



February 13, 2013

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

**RE: Air Monitoring Report  
Fourth Quarter, 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 October 2012 through December 2012 and includes one quarterly compliance sampling event (January 03, 2013). Due to construction activities and access issues to the large retail space, the compliance sampling event was completed in early January, 2013.

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 January 03, 2013.

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 (13A0054) associated with the January 03, 2013 quarterly sampling event is provided in Appendix A of this letter report. The analytical laboratory's detection limits are provided in Appendix B.

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

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

- Indoor air sample results were in compliance with action levels for the January 2013 quarterly sampling event in the small retail space (sample locations IA-5 through IA-7). The concentrations of carbon tetrachloride in the samples collected from locations IA-5 and IA-6 during the quarterly sampling in January 03, 2012 were slightly above the action level. As communicated to RIDEM in previous reports, carbon tetrachloride is ubiquitous to urban settings and is not one of the compounds for which the vapor mitigation system was installed. Thus, the concentration of carbon tetrachloride above the action level does not constitute a violation of the action levels contained in the order.
- The eastern small retail space (indoor air sample location IA-5) was occupied during the months of October and early November as a construction office for the Remedial Action Work Plan (RAWP) Phase I Soil Capping of Parcel C-1. Construction ended in late November and the retail space was unoccupied thereafter.
- 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 January 03, 2013. 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 (13A0054) associated with the January 03, 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 January 03, 2013 quarterly sampling event in the large retail space (sample locations IA-1 through IA-4). The concentration of carbon tetrachloride in the sample collected from location IA-2 during the quarterly sampling in January, 03 2013 was slightly above the action level. As communicated to RIDEM in previous reports, carbon tetrachloride is ubiquitous to urban settings and is not one of the compounds for which the vapor mitigation system was installed. Thus, the concentration of carbon tetrachloride above the action level does not constitute a violation of the action levels contained in the order. The mitigation system is functioning as designed and is achieving desired results with respect to indoor air quality in the large retail space.
- The retail space was in the process of being subdivided for future tenants. Construction of a health fitness club on the eastern end of the former Stop & Shop space began in early November 2012 and ended at the end of December 2012. Occupancy of the health fitness club was scheduled to begin on January 07, 2013. The eastern end of the retail space contains indoor air sample locations IA-2 and IA-4 and sub-slab vacuum monitoring well 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 began, Textron had 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 were not impacted by the construction. The sampling event conducted September 13, 2012 served as the pre -construction sampling event and sampling event January 03, 2013 severed as the post- construction sampling event. It was determined based on the sample results, that the construction of the new commercial space did not impact the ASD system and the indoor air quality.

### **ASD System Monitoring**

The ASD system performance is monitored and maintained monthly by Clean Harbors Environmental Services. On October 18<sup>th</sup> and again on October 22<sup>nd</sup>, a low flow condition for radon fan 1 (located in the eastern most small retail space) was reported via the remote monitoring system. A Clean Harbors technician was on-site October 23<sup>rd</sup> and October 24<sup>th</sup> to assess the alarm condition. The fan was determined not operational and a new replacement fan was ordered. Clean Harbors replaced radon fan 1 on November 14<sup>th</sup> and the alarm was reset. A full system check was also performed and it was noted that radon fan 2 was fully operational despite the presence of a low flow alarm. Clean Harbors reset the alarm. An issue with the current relay sensor for radon 2 was likely the cause for the alarm. During Clean Harbor's maintenance visit, water in the knockout tank and each extraction well (EW-1 thru EW-4) was drained due to a significant amount of water (approximately 22 inches in the knockout tank and ½ gallon in each incoming leg). An explanation for the significant water is possibly excess rainfall from recent storms. On November 26<sup>th</sup>, a high level water condition alarm was issued. The tank was pumped remotely and the system restarted. A high level water condition alarm was issued again on December 1<sup>st</sup> and the system could not be restarted remotely. Clean Harbors and AMEC were on-site on December 6<sup>th</sup> to assess the problem. Clean Harbors released the water that was in the knockout tank and each of the extraction wells. It was determined that the switch was on the OFF position rather than AUTO position explaining why the pump could not be restarted remotely. Inspection of the large retail space revealed that high levels of water were present underneath the slab in the vicinity of slab vacuum monitoring well VMW-2. During construction of the build out for the health fitness club, portable water was used for saw cutting of the tile floor. It is presumed that water may have seeped underneath the slab causing the build-up of water and subsequent system shutdown. Since the operation of saw cutting has ceased and the water has subsided, there have been no issues with high levels of water.

A system shutdown occurred on November 15<sup>th</sup> for less than hour for the change-out of the carbon in the carbon vessels. The spent carbon was removed by Siemens Industry, Inc. (Siemens) and transported, under manifest, as hazardous waste and reactivated at Siemens facility in Darlington, Pennsylvania.

### Next Reporting Period

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

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

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



Mark Maggiore  
Environmental Scientist



Charles Collet, P.E.  
Senior Principal/Senior Project Manager

Enclosures: Table 1. Summary of Analytical Results – Air Sampling for Small Retail Spaces  
Table 2. Vacuum Monitoring Results – Small Retail Spaces  
Table 3. Summary of Analytical Results – Air Sampling for Large Retail Space  
Table 4. Vacuum Monitoring Results – Large Retail Space  
  
Figure 1 Vapor Mitigation Sample Locations  
  
Appendix A – Laboratory Reports  
Appendix B – Analytical Laboratory Detection Limits

cc: 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\\_4\\_2012](P:\old_Wakefield_Data\projects\3650080114 - Textron Gorham Vapor Mitigation System\4.0 Project Deliverables\4.1 Reports\2012\QTR_4_2012)

Textron, Inc.  
Former Gorham Manufacturing Facility, Providence, RI  
Retail Complex, Active Sub-Slab Depressurization System  
Air Monitoring Report, Fourth Quarter, 2012  
February 13, 2013



## 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

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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
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



**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	AA-1-010313 1/3/2013	
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	0.27 U	0.29	0.082 U	0.1	0.19 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	0.34 U	0.34 U	0.21 U	0.1 U	0.21 U	0.24 U	0.24 U
1,1,2-Dichloroethane	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	0.27 U	0.16 U	0.082 U	0.16 U	0.19 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	0.2 U	0.2 U	0.063	0.061 U	0.12 U	0.14 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	0.2 U	0.2 U	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U
1,2,4-Trichlorobenzene	0.37 U	0.37 U	0.75 U	0.37 U	0.37 U	0.37 U	0.37 U	0.75 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.74 U	0.62	0.45 U	0.12	0.52 U	0.52 U	0.52 U
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	0.25 U	0.94	0.25 U	1.1	0.25 U	0.25 U	0.16	0.15 U	0.15 U	0.26	0.17 U
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	0.38 U	0.23 U	0.12 U	0.23 U	0.27 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	0.3 U	0.3 U	0.34	0.18 U	0.18 U	0.21 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	0.2 U	0.2 U	0.066	0.061 U	0.046	0.14 U	0.14 U
1,2-Dichloropropane	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.069 U	0.14 U	0.16 U	0.16 U	0.16 U
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								
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	0.28	0.25 U	0.33	0.25 U	0.25 U	0.068	0.15 U	0.15 U	0.16	0.17 U
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	0.078 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	0.3 U	0.18 U	0.18 U	0.18 U	0.21 U	0.21 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	0.3 U	0.18 U	0.18 U	0.18 U	0.21 U	0.21 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	0.89	0.89
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	0.14 U	0.14 U
4-Ethyltoluene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 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	0.17 U
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	0.2 U	0.12 U	0.12 U	0.23	0.1	0.14 U	0.14 U
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	8.7	8.7
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	0.42	0.42
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	0.18 U	0.18 U
Bromodichloromethane	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 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	0.24 U	0.24 U
Bromoform	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 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	0.36 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	0.12 U	0.14 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	1.1 U	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	0.52	0.52
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	0.16 U	0.16 U
Chloroethane	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.079 U	0.079 U	0.079 U	0.093 U	0.093 U	0.093 U
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	0.17 U	0.17 U
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	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	0.2 U	0.12	0.059 U	0.12 U	0.14 U	0.14 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	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.16 U
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	0.17 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	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	0.3 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	2.5	2.5
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	2.7	2.7
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	0.35	0.35
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	0.22 U	0.82	1.4	0.22 U	1.1	0.22 U	0.22 U	0.31	0.13 U	0.065	0.19	0.15 U
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	0.37 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	1.4	1.4
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	0.47	0.47
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	0.43 U	2.2	3.7	0.43 U	3.3	0.43 U	0.43 U	0.41	0.17	0.18	0.64	0.3 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> )	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	AA-1-010313 1/3/2013	
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	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	4.4	
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	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	0.91	0.2 U	0.95	0.2 U	0.20 U	0.12	0.089	0.11	0.18	0.14 U	
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	0.15 U	
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	0.35 U	0.87 U	0.87 U	1.9	0.86 U	0.86 U	0.86 U	3.4 U	2.1 U	2.1 U	0.77	1.3	2.4 U
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	0.15 U	
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	0.34 U	0.49	0.34 U	5.3	0.34 U	0.34 U	0.73	0.1 U	0.2 U	0.87	0.24 U
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	0.1 U	
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	0.48	
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	0.14 U	
trans-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	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	0.19 U	
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	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	0.58	
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	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	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	EW-5-010313 1/3/2013
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	0.55 U
1,1,2,2-Tetrachloroethane	6.8 U	6.8 U	6.8 U	6.8 U	1.7 U	68 U	3.4 U	3.4 U	3.4 U	3.4 U	6.8 U	3.4 U	6.8 U	1.4 UD	1.4 UD	6.9 UD	14 U	3.4 U	3.4 U	0.69 U	0.69 U	0.69 U
1,1,2-Trichloroethane	5.4 U	5.4 U	5.4 U	5.4 U	1.4 U	54 U	2.7 U	2.7 U	2.7 U	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	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	0.40 U
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	0.40 U
1,2,4-Trichlorobenzene	7.4 U	7.4 U	7.4 U	7.4 U	1.9 U	74 U	3.7 U	3.7 U	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	1.5 U
1,2,4-Trimethylbenzene	5 U	5 U	5 U	5 U	1.3 U	50 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	0.49 U
1,2-Dibromoethane (EDB)	7.6 U	7.6 U	7.6 U	7.6 U	1.9 U	76 U	3.8 U	3.8 U	3.8 U	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	0.77 U
1,2-Dichlorobenzene	6 U	6 U	6 U	6 U	1.5 U	60 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	0.60 U
1,2-Dichloroethane	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	0.81 UD	0.81 UD	4 UD	8 U	2 U	2 U	0.17	0.4	0.40 U
1,2-Dichloropropane	4.6 U	4.6 U	4.6 U	4.6 U	1.2 U	46 U	2.3 U	2.3 U	2.3 U	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	0.46 U
1,2-Dichlorotetrafluoroethane	7 U	7 U	7 U	7 U	1.8 U	70 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	50 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	0.49 U
1,3-Butadiene	2.2 U	2.2 U	2.2 U	2.2 U	0.55 U	22 U	1.1 U	1.1 U	2.3 U	1.1 U	2.2 U	1.1 U	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	0.22 U
1,3-Dichlorobenzene	6 U	6 U	6 U	6 U	1.5 U	60 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	0.60 U
1,4-Dichlorobenzene	6 U	6 U	6 U	6 U	1.5 U	60 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	0.60 U
1,4-Dioxane																	7.2 U					
2-Butanone	6.3	89	75	170	3700	64000	100000	230000	110000	7800	18000	28000	15000	4000 D	7200 BD	17000 D	13000	2700	1800	870	840	9.5
2-Hexanone	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	82 UD	8.2 U	2 U	4.1 U	0.43	0.41 U	0.41 U
4-Ethyltoluene	5 U	5 U	5 U	5 U	1.3 U	50 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	0.49 U
4-Methyl-2-pentanone	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	0.27	0.34	0.41 U
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	11
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	0.54
Benzyl chloride	5.2 U	5.2 U	5.2 U	5.2 U	1.3 U	52 U	2.6 U	2.6 U	2.6 U	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	0.52 U
Bromodichloromethane	6.6 U	6.6 U	6.6 U	6.6 U	1.7 U	66 U	3.3 U	3.3 U	3.3 U	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	0.67 U
Bromoform	11 U	11 U	11 U	11 U	2.6 U	110 U	5.1 U	5.1 U	5.1 U	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	1.0 U
Bromomethane	3.8 U	3.8 U	3.8 U	3.8 U	0.95 U	38 U	1.9 U	1.9 U	1.9 U	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	0.39 U
Carbon disulfide	3.2 U	3.2 U	3.2 U	3.2 U	0.8 U	230	4	5.4	8.2	2.9	5.7	12	14	8 D	15 D	22 D	62 U	13	11	25	49	3.1 U
Carbon tetrachloride	6.2 U	6.2 U	6.2 U	6.2 U	1.6 U	62 U	3.1 U	3.1 U	3.1 U	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	0.63 U
Chlorobenzene	4.6 U	4.6 U	4.6 U	4.6 U	1.2 U	46 U	2.3 U	2.3 U	2.3 U	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	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	0.26 U
Chloroform	83	32	20	16	2.8	48 U	7.2	6.5	5.8	2.6	4.8 U	2.4 U	4.8 U	1.1 D	1.2 D	4.9 UD	9.8 U	1.1	2.4 U	0.98	1.1	0.49 U
Chloromethane	2 U	2 U	2 U	2 U	0.5 U	20 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	1
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	0.40 U
cis-1,3-Dichloropropene	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	44 U	2.2 U	2.2 U	2.2 U	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	0.45 U
Cyclohexane	3.4 U	3.4 U	3.4 U	3.4 U	0.85 U	34 U	1.7 U	1.7 U	1.7 U	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	0.34 U
Dibromochloromethane	8.6 U	8.6 U	8.6 U	8.6 U	2.2 U	86 U	4.3 U	4.3 U	4.3 U	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	0.85 U
Dichlorodifluoromethane	5 U	5 U	5 U	5 U	2.7	50 U	3	3.2	2.5 U	2.5 U	5 U	2.5	5 U	2.4 D	3.7 D	4.9 UD	9.9 U	2.8	4.9 U	2.9	2.6	2.5
Ethanol	320	36	46	33	22	130	30	26	3.8 U	45	28	68	89	23 D	19 D	24 UD	150 U	12	290	14	100	9.9
Ethyl acetate	7.3 U	3.6 U	3.6 U	7.3 U	0.9 U	73 U	1.8 U	1.8 U	1.8 U	1.8 U	3.6 U	1.8 U	3.6 U	3.4 D	0.72 UD	3.8 D	7.2 U	3.6	26	4.2	30	0.36 U
Ethylbenzene	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	44 U	2.2 U	2.2 U	2.2 U	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	0.43 U
Hexachlorobutadiene	22 U	22 U	22 U	22 U	5.4 U	220 U	11 U	11 U	5.3 U	11 U	22 U	5.3 U	11 U	2.1 UD	2.1 UD	11 UD	21 U	4.2	11 U	1.1 U	1.1 U	1.1 U
Hexane	5	3.6 U	3.6 U	3.6 U	2.3	36 U	3.3	1.8 U	1.8 U	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	0.74
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	1.1
m,p-Xylene	8.6 U	8.6 U	8.6 U	8.6 U	2.2 U	86 U	4.3 U	4.3 U	4.3 U	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	0.75

**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	EW-5-010313 1/3/2013
Methyl methacrylate															0.82 UD	4.1 UD	8.2 U	2 U	4.1 U	0.41 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	1.8
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	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	0.41 U
o-Xylene	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	44 U	2.2 U	2.2 U	2.2 U	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	0.43 U
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	6.9 U
Styrene	4.2 U	17	4.2 U	4.2 U	1.7	42 U	2.2	2.1 U	2.1 U	2.1 U	4.2 U	2.1 U	4.2 U	0.85 UD	0.85 UD	4.3 UD	8.5 U	2.1 U	4.3 U	0.46	0.38	0.43 U
Tetrachloroethene	210	310	190	97	8	68 U	21	25	19	8.9	6.8 U	6.7	6.8 U	4 D	4100 D	6.8 UD	14 U	3.5	3.4 U	0.92	2.1	0.68 U
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	0.29 U
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	0.66
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	0.40 U
trans-1,3-Dichloropropene	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	44 U	2.2 U	2.2 U	2.2 U	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	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	0.54 U
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	2.4
Trichlorotrifluoroethane	7.6 U	7.6 U	7.6 U	7.6 U	1.9 U	76 U	3.8 U	3.8 U	3.8 U	3.8 U	7.6 U	3.8 U	7.6 U	1.5 UD	1.5 UD	7.7 UD	15 U	3.8 U	3.8 U	0.77 U	0.57	0.77 U
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	0.70 U
Vinyl chloride	2.6 U	2.6 U	2.6 U	2.6 U	0.65 U	26 U	1.3 U	5.3	1.3 U	3	3.4	3.1	4.3	2.4 D	3.7 D	3.3 D	6.2	1.3 U	1.3 U	2.9	4.7	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> )	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	EW-6-010313 1/3/2013
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	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	68 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	0.69 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	54 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	0.55 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	0.40 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	0.40 U
1,2,4-Trichlorobenzene	7.4 U	7.4 U	7.4 U	7.4 U	7.4 U	74 U	3.7 U	3.7 U	3.7 U	7.5 U	3.7 U	7.4 U	0.74 UD	0.74 UD	7.4 U	30 U	7.4 U	1.5 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	0.49 U
1,2-Dibromoethane (EDB)	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	0.77 UD	7.7 U	15 U	3.8 U	0.38 U	0.77 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	0.60 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	0.40 U
1,2-Dichloropropane	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 U	9.2 U	2.3 U	0.23 U	0.46 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	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	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	0.60 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	0.60 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	0.84
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	0.41 U
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	0.49 U
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	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	6.4
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	0.39
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	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	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	1.0 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	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	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	0.63 U
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	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	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	0.49 U
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	1.1
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	0.40 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	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	0.34 U
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	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	2.6
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	8.6
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	0.36 U
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	0.43 U
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	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	7.1 U	0.7 UD	1.3 D	3.5 UD	280 U	70 U	1.4	1.2	7.6	14 U
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	0.69
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	0.87 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 - 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	EW-6-010313 1/3/2013
Methyl methacrylate														0.41 UD	4.1 UD	8.2 U	2 U	0.41 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	2.1
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	0.36 U
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	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	0.43 U
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	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	0.43 U
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	0.68 U
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	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	0.46
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	0.40 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	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	0.54 U
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	1.9
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	0.77 U
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	0.70 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	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> )	Extraction Well - Western Small Retail Space																					
	EW-7-020309 2/3/2009	EW-7-021109 2/11/2009	EW-7-021809 2/18/2009	EW-7-022609 2/26/2009	EW-7-030609 3/6/2009	EW-7-041409 4/14/2009	EW-7-051509 5/15/2009	EW-7-061109 6/11/2009	EW-7-091709 9/17/2009	EW-7-122909 12/29/2009	EW-7-032610 3/26/2010	EW-7-070110 7/1/2010	EW-7-091610 9/16/2010	EW-7-120710 12/7/2010	EW-7-021711 2/17/2011	EW-7-060211 6/2/2011	EW-7-091511 9/15/2011	EW-7-120811 12/8/2011	EW-7-030812 3/8/2012	EW-7-061412 6/14/2012	EW-7-091312 9/13/2012	EW-7-010313 1/3/2013
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	0.55 U
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	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	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	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	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	0.40 U
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	0.40 U
1,2,4-Trichlorobenzene	7.4 U	1.5 U	1.9 U	1.9 U	1.9 U	7.4 U	3.7 U	3.7 U	3.7 U	7.5 U	1.5 U	0.74 U	0.74 U	0.74 UD	0.74 UD	7.4 UD	3.0 U	1.5 U	15 U	1.5 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 U	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	0.92
1,2-Dibromomethane (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	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	0.60 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	0.40 U
1,2-Dichloropropane	4.6 U	0.92 U	1.2 U	1.2 U	1.2 U	4.6 U	2.3 U	2.3 U	2.3 U	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	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	0.49 U
1,3-Butadiene	2.2 U	0.44 U	0.55 U	0.55 U	0.55 U	2.2 U	1.1 U	1.1 U	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	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	0.60 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	0.60 U
1,4-Dioxane																	0.72 U					
2-Butanone	8.7	12	7.3	8.5	5.5	4.5	7.1	16	4.9	3.5	31	3.8	1.8	4.1 D	5.3 BD	59 UD	24 U	6.2	100	14	3.6	18
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	0.41 U
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	0.49 U
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	0.55
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	23
Benzene	3.2 U	3.9	4.5	19	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	0.89
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	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	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	1.0 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	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	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	0.78
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	2.3 U	0.46 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	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	0.49 U
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	1.4
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	0.40 U
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	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	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	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	2.7
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	1200
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	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	0.44
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	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	1.5
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	12
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	1.5

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

Parameter (ug/m <sup>3</sup> )	Extraction Well - Western Small Retail Space																					
	EW-7-020309 2/3/2009	EW-7-021109 2/11/2009	EW-7-021809 2/18/2009	EW-7-022609 2/26/2009	EW-7-030609 3/6/2009	EW-7-041409 4/14/2009	EW-7-051509 5/15/2009	EW-7-061109 6/11/2009	EW-7-091709 9/17/2009	EW-7-122909 12/29/2009	EW-7-032610 3/26/2010	EW-7-070110 7/1/2010	EW-7-091610 9/16/2010	EW-7-120710 12/7/2010	EW-7-021711 2/17/2011	EW-7-060211 6/2/2011	EW-7-091511 9/15/2011	EW-7-120811 12/8/2011	EW-7-030812 3/8/2012	EW-7-061412 6/14/2012	EW-7-091312 9/13/2012	EW-7-010313 1/3/2013
Methyl methacrylate															0.41 UD	4.1 UD	0.82 U	0.41 U	4.1 U	0.41 U	0.41 U	0.41 U
Methylene chloride	9.3	2.6	8	1.8	1.8 U	20	29	16	7 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	5.6
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	0.36 UD	0.72 U	0.36 U	3.6 U	0.36 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	0.41 U
o-Xylene	4.4 U	0.88 U	1.1 U	1.1 U	1.1 U	4.4 U	2.2 U	2.2 U	2.2 U	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	0.51
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	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	0.43 U
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	1.3
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	8.2
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	1.6
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	0.40 U
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	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	1.1
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	3.5
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	0.77 U
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	0.70 U
Vinyl chloride	280	370	180	48	21	2.6 U	2.7	3.2	1.3 U	1.6	1	0.26 U	1.6	0.41 D	0.26 UD	2.6 UD	0.51 U	0.26 U	1.3 U	0.26 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	0.27 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	0.34 U
1,1,2-Trichloroethane	12	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
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	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	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	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	0.25 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	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	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	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	0.23 U
1,2-Dichlorotetrafluoroethane	NA	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,3,5-Trimethylbenzene	52	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
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	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	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	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	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	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	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	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	0.26 U
Bromodichloromethane	0.46	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Bromoform	7.3	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 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	0.19 U
Carbon disulfide	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.12 U	0.16 U	0.27	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
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	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	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	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	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	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	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	0.17 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	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	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	<b>5.5</b>	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-5-010313 1/3/2013	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	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	0.24 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	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,1-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.12 U	0.061 U	0.12 U	0.14 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	0.2 U	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	1.2	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
1,2,4-Trichlorobenzene	0.37 U	0.37 U	0.37 U	0.74 U	22	0.45 U	0.45 U	0.52 U	0.52 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	0.17 U	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	0.27 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	0.21 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	0.14 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
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	0.16 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	0.17 U	0.25 U	0.25 U	0.25 U	0.38	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
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	0.078 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	0.11 U	0.23 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	0.21 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	0.21 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	1.3	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	0.32	0.081	0.17	0.16	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	0.17 U	0.25 U	0.25 U	0.25 U	0.47	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-Methyl-2-pentanone	0.2 U	0.2 U	0.31	0.20 U	0.13	0.18	0.34	0.22	0.14 U	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	9	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	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	0.18 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	0.24 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	0.36 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	0.14 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	1.1 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
Carbon tetrachloride	0.54	0.6	0.59	0.48	0.49	0.46	0.42	0.38	0.58	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	0.16 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	0.093 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	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	0.17 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	0.36
Chloromethane	0.76	0.96	1.1	1.3	1	1.1	1.4	1.2	1	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	0.14 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	0.16 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
Cyclohexane	0.17 U	0.17 U	0.46	0.17 U	0.1 U	0.1 U	0.12	0.21	0.12 U	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	0.30 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	2.8	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	3.9	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	0.59	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	0.15	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	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	0.95	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	0.75	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	0.6	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-5-010313 1/3/2013	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	0.14 U		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
Methylene chloride	0.65	2.8	4.2	7.7	1.6	1.6	1.1	2.3	5.2														
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	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
n-Heptane	0.2 U	0.33	0.2 U	0.20 U	0.081	0.089	0.18	0.32	0.14 U	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	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	0.19	0.36	0.26	0.34	1.8	0.22 U	0.22 U	0.19	0.22 U	0.25	0.23	0.22 U	0.22 U	0.22 U	0.22 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	2.4 U	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	0.35 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	0.15 U	0.21 U	0.21 U	0.21 U	0.28	0.21 U	0.21 U	0.15 U	0.25	0.21 U	0.23	0.21 U	0.21 U	0.21 U	0.24
Tetrachloroethene	0.39	2.4	0.34 U	0.58	5.7	0.15	0.15	1.6	0.24 U	1.2	0.34 U	0.45	1.2	0.34 U	0.34 U	0.72	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Tetrahydrofuran	0.15 U	0.15 U	0.15 U	0.15 U	0.1	0.088 U	0.1	0.1 U	0.10 U	77	2.8	0.32	0.15 U	0.15 U	0.15 U	0.22	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Toluene	0.19 U	1.8	0.9	0.97	1.9	0.28	0.78	2	0.56	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	0.14 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	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	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Trichloroethene	0.27 U	0.27 U	0.27 U	0.27 U	0.63	0.081 U	0.045	0.1	0.19 U	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	0.27 U
Trichlorofluoromethane	1.3	1.7	1.4	1.7	1.1	0.98	1.7	1.6	1.8	4.8	1.3	1.7	2.5	1.5	1.7	1.4	1.2	2.2	1.2	1.7	1.3	1.5	
Trichlorotrifluoroethane	0.52	0.66	0.69	0.63	0.69	0.46	0.53	0.6	0.61	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	0.25 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	0.090 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

**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-6-010313 1/3/2013	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	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	0.27 U
1,1,2,2-Tetrachloroethane	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.21 U	0.1 U	0.21 U	0.24 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	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	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,1-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.12 U	0.061 U	0.12 U	0.14 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	0.2 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	0.14 U	0.52	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
1,2,4-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	0.52 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	0.17 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	0.27 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	0.21 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	0.2 U	0.20 U	0.056	0.061 U	0.056	0.14 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	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	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	
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	0.25 U	0.059	0.15 U	0.091	0.17 U	0.17 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	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	0.078 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	0.21 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	0.3 U	0.30 U	0.18 U	0.18 U	0.13	0.21 U	0.21 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-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	1.4	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	0.14 U	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	0.17 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	0.14 U	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	11	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	0.48	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	0.18 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.19 U	0.26 U	0.26 U	0.26 U	0.26 U	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	0.24 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	0.36 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	0.14 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	1.1 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.26	0.16 U	0.16 U	0.26	0.16 U	0.16 U	
Carbon tetrachloride	0.44	0.46	0.57	0.64	0.52	0.46	0.48	0.44	0.37	0.55	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	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	
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	0.093 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	0.17 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	
Chloromethane	1.1	0.95	0.92	1.1	1.4	1.3	1.2	1.4	1.2	1.1	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	0.14 U	0.29	0.2 U	0.2 U	0.2 U	0.2 U	0.14	0.2 U	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	0.16 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	
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	0.12 U	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	0.30 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	1.6	1.9	3.1	1.8	1.9	2.9	2	2.9	2.8	2.7	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	8.4	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	0.42	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	0.16	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	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	0.64	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	3.4 U	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	0.58	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-6-010313 1/3/2013	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	0.14 U												
Methylene chloride	0.64	0.94	3	1	1.7 U	1.5	1.8	1.5	2.2	1.6	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	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
n-Heptane	0.47	0.2 U	0.35	0.2 U	0.2	0.11	0.15	0.25	0.31	0.095	0.2	0.2 U	0.37	1.2	0.2 U	0.17	0.2 U	0.34	0.37	0.2 U	0.35	0.29
o-Xylene	0.42	0.22 U	0.4	0.22 U	0.22	0.17	0.13	0.29	0.12	0.18	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	2.4 U	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	0.15 U	0.21 U	0.21 U	0.21 U	0.26	0.21 U	0.21 U	0.15 U	0.21 U	0.29	0.39	0.21 U	0.26
Tetrachloroethene	0.34 U	0.34 U	1.6	0.34 U	0.58	0.68	0.15	0.57	2.6	0.24 U	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	0.10 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	0.56	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	0.14 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	0.16 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	0.19 U	<b>4.6</b>	<b>1.1</b>	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	2	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	0.61	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	0.25 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	0.090 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	IA-7-010313 1/3/2013
1,1,1-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.069	0.082 U	0.088	0.19 U	0.19 U
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	0.24 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	0.19 U
1,1-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.20 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	0.20 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	0.74 U	0.45 U	0.17	0.52 U	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	0.17 U
1,2-Dibromoethane (EDB)	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U	0.27 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	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	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	0.16 U
1,2-Dichlorotetrafluoroethane	0.35 U	0.35 U									
1,3,5-Trimethylbenzene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.1	0.15	0.083	0.26	0.17 U
1,3-Butadiene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.066 U	0.066 U	0.066 U	0.078 U	0.078 U
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	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	0.21 U
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	1.9
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	0.2
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	0.17 U
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	0.18
Acetone	41	27	12 B	15 B	48 B	38	17	13	18	24	14
Benzene	0.27	0.56	0.45	1.1	0.41	0.34	0.44	0.36	0.2	0.49	0.58
Benzyl chloride	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.16 U	0.16 U	0.16 U	0.18 U	0.18 U
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	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	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	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	1.1 U
Carbon tetrachloride	0.5	0.47	0.45	0.56	0.69	0.5	0.45	0.46	0.43	0.38	0.51
Chlorobenzene	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.14 U	0.14 U	0.16 U	0.16 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	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	0.17 U
Chloromethane	1.3	1.4	0.99	1	1.6	1.6	1.3	1.6	1.2	1.3	1.1
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	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	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	0.12 U
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	0.30 U
Dichlorodifluoromethane	2.7	1.7	2	3.1	2.5	1.8	2.8	2.1	2.7	2.9	2.6
Ethanol	39	240	13	14	28	76	60	70	110	60	52
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	0.77
Ethylbenzene	0.45	0.45	0.22 U	0.22 U	0.68	0.45	0.24	0.12	0.24	0.45	0.19
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	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	0.86
Isopropyl alcohol	5.8	28	2.8	11	1.2 U	77	2.9 U	2.9 U	48	22	3.3
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	0.71

**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	IA-7-010313 1/3/2013
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	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	2.6
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	0.13 U
n-Heptane	0.5	0.68	0.33	0.47	2	1.1	0.46	0.47	0.65	0.99	0.14 U
o-Xylene	0.43	0.43	0.22 U	0.22 U	0.69	0.41	0.3	0.17	0.2	0.56	0.24
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	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	0.15 U
Tetrachloroethene	0.34 U	0.36	0.34 U	1.7	0.34 U	0.62	0.66	0.14	0.15	1.7	0.24 U
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	0.10 U
Toluene	8.4	3.5	0.48	1.6	6.6	3.7	1.2	0.48	1.4	2.4	0.99
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	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	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	0.19 U
Trichlorofluoromethane	1.3	2.9	1.2	1.6	1.3	1.6	1.3	1.1	1.7	1.8	1.8
Trichlorotrifluoroethane	0.54	0.43	0.55	0.67	0.76	0.54	0.67	0.44	0.53	0.58	0.6
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	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	0.090 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 1/15/13  
 Checked by / Date: MAM 1/30/13



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

Date	Pressure Differential (inches of water)		
	VMW-5	VMW-6	VMW-7
2/3/2009	-0.25	-0.17	0.00
2/18/2009	-0.212	-0.155	-0.011
2/26/2009	-0.230	-0.120	-0.025
3/6/2009	-0.200	-0.086	-0.012
4/14/2009	-0.108	-0.054	-0.014
5/15/2009	-0.081	-0.073	-0.016
6/11/2009	-0.090	-0.076	-0.098
9/17/2009	-0.110	-0.102	+0.074
12/29/2009**	-0.011	-0.010	-0.061
3/26/2010	-0.245	-0.142	-0.018
7/1/2010	-0.542	-0.114	-0.176
9/16/2010	-0.247	-0.874	-0.013
12/7/2010	-0.044	-0.028	+0.022
2/17/2011	-0.212	-0.599	-0.337
6/2/2011	-0.277	-0.236	-0.138**
9/15/2011	-0.234	-0.212	-0.010
12/8/2011	-0.609	-0.115	-0.009
3/8/2012	-0.003	-0.246	-0.114
6/14/2012	-0.237	-0.103	-0.132
9/13/2012	-0.243	-0.119	-0.210
1/3/2013	-0.150	-0.060	-0.052

\*\* ASD system offline.

Prepared by/Date: MAM 01/25/13

Checked by/Date:

**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

**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	AA-1-010313 1/3/2013	
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	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	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	0.16 U	0.082 U	0.16 U	0.19 U	0.19 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	0.20 U	0.063	0.061 U	0.12 U	0.14 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	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	0.52 U	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	0.94	0.25 U	1.1	0.25 U	0.25 U	0.16	0.15 U	0.15 U	0.26	0.17 U
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	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	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	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	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									
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	0.28	0.25 U	0.33	0.25 U	0.25 U	0.068	0.15 U	0.15 U	0.16	0.17 U
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	0.078 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	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U	0.21 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	0.30 U	0.18 U	0.18 U	0.18 U	0.21 U	0.21 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	0.89
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	0.14 U	0.14 U
4-Ethyltoluene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 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	0.17 U	0.17 U
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	0.14 U	0.14 U
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	8.7	8.7
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	0.42	0.42
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	0.18 U	0.18 U
Bromodichloromethane	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.34 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	0.24 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	0.52 U	0.52 U	0.52 U	0.52 U	0.31 U	0.31 U	0.31 U	0.36 U	0.36 U	0.36 U
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	0.14 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	0.38	0.16 U	0.16 U	1.6 U	0.058	0.93 U	0.11	1.1 U	1.1 U	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	0.52	0.52
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	0.16 U	0.16 U
Chloroethane	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.079 U	0.079 U	0.079 U	0.093 U	0.093 U	0.093 U
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	0.094	0.073 U	0.067	0.096	0.17 U	0.17 U
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	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	0.14 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	0.16 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	0.12 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	0.26 U	0.13 U	0.26 U	0.3 U	0.3 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	2.5	2.5
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	2.7	2.7
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	0.35	0.35

**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	AA-1-010313 1/3/2013
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	0.15 U
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	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	1.4
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	0.47
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	0.3 U
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	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	4.4
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	0.13 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	0.14 U
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	0.15 U
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	2.4 U
Styrene	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 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	0.15 U
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	0.24 U
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	0.1 U
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	0.48
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	0.14 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	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	0.19 U
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	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	0.58
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	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	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	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.  
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
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

**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-Combined- 010313 1/13/2013	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
1,1,1-Trichloroethane	1400	1700	2000	4700	280 D	2500 D	2400	340	1100	1800	2800	1800	59000	66000	26000	30000	54000	72000	11000
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	0.69 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	1.7 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	0.55 U	6.4	10	5.4 U	5.4 U	5.4 U	5.4 U	1.4 U
1,1-Dichloroethane	200	270	290	330	36 D	170 D	200	70	78	130	200	99	4100	4400	5700	7000	1600	2300	690
1,1-Dichloroethene	30	40	52	81	7.3 D	58 D	44	21	34	42	15	28	570	1200	330	640	340	560	97
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	1.5 U	7.4 U	7.4 U	7.4 U	7.4 U	7.4 U	7.4 U	1.9 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	0.49 U	5 U	5 U	5 U	5 U	5 U	5 U	1.3 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	0.77 U	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	1.9 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	0.60 U	6 U	6 U	6 U	6 U	6 U	6 U	1.5 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	0.40 U	4 U	4 U	4 U	4 U	4 U	4 U	1 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	0.46 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	1.2 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
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	0.49 U	5 U	5 U	5 U	5 U	5 U	5 U	1.3 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	0.22 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.55 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	0.60 U	6 U	6 U	6 U	6 U	6 U	6 U	1.5 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	0.60 U	6 U	6 U	6 U	6 U	6 U	6 U	1.5 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	2.9	3.5	8.9	12.0	11	36	10	36
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	0.41 U	4 U	4 U	4 U	4 U	4 U	4 U	1 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	0.49 U	5 U	5 U	5 U	5 U	5 U	5 U	1.3 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	0.41 U	4 U	4 U	4 U	4 U	4 U	4 U	1 U
Acetone	16	24	16	6.6	11 BD	6.3 BD	19 U	6.6	22	19	14	10	35	16	9.6 U	9.6 U	53	24	26
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	0.45	5.3	11	5.6	7.8	3.2 U	6.8	1.4
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	0.52 U	5.2 U	5.2 U	5.2 U	5.2 U	5.2 U	5.2 U	1.3 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	0.67 U	6.6 U	6.6 U	6.6 U	6.6 U	6.6 U	6.6 U	1.7 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	1.0 U	11 U	11 U	11 U	11 U	11 U	11 U	2.6 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	0.39 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	0.95 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	0.43	3.2 U	3.2 U	27	25	3.2 U	3.2 U	1.8
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	0.63 U	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	1.6 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	0.46 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	1.2 U
Chloroethane	4.8	7.2	9.4	17	1 D	3.6 D	6.7	2.1	2.6 U	3	5.3	1.5	170	250	700	590	41	44	17
Chloroform	6	7.9	8	8.3	1.6 D	6.9 D	7.6	2.7	3.2	6.3	8.5	4.7	20	34	9.6	15	13	23	3.6
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	20	0.21 U	0.21 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U
cis-1,2-Dichloroethene	180	260	260	360	28 D	120 D	160	38	47	75	150	66	2000	2200	6100	7600	610	1200	560
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	0.45 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	1.1 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	0.34 U	3.4 U	5.7	8.4	8.8	3.4 U	3.4 U	0.85 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	0.85 U	8.6 U	8.6 U	8.6 U	8.6 U	8.6 U	8.6 U	2.2 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	2.4	5 U	170	5 U	5 U	5.4	7	2.6
Ethanol	10	19 U	15	1.9 U	8.2 D	17 D	15 U	9.2	75 U	7.2	12	19	33	40	12	8.3	39	1.8 U	8.6
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	0.36 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	0.9 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-Combined- 010313 1/13/2013	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	
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	0.43 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	1.1 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	1.1 U	22 U	22 U	22 U	22 U	22 U	22 U	5.4 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	0.53	3.6 U	3.6 U	3.6 U	6.6	3.6 U	3.6 U	3.2	
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	9.8 U	28	2.4 U	2.4 U	2.4 U	2.4 U	26	5.9	7.5
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	0.87 U	8.6 U	8.6 U	8.6 U	8.6 U	8.6 U	8.6 U	2.2 U	
Methyl methacrylate							0.41 UD	0.82 U	0.41 U	0.41 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	2.2	7 U	19	7 U	17	7 U	13	19	
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	0.36 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	0.9 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	0.41 U	4 U	4 U	4 U	4 U	4 U	4 U	1 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	0.43 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	1.1 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	6.9 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	0.45 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	0.43 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	1.1 U	
Tetrachloroethene	450	1300	640	750	160 D	920 D	440	8.1	170	530	910	850	600	1200	2300	2500	73	310	31	
Tetrahydrofuran	34	54	65	31	11 D	11 D	21	0.27	8.3	3800	110	1.8	6.3	21	19	3 U	32	14	37	
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	0.38 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	1.4	
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	1	9.2	23	69	180	4 U	8.8	2.5	
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	0.45 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	
Trichloroethene	1200	2000	1700	3200	240 D	1800 D	1900	97	730	1500	2600	2000	31000	42000	25000	25000	8600	19000	2700	
Trichlorofluoromethane	210	300	440	410	71 D	200 D	610	200	150	260	100	230	520	540	1300	1800	430	840	240	
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	0.77 U	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	1.9 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	0.70 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	0.9 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	0.26 U	2.7	4.8	9.4	8.1	2.6 U	2.6 U	0.65	

**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> )	EW-4-033109 3/31/2009
1,1,1-Trichloroethane	14000
1,1,2,2-Tetrachloroethane	6.8 U
1,1,2-Trichloroethane	5.4 U
1,1-Dichloroethane	1400
1,1-Dichloroethene	210
1,2,4-Trichlorobenzene	7.4 U
1,2,4-Trimethylbenzene	5 U
1,2-Dibromoethane (EDB)	7.6 U
1,2-Dichlorobenzene	6 U
1,2-Dichloroethane	4 U
1,2-Dichloropropane	4.6 U
1,2-Dichlorotetrafluoroethane	7 U
1,3,5-Trimethylbenzene	5 U
1,3-Butadiene	2.2 U
1,3-Dichlorobenzene	6 U
1,4-Dichlorobenzene	6 U
1,4-Dioxane	
2-Butanone	6.4
2-Hexanone	4 U
4-Ethyltoluene	5 U
4-Methyl-2-pentanone	4 U
Acetone	12
Benzene	3.2 U
Benzyl chloride	5.2 U
Bromodichloromethane	6.6 U
Bromoform	11 U
Bromomethane	3.8 U
Carbon disulfide	3.2 U
Carbon tetrachloride	6.2 U
Chlorobenzene	4.6 U
Chloroethane	33
Chloroform	7.5
Chloromethane	2 U
cis-1,2-Dichloroethene	1300
cis-1,3-Dichloropropene	4.4 U
Cyclohexane	3.4 U
Dibromochloromethane	8.6 U
Dichlorodifluoromethane	5 U
Ethanol	1.8 U
Ethyl acetate	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> )	EW-4-033109 3/31/2009
Ethylbenzene	4.4 U
Hexachlorobutadiene	22 U
Hexane	3.6 U
Isopropyl alcohol	7.1
m,p-Xylene	8.6 U
Methyl methacrylate	
Methylene chloride	12
Methyl-t-butyl ether	3.6 U
n-Heptane	4 U
o-Xylene	4.4 U
Propylene (Propene)	1.8 U
Styrene	4.2 U
Tetrachloroethene	170
Tetrahydrofuran	5.1
Toluene	3.8 U
trans-1,2-Dichloroethene	8
trans-1,3-Dichloropropene	4.4 U
Trichloroethene	5500
Trichlorofluoromethane	370
Trichlorotrifluoroethane	7.6 U
Vinyl acetate	3.6 U
Vinyl chloride	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	0.24	
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	
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	
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	
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-1-010313 1/3/2013	IA-2-011609 1/16/2009	
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	0.19 U	9.9	
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	0.24 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	0.19 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	0.20 U	0.12 U	0.061 U	0.12 U	0.14 U	0.14 U	0.72	
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	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	0.41	
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	0.52 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	0.17 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	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U	0.27 U	0.27 U	0.38 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	0.21 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	0.20 U	0.056	0.061 U	0.12 U	0.14 U	0.14 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	0.16 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	0.35 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	0.25 U	0.25 U	0.25 U	0.044	0.15 U	0.059	0.32	0.17 U	0.25 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	0.066 U	0.066 U	0.066 U	0.078 U	0.078 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	0.21 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	0.21 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	0.87	21	
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	0.14 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	0.17 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	0.14 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	7	17	
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	0.51	1	
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	0.18 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	0.24 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	0.36 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	0.14 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	1.1 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	0.54	0.33	
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	0.16 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	0.093 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	0.17 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	0.99	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	0.14 U	2.1	
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	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.22 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	0.12 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	0.30 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	2.5	1.8	
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	3.1	5.5	
Ethyl acetate	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 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	0.4	0.37 U	



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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-1-010313 1/3/2013	IA-2-011609 1/16/2009
Ethylbenzene	0.40	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	0.18	0.26
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	0.37 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	0.67	0.88
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	3.4 U	3.7
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	0.79	0.76
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	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	1.3	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	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U	0.11 U	0.13 U	0.13 U	0.18 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	0.14 U	0.23
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	0.25	0.3
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	2.4 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	0.15 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	<b>5.6 [a]</b>	0.34 U	0.47	0.84	0.21	0.065	2.7	0.24 U	<b>7.5</b>
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	0.10 U	12
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	0.47	1.7
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	0.14 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	0.16 U	0.22 U
Trichloroethene	0.27 U	0.27 U	0.27 U	0.31	0.39	0.27 U	<b>1.5</b>	0.27 U	0.4	0.27 U	<b>1.7</b>	0.27 U	0.27 U	0.27 U	0.25	0.081 U	0.16 U	0.21	0.19 U	<b>4.4</b>
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	1.6	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	0.55	0.69
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	0.25 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	0.090 U	0.27

**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> )	IA-2-020309 2/3/2009
1,1,1-Trichloroethane	0.63
1,1,2,2-Tetrachloroethane	0.34 U
1,1,2-Trichloroethane	0.27 U
1,1-Dichloroethane	0.2 U
1,1-Dichloroethene	0.2 U
1,2,4-Trichlorobenzene	0.37 U
1,2,4-Trimethylbenzene	0.37
1,2-Dibromoethane (EDB)	0.38 U
1,2-Dichlorobenzene	0.3 U
1,2-Dichloroethane	0.2 U
1,2-Dichloropropane	0.23 U
1,2-Dichlorotetrafluoroethane	0.35 U
1,3,5-Trimethylbenzene	0.25 U
1,3-Butadiene	0.11 U
1,3-Dichlorobenzene	0.3 U
1,4-Dichlorobenzene	0.3 U
1,4-Dioxane	
2-Butanone	4.1
2-Hexanone	0.2 U
4-Ethyltoluene	0.25 U
4-Methyl-2-pentanone	0.2 U
Acetone	9.6
Benzene	0.67
Benzyl chloride	0.26 U
Bromodichloromethane	0.33 U
Bromoform	0.51 U
Bromomethane	0.19 U
Carbon disulfide	0.16 U
Carbon tetrachloride	0.41
Chlorobenzene	0.23 U
Chloroethane	0.13 U
Chloroform	0.24 U
Chloromethane	1
cis-1,2-Dichloroethene	0.24
cis-1,3-Dichloropropene	0.22 U
Cyclohexane	0.17 U
Dibromochloromethane	0.43 U
Dichlorodifluoromethane	2.2
Ethanol	8.8
Ethyl acetate	0.37 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> )	IA-2-020309 2/3/2009
Ethylbenzene	0.28
Hexachlorobutadiene	1.1 U
Hexane	0.57
Isopropyl alcohol	3.1
m,p-Xylene	0.88
Methyl methacrylate	
Methylene chloride	<b>30</b>
Methyl-t-butyl ether	0.18 U
n-Heptane	0.2 U
o-Xylene	0.34
Propylene (Propene)	0.18 U
Styrene	0.21 U
Tetrachloroethene	0.64
Tetrahydrofuran	1.2
Toluene	1.3
trans-1,2-Dichloroethene	0.2 U
trans-1,3-Dichloropropene	0.22 U
Trichloroethene	0.56
Trichlorofluoromethane	1.2
Trichlorotrifluoroethane	0.58
Vinyl acetate	0.71 U
Vinyl chloride	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-2-021109 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

**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-2-021109 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	7.6	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	1.6	1.4	0.91	0.77	1.9	0.27 U	0.27 U	0.99	0.57	0.79	0.27 U	0.27 U	0.27 U	0.27 U	1.2
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 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-2-010313 1/3/2013	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
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	0.19 U	9.8	0.57	1.1	1.1	0.28	1.5	2.2	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	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.24 U	0.34 U	0.34 U
1,1,2-Trichloroethane	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.16 U	0.082 U	0.16 U	0.19 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U
1,1-Dichloroethane	0.2 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	0.14 U	0.68	0.2 U	0.2 U	0.2 U	0.14 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	0.14 U	0.35	0.2 U	0.2 U	0.2 U	0.2 U	0.14 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	0.45 U	0.45 U	0.45 U	0.52 U	0.52 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.26 U	0.37 U	0.37 U
1,2,4-Trimethylbenzene	0.35	0.48	0.52	0.25 U	0.52	0.25 U	0.25 U	0.088	0.15 U	0.19	0.48	0.98	0.25 U	0.36	0.68	0.61	0.25 U	0.18 U	0.25 U	0.29
1,2-Dibromoethane (EDB)	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U	0.27 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.27 U	0.38 U	0.38 U
1,2-Dichlorobenzene	0.3 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	0.21 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
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	0.16	0.2 U	0.2 U	0.2 U	0.2 U	0.2 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	0.14 U	0.069 U	0.14 U	0.16 U	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U
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
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	0.28	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U
1,3-Butadiene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.066 U	0.066 U	0.066 U	0.078 U	0.078 U	0.11 U	0.11 U	0.3	0.77	0.11 U	0.08 U	0.11 U	0.23 U
1,3-Dichlorobenzene	0.3 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	0.21 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
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	0.21 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
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	5.1	20	4.2	4.6	4	1.7	1.6	2.5	2
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	0.17	0.2 U	0.26	0.33	0.3	0.2 U	0.14 U	0.38	0.51
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	0.24	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U
4-Methyl-2-pentanone	0.28	0.49	0.34	0.2 U	0.2 U	0.2 U	0.24	0.1	0.11	0.12	0.19	3.6	0.2 U	0.2 U	0.29	0.34	0.2 U	0.14 U	0.22	0.2 U
Acetone	18	20	11	9.8 B	15 B	8.9 B	18	6.2	5.4	14	17	19	18	12	17	24	9.7	7.5	50	11
Benzene	0.47	0.48	0.72	0.48	1.5	0.26	0.3	0.39	0.36	0.24	0.62	0.65	1	0.71	1.9	3.1	0.69	0.6	0.46	0.41
Benzyl chloride	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.16 U	0.16 U	0.16 U	0.18 U	0.18 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.19 U	0.26 U	0.26 U
Bromodichloromethane	0.33 U	0.33 U	0.33 U	0.34 U	0.34 U	0.34 U	0.34 U	0.2 U	0.1 U	0.2 U	0.24 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	0.33 U	0.33 U
Bromoform	0.51 U	0.51 U	0.51 U	0.52 U	0.52 U	0.52 U	0.52 U	0.31 U	0.31 U	0.31 U	0.36 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.36 U	0.51 U	0.51 U
Bromomethane	0.19 U	0.22	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.14 U	0.19 U	0.19 U
Carbon disulfide	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	1.6 U	0.93 U	0.93 U	0.93 U	1.1 U	1.9	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.12 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	0.56	0.34	0.45	0.52	0.6	0.43	0.22 U	0.42	0.4
Chlorobenzene	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.14 U	0.14 U	0.16 U	0.58	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U
Chloroethane	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.079 U	0.079 U	0.079 U	0.093 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
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	0.17 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.17 U	0.24 U	0.24 U
Chloromethane	1.2	1.2	1.1	0.96	0.97	0.95	1.2	0.93	1	1.4	1.3	1	1.1	0.98	1.2	1.4	1.1	1.2	1.2	0.91
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	0.14 U	1.9	0.2 U	1.1	1.1	0.55	0.61	1.5	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	0.16 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
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	1.9	0.17 U	0.17 U	0.46	0.6	0.17 U	0.15	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	0.30 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.31 U	0.43 U	0.43 U
Dichlorodifluoromethane	2.4	2.6	1.7	1.9	3.2	1.6	2	2.7	2.1	2.7	2.8	2.6	1.9	2.3	2.5	2.9	2.6	2	2.9	2.1
Ethanol	5	7.6	9	2.7	10	2.5	8.5	2.1	2.1	10	9.8	8.1	5.5	9.2	13	18	7.9	4.2	9	6.2
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	0.59	0.37 U	0.37 U	0.18 U	0.18 U	0.37 U	0.26 U	0.37 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																			
	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-2-010313 1/3/2013	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
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	4.1	0.25	0.29	0.64	0.77	0.22 U	0.16	0.22 U	0.22 U
Hexachlorobutadiene	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	0.32 U	0.37 U	0.37 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.75 U	1.1 U	0.53 U
Hexane	0.51	0.49	0.53	0.35 U	1.6	0.31	7.0 U	0.32	0.34	2.6	2.4	15	0.94	0.87	1.3	1.9	3.7	0.37	0.77	0.96
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	3.4 U	4.9	4.1	5.5	4.9	3.1	0.18 U	33	180
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	17	0.75	0.9	2	2.6	0.65	0.57	0.66	0.7
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	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	1.1	2.2	<b>31</b>	3.1	3.5	<b>33</b>	1.2	3.6	2.4
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	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U
n-Heptane	0.2 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	3.1	0.22	0.2 U	0.61	0.77	0.2 U	0.14 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	5.1	0.28	0.33	0.79	0.86	0.23	0.22	0.24	0.26
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	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
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	0.45	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.15 U	0.21 U	0.21 U
Tetrachloroethene	0.43	1.4	0.34 U	3.2	<b>5.2 [a]</b>	0.34 U	0.45	0.92	0.23	0.09	2	0.24	<b>6.1</b>	0.56	4.3	3.3	1.9	2.2	<b>7.1</b>	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	0.24	12	1.1	1.3	0.49	0.15 U	0.24	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	5.6	1.7	1.5	4.7	5.8	2.1	1	1.2	1.2
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	0.14 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
trans-1,3-Dichloropropene	0.22 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.22 U
Trichloroethene	0.27 U	0.53	0.27 U	<b>1.7</b>	0.27 U	0.27 U	0.27 U	0.27	0.081 U	0.16 U	0.2	0.19 U	<b>3.9</b>	0.49	<b>1.7</b>	<b>1.5</b>	0.53	0.77	<b>1.8</b>	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	2.7	1.9	1.3	1.8	2.8	1.8	1.2	1.3	1.4
Trichlorotrifluoroethane	0.53	0.94	0.45	0.59	0.71	0.71	0.61	0.71	0.42	0.57	0.64	0.56	0.6	0.58	0.49	0.44	0.69	0.53	0.74	0.51
Vinyl acetate	0.18 U	0.18 U	0.36 U	0.35 U	0.18 U	3.5 U	0.18 U	0.11 U	0.21 U	0.21 U	0.25 U	0.25 U	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.5 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	0.090 U	0.23	0.13 U	0.19	0.21	0.13 U	0.1 U	0.17	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> )	IA-3-092409 9/24/2009
1,1,1-Trichloroethane	0.27 U
1,1,1,2-Tetrachloroethane	0.34 U
1,1,2-Trichloroethane	0.27 U
1,1-Dichloroethane	0.2 U
1,1-Dichloroethene	0.2 U
1,2,4-Trichlorobenzene	0.37 U
1,2,4-Trimethylbenzene	0.4
1,2-Dibromoethane (EDB)	0.38 U
1,2-Dichlorobenzene	0.3 U
1,2-Dichloroethane	0.2 U
1,2-Dichloropropane	0.23 U
1,2-Dichlorotetrafluoroethane	0.35 U
1,3,5-Trimethylbenzene	0.25 U
1,3-Butadiene	0.23 U
1,3-Dichlorobenzene	0.3 U
1,4-Dichlorobenzene	0.3 U
1,4-Dioxane	
2-Butanone	2.6
2-Hexanone	0.58
4-Ethyltoluene	0.25 U
4-Methyl-2-pentanone	0.42
Acetone	19
Benzene	0.5
Benzyl chloride	0.26 U
Bromodichloromethane	0.33 U
Bromoform	0.51 U
Bromomethane	0.19 U
Carbon disulfide	0.16 U
Carbon tetrachloride	0.43
Chlorobenzene	0.23 U
Chloroethane	0.13 U
Chloroform	0.24 U
Chloromethane	1.1
cis-1,2-Dichloroethene	0.2 U
cis-1,3-Dichloropropene	0.22 U
Cyclohexane	0.17 U
Dibromochloromethane	0.43 U
Dichlorodifluoromethane	2.1
Ethanol	7.5
Ethyl acetate	0.18 U



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Summary of Analytical Results - Air Sampling for Large Retail Space  
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Parameter (ug/m <sup>3</sup> )	IA-3-092409 9/24/2009
Ethylbenzene	0.23
Hexachlorobutadiene	0.53 U
Hexane	0.47
Isopropyl alcohol	5.9
m,p-Xylene	0.99
Methyl methacrylate	
Methylene chloride	0.7 U
Methyl-t-butyl ether	0.18 U
n-Heptane	0.2 U
o-Xylene	0.45
Propylene (Propene)	0.35 U
Styrene	0.21 U
Tetrachloroethene	0.34 U
Tetrahydrofuran	0.15 U
Toluene	1.1
trans-1,2-Dichloroethene	0.2 U
trans-1,3-Dichloropropene	0.22 U
Trichloroethene	0.27 U
Trichlorofluoromethane	1.2
Trichlorotrifluoroethane	0.46
Vinyl acetate	0.71 U
Vinyl chloride	0.13 U

**Table 3.  
Summary of Analytical Results - Air Sampling for Large Retail Space  
Former Gorham Manufacturing Site  
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Parameter (ug/m <sup>3</sup> )	Indoor Air - Large Retail Space																			
	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	IA-3-010313 1/3/2013
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	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	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	0.12 U	0.061 U	0.12 U	0.14 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	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	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	0.17 U
1,2-Dibromoethane (EDB)	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U	0.27 U	0.27 U
1,2-Dichlorobenzene	0.3 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	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	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	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	0.35 U
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	0.17 U
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	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	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	0.21 U
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	0.93
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	0.14 U
4-Ethyltoluene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.15 U	0.15 U	0.074	0.15	0.17 U
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	0.14 U
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	6.7
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	0.53
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	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	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	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	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	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	0.32
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	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	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	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.079	0.073 U	0.15	0.19	0.17 U
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	0.95
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	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	0.14 U	0.068 U	0.14 U	0.16 U	0.16 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	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	0.30 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	2.5
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	2.7
Ethyl acetate	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 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	0.68

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

Parameter (ug/m <sup>3</sup> )	Indoor Air - Large Retail Space																			
	IA-3-100109 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	IA-3-010313 1/3/2013
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	0.27
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	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	0.89
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	0.57
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	1
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	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	3.3
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	0.13 U
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	0.14 U
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	0.35
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	2.4 U
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	0.15 U
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	5.2 [a]	0.34 U	0.47	0.91	0.23	0.16	2.3	0.25
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	0.10 U
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	0.62
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	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	0.16 U
Trichloroethene	1.1	0.54	0.75	0.27 U	0.27 U	0.4	0.27 U	1.5	0.27 U	0.47	0.27 U	1.7	0.27 U	0.27 U	0.27 U	0.25	0.081 U	0.16 U	0.17	0.19 U
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	1.2
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	0.59
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	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	0.13 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	0.090 U

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

Parameter (ug/m <sup>3</sup> )	Indoor Air - Large Retail Space															
	IA-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	1.30	1.20	0.3 U	0.69	1.2	0.50	
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**

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
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

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Summary of Analytical Results - Air Sampling for Large Retail Space  
Former Gorham Manufacturing Site  
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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	IA-4-010313 1/3/2013	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	0.19 U	0.45	0.52	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	0.24 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	0.19 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	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	0.20 U	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	0.2 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	0.52 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	0.9	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	0.27 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 U	0.18 U	0.21 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	0.16	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	0.16 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
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	0.15 U	0.15 U	0.08	0.12	0.27	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	0.078 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	0.21 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	0.21 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	4.7	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	0.19	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	0.22	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	3.3	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	17	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	0.67	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	0.18 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	0.24 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	0.36 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	0.14 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	1.6	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	0.54	<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	0.47	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	0.093 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	0.17 U	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	1.1	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	0.14 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	0.16 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	2.1	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	0.30 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	2.8	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	7.5	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	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U

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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	IA-4-010313 1/3/2013	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	4.1	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	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	17	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	2.6	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	17	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	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	1.3	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	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
n-Heptane	0.2 U	0.2 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	1.6	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	5.1	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	2.4 U	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	0.52	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	0.18	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	0.28	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	4.8	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	0.14 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	0.16 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	0.19 U	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	2.8	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	0.6	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	0.25 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	0.090 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 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

Prepared by/Date: EYM 1/15/13

Checked by/Date: MAM 1/30/13

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

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

Date	Pressure Differential (inches of water)			
	VMW-1	VMW-2	VMW-3	VMW-4
2/3/2009	-0.20	-0.62	-0.15	-0.12
2/18/2009	-0.509	-0.738	-0.650	-0.253
2/26/2009	-0.511	-0.710	-0.665	-0.273
3/6/2009	-0.507	-0.610	-0.715	-0.251
3/6/2009*	-0.120	-0.195	-0.230	-0.028
3/31/2009	-0.148	-0.221	-0.244	-0.072
4/14/2009	-0.140	-0.210	-0.215	-0.081
5/15/2009	-0.133	-0.193	-0.208	-0.087
9/17/2009	-0.132	-0.172	-0.209	-0.087
9/24/2009	-0.146	-0.189	-0.254	-0.094
10/1/2009	-0.181	-0.232	-0.233	-0.097
10/8/2009	-0.197	-0.212	-0.255	-0.087
12/29/2009**	-0.021	-0.020	-0.160	-0.023
1/28/2010	-0.947	-0.642	-0.709	-0.237
2/5/2010	-0.497	-0.714	-0.510	-0.258
2/12/2010	-0.509	-0.706	-0.537	-0.261
2/19/2010	-0.526	-0.733	-0.667	-0.242
3/26/2010	-0.636	-0.860	-0.671	-0.331
4/30/2010	-0.519	-0.713	-0.378	-0.287
5/28/2010	-0.546	-0.727	+1.371	-0.279
7/1/2010	-0.505	-0.678	+1.568	-0.272
9/16/2010	-0.496	-0.654	+0.980	-0.272
12/7/2010	-0.126	-0.202	-0.155	-0.052
2/17/2011	-0.491	-0.683	-0.737	-0.263
6/2/2011	-0.561	-0.767	-0.393	-0.290
9/15/2011	-0.517	-0.710	+1.071	-0.260
12/8/2011	-0.609	-0.826	+1.502	-0.313
3/8/2012	-0.422	-0.680	+0.329	-0.288
6/14/2012	-0.372	-0.767	+2.389	-0.280
9/13/2012	-0.543	-1.021	-0.665	-0.283
1/3/2013	-0.495	-0.628	-1.141	-0.674

\* vacuum reduced at extraction wells

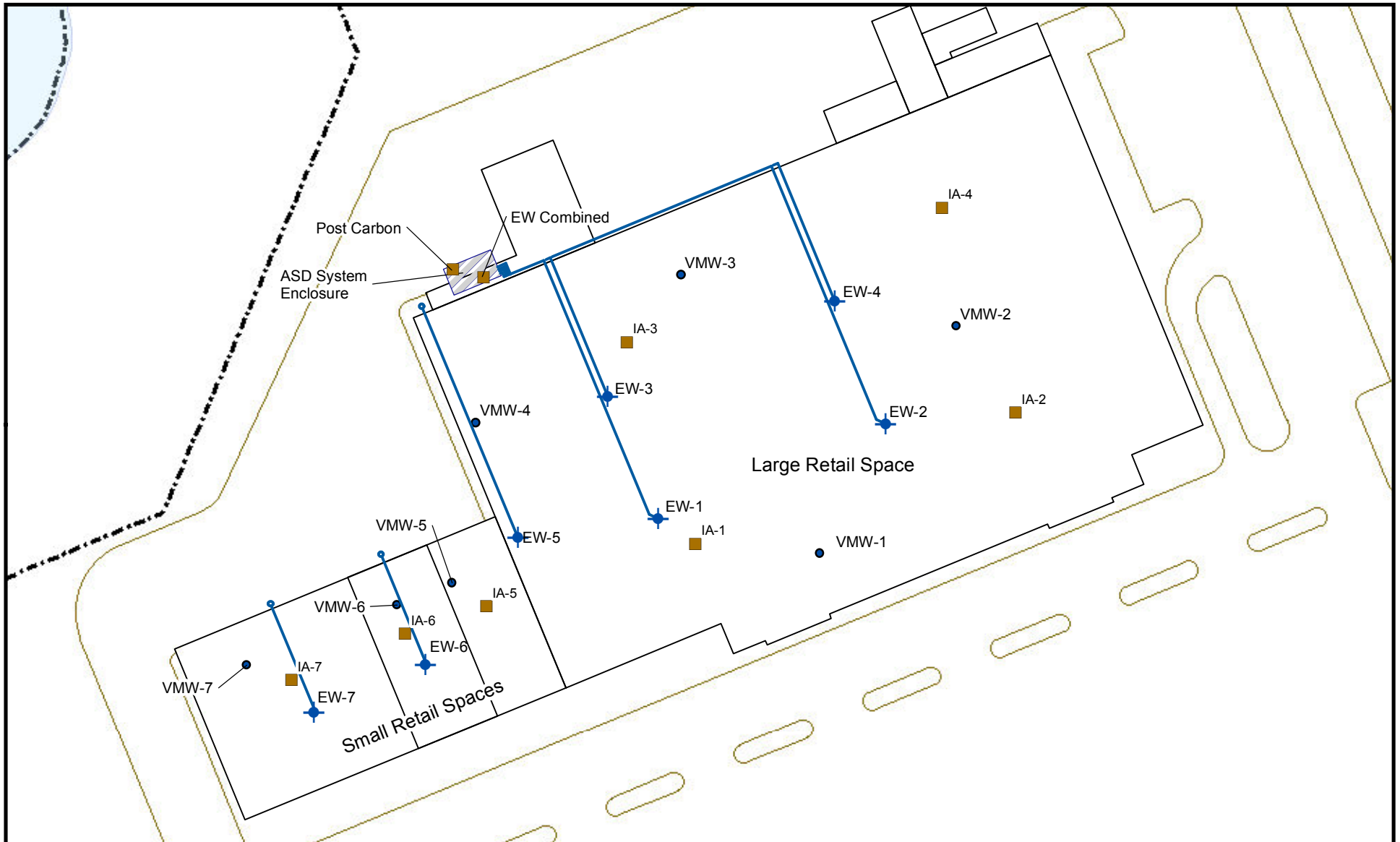
\*\* ASD system offline

Prepared by/Date: MAM 1/25/13

Checked by/Date: DLC



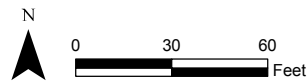
## FIGURES



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, Fourth Quarter, 2012  
February 13, 2013



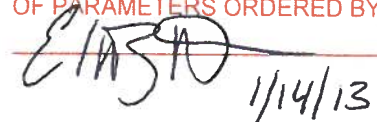
## **APPENDIX A**

### **Laboratory Reports**

January 14, 2013

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

CHECKED FOR COMPLETENESS  
OF PARAMETERS ORDERED BY:

  
1/14/13

Project Location: Providence RI  
Client Job Number:  
Project Number: 3650080114  
Laboratory Work Order Number: 13A0054

Enclosed are results of analyses for samples received by the laboratory on January 3, 2013. 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: 1/14/2013

PURCHASE ORDER NUMBER: C012600896

PROJECT NUMBER: 3650080114

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 13A0054

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-1-010313	13A0054-01	Indoor air		EPA TO-15	
IA-2-010313	13A0054-02	Indoor air		EPA TO-15	
IA-3-010313	13A0054-03	Indoor air		EPA TO-15	
IA-4-010313	13A0054-04	Indoor air		EPA TO-15	
IA-5-010313	13A0054-05	Indoor air		EPA TO-15	
IA-6-010313	13A0054-06	Indoor air		EPA TO-15	
IA-7-010313	13A0054-07	Indoor air		EPA TO-15	
AA-1-010313	13A0054-08	Ambient Air		EPA TO-15	
EW-5-010313	13A0054-09	Sub Slab		EPA TO-15	
EW-6-010313	13A0054-10	Sub Slab		EPA TO-15	
EW-7-010313	13A0054-11	Sub Slab		EPA TO-15	
EW-Combinded-010313	13A0054-12	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:**

---

Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

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

**Bromoform, Dibromochloromethane, trans-1,3-Dichloropropene**

B065952-BS1, B065953-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 high side.

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

**Acetone, Ethyl Acetate**

13A0054-01[IA-1-010313], 13A0054-02[IA-2-010313], 13A0054-03[IA-3-010313], 13A0054-04[IA-4-010313], 13A0054-05[IA-5-010313], 13A0054-06[IA-6-010313], 13A0054-07[IA-7-010313], 13A0054-08[AA-1-010313], 13A0054-09[EW-5-010313], 13A0054-10[EW-6-010313], 13A0054-11[EW-7-010313], 13A0054-12[EW-Combined-010313], B065952-BS1, B065952-DUP1, B065953-BS1, B065953-DUP1

---

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

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

**Ethyl Acetate, Hexane, Methylene Chloride**

13A0054-06[IA-6-010313], B065953-DUP1

---

Duplicate RPD outside of control limits. Reduced precision is expected for values near the reporting limit.

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

**m&p-Xylene**

13A0054-09[EW-5-010313], B065952-DUP1

---

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

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

**Acetone, Bromoform, Dibromochloromethane, Hexachlorobutadiene, trans-1,3-Dichloropropene**

13A0054-01[IA-1-010313], 13A0054-02[IA-2-010313], 13A0054-03[IA-3-010313], 13A0054-04[IA-4-010313], 13A0054-05[IA-5-010313], 13A0054-06[IA-6-010313], 13A0054-07[IA-7-010313], 13A0054-08[AA-1-010313], 13A0054-09[EW-5-010313], 13A0054-10[EW-6-010313], 13A0054-11[EW-7-010313], 13A0054-12[EW-Combined-010313], B065952-BS1, B065952-DUP1, B065953-BS1, B065953-DUP1

---



The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Daren J. Damboragian", is written over a light gray rectangular background.

Daren J. Damboragian  
Laboratory Manager

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: IA-1-010313**  
**Sample ID: 13A0054-01**  
 Sample Matrix: Indoor air  
 Sampled: 1/3/2013 08:54

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1675  
 Canister Size: 6 liter  
 Flow Controller ID: 4184  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -28  
 Final Vacuum(in Hg): -5.0  
 Receipt Vacuum(in Hg): -6.0  
 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	3.0	1.4	0.16	L-05, V-06	7.0	3.3	0.702	1/5/13 22:02	WSD	
Benzene	0.16	0.035	0.018		0.51	0.11	0.702	1/5/13 22:02	WSD	
Benzyl chloride	ND	0.035	0.0063		ND	0.18	0.702	1/5/13 22:02	WSD	
Bromodichloromethane	ND	0.035	0.0098		ND	0.24	0.702	1/5/13 22:02	WSD	
Bromoform	ND	0.035	0.0091		ND	0.36	0.702	1/5/13 22:02	WSD	
Bromomethane	ND	0.035	0.034		ND	0.14	0.702	1/5/13 22:02	WSD	
1,3-Butadiene	ND	0.035	0.020		ND	0.078	0.702	1/5/13 22:02	WSD	
2-Butanone (MEK)	0.30	1.4	0.027	J	0.87	4.1	0.702	1/5/13 22:02	WSD	
Carbon Disulfide	ND	0.35	0.0098		ND	1.1	0.702	1/5/13 22:02	WSD	
Carbon Tetrachloride	0.086	0.035	0.0098		0.54	0.22	0.702	1/5/13 22:02	WSD	
Chlorobenzene	ND	0.035	0.029		ND	0.16	0.702	1/5/13 22:02	WSD	
Chloroethane	ND	0.035	0.020		ND	0.093	0.702	1/5/13 22:02	WSD	
Chloroform	ND	0.035	0.013		ND	0.17	0.702	1/5/13 22:02	WSD	
Chloromethane	0.48	0.035	0.018		0.99	0.072	0.702	1/5/13 22:02	WSD	
Cyclohexane	ND	0.035	0.034		ND	0.12	0.702	1/5/13 22:02	WSD	
Dibromochloromethane	ND	0.035	0.0084		ND	0.30	0.702	1/5/13 22:02	WSD	
1,2-Dibromoethane (EDB)	ND	0.035	0.0098		ND	0.27	0.702	1/5/13 22:02	WSD	
1,2-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.702	1/5/13 22:02	WSD	
1,3-Dichlorobenzene	ND	0.035	0.0098		ND	0.21	0.702	1/5/13 22:02	WSD	
1,4-Dichlorobenzene	ND	0.035	0.0091		ND	0.21	0.702	1/5/13 22:02	WSD	
Dichlorodifluoromethane (Freon 12)	0.51	0.035	0.015		2.5	0.17	0.702	1/5/13 22:02	WSD	
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.702	1/5/13 22:02	WSD	
1,2-Dichloroethane	ND	0.035	0.012		ND	0.14	0.702	1/5/13 22:02	WSD	
1,1-Dichloroethylene	ND	0.035	0.011		ND	0.14	0.702	1/5/13 22:02	WSD	
cis-1,2-Dichloroethylene	ND	0.035	0.0098		ND	0.14	0.702	1/5/13 22:02	WSD	
trans-1,2-Dichloroethylene	ND	0.035	0.012		ND	0.14	0.702	1/5/13 22:02	WSD	
1,2-Dichloropropane	ND	0.035	0.014		ND	0.16	0.702	1/5/13 22:02	WSD	
cis-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	1/5/13 22:02	WSD	
trans-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	1/5/13 22:02	WSD	
Ethanol	1.7	1.4	0.17		3.1	2.6	0.702	1/5/13 22:02	WSD	
Ethyl Acetate	0.11	0.035	0.018	L-05	0.40	0.13	0.702	1/5/13 22:02	WSD	
Ethylbenzene	0.041	0.035	0.0098		0.18	0.15	0.702	1/5/13 22:02	WSD	
4-Ethyltoluene	ND	0.035	0.013		ND	0.17	0.702	1/5/13 22:02	WSD	
Heptane	ND	0.035	0.012		ND	0.14	0.702	1/5/13 22:02	WSD	
Hexachlorobutadiene	ND	0.035	0.013		ND	0.37	0.702	1/5/13 22:02	WSD	
Hexane	0.19	1.4	0.031	J	0.67	4.9	0.702	1/5/13 22:02	WSD	
2-Hexanone (MBK)	ND	0.035	0.011		ND	0.14	0.702	1/5/13 22:02	WSD	
Isopropanol	ND	1.4	0.021		ND	3.4	0.702	1/5/13 22:02	WSD	

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: IA-1-010313**  
**Sample ID: 13A0054-01**  
 Sample Matrix: Indoor air  
 Sampled: 1/3/2013 08:54

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1675  
 Canister Size: 6 liter  
 Flow Controller ID: 4184  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -28  
 Final Vacuum(in Hg): -5.0  
 Receipt Vacuum(in Hg): -6.0  
 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	1/5/13 22:02	WSD
Methylene Chloride	0.38	0.35	0.045		1.3	1.2	0.702	1/5/13 22:02	WSD
Methyl methacrylate	ND	0.035	0.011		ND	0.14	0.702	1/5/13 22:02	WSD
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.011		ND	0.14	0.702	1/5/13 22:02	WSD
Propene	ND	1.4	0.027		ND	2.4	0.702	1/5/13 22:02	WSD
Styrene	ND	0.035	0.0077		ND	0.15	0.702	1/5/13 22:02	WSD
1,1,1,2-Tetrachloroethane	ND	0.064	0.023		ND	0.44	0.702	1/5/13 22:02	WSD
1,1,2,2-Tetrachloroethane	ND	0.035	0.012		ND	0.24	0.702	1/5/13 22:02	WSD
Tetrachloroethylene	ND	0.035	0.011		ND	0.24	0.702	1/5/13 22:02	WSD
Tetrahydrofuran	ND	0.035	0.011		ND	0.10	0.702	1/5/13 22:02	WSD
Toluene	0.12	0.035	0.0098		0.47	0.13	0.702	1/5/13 22:02	WSD
1,2,4-Trichlorobenzene	ND	0.070	0.013		ND	0.52	0.702	1/5/13 22:02	WSD
1,1,1-Trichloroethane	ND	0.035	0.012		ND	0.19	0.702	1/5/13 22:02	WSD
1,1,2-Trichloroethane	ND	0.035	0.011		ND	0.19	0.702	1/5/13 22:02	WSD
Trichloroethylene	ND	0.035	0.0098		ND	0.19	0.702	1/5/13 22:02	WSD
Trichlorofluoromethane (Freon 11)	0.28	0.035	0.022		1.6	0.20	0.702	1/5/13 22:02	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.072	0.035	0.012		0.55	0.27	0.702	1/5/13 22:02	WSD
1,2,4-Trimethylbenzene	ND	0.035	0.012		ND	0.17	0.702	1/5/13 22:02	WSD
1,3,5-Trimethylbenzene	ND	0.035	0.011		ND	0.17	0.702	1/5/13 22:02	WSD
Vinyl Acetate	ND	0.070	0.018		ND	0.25	0.702	1/5/13 22:02	WSD
Vinyl Chloride	ND	0.035	0.018		ND	0.090	0.702	1/5/13 22:02	WSD
m&p-Xylene	0.18	0.070	0.018		0.79	0.30	0.702	1/5/13 22:02	WSD
o-Xylene	0.057	0.035	0.0091		0.25	0.15	0.702	1/5/13 22:02	WSD

Surrogates	% Recovery	% REC Limits	Date/Time Analyzed
4-Bromofluorobenzene (1)	106	70-130	1/5/13 22:02
4-Bromofluorobenzene (2)	104	70-130	1/5/13 22:02

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: IA-2-010313**  
**Sample ID: 13A0054-02**  
 Sample Matrix: Indoor air  
 Sampled: 1/3/2013 11:08

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1117  
 Canister Size: 6 liter  
 Flow Controller ID: 4186  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -29  
 Final Vacuum(in Hg): -6.0  
 Receipt Vacuum(in Hg): -7.0  
 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	7.8	1.4	0.16	L-05, V-06	19	3.3	0.702	1/5/13 22:48	WSD
Benzene	0.20	0.035	0.018		0.65	0.11	0.702	1/5/13 22:48	WSD
Benzyl chloride	ND	0.035	0.0063		ND	0.18	0.702	1/5/13 22:48	WSD
Bromodichloromethane	ND	0.035	0.0098		ND	0.24	0.702	1/5/13 22:48	WSD
Bromoform	ND	0.035	0.0091		ND	0.36	0.702	1/5/13 22:48	WSD
Bromomethane	ND	0.035	0.034		ND	0.14	0.702	1/5/13 22:48	WSD
1,3-Butadiene	ND	0.035	0.020		ND	0.078	0.702	1/5/13 22:48	WSD
2-Butanone (MEK)	1.7	1.4	0.027		5.1	4.1	0.702	1/5/13 22:48	WSD
Carbon Disulfide	0.61	0.35	0.0098		1.9	1.1	0.702	1/5/13 22:48	WSD
Carbon Tetrachloride	0.089	0.035	0.0098		0.56	0.22	0.702	1/5/13 22:48	WSD
Chlorobenzene	0.13	0.035	0.029		0.58	0.16	0.702	1/5/13 22:48	WSD
Chloroethane	ND	0.035	0.020		ND	0.093	0.702	1/5/13 22:48	WSD
Chloroform	ND	0.035	0.013		ND	0.17	0.702	1/5/13 22:48	WSD
Chloromethane	0.50	0.035	0.018		1.0	0.072	0.702	1/5/13 22:48	WSD
Cyclohexane	0.56	0.035	0.034		1.9	0.12	0.702	1/5/13 22:48	WSD
Dibromochloromethane	ND	0.035	0.0084		ND	0.30	0.702	1/5/13 22:48	WSD
1,2-Dibromoethane (EDB)	ND	0.035	0.0098		ND	0.27	0.702	1/5/13 22:48	WSD
1,2-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.702	1/5/13 22:48	WSD
1,3-Dichlorobenzene	ND	0.035	0.0098		ND	0.21	0.702	1/5/13 22:48	WSD
1,4-Dichlorobenzene	ND	0.035	0.0091		ND	0.21	0.702	1/5/13 22:48	WSD
Dichlorodifluoromethane (Freon 12)	0.53	0.035	0.015		2.6	0.17	0.702	1/5/13 22:48	WSD
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.702	1/5/13 22:48	WSD
1,2-Dichloroethane	0.039	0.035	0.012		0.16	0.14	0.702	1/5/13 22:48	WSD
1,1-Dichloroethylene	ND	0.035	0.011		ND	0.14	0.702	1/5/13 22:48	WSD
cis-1,2-Dichloroethylene	ND	0.035	0.0098		ND	0.14	0.702	1/5/13 22:48	WSD
trans-1,2-Dichloroethylene	ND	0.035	0.012		ND	0.14	0.702	1/5/13 22:48	WSD
1,2-Dichloropropane	ND	0.035	0.014		ND	0.16	0.702	1/5/13 22:48	WSD
cis-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	1/5/13 22:48	WSD
trans-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	1/5/13 22:48	WSD
Ethanol	4.3	1.4	0.17		8.1	2.6	0.702	1/5/13 22:48	WSD
Ethyl Acetate	0.16	0.035	0.018	L-05	0.59	0.13	0.702	1/5/13 22:48	WSD
Ethylbenzene	0.94	0.035	0.0098		4.1	0.15	0.702	1/5/13 22:48	WSD
4-Ethyltoluene	0.049	0.035	0.013		0.24	0.17	0.702	1/5/13 22:48	WSD
Heptane	0.74	0.035	0.012		3.1	0.14	0.702	1/5/13 22:48	WSD
Hexachlorobutadiene	ND	0.035	0.013		ND	0.37	0.702	1/5/13 22:48	WSD
Hexane	4.3	1.4	0.031		15	4.9	0.702	1/5/13 22:48	WSD
2-Hexanone (MBK)	0.042	0.035	0.011		0.17	0.14	0.702	1/5/13 22:48	WSD
Isopropanol	ND	1.4	0.021		ND	3.4	0.702	1/5/13 22:48	WSD

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: IA-2-010313**  
**Sample ID: 13A0054-02**  
 Sample Matrix: Indoor air  
 Sampled: 1/3/2013 11:08

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1117  
 Canister Size: 6 liter  
 Flow Controller ID: 4186  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -29  
 Final Vacuum(in Hg): -6.0  
 Receipt Vacuum(in Hg): -7.0  
 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	1/5/13 22:48	WSD
Methylene Chloride	0.31	0.35	0.045	J	1.1	1.2	0.702	1/5/13 22:48	WSD
Methyl methacrylate	ND	0.035	0.011		ND	0.14	0.702	1/5/13 22:48	WSD
4-Methyl-2-pentanone (MIBK)	0.87	0.035	0.011		3.6	0.14	0.702	1/5/13 22:48	WSD
Propene	ND	1.4	0.027		ND	2.4	0.702	1/5/13 22:48	WSD
Styrene	0.10	0.035	0.0077		0.45	0.15	0.702	1/5/13 22:48	WSD
1,1,1,2-Tetrachloroethane	ND	0.064	0.023		ND	0.44	0.702	1/5/13 22:48	WSD
1,1,2,2-Tetrachloroethane	ND	0.035	0.012		ND	0.24	0.702	1/5/13 22:48	WSD
Tetrachloroethylene	0.036	0.035	0.011		0.24	0.24	0.702	1/5/13 22:48	WSD
Tetrahydrofuran	0.081	0.035	0.011		0.24	0.10	0.702	1/5/13 22:48	WSD
Toluene	1.5	0.035	0.0098		5.6	0.13	0.702	1/5/13 22:48	WSD
1,2,4-Trichlorobenzene	ND	0.070	0.013		ND	0.52	0.702	1/5/13 22:48	WSD
1,1,1-Trichloroethane	ND	0.035	0.012		ND	0.19	0.702	1/5/13 22:48	WSD
1,1,2-Trichloroethane	ND	0.035	0.011		ND	0.19	0.702	1/5/13 22:48	WSD
Trichloroethylene	ND	0.035	0.0098		ND	0.19	0.702	1/5/13 22:48	WSD
Trichlorofluoromethane (Freon 11)	0.47	0.035	0.022		2.7	0.20	0.702	1/5/13 22:48	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.074	0.035	0.012		0.56	0.27	0.702	1/5/13 22:48	WSD
1,2,4-Trimethylbenzene	0.20	0.035	0.012		0.98	0.17	0.702	1/5/13 22:48	WSD
1,3,5-Trimethylbenzene	0.058	0.035	0.011		0.28	0.17	0.702	1/5/13 22:48	WSD
Vinyl Acetate	ND	0.070	0.018		ND	0.25	0.702	1/5/13 22:48	WSD
Vinyl Chloride	ND	0.035	0.018		ND	0.090	0.702	1/5/13 22:48	WSD
m&p-Xylene	3.9	0.070	0.018		17	0.30	0.702	1/5/13 22:48	WSD
o-Xylene	1.2	0.035	0.0091		5.1	0.15	0.702	1/5/13 22:48	WSD

Surrogates	% Recovery	% REC Limits	Date/Time Analyzed
4-Bromofluorobenzene (1)	110	70-130	1/5/13 22:48
4-Bromofluorobenzene (2)	108	70-130	1/5/13 22:48

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: IA-3-010313**  
**Sample ID: 13A0054-03**  
 Sample Matrix: Indoor air  
 Sampled: 1/3/2013 08:55

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1871  
 Canister Size: 6 liter  
 Flow Controller ID: 4185  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -28  
 Final Vacuum(in Hg): -5.0  
 Receipt Vacuum(in Hg): -5.0  
 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	2.8	1.4	0.16	L-05, V-06	6.7	3.3	0.702	1/5/13 23:33	WSD
Benzene	0.17	0.035	0.018		0.53	0.11	0.702	1/5/13 23:33	WSD
Benzyl chloride	ND	0.035	0.0063		ND	0.18	0.702	1/5/13 23:33	WSD
Bromodichloromethane	ND	0.035	0.0098		ND	0.24	0.702	1/5/13 23:33	WSD
Bromoform	ND	0.035	0.0091		ND	0.36	0.702	1/5/13 23:33	WSD
Bromomethane	ND	0.035	0.034		ND	0.14	0.702	1/5/13 23:33	WSD
1,3-Butadiene	ND	0.035	0.020		ND	0.078	0.702	1/5/13 23:33	WSD
2-Butanone (MEK)	0.32	1.4	0.027	J	0.93	4.1	0.702	1/5/13 23:33	WSD
Carbon Disulfide	ND	0.35	0.0098		ND	1.1	0.702	1/5/13 23:33	WSD
Carbon Tetrachloride	0.051	0.035	0.0098		0.32	0.22	0.702	1/5/13 23:33	WSD
Chlorobenzene	ND	0.035	0.029		ND	0.16	0.702	1/5/13 23:33	WSD
Chloroethane	ND	0.035	0.020		ND	0.093	0.702	1/5/13 23:33	WSD
Chloroform	ND	0.035	0.013		ND	0.17	0.702	1/5/13 23:33	WSD
Chloromethane	0.46	0.035	0.018		0.95	0.072	0.702	1/5/13 23:33	WSD
Cyclohexane	ND	0.035	0.034		ND	0.12	0.702	1/5/13 23:33	WSD
Dibromochloromethane	ND	0.035	0.0084		ND	0.30	0.702	1/5/13 23:33	WSD
1,2-Dibromoethane (EDB)	ND	0.035	0.0098		ND	0.27	0.702	1/5/13 23:33	WSD
1,2-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.702	1/5/13 23:33	WSD
1,3-Dichlorobenzene	ND	0.035	0.0098		ND	0.21	0.702	1/5/13 23:33	WSD
1,4-Dichlorobenzene	ND	0.035	0.0091		ND	0.21	0.702	1/5/13 23:33	WSD
Dichlorodifluoromethane (Freon 12)	0.50	0.035	0.015		2.5	0.17	0.702	1/5/13 23:33	WSD
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.702	1/5/13 23:33	WSD
1,2-Dichloroethane	ND	0.035	0.012		ND	0.14	0.702	1/5/13 23:33	WSD
1,1-Dichloroethylene	ND	0.035	0.011		ND	0.14	0.702	1/5/13 23:33	WSD
cis-1,2-Dichloroethylene	ND	0.035	0.0098		ND	0.14	0.702	1/5/13 23:33	WSD
trans-1,2-Dichloroethylene	ND	0.035	0.012		ND	0.14	0.702	1/5/13 23:33	WSD
1,2-Dichloropropane	ND	0.035	0.014		ND	0.16	0.702	1/5/13 23:33	WSD
cis-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	1/5/13 23:33	WSD
trans-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	1/5/13 23:33	WSD
Ethanol	1.4	1.4	0.17		2.7	2.6	0.702	1/5/13 23:33	WSD
Ethyl Acetate	0.19	0.035	0.018	L-05	0.68	0.13	0.702	1/5/13 23:33	WSD
Ethylbenzene	0.062	0.035	0.0098		0.27	0.15	0.702	1/5/13 23:33	WSD
4-Ethyltoluene	ND	0.035	0.013		ND	0.17	0.702	1/5/13 23:33	WSD
Heptane	ND	0.035	0.012		ND	0.14	0.702	1/5/13 23:33	WSD
Hexachlorobutadiene	ND	0.035	0.013		ND	0.37	0.702	1/5/13 23:33	WSD
Hexane	0.25	1.4	0.031	J	0.89	4.9	0.702	1/5/13 23:33	WSD
2-Hexanone (MBK)	ND	0.035	0.011		ND	0.14	0.702	1/5/13 23:33	WSD
Isopropanol	0.23	1.4	0.021	J	0.57	3.4	0.702	1/5/13 23:33	WSD

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: IA-3-010313**  
**Sample ID: 13A0054-03**  
 Sample Matrix: Indoor air  
 Sampled: 1/3/2013 08:55

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1871  
 Canister Size: 6 liter  
 Flow Controller ID: 4185  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -28  
 Final Vacuum(in Hg): -5.0  
 Receipt Vacuum(in Hg): -5.0  
 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	1/5/13 23:33	WSD
Methylene Chloride	0.96	0.35	0.045		3.3	1.2	0.702	1/5/13 23:33	WSD
Methyl methacrylate	ND	0.035	0.011		ND	0.14	0.702	1/5/13 23:33	WSD
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.011		ND	0.14	0.702	1/5/13 23:33	WSD
Propene	ND	1.4	0.027		ND	2.4	0.702	1/5/13 23:33	WSD
Styrene	ND	0.035	0.0077		ND	0.15	0.702	1/5/13 23:33	WSD
1,1,1,2-Tetrachloroethane	ND	0.064	0.023		ND	0.44	0.702	1/5/13 23:33	WSD
1,1,2,2-Tetrachloroethane	ND	0.035	0.012		ND	0.24	0.702	1/5/13 23:33	WSD
Tetrachloroethylene	0.036	0.035	0.011		0.25	0.24	0.702	1/5/13 23:33	WSD
Tetrahydrofuran	ND	0.035	0.011		ND	0.10	0.702	1/5/13 23:33	WSD
Toluene	0.16	0.035	0.0098		0.62	0.13	0.702	1/5/13 23:33	WSD
1,2,4-Trichlorobenzene	ND	0.070	0.013		ND	0.52	0.702	1/5/13 23:33	WSD
1,1,1-Trichloroethane	ND	0.035	0.012		ND	0.19	0.702	1/5/13 23:33	WSD
1,1,2-Trichloroethane	ND	0.035	0.011		ND	0.19	0.702	1/5/13 23:33	WSD
Trichloroethylene	ND	0.035	0.0098		ND	0.19	0.702	1/5/13 23:33	WSD
Trichlorofluoromethane (Freon 11)	0.22	0.035	0.022		1.2	0.20	0.702	1/5/13 23:33	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.077	0.035	0.012		0.59	0.27	0.702	1/5/13 23:33	WSD
1,2,4-Trimethylbenzene	ND	0.035	0.012		ND	0.17	0.702	1/5/13 23:33	WSD
1,3,5-Trimethylbenzene	ND	0.035	0.011		ND	0.17	0.702	1/5/13 23:33	WSD
Vinyl Acetate	ND	0.070	0.018		ND	0.25	0.702	1/5/13 23:33	WSD
Vinyl Chloride	ND	0.035	0.018		ND	0.090	0.702	1/5/13 23:33	WSD
m&p-Xylene	0.24	0.070	0.018		1.0	0.30	0.702	1/5/13 23:33	WSD
o-Xylene	0.081	0.035	0.0091		0.35	0.15	0.702	1/5/13 23:33	WSD

Surrogates	% Recovery	% REC Limits	Date/Time Analyzed
4-Bromofluorobenzene (1)	107	70-130	1/5/13 23:33
4-Bromofluorobenzene (2)	114	70-130	1/5/13 23:33

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: IA-4-010313**  
**Sample ID: 13A0054-04**  
 Sample Matrix: Indoor air  
 Sampled: 1/3/2013 11:12

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1314  
 Canister Size: 6 liter  
 Flow Controller ID: 4187  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -29  
 Final Vacuum(in Hg): -6.0  
 Receipt Vacuum(in Hg): -7.0  
 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	1.4	0.16	L-05, V-06	17	3.3	0.702	1/7/13	1:28	WSD
Benzene	0.21	0.035	0.018		0.67	0.11	0.702	1/7/13	1:28	WSD
Benzyl chloride	ND	0.035	0.0063		ND	0.18	0.702	1/7/13	1:28	WSD
Bromodichloromethane	ND	0.035	0.0098		ND	0.24	0.702	1/7/13	1:28	WSD
Bromoform	ND	0.035	0.0091		ND	0.36	0.702	1/7/13	1:28	WSD
Bromomethane	ND	0.035	0.034		ND	0.14	0.702	1/7/13	1:28	WSD
1,3-Butadiene	ND	0.035	0.020		ND	0.078	0.702	1/7/13	1:28	WSD
2-Butanone (MEK)	1.6	1.4	0.027		4.7	4.1	0.702	1/7/13	1:28	WSD
Carbon Disulfide	0.51	0.35	0.0098		1.6	1.1	0.702	1/7/13	1:28	WSD
Carbon Tetrachloride	0.086	0.035	0.0098		0.54	0.22	0.702	1/7/13	1:28	WSD
Chlorobenzene	0.10	0.035	0.029		0.47	0.16	0.702	1/7/13	1:28	WSD
Chloroethane	ND	0.035	0.020		ND	0.093	0.702	1/7/13	1:28	WSD
Chloroform	ND	0.035	0.013		ND	0.17	0.702	1/7/13	1:28	WSD
Chloromethane	0.53	0.035	0.018		1.1	0.072	0.702	1/7/13	1:28	WSD
Cyclohexane	0.60	0.035	0.034		2.1	0.12	0.702	1/7/13	1:28	WSD
Dibromochloromethane	ND	0.035	0.0084		ND	0.30	0.702	1/7/13	1:28	WSD
1,2-Dibromoethane (EDB)	ND	0.035	0.0098		ND	0.27	0.702	1/7/13	1:28	WSD
1,2-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.702	1/7/13	1:28	WSD
1,3-Dichlorobenzene	ND	0.035	0.0098		ND	0.21	0.702	1/7/13	1:28	WSD
1,4-Dichlorobenzene	ND	0.035	0.0091		ND	0.21	0.702	1/7/13	1:28	WSD
Dichlorodifluoromethane (Freon 12)	0.57	0.035	0.015		2.8	0.17	0.702	1/7/13	1:28	WSD
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.702	1/7/13	1:28	WSD
1,2-Dichloroethane	0.039	0.035	0.012		0.16	0.14	0.702	1/7/13	1:28	WSD
1,1-Dichloroethylene	ND	0.035	0.011		ND	0.14	0.702	1/7/13	1:28	WSD
cis-1,2-Dichloroethylene	ND	0.035	0.0098		ND	0.14	0.702	1/7/13	1:28	WSD
trans-1,2-Dichloroethylene	ND	0.035	0.012		ND	0.14	0.702	1/7/13	1:28	WSD
1,2-Dichloropropane	ND	0.035	0.014		ND	0.16	0.702	1/7/13	1:28	WSD
cis-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	1/7/13	1:28	WSD
trans-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	1/7/13	1:28	WSD
Ethanol	4.0	1.4	0.17		7.5	2.6	0.702	1/7/13	1:28	WSD
Ethyl Acetate	ND	0.035	0.018		ND	0.13	0.702	1/7/13	1:28	WSD
Ethylbenzene	0.96	0.035	0.0098		4.1	0.15	0.702	1/7/13	1:28	WSD
4-Ethyltoluene	0.046	0.035	0.013		0.22	0.17	0.702	1/7/13	1:28	WSD
Heptane	0.38	0.035	0.012		1.6	0.14	0.702	1/7/13	1:28	WSD
Hexachlorobutadiene	ND	0.035	0.013		ND	0.37	0.702	1/7/13	1:28	WSD
Hexane	4.8	1.4	0.031		17	4.9	0.702	1/7/13	1:28	WSD
2-Hexanone (MBK)	0.047	0.035	0.011		0.19	0.14	0.702	1/7/13	1:28	WSD
Isopropanol	1.1	1.4	0.021	J	2.6	3.4	0.702	1/7/13	1:28	WSD



**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: IA-4-010313**  
**Sample ID: 13A0054-04**  
 Sample Matrix: Indoor air  
 Sampled: 1/3/2013 11:12

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1314  
 Canister Size: 6 liter  
 Flow Controller ID: 4187  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -29  
 Final Vacuum(in Hg): -6.0  
 Receipt Vacuum(in Hg): -7.0  
 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	0.035	0.0098		ND	0.13	0.702	1/7/13	1:28	WSD
Methylene Chloride	0.37	0.35	0.045		1.3	1.2	0.702	1/7/13	1:28	WSD
Methyl methacrylate	ND	0.035	0.011		ND	0.14	0.702	1/7/13	1:28	WSD
4-Methyl-2-pentanone (MIBK)	0.80	0.035	0.011		3.3	0.14	0.702	1/7/13	1:28	WSD
Propene	ND	1.4	0.027		ND	2.4	0.702	1/7/13	1:28	WSD
Styrene	0.12	0.035	0.0077		0.52	0.15	0.702	1/7/13	1:28	WSD
1,1,1,2-Tetrachloroethane	ND	0.064	0.023		ND	0.44	0.702	1/7/13	1:28	WSD
1,1,2,2-Tetrachloroethane	ND	0.035	0.012		ND	0.24	0.702	1/7/13	1:28	WSD
Tetrachloroethylene	0.026	0.035	0.011	J	0.18	0.24	0.702	1/7/13	1:28	WSD
Tetrahydrofuran	0.096	0.035	0.011		0.28	0.10	0.702	1/7/13	1:28	WSD
Toluene	1.3	0.035	0.0098		4.8	0.13	0.702	1/7/13	1:28	WSD
1,2,4-Trichlorobenzene	ND	0.070	0.013		ND	0.52	0.702	1/7/13	1:28	WSD
1,1,1-Trichloroethane	ND	0.035	0.012		ND	0.19	0.702	1/7/13	1:28	WSD
1,1,2-Trichloroethane	ND	0.035	0.011		ND	0.19	0.702	1/7/13	1:28	WSD
Trichloroethylene	ND	0.035	0.0098		ND	0.19	0.702	1/7/13	1:28	WSD
Trichlorofluoromethane (Freon 11)	0.50	0.035	0.022		2.8	0.20	0.702	1/7/13	1:28	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.079	0.035	0.012		0.60	0.27	0.702	1/7/13	1:28	WSD
1,2,4-Trimethylbenzene	0.18	0.035	0.012		0.90	0.17	0.702	1/7/13	1:28	WSD
1,3,5-Trimethylbenzene	0.055	0.035	0.011		0.27	0.17	0.702	1/7/13	1:28	WSD
Vinyl Acetate	ND	0.070	0.018		ND	0.25	0.702	1/7/13	1:28	WSD
Vinyl Chloride	ND	0.035	0.018		ND	0.090	0.702	1/7/13	1:28	WSD
m&p-Xylene	4.0	0.070	0.018		17	0.30	0.702	1/7/13	1:28	WSD
o-Xylene	1.2	0.035	0.0091		5.1	0.15	0.702	1/7/13	1:28	WSD

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	111	70-130	1/7/13	1:28
4-Bromofluorobenzene (2)	107	70-130	1/7/13	1:28

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: IA-5-010313**  
**Sample ID: 13A0054-05**  
 Sample Matrix: Indoor air  
 Sampled: 1/3/2013 09:05

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1853  
 Canister Size: 6 liter  
 Flow Controller ID: 4183  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -28  
 Final Vacuum(in Hg): -4.0  
 Receipt Vacuum(in Hg): -4.0  
 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	3.8	1.4	0.16	L-05, V-06	9.0	3.3	0.702	1/7/13	0:42	WSD
Benzene	0.17	0.035	0.018		0.53	0.11	0.702	1/7/13	0:42	WSD
Benzyl chloride	ND	0.035	0.0063		ND	0.18	0.702	1/7/13	0:42	WSD
Bromodichloromethane	ND	0.035	0.0098		ND	0.24	0.702	1/7/13	0:42	WSD
Bromoform	ND	0.035	0.0091		ND	0.36	0.702	1/7/13	0:42	WSD
Bromomethane	ND	0.035	0.034		ND	0.14	0.702	1/7/13	0:42	WSD
1,3-Butadiene	ND	0.035	0.020		ND	0.078	0.702	1/7/13	0:42	WSD
2-Butanone (MEK)	0.43	1.4	0.027	J	1.3	4.1	0.702	1/7/13	0:42	WSD
Carbon Disulfide	ND	0.35	0.0098		ND	1.1	0.702	1/7/13	0:42	WSD
Carbon Tetrachloride	0.093	0.035	0.0098		0.58	0.22	0.702	1/7/13	0:42	WSD
Chlorobenzene	ND	0.035	0.029		ND	0.16	0.702	1/7/13	0:42	WSD
Chloroethane	ND	0.035	0.020		ND	0.093	0.702	1/7/13	0:42	WSD
Chloroform	ND	0.035	0.013		ND	0.17	0.702	1/7/13	0:42	WSD
Chloromethane	0.50	0.035	0.018		1.0	0.072	0.702	1/7/13	0:42	WSD
Cyclohexane	ND	0.035	0.034		ND	0.12	0.702	1/7/13	0:42	WSD
Dibromochloromethane	ND	0.035	0.0084		ND	0.30	0.702	1/7/13	0:42	WSD
1,2-Dibromoethane (EDB)	ND	0.035	0.0098		ND	0.27	0.702	1/7/13	0:42	WSD
1,2-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.702	1/7/13	0:42	WSD
1,3-Dichlorobenzene	ND	0.035	0.0098		ND	0.21	0.702	1/7/13	0:42	WSD
1,4-Dichlorobenzene	ND	0.035	0.0091		ND	0.21	0.702	1/7/13	0:42	WSD
Dichlorodifluoromethane (Freon 12)	0.56	0.035	0.015		2.8	0.17	0.702	1/7/13	0:42	WSD
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.702	1/7/13	0:42	WSD
1,2-Dichloroethane	ND	0.035	0.012		ND	0.14	0.702	1/7/13	0:42	WSD
1,1-Dichloroethylene	ND	0.035	0.011		ND	0.14	0.702	1/7/13	0:42	WSD
cis-1,2-Dichloroethylene	ND	0.035	0.0098		ND	0.14	0.702	1/7/13	0:42	WSD
trans-1,2-Dichloroethylene	ND	0.035	0.012		ND	0.14	0.702	1/7/13	0:42	WSD
1,2-Dichloropropane	ND	0.035	0.014		ND	0.16	0.702	1/7/13	0:42	WSD
cis-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	1/7/13	0:42	WSD
trans-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	1/7/13	0:42	WSD
Ethanol	2.1	1.4	0.17		3.9	2.6	0.702	1/7/13	0:42	WSD
Ethyl Acetate	0.16	0.035	0.018		0.59	0.13	0.702	1/7/13	0:42	WSD
Ethylbenzene	0.034	0.035	0.0098	J	0.15	0.15	0.702	1/7/13	0:42	WSD
4-Ethyltoluene	ND	0.035	0.013		ND	0.17	0.702	1/7/13	0:42	WSD
Heptane	ND	0.035	0.012		ND	0.14	0.702	1/7/13	0:42	WSD
Hexachlorobutadiene	ND	0.035	0.013		ND	0.37	0.702	1/7/13	0:42	WSD
Hexane	0.27	1.4	0.031	J	0.95	4.9	0.702	1/7/13	0:42	WSD
2-Hexanone (MBK)	0.039	0.035	0.011		0.16	0.14	0.702	1/7/13	0:42	WSD
Isopropanol	0.31	1.4	0.021	J	0.75	3.4	0.702	1/7/13	0:42	WSD

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: IA-5-010313**  
**Sample ID: 13A0054-05**  
 Sample Matrix: Indoor air  
 Sampled: 1/3/2013 09:05

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1853  
 Canister Size: 6 liter  
 Flow Controller ID: 4183  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -28  
 Final Vacuum(in Hg): -4.0  
 Receipt Vacuum(in Hg): -4.0  
 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	1/7/13	0:42	WSD
Methylene Chloride	1.5	0.35	0.045		5.2	1.2	0.702	1/7/13	0:42	WSD
Methyl methacrylate	ND	0.035	0.011		ND	0.14	0.702	1/7/13	0:42	WSD
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.011		ND	0.14	0.702	1/7/13	0:42	WSD
Propene	ND	1.4	0.027		ND	2.4	0.702	1/7/13	0:42	WSD
Styrene	ND	0.035	0.0077		ND	0.15	0.702	1/7/13	0:42	WSD
1,1,1,2-Tetrachloroethane	ND	0.064	0.023		ND	0.44	0.702	1/7/13	0:42	WSD
1,1,2,2-Tetrachloroethane	ND	0.035	0.012		ND	0.24	0.702	1/7/13	0:42	WSD
Tetrachloroethylene	ND	0.035	0.011		ND	0.24	0.702	1/7/13	0:42	WSD
Tetrahydrofuran	ND	0.035	0.011		ND	0.10	0.702	1/7/13	0:42	WSD
Toluene	0.15	0.035	0.0098		0.56	0.13	0.702	1/7/13	0:42	WSD
1,2,4-Trichlorobenzene	ND	0.070	0.013		ND	0.52	0.702	1/7/13	0:42	WSD
1,1,1-Trichloroethane	ND	0.035	0.012		ND	0.19	0.702	1/7/13	0:42	WSD
1,1,2-Trichloroethane	ND	0.035	0.011		ND	0.19	0.702	1/7/13	0:42	WSD
Trichloroethylene	ND	0.035	0.0098		ND	0.19	0.702	1/7/13	0:42	WSD
Trichlorofluoromethane (Freon 11)	0.31	0.035	0.022		1.8	0.20	0.702	1/7/13	0:42	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.080	0.035	0.012		0.61	0.27	0.702	1/7/13	0:42	WSD
1,2,4-Trimethylbenzene	ND	0.035	0.012		ND	0.17	0.702	1/7/13	0:42	WSD
1,3,5-Trimethylbenzene	ND	0.035	0.011		ND	0.17	0.702	1/7/13	0:42	WSD
Vinyl Acetate	ND	0.070	0.018		ND	0.25	0.702	1/7/13	0:42	WSD
Vinyl Chloride	ND	0.035	0.018		ND	0.090	0.702	1/7/13	0:42	WSD
m&p-Xylene	0.14	0.070	0.018		0.60	0.30	0.702	1/7/13	0:42	WSD
o-Xylene	0.044	0.035	0.0091		0.19	0.15	0.702	1/7/13	0:42	WSD

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	105	70-130	1/7/13 0:42
4-Bromofluorobenzene (2)	102	70-130	1/7/13 0:42

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: IA-6-010313**  
**Sample ID: 13A0054-06**  
 Sample Matrix: Indoor air  
 Sampled: 1/3/2013 09:08

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1844  
 Canister Size: 6 liter  
 Flow Controller ID: 4182  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -5.0  
 Receipt Vacuum(in Hg): -4.0  
 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	4.6	1.4	0.16	L-05, V-06	11	3.3	0.702	1/6/13 23:08	WSD
Benzene	0.15	0.035	0.018		0.48	0.11	0.702	1/6/13 23:08	WSD
Benzyl chloride	ND	0.035	0.0063		ND	0.18	0.702	1/6/13 23:08	WSD
Bromodichloromethane	ND	0.035	0.0098		ND	0.24	0.702	1/6/13 23:08	WSD
Bromoform	ND	0.035	0.0091		ND	0.36	0.702	1/6/13 23:08	WSD
Bromomethane	ND	0.035	0.034		ND	0.14	0.702	1/6/13 23:08	WSD
1,3-Butadiene	ND	0.035	0.020		ND	0.078	0.702	1/6/13 23:08	WSD
2-Butanone (MEK)	0.46	1.4	0.027	J	1.4	4.1	0.702	1/6/13 23:08	WSD
Carbon Disulfide	ND	0.35	0.0098		ND	1.1	0.702	1/6/13 23:08	WSD
Carbon Tetrachloride	0.087	0.035	0.0098		0.55	0.22	0.702	1/6/13 23:08	WSD
Chlorobenzene	ND	0.035	0.029		ND	0.16	0.702	1/6/13 23:08	WSD
Chloroethane	ND	0.035	0.020		ND	0.093	0.702	1/6/13 23:08	WSD
Chloroform	ND	0.035	0.013		ND	0.17	0.702	1/6/13 23:08	WSD
Chloromethane	0.52	0.035	0.018		1.1	0.072	0.702	1/6/13 23:08	WSD
Cyclohexane	ND	0.035	0.034		ND	0.12	0.702	1/6/13 23:08	WSD
Dibromochloromethane	ND	0.035	0.0084		ND	0.30	0.702	1/6/13 23:08	WSD
1,2-Dibromoethane (EDB)	ND	0.035	0.0098		ND	0.27	0.702	1/6/13 23:08	WSD
1,2-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.702	1/6/13 23:08	WSD
1,3-Dichlorobenzene	ND	0.035	0.0098		ND	0.21	0.702	1/6/13 23:08	WSD
1,4-Dichlorobenzene	ND	0.035	0.0091		ND	0.21	0.702	1/6/13 23:08	WSD
Dichlorodifluoromethane (Freon 12)	0.55	0.035	0.015		2.7	0.17	0.702	1/6/13 23:08	WSD
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.702	1/6/13 23:08	WSD
1,2-Dichloroethane	ND	0.035	0.012		ND	0.14	0.702	1/6/13 23:08	WSD
1,1-Dichloroethylene	ND	0.035	0.011		ND	0.14	0.702	1/6/13 23:08	WSD
cis-1,2-Dichloroethylene	ND	0.035	0.0098		ND	0.14	0.702	1/6/13 23:08	WSD
trans-1,2-Dichloroethylene	ND	0.035	0.012		ND	0.14	0.702	1/6/13 23:08	WSD
1,2-Dichloropropane	ND	0.035	0.014		ND	0.16	0.702	1/6/13 23:08	WSD
cis-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	1/6/13 23:08	WSD
trans-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	1/6/13 23:08	WSD
Ethanol	4.4	1.4	0.17		8.4	2.6	0.702	1/6/13 23:08	WSD
Ethyl Acetate	0.12	0.035	0.018	R-01	0.42	0.13	0.702	1/6/13 23:08	WSD
Ethylbenzene	0.036	0.035	0.0098		0.16	0.15	0.702	1/6/13 23:08	WSD
4-Ethyltoluene	ND	0.035	0.013		ND	0.17	0.702	1/6/13 23:08	WSD
Heptane	0.023	0.035	0.012	J	0.095	0.14	0.702	1/6/13 23:08	WSD
Hexachlorobutadiene	ND	0.035	0.013		ND	0.37	0.702	1/6/13 23:08	WSD
Hexane	0.18	1.4	0.031	R-01, J	0.64	4.9	0.702	1/6/13 23:08	WSD
2-Hexanone (MBK)	ND	0.035	0.011		ND	0.14	0.702	1/6/13 23:08	WSD
Isopropanol	ND	1.4	0.021		ND	3.4	0.702	1/6/13 23:08	WSD

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: IA-6-010313**  
**Sample ID: 13A0054-06**  
 Sample Matrix: Indoor air  
 Sampled: 1/3/2013 09:08

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1844  
 Canister Size: 6 liter  
 Flow Controller ID: 4182  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -5.0  
 Receipt Vacuum(in Hg): -4.0  
 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	1/6/13 23:08	WSD
Methylene Chloride	0.47	0.35	0.045	R-01	1.6	1.2	0.702	1/6/13 23:08	WSD
Methyl methacrylate	ND	0.035	0.011		ND	0.14	0.702	1/6/13 23:08	WSD
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.011		ND	0.14	0.702	1/6/13 23:08	WSD
Propene	ND	1.4	0.027		ND	2.4	0.702	1/6/13 23:08	WSD
Styrene	ND	0.035	0.0077		ND	0.15	0.702	1/6/13 23:08	WSD
1,1,1,2-Tetrachloroethane	ND	0.064	0.023		ND	0.44	0.702	1/6/13 23:08	WSD
1,1,2,2-Tetrachloroethane	ND	0.035	0.012		ND	0.24	0.702	1/6/13 23:08	WSD
Tetrachloroethylene	ND	0.035	0.011		ND	0.24	0.702	1/6/13 23:08	WSD
Tetrahydrofuran	ND	0.035	0.011		ND	0.10	0.702	1/6/13 23:08	WSD
Toluene	0.15	0.035	0.0098		0.56	0.13	0.702	1/6/13 23:08	WSD
1,2,4-Trichlorobenzene	ND	0.070	0.013		ND	0.52	0.702	1/6/13 23:08	WSD
1,1,1-Trichloroethane	ND	0.035	0.012		ND	0.19	0.702	1/6/13 23:08	WSD
1,1,2-Trichloroethane	ND	0.035	0.011		ND	0.19	0.702	1/6/13 23:08	WSD
Trichloroethylene	ND	0.035	0.0098		ND	0.19	0.702	1/6/13 23:08	WSD
Trichlorofluoromethane (Freon 11)	0.35	0.035	0.022		2.0	0.20	0.702	1/6/13 23:08	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.079	0.035	0.012		0.61	0.27	0.702	1/6/13 23:08	WSD
1,2,4-Trimethylbenzene	ND	0.035	0.012		ND	0.17	0.702	1/6/13 23:08	WSD
1,3,5-Trimethylbenzene	ND	0.035	0.011		ND	0.17	0.702	1/6/13 23:08	WSD
Vinyl Acetate	ND	0.070	0.018		ND	0.25	0.702	1/6/13 23:08	WSD
Vinyl Chloride	ND	0.035	0.018		ND	0.090	0.702	1/6/13 23:08	WSD
m&p-Xylene	0.13	0.070	0.018		0.58	0.30	0.702	1/6/13 23:08	WSD
o-Xylene	0.041	0.035	0.0091		0.18	0.15	0.702	1/6/13 23:08	WSD

Surrogates	% Recovery	% REC Limits	Date/Time Analyzed
4-Bromofluorobenzene (1)	105	70-130	1/6/13 23:08
4-Bromofluorobenzene (2)	103	70-130	1/6/13 23:08

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: IA-7-010313**  
**Sample ID: 13A0054-07**  
 Sample Matrix: Indoor air  
 Sampled: 1/3/2013 11:52

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1127  
 Canister Size: 6 liter  
 Flow Controller ID: 4174  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -5.0  
 Receipt Vacuum(in Hg): -4.0  
 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	5.7	1.4	0.16	L-05, V-06	14	3.3	0.702	1/6/13	2:36	WSD
Benzene	0.18	0.035	0.018		0.58	0.11	0.702	1/6/13	2:36	WSD
Benzyl chloride	ND	0.035	0.0063		ND	0.18	0.702	1/6/13	2:36	WSD
Bromodichloromethane	ND	0.035	0.0098		ND	0.24	0.702	1/6/13	2:36	WSD
Bromoform	ND	0.035	0.0091		ND	0.36	0.702	1/6/13	2:36	WSD
Bromomethane	ND	0.035	0.034		ND	0.14	0.702	1/6/13	2:36	WSD
1,3-Butadiene	ND	0.035	0.020		ND	0.078	0.702	1/6/13	2:36	WSD
2-Butanone (MEK)	0.65	1.4	0.027	J	1.9	4.1	0.702	1/6/13	2:36	WSD
Carbon Disulfide	ND	0.35	0.0098		ND	1.1	0.702	1/6/13	2:36	WSD
Carbon Tetrachloride	0.081	0.035	0.0098		0.51	0.22	0.702	1/6/13	2:36	WSD
Chlorobenzene	ND	0.035	0.029		ND	0.16	0.702	1/6/13	2:36	WSD
Chloroethane	ND	0.035	0.020		ND	0.093	0.702	1/6/13	2:36	WSD
Chloroform	ND	0.035	0.013		ND	0.17	0.702	1/6/13	2:36	WSD
Chloromethane	0.52	0.035	0.018		1.1	0.072	0.702	1/6/13	2:36	WSD
Cyclohexane	ND	0.035	0.034		ND	0.12	0.702	1/6/13	2:36	WSD
Dibromochloromethane	ND	0.035	0.0084		ND	0.30	0.702	1/6/13	2:36	WSD
1,2-Dibromoethane (EDB)	ND	0.035	0.0098		ND	0.27	0.702	1/6/13	2:36	WSD
1,2-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.702	1/6/13	2:36	WSD
1,3-Dichlorobenzene	ND	0.035	0.0098		ND	0.21	0.702	1/6/13	2:36	WSD
1,4-Dichlorobenzene	ND	0.035	0.0091		ND	0.21	0.702	1/6/13	2:36	WSD
Dichlorodifluoromethane (Freon 12)	0.52	0.035	0.015		2.6	0.17	0.702	1/6/13	2:36	WSD
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.702	1/6/13	2:36	WSD
1,2-Dichloroethane	ND	0.035	0.012		ND	0.14	0.702	1/6/13	2:36	WSD
1,1-Dichloroethylene	ND	0.035	0.011		ND	0.14	0.702	1/6/13	2:36	WSD
cis-1,2-Dichloroethylene	ND	0.035	0.0098		ND	0.14	0.702	1/6/13	2:36	WSD
trans-1,2-Dichloroethylene	ND	0.035	0.012		ND	0.14	0.702	1/6/13	2:36	WSD
1,2-Dichloropropane	ND	0.035	0.014		ND	0.16	0.702	1/6/13	2:36	WSD
cis-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	1/6/13	2:36	WSD
trans-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	1/6/13	2:36	WSD
Ethanol	28	1.4	0.17		52	2.6	0.702	1/6/13	2:36	WSD
Ethyl Acetate	0.21	0.035	0.018	L-05	0.77	0.13	0.702	1/6/13	2:36	WSD
Ethylbenzene	0.044	0.035	0.0098		0.19	0.15	0.702	1/6/13	2:36	WSD
4-Ethyltoluene	ND	0.035	0.013		ND	0.17	0.702	1/6/13	2:36	WSD
Heptane	ND	0.035	0.012		ND	0.14	0.702	1/6/13	2:36	WSD
Hexachlorobutadiene	ND	0.035	0.013		ND	0.37	0.702	1/6/13	2:36	WSD
Hexane	0.24	1.4	0.031	J	0.86	4.9	0.702	1/6/13	2:36	WSD
2-Hexanone (MBK)	0.048	0.035	0.011		0.20	0.14	0.702	1/6/13	2:36	WSD
Isopropanol	1.3	1.4	0.021	J	3.3	3.4	0.702	1/6/13	2:36	WSD

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: IA-7-010313**  
**Sample ID: 13A0054-07**  
 Sample Matrix: Indoor air  
 Sampled: 1/3/2013 11:52

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1127  
 Canister Size: 6 liter  
 Flow Controller ID: 4174  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -5.0  
 Receipt Vacuum(in Hg): -4.0  
 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	1/6/13	2:36	WSD
Methylene Chloride	0.75	0.35	0.045		2.6	1.2	0.702	1/6/13	2:36	WSD
Methyl methacrylate	ND	0.035	0.011		ND	0.14	0.702	1/6/13	2:36	WSD
4-Methyl-2-pentanone (MIBK)	0.045	0.035	0.011		0.18	0.14	0.702	1/6/13	2:36	WSD
Propene	ND	1.4	0.027		ND	2.4	0.702	1/6/13	2:36	WSD
Styrene	ND	0.035	0.0077		ND	0.15	0.702	1/6/13	2:36	WSD
1,1,1,2-Tetrachloroethane	ND	0.064	0.023		ND	0.44	0.702	1/6/13	2:36	WSD
1,1,2,2-Tetrachloroethane	ND	0.035	0.012		ND	0.24	0.702	1/6/13	2:36	WSD
Tetrachloroethylene	ND	0.035	0.011		ND	0.24	0.702	1/6/13	2:36	WSD
Tetrahydrofuran	ND	0.035	0.011		ND	0.10	0.702	1/6/13	2:36	WSD
Toluene	0.26	0.035	0.0098		0.99	0.13	0.702	1/6/13	2:36	WSD
1,2,4-Trichlorobenzene	ND	0.070	0.013		ND	0.52	0.702	1/6/13	2:36	WSD
1,1,1-Trichloroethane	ND	0.035	0.012		ND	0.19	0.702	1/6/13	2:36	WSD
1,1,2-Trichloroethane	ND	0.035	0.011		ND	0.19	0.702	1/6/13	2:36	WSD
Trichloroethylene	ND	0.035	0.0098		ND	0.19	0.702	1/6/13	2:36	WSD
Trichlorofluoromethane (Freon 11)	0.33	0.035	0.022		1.8	0.20	0.702	1/6/13	2:36	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.079	0.035	0.012		0.60	0.27	0.702	1/6/13	2:36	WSD
1,2,4-Trimethylbenzene	ND	0.035	0.012		ND	0.17	0.702	1/6/13	2:36	WSD
1,3,5-Trimethylbenzene	ND	0.035	0.011		ND	0.17	0.702	1/6/13	2:36	WSD
Vinyl Acetate	ND	0.070	0.018		ND	0.25	0.702	1/6/13	2:36	WSD
Vinyl Chloride	ND	0.035	0.018		ND	0.090	0.702	1/6/13	2:36	WSD
m&p-Xylene	0.16	0.070	0.018		0.71	0.30	0.702	1/6/13	2:36	WSD
o-Xylene	0.055	0.035	0.0091		0.24	0.15	0.702	1/6/13	2:36	WSD

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	106	70-130	1/6/13 2:36
4-Bromofluorobenzene (2)	110	70-130	1/6/13 2:36

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: AA-1-010313**  
**Sample ID: 13A0054-08**  
 Sample Matrix: Ambient Air  
 Sampled: 1/3/2013 12:43

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1279  
 Canister Size: 6 liter  
 Flow Controller ID: 4176  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -29  
 Final Vacuum(in Hg): -6.0  
 Receipt Vacuum(in Hg): -4.0  
 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	3.7	1.4	0.16	L-05, V-06	8.7	3.3	0.702	1/6/13	3:22	WSD
Benzene	0.13	0.035	0.018		0.42	0.11	0.702	1/6/13	3:22	WSD
Benzyl chloride	ND	0.035	0.0063		ND	0.18	0.702	1/6/13	3:22	WSD
Bromodichloromethane	ND	0.035	0.0098		ND	0.24	0.702	1/6/13	3:22	WSD
Bromoform	ND	0.035	0.0091		ND	0.36	0.702	1/6/13	3:22	WSD
Bromomethane	ND	0.035	0.034		ND	0.14	0.702	1/6/13	3:22	WSD
1,3-Butadiene	ND	0.035	0.020		ND	0.078	0.702	1/6/13	3:22	WSD
2-Butanone (MEK)	0.30	1.4	0.027	J	0.89	4.1	0.702	1/6/13	3:22	WSD
Carbon Disulfide	ND	0.35	0.0098		ND	1.1	0.702	1/6/13	3:22	WSD
Carbon Tetrachloride	0.082	0.035	0.0098		0.52	0.22	0.702	1/6/13	3:22	WSD
Chlorobenzene	ND	0.035	0.029		ND	0.16	0.702	1/6/13	3:22	WSD
Chloroethane	ND	0.035	0.020		ND	0.093	0.702	1/6/13	3:22	WSD
Chloroform	ND	0.035	0.013		ND	0.17	0.702	1/6/13	3:22	WSD
Chloromethane	0.50	0.035	0.018		1.0	0.072	0.702	1/6/13	3:22	WSD
Cyclohexane	ND	0.035	0.034		ND	0.12	0.702	1/6/13	3:22	WSD
Dibromochloromethane	ND	0.035	0.0084		ND	0.30	0.702	1/6/13	3:22	WSD
1,2-Dibromoethane (EDB)	ND	0.035	0.0098		ND	0.27	0.702	1/6/13	3:22	WSD
1,2-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.702	1/6/13	3:22	WSD
1,3-Dichlorobenzene	ND	0.035	0.0098		ND	0.21	0.702	1/6/13	3:22	WSD
1,4-Dichlorobenzene	ND	0.035	0.0091		ND	0.21	0.702	1/6/13	3:22	WSD
Dichlorodifluoromethane (Freon 12)	0.51	0.035	0.015		2.5	0.17	0.702	1/6/13	3:22	WSD
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.702	1/6/13	3:22	WSD
1,2-Dichloroethane	ND	0.035	0.012		ND	0.14	0.702	1/6/13	3:22	WSD
1,1-Dichloroethylene	ND	0.035	0.011		ND	0.14	0.702	1/6/13	3:22	WSD
cis-1,2-Dichloroethylene	ND	0.035	0.0098		ND	0.14	0.702	1/6/13	3:22	WSD
trans-1,2-Dichloroethylene	ND	0.035	0.012		ND	0.14	0.702	1/6/13	3:22	WSD
1,2-Dichloropropane	ND	0.035	0.014		ND	0.16	0.702	1/6/13	3:22	WSD
cis-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	1/6/13	3:22	WSD
trans-1,3-Dichloropropene	ND	0.035	0.0070		ND	0.16	0.702	1/6/13	3:22	WSD
Ethanol	1.4	1.4	0.17		2.7	2.6	0.702	1/6/13	3:22	WSD
Ethyl Acetate	0.098	0.035	0.018	L-05	0.35	0.13	0.702	1/6/13	3:22	WSD
Ethylbenzene	ND	0.035	0.0098		ND	0.15	0.702	1/6/13	3:22	WSD
4-Ethyltoluene	ND	0.035	0.013		ND	0.17	0.702	1/6/13	3:22	WSD
Heptane	ND	0.035	0.012		ND	0.14	0.702	1/6/13	3:22	WSD
Hexachlorobutadiene	ND	0.035	0.013		ND	0.37	0.702	1/6/13	3:22	WSD
Hexane	0.40	1.4	0.031	J	1.4	4.9	0.702	1/6/13	3:22	WSD
2-Hexanone (MBK)	ND	0.035	0.011		ND	0.14	0.702	1/6/13	3:22	WSD
Isopropanol	0.19	1.4	0.021	J	0.47	3.4	0.702	1/6/13	3:22	WSD



**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: AA-1-010313**  
**Sample ID: 13A0054-08**  
 Sample Matrix: Ambient Air  
 Sampled: 1/3/2013 12:43

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1279  
 Canister Size: 6 liter  
 Flow Controller ID: 4176  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -29  
 Final Vacuum(in Hg): -6.0  
 Receipt Vacuum(in Hg): -4.0  
 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	1/6/13	3:22	WSD
Methylene Chloride	1.3	0.35	0.045		4.4	1.2	0.702	1/6/13	3:22	WSD
Methyl methacrylate	ND	0.035	0.011		ND	0.14	0.702	1/6/13	3:22	WSD
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.011		ND	0.14	0.702	1/6/13	3:22	WSD
Propene	ND	1.4	0.027		ND	2.4	0.702	1/6/13	3:22	WSD
Styrene	ND	0.035	0.0077		ND	0.15	0.702	1/6/13	3:22	WSD
1,1,1,2-Tetrachloroethane	ND	0.064	0.023		ND	0.44	0.702	1/6/13	3:22	WSD
1,1,2,2-Tetrachloroethane	ND	0.035	0.012		ND	0.24	0.702	1/6/13	3:22	WSD
Tetrachloroethylene	ND	0.035	0.011		ND	0.24	0.702	1/6/13	3:22	WSD
Tetrahydrofuran	ND	0.035	0.011		ND	0.10	0.702	1/6/13	3:22	WSD
Toluene	0.13	0.035	0.0098		0.48	0.13	0.702	1/6/13	3:22	WSD
1,2,4-Trichlorobenzene	ND	0.070	0.013		ND	0.52	0.702	1/6/13	3:22	WSD
1,1,1-Trichloroethane	ND	0.035	0.012		ND	0.19	0.702	1/6/13	3:22	WSD
1,1,2-Trichloroethane	ND	0.035	0.011		ND	0.19	0.702	1/6/13	3:22	WSD
Trichloroethylene	ND	0.035	0.0098		ND	0.19	0.702	1/6/13	3:22	WSD
Trichlorofluoromethane (Freon 11)	0.26	0.035	0.022		1.5	0.20	0.702	1/6/13	3:22	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.076	0.035	0.012		0.58	0.27	0.702	1/6/13	3:22	WSD
1,2,4-Trimethylbenzene	ND	0.035	0.012		ND	0.17	0.702	1/6/13	3:22	WSD
1,3,5-Trimethylbenzene	ND	0.035	0.011		ND	0.17	0.702	1/6/13	3:22	WSD
Vinyl Acetate	ND	0.070	0.018		ND	0.25	0.702	1/6/13	3:22	WSD
Vinyl Chloride	ND	0.035	0.018		ND	0.090	0.702	1/6/13	3:22	WSD
m&p-Xylene	ND	0.070	0.018		ND	0.30	0.702	1/6/13	3:22	WSD
o-Xylene	ND	0.035	0.0091		ND	0.15	0.702	1/6/13	3:22	WSD

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	105	70-130	1/6/13	3:22
4-Bromofluorobenzene (2)	108	70-130	1/6/13	3:22

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: EW-5-010313**  
**Sample ID: 13A0054-09**  
 Sample Matrix: Sub Slab  
 Sampled: 1/3/2013 09:53

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1083  
 Canister Size: 6 liter  
 Flow Controller ID: 4188  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -28  
 Final Vacuum(in Hg): -8.0  
 Receipt Vacuum(in Hg): -8.0  
 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	4.5	4.0	0.46	L-05, V-06	11	9.5	2	1/6/13	7:36	WSD
Benzene	0.17	0.10	0.052		0.54	0.32	2	1/6/13	7:36	WSD
Benzyl chloride	ND	0.10	0.018		ND	0.52	2	1/6/13	7:36	WSD
Bromodichloromethane	ND	0.10	0.028		ND	0.67	2	1/6/13	7:36	WSD
Bromoform	ND	0.10	0.026		ND	1.0	2	1/6/13	7:36	WSD
Bromomethane	ND	0.10	0.096		ND	0.39	2	1/6/13	7:36	WSD
1,3-Butadiene	ND	0.10	0.058		ND	0.22	2	1/6/13	7:36	WSD
2-Butanone (MEK)	3.2	4.0	0.076	J	9.5	12	2	1/6/13	7:36	WSD
Carbon Disulfide	ND	1.0	0.028		ND	3.1	2	1/6/13	7:36	WSD
Carbon Tetrachloride	ND	0.10	0.028		ND	0.63	2	1/6/13	7:36	WSD
Chlorobenzene	ND	0.10	0.084		ND	0.46	2	1/6/13	7:36	WSD
Chloroethane	ND	0.10	0.056		ND	0.26	2	1/6/13	7:36	WSD
Chloroform	ND	0.10	0.036		ND	0.49	2	1/6/13	7:36	WSD
Chloromethane	0.51	0.10	0.050		1.0	0.21	2	1/6/13	7:36	WSD
Cyclohexane	ND	0.10	0.096		ND	0.34	2	1/6/13	7:36	WSD
Dibromochloromethane	ND	0.10	0.024		ND	0.85	2	1/6/13	7:36	WSD
1,2-Dibromoethane (EDB)	ND	0.10	0.028		ND	0.77	2	1/6/13	7:36	WSD
1,2-Dichlorobenzene	ND	0.10	0.052		ND	0.60	2	1/6/13	7:36	WSD
1,3-Dichlorobenzene	ND	0.10	0.028		ND	0.60	2	1/6/13	7:36	WSD
1,4-Dichlorobenzene	ND	0.10	0.026		ND	0.60	2	1/6/13	7:36	WSD
Dichlorodifluoromethane (Freon 12)	0.51	0.10	0.042		2.5	0.49	2	1/6/13	7:36	WSD
1,1-Dichloroethane	ND	0.10	0.030		ND	0.40	2	1/6/13	7:36	WSD
1,2-Dichloroethane	ND	0.10	0.034		ND	0.40	2	1/6/13	7:36	WSD
1,1-Dichloroethylene	ND	0.10	0.032		ND	0.40	2	1/6/13	7:36	WSD
cis-1,2-Dichloroethylene	ND	0.10	0.028		ND	0.40	2	1/6/13	7:36	WSD
trans-1,2-Dichloroethylene	ND	0.10	0.034		ND	0.40	2	1/6/13	7:36	WSD
1,2-Dichloropropane	ND	0.10	0.040		ND	0.46	2	1/6/13	7:36	WSD
cis-1,3-Dichloropropene	ND	0.10	0.020		ND	0.45	2	1/6/13	7:36	WSD
trans-1,3-Dichloropropene	ND	0.10	0.020		ND	0.45	2	1/6/13	7:36	WSD
Ethanol	5.3	4.0	0.47		9.9	7.5	2	1/6/13	7:36	WSD
Ethyl Acetate	ND	0.10	0.052		ND	0.36	2	1/6/13	7:36	WSD
Ethylbenzene	ND	0.10	0.028		ND	0.43	2	1/6/13	7:36	WSD
4-Ethyltoluene	ND	0.10	0.036		ND	0.49	2	1/6/13	7:36	WSD
Heptane	ND	0.10	0.034		ND	0.41	2	1/6/13	7:36	WSD
Hexachlorobutadiene	ND	0.10	0.036		ND	1.1	2	1/6/13	7:36	WSD
Hexane	0.21	4.0	0.088	J	0.74	14	2	1/6/13	7:36	WSD
2-Hexanone (MBK)	ND	0.10	0.030		ND	0.41	2	1/6/13	7:36	WSD
Isopropanol	0.45	4.0	0.060	J	1.1	9.8	2	1/6/13	7:36	WSD

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: EW-5-010313**  
**Sample ID: 13A0054-09**  
 Sample Matrix: Sub Slab  
 Sampled: 1/3/2013 09:53

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1083  
 Canister Size: 6 liter  
 Flow Controller ID: 4188  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -28  
 Final Vacuum(in Hg): -8.0  
 Receipt Vacuum(in Hg): -8.0  
 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	1/6/13	7:36	WSD
Methylene Chloride	0.53	1.0	0.13	J	1.8	3.5	2	1/6/13	7:36	WSD
Methyl methacrylate	ND	0.10	0.030		ND	0.41	2	1/6/13	7:36	WSD
4-Methyl-2-pentanone (MIBK)	ND	0.10	0.030		ND	0.41	2	1/6/13	7:36	WSD
Propene	ND	4.0	0.076		ND	6.9	2	1/6/13	7:36	WSD
Styrene	ND	0.10	0.022		ND	0.43	2	1/6/13	7:36	WSD
1,1,1,2-Tetrachloroethane	ND	0.18	0.066		ND	1.2	2	1/6/13	7:36	WSD
1,1,2,2-Tetrachloroethane	ND	0.10	0.034		ND	0.69	2	1/6/13	7:36	WSD
Tetrachloroethylene	ND	0.10	0.030		ND	0.68	2	1/6/13	7:36	WSD
Tetrahydrofuran	ND	0.10	0.032		ND	0.29	2	1/6/13	7:36	WSD
Toluene	0.17	0.10	0.028		0.66	0.38	2	1/6/13	7:36	WSD
1,2,4-Trichlorobenzene	ND	0.20	0.038		ND	1.5	2	1/6/13	7:36	WSD
1,1,1-Trichloroethane	ND	0.10	0.034		ND	0.55	2	1/6/13	7:36	WSD
1,1,2-Trichloroethane	ND	0.10	0.032		ND	0.55	2	1/6/13	7:36	WSD
Trichloroethylene	ND	0.10	0.028		ND	0.54	2	1/6/13	7:36	WSD
Trichlorofluoromethane (Freon 11)	0.43	0.10	0.062		2.4	0.56	2	1/6/13	7:36	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10	0.034		ND	0.77	2	1/6/13	7:36	WSD
1,2,4-Trimethylbenzene	ND	0.10	0.034		ND	0.49	2	1/6/13	7:36	WSD
1,3,5-Trimethylbenzene	ND	0.10	0.030		ND	0.49	2	1/6/13	7:36	WSD
Vinyl Acetate	ND	0.20	0.050		ND	0.70	2	1/6/13	7:36	WSD
Vinyl Chloride	ND	0.10	0.050		ND	0.26	2	1/6/13	7:36	WSD
m&p-Xylene	0.17	0.20	0.052	R-03, J	0.75	0.87	2	1/6/13	7:36	WSD
o-Xylene	ND	0.10	0.026		ND	0.43	2	1/6/13	7:36	WSD

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	104	70-130	1/6/13 7:36
4-Bromofluorobenzene (2)	104	70-130	1/6/13 7:36

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: EW-6-010313**  
**Sample ID: 13A0054-10**  
 Sample Matrix: Sub Slab  
 Sampled: 1/3/2013 09:47

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1101  
 Canister Size: 6 liter  
 Flow Controller ID: 4189  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -29  
 Final Vacuum(in Hg): -5.0  
 Receipt Vacuum(in Hg): -4.0  
 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	2.7	4.0	0.46	L-05, V-06, J	6.4	9.5	2	1/6/13	8:58	WSD
Benzene	0.12	0.10	0.052		0.39	0.32	2	1/6/13	8:58	WSD
Benzyl chloride	ND	0.10	0.018		ND	0.52	2	1/6/13	8:58	WSD
Bromodichloromethane	ND	0.10	0.028		ND	0.67	2	1/6/13	8:58	WSD
Bromoform	ND	0.10	0.026		ND	1.0	2	1/6/13	8:58	WSD
Bromomethane	ND	0.10	0.096		ND	0.39	2	1/6/13	8:58	WSD
1,3-Butadiene	ND	0.10	0.058		ND	0.22	2	1/6/13	8:58	WSD
2-Butanone (MEK)	0.29	4.0	0.076	J	0.84	12	2	1/6/13	8:58	WSD
Carbon Disulfide	ND	1.0	0.028		ND	3.1	2	1/6/13	8:58	WSD
Carbon Tetrachloride	ND	0.10	0.028		ND	0.63	2	1/6/13	8:58	WSD
Chlorobenzene	ND	0.10	0.084		ND	0.46	2	1/6/13	8:58	WSD
Chloroethane	ND	0.10	0.056		ND	0.26	2	1/6/13	8:58	WSD
Chloroform	ND	0.10	0.036		ND	0.49	2	1/6/13	8:58	WSD
Chloromethane	0.54	0.10	0.050		1.1	0.21	2	1/6/13	8:58	WSD
Cyclohexane	ND	0.10	0.096		ND	0.34	2	1/6/13	8:58	WSD
Dibromochloromethane	ND	0.10	0.024		ND	0.85	2	1/6/13	8:58	WSD
1,2-Dibromoethane (EDB)	ND	0.10	0.028		ND	0.77	2	1/6/13	8:58	WSD
1,2-Dichlorobenzene	ND	0.10	0.052		ND	0.60	2	1/6/13	8:58	WSD
1,3-Dichlorobenzene	ND	0.10	0.028		ND	0.60	2	1/6/13	8:58	WSD
1,4-Dichlorobenzene	ND	0.10	0.026		ND	0.60	2	1/6/13	8:58	WSD
Dichlorodifluoromethane (Freon 12)	0.53	0.10	0.042		2.6	0.49	2	1/6/13	8:58	WSD
1,1-Dichloroethane	ND	0.10	0.030		ND	0.40	2	1/6/13	8:58	WSD
1,2-Dichloroethane	ND	0.10	0.034		ND	0.40	2	1/6/13	8:58	WSD
1,1-Dichloroethylene	ND	0.10	0.032		ND	0.40	2	1/6/13	8:58	WSD
cis-1,2-Dichloroethylene	ND	0.10	0.028		ND	0.40	2	1/6/13	8:58	WSD
trans-1,2-Dichloroethylene	ND	0.10	0.034		ND	0.40	2	1/6/13	8:58	WSD
1,2-Dichloropropane	ND	0.10	0.040		ND	0.46	2	1/6/13	8:58	WSD
cis-1,3-Dichloropropene	ND	0.10	0.020		ND	0.45	2	1/6/13	8:58	WSD
trans-1,3-Dichloropropene	ND	0.10	0.020		ND	0.45	2	1/6/13	8:58	WSD
Ethanol	4.6	4.0	0.47		8.6	7.5	2	1/6/13	8:58	WSD
Ethyl Acetate	ND	0.10	0.052		ND	0.36	2	1/6/13	8:58	WSD
Ethylbenzene	ND	0.10	0.028		ND	0.43	2	1/6/13	8:58	WSD
4-Ethyltoluene	ND	0.10	0.036		ND	0.49	2	1/6/13	8:58	WSD
Heptane	ND	0.10	0.034		ND	0.41	2	1/6/13	8:58	WSD
Hexachlorobutadiene	ND	0.10	0.036		ND	1.1	2	1/6/13	8:58	WSD
Hexane	ND	4.0	0.088		ND	14	2	1/6/13	8:58	WSD
2-Hexanone (MBK)	ND	0.10	0.030		ND	0.41	2	1/6/13	8:58	WSD
Isopropanol	0.28	4.0	0.060	J	0.69	9.8	2	1/6/13	8:58	WSD

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: EW-6-010313**  
**Sample ID: 13A0054-10**  
 Sample Matrix: Sub Slab  
 Sampled: 1/3/2013 09:47

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1101  
 Canister Size: 6 liter  
 Flow Controller ID: 4189  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -29  
 Final Vacuum(in Hg): -5.0  
 Receipt Vacuum(in Hg): -4.0  
 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	1/6/13	8:58	WSD
Methylene Chloride	0.59	1.0	0.13	J	2.1	3.5	2	1/6/13	8:58	WSD
Methyl methacrylate	ND	0.10	0.030		ND	0.41	2	1/6/13	8:58	WSD
4-Methyl-2-pentanone (MIBK)	ND	0.10	0.030		ND	0.41	2	1/6/13	8:58	WSD
Propene	ND	4.0	0.076		ND	6.9	2	1/6/13	8:58	WSD
Styrene	ND	0.10	0.022		ND	0.43	2	1/6/13	8:58	WSD
1,1,1,2-Tetrachloroethane	ND	0.18	0.066		ND	1.2	2	1/6/13	8:58	WSD
1,1,2,2-Tetrachloroethane	ND	0.10	0.034		ND	0.69	2	1/6/13	8:58	WSD
Tetrachloroethylene	ND	0.10	0.030		ND	0.68	2	1/6/13	8:58	WSD
Tetrahydrofuran	ND	0.10	0.032		ND	0.29	2	1/6/13	8:58	WSD
Toluene	0.12	0.10	0.028		0.46	0.38	2	1/6/13	8:58	WSD
1,2,4-Trichlorobenzene	ND	0.20	0.038		ND	1.5	2	1/6/13	8:58	WSD
1,1,1-Trichloroethane	ND	0.10	0.034		ND	0.55	2	1/6/13	8:58	WSD
1,1,2-Trichloroethane	ND	0.10	0.032		ND	0.55	2	1/6/13	8:58	WSD
Trichloroethylene	ND	0.10	0.028		ND	0.54	2	1/6/13	8:58	WSD
Trichlorofluoromethane (Freon 11)	0.34	0.10	0.062		1.9	0.56	2	1/6/13	8:58	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10	0.034		ND	0.77	2	1/6/13	8:58	WSD
1,2,4-Trimethylbenzene	ND	0.10	0.034		ND	0.49	2	1/6/13	8:58	WSD
1,3,5-Trimethylbenzene	ND	0.10	0.030		ND	0.49	2	1/6/13	8:58	WSD
Vinyl Acetate	ND	0.20	0.050		ND	0.70	2	1/6/13	8:58	WSD
Vinyl Chloride	ND	0.10	0.050		ND	0.26	2	1/6/13	8:58	WSD
m&p-Xylene	ND	0.20	0.052		ND	0.87	2	1/6/13	8:58	WSD
o-Xylene	ND	0.10	0.026		ND	0.43	2	1/6/13	8:58	WSD

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	103	70-130	1/6/13	8:58
4-Bromofluorobenzene (2)	99.8	70-130	1/6/13	8:58

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: EW-7-010313**  
**Sample ID: 13A0054-11**  
 Sample Matrix: Sub Slab  
 Sampled: 1/3/2013 11:59

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1110  
 Canister Size: 6 liter  
 Flow Controller ID: 4175  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -17.0  
 Receipt Vacuum(in Hg): -18.0  
 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	9.8	4.0	0.46	L-05, V-06	23	9.5	2	1/6/13 9:41	WSD
Benzene	0.28	0.10	0.052		0.89	0.32	2	1/6/13 9:41	WSD
Benzyl chloride	ND	0.10	0.018		ND	0.52	2	1/6/13 9:41	WSD
Bromodichloromethane	ND	0.10	0.028		ND	0.67	2	1/6/13 9:41	WSD
Bromoform	ND	0.10	0.026		ND	1.0	2	1/6/13 9:41	WSD
Bromomethane	ND	0.10	0.096		ND	0.39	2	1/6/13 9:41	WSD
1,3-Butadiene	ND	0.10	0.058		ND	0.22	2	1/6/13 9:41	WSD
2-Butanone (MEK)	6.1	4.0	0.076		18	12	2	1/6/13 9:41	WSD
Carbon Disulfide	ND	1.0	0.028		ND	3.1	2	1/6/13 9:41	WSD
Carbon Tetrachloride	0.12	0.10	0.028		0.78	0.63	2	1/6/13 9:41	WSD
Chlorobenzene	ND	0.10	0.084		ND	0.46	2	1/6/13 9:41	WSD
Chloroethane	ND	0.10	0.056		ND	0.26	2	1/6/13 9:41	WSD
Chloroform	ND	0.10	0.036		ND	0.49	2	1/6/13 9:41	WSD
Chloromethane	0.67	0.10	0.050		1.4	0.21	2	1/6/13 9:41	WSD
Cyclohexane	ND	0.10	0.096		ND	0.34	2	1/6/13 9:41	WSD
Dibromochloromethane	ND	0.10	0.024		ND	0.85	2	1/6/13 9:41	WSD
1,2-Dibromoethane (EDB)	ND	0.10	0.028		ND	0.77	2	1/6/13 9:41	WSD
1,2-Dichlorobenzene	ND	0.10	0.052		ND	0.60	2	1/6/13 9:41	WSD
1,3-Dichlorobenzene	ND	0.10	0.028		ND	0.60	2	1/6/13 9:41	WSD
1,4-Dichlorobenzene	ND	0.10	0.026		ND	0.60	2	1/6/13 9:41	WSD
Dichlorodifluoromethane (Freon 12)	0.54	0.10	0.042		2.7	0.49	2	1/6/13 9:41	WSD
1,1-Dichloroethane	ND	0.10	0.030		ND	0.40	2	1/6/13 9:41	WSD
1,2-Dichloroethane	ND	0.10	0.034		ND	0.40	2	1/6/13 9:41	WSD
1,1-Dichloroethylene	ND	0.10	0.032		ND	0.40	2	1/6/13 9:41	WSD
cis-1,2-Dichloroethylene	ND	0.10	0.028		ND	0.40	2	1/6/13 9:41	WSD
trans-1,2-Dichloroethylene	ND	0.10	0.034		ND	0.40	2	1/6/13 9:41	WSD
1,2-Dichloropropane	ND	0.10	0.040		ND	0.46	2	1/6/13 9:41	WSD
cis-1,3-Dichloropropene	ND	0.10	0.020		ND	0.45	2	1/6/13 9:41	WSD
trans-1,3-Dichloropropene	ND	0.10	0.020		ND	0.45	2	1/6/13 9:41	WSD
Ethanol	640	40	4.7		1200	75	20	1/5/13 6:30	WSD
Ethyl Acetate	ND	0.10	0.052		ND	0.36	2	1/6/13 9:41	WSD
Ethylbenzene	0.10	0.10	0.028		0.44	0.43	2	1/6/13 9:41	WSD
4-Ethyltoluene	ND	0.10	0.036		ND	0.49	2	1/6/13 9:41	WSD
Heptane	ND	0.10	0.034		ND	0.41	2	1/6/13 9:41	WSD
Hexachlorobutadiene	ND	0.10	0.036		ND	1.1	2	1/6/13 9:41	WSD
Hexane	0.43	4.0	0.088	J	1.5	14	2	1/6/13 9:41	WSD
2-Hexanone (MBK)	ND	0.10	0.030		ND	0.41	2	1/6/13 9:41	WSD
Isopropanol	4.9	4.0	0.060		12	9.8	2	1/6/13 9:41	WSD

**ANALYTICAL RESULTS**

Project Location: Providence RI  
 Date Received: 1/3/2013  
**Field Sample #: EW-7-010313**  
**Sample ID: 13A0054-11**  
 Sample Matrix: Sub Slab  
 Sampled: 1/3/2013 11:59

Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1110  
 Canister Size: 6 liter  
 Flow Controller ID: 4175  
 Sample Type: 30 min

**Work Order: 13A0054**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -17.0  
 Receipt Vacuum(in Hg): -18.0  
 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	1/6/13 9:41	WSD
Methylene Chloride	1.6	1.0	0.13		5.6	3.5	2	1/6/13 9:41	WSD
Methyl methacrylate	ND	0.10	0.030		ND	0.41	2	1/6/13 9:41	WSD
4-Methyl-2-pentanone (MIBK)	0.13	0.10	0.030		0.55	0.41	2	1/6/13 9:41	WSD
Propene	ND	4.0	0.076		ND	6.9	2	1/6/13 9:41	WSD
Styrene	ND	0.10	0.022		ND	0.43	2	1/6/13 9:41	WSD
1,1,1,2-Tetrachloroethane	ND	0.18	0.066		ND	1.2	2	1/6/13 9:41	WSD
1,1,2,2-Tetrachloroethane	ND	0.10	0.034		ND	0.69	2	1/6/13 9:41	WSD
Tetrachloroethylene	0.20	0.10	0.030		1.3	0.68	2	1/6/13 9:41	WSD
Tetrahydrofuran	2.8	0.10	0.032		8.2	0.29	2	1/6/13 9:41	WSD
Toluene	0.43	0.10	0.028		1.6	0.38	2	1/6/13 9:41	WSD
1,2,4-Trichlorobenzene	ND	0.20	0.038		ND	1.5	2	1/6/13 9:41	WSD
1,1,1-Trichloroethane	ND	0.10	0.034		ND	0.55	2	1/6/13 9:41	WSD
1,1,2-Trichloroethane	ND	0.10	0.032		ND	0.55	2	1/6/13 9:41	WSD
Trichloroethylene	0.21	0.10	0.028		1.1	0.54	2	1/6/13 9:41	WSD
Trichlorofluoromethane (Freon 11)	0.62	0.10	0.062		3.5	0.56	2	1/6/13 9:41	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10	0.034		ND	0.77	2	1/6/13 9:41	WSD
1,2,4-Trimethylbenzene	0.19	0.10	0.034		0.92	0.49	2	1/6/13 9:41	WSD
1,3,5-Trimethylbenzene	ND	0.10	0.030		ND	0.49	2	1/6/13 9:41	WSD
Vinyl Acetate	ND	0.20	0.050		ND	0.70	2	1/6/13 9:41	WSD
Vinyl Chloride	ND	0.10	0.050		ND	0.26	2	1/6/13 9:41	WSD
m&p-Xylene	0.34	0.20	0.052		1.5	0.87	2	1/6/13 9:41	WSD
o-Xylene	0.12	0.10	0.026		0.51	0.43	2	1/6/13 9:41	WSD

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	110	70-130	1/5/13 6:30
4-Bromofluorobenzene (1)	104	70-130	1/6/13 9:41
4-Bromofluorobenzene (2)	101	70-130	1/6/13 9:41

**ANALYTICAL RESULTS**

Project Location: Providence RI

Date Received: 1/3/2013

Field Sample #: EW-Combinded-010313

Sample ID: 13A0054-12

Sample Matrix: Sub Slab

Sampled: 1/3/2013 12:48

Sample Description/Location:

Sub Description/Location:

Canister ID: 1159

Canister Size: 6 liter

Flow Controller ID: 4177

Sample Type: 30 min

Work Order: 13A0054

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -6.0

Receipt Vacuum(in Hg): -7.0

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	4.3	4.0	0.46	L-05, V-06	10	9.5	2	1/6/13 11:11	WSD
Benzene	0.14	0.10	0.052		0.45	0.32	2	1/6/13 11:11	WSD
Benzyl chloride	ND	0.10	0.018		ND	0.52	2	1/6/13 11:11	WSD
Bromodichloromethane	ND	0.10	0.028		ND	0.67	2	1/6/13 11:11	WSD
Bromoform	ND	0.10	0.026		ND	1.0	2	1/6/13 11:11	WSD
Bromomethane	ND	0.10	0.096		ND	0.39	2	1/6/13 11:11	WSD
1,3-Butadiene	ND	0.10	0.058		ND	0.22	2	1/6/13 11:11	WSD
2-Butanone (MEK)	0.99	4.0	0.076	J	2.9	12	2	1/6/13 11:11	WSD
Carbon Disulfide	0.14	1.0	0.028	J	0.43	3.1	2	1/6/13 11:11	WSD
Carbon Tetrachloride	ND	0.10	0.028		ND	0.63	2	1/6/13 11:11	WSD
Chlorobenzene	ND	0.10	0.084		ND	0.46	2	1/6/13 11:11	WSD
Chloroethane	0.56	0.10	0.056		1.5	0.26	2	1/6/13 11:11	WSD
Chloroform	0.97	0.10	0.036		4.7	0.49	2	1/6/13 11:11	WSD
Chloromethane	ND	0.10	0.050		ND	0.21	2	1/6/13 11:11	WSD
Cyclohexane	ND	0.10	0.096		ND	0.34	2	1/6/13 11:11	WSD
Dibromochloromethane	ND	0.10	0.024		ND	0.85	2	1/6/13 11:11	WSD
1,2-Dibromoethane (EDB)	ND	0.10	0.028		ND	0.77	2	1/6/13 11:11	WSD
1,2-Dichlorobenzene	ND	0.10	0.052		ND	0.60	2	1/6/13 11:11	WSD
1,3-Dichlorobenzene	ND	0.10	0.028		ND	0.60	2	1/6/13 11:11	WSD
1,4-Dichlorobenzene	ND	0.10	0.026		ND	0.60	2	1/6/13 11:11	WSD
Dichlorodifluoromethane (Freon 12)	0.48	0.10	0.042		2.4	0.49	2	1/6/13 11:11	WSD
1,1-Dichloroethane	24	0.10	0.030		99	0.40	2	1/6/13 11:11	WSD
1,2-Dichloroethane	ND	0.10	0.034		ND	0.40	2	1/6/13 11:11	WSD
1,1-Dichloroethylene	7.2	0.10	0.032		28	0.40	2	1/6/13 11:11	WSD
cis-1,2-Dichloroethylene	17	0.10	0.028		66	0.40	2	1/6/13 11:11	WSD
trans-1,2-Dichloroethylene	0.25	0.10	0.034		1.00	0.40	2	1/6/13 11:11	WSD
1,2-Dichloropropane	ND	0.10	0.040		ND	0.46	2	1/6/13 11:11	WSD
cis-1,3-Dichloropropene	ND	0.10	0.020		ND	0.45	2	1/6/13 11:11	WSD
trans-1,3-Dichloropropene	ND	0.10	0.020		ND	0.45	2	1/6/13 11:11	WSD
Ethanol	9.9	4.0	0.47		19	7.5	2	1/6/13 11:11	WSD
Ethyl Acetate	ND	0.10	0.052		ND	0.36	2	1/6/13 11:11	WSD
Ethylbenzene	ND	0.10	0.028		ND	0.43	2	1/6/13 11:11	WSD
4-Ethyltoluene	ND	0.10	0.036		ND	0.49	2	1/6/13 11:11	WSD
Heptane	ND	0.10	0.034		ND	0.41	2	1/6/13 11:11	WSD
Hexachlorobutadiene	ND	0.10	0.036		ND	1.1	2	1/6/13 11:11	WSD
Hexane	0.15	4.0	0.088	J	0.53	14	2	1/6/13 11:11	WSD
2-Hexanone (MBK)	ND	0.10	0.030		ND	0.41	2	1/6/13 11:11	WSD
Isopropanol	ND	4.0	0.060		ND	9.8	2	1/6/13 11:11	WSD



**ANALYTICAL RESULTS**

Project Location: Providence RI

Date Received: 1/3/2013

Field Sample #: EW-Combinded-010313

Sample ID: 13A0054-12

Sample Matrix: Sub Slab

Sampled: 1/3/2013 12:48

Sample Description/Location:

Sub Description/Location:

Canister ID: 1159

Canister Size: 6 liter

Flow Controller ID: 4177

Sample Type: 30 min

Work Order: 13A0054

Initial Vacuum(in Hg): -29

Final Vacuum(in Hg): -6.0

Receipt Vacuum(in Hg): -7.0

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	1/6/13 11:11	WSD	
Methylene Chloride	0.65	1.0	0.13	J	2.2	3.5	2	1/6/13 11:11	WSD	
Methyl methacrylate	ND	0.10	0.030		ND	0.41	2	1/6/13 11:11	WSD	
4-Methyl-2-pentanone (MIBK)	ND	0.10	0.030		ND	0.41	2	1/6/13 11:11	WSD	
Propene	ND	4.0	0.076		ND	6.9	2	1/6/13 11:11	WSD	
Styrene	ND	0.10	0.022		ND	0.43	2	1/6/13 11:11	WSD	
1,1,1,2-Tetrachloroethane	ND	0.18	0.066		ND	1.2	2	1/6/13 11:11	WSD	
1,1,2,2-Tetrachloroethane	ND	0.10	0.034		ND	0.69	2	1/6/13 11:11	WSD	
Tetrachloroethylene	130	1.0	0.30		850	6.8	20	1/6/13 10:27	WSD	
Tetrahydrofuran	0.63	0.10	0.032		1.8	0.29	2	1/6/13 11:11	WSD	
Toluene	ND	0.10	0.028		ND	0.38	2	1/6/13 11:11	WSD	
1,2,4-Trichlorobenzene	ND	0.20	0.038		ND	1.5	2	1/6/13 11:11	WSD	
1,1,1-Trichloroethane	330	1.0	0.34		1800	5.5	20	1/6/13 10:27	WSD	
1,1,2-Trichloroethane	ND	0.10	0.032		ND	0.55	2	1/6/13 11:11	WSD	
Trichloroethylene	380	1.0	0.28		2000	5.4	20	1/6/13 10:27	WSD	
Trichlorofluoromethane (Freon 11)	40	0.10	0.062		230	0.56	2	1/6/13 11:11	WSD	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10	0.034		ND	0.77	2	1/6/13 11:11	WSD	
1,2,4-Trimethylbenzene	ND	0.10	0.034		ND	0.49	2	1/6/13 11:11	WSD	
1,3,5-Trimethylbenzene	ND	0.10	0.030		ND	0.49	2	1/6/13 11:11	WSD	
Vinyl Acetate	ND	0.20	0.050		ND	0.70	2	1/6/13 11:11	WSD	
Vinyl Chloride	ND	0.10	0.050		ND	0.26	2	1/6/13 11:11	WSD	
m&p-Xylene	ND	0.20	0.052		ND	0.87	2	1/6/13 11:11	WSD	
o-Xylene	ND	0.10	0.026		ND	0.43	2	1/6/13 11:11	WSD	

Surrogates	% Recovery	% REC Limits	Date/Time
4-Bromofluorobenzene (1)	105	70-130	1/6/13 10:27
4-Bromofluorobenzene (1)	102	70-130	1/6/13 11:11
4-Bromofluorobenzene (2)	105	70-130	1/6/13 10:27
4-Bromofluorobenzene (2)	101	70-130	1/6/13 11:11

**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
13A0054-01 [IA-1-010313]	B065952	1.5	1	N/A	1000	400	855	01/05/13
13A0054-02 [IA-2-010313]	B065952	1.5	1	N/A	1000	400	855	01/05/13
13A0054-03 [IA-3-010313]	B065952	1.5	1	N/A	1000	400	855	01/05/13
13A0054-07 [IA-7-010313]	B065952	1.5	1	N/A	1000	400	855	01/05/13
13A0054-08 [AA-1-010313]	B065952	1.5	1	N/A	1000	400	855	01/05/13
13A0054-09 [EW-5-010313]	B065952	2	1	N/A	1000	400	400	01/05/13
13A0054-10 [EW-6-010313]	B065952	2	1	N/A	1000	400	400	01/05/13
13A0054-11 [EW-7-010313]	B065952	3	1	N/A	1000	400	600	01/05/13
13A0054-12 [EW-Combinded-010313]	B065952	2	1	N/A	1000	400	400	01/05/13
13A0054-12RE1 [EW-Combinded-010313]	B065952	2	1	N/A	1000	400	40	01/05/13

**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
13A0054-04 [IA-4-010313]	B065953	1.5	1	N/A	1000	400	855	01/06/13
13A0054-05 [IA-5-010313]	B065953	1.5	1	N/A	1000	400	855	01/06/13
13A0054-06 [IA-6-010313]	B065953	1.5	1	N/A	1000	400	855	01/06/13

**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
13A0054-11RE1 [EW-7-010313]	B065960	3	1	N/A	1000	400	60	01/04/13

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	Limits	RPD	Limit	
<b>Batch B065952 - TO-15 Prep</b>										
<b>Blank (B065952-BLK1)</b>					Prepared & Analyzed: 01/05/13					
Acetone	0.91	1.0								J
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)	0.11	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	0.20	1.0								J
Ethyl Acetate	ND	0.025								
Ethylbenzene	ND	0.025								
4-Ethyltoluene	ND	0.025								
Heptane	ND	0.025								
Hexachlorobutadiene	ND	0.025								
Hexane	ND	1.0								
2-Hexanone (MBK)	ND	0.025								
Isopropanol	ND	1.0								
Methyl tert-Butyl Ether (MTBE)	ND	0.025								
Methylene Chloride	0.053	0.25								J
Methyl methacrylate	ND	0.025								
4-Methyl-2-pentanone (MIBK)	ND	0.025								
Propene	ND	1.0								
Styrene	ND	0.025								
1,1,1,2-Tetrachloroethane	ND	0.046								
1,1,2,2-Tetrachloroethane	ND	0.025								

**QUALITY CONTROL**

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

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

**Batch B065952 - TO-15 Prep**

**Blank (B065952-BLK1)**

Prepared & Analyzed: 01/05/13

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>	8.22				8.00		103	70-130			
<i>Surrogate: 4-Bromofluorobenzene (2)</i>	8.02				8.00		100	70-130			

**LCS (B065952-BS1)**

Prepared & Analyzed: 01/05/13

Acetone	6.89				5.00		138 *	70-130			L-05, V-06
Benzene	4.54				5.00		90.8	70-130			
Benzyl chloride	5.42				5.00		108	70-130			
Bromodichloromethane	5.66				5.00		113	70-130			
Bromoform	7.40				5.00		148 *	70-130			L-01, V-06
Bromomethane	4.54				5.00		90.8	70-130			
1,3-Butadiene	4.94				5.00		98.7	70-130			
2-Butanone (MEK)	5.91				5.00		118	70-130			
Carbon Disulfide	4.51				5.00		90.3	70-130			
Carbon Tetrachloride	6.24				5.00		125	70-130			
Chlorobenzene	5.34				5.00		107	70-130			
Chloroethane	4.77				5.00		95.5	70-130			
Chloroform	4.76				5.00		95.2	70-130			
Chloromethane	4.78				5.00		95.6	70-130			
Cyclohexane	4.96				5.00		99.3	70-130			
Dibromochloromethane	6.82				5.00		136 *	70-130			L-01, V-06
1,2-Dibromoethane (EDB)	5.70				5.00		114	70-130			
1,2-Dichlorobenzene	5.15				5.00		103	70-130			
1,3-Dichlorobenzene	5.48				5.00		110	70-130			
1,4-Dichlorobenzene	5.42				5.00		108	70-130			
Dichlorodifluoromethane (Freon 12)	5.03				5.00		101	70-130			
1,1-Dichloroethane	4.50				5.00		90.0	70-130			
1,2-Dichloroethane	5.43				5.00		109	70-130			
1,1-Dichloroethylene	4.60				5.00		92.0	70-130			
cis-1,2-Dichloroethylene	4.83				5.00		96.7	70-130			
trans-1,2-Dichloroethylene	4.39				5.00		87.8	70-130			
1,2-Dichloropropane	4.89				5.00		97.7	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 B065952 - TO-15 Prep</b>											
<b>LCS (B065952-BS1)</b>											
Prepared & Analyzed: 01/05/13											
cis-1,3-Dichloropropene	5.99				5.00		120	70-130			
trans-1,3-Dichloropropene	7.16				5.00		143 *	70-130			L-01, V-06
Ethanol	4.07				5.00		81.3	70-130			
Ethyl Acetate	6.61				5.00		132 *	70-130			L-05
Ethylbenzene	5.64				5.00		113	70-130			
4-Ethyltoluene	5.42				5.00		108	70-130			
Heptane	5.68				5.00		114	70-130			
Hexachlorobutadiene	5.23				5.00		105	70-130			V-06
Hexane	6.28				5.00		126	70-130			
2-Hexanone (MBK)	5.40				5.00		108	70-130			
Isopropanol	5.18				5.00		104	70-130			
Methyl tert-Butyl Ether (MTBE)	5.65				5.00		113	70-130			
Methylene Chloride	4.68				5.00		93.6	70-130			
Methyl methacrylate	5.42				5.00		108	70-130			
4-Methyl-2-pentanone (MIBK)	6.01				5.00		120	70-130			
Propene	4.96				5.00		99.2	70-130			
Styrene	5.24				5.00		105	70-130			
1,1,1,2-Tetrachloroethane	1.03				0.910		113	70-130			
1,1,2,2-Tetrachloroethane	4.82				5.00		96.5	70-130			
Tetrachloroethylene	5.79				5.00		116	70-130			
Tetrahydrofuran	5.52				5.00		110	70-130			
Toluene	5.50				5.00		110	70-130			
1,2,4-Trichlorobenzene	5.10				5.00		102	70-130			
1,1,1-Trichloroethane	5.24				5.00		105	70-130			
1,1,2-Trichloroethane	5.50				5.00		110	70-130			
Trichloroethylene	4.92				5.00		98.4	70-130			
Trichlorofluoromethane (Freon 11)	5.43				5.00		109	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	4.77				5.00		95.4	70-130			
1,2,4-Trimethylbenzene	5.43				5.00		109	70-130			
1,3,5-Trimethylbenzene	5.42				5.00		108	70-130			
Vinyl Acetate	6.27				5.00		125	70-130			
Vinyl Chloride	4.55				5.00		91.0	70-130			
m&p-Xylene	12.1				10.0		121	70-130			
o-Xylene	5.99				5.00		120	70-130			
Surrogate: 4-Bromofluorobenzene (1)	8.67				8.00		108	70-130			
Surrogate: 4-Bromofluorobenzene (2)	7.91				8.00		98.9	70-130			

**QUALITY CONTROL**

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

Analyte	ppbv		ug/m3		Spike Level ppbv	Source Result	%REC Limits	RPD	RPD Limit	Flag
	Results	RL	Results	RL						
<b>Batch B065952 - TO-15 Prep</b>										
<b>Duplicate (B065952-DUP1)</b>										
<b>Source: 13A0054-09</b>										
Prepared: 01/05/13 Analyzed: 01/06/13										
Acetone	4.7	4.0	11	9.5		4.5		4.33	25	L-05, V-06
Benzene	0.16	0.10	0.52	0.32		0.17		3.59	25	
Benzyl chloride	ND	0.10	ND	0.52		ND			25	
Bromodichloromethane	ND	0.10	ND	0.67		ND			25	
Bromoform	ND	0.10	ND	1.0		ND			25	
Bromomethane	ND	0.10	ND	0.39		ND			25	
1,3-Butadiene	ND	0.10	ND	0.22		ND			25	
2-Butanone (MEK)	3.2	4.0	9.3	12		3.2		1.38	25	J
Carbon Disulfide	ND	1.0	ND	3.1		ND			25	
Carbon Tetrachloride	ND	0.10	ND	0.63		ND			25	
Chlorobenzene	ND	0.10	ND	0.46		ND			25	
Chloroethane	ND	0.10	ND	0.26		ND			25	
Chloroform	ND	0.10	ND	0.49		ND			25	
Chloromethane	0.52	0.10	1.1	0.21		0.51		3.50	25	
Cyclohexane	ND	0.10	ND	0.34		ND			25	
Dibromochloromethane	ND	0.10	ND	0.85		ND			25	
1,2-Dibromoethane (EDB)	ND	0.10	ND	0.77		ND			25	
1,2-Dichlorobenzene	ND	0.10	ND	0.60		ND			25	
1,3-Dichlorobenzene	ND	0.10	ND	0.60		ND			25	
1,4-Dichlorobenzene	ND	0.10	ND	0.60		ND			25	
Dichlorodifluoromethane (Freon 12)	0.54	0.10	2.7	0.49		0.51		4.19	25	
1,1-Dichloroethane	ND	0.10	ND	0.40		ND			25	
1,2-Dichloroethane	ND	0.10	ND	0.40		ND			25	
1,1-Dichloroethylene	ND	0.10	ND	0.40		ND			25	
cis-1,2-Dichloroethylene	ND	0.10	ND	0.40		ND			25	
trans-1,2-Dichloroethylene	ND	0.10	ND	0.40		ND			25	
1,2-Dichloropropane	ND	0.10	ND	0.46		ND			25	
cis-1,3-Dichloropropene	ND	0.10	ND	0.45		ND			25	
trans-1,3-Dichloropropene	ND	0.10	ND	0.45		ND			25	
Ethanol	5.4	4.0	10	7.5		5.3		1.77	25	
Ethyl Acetate	ND	0.10	ND	0.36		ND			25	
Ethylbenzene	ND	0.10	ND	0.43		ND			25	
4-Ethyltoluene	ND	0.10	ND	0.49		ND			25	
Heptane	ND	0.10	ND	0.41		ND			25	
Hexachlorobutadiene	ND	0.10	ND	1.1		ND			25	
Hexane	ND	4.0	ND	14		0.21			25	
2-Hexanone (MBK)	ND	0.10	ND	0.41		ND			25	
Isopropanol	0.46	4.0	1.1	9.8		0.45		1.77	25	J
Methyl tert-Butyl Ether (MTBE)	ND	0.10	ND	0.36		ND			25	
Methylene Chloride	0.51	1.0	1.8	3.5		0.53		3.44	25	J
Methyl methacrylate	ND	0.10	ND	0.41		ND			25	
4-Methyl-2-pentanone (MIBK)	ND	0.10	ND	0.41		ND			25	
Propene	ND	4.0	ND	6.9		ND			25	
Styrene	ND	0.10	ND	0.43		ND			25	
1,1,1,2-Tetrachloroethane	ND	0.18	ND	1.2		ND			25	
1,1,1,2,2-Tetrachloroethane	ND	0.10	ND	0.69		ND			25	

**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	Limits	Limit	
<b>Batch B065952 - TO-15 Prep</b>										
<b>Duplicate (B065952-DUP1)</b>		<b>Source: 13A0054-09</b>				Prepared: 01/05/13 Analyzed: 01/06/13				
Tetrachloroethylene	ND	0.10	ND	0.68		ND			25	
Tetrahydrofuran	2.1	0.10	6.3	0.29		ND			25	
Toluene	0.15	0.10	0.57	0.38		0.17		14.8	25	
1,2,4-Trichlorobenzene	ND	0.20	ND	1.5		ND			25	
1,1,1-Trichloroethane	ND	0.10	ND	0.55		ND			25	
1,1,2-Trichloroethane	ND	0.10	ND	0.55		ND			25	
Trichloroethylene	ND	0.10	ND	0.54		ND			25	
Trichlorofluoromethane (Freon 11)	0.45	0.10	2.5	0.56		0.43		4.57	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10	ND	0.77		ND			25	
1,2,4-Trimethylbenzene	ND	0.10	ND	0.49		ND			25	
1,3,5-Trimethylbenzene	ND	0.10	ND	0.49		ND			25	
Vinyl Acetate	ND	0.20	ND	0.70		ND			25	
Vinyl Chloride	ND	0.10	ND	0.26		ND			25	
m&p-Xylene	0.23	0.20	1.0	0.87		0.17		30.5	25	R-03
o-Xylene	ND	0.10	ND	0.43		ND			25	
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	<i>7.93</i>					<i>8.00</i>		<i>99.2</i>	<i>70-130</i>	
<i>Surrogate: 4-Bromofluorobenzene (2)</i>	<i>7.81</i>					<i>8.00</i>		<i>97.6</i>	<i>70-130</i>	

**Batch B065953 - TO-15 Prep**

<b>Blank (B065953-BLK1)</b>		Prepared & Analyzed: 01/06/13								
Acetone	0.26	1.0								J
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)	ND	1.0								
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								

**QUALITY CONTROL**

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

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

**Batch B065953 - TO-15 Prep**

**Blank (B065953-BLK1)**

Prepared & Analyzed: 01/06/13

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								
Ethyl Acetate	ND	0.025								
Ethylbenzene	ND	0.025								
4-Ethyltoluene	ND	0.025								
Heptane	ND	0.025								
Hexachlorobutadiene	ND	0.025								
Hexane	ND	1.0								
2-Hexanone (MBK)	ND	0.025								
Isopropanol	ND	1.0								
Methyl tert-Butyl Ether (MTBE)	ND	0.025								
Methylene Chloride	0.060	0.25								J
Methyl methacrylate	ND	0.025								
4-Methyl-2-pentanone (MIBK)	ND	0.025								
Propene	ND	1.0								
Styrene	ND	0.025								
1,1,1,2-Tetrachloroethane	ND	0.046								
1,1,1,2,2-Tetrachloroethane	ND	0.025								
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								
Surrogate: 4-Bromofluorobenzene (1)	8.67				8.00		108		70-130	
Surrogate: 4-Bromofluorobenzene (2)	8.33				8.00		104		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 B065953 - TO-15 Prep</b>											
<b>LCS (B065953-BS1)</b>											
Prepared & Analyzed: 01/06/13											
Acetone	7.00				5.00		140 *	70-130			L-05, V-06
Benzene	4.35				5.00		87.0	70-130			
Benzyl chloride	5.27				5.00		105	70-130			
Bromodichloromethane	5.48				5.00		110	70-130			
Bromoform	7.27				5.00		145 *	70-130			L-01, V-06
Bromomethane	4.46				5.00		89.2	70-130			
1,3-Butadiene	4.55				5.00		91.0	70-130			
2-Butanone (MEK)	5.68				5.00		114	70-130			
Carbon Disulfide	4.47				5.00		89.4	70-130			
Carbon Tetrachloride	6.12				5.00		122	70-130			
Chlorobenzene	5.24				5.00		105	70-130			
Chloroethane	4.65				5.00		92.9	70-130			
Chloroform	4.74				5.00		94.7	70-130			
Chloromethane	4.38				5.00		87.7	70-130			
Cyclohexane	4.98				5.00		99.6	70-130			
Dibromochloromethane	6.55				5.00		131 *	70-130			L-01, V-06
1,2-Dibromoethane (EDB)	5.44				5.00		109	70-130			
1,2-Dichlorobenzene	5.01				5.00		100	70-130			
1,3-Dichlorobenzene	5.30				5.00		106	70-130			
1,4-Dichlorobenzene	5.29				5.00		106	70-130			
Dichlorodifluoromethane (Freon 12)	5.23				5.00		105	70-130			
1,1-Dichloroethane	4.44				5.00		88.9	70-130			
1,2-Dichloroethane	5.38				5.00		108	70-130			
1,1-Dichloroethylene	4.61				5.00		92.2	70-130			
cis-1,2-Dichloroethylene	4.64				5.00		92.8	70-130			
trans-1,2-Dichloroethylene	4.24				5.00		84.8	70-130			
1,2-Dichloropropane	4.69				5.00		93.9	70-130			
cis-1,3-Dichloropropene	5.82				5.00		116	70-130			
trans-1,3-Dichloropropene	6.99				5.00		140 *	70-130			L-01, V-06
Ethanol	3.67				5.00		73.4	70-130			
Ethyl Acetate	6.41				5.00		128	70-130			
Ethylbenzene	5.56				5.00		111	70-130			
4-Ethyltoluene	5.30				5.00		106	70-130			
Heptane	5.59				5.00		112	70-130			
Hexachlorobutadiene	5.20				5.00		104	70-130			V-06
Hexane	6.26				5.00		125	70-130			
2-Hexanone (MBK)	4.98				5.00		99.6	70-130			
Isopropanol	5.30				5.00		106	70-130			
Methyl tert-Butyl Ether (MTBE)	5.46				5.00		109	70-130			
Methylene Chloride	4.56				5.00		91.2	70-130			
Methyl methacrylate	5.30				5.00		106	70-130			
4-Methyl-2-pentanone (MIBK)	5.80				5.00		116	70-130			
Propene	4.94				5.00		98.8	70-130			
Styrene	5.05				5.00		101	70-130			
1,1,1,2-Tetrachloroethane	0.977				0.910		107	70-130			
1,1,2,2-Tetrachloroethane	4.65				5.00		93.0	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		

**Batch B065953 - TO-15 Prep**

**LCS (B065953-BS1)**

Prepared & Analyzed: 01/06/13

Tetrachloroethylene	5.50				5.00		110	70-130			
Tetrahydrofuran	5.31				5.00		106	70-130			
Toluene	5.24				5.00		105	70-130			
1,2,4-Trichlorobenzene	4.93				5.00		98.6	70-130			
1,1,1-Trichloroethane	5.14				5.00		103	70-130			
1,1,2-Trichloroethane	5.24				5.00		105	70-130			
Trichloroethylene	4.90				5.00		97.9	70-130			
Trichlorofluoromethane (Freon 11)	5.63				5.00		113	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	4.76				5.00		95.3	70-130			
1,2,4-Trimethylbenzene	5.28				5.00		106	70-130			
1,3,5-Trimethylbenzene	5.27				5.00		105	70-130			
Vinyl Acetate	6.13				5.00		123	70-130			
Vinyl Chloride	4.33				5.00		86.6	70-130			
m&p-Xylene	11.8				10.0		118	70-130			
o-Xylene	5.81				5.00		116	70-130			
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	<i>8.60</i>				<i>8.00</i>		<i>107</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene (2)</i>	<i>8.03</i>				<i>8.00</i>		<i>100</i>	<i>70-130</i>			

**Duplicate (B065953-DUP1)**

Source: 13A0054-06

Prepared & Analyzed: 01/06/13

Acetone	5.3	1.4	13	3.3		4.6		14.3	25	L-05, V-06
Benzene	0.19	0.035	0.59	0.11		0.15		20.4	25	
Benzyl chloride	ND	0.035	ND	0.18		ND			25	
Bromodichloromethane	ND	0.035	ND	0.24		ND			25	
Bromoform	ND	0.035	ND	0.36		ND			25	
Bromomethane	ND	0.035	ND	0.14		ND			25	
1,3-Butadiene	ND	0.035	ND	0.078		ND			25	
2-Butanone (MEK)	0.46	1.4	1.4	4.1		0.46		0.760	25	J
Carbon Disulfide	ND	0.35	ND	1.1		ND			25	
Carbon Tetrachloride	0.096	0.035	0.60	0.22		0.087		9.96	25	
Chlorobenzene	ND	0.035	ND	0.16		ND			25	
Chloroethane	ND	0.035	ND	0.093		ND			25	
Chloroform	ND	0.035	ND	0.17		ND			25	
Chloromethane	0.50	0.035	1.0	0.072		0.52		3.69	25	
Cyclohexane	ND	0.035	ND	0.12		ND			25	
Dibromochloromethane	ND	0.035	ND	0.30		ND			25	
1,2-Dibromoethane (EDB)	ND	0.035	ND	0.27		ND			25	
1,2-Dichlorobenzene	ND	0.035	ND	0.21		ND			25	
1,3-Dichlorobenzene	ND	0.035	ND	0.21		ND			25	
1,4-Dichlorobenzene	ND	0.035	ND	0.21		ND			25	
Dichlorodifluoromethane (Freon 12)	0.59	0.035	2.9	0.17		0.55		5.93	25	
1,1-Dichloroethane	ND	0.035	ND	0.14		ND			25	
1,2-Dichloroethane	ND	0.035	ND	0.14		ND			25	
1,1-Dichloroethylene	ND	0.035	ND	0.14		ND			25	
cis-1,2-Dichloroethylene	ND	0.035	ND	0.14		ND			25	
trans-1,2-Dichloroethylene	ND	0.035	ND	0.14		ND			25	
1,2-Dichloropropane	ND	0.035	ND	0.16		ND			25	

**QUALITY CONTROL**

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

Analyte	ppbv		ug/m3		Spike Level ppbv	Source Result	%REC Limits	RPD	RPD Limit	Flag
	Results	RL	Results	RL						
<b>Batch B065953 - TO-15 Prep</b>										
<b>Duplicate (B065953-DUP1)</b>		<b>Source: 13A0054-06</b>				<b>Prepared &amp; Analyzed: 01/06/13</b>				
cis-1,3-Dichloropropene	ND	0.035	ND	0.16		ND			25	
trans-1,3-Dichloropropene	ND	0.035	ND	0.16		ND			25	
Ethanol	4.3	1.4	8.1	2.6		4.4		3.46	25	
Ethyl Acetate	0.19	0.035	0.67	0.13		0.12		45.6	25	R-01
Ethylbenzene	0.034	0.035	0.15	0.15		0.036		4.00	25	J
4-Ethyltoluene	ND	0.035	ND	0.17		ND			25	
Heptane	ND	0.035	ND	0.14		0.023			25	
Hexachlorobutadiene	ND	0.035	ND	0.37		ND			25	
Hexane	0.48	1.4	1.7	4.9		0.18		89.9	25	R-01, J
2-Hexanone (MBK)	0.024	0.035	0.098	0.14		ND			25	J
Isopropanol	0.45	1.4	1.1	3.4		ND			25	J
Methyl tert-Butyl Ether (MTBE)	ND	0.035	ND	0.13		ND			25	
Methylene Chloride	0.79	0.35	2.7	1.2		0.47		51.6	25	R-01
Methyl methacrylate	ND	0.035	ND	0.14		ND			25	
4-Methyl-2-pentanone (MIBK)	ND	0.035	ND	0.14		ND			25	
Propene	ND	1.4	ND	2.4		ND			25	
Styrene	ND	0.035	ND	0.15		ND			25	
1,1,1,2-Tetrachloroethane	ND	0.064	ND	0.44		ND			25	
1,1,2,2-Tetrachloroethane	ND	0.035	ND	0.24		ND			25	
Tetrachloroethylene	ND	0.035	ND	0.24		ND			25	
Tetrahydrofuran	ND	0.035	ND	0.10		ND			25	
Toluene	0.16	0.035	0.61	0.13		0.15		8.14	25	
1,2,4-Trichlorobenzene	ND	0.070	ND	0.52		ND			25	
1,1,1-Trichloroethane	ND	0.035	ND	0.19		ND			25	
1,1,2-Trichloroethane	ND	0.035	ND	0.19		ND			25	
Trichloroethylene	ND	0.035	ND	0.19		ND			25	
Trichlorofluoromethane (Freon 11)	0.37	0.035	2.1	0.20		0.35		7.58	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.086	0.035	0.66	0.27		0.079		8.47	25	
1,2,4-Trimethylbenzene	ND	0.035	ND	0.17		ND			25	
1,3,5-Trimethylbenzene	ND	0.035	ND	0.17		ND			25	
Vinyl Acetate	ND	0.070	ND	0.25		ND			25	
Vinyl Chloride	ND	0.035	ND	0.090		ND			25	
m&p-Xylene	0.14	0.070	0.59	0.30		0.13		2.09	25	
o-Xylene	0.045	0.035	0.20	0.15		0.041		8.13	25	
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	8.37					8.00		105	70-130	
<i>Surrogate: 4-Bromofluorobenzene (2)</i>	8.16					8.00		102	70-130	

**QUALITY CONTROL**

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

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

**Batch B065960 - TO-15 Prep**

**Blank (B065960-BLK1)**

Prepared & Analyzed: 01/04/13

Acetone	0.86	1.0								J
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)	ND	1.0								
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								
Ethyl Acetate	ND	0.025								
Ethylbenzene	ND	0.025								
4-Ethyltoluene	ND	0.025								
Heptane	ND	0.025								
Hexachlorobutadiene	ND	0.025								
Hexane	ND	1.0								
2-Hexanone (MBK)	ND	0.025								
Isopropanol	ND	1.0								
Methyl tert-Butyl Ether (MTBE)	ND	0.025								
Methylene Chloride	0.058	0.25								J
Methyl methacrylate	ND	0.025								
4-Methyl-2-pentanone (MIBK)	ND	0.025								
Propene	ND	1.0								
Styrene	ND	0.025								
1,1,1,2-Tetrachloroethane	ND	0.046								
1,1,2,2-Tetrachloroethane	ND	0.025								

**QUALITY CONTROL**

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

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

**Batch B065960 - TO-15 Prep**

**Blank (B065960-BLK1)**

Prepared & Analyzed: 01/04/13

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

*Surrogate: 4-Bromofluorobenzene (1)*      8.89      8.00      111      70-130

**LCS (B065960-BS1)**

Prepared & Analyzed: 01/04/13

Acetone	7.34	5.00	147 *	70-130
Benzene	4.43	5.00	88.6	70-130
Benzyl chloride	5.50	5.00	110	70-130
Bromodichloromethane	5.56	5.00	111	70-130
Bromoform	7.45	5.00	149 *	70-130
Bromomethane	4.59	5.00	91.7	70-130
1,3-Butadiene	5.01	5.00	100	70-130
2-Butanone (MEK)	5.71	5.00	114	70-130
Carbon Disulfide	4.38	5.00	87.5	70-130
Carbon Tetrachloride	6.24	5.00	125	70-130
Chlorobenzene	5.31	5.00	106	70-130
Chloroethane	4.93	5.00	98.5	70-130
Chloroform	4.66	5.00	93.2	70-130
Chloromethane	4.78	5.00	95.5	70-130
Cyclohexane	4.86	5.00	97.3	70-130
Dibromochloromethane	6.70	5.00	134 *	70-130
1,2-Dibromoethane (EDB)	5.59	5.00	112	70-130
1,2-Dichlorobenzene	5.19	5.00	104	70-130
1,3-Dichlorobenzene	5.42	5.00	108	70-130
1,4-Dichlorobenzene	5.40	5.00	108	70-130
Dichlorodifluoromethane (Freon 12)	4.98	5.00	99.5	70-130
1,1-Dichloroethane	4.42	5.00	88.3	70-130
1,2-Dichloroethane	5.28	5.00	106	70-130
1,1-Dichloroethylene	4.46	5.00	89.3	70-130
cis-1,2-Dichloroethylene	4.73	5.00	94.6	70-130
trans-1,2-Dichloroethylene	4.24	5.00	84.9	70-130
1,2-Dichloropropane	4.74	5.00	94.8	70-130
cis-1,3-Dichloropropene	5.87	5.00	117	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		

**Batch B065960 - TO-15 Prep**

**LCS (B065960-BS1)**

Prepared & Analyzed: 01/04/13

trans-1,3-Dichloropropene	6.82				5.00		<b>136</b> *	70-130			
Ethanol	4.30				5.00		86.0	70-130			
Ethyl Acetate	6.40				5.00		128	70-130			
Ethylbenzene	5.72				5.00		114	70-130			
4-Ethyltoluene	5.48				5.00		110	70-130			
Heptane	5.56				5.00		111	70-130			
Hexachlorobutadiene	5.18				5.00		104	70-130			
Hexane	6.11				5.00		122	70-130			
2-Hexanone (MBK)	5.25				5.00		105	70-130			
Isopropanol	5.54				5.00		111	70-130			
Methyl tert-Butyl Ether (MTBE)	5.52				5.00		110	70-130			
Methylene Chloride	4.61				5.00		92.3	70-130			
Methyl methacrylate	5.40				5.00		108	70-130			
4-Methyl-2-pentanone (MIBK)	5.90				5.00		118	70-130			
Propene	4.84				5.00		96.8	70-130			
Styrene	5.17				5.00		103	70-130			
1,1,1,2-Tetrachloroethane	ND	0.091		0.62				70-130			
1,1,2,2-Tetrachloroethane	4.83				5.00		96.6	70-130			
Tetrachloroethylene	5.61				5.00		112	70-130			
Tetrahydrofuran	5.28				5.00		106	70-130			
Toluene	5.29				5.00		106	70-130			
1,2,4-Trichlorobenzene	5.13				5.00		103	70-130			
1,1,1-Trichloroethane	5.15				5.00		103	70-130			
1,1,2-Trichloroethane	5.35				5.00		107	70-130			
Trichloroethylene	4.85				5.00		97.0	70-130			
Trichlorofluoromethane (Freon 11)	5.42				5.00		108	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	4.59				5.00		91.8	70-130			
1,2,4-Trimethylbenzene	5.44				5.00		109	70-130			
1,3,5-Trimethylbenzene	5.47				5.00		109	70-130			
Vinyl Acetate	6.18				5.00		124	70-130			
Vinyl Chloride	4.63				5.00		92.6	70-130			
m&p-Xylene	12.0				10.0		120	70-130			
o-Xylene	5.98				5.00		120	70-130			
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	8.63				8.00		108	70-130			

**FLAG/QUALIFIER SUMMARY**

- \* QC result is outside of established limits.
  - † Wide recovery limits established for difficult compound.
  - ‡ Wide RPD limits established for difficult compound.
  - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
- J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
  - L-01 Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
  - L-05 Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the high side.
  - R-01 Duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result.
  - R-03 Duplicate RPD outside of control limits. Reduced precision is expected for values near the reporting limit.
  - V-06 Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

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



**CERTIFICATIONS**

**Certified Analyses included in this Report**

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

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-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2013
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
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	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2012



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: Ame C  
 Address: 107 Auburn Rd. Site 3c 1  
Walle Field, MA 01880

Attention: Kelly Chasterton

Project Location: Providence, RI  
 Sampled By: Mark McGivern

Proposal Provided? (For Billing purposes)  
 yes  no

Telephone: (781) 245-6606  
 Project # 3650020114  
 Client PO # CO12600895

DATA DELIVERY (check one):  
 FAX  EMAIL  WEBSITE CLIENT

Fax #: \_\_\_\_\_  
 Email: Kelly.Chasterton@ame.com  
 Format:  EXCEL  PDF  GIS KEY  OTHER Excel

Date Sampled  ONLY USE WHEN USING PUMPS

Field ID	Sample Description	Media	Lab #	Date		Total	Flow Rate	Volume	Matrix	Code*	Requested	Hg	Summa	Flow
				Time	Time									
01	IA-1-010313	S		7/13/13	7/13/13	30	0.2	6	IA	X			1675	418
02	IA-2-010313	S		0824	0854	30	0.2	6	IA	X			1117	418
03	IA-3-010313	S		1/13/13	1/13/13	30	0.2	6	IA	X			1871	418
04	IA-4-010313	S		1/13/13	1/11/13	30	0.2	6	IA	X			1314	4187
05	IA-5-010313	S		1/13/13	0905	30	0.2	6	IA	X			1853	4183
06	IA-6-010313	S		0538	0908	30	0.2	6	IA	X			1844	4182
07	IA-7-010313	S		1/13/13	1/13/13	30	0.2	6	IA	X			1127	4174
08	AA-1-010313	S		12/13	12/13	30	0.2	6	AMB	Y			1279	4176

Laboratory Comments:

CLIENT COMMENTS:

**ANALYSIS REQUESTED**

Summa canisters are returned within 14 days of receipt or rental fee will apply.

Summa canisters will be retained for a minimum of 14 days after sampling date prior to cleaning.

Please fill out completely, sign, date and retain the yellow copy for your records.

Summa canisters are returned within 14 days of receipt or rental fee will apply.

Summa canisters will be retained for a minimum of 14 days after sampling date prior to cleaning.

Relinquished by: (signature) [Signature] Date/Time: 11/3/13 1345

Received by: (signature) [Signature] Date/Time: 1/3/13 1345

Relinquished by: (signature) [Signature] Date/Time: 1-3-13 1800

Received by: (signature) [Signature] Date/Time: 1-4-13 1800

**Turnaround\*\***

7-Day  10-Day  Other \_\_\_\_\_

**RUSH\***

\*24-Hr  \*48-Hr  \*72-Hr  \*4-Day

Approval Required

**Special Requirements**

Regulations: CT Target Industrial

Data Enhancement/RCP?  Y  N

Enhanced Data Package  Y  N

(Surcharge Applies)

Required Detection Limits: CT Target

Other: Permeation

**\*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=ledlar bag P=PUF T=tube F=filter C=cassette O= Other

**\*\* 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**



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: Amer

Address: 107A Jubelin Rd Suite 301

Worcester, MA 01820

Attention: Kelly Chasterton

Project Location: Providence, RI

Sampled By: Mark Magrison

Proposal Provided? (For Billing purposes)  yes  no

Telephone: (781) 245-6666

Project # 36500 80114

Client PO # CO12600 895

DATA DELIVERY (check one):  
 FAX  EMAIL  WEBSITE CLIENT

Fax #: \_\_\_\_\_

Email: Kelly.Chasterton@Amer.com

Format:  EXCEL  PDF  GIS KEY  OTHER EX

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*	ANALYSIS REQUESTED	"Hg	Please fill out completely, sign, date and retain the yellow copy for your record
				Start Time	Stop Time							
09	EW-5-010313	S		1/3/13 0923	1/3/13 0953	30	0.2	6	SS	X		Summa canisters were retained for a minimum of 14 days after sampling date prior to cleaning.
10	EW-6-010313	S		1/3/13 0917	1/3/13 0947	30	0.2	6	SS	X		Summa canisters were retained for a minimum of 14 days after sampling date prior to cleaning.
11	EW-7-010313	S		1/3/13 1129	1/3/13 1159	30	0.2	6	SS	X		Summa canisters were retained for a minimum of 14 days after sampling date prior to cleaning.
12	EW-Combinder-010313	S		1/3/13 1212	1/3/13 1242	30	0.2	6	SS	X		Summa canisters were retained for a minimum of 14 days after sampling date prior to cleaning.

Laboratory Comments:

CLIENT COMMENTS:

Relinquished by: (signature) \_\_\_\_\_

Date/Time: 1-2-13 1345

Received by: (signature) \_\_\_\_\_

Date/Time: 1-3-13 1344

Relinquished by: (signature) \_\_\_\_\_

Date/Time: 1-3-13 1800

Received by: (signature) \_\_\_\_\_

Date/Time: 1-2-13 1800

**Turnaround \*\***

7-Day

10-Day

Other \_\_\_\_\_

**RUSH \***

\*24-Hr  \*48-Hr

\*72-Hr  \*4-Day

Approval Required

**Special Requirements**

Regulations: CT Target Industrial

Data Enhancement/RCP?  Y  N

Enhanced Data Package  Y  N

(Surcharge Applies)

Required Detection Limits: CT Target

Other: Commented

**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= PUF

T= tube

F= filter

C= cassette

O= Other

\*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.

A/HA, NELAC & WBE/DBE Certified



www.contestlabs.com



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

AIR Only Receipt Checklist

CLIENT NAME: AMSC RECEIVED BY: WK DATE: 1-3-13

- 1) Was the chain(s) of custody relinquished and signed?
2) Does the chain agree with the samples?
3) Are all the samples in good condition?
4) Are there any samples "On Hold"?
5) Are there any RUSH or SHORT HOLDING TIME samples?

6) Location where samples are stored: AIR LAB
Permission to subcontract samples? Yes No
Client Signature:

Containers received at Con-Test table with columns for container type, # of containers, and types (size, duration). Includes rows for Summa Cans, Tedlar Bags, Tubes, Regulators, Restrictors, Tubing, and Other.

Unused Summas: 1053

Unused Regulators: 4042

- 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: 1079, 1117, 1871, 1314, 1853, 1844, 1127, 1279, 1083, 1101, 1110, 1159, 4184, 4186, 4185, 4187, 4183, 4182, 4174, 4176, 4188, 4189, 4175, 4177



## **APPENDIX B**

### **Analytical Laboratory Detection Limits**



39 Spruce Street, 2nd Floor  
 East Longmeadow, MA 01028  
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**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



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



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## APH COMPOUNDS

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





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### EXTRA COMPOUNDS

1,1,1,2-tetrachloroethane	ND	ND	0.091	0.6247	167.85	1	0.15
1,2-Dibromo-3-chloropropane	ND	ND	0.065	0.6283	236.33	1	0.10
1,3-Dichloropropane	ND	ND	0.135	0.6238	112.99	1	0.22
1-Methylnaphthalene	ND	ND	0.107	0.6223	142.20	1	0.17
2,2,4-Trimethylpentane	ND	ND	0.134	0.6260	114.23	1	0.21
2-Methylnaphthalene	ND	ND	0.107	0.6223	142.20	1	0.17
Acrylonitrile	ND	ND	0.288	0.6250	53.06	1	0.46
Butylbenzene	ND	ND	0.114	0.6258	134.22	1	0.18
Cumene	ND	ND	0.127	0.6243	120.19	1	0.20
Hexylcyclohexane	ND	ND	0.091	0.6265	168.32	1	0.15
Indane	ND	ND	0.129	0.6235	118.18	1	0.21
Indene	ND	ND	0.132	0.6271	116.16	1	0.21
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