p-Xylene	0.33	0.070	0.018		1.4	0.30	0.702	9/17/12	1:39	TPH
o-Xylene	0.13	0.035	0.0091		0.56	0.15	0.702	9/17/12	1:39	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	107	70-130	9/17/12 1:39
4-Bromofluorobenzene (2)	114	70-130	9/17/12 1:39

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: AA-1-091312**  
**Sample ID: 1210395-08**  
 Sample Matrix: Ambient Air  
 Sampled: 9/13/2012 11:34

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1729  
 Canister Size: 6 liter  
 Flow Controller ID: 4042  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -8  
 Receipt Vacuum(in Hg): -8.5  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv			Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL	MDL		Results	RL		Analyzed		
Acetone	5.1	1.4	0.16	B	12	3.3	0.702	9/17/12	2:26	TPH
Benzene	0.21	0.035	0.018		0.68	0.11	0.702	9/17/12	2:26	TPH
Benzyl chloride	ND	0.035	0.0063		ND	0.18	0.702	9/17/12	2:26	TPH
Bromodichloromethane	ND	0.035	0.0098		ND	0.24	0.702	9/17/12	2:26	TPH
Bromoform	ND	0.035	0.0091		ND	0.36	0.702	9/17/12	2:26	TPH
Bromomethane	ND	0.035	0.034		ND	0.14	0.702	9/17/12	2:26	TPH
1,3-Butadiene	ND	0.035	0.020		ND	0.078	0.702	9/17/12	2:26	TPH
2-Butanone (MEK)	0.67	1.4	0.027	J	2.0	4.1	0.702	9/17/12	2:26	TPH
Carbon Disulfide	ND	0.35	0.0098		ND	1.1	0.702	9/17/12	2:26	TPH
Carbon Tetrachloride	0.057	0.035	0.0098		0.36	0.22	0.702	9/17/12	2:26	TPH
Chlorobenzene	ND	0.035	0.029		ND	0.16	0.702	9/17/12	2:26	TPH
Chloroethane	ND	0.035	0.020		ND	0.093	0.702	9/17/12	2:26	TPH
Chloroform	0.020	0.035	0.013	J	0.096	0.17	0.702	9/17/12	2:26	TPH
Chloromethane	0.55	0.035	0.018		1.1	0.072	0.702	9/17/12	2:26	TPH
Cyclohexane	ND	0.035	0.034		ND	0.12	0.702	9/17/12	2:26	TPH
Dibromochloromethane	ND	0.035	0.0084		ND	0.30	0.702	9/17/12	2:26	TPH
1,2-Dibromoethane (EDB)	ND	0.035	0.0098		ND	0.27	0.702	9/17/12	2:26	TPH
1,2-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.702	9/17/12	2:26	TPH
1,3-Dichlorobenzene	ND	0.035	0.0098		ND	0.21	0.702	9/17/12	2:26	TPH
1,4-Dichlorobenzene	ND	0.035	0.0091		ND	0.21	0.702	9/17/12	2:26	TPH
Dichlorodifluoromethane (Freon 12)	0.57	0.035	0.015		2.8	0.17	0.702	9/17/12	2:26	TPH
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.702	9/17/12	2:26	TPH
1,2-Dichloroethane	ND	0.035	0.012		ND	0.14	0.702	9/17/12	2:26	TPH
1,1-Dichloroethylene	ND	0.035	0.011		ND	0.14	0.702	9/17/12	2:26	TPH
cis-1,2-Dichloroethylene	ND	0.035	0.0098		ND	0.14	0.702	9/17/12	2:26	TPH
trans-1,2-Dichloroethylene	ND	0.035	0.012		ND	0.14	0.702	9/17/12	2:26	TPH
1,2-Dichloropropane	ND	0.035	0.014		ND	0.16	0.702	9/17/12	2:26	TPH
cis-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	9/17/12	2:26	TPH
trans-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	9/17/12	2:26	TPH
Ethanol	2.8	1.4	0.17	L-03	5.2	2.6	0.702	9/17/12	2:26	TPH
Ethyl Acetate	0.19	0.035	0.018		0.67	0.13	0.702	9/17/12	2:26	TPH
Ethylbenzene	0.044	0.035	0.0098		0.19	0.15	0.702	9/17/12	2:26	TPH
4-Ethyltoluene	0.019	0.035	0.013	J	0.093	0.17	0.702	9/17/12	2:26	TPH
Heptane	0.044	0.035	0.012		0.18	0.14	0.702	9/17/12	2:26	TPH
Hexachlorobutadiene	ND	0.035	0.013		ND	0.37	0.702	9/17/12	2:26	TPH
Hexane	0.19	1.4	0.031	J	0.67	4.9	0.702	9/17/12	2:26	TPH
2-Hexanone (MBK)	0.066	0.035	0.011	V-05	0.27	0.14	0.702	9/17/12	2:26	TPH
Isopropanol	0.24	1.4	0.021	J	0.58	3.4	0.702	9/17/12	2:26	TPH



**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: AA-1-091312**  
**Sample ID: 1210395-08**  
 Sample Matrix: Ambient Air  
 Sampled: 9/13/2012 11:34

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1729  
 Canister Size: 6 liter  
 Flow Controller ID: 4042  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -8  
 Receipt Vacuum(in Hg): -8.5  
 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		Analyst
		RL	MDL		Results	RL		Analyzed		
Methyl tert-Butyl Ether (MTBE)	ND	0.035	0.0098		ND	0.13	0.702	9/17/12	2:26	TPH
Methylene Chloride	0.59	0.35	0.045	B	2.1	1.2	0.702	9/17/12	2:26	TPH
Methyl methacrylate	ND	0.035	0.011		ND	0.14	0.702	9/17/12	2:26	TPH
4-Methyl-2-pentanone (MIBK)	0.025	0.035	0.011	V-05, J	0.10	0.14	0.702	9/17/12	2:26	TPH
Propene	0.73	1.4	0.027	J	1.3	2.4	0.702	9/17/12	2:26	TPH
Styrene	0.029	0.035	0.0077	V-05, J	0.13	0.15	0.702	9/17/12	2:26	TPH
1,1,1,2-Tetrachloroethane	ND	0.064	0.023	L-03, V-05	ND	0.44	0.702	9/17/12	2:26	TPH
1,1,2,2-Tetrachloroethane	ND	0.035	0.012		ND	0.24	0.702	9/17/12	2:26	TPH
Tetrachloroethylene	0.13	0.035	0.011		0.87	0.24	0.702	9/17/12	2:26	TPH
Tetrahydrofuran	0.15	0.035	0.011		0.43	0.10	0.702	9/17/12	2:26	TPH
Toluene	0.21	0.035	0.0098		0.81	0.13	0.702	9/17/12	2:26	TPH
1,2,4-Trichlorobenzene	ND	0.070	0.013		ND	0.52	0.702	9/17/12	2:26	TPH
1,1,1-Trichloroethane	ND	0.035	0.012		ND	0.19	0.702	9/17/12	2:26	TPH
1,1,2-Trichloroethane	ND	0.035	0.011		ND	0.19	0.702	9/17/12	2:26	TPH
Trichloroethylene	0.017	0.035	0.0098	J	0.091	0.19	0.702	9/17/12	2:26	TPH
Trichlorofluoromethane (Freon 11)	0.27	0.035	0.022		1.5	0.20	0.702	9/17/12	2:26	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.076	0.035	0.012		0.59	0.27	0.702	9/17/12	2:26	TPH
1,2,4-Trimethylbenzene	0.052	0.035	0.012		0.26	0.17	0.702	9/17/12	2:26	TPH
1,3,5-Trimethylbenzene	0.032	0.035	0.011	J	0.16	0.17	0.702	9/17/12	2:26	TPH
Vinyl Acetate	ND	0.070	0.018		ND	0.25	0.702	9/17/12	2:26	TPH
Vinyl Chloride	ND	0.035	0.018		ND	0.090	0.702	9/17/12	2:26	TPH
m&p-Xylene	0.15	0.070	0.018		0.64	0.30	0.702	9/17/12	2:26	TPH
o-Xylene	0.072	0.035	0.0091		0.31	0.15	0.702	9/17/12	2:26	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	104	70-130	9/17/12 2:26
4-Bromofluorobenzene (2)	112	70-130	9/17/12 2:26

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: EW-5-091312**  
**Sample ID: 1210395-09**  
 Sample Matrix: Sub Slab  
 Sampled: 9/13/2012 09:46

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1454  
 Canister Size: 6 liter  
 Flow Controller ID: 4179  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -29  
 Final Vacuum(in Hg): -6  
 Receipt Vacuum(in Hg): -6  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv			Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL	MDL		Results	RL		Analized		
Acetone	280	4.0	0.46	B	670	9.5	2	9/17/12	16:17	TPH
Benzene	1.2	0.10	0.052		3.7	0.32	2	9/17/12	16:17	TPH
Benzyl chloride	ND	0.10	0.018		ND	0.52	2	9/17/12	16:17	TPH
Bromodichloromethane	ND	0.10	0.028		ND	0.67	2	9/17/12	16:17	TPH
Bromoform	ND	0.10	0.026		ND	1.0	2	9/17/12	16:17	TPH
Bromomethane	ND	0.10	0.096		ND	0.39	2	9/17/12	16:17	TPH
1,3-Butadiene	ND	0.10	0.058		ND	0.22	2	9/17/12	16:17	TPH
2-Butanone (MEK)	280	4.0	0.076		840	12	2	9/17/12	16:17	TPH
Carbon Disulfide	16	1.0	0.028		49	3.1	2	9/17/12	16:17	TPH
Carbon Tetrachloride	0.060	0.10	0.028	J	0.38	0.63	2	9/17/12	16:17	TPH
Chlorobenzene	ND	0.10	0.084		ND	0.46	2	9/17/12	16:17	TPH
Chloroethane	2.0	0.10	0.056		5.3	0.26	2	9/17/12	16:17	TPH
Chloroform	0.22	0.10	0.036		1.1	0.49	2	9/17/12	16:17	TPH
Chloromethane	ND	0.10	0.050		ND	0.21	2	9/17/12	16:17	TPH
Cyclohexane	ND	0.10	0.096		ND	0.34	2	9/17/12	16:17	TPH
Dibromochloromethane	ND	0.10	0.024		ND	0.85	2	9/17/12	16:17	TPH
1,2-Dibromoethane (EDB)	ND	0.10	0.028		ND	0.77	2	9/17/12	16:17	TPH
1,2-Dichlorobenzene	ND	0.10	0.052		ND	0.60	2	9/17/12	16:17	TPH
1,3-Dichlorobenzene	ND	0.10	0.028		ND	0.60	2	9/17/12	16:17	TPH
1,4-Dichlorobenzene	ND	0.10	0.026		ND	0.60	2	9/17/12	16:17	TPH
Dichlorodifluoromethane (Freon 12)	0.53	0.10	0.042		2.6	0.49	2	9/17/12	16:17	TPH
1,1-Dichloroethane	5.3	0.10	0.030		21	0.40	2	9/17/12	16:17	TPH
1,2-Dichloroethane	ND	0.10	0.034		ND	0.40	2	9/17/12	16:17	TPH
1,1-Dichloroethylene	1.7	0.10	0.032		6.9	0.40	2	9/17/12	16:17	TPH
cis-1,2-Dichloroethylene	3.6	0.10	0.028		14	0.40	2	9/17/12	16:17	TPH
trans-1,2-Dichloroethylene	0.046	0.10	0.034	J	0.18	0.40	2	9/17/12	16:17	TPH
1,2-Dichloropropane	ND	0.10	0.040		ND	0.46	2	9/17/12	16:17	TPH
cis-1,3-Dichloropropene	ND	0.10	0.020		ND	0.45	2	9/17/12	16:17	TPH
trans-1,3-Dichloropropene	ND	0.10	0.020		ND	0.45	2	9/17/12	16:17	TPH
Ethanol	54	4.0	0.47	L-03	100	7.5	2	9/17/12	16:17	TPH
Ethyl Acetate	8.2	0.10	0.052		30	0.36	2	9/17/12	16:17	TPH
Ethylbenzene	0.16	0.10	0.028		0.69	0.43	2	9/17/12	16:17	TPH
4-Ethyltoluene	0.036	0.10	0.036	J	0.18	0.49	2	9/17/12	16:17	TPH
Heptane	0.13	0.10	0.034		0.52	0.41	2	9/17/12	16:17	TPH
Hexachlorobutadiene	ND	0.10	0.036		ND	1.1	2	9/17/12	16:17	TPH
Hexane	0.57	4.0	0.088	J	2.0	14	2	9/17/12	16:17	TPH
2-Hexanone (MBK)	ND	0.10	0.030	V-05	ND	0.41	2	9/17/12	16:17	TPH
Isopropanol	4.5	4.0	0.060		11	9.8	2	9/17/12	16:17	TPH

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: EW-5-091312**  
**Sample ID: 1210395-09**  
 Sample Matrix: Sub Slab  
 Sampled: 9/13/2012 09:46

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1454  
 Canister Size: 6 liter  
 Flow Controller ID: 4179  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -29  
 Final Vacuum(in Hg): -6  
 Receipt Vacuum(in Hg): -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	0.10	0.028		ND	0.36	2	9/17/12 16:17	TPH
Methylene Chloride	0.73	1.0	0.13	J, B	2.5	3.5	2	9/17/12 16:17	TPH
Methyl methacrylate	ND	0.10	0.030		ND	0.41	2	9/17/12 16:17	TPH
4-Methyl-2-pentanone (MIBK)	0.084	0.10	0.030	V-05, J	0.34	0.41	2	9/17/12 16:17	TPH
Propene	2.3	4.0	0.076	J	3.9	6.9	2	9/17/12 16:17	TPH
Styrene	0.090	0.10	0.022	V-05, J	0.38	0.43	2	9/17/12 16:17	TPH
1,1,1,2-Tetrachloroethane	ND	0.18	0.066	L-03, V-05	ND	1.2	2	9/17/12 16:17	TPH
1,1,2,2-Tetrachloroethane	ND	0.10	0.034		ND	0.69	2	9/17/12 16:17	TPH
Tetrachloroethylene	0.31	0.10	0.030		2.1	0.68	2	9/17/12 16:17	TPH
Tetrahydrofuran	350	0.10	0.032		1000	0.29	2	9/17/12 16:17	TPH
Toluene	1.5	0.10	0.028		5.6	0.38	2	9/17/12 16:17	TPH
1,2,4-Trichlorobenzene	ND	0.20	0.038		ND	1.5	2	9/17/12 16:17	TPH
1,1,1-Trichloroethane	34	0.10	0.034		190	0.55	2	9/17/12 16:17	TPH
1,1,2-Trichloroethane	ND	0.10	0.032		ND	0.55	2	9/17/12 16:17	TPH
Trichloroethylene	75	0.10	0.028		400	0.54	2	9/17/12 16:17	TPH
Trichlorofluoromethane (Freon 11)	1.5	0.10	0.062		8.5	0.56	2	9/17/12 16:17	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.074	0.10	0.034	J	0.57	0.77	2	9/17/12 16:17	TPH
1,2,4-Trimethylbenzene	0.13	0.10	0.034		0.63	0.49	2	9/17/12 16:17	TPH
1,3,5-Trimethylbenzene	0.038	0.10	0.030	J	0.19	0.49	2	9/17/12 16:17	TPH
Vinyl Acetate	ND	0.20	0.050		ND	0.70	2	9/17/12 16:17	TPH
Vinyl Chloride	1.8	0.10	0.050		4.7	0.26	2	9/17/12 16:17	TPH
m&p-Xylene	0.44	0.20	0.052		1.9	0.87	2	9/17/12 16:17	TPH
o-Xylene	0.17	0.10	0.026		0.73	0.43	2	9/17/12 16:17	TPH

Surrogates	% Recovery	% REC Limits	Date/Time Analyzed
4-Bromofluorobenzene (1)	107	70-130	9/17/12 16:17
4-Bromofluorobenzene (2)	116	70-130	9/17/12 16:17

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: EW-6-091312**  
**Sample ID: 1210395-10**  
 Sample Matrix: Sub Slab  
 Sampled: 9/13/2012 09:53

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1644  
 Canister Size: 6 liter  
 Flow Controller ID: 4180  
 Sample Type: 30 min

**Work Order: 1210395**  
 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	ppbv			Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL	MDL		Results	RL		Analyzed		
Acetone	11	4.0	0.46	B	25	9.5	2	9/17/12	14:58	TPH
Benzene	0.24	0.10	0.052		0.77	0.32	2	9/17/12	14:58	TPH
Benzyl chloride	ND	0.10	0.018		ND	0.52	2	9/17/12	14:58	TPH
Bromodichloromethane	ND	0.10	0.028		ND	0.67	2	9/17/12	14:58	TPH
Bromoform	ND	0.10	0.026		ND	1.0	2	9/17/12	14:58	TPH
Bromomethane	ND	0.10	0.096		ND	0.39	2	9/17/12	14:58	TPH
1,3-Butadiene	ND	0.10	0.058		ND	0.22	2	9/17/12	14:58	TPH
2-Butanone (MEK)	1.3	4.0	0.076	J	3.7	12	2	9/17/12	14:58	TPH
Carbon Disulfide	ND	1.0	0.028		ND	3.1	2	9/17/12	14:58	TPH
Carbon Tetrachloride	0.064	0.10	0.028	J	0.40	0.63	2	9/17/12	14:58	TPH
Chlorobenzene	ND	0.10	0.084		ND	0.46	2	9/17/12	14:58	TPH
Chloroethane	ND	0.10	0.056		ND	0.26	2	9/17/12	14:58	TPH
Chloroform	0.042	0.10	0.036	J	0.21	0.49	2	9/17/12	14:58	TPH
Chloromethane	0.65	0.10	0.050		1.3	0.21	2	9/17/12	14:58	TPH
Cyclohexane	0.14	0.10	0.096		0.49	0.34	2	9/17/12	14:58	TPH
Dibromochloromethane	ND	0.10	0.024		ND	0.85	2	9/17/12	14:58	TPH
1,2-Dibromoethane (EDB)	ND	0.10	0.028		ND	0.77	2	9/17/12	14:58	TPH
1,2-Dichlorobenzene	ND	0.10	0.052		ND	0.60	2	9/17/12	14:58	TPH
1,3-Dichlorobenzene	ND	0.10	0.028		ND	0.60	2	9/17/12	14:58	TPH
1,4-Dichlorobenzene	ND	0.10	0.026		ND	0.60	2	9/17/12	14:58	TPH
Dichlorodifluoromethane (Freon 12)	0.58	0.10	0.042		2.9	0.49	2	9/17/12	14:58	TPH
1,1-Dichloroethane	ND	0.10	0.030		ND	0.40	2	9/17/12	14:58	TPH
1,2-Dichloroethane	ND	0.10	0.034		ND	0.40	2	9/17/12	14:58	TPH
1,1-Dichloroethylene	ND	0.10	0.032		ND	0.40	2	9/17/12	14:58	TPH
cis-1,2-Dichloroethylene	ND	0.10	0.028		ND	0.40	2	9/17/12	14:58	TPH
trans-1,2-Dichloroethylene	ND	0.10	0.034		ND	0.40	2	9/17/12	14:58	TPH
1,2-Dichloropropane	ND	0.10	0.040		ND	0.46	2	9/17/12	14:58	TPH
cis-1,3-Dichloropropene	ND	0.10	0.020		ND	0.45	2	9/17/12	14:58	TPH
trans-1,3-Dichloropropene	ND	0.10	0.020		ND	0.45	2	9/17/12	14:58	TPH
Ethanol	36	4.0	0.47	L-03	68	7.5	2	9/17/12	14:58	TPH
Ethyl Acetate	6.8	0.10	0.052		24	0.36	2	9/17/12	14:58	TPH
Ethylbenzene	0.15	0.10	0.028		0.66	0.43	2	9/17/12	14:58	TPH
4-Ethyltoluene	0.056	0.10	0.036	J	0.28	0.49	2	9/17/12	14:58	TPH
Heptane	ND	0.10	0.034		ND	0.41	2	9/17/12	14:58	TPH
Hexachlorobutadiene	ND	0.10	0.036		ND	1.1	2	9/17/12	14:58	TPH
Hexane	2.2	4.0	0.088	J	7.6	14	2	9/17/12	14:58	TPH
2-Hexanone (MBK)	0.13	0.10	0.030	V-05	0.52	0.41	2	9/17/12	14:58	TPH
Isopropanol	3.1	4.0	0.060	J	7.6	9.8	2	9/17/12	14:58	TPH

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: EW-6-091312**  
**Sample ID: 1210395-10**  
 Sample Matrix: Sub Slab  
 Sampled: 9/13/2012 09:53

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1644  
 Canister Size: 6 liter  
 Flow Controller ID: 4180  
 Sample Type: 30 min

**Work Order: 1210395**  
 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	ppbv			Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL	MDL		Results	RL			
Methyl tert-Butyl Ether (MTBE)	0.036	0.10	0.028	J	0.13	0.36	2	9/17/12 14:58	TPH
Methylene Chloride	3.9	1.0	0.13	B	14	3.5	2	9/17/12 14:58	TPH
Methyl methacrylate	ND	0.10	0.030		ND	0.41	2	9/17/12 14:58	TPH
4-Methyl-2-pentanone (MIBK)	ND	0.10	0.030	V-05	ND	0.41	2	9/17/12 14:58	TPH
Propene	ND	4.0	0.076		ND	6.9	2	9/17/12 14:58	TPH
Styrene	0.082	0.10	0.022	V-05, J	0.35	0.43	2	9/17/12 14:58	TPH
1,1,1,2-Tetrachloroethane	ND	0.18	0.066	L-03, V-05	ND	1.2	2	9/17/12 14:58	TPH
1,1,2,2-Tetrachloroethane	ND	0.10	0.034		ND	0.69	2	9/17/12 14:58	TPH
Tetrachloroethylene	0.13	0.10	0.030		0.88	0.68	2	9/17/12 14:58	TPH
Tetrahydrofuran	ND	0.10	0.032		ND	0.29	2	9/17/12 14:58	TPH
Toluene	1.4	0.10	0.028		5.3	0.38	2	9/17/12 14:58	TPH
1,2,4-Trichlorobenzene	ND	0.20	0.038		ND	1.5	2	9/17/12 14:58	TPH
1,1,1-Trichloroethane	ND	0.10	0.034		ND	0.55	2	9/17/12 14:58	TPH
1,1,2-Trichloroethane	ND	0.10	0.032		ND	0.55	2	9/17/12 14:58	TPH
Trichloroethylene	0.040	0.10	0.028	J	0.21	0.54	2	9/17/12 14:58	TPH
Trichlorofluoromethane (Freon 11)	0.35	0.10	0.062		2.0	0.56	2	9/17/12 14:58	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.078	0.10	0.034	J	0.60	0.77	2	9/17/12 14:58	TPH
1,2,4-Trimethylbenzene	0.12	0.10	0.034		0.60	0.49	2	9/17/12 14:58	TPH
1,3,5-Trimethylbenzene	ND	0.10	0.030		ND	0.49	2	9/17/12 14:58	TPH
Vinyl Acetate	ND	0.20	0.050		ND	0.70	2	9/17/12 14:58	TPH
Vinyl Chloride	ND	0.10	0.050		ND	0.26	2	9/17/12 14:58	TPH
m&p-Xylene	0.43	0.20	0.052		1.9	0.87	2	9/17/12 14:58	TPH
o-Xylene	0.17	0.10	0.026		0.73	0.43	2	9/17/12 14:58	TPH

Surrogates	% Recovery	% REC Limits	Date/Time Analyzed
4-Bromofluorobenzene (1)	103	70-130	9/17/12 14:58
4-Bromofluorobenzene (2)	112	70-130	9/17/12 14:58

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: EW-7-091312**  
**Sample ID: 1210395-11**  
 Sample Matrix: Sub Slab  
 Sampled: 9/13/2012 10:50

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1032  
 Canister Size: 6 liter  
 Flow Controller ID: 4171  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -6  
 Receipt Vacuum(in Hg): -6.5  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv			Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL	MDL		Results	RL		Analyzed		
Acetone	7.0	4.0	0.46	B	17	9.5	2	9/17/12	14:17	TPH
Benzene	0.38	0.10	0.052		1.2	0.32	2	9/17/12	14:17	TPH
Benzyl chloride	ND	0.10	0.018		ND	0.52	2	9/17/12	14:17	TPH
Bromodichloromethane	ND	0.10	0.028		ND	0.67	2	9/17/12	14:17	TPH
Bromoform	ND	0.10	0.026		ND	1.0	2	9/17/12	14:17	TPH
Bromomethane	ND	0.10	0.096		ND	0.39	2	9/17/12	14:17	TPH
1,3-Butadiene	ND	0.10	0.058		ND	0.22	2	9/17/12	14:17	TPH
2-Butanone (MEK)	1.2	4.0	0.076	J	3.6	12	2	9/17/12	14:17	TPH
Carbon Disulfide	ND	1.0	0.028		ND	3.1	2	9/17/12	14:17	TPH
Carbon Tetrachloride	0.052	0.10	0.028	J	0.33	0.63	2	9/17/12	14:17	TPH
Chlorobenzene	ND	0.10	0.084		ND	0.46	2	9/17/12	14:17	TPH
Chloroethane	ND	0.10	0.056		ND	0.26	2	9/17/12	14:17	TPH
Chloroform	0.83	0.10	0.036		4.1	0.49	2	9/17/12	14:17	TPH
Chloromethane	ND	0.10	0.050		ND	0.21	2	9/17/12	14:17	TPH
Cyclohexane	ND	0.10	0.096		ND	0.34	2	9/17/12	14:17	TPH
Dibromochloromethane	ND	0.10	0.024		ND	0.85	2	9/17/12	14:17	TPH
1,2-Dibromoethane (EDB)	ND	0.10	0.028		ND	0.77	2	9/17/12	14:17	TPH
1,2-Dichlorobenzene	ND	0.10	0.052		ND	0.60	2	9/17/12	14:17	TPH
1,3-Dichlorobenzene	ND	0.10	0.028		ND	0.60	2	9/17/12	14:17	TPH
1,4-Dichlorobenzene	ND	0.10	0.026		ND	0.60	2	9/17/12	14:17	TPH
Dichlorodifluoromethane (Freon 12)	ND	0.10	0.042		ND	0.49	2	9/17/12	14:17	TPH
1,1-Dichloroethane	26	0.10	0.030		100	0.40	2	9/17/12	14:17	TPH
1,2-Dichloroethane	ND	0.10	0.034		ND	0.40	2	9/17/12	14:17	TPH
1,1-Dichloroethylene	ND	0.10	0.032		ND	0.40	2	9/17/12	14:17	TPH
cis-1,2-Dichloroethylene	29	0.10	0.028		120	0.40	2	9/17/12	14:17	TPH
trans-1,2-Dichloroethylene	11	0.10	0.034		45	0.40	2	9/17/12	14:17	TPH
1,2-Dichloropropane	ND	0.10	0.040		ND	0.46	2	9/17/12	14:17	TPH
cis-1,3-Dichloropropene	ND	0.10	0.020		ND	0.45	2	9/17/12	14:17	TPH
trans-1,3-Dichloropropene	ND	0.10	0.020		ND	0.45	2	9/17/12	14:17	TPH
Ethanol	72	4.0	0.47	L-03	140	7.5	2	9/17/12	14:17	TPH
Ethyl Acetate	ND	0.10	0.052		ND	0.36	2	9/17/12	14:17	TPH
Ethylbenzene	0.11	0.10	0.028		0.47	0.43	2	9/17/12	14:17	TPH
4-Ethyltoluene	0.042	0.10	0.036	J	0.21	0.49	2	9/17/12	14:17	TPH
Heptane	0.18	0.10	0.034		0.75	0.41	2	9/17/12	14:17	TPH
Hexachlorobutadiene	ND	0.10	0.036		ND	1.1	2	9/17/12	14:17	TPH
Hexane	ND	4.0	0.088		ND	14	2	9/17/12	14:17	TPH
2-Hexanone (MBK)	0.16	0.10	0.030	V-05	0.64	0.41	2	9/17/12	14:17	TPH
Isopropanol	ND	4.0	0.060		ND	9.8	2	9/17/12	14:17	TPH

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
 Field Sample #: EW-7-091312  
 Sample ID: 1210395-11  
 Sample Matrix: Sub Slab  
 Sampled: 9/13/2012 10:50

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1032  
 Canister Size: 6 liter  
 Flow Controller ID: 4171  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -6  
 Receipt Vacuum(in Hg): -6.5  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
		RL	MDL		Results	RL		Analized		
Methyl tert-Butyl Ether (MTBE)	ND	0.10	0.028		ND	0.36	2	9/17/12 14:17	TPH	
Methylene Chloride	1.5	1.0	0.13	B	5.4	3.5	2	9/17/12 14:17	TPH	
Methyl methacrylate	ND	0.10	0.030		ND	0.41	2	9/17/12 14:17	TPH	
4-Methyl-2-pentanone (MIBK)	0.076	0.10	0.030	V-05, J	0.31	0.41	2	9/17/12 14:17	TPH	
Propene	ND	4.0	0.076		ND	6.9	2	9/17/12 14:17	TPH	
Styrene	0.096	0.10	0.022	V-05, J	0.41	0.43	2	9/17/12 14:17	TPH	
1,1,1,2-Tetrachloroethane	ND	0.18	0.066	L-03, V-05	ND	1.2	2	9/17/12 14:17	TPH	
1,1,2,2-Tetrachloroethane	ND	0.10	0.034		ND	0.69	2	9/17/12 14:17	TPH	
Tetrachloroethylene	29	0.10	0.030		200	0.68	2	9/17/12 14:17	TPH	
Tetrahydrofuran	0.38	0.10	0.032		1.1	0.29	2	9/17/12 14:17	TPH	
Toluene	0.52	0.10	0.028		1.9	0.38	2	9/17/12 14:17	TPH	
1,2,4-Trichlorobenzene	ND	0.20	0.038		ND	1.5	2	9/17/12 14:17	TPH	
1,1,1-Trichloroethane	17	0.10	0.034		95	0.55	2	9/17/12 14:17	TPH	
1,1,2-Trichloroethane	ND	0.10	0.032		ND	0.55	2	9/17/12 14:17	TPH	
Trichloroethylene	85	1.0	0.28		450	5.4	20	9/17/12 4:23	TPH	
Trichlorofluoromethane (Freon 11)	350	1.0	0.62		2000	5.6	20	9/17/12 4:23	TPH	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.074	0.10	0.034	J	0.57	0.77	2	9/17/12 14:17	TPH	
1,2,4-Trimethylbenzene	0.20	0.10	0.034		0.97	0.49	2	9/17/12 14:17	TPH	
1,3,5-Trimethylbenzene	0.10	0.10	0.030		0.50	0.49	2	9/17/12 14:17	TPH	
Vinyl Acetate	ND	0.20	0.050		ND	0.70	2	9/17/12 14:17	TPH	
Vinyl Chloride	ND	0.10	0.050		ND	0.26	2	9/17/12 14:17	TPH	
m&p-Xylene	0.29	0.20	0.052		1.3	0.87	2	9/17/12 14:17	TPH	
o-Xylene	0.12	0.10	0.026		0.52	0.43	2	9/17/12 14:17	TPH	

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	104	70-130	9/17/12 4:23
4-Bromofluorobenzene (1)	113	70-130	9/17/12 14:17
4-Bromofluorobenzene (2)	120	70-130	9/17/12 14:17

**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: EW-Combined-091312**  
**Sample ID: 1210395-12**  
 Sample Matrix: Sub Slab  
 Sampled: 9/13/2012 11:32

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1456  
 Canister Size: 6 liter  
 Flow Controller ID: 4178  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -6  
 Receipt Vacuum(in Hg): -6.5  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv			Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL	MDL		Results	RL		Analized		
Acetone	5.7	4.0	0.46	B	14	9.5	2	9/17/12	13:36	TPH
Benzene	0.30	0.10	0.052		0.96	0.32	2	9/17/12	13:36	TPH
Benzyl chloride	ND	0.10	0.018		ND	0.52	2	9/17/12	13:36	TPH
Bromodichloromethane	ND	0.10	0.028		ND	0.67	2	9/17/12	13:36	TPH
Bromoform	ND	0.10	0.026		ND	1.0	2	9/17/12	13:36	TPH
Bromomethane	ND	0.10	0.096		ND	0.39	2	9/17/12	13:36	TPH
1,3-Butadiene	ND	0.10	0.058		ND	0.22	2	9/17/12	13:36	TPH
2-Butanone (MEK)	5.4	4.0	0.076		16	12	2	9/17/12	13:36	TPH
Carbon Disulfide	1.2	1.0	0.028		3.6	3.1	2	9/17/12	13:36	TPH
Carbon Tetrachloride	0.12	0.10	0.028		0.74	0.63	2	9/17/12	13:36	TPH
Chlorobenzene	ND	0.10	0.084		ND	0.46	2	9/17/12	13:36	TPH
Chloroethane	2.0	0.10	0.056		5.3	0.26	2	9/17/12	13:36	TPH
Chloroform	1.7	0.10	0.036		8.5	0.49	2	9/17/12	13:36	TPH
Chloromethane	ND	0.10	0.050		ND	0.21	2	9/17/12	13:36	TPH
Cyclohexane	ND	0.10	0.096		ND	0.34	2	9/17/12	13:36	TPH
Dibromochloromethane	ND	0.10	0.024		ND	0.85	2	9/17/12	13:36	TPH
1,2-Dibromoethane (EDB)	ND	0.10	0.028		ND	0.77	2	9/17/12	13:36	TPH
1,2-Dichlorobenzene	ND	0.10	0.052		ND	0.60	2	9/17/12	13:36	TPH
1,3-Dichlorobenzene	ND	0.10	0.028		ND	0.60	2	9/17/12	13:36	TPH
1,4-Dichlorobenzene	ND	0.10	0.026		ND	0.60	2	9/17/12	13:36	TPH
Dichlorodifluoromethane (Freon 12)	0.58	0.10	0.042		2.9	0.49	2	9/17/12	13:36	TPH
1,1-Dichloroethane	50	0.10	0.030		200	0.40	2	9/17/12	13:36	TPH
1,2-Dichloroethane	ND	0.10	0.034		ND	0.40	2	9/17/12	13:36	TPH
1,1-Dichloroethylene	3.7	0.10	0.032		15	0.40	2	9/17/12	13:36	TPH
cis-1,2-Dichloroethylene	37	0.10	0.028		150	0.40	2	9/17/12	13:36	TPH
trans-1,2-Dichloroethylene	0.48	0.10	0.034		1.9	0.40	2	9/17/12	13:36	TPH
1,2-Dichloropropane	ND	0.10	0.040		ND	0.46	2	9/17/12	13:36	TPH
cis-1,3-Dichloropropene	ND	0.10	0.020		ND	0.45	2	9/17/12	13:36	TPH
trans-1,3-Dichloropropene	ND	0.10	0.020		ND	0.45	2	9/17/12	13:36	TPH
Ethanol	6.4	4.0	0.47	L-03	12	7.5	2	9/17/12	13:36	TPH
Ethyl Acetate	ND	0.10	0.052		ND	0.36	2	9/17/12	13:36	TPH
Ethylbenzene	0.048	0.10	0.028	J	0.21	0.43	2	9/17/12	13:36	TPH
4-Ethyltoluene	ND	0.10	0.036		ND	0.49	2	9/17/12	13:36	TPH
Heptane	ND	0.10	0.034		ND	0.41	2	9/17/12	13:36	TPH
Hexachlorobutadiene	ND	0.10	0.036		ND	1.1	2	9/17/12	13:36	TPH
Hexane	0.43	4.0	0.088	J	1.5	14	2	9/17/12	13:36	TPH
2-Hexanone (MBK)	ND	0.10	0.030	V-05	ND	0.41	2	9/17/12	13:36	TPH
Isopropanol	1.2	4.0	0.060	J	2.9	9.8	2	9/17/12	13:36	TPH



**ANALYTICAL RESULTS**

Project Location: Providence, RI  
 Date Received: 9/13/2012  
**Field Sample #: EW-Combined-091312**  
**Sample ID: 1210395-12**  
 Sample Matrix: Sub Slab  
 Sampled: 9/13/2012 11:32

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1456  
 Canister Size: 6 liter  
 Flow Controller ID: 4178  
 Sample Type: 30 min

**Work Order: 1210395**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -6  
 Receipt Vacuum(in Hg): -6.5  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	Results	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
		RL	MDL		Results	RL		Analyzed		
Methyl tert-Butyl Ether (MTBE)	0.048	0.10	0.028	J	0.17	0.36	2	9/17/12	13:36	TPH
Methylene Chloride	0.64	1.0	0.13	J, B	2.2	3.5	2	9/17/12	13:36	TPH
Methyl methacrylate	ND	0.10	0.030		ND	0.41	2	9/17/12	13:36	TPH
4-Methyl-2-pentanone (MIBK)	ND	0.10	0.030	V-05	ND	0.41	2	9/17/12	13:36	TPH
Propene	ND	4.0	0.076		ND	6.9	2	9/17/12	13:36	TPH
Styrene	0.092	0.10	0.022	V-05, J	0.39	0.43	2	9/17/12	13:36	TPH
1,1,1,2-Tetrachloroethane	ND	0.18	0.066	L-03, V-05	ND	1.2	2	9/17/12	13:36	TPH
1,1,2,2-Tetrachloroethane	ND	0.10	0.034		ND	0.69	2	9/17/12	13:36	TPH
Tetrachloroethylene	130	1.0	0.30		910	6.8	20	9/17/12	5:02	TPH
Tetrahydrofuran	38	0.10	0.032		110	0.29	2	9/17/12	13:36	TPH
Toluene	0.23	0.10	0.028		0.87	0.38	2	9/17/12	13:36	TPH
1,2,4-Trichlorobenzene	ND	0.20	0.038		ND	1.5	2	9/17/12	13:36	TPH
1,1,1-Trichloroethane	520	1.0	0.34		2800	5.5	20	9/17/12	5:02	TPH
1,1,2-Trichloroethane	0.048	0.10	0.032	J	0.26	0.55	2	9/17/12	13:36	TPH
Trichloroethylene	480	1.0	0.28		2600	5.4	20	9/17/12	5:02	TPH
Trichlorofluoromethane (Freon 11)	18	0.10	0.062		100	0.56	2	9/17/12	13:36	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.048	0.10	0.034	J	0.37	0.77	2	9/17/12	13:36	TPH
1,2,4-Trimethylbenzene	0.048	0.10	0.034	J	0.24	0.49	2	9/17/12	13:36	TPH
1,3,5-Trimethylbenzene	ND	0.10	0.030		ND	0.49	2	9/17/12	13:36	TPH
Vinyl Acetate	ND	0.20	0.050		ND	0.70	2	9/17/12	13:36	TPH
Vinyl Chloride	ND	0.10	0.050		ND	0.26	2	9/17/12	13:36	TPH
m&p-Xylene	0.14	0.20	0.052	J	0.59	0.87	2	9/17/12	13:36	TPH
o-Xylene	0.058	0.10	0.026	J	0.25	0.43	2	9/17/12	13:36	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	101	70-130	9/17/12 5:02
4-Bromofluorobenzene (1)	101	70-130	9/17/12 13:36
4-Bromofluorobenzene (2)	108	70-130	9/17/12 13:36

**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
12I0395-01 [IA-1-091312]	B059064	1	1	N/A	1000	400	570	09/16/12
12I0395-02 [IA-2-091312]	B059064	1	1	N/A	1000	400	570	09/16/12
12I0395-03 [IA-3-091312]	B059064	1	1	N/A	1000	400	570	09/16/12
12I0395-04 [IA-4-091312]	B059064	1	1	N/A	1000	400	570	09/16/12
12I0395-05 [IA-5-091312]	B059064	1	1	N/A	1000	400	570	09/16/12
12I0395-06 [IA-6-091312]	B059064	1	1	N/A	1000	400	570	09/16/12
12I0395-07 [IA-7-091312]	B059064	1	1	N/A	1000	400	570	09/16/12
12I0395-08 [AA-1-091312]	B059064	1	1	N/A	1000	400	570	09/16/12
12I0395-09 [EW-5-091312]	B059064	2	1	N/A	1000	400	400	09/16/12
12I0395-10 [EW-6-091312]	B059064	2	1	N/A	1000	400	400	09/16/12
12I0395-11 [EW-7-091312]	B059064	2	1	N/A	1000	400	400	09/16/12
12I0395-11RE1 [EW-7-091312]	B059064	2	1	N/A	1000	400	40	09/16/12
12I0395-12 [EW-Combined-091312]	B059064	2	1	N/A	1000	400	400	09/16/12
12I0395-12RE1 [EW-Combined-091312]	B059064	2	1	N/A	1000	400	40	09/16/12

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	RPD	RPD	Flag
	Results	RL	Results	RL	ppbv	Result	%REC	RPD	Limit	
<b>Batch B059064 - TO-15 Prep</b>										
<b>Blank (B059064-BLK1)</b>										
Prepared & Analyzed: 09/16/12										
Acetone	1.1	1.0								B
Benzene	ND	0.025								
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)	0.15	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	0.025								
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								
cis-1,3-Dichloropropene	ND	0.025								
trans-1,3-Dichloropropene	ND	0.025								
Ethanol	ND	1.0								L-03
Ethyl Acetate	ND	0.025								
Ethylbenzene	ND	0.025								
4-Ethyltoluene	ND	0.025								
Heptane	ND	0.025								
Hexachlorobutadiene	ND	0.025								
Hexane	0.092	1.0								J
2-Hexanone (MBK)	ND	0.025								V-05
Isopropanol	0.052	1.0								J
Methyl tert-Butyl Ether (MTBE)	ND	0.025								
Methylene Chloride	0.36	0.25								B
Methyl methacrylate	ND	0.025								
4-Methyl-2-pentanone (MIBK)	ND	0.025								V-05
Propene	ND	1.0								
Styrene	ND	0.025								V-05
1,1,1,2-Tetrachloroethane	ND	0.046								L-03, V-05
1,1,1,2,2-Tetrachloroethane	ND	0.025								

**QUALITY CONTROL**

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

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit		

**Batch B059064 - TO-15 Prep**

**Blank (B059064-BLK1)**

Prepared & Analyzed: 09/16/12

Tetrachloroethylene	ND	0.025									
Tetrahydrofuran	ND	0.025									
Toluene	ND	0.025									
1,2,4-Trichlorobenzene	ND	0.050									
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	0.050									
Vinyl Chloride	ND	0.025									
m&p-Xylene	ND	0.050									
o-Xylene	ND	0.025									
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	8.25				8.00		103	70-130			
<i>Surrogate: 4-Bromofluorobenzene (2)</i>	8.77				8.00		110	70-130			

**LCS (B059064-BS1)**

Prepared & Analyzed: 09/16/12

Acetone	5.95				5.00		119	70-130			B
Benzene	3.82				5.00		76.4	70-130			
Benzyl chloride	5.23				5.00		105	70-130			
Bromodichloromethane	4.18				5.00		83.6	70-130			
Bromoform	5.06				5.00		101	70-130			
Bromomethane	5.64				5.00		113	70-130			
1,3-Butadiene	5.02				5.00		100	70-130			
2-Butanone (MEK)	4.70				5.00		94.1	70-130			
Carbon Disulfide	3.92				5.00		78.4	70-130			
Carbon Tetrachloride	4.25				5.00		85.0	70-130			
Chlorobenzene	4.24				5.00		84.9	70-130			
Chloroethane	5.46				5.00		109	70-130			
Chloroform	4.47				5.00		89.4	70-130			
Chloromethane	4.90				5.00		97.9	70-130			
Cyclohexane	3.78				5.00		75.7	70-130			
Dibromochloromethane	4.78				5.00		95.6	70-130			
1,2-Dibromoethane (EDB)	4.46				5.00		89.2	70-130			
1,2-Dichlorobenzene	4.30				5.00		86.1	70-130			
1,3-Dichlorobenzene	4.45				5.00		89.1	70-130			
1,4-Dichlorobenzene	4.36				5.00		87.2	70-130			
Dichlorodifluoromethane (Freon 12)	5.15				5.00		103	70-130			
1,1-Dichloroethane	4.14				5.00		82.9	70-130			
1,2-Dichloroethane	4.24				5.00		84.7	70-130			
1,1-Dichloroethylene	4.05				5.00		81.1	70-130			
cis-1,2-Dichloroethylene	4.26				5.00		85.2	70-130			
trans-1,2-Dichloroethylene	3.96				5.00		79.1	70-130			
1,2-Dichloropropane	3.88				5.00		77.5	70-130			

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit		
<b>Batch B059064 - TO-15 Prep</b>											
<b>LCS (B059064-BS1)</b>											
Prepared & Analyzed: 09/16/12											
cis-1,3-Dichloropropene	4.40				5.00		87.9	70-130			
trans-1,3-Dichloropropene	4.08				5.00		81.7	70-130			
Ethanol	3.42				5.00		<b>68.4</b> *	70-130			L-03
Ethyl Acetate	4.16				5.00		83.2	70-130			
Ethylbenzene	4.38				5.00		87.5	70-130			
4-Ethyltoluene	4.46				5.00		89.1	70-130			
Heptane	3.89				5.00		77.8	70-130			
Hexachlorobutadiene	3.83				5.00		76.7	70-130			
Hexane	4.38				5.00		87.7	70-130			
2-Hexanone (MBK)	3.89				5.00		77.8	70-130			V-05
Isopropanol	4.40				5.00		88.1	70-130			
Methyl tert-Butyl Ether (MTBE)	4.43				5.00		88.5	70-130			
Methylene Chloride	4.16				5.00		83.3	70-130			B
Methyl methacrylate	4.35				5.00		87.0	70-130			
4-Methyl-2-pentanone (MIBK)	3.72				5.00		74.3	70-130			V-05
Propene	4.87				5.00		97.3	70-130			
Styrene	4.52				5.00		90.4	70-130			V-05
1,1,1,2-Tetrachloroethane	0.460				0.910		<b>50.5</b> *	70-130			L-03, V-05
1,1,2,2-Tetrachloroethane	4.48				5.00		89.6	70-130			
Tetrachloroethylene	4.28				5.00		85.5	70-130			
Tetrahydrofuran	4.47				5.00		89.5	70-130			
Toluene	4.26				5.00		85.2	70-130			
1,2,4-Trichlorobenzene	4.39				5.00		87.7	70-130			
1,1,1-Trichloroethane	4.06				5.00		81.3	70-130			
1,1,2-Trichloroethane	4.32				5.00		86.5	70-130			
Trichloroethylene	4.10				5.00		81.9	70-130			
Trichlorofluoromethane (Freon 11)	5.50				5.00		110	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	4.36				5.00		87.1	70-130			
1,2,4-Trimethylbenzene	4.49				5.00		89.8	70-130			
1,3,5-Trimethylbenzene	4.48				5.00		89.5	70-130			
Vinyl Acetate	4.42				5.00		88.3	70-130			
Vinyl Chloride	5.22				5.00		104	70-130			
m&p-Xylene	9.04				10.0		90.4	70-130			
o-Xylene	4.56				5.00		91.3	70-130			
Surrogate: 4-Bromofluorobenzene (1)	8.46				8.00		106	70-130			
Surrogate: 4-Bromofluorobenzene (2)	7.64				8.00		95.5	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.
- B Analyte is found in the associated blank as well as in the sample.
  - 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
<i>EPA TO-15 in Air</i>	
Acetone	AIHA
Benzene	AIHA,FL,NJ,NY
Benzyl chloride	AIHA,FL,NJ,NY
Bromodichloromethane	AIHA,NJ
Bromoform	AIHA,NJ
Bromomethane	AIHA,FL,NJ,NY
1,3-Butadiene	AIHA,NJ
2-Butanone (MEK)	AIHA,FL,NJ,NY
Carbon Disulfide	AIHA,NJ
Carbon Tetrachloride	AIHA,FL,NJ,NY
Chlorobenzene	AIHA,FL,NJ,NY
Chloroethane	AIHA,FL,NJ,NY
Chloroform	AIHA,FL,NJ,NY
Chloromethane	AIHA,FL,NJ,NY
Cyclohexane	AIHA,NJ
Dibromochloromethane	AIHA,NY
1,2-Dibromoethane (EDB)	AIHA,NJ,NY
1,2-Dichlorobenzene	AIHA,FL,NJ,NY
1,3-Dichlorobenzene	AIHA,NJ,NY
1,4-Dichlorobenzene	AIHA,FL,NJ,NY
Dichlorodifluoromethane (Freon 12)	AIHA,NY
1,1-Dichloroethane	AIHA,FL,NJ,NY
1,2-Dichloroethane	AIHA,FL,NJ,NY
1,1-Dichloroethylene	AIHA,FL,NJ,NY
cis-1,2-Dichloroethylene	AIHA,FL,NY
trans-1,2-Dichloroethylene	AIHA,NJ,NY
1,2-Dichloropropane	AIHA,FL,NJ,NY
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY
trans-1,3-Dichloropropene	AIHA,NY
Ethanol	AIHA
Ethyl Acetate	AIHA
Ethylbenzene	AIHA,FL,NJ,NY
4-Ethyltoluene	AIHA,NJ
Heptane	AIHA,NJ,NY
Hexachlorobutadiene	AIHA,NJ,NY
Hexane	AIHA,FL,NJ,NY
2-Hexanone (MBK)	AIHA
Isopropanol	AIHA,NY
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY
Methylene Chloride	AIHA,FL,NJ,NY
Methyl methacrylate	AIHA,NJ
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY
Propene	AIHA
Styrene	AIHA,FL,NJ,NY
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY
Tetrachloroethylene	AIHA,FL,NJ,NY
Tetrahydrofuran	AIHA

**CERTIFICATIONS**

**Certified Analyses included in this Report**

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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2013
CT	Connecticut Department of Public Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2013
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2013
RI	Rhode Island Department of Health	LAO00112	12/30/2012
NC	North Carolina Div. of Water Quality	652	12/31/2012
NJ	New Jersey DEP	MA007 NELAP	06/30/2013
FL	Florida Department of Health	E871027 NELAP	06/30/2013
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2013
WA	State of Washington Department of Ecology	C2065	02/23/2013
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	1381	12/14/2012







Phone: 413-525-2332  
 Fax: 413-525-6405  
 Email: info@contestlabs.com  
 www.contestlabs.com

**AIR SAMPLE CHAIN OF CUSTODY RECORD**

39 SPRUCE ST  
 EAST LONGMEADOW, MA 01028

Company Name: AMEC  
 Address: 107 Audubon Rd. Suite 301  
Wakefield, MA 01880

Attention: Kelly Chatterton

Project Location: Providence, RI  
 Sampled By: Mark Maggs, Inc

Proposal Provided? (For Billing purposes)

Telephone: (771) 245-6666  
 Project # 3650080114  
 Client PO # CO126000896

DATA DELIVERY (check one):  
 FAX  EMAIL  WEBSITE CLIENT

Fax #: \_\_\_\_\_  
 Email: Kelly.Chatterton@Amec.com  
 Format:  EXCEL  PDF  GIS KEY  OTHER

1250395  
12E0402

ANALYSIS REQUESTED	"Hg	Please fill out completely, sign, date and retain the yellow copy for your record
	Initials	Summa canisters are flow controllers must be returned within 14 days of receipt or rental fee will apply.
	Final	Summa canisters will be retained for a minimum of 14 days after sampling date prior to cleaning.

Field ID	Sample Description	Media	Lab #	Date Sampled		Total Minutes Sampled	Flow Rate M <sup>3</sup> /Min. or L/Min.	Volume Liters or M <sup>3</sup>	Matrix Code*	Summa Canister ID	Flow Controller ID
				Start Date/Time	Stop Date/Time						
	EW-5-091312	S	<del>09</del> 09	9/13/12 0916	9/13/12 0946	30	0.2	6	SS	1454	4179
	EW-6-091312	S	<del>10</del> 11	9/13/12 0923	9/13/12 1050	30	0.2	6	SS	1644	4180
	EW-7-091312	S	<del>09</del> 12	9/13/12 1040	9/13/12 1132	30	0.2	6	SS	1456	4178

Laboratory Comments:

CLIENT COMMENTS:

**Turnaround \*\***

7-Day  
 10-Day  
 Other \_\_\_\_\_  
**RUSH \***  
 \*24-Hr  \*48-Hr  
 \*72-Hr  \*4-Day  
 \*Approval Required

**Special Requirements**

Regulations: CT Target Indoor  
 Data Enhancement/RCP?  Y  N  
 Enhanced Data Package  Y  N  
 (Surcharge Applies)  
 Required Detection Limits: CT Target  
 Other: Commercial

**\*Matrix Code:**

SG= SOIL GAS  
 IA= INDOOR AIR  
 AMB=AMBIENT  
 SS = SUB SLAB  
 D = DUP  
 BL = BLANK  
 O = other

**\*\*Media Codes:**

S=Summa can  
 TB=tedlar bag  
 P=P-UF  
 T=tube  
 F=filter  
 G=cassette  
 O = Other

Relinquished by: (signature) \_\_\_\_\_ Date/Time: 9/13/12 1500  
 Received by: (signature) \_\_\_\_\_ Date/Time: 9-13-12 1500  
 Relinquished by: (signature) \_\_\_\_\_ Date/Time: 9-13-12 1724  
 Received by: (signature) \_\_\_\_\_ Date/Time: 9-13-12 1724

\*\*TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT. AIHA, NELAC & WBE/DBE Certified



www.contestlabs.com



### AIR Only Receipt Checklist

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

CLIENT NAME: AMEC RECEIVED BY: JSM DATE: 9-13-12

- 1) Was the chain(s) of custody relinquished and signed?  Yes  No
- 2) Does the chain agree with the samples?  
If not, explain:  Yes  No
- 3) Are all the samples in good condition?  
If not, explain:  Yes  No
- 4) Are there any samples "On Hold"? Yes  No  Stored where:
- 5) Are there any RUSH or SHORT HOLDING TIME samples? Yes  No

Who was notified \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

6) Location where samples are stored: AIR LAB

Permission to subcontract samples? Yes  No   
 (Walk-in clients only) if not already approved  
 Client Signature: \_\_\_\_\_

### Containers received at Con-Test

	# of Containers	Types (Size, Duration)
Summa Cans	<del>8</del> 13	6L
Tedlar Bags		
Tubes		
Regulators	<del>8</del> 13	30 min
Restrictors		
Tubing		
Other		

Unused Summas:

1197	1081
1454	1289
1644	1456
1032	1320
	1100
	1159
	1729

Unused Regulators:

4176	4172
4170	4177
4178	4181
4179	4174
	4042
	4175
	4171

- 1) Was all media (used & unused checked into the WASP?
- 2) Were all returned summa cans, Restrictors, & Regulators documented as returned in the Air Lab Inbound/Outbound Excel Spreadsheet?

Laboratory Comments:

unused Summa - 1509	unused Regulator - 4180
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## **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>	<b>133.40</b>	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	<b>187.37</b>	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	<b>96.94</b>	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	<b>120.19</b>	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	<b>147.00</b>	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	<b>112.99</b>	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	<b>120.19</b>	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	<b>72.11</b>	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	<b>100.16</b>	1	0.24
Acetone	ND	ND	0.050	0.12	58.08	1	0.42
Acrolein	ND	ND	0.050	0.11	<b>56.06</b>	1	0.44
Benzene	ND	ND	0.050	0.16	78.11	1	0.31
Benzyl Chloride	ND	ND	0.050	0.26	<b>126.58</b>	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	<b>94.94</b>	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>	<b>153.82</b>	1	0.16



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

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



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

## 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
Methyl Acetate	ND	ND	0.206	0.6241	74.08	1	0.33
Methylcyclohexane	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