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March 16, 2019

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
March 2020 Semi-Annual Monitoring
Retail Complex, Active Sub-Slab Depressurization System
Former Gorham Manufacturing Facility
333 Adelaide Avenue, Providence, Rhode Island
Wood Project No. 3651200101

Dear Mr. Martella:

This letter report presents the results of semi-annual compliance sampling and analysis conducted by Wood Environment and Infrastructure Solutions, Inc. (Wood) at the retail complex located at the Former Gorham Manufacturing Facility, 333 Adelaide Avenue, Providence, Rhode Island (Site). The reporting period is from October 2019 through March 2020 which includes one semi-annual compliance sampling event conducted on February 14, 2020.

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

Background

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

The small retail spaces consist of the eastern, central, and western retail spaces (**Figure 1**). The mitigation systems in the central and western 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 the small retail spaces. The eastern small retail space extraction well is located along the wall of the large retail space (EW-5) and is part of the ASD system described above.

Current Monitoring Results

The following provides a discussion of results from sampling conducted on February 14, 2020. The sampling was performed consistent with the requirements of the Orders of Approval. This is the eighth semi-annual monitoring event since the change from quarterly monitoring after February 2016, based on the historical indoor air data and performance of the existing vapor mitigation system.

The laboratory analytical report (Con-test W. O. 20B0726) for February 14, 2020 analyses is provided in **Appendix A**, and the laboratory's detection limits are provided in **Appendix B.**

Consistent with previous reports, analytical results of the most recent 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.

Outdoor Reference Sample

One outdoor reference air sample (AA-1) was located northwest of the property, upwind of the retail building. The results for the outdoor reference sample are provided in **Table 1** (two most recent sampling events). All historic outdoor reference sample results are provided in **Appendix C**.

Small Retail Spaces

The February 2020 sampling event included an indoor air sample from each of the three small retail spaces (locations IA-5, IA-6, and IA-7) and one air sample collected from each of the three vapor extraction wells (EW-5, EW-6, and EW-7). The sub-slab vacuum monitoring (pressure differential measurements) was conducted at locations VMW-5, VMW-6, and VMW-7 on February 14, 2020 in conjunction with the semi-annual air sampling program. The indoor air and vapor extraction sampling and sub-slab vacuum monitoring locations are shown in **Figure 1**.

During the reporting period, the eastern small retail space (indoor air sample location IA-5) was intermittently occupied as storage/staging area for a clothing consignment shop which occupied the center small retail space (sample location IA-6). The western small retail space (sample location IA-7) was intermittently occupied as a church hall.

Analytical results for the small retail spaces are summarized in **Table 2a** (indoor air, two most recent sampling events), and **Table 2b** (extraction wells, two most recent sampling events). For reference, all analytical results for the small retail spaces from initiation of sampling in 2009, including a baseline event prior to system start-up in February 2009, and all subsequent sampling events are presented in **Appendix D1** (indoor air, small retail) and **Appendix D2** (extraction wells, small retail). The vacuum monitoring results for the small retails spaces are presented in **Table 3**.

The following conclusions are based on Site observations and the February 14, 2020 analytical results:

- The indoor air sample results for the February 14, 2020 sampling event in the small retail spaces (sample locations IA-5 through IA-7) were in compliance with TAC action levels.
- The eastern small retail space (indoor air sample location IA-5) was intermittently occupied as storage/staging area for the consignment shop during the reporting period.
- The center small retail space (sample location IA-6) was occupied as a consignment shop during the reporting period.

- The western small retail space (sample location IA-7) was intermittently occupied as a church hall.
- The mitigation systems in the small retail areas were functioning correctly during the sampling event

Large Retail Space

The February 2020 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) and from the manifold where air from the four vapor extraction wells is combined (EW-Combined). In addition, one sample of exhaust from the carbon treatment system (Post Carbon) was collected. The sub-slab vacuum monitoring (pressure differential measurements) was conducted on February 14, 2020 at locations VMW-1 through VMW-4 in conjunction with the air sampling program. The sampling locations are shown in **Figure 1**.

Analytical results for the large retail spaces are summarized in **Table 4a** (indoor air, two most recent sampling events for IA-1 and IA-3 and two most recent events for IA-2 and IA-4), and **Table 4b** (extraction wells and post-carbon treatment, two most recent sampling events). For reference, all analytical results for the large retail spaces from initiation of sampling in 2009, including a baseline event prior to system start-up in February 2009, and all subsequent sampling events are presented in **Appendix E1** (indoor air, large space) and **Appendix E2** (extraction wells, large space)**.** The vacuum monitoring results for the large retail spaces are presented in **Table 5**.

The following conclusions are based on Site observations and a review of analytical results:

- The indoor air sample results for the February 14, 2020 sampling event for the large retail space (sample locations IA-1 through IA-4) are in compliance with the TAC action levels.
- The large retail space has been subdivided into two spaces. The eastern section has been vacant since on or before August 27th, 2018 and was empty during the performance sampling on February 14, 2020. This space includes indoor air sample locations IA-2 and IA-4 and sub-slab vacuum monitoring well VMW-2. Prior to sampling, Wood contacted the property management company to have the HVAC system operating properly before and during sampling to ensure proper ventilation and conditions typical of an occupied condition.
- The western side of the large retail space remains vacant and includes indoor air sample locations IA-1 and IA-3, vapor extraction well EW-5 and sub-slab vacuum monitoring locations VMW-1, VMW-3, and VMW-4.
- The mitigation system in the large retail area was functioning correctly during the sampling event
- A sample (Post Carbon-021420) was collected from the exhaust air of the treatment system. The concentration of total VOCs was lower than the total VOC concentration in the previous sampling round in September 2019. Wood will continue to monitor the total VOC's in the exhaust air to determine when a carbon change-out may be required in the future.

ASD System Monitoring/Maintenance

The ASD system performance is monitored monthly by Clean Harbors Environmental Services. There were no system shutdowns during the reporting period. Vacuum monitoring conducted at the time of the February 2020 indoor air monitoring event indicated that the desired negative pressure condition existed at the various sub-slab monitoring points.

Next Reporting Period

The next Semi-Annual Report will cover the monitoring period from March 2020 through September 2020. The report will be prepared and submitted to the Rhode Island Department of Environmental Management in October 2020.

Please contact the undersigned at (978) 392-5312 if we can provide additional information or answer any questions concerning these monitoring events and system adjustments.

Sincerely,

Wood Environment & Infrastructure Solutions, Inc.

Mark Maggiore
Environmental Scientist

Herb Colby, PG
Senior Project Manager

Attachments:

Table 1. Outdoor Air Reference Sampling
Table 2a. Summary of Analytical Results – Indoor Air Sampling for Small Retail Spaces
Table 2b. Summary of Analytical Results – Extraction Wells (Small Retail)
Table 3. Vacuum Monitoring Results – Small Retail Spaces
Table 4a. Summary of Analytical Results – Indoor Air Sampling for Large Retail Space
Table 4b. Summary of Analytical Results – Extraction Well and Post-Treatment Sampling for Large Retail Space
Table 5. Vacuum Monitoring Results – Large Retail Space

Figure 1. Vapor Mitigation Sample Locations

Appendix A. Laboratory Report
Appendix B. Analytical Laboratory Detection Limits
Appendix C. Outdoor Reference Sample Results
Appendix D1. Summary of All Analytical Results – Indoor Air Samples for Small Retail Space
Appendix D2. Summary of All Analytical Results – Extraction Well Samples for Small Retail Space
Appendix E1. Summary of All Analytical Results – Indoor Air Samples for Large Retail Space
Appendix E2. Summary of All Analytical Results – Extraction Well and Post-Treatment Samples for Large Retail Space

cc: Robert Azar, Deputy Director - Providence Planning & Development
G. Simpson, Textron, Inc. (Electronic)
Knight Memorial Library Repository
Shane Brackett, Paolino Properties (including tenants)

Tables

Table 1.
Summary of Analytical Results - Outdoor Air Reference Sampling
Former Gorham Manufacturing Site
Providence, Rhode Island

	Area:	Outdoor Air Reference Location	
	Location:	AA-1	
	Sample ID:	AA-1-090619	AA-1-021420
	Sample Date:	9/6/2019	2/14/2020
Analyte	**Units**		
1,1,1,2-Tetrachloroethane	ug/m3	0.44 U	0.44 U
1,1,1-Trichloroethane	ug/m3	0.19 U	0.19 U
1,1,2,2-Tetrachloroethane	ug/m3	0.24 U	0.24 U
1,1,2-Trichloroethane	ug/m3	0.19 U	0.19 U
1,1-Dichloroethane	ug/m3	0.14 U	0.14 U
1,1-Dichloroethene	ug/m3	0.14 U	0.14 U
1,2,4-Trichlorobenzene	ug/m3	0.26 U	0.26 U
1,2,4-Trimethylbenzene	ug/m3	0.17 U	0.17 U
1,2-Dibromoethane (EDB)	ug/m3	0.27 U	0.27 U
1,2-Dichlorobenzene	ug/m3	0.21 U	0.21 U
1,2-Dichloroethane	ug/m3	0.14 U	0.14 U
1,2-Dichloropropane	ug/m3	0.16 U	0.16 U
1,3,5-Trimethylbenzene	ug/m3	0.17 U	0.17 U
1,3-Butadiene	ug/m3	0.078 U	0.078 U
1,3-Dichlorobenzene	ug/m3	0.21 U	0.21 U
1,4-Dichlorobenzene	ug/m3	0.21 U	0.21 U
2-Butanone	ug/m3	0.63 J	1.6 J
2-Hexanone	ug/m3	0.14 U	0.14 U
4-Ethyltoluene	ug/m3	0.17 U	0.17 U
4-Methyl-2-pentanone	ug/m3	0.14 U	0.14 U
Acetone	ug/m3	5.1	9.8
Benzene	ug/m3	0.24	0.34
Benzyl chloride	ug/m3	0.18 U	0.18 U
Bromodichloromethane	ug/m3	0.24 U	0.24 U
Bromoform	ug/m3	0.36 U	0.36 U
Bromomethane	ug/m3	1.4 U	0.27 U
Carbon Disulfide	ug/m3	1.1 U	1.1 U
Carbon Tetrachloride	ug/m3	0.39	0.41
Chlorobenzene	ug/m3	0.16 U	0.16 U
Chloroethane	ug/m3	0.093 U	0.093 U
Chloroform	ug/m3	0.17 U	0.17 U
Chloromethane	ug/m3	0.87	1.5
cis-1,2-Dichloroethene	ug/m3	0.14 U	0.14 U
cis-1,3-Dichloropropene	ug/m3	0.16 U	0.16 U
Cyclohexane	ug/m3	0.12 U	0.12 U
Dibromochloromethane	ug/m3	0.3 U	0.3 U
Dichlorodifluoromethane	ug/m3	1.7	1.6
Ethanol	ug/m3	5.9	3.9
Ethyl Acetate	ug/m3	0.13 U	0.13 U
Ethylbenzene	ug/m3	0.17	0.15 U
Hexachlorobutadiene	ug/m3	0.37 U	0.37 U
Hexane	ug/m3	4.9 U	4.9 U
Isopropyl alcohol	ug/m3	0.18 J	0.53 J
m,p-Xylene	ug/m3	0.57	0.3 U
Methyl methacrylate	ug/m3	0.14 U	0.14 U
Methylene Chloride	ug/m3	0.28 J	0.42 J
Methyl-t-butyl ether	ug/m3	0.13 U	0.13 U
n-Heptane	ug/m3	0.14 U	0.14 U
o-Xylene	ug/m3	0.22	0.15 U
Propylene (Propene)	ug/m3	2.4 U	2.4 U
Styrene	ug/m3	0.15 U	0.15 U
Tetrachloroethene	ug/m3	0.68	0.24 U
Tetrahydrofuran	ug/m3	0.1 U	0.1 U
Toluene	ug/m3	0.68	0.26
trans-1,2-Dichloroethene	ug/m3	0.14 U	0.14 U
trans-1,3-Dichloropropene	ug/m3	0.16 U	0.16 U
Trichloroethene	ug/m3	0.34	0.19 U
Trichlorofluoromethane	ug/m3	1.2	1.5
Trichlorotrifluoroethane	ug/m3	1.1 U	1.3
Vinyl Acetate	ug/m3	2.5 U	2.5 U
Vinyl Chloride	ug/m3	0.09 U	0.09 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter

Prepared By: AKN, 2/28/2020

Checked By: HWC, 2/28/2020

Table 2a.
Summary of Analytical Results - Indoor Air Sampling for Small Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

		Area:	Eastern Small Retail Space		Small Center Retail Space		Western Small Retail Space	
		Location:	IA-5		IA-6		IA-7	
		Sample ID:	IA-5-090619	IA-5-021420	IA-6-090619	IA-6-021420	IA-7-090619	IA-7-021420
		Sample Date:	9/6/2019	2/14/2020	9/6/2019	2/14/2020	9/6/2019	2/14/2020
Analyte	**Units**	**CT IACTIND 2003**						
1,1,1,2-Tetrachloroethane	ug/m3	1.1	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
1,1,1-Trichloroethane	ug/m3	500	0.19 U	0.19 U	0.39	0.19 U	0.19 U	0.19 U
1,1,2,2-Tetrachloroethane	ug/m3	0.14	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1,2-Trichloroethane	ug/m3	12	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1-Dichloroethane	ug/m3	430	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,1-Dichloroethene	ug/m3	20	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,4-Trichlorobenzene	ug/m3	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
1,2,4-Trimethylbenzene	ug/m3	52	0.17 U	0.17 U	0.29	0.17 U	0.17 U	0.17 U
1,2-Dibromoethane (EDB)	ug/m3	0.038	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dichlorobenzene	ug/m3	410	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethane	ug/m3	0.31	0.14 U	0.14 U	0.14 U	0.14 U	**0.46**	0.14 U
1,2-Dichloropropane	ug/m3	0.42	0.16 U	0.16 U	0.16 U	0.16 U	**0.8**	0.16 U
1,3,5-Trimethylbenzene	ug/m3	52	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
1,3-Butadiene	ug/m3	NA	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U
1,3-Dichlorobenzene	ug/m3	410	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,4-Dichlorobenzene	ug/m3	24	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
2-Butanone	ug/m3	500	0.37 J	1.6 J	0.85 J	0.59 J	1.1 J	0.91 J
2-Hexanone	ug/m3	NA	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
4-Ethyltoluene	ug/m3	NA	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
4-Methyl-2-pentanone	ug/m3	200	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Acetone	ug/m3	500	6.1	12	11	7.7	18	26
Benzene	ug/m3	3.3	0.41	0.38	0.48	0.4	0.4	0.41
Benzyl chloride	ug/m3	NA	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromodichloromethane	ug/m3	0.46	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Bromoform	ug/m3	7.3	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Bromomethane	ug/m3	NA	1.4 U	0.27 U	1.4 U	0.27 U	1.4 U	0.27 U
Carbon Disulfide	ug/m3	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Carbon Tetrachloride	ug/m3	0.54	0.37	0.44	0.35	0.45	0.43	0.43
Chlorobenzene	ug/m3	200	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Chloroethane	ug/m3	500	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U
Chloroform	ug/m3	0.5	0.24	0.17 U	0.17 U	0.17 U	0.34	0.17 U
Chloromethane	ug/m3	80	0.97	1	1	1.1	0.14 U	1
cis-1,2-Dichloroethene	ug/m3	100	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
cis-1,3-Dichloropropene	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Cyclohexane	ug/m3	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Dibromochloromethane	ug/m3	NA	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Dichlorodifluoromethane	ug/m3	500	1.6	1.5	1.7	1.5	0.17 U	1.4
Ethanol	ug/m3	NA	24	24	30	41	200	190
Ethyl Acetate	ug/m3	NA	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Ethylbenzene	ug/m3	290	0.15 U	0.15 U	0.31	0.15 U	0.48	0.15 U
Hexachlorobutadiene	ug/m3	NA	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Hexane	ug/m3	NA	4.9 U	4.9 U	0.35 J	4.9 U	4.9 U	4.9 U
Isopropyl alcohol	ug/m3	NA	1.6 J	1.9 J	3.9	2 J	18	8.9
m,p-Xylene	ug/m3	NA	0.36	0.3 U	0.9	0.3 U	1.5	0.23 J
Methyl methacrylate	ug/m3	NA	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Methylene Chloride	ug/m3	17	0.38 J	0.54 J	0.39 J	0.56 J	0.4 J	0.56 J
Methyl-t-butyl ether	ug/m3	190	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
n-Heptane	ug/m3	NA	0.35	0.14 U	0.51	0.14 U	0.43	0.14 U
o-Xylene	ug/m3	NA	0.15 U	0.15 U	0.33	0.15 U	0.51	0.15 U
Propylene (Propene)	ug/m3	NA	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Styrene	ug/m3	290	0.15 U	0.15 U	0.15 U	0.15 U	0.33	0.15 U
Tetrachloroethene	ug/m3	5	0.82	0.24 U	2.6	0.24 U	1.6	1.9
Tetrahydrofuran	ug/m3	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Toluene	ug/m3	500	5.7	0.34	4.2	0.36	3.9	0.42
trans-1,2-Dichloroethene	ug/m3	200	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
trans-1,3-Dichloropropene	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Trichloroethene	ug/m3	1	0.45	0.19 U	**1.5**	0.19 U	0.43	0.19 U
Trichlorofluoromethane	ug/m3	500	1.2	1.2	1.2	1.2	1.2	1.2
Trichlorotrifluoroethane	ug/m3	NA	1.1 U	0.42 J	1.1 U	0.42 J	1.1 U	0.41 J
Vinyl Acetate	ug/m3	NA	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Vinyl Chloride	ug/m3	1.9	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter
Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Prepared By: AKN, 2/28/2020

Checked By: HWC, 2/28/2020

Table 2b.
Summary of Analytical Results - Extraction Wells
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:		Extraction Well - Eastern Small		Extraction Well - Center Small		Extraction Well - Western Small	
Location:		EW-5		EW-6		EW-7	
Sample ID:		EW-5-090619	EW-5-021420	EW-6-090619	EW-6-021420	EW-7-090619	EW-7-021420
Sample Date:		9/6/2019	2/14/2020	9/6/2019	2/14/2020	9/6/2019	2/14/2020
Analyte	**Units**						
1,1,1,2-Tetrachloroethane	ug/m3	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
1,1,1-Trichloroethane	ug/m3	40	11	0.55 U	0.55 U	8.3	9.4
1,1,2,2-Tetrachloroethane	ug/m3	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
1,1,2-Trichloroethane	ug/m3	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U
1,1-Dichloroethane	ug/m3	4.9	1.7	0.4 U	0.4 U	1.3	0.81
1,1-Dichloroethene	ug/m3	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2,4-Trichlorobenzene	ug/m3	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U
1,2,4-Trimethylbenzene	ug/m3	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
1,2-Dibromoethane (EDB)	ug/m3	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U
1,2-Dichlorobenzene	ug/m3	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
1,2-Dichloroethane	ug/m3	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	ug/m3	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
1,3,5-Trimethylbenzene	ug/m3	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
1,3-Butadiene	ug/m3	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,3-Dichlorobenzene	ug/m3	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
1,4-Dichlorobenzene	ug/m3	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
2-Butanone	ug/m3	7300	160	17	6.1 J	22	32
2-Hexanone	ug/m3	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
4-Ethyltoluene	ug/m3	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
4-Methyl-2-pentanone	ug/m3	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
Acetone	ug/m3	1700	66	38	26	17	26
Benzene	ug/m3	2.5	1.6	1.2	0.69	1.4	1
Benzyl chloride	ug/m3	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
Bromodichloromethane	ug/m3	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
Bromoform	ug/m3	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	ug/m3	3.9 U	0.78 U	3.9 U	0.78 U	3.9 U	0.78 U
Carbon Disulfide	ug/m3	210	44	3.1 U	3.1 U	47	25
Carbon Tetrachloride	ug/m3	6	0.63 U	0.36 J	0.63 U	0.63 U	0.63 U
Chlorobenzene	ug/m3	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
Chloroethane	ug/m3	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Chloroform	ug/m3	0.49 U	0.49 U	0.49 U	0.49 U	1.7	0.86
Chloromethane	ug/m3	0.41 U	0.41 U	1.1	0.41 U	0.41 U	0.41 U
cis-1,2-Dichloroethene	ug/m3	2.1	0.52	0.4 U	0.4 U	1.2	0.59
cis-1,3-Dichloropropene	ug/m3	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
Cyclohexane	ug/m3	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Dibromochloromethane	ug/m3	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
Dichlorodifluoromethane	ug/m3	0.49 U	1.8	2.2	1.7	0.49 U	1.7
Ethanol	ug/m3	18	30	44	8.8	63	140
Ethyl Acetate	ug/m3	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Ethylbenzene	ug/m3	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
Hexachlorobutadiene	ug/m3	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Hexane	ug/m3	14 U	14 U	14 U	14 U	14 U	14 U
Isopropyl alcohol	ug/m3	8.7 J	9.8 U	0.83 J	9.8 U	4.6 J	11
m,p-Xylene	ug/m3	0.87 U	0.87 U	0.76 J	0.87 U	0.87 U	0.55 J
Methyl methacrylate	ug/m3	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
Methylene Chloride	ug/m3	3.5 U	0.5 J	0.68 J	0.69 J	3.5 U	0.51 J
Methyl-t-butyl ether	ug/m3	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
n-Heptane	ug/m3	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
o-Xylene	ug/m3	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
Propylene (Propene)	ug/m3	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U
Styrene	ug/m3	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.71
Tetrachloroethene	ug/m3	1.3	0.68 U	0.73	0.73	93	45
Tetrahydrofuran	ug/m3	4900	880	6.1	4	2500	980
Toluene	ug/m3	1.9	0.45	2.1	0.38	1.5	0.61
trans-1,2-Dichloroethene	ug/m3	0.4 U	0.4 U	0.4 U	0.4 U	1.4	0.82
trans-1,3-Dichloropropene	ug/m3	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
Trichloroethene	ug/m3	130	30	0.37 J	3.8	150	81
Trichlorofluoromethane	ug/m3	3.1	1.8 J	1.3 J	1.2 J	140	170
Trichlorotrifluoroethane	ug/m3	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U
Vinyl Acetate	ug/m3	7 U	7 U	7 U	7 U	7 U	7 U
Vinyl Chloride	ug/m3	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter

Prepared By: AKN, 2/28/2020
Checked By: HWC, 2/28/2020

Table 3
Vacuum Monitoring Results - Small Retail Spaces
Former Gorham Manufacturing Site
Providence, Rhode Island

	Pressure Differential (inches of water)		
Date	VMW-5	VMW-6	VMW-7
2/3/2009	-0.25	-0.17	0.00
2/18/2009	-0.212	-0.155	-0.011
2/26/2009	-0.230	-0.120	-0.025
3/6/2009	-0.200	-0.086	-0.012
4/14/2009	-0.108	-0.054	-0.014
5/15/2009	-0.081	-0.073	-0.016
6/11/2009	-0.090	-0.076	-0.098
9/17/2009	-0.110	-0.102	+0.074
12/29/2009**	-0.011	-0.010	-0.061
3/26/2010	-0.245	-0.142	-0.018
7/1/2010	-0.542	-0.114	-0.176
9/16/2010	-0.247	-0.874	-0.013
12/7/2010	-0.044	-0.028	+0.022
2/17/2011	-0.212	-0.599	-0.337
6/2/2011	-0.277	-0.236	-0.138**
9/15/2011	-0.234	-0.212	-0.010
12/8/2011	-0.609	-0.115	-0.009
3/8/2012	-0.003	-0.246	-0.114
6/14/2012	-0.237	-0.103	-0.132
9/13/2012	-0.243	-0.119	-0.210
1/3/2013	-0.150	-0.060	-0.052
3/15/2013	-0.228	-0.354	-0.002
6/7/2013	-0.226	-0.123	-0.011
9/6/2013	-0.232	-0.829	-0.007
10/3/2013	NM	NM	-0.006
12/13/2013	-0.215	-0.002	-0.002
3/7/2014	-0.177	-0.002	-0.002
6/13/2014	-0.185	-0.010	-0.011
9/12/2014	-0.258	-0.256	-0.014
12/19/2014	-0.222	-0.100	-0.001
3/27/2015	-0.301	-0.097	-0.036
6/11/2015	-0.23***	-0.1***	NM***
9/16/2015	-0.246	-0.050	-0.013
12/18/2015	-0.378	-0.177	-0.005
2/18/2016	-0.228	-0.987	-0.009
8/5/2016	-0.243	-0.095	-0.088
2/13/2017	-0.0195	-0.08	-0.107
9/6/2017	-0.242	-0.045	-0.003
2/28/2018	-0.227	-0.100	-0.010
9/12/2018	-0.237	-0.058	-0.006
2/8/2019	-0.129	-0.078	-0.127
9/6/2019	-0.217	-0.107	-0.002
2/14/2020	-0.195	-0.074	-0.011

** ASD system offline.

NM = Not Measured

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

Prepared by/Date: MAM 2/17/2020
Checked by/Date: HWC 3/12/20

Table 4a.
Summary of Analytical Results - Indoor Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

		Area:	Large Retail Space							
		Location:	IA-1		IA-2		IA-3		IA-4	
		Sample ID:	IA-1-090619	IA-1-021420	IA-2-090619	IA-2-021420	IA-3-090619	IA-3-021420	IA-4-090619	IA-4-021420
		Sample Date:	9/6/2019	2/14/2020	9/6/2019	2/14/2020	9/6/2019	2/14/2020	9/6/2019	2/14/2020
Analyte	**Units**	**CT IACTIND 2003**								
1,1,1,2-Tetrachloroethane	ug/m3	1.1	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.5 U	0.44 U
1,1,1-Trichloroethane	ug/m3	500	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.22 U	0.19 U
1,1,2,2-Tetrachloroethane	ug/m3	0.14	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.27 U	0.24 U
1,1,2-Trichloroethane	ug/m3	12	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.22 U	0.19 U
1,1-Dichloroethane	ug/m3	430	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.16 U	0.14 U
1,1-Dichloroethene	ug/m3	20	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.16 U	0.14 U
1,2,4-Trichlorobenzene	ug/m3	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.3 U	0.26 U
1,2,4-Trimethylbenzene	ug/m3	52	0.29	0.17 U	0.31	0.17 U	0.39	0.17 U	0.27	0.17 U
1,2-Dibromoethane (EDB)	ug/m3	0.038	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.31 U	0.27 U
1,2-Dichlorobenzene	ug/m3	410	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.24 U	0.21 U
1,2-Dichloroethane	ug/m3	0.31	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.16 U	0.14 U
1,2-Dichloropropane	ug/m3	0.42	0.16 U	0.16 U	0.16 U	0.16 U	**1.3**	0.16 U	0.18 U	0.16 U
1,3,5-Trimethylbenzene	ug/m3	52	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.2 U	0.17 U
1,3-Butadiene	ug/m3	NA	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.088 U	0.078 U
1,3-Dichlorobenzene	ug/m3	410	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.24 U	0.21 U
1,4-Dichlorobenzene	ug/m3	24	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.24 U	0.21 U
2-Butanone	ug/m3	500	0.73 J	1.1 J	0.68 J	1.3 J	1.2 J	0.71 J	0.52 J	1.6 J
2-Hexanone	ug/m3	NA	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.16 U	0.14 U
4-Ethyltoluene	ug/m3	NA	0.17 U	0.17 U	0.17 U	0.17 U	0.4	0.17 U	0.2 U	0.17 U
4-Methyl-2-pentanone	ug/m3	200	0.14 U	0.14 U	0.47	0.14 U	0.87	0.14 U	0.16 U	0.14 U
Acetone	ug/m3	500	6.7	7.8	6.4	7.9	8.5	6.7	5.9	9.3
Benzene	ug/m3	3.3	0.41	0.36	0.39	0.36	0.48	0.35	0.43	0.37
Benzyl chloride	ug/m3	NA	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.21 U	0.18 U
Bromodichloromethane	ug/m3	0.46	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.27 U	0.24 U
Bromoform	ug/m3	7.3	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.41 U	0.36 U
Bromomethane	ug/m3	NA	1.4 U	0.27 U	1.4 U	0.27 U	1.4 U	0.27 U	1.6 U	0.27 U
Carbon Disulfide	ug/m3	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U
Carbon Tetrachloride	ug/m3	0.54	0.36	0.44	0.37	0.42	0.37	0.42	0.37	0.45
Chlorobenzene	ug/m3	200	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.18 U	0.16 U
Chloroethane	ug/m3	500	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.11 U	0.093 U
Chloroform	ug/m3	0.5	0.18	0.17 U	0.19	0.17 U	0.17 U	0.17 U	0.2 U	0.17 U
Chloromethane	ug/m3	80	0.14 U	1.3	0.9	1	1	1.1	1.2	1
cis-1,2-Dichloroethene	ug/m3	100	0.14 U	0.14 U	0.14 U	0.19	0.14 U	0.14 U	0.16 U	0.41
cis-1,3-Dichloropropene	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.18 U	0.16 U
Cyclohexane	ug/m3	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.14 U	0.12 U
Dibromochloromethane	ug/m3	NA	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.34 U	0.3 U
Dichlorodifluoromethane	ug/m3	500	0.17 U	1.5	1.6	1.4	0.17 U	1.5	1.5	1.4
Ethanol	ug/m3	NA	16	5.1	22	5.6	24	4.1	22	6.7
Ethyl Acetate	ug/m3	NA	0.13 U	0.13 U	0.13 U	0.13 U	3.4	0.13 U	0.14 U	0.13 U
Ethylbenzene	ug/m3	290	0.28	0.15 U	0.39	0.15 U	0.66	0.15 U	0.39	0.15 U
Hexachlorobutadiene	ug/m3	NA	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.43 U	0.37 U
Hexane	ug/m3	NA	4.9 U	4.9 U	4.9 U	4.9 U	0.42 J	4.9 U	0.28 J	4.9 U
Isopropyl alcohol	ug/m3	NA	1.4 J	3.4 U	0.8 J	3.4 U	4.6	3.4 U	0.87 J	3.4 U
m,p-Xylene	ug/m3	NA	0.99	0.3 U	1.3	0.3 U	2.3	0.3 U	1.2	0.3 U
Methyl methacrylate	ug/m3	NA	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.16 U	0.14 U
Methylene Chloride	ug/m3	17	0.35 J	0.68 J	0.39 J	0.64 J	0.54 J	0.5 J	0.43 J	0.58 J
Methyl-t-butyl ether	ug/m3	190	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.14 U	0.13 U
n-Heptane	ug/m3	NA	0.31	0.14 U	0.32	0.14 U	0.63	0.14 U	0.56	0.14 U
o-Xylene	ug/m3	NA	0.34	0.15 U	0.46	0.15 U	0.74	0.15 U	0.44	0.15 U
Propylene (Propene)	ug/m3	NA	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.8 U	2.4 U
Styrene	ug/m3	290	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.17 U	0.15 U
Tetrachloroethene	ug/m3	5	0.16 J	0.24 U	0.24 U	0.59	0.21 J	0.24 U	0.27 U	1.4
Tetrahydrofuran	ug/m3	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12 U	0.1 U
Toluene	ug/m3	500	3.2	0.28	1.3	0.3	7.1	0.26	1.4	0.3
trans-1,2-Dichloroethene	ug/m3	200	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.16 U	0.14 U
trans-1,3-Dichloropropene	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.18 U	0.16 U
Trichloroethene	ug/m3	1	0.12 J	0.19 U	0.19 U	0.19 U	0.2	0.19 U	0.21 U	0.42
Trichlorofluoromethane	ug/m3	500	1.2	1.2	1.1	1.2	1.2	1.2	1.2	1.2
Trichlorotrifluoroethane	ug/m3	NA	1.1 U	0.43 J	1.1 U	0.42 J	1.1 U	0.41 J	0.42 J	0.41 J
Vinyl Acetate	ug/m3	NA	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.8 U	2.5 U
Vinyl Chloride	ug/m3	1.9	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.1 U	0.09 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter
Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Prepared By: AKN, 2/28/2020
Checked By: HWC, 2/28/2020

Table 4b.
Summary of Analytical Results - Extraction Well and Post-Treatment Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:		Extraction Well - Large Retail		Post Treatment - Large Retail	
Location:		EW-Combined		PostCarbon	
Sample ID:		EW-Combined-090619	EW-Combined-021420	Post Carbon-090619	Post Carbon-021420
Sample Date:		9/6/2019	2/14/2020	9/6/2019	2/14/2020
Analyte	**Units**				
1,1,1,2-Tetrachloroethane	ug/m3	1.2 U	1.2 U	1.2 U	1.2 U
1,1,1-Trichloroethane	ug/m3	670	200	2.3	2.4
1,1,2,2-Tetrachloroethane	ug/m3	0.69 U	0.69 U	0.69 U	0.69 U
1,1,2-Trichloroethane	ug/m3	0.55 U	0.55 U	0.55 U	0.55 U
1,1-Dichloroethane	ug/m3	45	19	2.8	17
1,1-Dichloroethene	ug/m3	24	10	9.8	9.1
1,2,4-Trichlorobenzene	ug/m3	0.74 U	0.74 U	0.74 U	0.74 U
1,2,4-Trimethylbenzene	ug/m3	0.49 U	0.49 U	8.1	0.49 U
1,2-Dibromoethane (EDB)	ug/m3	0.77 U	0.77 U	0.77 U	0.77 U
1,2-Dichlorobenzene	ug/m3	0.6 U	0.6 U	0.6 U	0.6 U
1,2-Dichloroethane	ug/m3	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	ug/m3	0.46 U	0.46 U	110	0.46 U
1,3,5-Trimethylbenzene	ug/m3	0.49 U	0.49 U	2.9	0.49 U
1,3-Butadiene	ug/m3	0.22 U	0.22 U	0.22 U	0.22 U
1,3-Dichlorobenzene	ug/m3	0.6 U	0.6 U	0.6 U	0.6 U
1,4-Dichlorobenzene	ug/m3	0.6 U	0.6 U	0.6 U	0.6 U
2-Butanone	ug/m3	1.6 J	2 J	27	1.9 J
2-Hexanone	ug/m3	0.41 U	0.41 U	0.41 U	0.41 U
4-Ethyltoluene	ug/m3	0.49 U	0.49 U	9.5	0.49 U
4-Methyl-2-pentanone	ug/m3	0.41 U	0.41 U	28	0.41 U
Acetone	ug/m3	4.9 J	12	71	10
Benzene	ug/m3	0.4	0.33	1.6	0.32 U
Benzyl chloride	ug/m3	0.52 U	0.52 U	0.52 U	0.52 U
Bromodichloromethane	ug/m3	0.67 U	0.67 U	0.67 U	0.67 U
Bromoform	ug/m3	1 U	1 U	1 U	1 U
Bromomethane	ug/m3	3.9 U	0.78 U	3.9 U	0.78 U
Carbon Disulfide	ug/m3	3.1 U	3.1 U	3.1 U	3.1 U
Carbon Tetrachloride	ug/m3	89	0.63 U	0.63 U	0.63 U
Chlorobenzene	ug/m3	0.46 U	0.46 U	0.46 U	0.46 U
Chloroethane	ug/m3	0.26 U	0.26 U	0.26 U	0.26 U
Chloroform	ug/m3	3.2	1	0.49 U	0.49 U
Chloromethane	ug/m3	0.41 U	0.41 U	0.41 U	0.41 U
cis-1,2-Dichloroethene	ug/m3	27	6.4	2.3	9.4
cis-1,3-Dichloropropene	ug/m3	0.45 U	0.45 U	0.45 U	0.45 U
Cyclohexane	ug/m3	0.34 U	0.34 U	0.34 U	0.34 U
Dibromochloromethane	ug/m3	0.85 U	0.85 U	0.85 U	0.85 U
Dichlorodifluoromethane	ug/m3	0.49 U	1.7	0.49 U	1.6
Ethanol	ug/m3	25	14	360	6.8 J
Ethyl Acetate	ug/m3	0.36 U	0.36 U	180	0.36 U
Ethylbenzene	ug/m3	0.43 U	0.43 U	33	0.43 U
Hexachlorobutadiene	ug/m3	1.1 U	1.1 U	1.1 U	1.1 U
Hexane	ug/m3	14 U	14 U	14 U	14 U
Isopropyl alcohol	ug/m3	9.8 U	2.3 J	230	1.5 J
m,p-Xylene	ug/m3	1	0.87 U	120	0.87 U
Methyl methacrylate	ug/m3	0.41 U	0.41 U	0.41 U	0.41 U
Methylene Chloride	ug/m3	3.5 U	3.5 U	10	0.75 J
Methyl-t-butyl ether	ug/m3	0.36 U	0.36 U	0.36 U	0.36 U
n-Heptane	ug/m3	0.41 U	0.41 U	15	0.41 U
o-Xylene	ug/m3	0.43 U	0.43 U	36	0.43 U
Propylene (Propene)	ug/m3	6.9 U	6.9 U	6.9 U	6.9 U
Styrene	ug/m3	0.43 U	0.43 U	10	0.43 U
Tetrachloroethene	ug/m3	110	20	7.7	7
Tetrahydrofuran	ug/m3	3.2	0.29 U	0.29 U	0.29 U
Toluene	ug/m3	1.8	0.57	340	0.38 U
trans-1,2-Dichloroethene	ug/m3	0.55	0.4 U	0.78	0.4 U
trans-1,3-Dichloropropene	ug/m3	0.45 U	0.45 U	0.45 U	0.45 U
Trichloroethene	ug/m3	520	100	11	5.9
Trichlorofluoromethane	ug/m3	230	51	44	110
Trichlorotrifluoroethane	ug/m3	3.1 U	1 J	3.1 U	3.1 U
Vinyl Acetate	ug/m3	7 U	7 U	7 U	7 U
Vinyl Chloride	ug/m3	0.26 U	0.26 U	0.26 U	0.26 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter

Prepared By: AKN, 2/28/2020

Checked By: HWC, 2/28/2020

Table 5
Vacuum Monitoring Results - Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

	Pressure Differential (inches of water)			
Date	VMW-1	VMW-2	VMW-3	VMW-4
2/3/2009	-0.20	-0.62	-0.15	-0.12
2/18/2009	-0.509	-0.738	-0.650	-0.253
2/26/2009	-0.511	-0.710	-0.665	-0.273
3/6/2009	-0.507	-0.610	-0.715	-0.251
3/6/2009*	-0.120	-0.195	-0.230	-0.028
3/31/2009	-0.148	-0.221	-0.244	-0.072
4/14/2009	-0.140	-0.210	-0.215	-0.081
5/15/2009	-0.133	-0.193	-0.208	-0.087
9/17/2009	-0.132	-0.172	-0.209	-0.087
9/24/2009	-0.146	-0.189	-0.254	-0.094
10/1/2009	-0.181	-0.232	-0.233	-0.097
10/8/2009	-0.197	-0.212	-0.255	-0.087
12/29/2009**	-0.021	-0.020	-0.160	-0.023
1/28/2010	-0.947	-0.642	-0.709	-0.237
2/5/2010	-0.497	-0.714	-0.510	-0.258
2/12/2010	-0.509	-0.706	-0.537	-0.261
2/19/2010	-0.526	-0.733	-0.667	-0.242
3/26/2010	-0.636	-0.860	-0.671	-0.331
4/30/2010	-0.519	-0.713	-0.378	-0.287
5/28/2010	-0.546	-0.727	+1.371	-0.279
7/1/2010	-0.505	-0.678	+1.568	-0.272
9/16/2010	-0.496	-0.654	+0.980	-0.272
12/7/2010	-0.126	-0.202	-0.155	-0.052
2/17/2011	-0.491	-0.683	-0.737	-0.263
6/2/2011	-0.561	-0.767	-0.393	-0.290
9/15/2011	-0.517	-0.710	+1.071	-0.260
12/8/2011	-0.609	-0.826	+1.502	-0.313
3/8/2012	-0.422	-0.680	+0.329	-0.288
6/14/2012	-0.372	-0.767	+2.389	-0.280
9/13/2012	-0.543	-1.021	-0.665	-0.283
1/3/2013	-0.495	-0.628	-1.141	-0.674
3/15/2013	-0.539	-0.636	-0.754	-0.254
6/7/2013	-0.121	-0.681	-0.787	-0.223
9/6/2013	-0.421	-0.743	-0.766	-0.265
12/13/2013	-0.435	-0.580	-0.031	-0.190
3/7/2014	-0.311	-0.541	-0.741	-0.157
6/13/2014	-0.538	-0.627	-0.010	-0.058
9/12/2014	-0.549	-0.528	-0.295	-0.002
12/19/2014	-0.492	-0.427	-0.002	-0.143
3/27/2015	-0.433	-0.655	-0.011	-0.108
6/11/2015	-0.49***	-0.66***	-0.5***	-0.15***
9/16/2015	-0.535	-0.409	-0.611	-0.123
12/18/2015	-0.436	-0.495	-0.692	-0.181
2/20/2016	-0.49	-0.592	-0.804	-0.0225
8/5/2016	-0.542	-0.503	-0.746	-0.165
2/13/2017	-0.39	-0.602	-0.494	-0.206
9/6/2017	-0.593	-0.649	-0.031	-0.290
2/28/2018	-0.489	-0.677	-0.779	-0.241
9/12/2018	-0.512	-0.723	-0.477	-0.071
2/8/2019	-0.274	-0.633	-0.677	-0.229
4/11/2019	NM	-0.681	NM	NM
9/12/2019	-0.525	-0.68	-0.131	-0.267
2/14/2020	-0.564	-0.728	-0.003	-0.271

* vacuum reduced at extraction wells

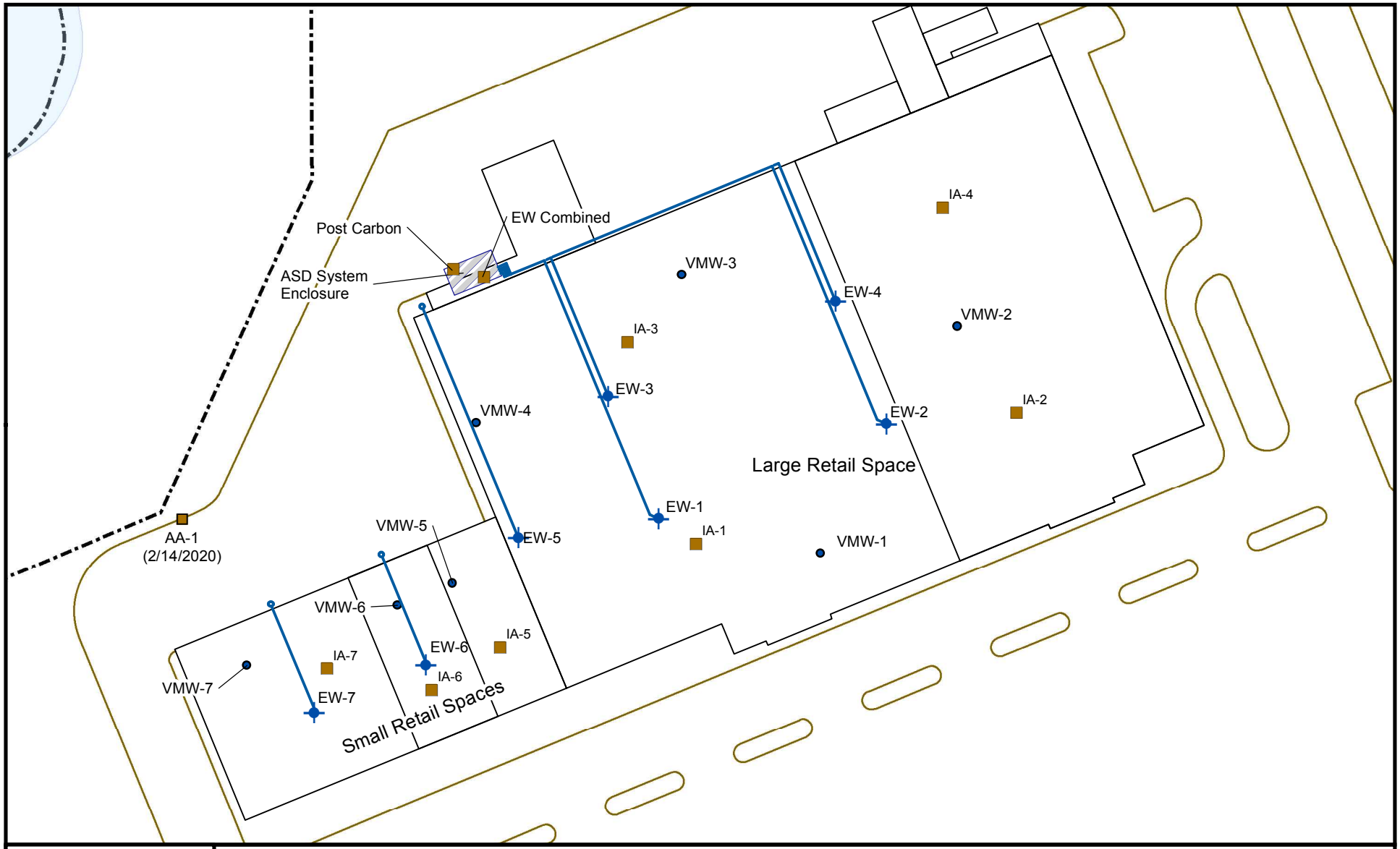
** ASD system offline

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

NM - not measured

Prepared by/Date: MAM 2/17/2020
Checked by/Date: HWC 3/12/20

Figures



All locations are approximate.

N

0 30 60 Feet

Prepared/Date: EFG 03/04/20 | Checked/Date: MAM 03/04/20

Legend

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

Figure 1
Vapor Mitigation
Sample Locations

Former Gorham Manufacturing Facility
333 Adelaide Avenue
Providence, Rhode Island

Document: P:\old_Wakefield_Data\projects\TEXTRON\GORHAM\GIS\MapDocuments\StopShopVI.mxd

Appendix A

Laboratory Report

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

February 26, 2020

Reviewed 03/02/2020
Elizabeth Penta
Wood

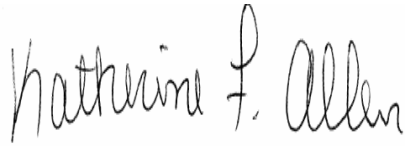
Herb Colby
WOOD PLC - Chelmsford
271 Mill Road, 3rd Floor
Chelmsford, MA 01824

Project Location: Providence, RI
Client Job Number:
Project Number: 3651200101
Laboratory Work Order Number: 20B0726

Enclosed are results of analyses for samples received by the laboratory on February 17, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Raymond J. McCarthy
Project Manager



QA Officer
Katherine Allen

Laboratory Manager
Daren Damboragian

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

WOOD PLC - Chelmsford
271 Mill Road, 3rd Floor
Chelmsford, MA 01824
ATTN: Herb Colby

REPORT DATE: 2/26/2020

PURCHASE ORDER NUMBER: C012206368

PROJECT NUMBER: 3651200101

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20B0726

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-1-021420	20B0726-01	Indoor air		EPA TO-15	
IA-2-021420	20B0726-02	Indoor air		EPA TO-15	
IA-3-021420	20B0726-03	Indoor air		EPA TO-15	
IA-4-021420	20B0726-04	Indoor air		EPA TO-15	
IA-5-021420	20B0726-05	Indoor air		EPA TO-15	
IA-6-021420	20B0726-06	Indoor air		EPA TO-15	
IA-7-021420	20B0726-07	Indoor air		EPA TO-15	
AA-1-021420	20B0726-08	Ambient Air		EPA TO-15	
EW-5-021420	20B0726-09	Sub Slab		EPA TO-15	
EW-6-021420	20B0726-10	Sub Slab		EPA TO-15	
EW-7-021420	20B0726-11	Sub Slab		EPA TO-15	
EW-Combined-021420	20B0726-12	Sub Slab		EPA TO-15	
Post Carbon-021420	20B0726-13	Air		EPA TO-15	

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

CASE NARRATIVE SUMMARY

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

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.

Lisa A. Worthington
Technical Representative

con-test® ANALYTICAL LABORATORY

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

ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: IA-1-021420
Sample ID: 20B0726-01
Sample Matrix: Indoor air
Sampled: 2/14/2020 08:20

Sample Description/Location:
Sub Description/Location:
Canister ID: 1072
Canister Size: 6 liter
Flow Controller ID: 4202
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -5
Receipt Vacuum(in Hg): -4.6
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	Results	RL	MDL	Flag/Qual	Results	RL	MDL	Dilution	Analyzed	Analyst
Acetone	3.3	1.4	0.49		7.8	3.3	1.2	0.702	2/24/20 16:23	BRF
Benzene	0.11	0.035	0.014		0.36	0.11	0.046	0.702	2/24/20 16:23	BRF
Benzyl chloride	ND	0.035	0.0091		ND	0.18	0.047	0.702	2/24/20 16:23	BRF
Bromodichloromethane	ND	0.035	0.013		ND	0.24	0.087	0.702	2/24/20 16:23	BRF
Bromoform	ND	0.035	0.016		ND	0.36	0.16	0.702	2/24/20 16:23	BRF
Bromomethane	ND	0.070	0.024		ND	0.27	0.094	0.702	2/24/20 16:23	BRF
1,3-Butadiene	ND	0.035	0.026		ND	0.078	0.057	0.702	2/24/20 16:23	BRF
2-Butanone (MEK)	0.37	1.4	0.066	J	1.1	4.1	0.19	0.702	2/24/20 16:23	BRF
Carbon Disulfide	ND	0.35	0.024		ND	1.1	0.075	0.702	2/24/20 16:23	BRF
Carbon Tetrachloride	0.069	0.035	0.011		0.44	0.22	0.072	0.702	2/24/20 16:23	BRF
Chlorobenzene	ND	0.035	0.017		ND	0.16	0.079	0.702	2/24/20 16:23	BRF
Chloroethane	ND	0.035	0.034		ND	0.093	0.091	0.702	2/24/20 16:23	BRF
Chloroform	ND	0.035	0.013		ND	0.17	0.064	0.702	2/24/20 16:23	BRF
Chloromethane	0.63	0.070	0.024		1.3	0.14	0.049	0.702	2/24/20 16:23	BRF
Cyclohexane	ND	0.035	0.025		ND	0.12	0.086	0.702	2/24/20 16:23	BRF
Dibromochloromethane	ND	0.035	0.012		ND	0.30	0.099	0.702	2/24/20 16:23	BRF
1,2-Dibromoethane (EDB)	ND	0.035	0.014		ND	0.27	0.11	0.702	2/24/20 16:23	BRF
1,2-Dichlorobenzene	ND	0.035	0.017		ND	0.21	0.10	0.702	2/24/20 16:23	BRF
1,3-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.11	0.702	2/24/20 16:23	BRF
1,4-Dichlorobenzene	ND	0.035	0.021		ND	0.21	0.13	0.702	2/24/20 16:23	BRF
Dichlorodifluoromethane (Freon 12)	0.30	0.035	0.015		1.5	0.17	0.075	0.702	2/24/20 16:23	BRF
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.043	0.702	2/24/20 16:23	BRF
1,2-Dichloroethane	ND	0.035	0.013		ND	0.14	0.054	0.702	2/24/20 16:23	BRF
1,1-Dichloroethylene	ND	0.035	0.019		ND	0.14	0.076	0.702	2/24/20 16:23	BRF
cis-1,2-Dichloroethylene	ND	0.035	0.014		ND	0.14	0.057	0.702	2/24/20 16:23	BRF
trans-1,2-Dichloroethylene	ND	0.035	0.014		ND	0.14	0.056	0.702	2/24/20 16:23	BRF
1,2-Dichloropropane	ND	0.035	0.012		ND	0.16	0.057	0.702	2/24/20 16:23	BRF
cis-1,3-Dichloropropene	ND	0.035	0.012		ND	0.16	0.056	0.702	2/24/20 16:23	BRF
trans-1,3-Dichloropropene	ND	0.035	0.013		ND	0.16	0.058	0.702	2/24/20 16:23	BRF
Ethanol	2.7	1.4	0.63		5.1	2.6	1.2	0.702	2/24/20 16:23	BRF
Ethyl Acetate	ND	0.035	0.026		ND	0.13	0.094	0.702	2/24/20 16:23	BRF
Ethylbenzene	ND	0.035	0.020		ND	0.15	0.088	0.702	2/24/20 16:23	BRF
4-Ethyltoluene	ND	0.035	0.021		ND	0.17	0.11	0.702	2/24/20 16:23	BRF
Heptane	ND	0.035	0.021		ND	0.14	0.085	0.702	2/24/20 16:23	BRF
Hexachlorobutadiene	ND	0.035	0.016		ND	0.37	0.17	0.702	2/24/20 16:23	BRF
Hexane	ND	1.4	0.062		ND	4.9	0.22	0.702	2/24/20 16:23	BRF
2-Hexanone (MBK)	ND	0.035	0.021		ND	0.14	0.085	0.702	2/24/20 16:23	BRF
Isopropanol	ND	1.4	0.064		ND	3.4	0.16	0.702	2/24/20 16:23	BRF
Methyl tert-Butyl Ether (MTBE)	ND	0.035	0.018		ND	0.13	0.063	0.702	2/24/20 16:23	BRF
Methylene Chloride	0.20	0.35	0.043	J	0.68	1.2	0.15	0.702	2/24/20 16:23	BRF
Methyl methacrylate	ND	0.035	0.020		ND	0.14	0.082	0.702	2/24/20 16:23	BRF
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.018		ND	0.14	0.075	0.702	2/24/20 16:23	BRF
Propene	ND	1.4	0.065		ND	2.4	0.11	0.702	2/24/20 16:23	BRF
Styrene	ND	0.035	0.022		ND	0.15	0.092	0.702	2/24/20 16:23	BRF
1,1,1,2-Tetrachloroethane	ND	0.064	0.023		ND	0.44	0.16	0.702	2/24/20 16:23	BRF
1,1,2,2-Tetrachloroethane	ND	0.035	0.016		ND	0.24	0.11	0.702	2/24/20 16:23	BRF
Tetrachloroethylene	ND	0.035	0.020		ND	0.24	0.13	0.702	2/24/20 16:23	BRF

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: IA-1-021420
Sample ID: 20B0726-01
Sample Matrix: Indoor air
Sampled: 2/14/2020 08:20

Sample Description/Location:
Sub Description/Location:
Canister ID: 1072
Canister Size: 6 liter
Flow Controller ID: 4202
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -5
Receipt Vacuum(in Hg): -4.6
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrahydrofuran	ND	0.035	0.035		ND	0.10	0.10	0.702	2/24/20 16:23	BRF
Toluene	0.074	0.035	0.018		0.28	0.13	0.068	0.702	2/24/20 16:23	BRF
1,2,4-Trichlorobenzene	ND	0.035	0.024		ND	0.26	0.18	0.702	2/24/20 16:23	BRF
1,1,1-Trichloroethane	ND	0.035	0.013		ND	0.19	0.072	0.702	2/24/20 16:23	BRF
1,1,2-Trichloroethane	ND	0.035	0.014		ND	0.19	0.079	0.702	2/24/20 16:23	BRF
Trichloroethylene	ND	0.035	0.014		ND	0.19	0.076	0.702	2/24/20 16:23	BRF
Trichlorofluoromethane (Freon 11)	0.22	0.14	0.027		1.2	0.79	0.15	0.702	2/24/20 16:23	BRF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.056	0.14	0.026	J	0.43	1.1	0.20	0.702	2/24/20 16:23	BRF
1,2,4-Trimethylbenzene	ND	0.035	0.022		ND	0.17	0.11	0.702	2/24/20 16:23	BRF
1,3,5-Trimethylbenzene	ND	0.035	0.022		ND	0.17	0.11	0.702	2/24/20 16:23	BRF
Vinyl Acetate	ND	0.70	0.022		ND	2.5	0.077	0.702	2/24/20 16:23	BRF
Vinyl Chloride	ND	0.035	0.022		ND	0.090	0.057	0.702	2/24/20 16:23	BRF
m&p-Xylene	ND	0.070	0.040		ND	0.30	0.18	0.702	2/24/20 16:23	BRF
o-Xylene	ND	0.035	0.022		ND	0.15	0.095	0.702	2/24/20 16:23	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	91.9	70-130	2/24/20 16:23
4-Bromofluorobenzene (2)	75.2	70-130	2/24/20 16:23

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: IA-2-021420
Sample ID: 20B0726-02
Sample Matrix: Indoor air
Sampled: 2/14/2020 08:40

Sample Description/Location:
Sub Description/Location:
Canister ID: 2025
Canister Size: 6 liter
Flow Controller ID: 4073
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -5.9
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	Results	RL	MDL	Flag/Qual	Results	RL	MDL	Dilution	Analyzed	Analyst
Acetone	3.3	1.4	0.49		7.9	3.3	1.2	0.702	2/24/20 17:10	BRF
Benzene	0.11	0.035	0.014		0.36	0.11	0.046	0.702	2/24/20 17:10	BRF
Benzyl chloride	ND	0.035	0.0091		ND	0.18	0.047	0.702	2/24/20 17:10	BRF
Bromodichloromethane	ND	0.035	0.013		ND	0.24	0.087	0.702	2/24/20 17:10	BRF
Bromoform	ND	0.035	0.016		ND	0.36	0.16	0.702	2/24/20 17:10	BRF
Bromomethane	ND	0.070	0.024		ND	0.27	0.094	0.702	2/24/20 17:10	BRF
1,3-Butadiene	ND	0.035	0.026		ND	0.078	0.057	0.702	2/24/20 17:10	BRF
2-Butanone (MEK)	0.44	1.4	0.066	J	1.3	4.1	0.19	0.702	2/24/20 17:10	BRF
Carbon Disulfide	ND	0.35	0.024		ND	1.1	0.075	0.702	2/24/20 17:10	BRF
Carbon Tetrachloride	0.067	0.035	0.011		0.42	0.22	0.072	0.702	2/24/20 17:10	BRF
Chlorobenzene	ND	0.035	0.017		ND	0.16	0.079	0.702	2/24/20 17:10	BRF
Chloroethane	ND	0.035	0.034		ND	0.093	0.091	0.702	2/24/20 17:10	BRF
Chloroform	ND	0.035	0.013		ND	0.17	0.064	0.702	2/24/20 17:10	BRF
Chloromethane	0.50	0.070	0.024		1.0	0.14	0.049	0.702	2/24/20 17:10	BRF
Cyclohexane	ND	0.035	0.025		ND	0.12	0.086	0.702	2/24/20 17:10	BRF
Dibromochloromethane	ND	0.035	0.012		ND	0.30	0.099	0.702	2/24/20 17:10	BRF
1,2-Dibromoethane (EDB)	ND	0.035	0.014		ND	0.27	0.11	0.702	2/24/20 17:10	BRF
1,2-Dichlorobenzene	ND	0.035	0.017		ND	0.21	0.10	0.702	2/24/20 17:10	BRF
1,3-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.11	0.702	2/24/20 17:10	BRF
1,4-Dichlorobenzene	ND	0.035	0.021		ND	0.21	0.13	0.702	2/24/20 17:10	BRF
Dichlorodifluoromethane (Freon 12)	0.29	0.035	0.015		1.4	0.17	0.075	0.702	2/24/20 17:10	BRF
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.043	0.702	2/24/20 17:10	BRF
1,2-Dichloroethane	ND	0.035	0.013		ND	0.14	0.054	0.702	2/24/20 17:10	BRF
1,1-Dichloroethylene	ND	0.035	0.019		ND	0.14	0.076	0.702	2/24/20 17:10	BRF
cis-1,2-Dichloroethylene	0.047	0.035	0.014		0.19	0.14	0.057	0.702	2/24/20 17:10	BRF
trans-1,2-Dichloroethylene	ND	0.035	0.014		ND	0.14	0.056	0.702	2/24/20 17:10	BRF
1,2-Dichloropropane	ND	0.035	0.012		ND	0.16	0.057	0.702	2/24/20 17:10	BRF
cis-1,3-Dichloropropene	ND	0.035	0.012		ND	0.16	0.056	0.702	2/24/20 17:10	BRF
trans-1,3-Dichloropropene	ND	0.035	0.013		ND	0.16	0.058	0.702	2/24/20 17:10	BRF
Ethanol	3.0	1.4	0.63		5.6	2.6	1.2	0.702	2/24/20 17:10	BRF
Ethyl Acetate	ND	0.035	0.026		ND	0.13	0.094	0.702	2/24/20 17:10	BRF
Ethylbenzene	ND	0.035	0.020		ND	0.15	0.088	0.702	2/24/20 17:10	BRF
4-Ethyltoluene	ND	0.035	0.021		ND	0.17	0.11	0.702	2/24/20 17:10	BRF
Heptane	ND	0.035	0.021		ND	0.14	0.085	0.702	2/24/20 17:10	BRF
Hexachlorobutadiene	ND	0.035	0.016		ND	0.37	0.17	0.702	2/24/20 17:10	BRF
Hexane	ND	1.4	0.062		ND	4.9	0.22	0.702	2/24/20 17:10	BRF
2-Hexanone (MBK)	ND	0.035	0.021		ND	0.14	0.085	0.702	2/24/20 17:10	BRF
Isopropanol	ND	1.4	0.064		ND	3.4	0.16	0.702	2/24/20 17:10	BRF
Methyl tert-Butyl Ether (MTBE)	ND	0.035	0.018		ND	0.13	0.063	0.702	2/24/20 17:10	BRF
Methylene Chloride	0.19	0.35	0.043	J	0.64	1.2	0.15	0.702	2/24/20 17:10	BRF
Methyl methacrylate	ND	0.035	0.020		ND	0.14	0.082	0.702	2/24/20 17:10	BRF
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.018		ND	0.14	0.075	0.702	2/24/20 17:10	BRF
Propene	ND	1.4	0.065		ND	2.4	0.11	0.702	2/24/20 17:10	BRF
Styrene	ND	0.035	0.022		ND	0.15	0.092	0.702	2/24/20 17:10	BRF
1,1,1,2-Tetrachloroethane	ND	0.064	0.023		ND	0.44	0.16	0.702	2/24/20 17:10	BRF
1,1,2,2-Tetrachloroethane	ND	0.035	0.016		ND	0.24	0.11	0.702	2/24/20 17:10	BRF
Tetrachloroethylene	0.087	0.035	0.020		0.59	0.24	0.13	0.702	2/24/20 17:10	BRF

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: IA-2-021420
Sample ID: 20B0726-02
Sample Matrix: Indoor air
Sampled: 2/14/2020 08:40

Sample Description/Location:
Sub Description/Location:
Canister ID: 2025
Canister Size: 6 liter
Flow Controller ID: 4073
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -5.9
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrahydrofuran	ND	0.035	0.035		ND	0.10	0.10	0.702	2/24/20 17:10	BRF
Toluene	0.081	0.035	0.018		0.30	0.13	0.068	0.702	2/24/20 17:10	BRF
1,2,4-Trichlorobenzene	ND	0.035	0.024		ND	0.26	0.18	0.702	2/24/20 17:10	BRF
1,1,1-Trichloroethane	ND	0.035	0.013		ND	0.19	0.072	0.702	2/24/20 17:10	BRF
1,1,2-Trichloroethane	ND	0.035	0.014		ND	0.19	0.079	0.702	2/24/20 17:10	BRF
Trichloroethylene	ND	0.035	0.014		ND	0.19	0.076	0.702	2/24/20 17:10	BRF
Trichlorofluoromethane (Freon 11)	0.21	0.14	0.027		1.2	0.79	0.15	0.702	2/24/20 17:10	BRF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.055	0.14	0.026	J	0.42	1.1	0.20	0.702	2/24/20 17:10	BRF
1,2,4-Trimethylbenzene	ND	0.035	0.022		ND	0.17	0.11	0.702	2/24/20 17:10	BRF
1,3,5-Trimethylbenzene	ND	0.035	0.022		ND	0.17	0.11	0.702	2/24/20 17:10	BRF
Vinyl Acetate	ND	0.70	0.022		ND	2.5	0.077	0.702	2/24/20 17:10	BRF
Vinyl Chloride	ND	0.035	0.022		ND	0.090	0.057	0.702	2/24/20 17:10	BRF
m&p-Xylene	ND	0.070	0.040		ND	0.30	0.18	0.702	2/24/20 17:10	BRF
o-Xylene	ND	0.035	0.022		ND	0.15	0.095	0.702	2/24/20 17:10	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	90.0	70-130	2/24/20 17:10
4-Bromofluorobenzene (2)	74.2	70-130	2/24/20 17:10

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: IA-3-021420
Sample ID: 20B0726-03
Sample Matrix: Indoor air
Sampled: 2/14/2020 08:21

Sample Description/Location:
Sub Description/Location:
Canister ID: 1302
Canister Size: 6 liter
Flow Controller ID: 4203
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -5
Receipt Vacuum(in Hg): -4.2
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	Results	RL	MDL	Flag/Qual	Results	RL	MDL	Dilution	Analyzed	Analyst
Acetone	2.8	1.4	0.49		6.7	3.3	1.2	0.702	2/24/20 17:57	BRF
Benzene	0.11	0.035	0.014		0.35	0.11	0.046	0.702	2/24/20 17:57	BRF
Benzyl chloride	ND	0.035	0.0091		ND	0.18	0.047	0.702	2/24/20 17:57	BRF
Bromodichloromethane	ND	0.035	0.013		ND	0.24	0.087	0.702	2/24/20 17:57	BRF
Bromoform	ND	0.035	0.016		ND	0.36	0.16	0.702	2/24/20 17:57	BRF
Bromomethane	ND	0.070	0.024		ND	0.27	0.094	0.702	2/24/20 17:57	BRF
1,3-Butadiene	ND	0.035	0.026		ND	0.078	0.057	0.702	2/24/20 17:57	BRF
2-Butanone (MEK)	0.24	1.4	0.066	J	0.71	4.1	0.19	0.702	2/24/20 17:57	BRF
Carbon Disulfide	ND	0.35	0.024		ND	1.1	0.075	0.702	2/24/20 17:57	BRF
Carbon Tetrachloride	0.067	0.035	0.011		0.42	0.22	0.072	0.702	2/24/20 17:57	BRF
Chlorobenzene	ND	0.035	0.017		ND	0.16	0.079	0.702	2/24/20 17:57	BRF
Chloroethane	ND	0.035	0.034		ND	0.093	0.091	0.702	2/24/20 17:57	BRF
Chloroform	ND	0.035	0.013		ND	0.17	0.064	0.702	2/24/20 17:57	BRF
Chloromethane	0.51	0.070	0.024		1.1	0.14	0.049	0.702	2/24/20 17:57	BRF
Cyclohexane	ND	0.035	0.025		ND	0.12	0.086	0.702	2/24/20 17:57	BRF
Dibromochloromethane	ND	0.035	0.012		ND	0.30	0.099	0.702	2/24/20 17:57	BRF
1,2-Dibromoethane (EDB)	ND	0.035	0.014		ND	0.27	0.11	0.702	2/24/20 17:57	BRF
1,2-Dichlorobenzene	ND	0.035	0.017		ND	0.21	0.10	0.702	2/24/20 17:57	BRF
1,3-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.11	0.702	2/24/20 17:57	BRF
1,4-Dichlorobenzene	ND	0.035	0.021		ND	0.21	0.13	0.702	2/24/20 17:57	BRF
Dichlorodifluoromethane (Freon 12)	0.30	0.035	0.015		1.5	0.17	0.075	0.702	2/24/20 17:57	BRF
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.043	0.702	2/24/20 17:57	BRF
1,2-Dichloroethane	ND	0.035	0.013		ND	0.14	0.054	0.702	2/24/20 17:57	BRF
1,1-Dichloroethylene	ND	0.035	0.019		ND	0.14	0.076	0.702	2/24/20 17:57	BRF
cis-1,2-Dichloroethylene	ND	0.035	0.014		ND	0.14	0.057	0.702	2/24/20 17:57	BRF
trans-1,2-Dichloroethylene	ND	0.035	0.014		ND	0.14	0.056	0.702	2/24/20 17:57	BRF
1,2-Dichloropropane	ND	0.035	0.012		ND	0.16	0.057	0.702	2/24/20 17:57	BRF
cis-1,3-Dichloropropene	ND	0.035	0.012		ND	0.16	0.056	0.702	2/24/20 17:57	BRF
trans-1,3-Dichloropropene	ND	0.035	0.013		ND	0.16	0.058	0.702	2/24/20 17:57	BRF
Ethanol	2.2	1.4	0.63		4.1	2.6	1.2	0.702	2/24/20 17:57	BRF
Ethyl Acetate	ND	0.035	0.026		ND	0.13	0.094	0.702	2/24/20 17:57	BRF
Ethylbenzene	ND	0.035	0.020		ND	0.15	0.088	0.702	2/24/20 17:57	BRF
4-Ethyltoluene	ND	0.035	0.021		ND	0.17	0.11	0.702	2/24/20 17:57	BRF
Heptane	ND	0.035	0.021		ND	0.14	0.085	0.702	2/24/20 17:57	BRF
Hexachlorobutadiene	ND	0.035	0.016		ND	0.37	0.17	0.702	2/24/20 17:57	BRF
Hexane	ND	1.4	0.062		ND	4.9	0.22	0.702	2/24/20 17:57	BRF
2-Hexanone (MBK)	ND	0.035	0.021		ND	0.14	0.085	0.702	2/24/20 17:57	BRF
Isopropanol	ND	1.4	0.064		ND	3.4	0.16	0.702	2/24/20 17:57	BRF
Methyl tert-Butyl Ether (MTBE)	ND	0.035	0.018		ND	0.13	0.063	0.702	2/24/20 17:57	BRF
Methylene Chloride	0.15	0.35	0.043	J	0.50	1.2	0.15	0.702	2/24/20 17:57	BRF
Methyl methacrylate	ND	0.035	0.020		ND	0.14	0.082	0.702	2/24/20 17:57	BRF
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.018		ND	0.14	0.075	0.702	2/24/20 17:57	BRF
Propene	ND	1.4	0.065		ND	2.4	0.11	0.702	2/24/20 17:57	BRF
Styrene	ND	0.035	0.022		ND	0.15	0.092	0.702	2/24/20 17:57	BRF
1,1,1,2-Tetrachloroethane	ND	0.064	0.023		ND	0.44	0.16	0.702	2/24/20 17:57	BRF
1,1,2,2-Tetrachloroethane	ND	0.035	0.016		ND	0.24	0.11	0.702	2/24/20 17:57	BRF
Tetrachloroethylene	ND	0.035	0.020		ND	0.24	0.13	0.702	2/24/20 17:57	BRF

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: IA-3-021420
Sample ID: 20B0726-03
Sample Matrix: Indoor air
Sampled: 2/14/2020 08:21

Sample Description/Location:
Sub Description/Location:
Canister ID: 1302
Canister Size: 6 liter
Flow Controller ID: 4203
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -5
Receipt Vacuum(in Hg): -4.2
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrahydrofuran	ND	0.035	0.035		ND	0.10	0.10	0.702	2/24/20 17:57	BRF
Toluene	0.070	0.035	0.018		0.26	0.13	0.068	0.702	2/24/20 17:57	BRF
1,2,4-Trichlorobenzene	ND	0.035	0.024		ND	0.26	0.18	0.702	2/24/20 17:57	BRF
1,1,1-Trichloroethane	ND	0.035	0.013		ND	0.19	0.072	0.702	2/24/20 17:57	BRF
1,1,2-Trichloroethane	ND	0.035	0.014		ND	0.19	0.079	0.702	2/24/20 17:57	BRF
Trichloroethylene	ND	0.035	0.014		ND	0.19	0.076	0.702	2/24/20 17:57	BRF
Trichlorofluoromethane (Freon 11)	0.21	0.14	0.027		1.2	0.79	0.15	0.702	2/24/20 17:57	BRF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.054	0.14	0.026	J	0.41	1.1	0.20	0.702	2/24/20 17:57	BRF
1,2,4-Trimethylbenzene	ND	0.035	0.022		ND	0.17	0.11	0.702	2/24/20 17:57	BRF
1,3,5-Trimethylbenzene	ND	0.035	0.022		ND	0.17	0.11	0.702	2/24/20 17:57	BRF
Vinyl Acetate	ND	0.70	0.022		ND	2.5	0.077	0.702	2/24/20 17:57	BRF
Vinyl Chloride	ND	0.035	0.022		ND	0.090	0.057	0.702	2/24/20 17:57	BRF
m&p-Xylene	ND	0.070	0.040		ND	0.30	0.18	0.702	2/24/20 17:57	BRF
o-Xylene	ND	0.035	0.022		ND	0.15	0.095	0.702	2/24/20 17:57	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	91.5	70-130	2/24/20 17:57
4-Bromofluorobenzene (2)	74.8	70-130	2/24/20 17:57

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: IA-4-021420
Sample ID: 20B0726-04
Sample Matrix: Indoor air
Sampled: 2/14/2020 08:40

Sample Description/Location:
Sub Description/Location:
Canister ID: 2183
Canister Size: 6 liter
Flow Controller ID: 4283
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -5
Receipt Vacuum(in Hg): -5.7
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	Results	RL	MDL	Flag/Qual	Results	RL	MDL	Dilution	Analyzed	Analyst
Acetone	3.9	1.4	0.49		9.3	3.3	1.2	0.702	2/24/20 18:44	BRF
Benzene	0.12	0.035	0.014		0.37	0.11	0.046	0.702	2/24/20 18:44	BRF
Benzyl chloride	ND	0.035	0.0091		ND	0.18	0.047	0.702	2/24/20 18:44	BRF
Bromodichloromethane	ND	0.035	0.013		ND	0.24	0.087	0.702	2/24/20 18:44	BRF
Bromoform	ND	0.035	0.016		ND	0.36	0.16	0.702	2/24/20 18:44	BRF
Bromomethane	ND	0.070	0.024		ND	0.27	0.094	0.702	2/24/20 18:44	BRF
1,3-Butadiene	ND	0.035	0.026		ND	0.078	0.057	0.702	2/24/20 18:44	BRF
2-Butanone (MEK)	0.54	1.4	0.066	J	1.6	4.1	0.19	0.702	2/24/20 18:44	BRF
Carbon Disulfide	ND	0.35	0.024		ND	1.1	0.075	0.702	2/24/20 18:44	BRF
Carbon Tetrachloride	0.071	0.035	0.011		0.45	0.22	0.072	0.702	2/24/20 18:44	BRF
Chlorobenzene	ND	0.035	0.017		ND	0.16	0.079	0.702	2/24/20 18:44	BRF
Chloroethane	ND	0.035	0.034		ND	0.093	0.091	0.702	2/24/20 18:44	BRF
Chloroform	ND	0.035	0.013		ND	0.17	0.064	0.702	2/24/20 18:44	BRF
Chloromethane	0.50	0.070	0.024		1.0	0.14	0.049	0.702	2/24/20 18:44	BRF
Cyclohexane	ND	0.035	0.025		ND	0.12	0.086	0.702	2/24/20 18:44	BRF
Dibromochloromethane	ND	0.035	0.012		ND	0.30	0.099	0.702	2/24/20 18:44	BRF
1,2-Dibromoethane (EDB)	ND	0.035	0.014		ND	0.27	0.11	0.702	2/24/20 18:44	BRF
1,2-Dichlorobenzene	ND	0.035	0.017		ND	0.21	0.10	0.702	2/24/20 18:44	BRF
1,3-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.11	0.702	2/24/20 18:44	BRF
1,4-Dichlorobenzene	ND	0.035	0.021		ND	0.21	0.13	0.702	2/24/20 18:44	BRF
Dichlorodifluoromethane (Freon 12)	0.28	0.035	0.015		1.4	0.17	0.075	0.702	2/24/20 18:44	BRF
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.043	0.702	2/24/20 18:44	BRF
1,2-Dichloroethane	ND	0.035	0.013		ND	0.14	0.054	0.702	2/24/20 18:44	BRF
1,1-Dichloroethylene	ND	0.035	0.019		ND	0.14	0.076	0.702	2/24/20 18:44	BRF
cis-1,2-Dichloroethylene	0.10	0.035	0.014		0.41	0.14	0.057	0.702	2/24/20 18:44	BRF
trans-1,2-Dichloroethylene	ND	0.035	0.014		ND	0.14	0.056	0.702	2/24/20 18:44	BRF
1,2-Dichloropropane	ND	0.035	0.012		ND	0.16	0.057	0.702	2/24/20 18:44	BRF
cis-1,3-Dichloropropene	ND	0.035	0.012		ND	0.16	0.056	0.702	2/24/20 18:44	BRF
trans-1,3-Dichloropropene	ND	0.035	0.013		ND	0.16	0.058	0.702	2/24/20 18:44	BRF
Ethanol	3.5	1.4	0.63		6.7	2.6	1.2	0.702	2/24/20 18:44	BRF
Ethyl Acetate	ND	0.035	0.026		ND	0.13	0.094	0.702	2/24/20 18:44	BRF
Ethylbenzene	ND	0.035	0.020		ND	0.15	0.088	0.702	2/24/20 18:44	BRF
4-Ethyltoluene	ND	0.035	0.021		ND	0.17	0.11	0.702	2/24/20 18:44	BRF
Heptane	ND	0.035	0.021		ND	0.14	0.085	0.702	2/24/20 18:44	BRF
Hexachlorobutadiene	ND	0.035	0.016		ND	0.37	0.17	0.702	2/24/20 18:44	BRF
Hexane	ND	1.4	0.062		ND	4.9	0.22	0.702	2/24/20 18:44	BRF
2-Hexanone (MBK)	ND	0.035	0.021		ND	0.14	0.085	0.702	2/24/20 18:44	BRF
Isopropanol	ND	1.4	0.064		ND	3.4	0.16	0.702	2/24/20 18:44	BRF
Methyl tert-Butyl Ether (MTBE)	ND	0.035	0.018		ND	0.13	0.063	0.702	2/24/20 18:44	BRF
Methylene Chloride	0.17	0.35	0.043	J	0.58	1.2	0.15	0.702	2/24/20 18:44	BRF
Methyl methacrylate	ND	0.035	0.020		ND	0.14	0.082	0.702	2/24/20 18:44	BRF
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.018		ND	0.14	0.075	0.702	2/24/20 18:44	BRF
Propene	ND	1.4	0.065		ND	2.4	0.11	0.702	2/24/20 18:44	BRF
Styrene	ND	0.035	0.022		ND	0.15	0.092	0.702	2/24/20 18:44	BRF
1,1,1,2-Tetrachloroethane	ND	0.064	0.023		ND	0.44	0.16	0.702	2/24/20 18:44	BRF
1,1,2,2-Tetrachloroethane	ND	0.035	0.016		ND	0.24	0.11	0.702	2/24/20 18:44	BRF
Tetrachloroethylene	0.21	0.035	0.020		1.4	0.24	0.13	0.702	2/24/20 18:44	BRF

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

ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: IA-4-021420
Sample ID: 20B0726-04
Sample Matrix: Indoor air
Sampled: 2/14/2020 08:40

Sample Description/Location:
Sub Description/Location:
Canister ID: 2183
Canister Size: 6 liter
Flow Controller ID: 4283
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -5
Receipt Vacuum(in Hg): -5.7
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrahydrofuran	ND	0.035	0.035		ND	0.10	0.10	0.702	2/24/20 18:44	BRF
Toluene	0.081	0.035	0.018		0.30	0.13	0.068	0.702	2/24/20 18:44	BRF
1,2,4-Trichlorobenzene	ND	0.035	0.024		ND	0.26	0.18	0.702	2/24/20 18:44	BRF
1,1,1-Trichloroethane	ND	0.035	0.013		ND	0.19	0.072	0.702	2/24/20 18:44	BRF
1,1,2-Trichloroethane	ND	0.035	0.014		ND	0.19	0.079	0.702	2/24/20 18:44	BRF
Trichloroethylene	0.078	0.035	0.014		0.42	0.19	0.076	0.702	2/24/20 18:44	BRF
Trichlorofluoromethane (Freon 11)	0.21	0.14	0.027		1.2	0.79	0.15	0.702	2/24/20 18:44	BRF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.054	0.14	0.026	J	0.41	1.1	0.20	0.702	2/24/20 18:44	BRF
1,2,4-Trimethylbenzene	ND	0.035	0.022		ND	0.17	0.11	0.702	2/24/20 18:44	BRF
1,3,5-Trimethylbenzene	ND	0.035	0.022		ND	0.17	0.11	0.702	2/24/20 18:44	BRF
Vinyl Acetate	ND	0.70	0.022		ND	2.5	0.077	0.702	2/24/20 18:44	BRF
Vinyl Chloride	ND	0.035	0.022		ND	0.090	0.057	0.702	2/24/20 18:44	BRF
m&p-Xylene	ND	0.070	0.040		ND	0.30	0.18	0.702	2/24/20 18:44	BRF
o-Xylene	ND	0.035	0.022		ND	0.15	0.095	0.702	2/24/20 18:44	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	91.0	70-130	2/24/20 18:44
4-Bromofluorobenzene (2)	74.5	70-130	2/24/20 18:44

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: IA-5-021420
Sample ID: 20B0726-05
Sample Matrix: Indoor air
Sampled: 2/14/2020 08:25

Sample Description/Location:
Sub Description/Location:
Canister ID: 1972
Canister Size: 6 liter
Flow Controller ID: 4375
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -5.3
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	Results	RL	MDL	Flag/Qual	Results	RL	MDL	Dilution	Analyzed	Analyst
Acetone	4.9	1.4	0.49		12	3.3	1.2	0.702	2/24/20 19:32	BRF
Benzene	0.12	0.035	0.014		0.38	0.11	0.046	0.702	2/24/20 19:32	BRF
Benzyl chloride	ND	0.035	0.0091		ND	0.18	0.047	0.702	2/24/20 19:32	BRF
Bromodichloromethane	ND	0.035	0.013		ND	0.24	0.087	0.702	2/24/20 19:32	BRF
Bromoform	ND	0.035	0.016		ND	0.36	0.16	0.702	2/24/20 19:32	BRF
Bromomethane	ND	0.070	0.024		ND	0.27	0.094	0.702	2/24/20 19:32	BRF
1,3-Butadiene	ND	0.035	0.026		ND	0.078	0.057	0.702	2/24/20 19:32	BRF
2-Butanone (MEK)	0.55	1.4	0.066	J	1.6	4.1	0.19	0.702	2/24/20 19:32	BRF
Carbon Disulfide	ND	0.35	0.024		ND	1.1	0.075	0.702	2/24/20 19:32	BRF
Carbon Tetrachloride	0.069	0.035	0.011		0.44	0.22	0.072	0.702	2/24/20 19:32	BRF
Chlorobenzene	ND	0.035	0.017		ND	0.16	0.079	0.702	2/24/20 19:32	BRF
Chloroethane	ND	0.035	0.034		ND	0.093	0.091	0.702	2/24/20 19:32	BRF
Chloroform	ND	0.035	0.013		ND	0.17	0.064	0.702	2/24/20 19:32	BRF
Chloromethane	0.50	0.070	0.024		1.0	0.14	0.049	0.702	2/24/20 19:32	BRF
Cyclohexane	ND	0.035	0.025		ND	0.12	0.086	0.702	2/24/20 19:32	BRF
Dibromochloromethane	ND	0.035	0.012		ND	0.30	0.099	0.702	2/24/20 19:32	BRF
1,2-Dibromoethane (EDB)	ND	0.035	0.014		ND	0.27	0.11	0.702	2/24/20 19:32	BRF
1,2-Dichlorobenzene	ND	0.035	0.017		ND	0.21	0.10	0.702	2/24/20 19:32	BRF
1,3-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.11	0.702	2/24/20 19:32	BRF
1,4-Dichlorobenzene	ND	0.035	0.021		ND	0.21	0.13	0.702	2/24/20 19:32	BRF
Dichlorodifluoromethane (Freon 12)	0.29	0.035	0.015		1.5	0.17	0.075	0.702	2/24/20 19:32	BRF
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.043	0.702	2/24/20 19:32	BRF
1,2-Dichloroethane	ND	0.035	0.013		ND	0.14	0.054	0.702	2/24/20 19:32	BRF
1,1-Dichloroethylene	ND	0.035	0.019		ND	0.14	0.076	0.702	2/24/20 19:32	BRF
cis-1,2-Dichloroethylene	ND	0.035	0.014		ND	0.14	0.057	0.702	2/24/20 19:32	BRF
trans-1,2-Dichloroethylene	ND	0.035	0.014		ND	0.14	0.056	0.702	2/24/20 19:32	BRF
1,2-Dichloropropane	ND	0.035	0.012		ND	0.16	0.057	0.702	2/24/20 19:32	BRF
cis-1,3-Dichloropropene	ND	0.035	0.012		ND	0.16	0.056	0.702	2/24/20 19:32	BRF
trans-1,3-Dichloropropene	ND	0.035	0.013		ND	0.16	0.058	0.702	2/24/20 19:32	BRF
Ethanol	13	1.4	0.63		24	2.6	1.2	0.702	2/24/20 19:32	BRF
Ethyl Acetate	ND	0.035	0.026		ND	0.13	0.094	0.702	2/24/20 19:32	BRF
Ethylbenzene	ND	0.035	0.020		ND	0.15	0.088	0.702	2/24/20 19:32	BRF
4-Ethyltoluene	ND	0.035	0.021		ND	0.17	0.11	0.702	2/24/20 19:32	BRF
Heptane	ND	0.035	0.021		ND	0.14	0.085	0.702	2/24/20 19:32	BRF
Hexachlorobutadiene	ND	0.035	0.016		ND	0.37	0.17	0.702	2/24/20 19:32	BRF
Hexane	ND	1.4	0.062		ND	4.9	0.22	0.702	2/24/20 19:32	BRF
2-Hexanone (MBK)	ND	0.035	0.021		ND	0.14	0.085	0.702	2/24/20 19:32	BRF
Isopropanol	0.76	1.4	0.064	J	1.9	3.4	0.16	0.702	2/24/20 19:32	BRF
Methyl tert-Butyl Ether (MTBE)	ND	0.035	0.018		ND	0.13	0.063	0.702	2/24/20 19:32	BRF
Methylene Chloride	0.16	0.35	0.043	J	0.54	1.2	0.15	0.702	2/24/20 19:32	BRF
Methyl methacrylate	ND	0.035	0.020		ND	0.14	0.082	0.702	2/24/20 19:32	BRF
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.018		ND	0.14	0.075	0.702	2/24/20 19:32	BRF
Propene	ND	1.4	0.065		ND	2.4	0.11	0.702	2/24/20 19:32	BRF
Styrene	ND	0.035	0.022		ND	0.15	0.092	0.702	2/24/20 19:32	BRF
1,1,1,2-Tetrachloroethane	ND	0.064	0.023		ND	0.44	0.16	0.702	2/24/20 19:32	BRF
1,1,2,2-Tetrachloroethane	ND	0.035	0.016		ND	0.24	0.11	0.702	2/24/20 19:32	BRF
Tetrachloroethylene	ND	0.035	0.020		ND	0.24	0.13	0.702	2/24/20 19:32	BRF

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: IA-5-021420
Sample ID: 20B0726-05
Sample Matrix: Indoor air
Sampled: 2/14/2020 08:25

Sample Description/Location:
Sub Description/Location:
Canister ID: 1972
Canister Size: 6 liter
Flow Controller ID: 4375
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -5.3
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrahydrofuran	ND	0.035	0.035		ND	0.10	0.10	0.702	2/24/20 19:32	BRF
Toluene	0.090	0.035	0.018		0.34	0.13	0.068	0.702	2/24/20 19:32	BRF
1,2,4-Trichlorobenzene	ND	0.035	0.024		ND	0.26	0.18	0.702	2/24/20 19:32	BRF
1,1,1-Trichloroethane	ND	0.035	0.013		ND	0.19	0.072	0.702	2/24/20 19:32	BRF
1,1,2-Trichloroethane	ND	0.035	0.014		ND	0.19	0.079	0.702	2/24/20 19:32	BRF
Trichloroethylene	ND	0.035	0.014		ND	0.19	0.076	0.702	2/24/20 19:32	BRF
Trichlorofluoromethane (Freon 11)	0.21	0.14	0.027		1.2	0.79	0.15	0.702	2/24/20 19:32	BRF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.055	0.14	0.026	J	0.42	1.1	0.20	0.702	2/24/20 19:32	BRF
1,2,4-Trimethylbenzene	ND	0.035	0.022		ND	0.17	0.11	0.702	2/24/20 19:32	BRF
1,3,5-Trimethylbenzene	ND	0.035	0.022		ND	0.17	0.11	0.702	2/24/20 19:32	BRF
Vinyl Acetate	ND	0.70	0.022		ND	2.5	0.077	0.702	2/24/20 19:32	BRF
Vinyl Chloride	ND	0.035	0.022		ND	0.090	0.057	0.702	2/24/20 19:32	BRF
m&p-Xylene	ND	0.070	0.040		ND	0.30	0.18	0.702	2/24/20 19:32	BRF
o-Xylene	ND	0.035	0.022		ND	0.15	0.095	0.702	2/24/20 19:32	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	91.1	70-130	2/24/20 19:32
4-Bromofluorobenzene (2)	75.0	70-130	2/24/20 19:32

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: IA-6-021420
Sample ID: 20B0726-06
Sample Matrix: Indoor air
Sampled: 2/14/2020 08:28

Sample Description/Location:
Sub Description/Location:
Canister ID: 1811
Canister Size: 6 liter
Flow Controller ID: 4183
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -5.3
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	Results	RL	MDL	Flag/Qual	Results	RL	MDL	Dilution	Analyzed	Analyst
Acetone	3.2	1.4	0.49		7.7	3.3	1.2	0.702	2/24/20 20:19	BRF
Benzene	0.13	0.035	0.014		0.40	0.11	0.046	0.702	2/24/20 20:19	BRF
Benzyl chloride	ND	0.035	0.0091		ND	0.18	0.047	0.702	2/24/20 20:19	BRF
Bromodichloromethane	ND	0.035	0.013		ND	0.24	0.087	0.702	2/24/20 20:19	BRF
Bromoform	ND	0.035	0.016		ND	0.36	0.16	0.702	2/24/20 20:19	BRF
Bromomethane	ND	0.070	0.024		ND	0.27	0.094	0.702	2/24/20 20:19	BRF
1,3-Butadiene	ND	0.035	0.026		ND	0.078	0.057	0.702	2/24/20 20:19	BRF
2-Butanone (MEK)	0.20	1.4	0.066	J	0.59	4.1	0.19	0.702	2/24/20 20:19	BRF
Carbon Disulfide	ND	0.35	0.024		ND	1.1	0.075	0.702	2/24/20 20:19	BRF
Carbon Tetrachloride	0.072	0.035	0.011		0.45	0.22	0.072	0.702	2/24/20 20:19	BRF
Chlorobenzene	ND	0.035	0.017		ND	0.16	0.079	0.702	2/24/20 20:19	BRF
Chloroethane	ND	0.035	0.034		ND	0.093	0.091	0.702	2/24/20 20:19	BRF
Chloroform	ND	0.035	0.013		ND	0.17	0.064	0.702	2/24/20 20:19	BRF
Chloromethane	0.51	0.070	0.024		1.1	0.14	0.049	0.702	2/24/20 20:19	BRF
Cyclohexane	ND	0.035	0.025		ND	0.12	0.086	0.702	2/24/20 20:19	BRF
Dibromochloromethane	ND	0.035	0.012		ND	0.30	0.099	0.702	2/24/20 20:19	BRF
1,2-Dibromoethane (EDB)	ND	0.035	0.014		ND	0.27	0.11	0.702	2/24/20 20:19	BRF
1,2-Dichlorobenzene	ND	0.035	0.017		ND	0.21	0.10	0.702	2/24/20 20:19	BRF
1,3-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.11	0.702	2/24/20 20:19	BRF
1,4-Dichlorobenzene	ND	0.035	0.021		ND	0.21	0.13	0.702	2/24/20 20:19	BRF
Dichlorodifluoromethane (Freon 12)	0.30	0.035	0.015		1.5	0.17	0.075	0.702	2/24/20 20:19	BRF
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.043	0.702	2/24/20 20:19	BRF
1,2-Dichloroethane	ND	0.035	0.013		ND	0.14	0.054	0.702	2/24/20 20:19	BRF
1,1-Dichloroethylene	ND	0.035	0.019		ND	0.14	0.076	0.702	2/24/20 20:19	BRF
cis-1,2-Dichloroethylene	ND	0.035	0.014		ND	0.14	0.057	0.702	2/24/20 20:19	BRF
trans-1,2-Dichloroethylene	ND	0.035	0.014		ND	0.14	0.056	0.702	2/24/20 20:19	BRF
1,2-Dichloropropane	ND	0.035	0.012		ND	0.16	0.057	0.702	2/24/20 20:19	BRF
cis-1,3-Dichloropropene	ND	0.035	0.012		ND	0.16	0.056	0.702	2/24/20 20:19	BRF
trans-1,3-Dichloropropene	ND	0.035	0.013		ND	0.16	0.058	0.702	2/24/20 20:19	BRF
Ethanol	22	1.4	0.63		41	2.6	1.2	0.702	2/24/20 20:19	BRF
Ethyl Acetate	ND	0.035	0.026		ND	0.13	0.094	0.702	2/24/20 20:19	BRF
Ethylbenzene	ND	0.035	0.020		ND	0.15	0.088	0.702	2/24/20 20:19	BRF
4-Ethyltoluene	ND	0.035	0.021		ND	0.17	0.11	0.702	2/24/20 20:19	BRF
Heptane	ND	0.035	0.021		ND	0.14	0.085	0.702	2/24/20 20:19	BRF
Hexachlorobutadiene	ND	0.035	0.016		ND	0.37	0.17	0.702	2/24/20 20:19	BRF
Hexane	ND	1.4	0.062		ND	4.9	0.22	0.702	2/24/20 20:19	BRF
2-Hexanone (MBK)	ND	0.035	0.021		ND	0.14	0.085	0.702	2/24/20 20:19	BRF
Isopropanol	0.81	1.4	0.064	J	2.0	3.4	0.16	0.702	2/24/20 20:19	BRF
Methyl tert-Butyl Ether (MTBE)	ND	0.035	0.018		ND	0.13	0.063	0.702	2/24/20 20:19	BRF
Methylene Chloride	0.16	0.35	0.043	J	0.56	1.2	0.15	0.702	2/24/20 20:19	BRF
Methyl methacrylate	ND	0.035	0.020		ND	0.14	0.082	0.702	2/24/20 20:19	BRF
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.018		ND	0.14	0.075	0.702	2/24/20 20:19	BRF
Propene	ND	1.4	0.065		ND	2.4	0.11	0.702	2/24/20 20:19	BRF
Styrene	ND	0.035	0.022		ND	0.15	0.092	0.702	2/24/20 20:19	BRF
1,1,1,2-Tetrachloroethane	ND	0.064	0.023		ND	0.44	0.16	0.702	2/24/20 20:19	BRF
1,1,2,2-Tetrachloroethane	ND	0.035	0.016		ND	0.24	0.11	0.702	2/24/20 20:19	BRF
Tetrachloroethylene	ND	0.035	0.020		ND	0.24	0.13	0.702	2/24/20 20:19	BRF

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: IA-6-021420
Sample ID: 20B0726-06
Sample Matrix: Indoor air
Sampled: 2/14/2020 08:28

Sample Description/Location:
Sub Description/Location:
Canister ID: 1811
Canister Size: 6 liter
Flow Controller ID: 4183
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -5.3
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrahydrofuran	ND	0.035	0.035		ND	0.10	0.10	0.702	2/24/20 20:19	BRF
Toluene	0.097	0.035	0.018		0.36	0.13	0.068	0.702	2/24/20 20:19	BRF
1,2,4-Trichlorobenzene	ND	0.035	0.024		ND	0.26	0.18	0.702	2/24/20 20:19	BRF
1,1,1-Trichloroethane	ND	0.035	0.013		ND	0.19	0.072	0.702	2/24/20 20:19	BRF
1,1,2-Trichloroethane	ND	0.035	0.014		ND	0.19	0.079	0.702	2/24/20 20:19	BRF
Trichloroethylene	ND	0.035	0.014		ND	0.19	0.076	0.702	2/24/20 20:19	BRF
Trichlorofluoromethane (Freon 11)	0.21	0.14	0.027		1.2	0.79	0.15	0.702	2/24/20 20:19	BRF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.055	0.14	0.026	J	0.42	1.1	0.20	0.702	2/24/20 20:19	BRF
1,2,4-Trimethylbenzene	ND	0.035	0.022		ND	0.17	0.11	0.702	2/24/20 20:19	BRF
1,3,5-Trimethylbenzene	ND	0.035	0.022		ND	0.17	0.11	0.702	2/24/20 20:19	BRF
Vinyl Acetate	ND	0.70	0.022		ND	2.5	0.077	0.702	2/24/20 20:19	BRF
Vinyl Chloride	ND	0.035	0.022		ND	0.090	0.057	0.702	2/24/20 20:19	BRF
m&p-Xylene	ND	0.070	0.040		ND	0.30	0.18	0.702	2/24/20 20:19	BRF
o-Xylene	ND	0.035	0.022		ND	0.15	0.095	0.702	2/24/20 20:19	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	91.8	70-130	2/24/20 20:19
4-Bromofluorobenzene (2)	75.6	70-130	2/24/20 20:19

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

ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: IA-7-021420
Sample ID: 20B0726-07
Sample Matrix: Indoor air
Sampled: 2/14/2020 08:31

Sample Description/Location:
Sub Description/Location:
Canister ID: 1808
Canister Size: 6 liter
Flow Controller ID: 4366
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -5.6
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	Results	RL	MDL	Flag/Qual	Results	RL	MDL	Dilution	Analyzed	Analyst
Acetone	11	1.4	0.49		26	3.3	1.2	0.702	2/24/20 21:06	BRF
Benzene	0.13	0.035	0.014		0.41	0.11	0.046	0.702	2/24/20 21:06	BRF
Benzyl chloride	ND	0.035	0.0091		ND	0.18	0.047	0.702	2/24/20 21:06	BRF
Bromodichloromethane	ND	0.035	0.013		ND	0.24	0.087	0.702	2/24/20 21:06	BRF
Bromoform	ND	0.035	0.016		ND	0.36	0.16	0.702	2/24/20 21:06	BRF
Bromomethane	ND	0.070	0.024		ND	0.27	0.094	0.702	2/24/20 21:06	BRF
1,3-Butadiene	ND	0.035	0.026		ND	0.078	0.057	0.702	2/24/20 21:06	BRF
2-Butanone (MEK)	0.31	1.4	0.066	J	0.91	4.1	0.19	0.702	2/24/20 21:06	BRF
Carbon Disulfide	ND	0.35	0.024		ND	1.1	0.075	0.702	2/24/20 21:06	BRF
Carbon Tetrachloride	0.068	0.035	0.011		0.43	0.22	0.072	0.702	2/24/20 21:06	BRF
Chlorobenzene	ND	0.035	0.017		ND	0.16	0.079	0.702	2/24/20 21:06	BRF
Chloroethane	ND	0.035	0.034		ND	0.093	0.091	0.702	2/24/20 21:06	BRF
Chloroform	ND	0.035	0.013		ND	0.17	0.064	0.702	2/24/20 21:06	BRF
Chloromethane	0.50	0.070	0.024		1.0	0.14	0.049	0.702	2/24/20 21:06	BRF
Cyclohexane	ND	0.035	0.025		ND	0.12	0.086	0.702	2/24/20 21:06	BRF
Dibromochloromethane	ND	0.035	0.012		ND	0.30	0.099	0.702	2/24/20 21:06	BRF
1,2-Dibromoethane (EDB)	ND	0.035	0.014		ND	0.27	0.11	0.702	2/24/20 21:06	BRF
1,2-Dichlorobenzene	ND	0.035	0.017		ND	0.21	0.10	0.702	2/24/20 21:06	BRF
1,3-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.11	0.702	2/24/20 21:06	BRF
1,4-Dichlorobenzene	ND	0.035	0.021		ND	0.21	0.13	0.702	2/24/20 21:06	BRF
Dichlorodifluoromethane (Freon 12)	0.28	0.035	0.015		1.4	0.17	0.075	0.702	2/24/20 21:06	BRF
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.043	0.702	2/24/20 21:06	BRF
1,2-Dichloroethane	ND	0.035	0.013		ND	0.14	0.054	0.702	2/24/20 21:06	BRF
1,1-Dichloroethylene	ND	0.035	0.019		ND	0.14	0.076	0.702	2/24/20 21:06	BRF
cis-1,2-Dichloroethylene	ND	0.035	0.014		ND	0.14	0.057	0.702	2/24/20 21:06	BRF
trans-1,2-Dichloroethylene	ND	0.035	0.014		ND	0.14	0.056	0.702	2/24/20 21:06	BRF
1,2-Dichloropropane	ND	0.035	0.012		ND	0.16	0.057	0.702	2/24/20 21:06	BRF
cis-1,3-Dichloropropene	ND	0.035	0.012		ND	0.16	0.056	0.702	2/24/20 21:06	BRF
trans-1,3-Dichloropropene	ND	0.035	0.013		ND	0.16	0.058	0.702	2/24/20 21:06	BRF
Ethanol	100	8.0	3.6		190	15	6.7	4	2/25/20 9:23	BRF
Ethyl Acetate	ND	0.035	0.026		ND	0.13	0.094	0.702	2/24/20 21:06	BRF
Ethylbenzene	ND	0.035	0.020		ND	0.15	0.088	0.702	2/24/20 21:06	BRF
4-Ethyltoluene	ND	0.035	0.021		ND	0.17	0.11	0.702	2/24/20 21:06	BRF
Heptane	ND	0.035	0.021		ND	0.14	0.085	0.702	2/24/20 21:06	BRF
Hexachlorobutadiene	ND	0.035	0.016		ND	0.37	0.17	0.702	2/24/20 21:06	BRF
Hexane	ND	1.4	0.062		ND	4.9	0.22	0.702	2/24/20 21:06	BRF
2-Hexanone (MBK)	ND	0.035	0.021		ND	0.14	0.085	0.702	2/24/20 21:06	BRF
Isopropanol	3.6	1.4	0.064		8.9	3.4	0.16	0.702	2/24/20 21:06	BRF
Methyl tert-Butyl Ether (MTBE)	ND	0.035	0.018		ND	0.13	0.063	0.702	2/24/20 21:06	BRF
Methylene Chloride	0.16	0.35	0.043	J	0.56	1.2	0.15	0.702	2/24/20 21:06	BRF
Methyl methacrylate	ND	0.035	0.020		ND	0.14	0.082	0.702	2/24/20 21:06	BRF
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.018		ND	0.14	0.075	0.702	2/24/20 21:06	BRF
Propene	ND	1.4	0.065		ND	2.4	0.11	0.702	2/24/20 21:06	BRF
Styrene	ND	0.035	0.022		ND	0.15	0.092	0.702	2/24/20 21:06	BRF
1,1,1,2-Tetrachloroethane	ND	0.064	0.023		ND	0.44	0.16	0.702	2/24/20 21:06	BRF
1,1,2,2-Tetrachloroethane	ND	0.035	0.016		ND	0.24	0.11	0.702	2/24/20 21:06	BRF
Tetrachloroethylene	0.28	0.035	0.020		1.9	0.24	0.13	0.702	2/24/20 21:06	BRF

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: IA-7-021420
Sample ID: 20B0726-07
Sample Matrix: Indoor air
Sampled: 2/14/2020 08:31

Sample Description/Location:
Sub Description/Location:
Canister ID: 1808
Canister Size: 6 liter
Flow Controller ID: 4366
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -5.6
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrahydrofuran	ND	0.035	0.035		ND	0.10	0.10	0.702	2/24/20 21:06	BRF
Toluene	0.11	0.035	0.018		0.42	0.13	0.068	0.702	2/24/20 21:06	BRF
1,2,4-Trichlorobenzene	ND	0.035	0.024		ND	0.26	0.18	0.702	2/24/20 21:06	BRF
1,1,1-Trichloroethane	ND	0.035	0.013		ND	0.19	0.072	0.702	2/24/20 21:06	BRF
1,1,2-Trichloroethane	ND	0.035	0.014		ND	0.19	0.079	0.702	2/24/20 21:06	BRF
Trichloroethylene	ND	0.035	0.014		ND	0.19	0.076	0.702	2/24/20 21:06	BRF
Trichlorofluoromethane (Freon 11)	0.21	0.14	0.027		1.2	0.79	0.15	0.702	2/24/20 21:06	BRF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.053	0.14	0.026	J	0.41	1.1	0.20	0.702	2/24/20 21:06	BRF
1,2,4-Trimethylbenzene	ND	0.035	0.022		ND	0.17	0.11	0.702	2/24/20 21:06	BRF
1,3,5-Trimethylbenzene	ND	0.035	0.022		ND	0.17	0.11	0.702	2/24/20 21:06	BRF
Vinyl Acetate	ND	0.70	0.022		ND	2.5	0.077	0.702	2/24/20 21:06	BRF
Vinyl Chloride	ND	0.035	0.022		ND	0.090	0.057	0.702	2/24/20 21:06	BRF
m&p-Xylene	0.052	0.070	0.040	J	0.23	0.30	0.18	0.702	2/24/20 21:06	BRF
o-Xylene	ND	0.035	0.022		ND	0.15	0.095	0.702	2/24/20 21:06	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	91.9	70-130	2/24/20 21:06
4-Bromofluorobenzene (1)	91.4	70-130	2/25/20 9:23
4-Bromofluorobenzene (2)	75.5	70-130	2/24/20 21:06

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: AA-1-021420
Sample ID: 20B0726-08
Sample Matrix: Ambient Air
Sampled: 2/14/2020 08:37

Sample Description/Location:
Sub Description/Location:
Canister ID: 1019
Canister Size: 6 liter
Flow Controller ID: 4177
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -4.7
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	Results	RL	MDL	Flag/Qual	Results	RL	MDL	Dilution	Analyzed	Analyst
Acetone	4.1	1.4	0.49		9.8	3.3	1.2	0.702	2/24/20 21:53	BRF
Benzene	0.11	0.035	0.014		0.34	0.11	0.046	0.702	2/24/20 21:53	BRF
Benzyl chloride	ND	0.035	0.0091		ND	0.18	0.047	0.702	2/24/20 21:53	BRF
Bromodichloromethane	ND	0.035	0.013		ND	0.24	0.087	0.702	2/24/20 21:53	BRF
Bromoform	ND	0.035	0.016		ND	0.36	0.16	0.702	2/24/20 21:53	BRF
Bromomethane	ND	0.070	0.024		ND	0.27	0.094	0.702	2/24/20 21:53	BRF
1,3-Butadiene	ND	0.035	0.026		ND	0.078	0.057	0.702	2/24/20 21:53	BRF
2-Butanone (MEK)	0.54	1.4	0.066	J	1.6	4.1	0.19	0.702	2/24/20 21:53	BRF
Carbon Disulfide	ND	0.35	0.024		ND	1.1	0.075	0.702	2/24/20 21:53	BRF
Carbon Tetrachloride	0.065	0.035	0.011		0.41	0.22	0.072	0.702	2/24/20 21:53	BRF
Chlorobenzene	ND	0.035	0.017		ND	0.16	0.079	0.702	2/24/20 21:53	BRF
Chloroethane	ND	0.035	0.034		ND	0.093	0.091	0.702	2/24/20 21:53	BRF
Chloroform	ND	0.035	0.013		ND	0.17	0.064	0.702	2/24/20 21:53	BRF
Chloromethane	0.71	0.070	0.024		1.5	0.14	0.049	0.702	2/24/20 21:53	BRF
Cyclohexane	ND	0.035	0.025		ND	0.12	0.086	0.702	2/24/20 21:53	BRF
Dibromochloromethane	ND	0.035	0.012		ND	0.30	0.099	0.702	2/24/20 21:53	BRF
1,2-Dibromoethane (EDB)	ND	0.035	0.014		ND	0.27	0.11	0.702	2/24/20 21:53	BRF
1,2-Dichlorobenzene	ND	0.035	0.017		ND	0.21	0.10	0.702	2/24/20 21:53	BRF
1,3-Dichlorobenzene	ND	0.035	0.018		ND	0.21	0.11	0.702	2/24/20 21:53	BRF
1,4-Dichlorobenzene	ND	0.035	0.021		ND	0.21	0.13	0.702	2/24/20 21:53	BRF
Dichlorodifluoromethane (Freon 12)	0.32	0.035	0.015		1.6	0.17	0.075	0.702	2/24/20 21:53	BRF
1,1-Dichloroethane	ND	0.035	0.011		ND	0.14	0.043	0.702	2/24/20 21:53	BRF
1,2-Dichloroethane	ND	0.035	0.013		ND	0.14	0.054	0.702	2/24/20 21:53	BRF
1,1-Dichloroethylene	ND	0.035	0.019		ND	0.14	0.076	0.702	2/24/20 21:53	BRF
cis-1,2-Dichloroethylene	ND	0.035	0.014		ND	0.14	0.057	0.702	2/24/20 21:53	BRF
trans-1,2-Dichloroethylene	ND	0.035	0.014		ND	0.14	0.056	0.702	2/24/20 21:53	BRF
1,2-Dichloropropane	ND	0.035	0.012		ND	0.16	0.057	0.702	2/24/20 21:53	BRF
cis-1,3-Dichloropropene	ND	0.035	0.012		ND	0.16	0.056	0.702	2/24/20 21:53	BRF
trans-1,3-Dichloropropene	ND	0.035	0.013		ND	0.16	0.058	0.702	2/24/20 21:53	BRF
Ethanol	2.1	1.4	0.63		3.9	2.6	1.2	0.702	2/24/20 21:53	BRF
Ethyl Acetate	ND	0.035	0.026		ND	0.13	0.094	0.702	2/24/20 21:53	BRF
Ethylbenzene	ND	0.035	0.020		ND	0.15	0.088	0.702	2/24/20 21:53	BRF
4-Ethyltoluene	ND	0.035	0.021		ND	0.17	0.11	0.702	2/24/20 21:53	BRF
Heptane	ND	0.035	0.021		ND	0.14	0.085	0.702	2/24/20 21:53	BRF
Hexachlorobutadiene	ND	0.035	0.016		ND	0.37	0.17	0.702	2/24/20 21:53	BRF
Hexane	ND	1.4	0.062		ND	4.9	0.22	0.702	2/24/20 21:53	BRF
2-Hexanone (MBK)	ND	0.035	0.021		ND	0.14	0.085	0.702	2/24/20 21:53	BRF
Isopropanol	0.21	1.4	0.064	J	0.53	3.4	0.16	0.702	2/24/20 21:53	BRF
Methyl tert-Butyl Ether (MTBE)	ND	0.035	0.018		ND	0.13	0.063	0.702	2/24/20 21:53	BRF
Methylene Chloride	0.12	0.35	0.043	J	0.42	1.2	0.15	0.702	2/24/20 21:53	BRF
Methyl methacrylate	ND	0.035	0.020		ND	0.14	0.082	0.702	2/24/20 21:53	BRF
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.018		ND	0.14	0.075	0.702	2/24/20 21:53	BRF
Propene	ND	1.4	0.065		ND	2.4	0.11	0.702	2/24/20 21:53	BRF
Styrene	ND	0.035	0.022		ND	0.15	0.092	0.702	2/24/20 21:53	BRF
1,1,1,2-Tetrachloroethane	ND	0.064	0.023		ND	0.44	0.16	0.702	2/24/20 21:53	BRF
1,1,2,2-Tetrachloroethane	ND	0.035	0.016		ND	0.24	0.11	0.702	2/24/20 21:53	BRF
Tetrachloroethylene	ND	0.035	0.020		ND	0.24	0.13	0.702	2/24/20 21:53	BRF

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: AA-1-021420
Sample ID: 20B0726-08
Sample Matrix: Ambient Air
Sampled: 2/14/2020 08:37

Sample Description/Location:
Sub Description/Location:
Canister ID: 1019
Canister Size: 6 liter
Flow Controller ID: 4177
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -4.7
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrahydrofuran	ND	0.035	0.035		ND	0.10	0.10	0.702	2/24/20 21:53	BRF
Toluene	0.069	0.035	0.018		0.26	0.13	0.068	0.702	2/24/20 21:53	BRF
1,2,4-Trichlorobenzene	ND	0.035	0.024		ND	0.26	0.18	0.702	2/24/20 21:53	BRF
1,1,1-Trichloroethane	ND	0.035	0.013		ND	0.19	0.072	0.702	2/24/20 21:53	BRF
1,1,2-Trichloroethane	ND	0.035	0.014		ND	0.19	0.079	0.702	2/24/20 21:53	BRF
Trichloroethylene	ND	0.035	0.014		ND	0.19	0.076	0.702	2/24/20 21:53	BRF
Trichlorofluoromethane (Freon 11)	0.26	0.14	0.027		1.5	0.79	0.15	0.702	2/24/20 21:53	BRF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.17	0.14	0.026		1.3	1.1	0.20	0.702	2/24/20 21:53	BRF
1,2,4-Trimethylbenzene	ND	0.035	0.022		ND	0.17	0.11	0.702	2/24/20 21:53	BRF
1,3,5-Trimethylbenzene	ND	0.035	0.022		ND	0.17	0.11	0.702	2/24/20 21:53	BRF
Vinyl Acetate	ND	0.70	0.022		ND	2.5	0.077	0.702	2/24/20 21:53	BRF
Vinyl Chloride	ND	0.035	0.022		ND	0.090	0.057	0.702	2/24/20 21:53	BRF
m&p-Xylene	ND	0.070	0.040		ND	0.30	0.18	0.702	2/24/20 21:53	BRF
o-Xylene	ND	0.035	0.022		ND	0.15	0.095	0.702	2/24/20 21:53	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	90.9	70-130	2/24/20 21:53
4-Bromofluorobenzene (2)	74.1	70-130	2/24/20 21:53

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: EW-5-021420
Sample ID: 20B0726-09
Sample Matrix: Sub Slab
Sampled: 2/14/2020 09:12

Sample Description/Location:
Sub Description/Location:
Canister ID: 1658
Canister Size: 6 liter
Flow Controller ID: 4376
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -29.5
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -5.6
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	Results	RL	MDL	Flag/Qual	Results	RL	MDL	Dilution	Analyzed	Analyst
Acetone	28	4.0	1.4		66	9.5	3.3	2	2/25/20 20:56	BRF
Benzene	0.50	0.10	0.041		1.6	0.32	0.13	2	2/25/20 20:56	BRF
Benzyl chloride	ND	0.10	0.026		ND	0.52	0.13	2	2/25/20 20:56	BRF
Bromodichloromethane	ND	0.10	0.037		ND	0.67	0.25	2	2/25/20 20:56	BRF
Bromoform	ND	0.10	0.045		ND	1.0	0.47	2	2/25/20 20:56	BRF
Bromomethane	ND	0.20	0.069		ND	0.78	0.27	2	2/25/20 20:56	BRF
1,3-Butadiene	ND	0.10	0.073		ND	0.22	0.16	2	2/25/20 20:56	BRF
2-Butanone (MEK)	56	4.0	0.19		160	12	0.55	2	2/25/20 20:56	BRF
Carbon Disulfide	14	1.0	0.069		44	3.1	0.21	2	2/25/20 20:56	BRF
Carbon Tetrachloride	ND	0.10	0.033		ND	0.63	0.21	2	2/25/20 20:56	BRF
Chlorobenzene	ND	0.10	0.049		ND	0.46	0.23	2	2/25/20 20:56	BRF
Chloroethane	ND	0.10	0.098		ND	0.26	0.26	2	2/25/20 20:56	BRF
Chloroform	ND	0.10	0.037		ND	0.49	0.18	2	2/25/20 20:56	BRF
Chloromethane	ND	0.20	0.068		ND	0.41	0.14	2	2/25/20 20:56	BRF
Cyclohexane	ND	0.10	0.071		ND	0.34	0.24	2	2/25/20 20:56	BRF
Dibromochloromethane	ND	0.10	0.033		ND	0.85	0.28	2	2/25/20 20:56	BRF
1,2-Dibromoethane (EDB)	ND	0.10	0.039		ND	0.77	0.30	2	2/25/20 20:56	BRF
1,2-Dichlorobenzene	ND	0.10	0.048		ND	0.60	0.29	2	2/25/20 20:56	BRF
1,3-Dichlorobenzene	ND	0.10	0.052		ND	0.60	0.31	2	2/25/20 20:56	BRF
1,4-Dichlorobenzene	ND	0.10	0.061		ND	0.60	0.37	2	2/25/20 20:56	BRF
Dichlorodifluoromethane (Freon 12)	0.37	0.10	0.043		1.8	0.49	0.21	2	2/25/20 20:56	BRF
1,1-Dichloroethane	0.42	0.10	0.030		1.7	0.40	0.12	2	2/25/20 20:56	BRF
1,2-Dichloroethane	ND	0.10	0.038		ND	0.40	0.15	2	2/25/20 20:56	BRF
1,1-Dichloroethylene	ND	0.10	0.054		ND	0.40	0.22	2	2/25/20 20:56	BRF
cis-1,2-Dichloroethylene	0.13	0.10	0.041		0.52	0.40	0.16	2	2/25/20 20:56	BRF
trans-1,2-Dichloroethylene	ND	0.10	0.041		ND	0.40	0.16	2	2/25/20 20:56	BRF
1,2-Dichloropropane	ND	0.10	0.035		ND	0.46	0.16	2	2/25/20 20:56	BRF
cis-1,3-Dichloropropene	ND	0.10	0.035		ND	0.45	0.16	2	2/25/20 20:56	BRF
trans-1,3-Dichloropropene	ND	0.10	0.036		ND	0.45	0.17	2	2/25/20 20:56	BRF
Ethanol	16	4.0	1.8		30	7.5	3.4	2	2/25/20 20:56	BRF
Ethyl Acetate	ND	0.10	0.075		ND	0.36	0.27	2	2/25/20 20:56	BRF
Ethylbenzene	ND	0.10	0.058		ND	0.43	0.25	2	2/25/20 20:56	BRF
4-Ethyltoluene	ND	0.10	0.061		ND	0.49	0.30	2	2/25/20 20:56	BRF
Heptane	ND	0.10	0.059		ND	0.41	0.24	2	2/25/20 20:56	BRF
Hexachlorobutadiene	ND	0.10	0.046		ND	1.1	0.49	2	2/25/20 20:56	BRF
Hexane	ND	4.0	0.18		ND	14	0.62	2	2/25/20 20:56	BRF
2-Hexanone (MBK)	ND	0.10	0.059		ND	0.41	0.24	2	2/25/20 20:56	BRF
Isopropanol	ND	4.0	0.18		ND	9.8	0.45	2	2/25/20 20:56	BRF
Methyl tert-Butyl Ether (MTBE)	ND	0.10	0.050		ND	0.36	0.18	2	2/25/20 20:56	BRF
Methylene Chloride	0.14	1.0	0.12	J	0.50	3.5	0.42	2	2/25/20 20:56	BRF
Methyl methacrylate	ND	0.10	0.057		ND	0.41	0.23	2	2/25/20 20:56	BRF
4-Methyl-2-pentanone (MIBK)	ND	0.10	0.052		ND	0.41	0.21	2	2/25/20 20:56	BRF
Propene	ND	4.0	0.19		ND	6.9	0.32	2	2/25/20 20:56	BRF
Styrene	ND	0.10	0.062		ND	0.43	0.26	2	2/25/20 20:56	BRF
1,1,1,2-Tetrachloroethane	ND	0.18	0.066		ND	1.2	0.45	2	2/25/20 20:56	BRF
1,1,2,2-Tetrachloroethane	ND	0.10	0.044		ND	0.69	0.30	2	2/25/20 20:56	BRF
Tetrachloroethylene	ND	0.10	0.056		ND	0.68	0.38	2	2/25/20 20:56	BRF

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

ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: EW-5-021420
Sample ID: 20B0726-09
Sample Matrix: Sub Slab
Sampled: 2/14/2020 09:12

Sample Description/Location:
Sub Description/Location:
Canister ID: 1658
Canister Size: 6 liter
Flow Controller ID: 4376
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -29.5
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -5.6
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrahydrofuran	300	0.50	0.50		880	1.5	1.5	10	2/25/20 21:35	BRF
Toluene	0.12	0.10	0.052		0.45	0.38	0.19	2	2/25/20 20:56	BRF
1,2,4-Trichlorobenzene	ND	0.10	0.069		ND	0.74	0.51	2	2/25/20 20:56	BRF
1,1,1-Trichloroethane	2.0	0.10	0.037		11	0.55	0.20	2	2/25/20 20:56	BRF
1,1,2-Trichloroethane	ND	0.10	0.041		ND	0.55	0.22	2	2/25/20 20:56	BRF
Trichloroethylene	5.6	0.10	0.040		30	0.54	0.22	2	2/25/20 20:56	BRF
Trichlorofluoromethane (Freon 11)	0.31	0.40	0.076	J	1.8	2.2	0.43	2	2/25/20 20:56	BRF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.40	0.075		ND	3.1	0.58	2	2/25/20 20:56	BRF
1,2,4-Trimethylbenzene	ND	0.10	0.064		ND	0.49	0.31	2	2/25/20 20:56	BRF
1,3,5-Trimethylbenzene	ND	0.10	0.063		ND	0.49	0.31	2	2/25/20 20:56	BRF
Vinyl Acetate	ND	2.0	0.062		ND	7.0	0.22	2	2/25/20 20:56	BRF
Vinyl Chloride	ND	0.10	0.063		ND	0.26	0.16	2	2/25/20 20:56	BRF
m&p-Xylene	ND	0.20	0.12		ND	0.87	0.50	2	2/25/20 20:56	BRF
o-Xylene	ND	0.10	0.062		ND	0.43	0.27	2	2/25/20 20:56	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	91.6	70-130	2/25/20 21:35
4-Bromofluorobenzene (1)	91.5	70-130	2/25/20 20:56
4-Bromofluorobenzene (2)	75.0	70-130	2/25/20 20:56

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

ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: EW-6-021420
Sample ID: 20B0726-10
Sample Matrix: Sub Slab
Sampled: 2/14/2020 09:14

Sample Description/Location:
Sub Description/Location:
Canister ID: 2206
Canister Size: 6 liter
Flow Controller ID: 4365
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -29.5
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -5.7
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Acetone	11	4.0	1.4		26	9.5	3.3	2	2/25/20 22:17	BRF
Benzene	0.22	0.10	0.041		0.69	0.32	0.13	2	2/25/20 22:17	BRF
Benzyl chloride	ND	0.10	0.026		ND	0.52	0.13	2	2/25/20 22:17	BRF
Bromodichloromethane	ND	0.10	0.037		ND	0.67	0.25	2	2/25/20 22:17	BRF
Bromoform	ND	0.10	0.045		ND	1.0	0.47	2	2/25/20 22:17	BRF
Bromomethane	ND	0.20	0.069		ND	0.78	0.27	2	2/25/20 22:17	BRF
1,3-Butadiene	ND	0.10	0.073		ND	0.22	0.16	2	2/25/20 22:17	BRF
2-Butanone (MEK)	2.1	4.0	0.19	J	6.1	12	0.55	2	2/25/20 22:17	BRF
Carbon Disulfide	ND	1.0	0.069		ND	3.1	0.21	2	2/25/20 22:17	BRF
Carbon Tetrachloride	ND	0.10	0.033		ND	0.63	0.21	2	2/25/20 22:17	BRF
Chlorobenzene	ND	0.10	0.049		ND	0.46	0.23	2	2/25/20 22:17	BRF
Chloroethane	ND	0.10	0.098		ND	0.26	0.26	2	2/25/20 22:17	BRF
Chloroform	ND	0.10	0.037		ND	0.49	0.18	2	2/25/20 22:17	BRF
Chloromethane	ND	0.20	0.068		ND	0.41	0.14	2	2/25/20 22:17	BRF
Cyclohexane	ND	0.10	0.071		ND	0.34	0.24	2	2/25/20 22:17	BRF
Dibromochloromethane	ND	0.10	0.033		ND	0.85	0.28	2	2/25/20 22:17	BRF
1,2-Dibromoethane (EDB)	ND	0.10	0.039		ND	0.77	0.30	2	2/25/20 22:17	BRF
1,2-Dichlorobenzene	ND	0.10	0.048		ND	0.60	0.29	2	2/25/20 22:17	BRF
1,3-Dichlorobenzene	ND	0.10	0.052		ND	0.60	0.31	2	2/25/20 22:17	BRF
1,4-Dichlorobenzene	ND	0.10	0.061		ND	0.60	0.37	2	2/25/20 22:17	BRF
Dichlorodifluoromethane (Freon 12)	0.35	0.10	0.043		1.7	0.49	0.21	2	2/25/20 22:17	BRF
1,1-Dichloroethane	ND	0.10	0.030		ND	0.40	0.12	2	2/25/20 22:17	BRF
1,2-Dichloroethane	ND	0.10	0.038		ND	0.40	0.15	2	2/25/20 22:17	BRF
1,1-Dichloroethylene	ND	0.10	0.054		ND	0.40	0.22	2	2/25/20 22:17	BRF
cis-1,2-Dichloroethylene	ND	0.10	0.041		ND	0.40	0.16	2	2/25/20 22:17	BRF
trans-1,2-Dichloroethylene	ND	0.10	0.041		ND	0.40	0.16	2	2/25/20 22:17	BRF
1,2-Dichloropropane	ND	0.10	0.035		ND	0.46	0.16	2	2/25/20 22:17	BRF
cis-1,3-Dichloropropene	ND	0.10	0.035		ND	0.45	0.16	2	2/25/20 22:17	BRF
trans-1,3-Dichloropropene	ND	0.10	0.036		ND	0.45	0.17	2	2/25/20 22:17	BRF
Ethanol	4.6	4.0	1.8		8.8	7.5	3.4	2	2/25/20 22:17	BRF
Ethyl Acetate	ND	0.10	0.075		ND	0.36	0.27	2	2/25/20 22:17	BRF
Ethylbenzene	ND	0.10	0.058		ND	0.43	0.25	2	2/25/20 22:17	BRF
4-Ethyltoluene	ND	0.10	0.061		ND	0.49	0.30	2	2/25/20 22:17	BRF
Heptane	ND	0.10	0.059		ND	0.41	0.24	2	2/25/20 22:17	BRF
Hexachlorobutadiene	ND	0.10	0.046		ND	1.1	0.49	2	2/25/20 22:17	BRF
Hexane	ND	4.0	0.18		ND	14	0.62	2	2/25/20 22:17	BRF
2-Hexanone (MBK)	ND	0.10	0.059		ND	0.41	0.24	2	2/25/20 22:17	BRF
Isopropanol	ND	4.0	0.18		ND	9.8	0.45	2	2/25/20 22:17	BRF
Methyl tert-Butyl Ether (MTBE)	ND	0.10	0.050		ND	0.36	0.18	2	2/25/20 22:17	BRF
Methylene Chloride	0.20	1.0	0.12	J	0.69	3.5	0.42	2	2/25/20 22:17	BRF
Methyl methacrylate	ND	0.10	0.057		ND	0.41	0.23	2	2/25/20 22:17	BRF
4-Methyl-2-pentanone (MIBK)	ND	0.10	0.052		ND	0.41	0.21	2	2/25/20 22:17	BRF
Propene	ND	4.0	0.19		ND	6.9	0.32	2	2/25/20 22:17	BRF
Styrene	ND	0.10	0.062		ND	0.43	0.26	2	2/25/20 22:17	BRF
1,1,1,2-Tetrachloroethane	ND	0.18	0.066		ND	1.2	0.45	2	2/25/20 22:17	BRF
1,1,2,2-Tetrachloroethane	ND	0.10	0.044		ND	0.69	0.30	2	2/25/20 22:17	BRF
Tetrachloroethylene	0.11	0.10	0.056		0.73	0.68	0.38	2	2/25/20 22:17	BRF

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

ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: EW-6-021420
Sample ID: 20B0726-10
Sample Matrix: Sub Slab
Sampled: 2/14/2020 09:14

Sample Description/Location:
Sub Description/Location:
Canister ID: 2206
Canister Size: 6 liter
Flow Controller ID: 4365
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -29.5
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -5.7
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrahydrofuran	1.4	0.10	0.099		4.0	0.29	0.29	2	2/25/20 22:17	BRF
Toluene	0.10	0.10	0.052		0.38	0.38	0.19	2	2/25/20 22:17	BRF
1,2,4-Trichlorobenzene	ND	0.10	0.069		ND	0.74	0.51	2	2/25/20 22:17	BRF
1,1,1-Trichloroethane	ND	0.10	0.037		ND	0.55	0.20	2	2/25/20 22:17	BRF
1,1,2-Trichloroethane	ND	0.10	0.041		ND	0.55	0.22	2	2/25/20 22:17	BRF
Trichloroethylene	0.72	0.10	0.040		3.8	0.54	0.22	2	2/25/20 22:17	BRF
Trichlorofluoromethane (Freon 11)	0.21	0.40	0.076	J	1.2	2.2	0.43	2	2/25/20 22:17	BRF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.40	0.075		ND	3.1	0.58	2	2/25/20 22:17	BRF
1,2,4-Trimethylbenzene	ND	0.10	0.064		ND	0.49	0.31	2	2/25/20 22:17	BRF
1,3,5-Trimethylbenzene	ND	0.10	0.063		ND	0.49	0.31	2	2/25/20 22:17	BRF
Vinyl Acetate	ND	2.0	0.062		ND	7.0	0.22	2	2/25/20 22:17	BRF
Vinyl Chloride	ND	0.10	0.063		ND	0.26	0.16	2	2/25/20 22:17	BRF
m&p-Xylene	ND	0.20	0.12		ND	0.87	0.50	2	2/25/20 22:17	BRF
o-Xylene	ND	0.10	0.062		ND	0.43	0.27	2	2/25/20 22:17	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	92.2	70-130	2/25/20 22:17
4-Bromofluorobenzene (2)	76.2	70-130	2/25/20 22:17

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

ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: EW-7-021420
Sample ID: 20B0726-11
Sample Matrix: Sub Slab
Sampled: 2/14/2020 09:17

Sample Description/Location:
Sub Description/Location:
Canister ID: 1725
Canister Size: 6 liter
Flow Controller ID: 4294
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -6.9
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	Results	RL	MDL	Flag/Qual	Results	RL	MDL	Dilution	Analyzed	Analyst
Acetone	11	4.0	1.4		26	9.5	3.3	2	2/25/20 22:59	BRF
Benzene	0.31	0.10	0.041		1.00	0.32	0.13	2	2/25/20 22:59	BRF
Benzyl chloride	ND	0.10	0.026		ND	0.52	0.13	2	2/25/20 22:59	BRF
Bromodichloromethane	ND	0.10	0.037		ND	0.67	0.25	2	2/25/20 22:59	BRF
Bromoform	ND	0.10	0.045		ND	1.0	0.47	2	2/25/20 22:59	BRF
Bromomethane	ND	0.20	0.069		ND	0.78	0.27	2	2/25/20 22:59	BRF
1,3-Butadiene	ND	0.10	0.073		ND	0.22	0.16	2	2/25/20 22:59	BRF
2-Butanone (MEK)	11	4.0	0.19		32	12	0.55	2	2/25/20 22:59	BRF
Carbon Disulfide	8.1	1.0	0.069		25	3.1	0.21	2	2/25/20 22:59	BRF
Carbon Tetrachloride	ND	0.10	0.033		ND	0.63	0.21	2	2/25/20 22:59	BRF
Chlorobenzene	ND	0.10	0.049		ND	0.46	0.23	2	2/25/20 22:59	BRF
Chloroethane	ND	0.10	0.098		ND	0.26	0.26	2	2/25/20 22:59	BRF
Chloroform	0.18	0.10	0.037		0.86	0.49	0.18	2	2/25/20 22:59	BRF
Chloromethane	ND	0.20	0.068		ND	0.41	0.14	2	2/25/20 22:59	BRF
Cyclohexane	ND	0.10	0.071		ND	0.34	0.24	2	2/25/20 22:59	BRF
Dibromochloromethane	ND	0.10	0.033		ND	0.85	0.28	2	2/25/20 22:59	BRF
1,2-Dibromoethane (EDB)	ND	0.10	0.039		ND	0.77	0.30	2	2/25/20 22:59	BRF
1,2-Dichlorobenzene	ND	0.10	0.048		ND	0.60	0.29	2	2/25/20 22:59	BRF
1,3-Dichlorobenzene	ND	0.10	0.052		ND	0.60	0.31	2	2/25/20 22:59	BRF
1,4-Dichlorobenzene	ND	0.10	0.061		ND	0.60	0.37	2	2/25/20 22:59	BRF
Dichlorodifluoromethane (Freon 12)	0.34	0.10	0.043		1.7	0.49	0.21	2	2/25/20 22:59	BRF
1,1-Dichloroethane	0.20	0.10	0.030		0.81	0.40	0.12	2	2/25/20 22:59	BRF
1,2-Dichloroethane	ND	0.10	0.038		ND	0.40	0.15	2	2/25/20 22:59	BRF
1,1-Dichloroethylene	ND	0.10	0.054		ND	0.40	0.22	2	2/25/20 22:59	BRF
cis-1,2-Dichloroethylene	0.15	0.10	0.041		0.59	0.40	0.16	2	2/25/20 22:59	BRF
trans-1,2-Dichloroethylene	0.21	0.10	0.041		0.82	0.40	0.16	2	2/25/20 22:59	BRF
1,2-Dichloropropane	ND	0.10	0.035		ND	0.46	0.16	2	2/25/20 22:59	BRF
cis-1,3-Dichloropropene	ND	0.10	0.035		ND	0.45	0.16	2	2/25/20 22:59	BRF
trans-1,3-Dichloropropene	ND	0.10	0.036		ND	0.45	0.17	2	2/25/20 22:59	BRF
Ethanol	73	4.0	1.8		140	7.5	3.4	2	2/25/20 22:59	BRF
Ethyl Acetate	ND	0.10	0.075		ND	0.36	0.27	2	2/25/20 22:59	BRF
Ethylbenzene	ND	0.10	0.058		ND	0.43	0.25	2	2/25/20 22:59	BRF
4-Ethyltoluene	ND	0.10	0.061		ND	0.49	0.30	2	2/25/20 22:59	BRF
Heptane	ND	0.10	0.059		ND	0.41	0.24	2	2/25/20 22:59	BRF
Hexachlorobutadiene	ND	0.10	0.046		ND	1.1	0.49	2	2/25/20 22:59	BRF
Hexane	ND	4.0	0.18		ND	14	0.62	2	2/25/20 22:59	BRF
2-Hexanone (MBK)	ND	0.10	0.059		ND	0.41	0.24	2	2/25/20 22:59	BRF
Isopropanol	4.3	4.0	0.18		11	9.8	0.45	2	2/25/20 22:59	BRF
Methyl tert-Butyl Ether (MTBE)	ND	0.10	0.050		ND	0.36	0.18	2	2/25/20 22:59	BRF
Methylene Chloride	0.15	1.0	0.12	J	0.51	3.5	0.42	2	2/25/20 22:59	BRF
Methyl methacrylate	ND	0.10	0.057		ND	0.41	0.23	2	2/25/20 22:59	BRF
4-Methyl-2-pentanone (MIBK)	ND	0.10	0.052		ND	0.41	0.21	2	2/25/20 22:59	BRF
Propene	ND	4.0	0.19		ND	6.9	0.32	2	2/25/20 22:59	BRF
Styrene	0.17	0.10	0.062		0.71	0.43	0.26	2	2/25/20 22:59	BRF
1,1,1,2-Tetrachloroethane	ND	0.18	0.066		ND	1.2	0.45	2	2/25/20 22:59	BRF
1,1,2,2-Tetrachloroethane	ND	0.10	0.044		ND	0.69	0.30	2	2/25/20 22:59	BRF
Tetrachloroethylene	6.7	0.10	0.056		45	0.68	0.38	2	2/25/20 22:59	BRF

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

ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: EW-7-021420
Sample ID: 20B0726-11
Sample Matrix: Sub Slab
Sampled: 2/14/2020 09:17

Sample Description/Location:
Sub Description/Location:
Canister ID: 1725
Canister Size: 6 liter
Flow Controller ID: 4294
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -6
Receipt Vacuum(in Hg): -6.9
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrahydrofuran	330	0.50	0.50		980	1.5	1.5	10	2/25/20 23:39	BRF
Toluene	0.16	0.10	0.052		0.61	0.38	0.19	2	2/25/20 22:59	BRF
1,2,4-Trichlorobenzene	ND	0.10	0.069		ND	0.74	0.51	2	2/25/20 22:59	BRF
1,1,1-Trichloroethane	1.7	0.10	0.037		9.4	0.55	0.20	2	2/25/20 22:59	BRF
1,1,2-Trichloroethane	ND	0.10	0.041		ND	0.55	0.22	2	2/25/20 22:59	BRF
Trichloroethylene	15	0.10	0.040		81	0.54	0.22	2	2/25/20 22:59	BRF
Trichlorofluoromethane (Freon 11)	31	0.40	0.076		170	2.2	0.43	2	2/25/20 22:59	BRF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.40	0.075		ND	3.1	0.58	2	2/25/20 22:59	BRF
1,2,4-Trimethylbenzene	ND	0.10	0.064		ND	0.49	0.31	2	2/25/20 22:59	BRF
1,3,5-Trimethylbenzene	ND	0.10	0.063		ND	0.49	0.31	2	2/25/20 22:59	BRF
Vinyl Acetate	ND	2.0	0.062		ND	7.0	0.22	2	2/25/20 22:59	BRF
Vinyl Chloride	ND	0.10	0.063		ND	0.26	0.16	2	2/25/20 22:59	BRF
m&p-Xylene	0.13	0.20	0.12	J	0.55	0.87	0.50	2	2/25/20 22:59	BRF
o-Xylene	ND	0.10	0.062		ND	0.43	0.27	2	2/25/20 22:59	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	88.7	70-130	2/25/20 23:39
4-Bromofluorobenzene (1)	89.2	70-130	2/25/20 22:59
4-Bromofluorobenzene (2)	71.6	70-130	2/25/20 22:59

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

ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: EW-Combined-021420
Sample ID: 20B0726-12
Sample Matrix: Sub Slab
Sampled: 2/14/2020 10:30

Sample Description/Location:
Sub Description/Location:
Canister ID: 2003
Canister Size: 6 liter
Flow Controller ID: 4192
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -4
Receipt Vacuum(in Hg): -4.6
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	Results	RL	MDL	Flag/Qual	Results	RL	MDL	Dilution	Analyzed	Analyst
Acetone	5.1	4.0	1.4		12	9.5	3.3	2	2/26/20 0:21	BRF
Benzene	0.10	0.10	0.041		0.33	0.32	0.13	2	2/26/20 0:21	BRF
Benzyl chloride	ND	0.10	0.026		ND	0.52	0.13	2	2/26/20 0:21	BRF
Bromodichloromethane	ND	0.10	0.037		ND	0.67	0.25	2	2/26/20 0:21	BRF
Bromoform	ND	0.10	0.045		ND	1.0	0.47	2	2/26/20 0:21	BRF
Bromomethane	ND	0.20	0.069		ND	0.78	0.27	2	2/26/20 0:21	BRF
1,3-Butadiene	ND	0.10	0.073		ND	0.22	0.16	2	2/26/20 0:21	BRF
2-Butanone (MEK)	0.68	4.0	0.19	J	2.0	12	0.55	2	2/26/20 0:21	BRF
Carbon Disulfide	ND	1.0	0.069		ND	3.1	0.21	2	2/26/20 0:21	BRF
Carbon Tetrachloride	ND	0.10	0.033		ND	0.63	0.21	2	2/26/20 0:21	BRF
Chlorobenzene	ND	0.10	0.049		ND	0.46	0.23	2	2/26/20 0:21	BRF
Chloroethane	ND	0.10	0.098		ND	0.26	0.26	2	2/26/20 0:21	BRF
Chloroform	0.21	0.10	0.037		1.0	0.49	0.18	2	2/26/20 0:21	BRF
Chloromethane	ND	0.20	0.068		ND	0.41	0.14	2	2/26/20 0:21	BRF
Cyclohexane	ND	0.10	0.071		ND	0.34	0.24	2	2/26/20 0:21	BRF
Dibromochloromethane	ND	0.10	0.033		ND	0.85	0.28	2	2/26/20 0:21	BRF
1,2-Dibromoethane (EDB)	ND	0.10	0.039		ND	0.77	0.30	2	2/26/20 0:21	BRF
1,2-Dichlorobenzene	ND	0.10	0.048		ND	0.60	0.29	2	2/26/20 0:21	BRF
1,3-Dichlorobenzene	ND	0.10	0.052		ND	0.60	0.31	2	2/26/20 0:21	BRF
1,4-Dichlorobenzene	ND	0.10	0.061		ND	0.60	0.37	2	2/26/20 0:21	BRF
Dichlorodifluoromethane (Freon 12)	0.35	0.10	0.043		1.7	0.49	0.21	2	2/26/20 0:21	BRF
1,1-Dichloroethane	4.6	0.10	0.030		19	0.40	0.12	2	2/26/20 0:21	BRF
1,2-Dichloroethane	ND	0.10	0.038		ND	0.40	0.15	2	2/26/20 0:21	BRF
1,1-Dichloroethylene	2.6	0.10	0.054		10	0.40	0.22	2	2/26/20 0:21	BRF
cis-1,2-Dichloroethylene	1.6	0.10	0.041		6.4	0.40	0.16	2	2/26/20 0:21	BRF
trans-1,2-Dichloroethylene	ND	0.10	0.041		ND	0.40	0.16	2	2/26/20 0:21	BRF
1,2-Dichloropropane	ND	0.10	0.035		ND	0.46	0.16	2	2/26/20 0:21	BRF
cis-1,3-Dichloropropene	ND	0.10	0.035		ND	0.45	0.16	2	2/26/20 0:21	BRF
trans-1,3-Dichloropropene	ND	0.10	0.036		ND	0.45	0.17	2	2/26/20 0:21	BRF
Ethanol	7.5	4.0	1.8		14	7.5	3.4	2	2/26/20 0:21	BRF
Ethyl Acetate	ND	0.10	0.075		ND	0.36	0.27	2	2/26/20 0:21	BRF
Ethylbenzene	ND	0.10	0.058		ND	0.43	0.25	2	2/26/20 0:21	BRF
4-Ethyltoluene	ND	0.10	0.061		ND	0.49	0.30	2	2/26/20 0:21	BRF
Heptane	ND	0.10	0.059		ND	0.41	0.24	2	2/26/20 0:21	BRF
Hexachlorobutadiene	ND	0.10	0.046		ND	1.1	0.49	2	2/26/20 0:21	BRF
Hexane	ND	4.0	0.18		ND	14	0.62	2	2/26/20 0:21	BRF
2-Hexanone (MBK)	ND	0.10	0.059		ND	0.41	0.24	2	2/26/20 0:21	BRF
Isopropanol	0.95	4.0	0.18	J	2.3	9.8	0.45	2	2/26/20 0:21	BRF
Methyl tert-Butyl Ether (MTBE)	ND	0.10	0.050		ND	0.36	0.18	2	2/26/20 0:21	BRF
Methylene Chloride	ND	1.0	0.12		ND	3.5	0.42	2	2/26/20 0:21	BRF
Methyl methacrylate	ND	0.10	0.057		ND	0.41	0.23	2	2/26/20 0:21	BRF
4-Methyl-2-pentanone (MIBK)	ND	0.10	0.052		ND	0.41	0.21	2	2/26/20 0:21	BRF
Propene	ND	4.0	0.19		ND	6.9	0.32	2	2/26/20 0:21	BRF
Styrene	ND	0.10	0.062		ND	0.43	0.26	2	2/26/20 0:21	BRF
1,1,1,2-Tetrachloroethane	ND	0.18	0.066		ND	1.2	0.45	2	2/26/20 0:21	BRF
1,1,2,2-Tetrachloroethane	ND	0.10	0.044		ND	0.69	0.30	2	2/26/20 0:21	BRF
Tetrachloroethylene	2.9	0.10	0.056		20	0.68	0.38	2	2/26/20 0:21	BRF

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: EW-Combined-021420
Sample ID: 20B0726-12
Sample Matrix: Sub Slab
Sampled: 2/14/2020 10:30

Sample Description/Location:
Sub Description/Location:
Canister ID: 2003
Canister Size: 6 liter
Flow Controller ID: 4192
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -4
Receipt Vacuum(in Hg): -4.6
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrahydrofuran	ND	0.10	0.099		ND	0.29	0.29	2	2/26/20 0:21	BRF
Toluene	0.15	0.10	0.052		0.57	0.38	0.19	2	2/26/20 0:21	BRF
1,2,4-Trichlorobenzene	ND	0.10	0.069		ND	0.74	0.51	2	2/26/20 0:21	BRF
1,1,1-Trichloroethane	36	0.10	0.037		200	0.55	0.20	2	2/26/20 0:21	BRF
1,1,2-Trichloroethane	ND	0.10	0.041		ND	0.55	0.22	2	2/26/20 0:21	BRF
Trichloroethylene	19	0.10	0.040		100	0.54	0.22	2	2/26/20 0:21	BRF
Trichlorofluoromethane (Freon 11)	9.0	0.40	0.076		51	2.2	0.43	2	2/26/20 0:21	BRF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.13	0.40	0.075	J	1.0	3.1	0.58	2	2/26/20 0:21	BRF
1,2,4-Trimethylbenzene	ND	0.10	0.064		ND	0.49	0.31	2	2/26/20 0:21	BRF
1,3,5-Trimethylbenzene	ND	0.10	0.063		ND	0.49	0.31	2	2/26/20 0:21	BRF
Vinyl Acetate	ND	2.0	0.062		ND	7.0	0.22	2	2/26/20 0:21	BRF
Vinyl Chloride	ND	0.10	0.063		ND	0.26	0.16	2	2/26/20 0:21	BRF
m&p-Xylene	ND	0.20	0.12		ND	0.87	0.50	2	2/26/20 0:21	BRF
o-Xylene	ND	0.10	0.062		ND	0.43	0.27	2	2/26/20 0:21	BRF

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	88.3	70-130	2/26/20	0:21
4-Bromofluorobenzene (2)	71.9	70-130	2/26/20	0:21

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

ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: Post Carbon-021420
Sample ID: 20B0726-13
Sample Matrix: Air
Sampled: 2/14/2020 10:31

Sample Description/Location:
Sub Description/Location:
Canister ID: 1029
Canister Size: 6 liter
Flow Controller ID: 4107
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -7
Receipt Vacuum(in Hg): -7.3
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	Results	RL	MDL	Flag/Qual	Results	RL	MDL	Dilution	Analyzed	Analyst
Acetone	4.2	4.0	1.4		10	9.5	3.3	2	2/26/20 1:03	BRF
Benzene	ND	0.10	0.041		ND	0.32	0.13	2	2/26/20 1:03	BRF
Benzyl chloride	ND	0.10	0.026		ND	0.52	0.13	2	2/26/20 1:03	BRF
Bromodichloromethane	ND	0.10	0.037		ND	0.67	0.25	2	2/26/20 1:03	BRF
Bromoform	ND	0.10	0.045		ND	1.0	0.47	2	2/26/20 1:03	BRF
Bromomethane	ND	0.20	0.069		ND	0.78	0.27	2	2/26/20 1:03	BRF
1,3-Butadiene	ND	0.10	0.073		ND	0.22	0.16	2	2/26/20 1:03	BRF
2-Butanone (MEK)	0.63	4.0	0.19	J	1.9	12	0.55	2	2/26/20 1:03	BRF
Carbon Disulfide	ND	1.0	0.069		ND	3.1	0.21	2	2/26/20 1:03	BRF
Carbon Tetrachloride	ND	0.10	0.033		ND	0.63	0.21	2	2/26/20 1:03	BRF
Chlorobenzene	ND	0.10	0.049		ND	0.46	0.23	2	2/26/20 1:03	BRF
Chloroethane	ND	0.10	0.098		ND	0.26	0.26	2	2/26/20 1:03	BRF
Chloroform	ND	0.10	0.037		ND	0.49	0.18	2	2/26/20 1:03	BRF
Chloromethane	ND	0.20	0.068		ND	0.41	0.14	2	2/26/20 1:03	BRF
Cyclohexane	ND	0.10	0.071		ND	0.34	0.24	2	2/26/20 1:03	BRF
Dibromochloromethane	ND	0.10	0.033		ND	0.85	0.28	2	2/26/20 1:03	BRF
1,2-Dibromoethane (EDB)	ND	0.10	0.039		ND	0.77	0.30	2	2/26/20 1:03	BRF
1,2-Dichlorobenzene	ND	0.10	0.048		ND	0.60	0.29	2	2/26/20 1:03	BRF
1,3-Dichlorobenzene	ND	0.10	0.052		ND	0.60	0.31	2	2/26/20 1:03	BRF
1,4-Dichlorobenzene	ND	0.10	0.061		ND	0.60	0.37	2	2/26/20 1:03	BRF
Dichlorodifluoromethane (Freon 12)	0.33	0.10	0.043		1.6	0.49	0.21	2	2/26/20 1:03	BRF
1,1-Dichloroethane	4.2	0.10	0.030		17	0.40	0.12	2	2/26/20 1:03	BRF
1,2-Dichloroethane	ND	0.10	0.038		ND	0.40	0.15	2	2/26/20 1:03	BRF
1,1-Dichloroethylene	2.3	0.10	0.054		9.1	0.40	0.22	2	2/26/20 1:03	BRF
cis-1,2-Dichloroethylene	2.4	0.10	0.041		9.4	0.40	0.16	2	2/26/20 1:03	BRF
trans-1,2-Dichloroethylene	ND	0.10	0.041		ND	0.40	0.16	2	2/26/20 1:03	BRF
1,2-Dichloropropane	ND	0.10	0.035		ND	0.46	0.16	2	2/26/20 1:03	BRF
cis-1,3-Dichloropropene	ND	0.10	0.035		ND	0.45	0.16	2	2/26/20 1:03	BRF
trans-1,3-Dichloropropene	ND	0.10	0.036		ND	0.45	0.17	2	2/26/20 1:03	BRF
Ethanol	3.6	4.0	1.8	J	6.8	7.5	3.4	2	2/26/20 1:03	BRF
Ethyl Acetate	ND	0.10	0.075		ND	0.36	0.27	2	2/26/20 1:03	BRF
Ethylbenzene	ND	0.10	0.058		ND	0.43	0.25	2	2/26/20 1:03	BRF
4-Ethyltoluene	ND	0.10	0.061		ND	0.49	0.30	2	2/26/20 1:03	BRF
Heptane	ND	0.10	0.059		ND	0.41	0.24	2	2/26/20 1:03	BRF
Hexachlorobutadiene	ND	0.10	0.046		ND	1.1	0.49	2	2/26/20 1:03	BRF
Hexane	ND	4.0	0.18		ND	14	0.62	2	2/26/20 1:03	BRF
2-Hexanone (MBK)	ND	0.10	0.059		ND	0.41	0.24	2	2/26/20 1:03	BRF
Isopropanol	0.63	4.0	0.18	J	1.5	9.8	0.45	2	2/26/20 1:03	BRF
Methyl tert-Butyl Ether (MTBE)	ND	0.10	0.050		ND	0.36	0.18	2	2/26/20 1:03	BRF
Methylene Chloride	0.22	1.0	0.12	J	0.75	3.5	0.42	2	2/26/20 1:03	BRF
Methyl methacrylate	ND	0.10	0.057		ND	0.41	0.23	2	2/26/20 1:03	BRF
4-Methyl-2-pentanone (MIBK)	ND	0.10	0.052		ND	0.41	0.21	2	2/26/20 1:03	BRF
Propene	ND	4.0	0.19		ND	6.9	0.32	2	2/26/20 1:03	BRF
Styrene	ND	0.10	0.062		ND	0.43	0.26	2	2/26/20 1:03	BRF
1,1,1,2-Tetrachloroethane	ND	0.18	0.066		ND	1.2	0.45	2	2/26/20 1:03	BRF
1,1,2,2-Tetrachloroethane	ND	0.10	0.044		ND	0.69	0.30	2	2/26/20 1:03	BRF
Tetrachloroethylene	1.0	0.10	0.056		7.0	0.68	0.38	2	2/26/20 1:03	BRF

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 2/17/2020
Field Sample #: Post Carbon-021420
Sample ID: 20B0726-13
Sample Matrix: Air
Sampled: 2/14/2020 10:31

Sample Description/Location:
Sub Description/Location:
Canister ID: 1029
Canister Size: 6 liter
Flow Controller ID: 4107
Sample Type: 30 min

Work Order: 20B0726
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -7
Receipt Vacuum(in Hg): -7.3
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrahydrofuran	ND	0.10	0.099		ND	0.29	0.29	2	2/26/20 1:03	BRF
Toluene	ND	0.10	0.052		ND	0.38	0.19	2	2/26/20 1:03	BRF
1,2,4-Trichlorobenzene	ND	0.10	0.069		ND	0.74	0.51	2	2/26/20 1:03	BRF
1,1,1-Trichloroethane	0.44	0.10	0.037		2.4	0.55	0.20	2	2/26/20 1:03	BRF
1,1,2-Trichloroethane	ND	0.10	0.041		ND	0.55	0.22	2	2/26/20 1:03	BRF
Trichloroethylene	1.1	0.10	0.040		5.9	0.54	0.22	2	2/26/20 1:03	BRF
Trichlorofluoromethane (Freon 11)	20	0.40	0.076		110	2.2	0.43	2	2/26/20 1:03	BRF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.40	0.075		ND	3.1	0.58	2	2/26/20 1:03	BRF
1,2,4-Trimethylbenzene	ND	0.10	0.064		ND	0.49	0.31	2	2/26/20 1:03	BRF
1,3,5-Trimethylbenzene	ND	0.10	0.063		ND	0.49	0.31	2	2/26/20 1:03	BRF
Vinyl Acetate	ND	2.0	0.062		ND	7.0	0.22	2	2/26/20 1:03	BRF
Vinyl Chloride	ND	0.10	0.063		ND	0.26	0.16	2	2/26/20 1:03	BRF
m&p-Xylene	ND	0.20	0.12		ND	0.87	0.50	2	2/26/20 1:03	BRF
o-Xylene	ND	0.10	0.062		ND	0.43	0.27	2	2/26/20 1:03	BRF

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	91.1	70-130	2/26/20	1:03
4-Bromofluorobenzene (2)	73.6	70-130	2/26/20	1:03

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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
20B0726-01 [IA-1-021420]	B252961	1.5	1	N/A	1000	400	855	02/24/20
20B0726-02 [IA-2-021420]	B252961	1.5	1	N/A	1000	400	855	02/24/20
20B0726-03 [IA-3-021420]	B252961	1.5	1	N/A	1000	400	855	02/24/20
20B0726-04 [IA-4-021420]	B252961	1.5	1	N/A	1000	400	855	02/24/20
20B0726-05 [IA-5-021420]	B252961	1.5	1	N/A	1000	400	855	02/24/20
20B0726-06 [IA-6-021420]	B252961	1.5	1	N/A	1000	400	855	02/24/20
20B0726-07 [IA-7-021420]	B252961	1.5	1	N/A	1000	400	855	02/24/20
20B0726-07RE1 [IA-7-021420]	B252961	1.5	1	N/A	1000	400	150	02/24/20
20B0726-08 [AA-1-021420]	B252961	1.5	1	N/A	1000	400	855	02/24/20

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
20B0726-09 [EW-5-021420]	B253051	1.5	1	N/A	1000	400	300	02/25/20
20B0726-09RE1 [EW-5-021420]	B253051	1.5	1	N/A	1000	400	60	02/25/20
20B0726-10 [EW-6-021420]	B253051	1.5	1	N/A	1000	400	300	02/25/20
20B0726-11 [EW-7-021420]	B253051	1.5	1	N/A	1000	400	300	02/25/20
20B0726-11RE1 [EW-7-021420]	B253051	1.5	1	N/A	1000	400	60	02/25/20
20B0726-12 [EW-Combined-021420]	B253051	1.5	1	N/A	1000	400	300	02/25/20
20B0726-13 [Post Carbon-021420]	B253051	1.5	1	N/A	1000	400	300	02/25/20

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Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B252961 - TO-15 Prep											
Blank (B252961-BLK1)					Prepared & Analyzed: 02/24/20						
Acetone	ND	1.4									
Benzene	ND	0.035									
Benzyl chloride	ND	0.035									
Bromodichloromethane	ND	0.035									
Bromoform	ND	0.035									
Bromomethane	ND	0.035									
1,3-Butadiene	ND	0.035									
2-Butanone (MEK)	ND	1.4									
Carbon Disulfide	ND	0.35									
Carbon Tetrachloride	ND	0.035									
Chlorobenzene	ND	0.035									
Chloroethane	ND	0.035									
Chloroform	ND	0.035									
Chloromethane	ND	0.070									
Cyclohexane	ND	0.035									
Dibromochloromethane	ND	0.035									
1,2-Dibromoethane (EDB)	ND	0.035									
1,2-Dichlorobenzene	ND	0.035									
1,3-Dichlorobenzene	ND	0.035									
1,4-Dichlorobenzene	ND	0.035									
Dichlorodifluoromethane (Freon 12)	ND	0.035									
1,1-Dichloroethane	ND	0.035									
1,2-Dichloroethane	ND	0.035									
1,1-Dichloroethylene	ND	0.035									
cis-1,2-Dichloroethylene	ND	0.035									
trans-1,2-Dichloroethylene	ND	0.035									
1,2-Dichloropropane	ND	0.035									
cis-1,3-Dichloropropene	ND	0.035									
trans-1,3-Dichloropropene	ND	0.035									
Ethanol	ND	1.4									
Ethyl Acetate	ND	0.035									
Ethylbenzene	ND	0.035									
4-Ethyltoluene	ND	0.035									
Heptane	ND	0.035									
Hexachlorobutadiene	ND	0.035									
Hexane	ND	1.4									
2-Hexanone (MBK)	ND	0.035									
Isopropanol	ND	1.4									
Methyl tert-Butyl Ether (MTBE)	ND	0.035									
Methylene Chloride	ND	0.35									
Methyl methacrylate	ND	0.035									
4-Methyl-2-pentanone (MIBK)	ND	0.035									
Propene	ND	1.4									
Styrene	ND	0.035									
1,1,1,2-Tetrachloroethane	ND	0.064									
1,1,2,2-Tetrachloroethane	ND	0.035									

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Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B252961 - TO-15 Prep											
Blank (B252961-BLK1)					Prepared & Analyzed: 02/24/20						
Tetrachloroethylene	ND	0.035									
Tetrahydrofuran	ND	0.035									
Toluene	ND	0.035									
1,2,4-Trichlorobenzene	ND	0.035									
1,1,1-Trichloroethane	ND	0.035									
1,1,2-Trichloroethane	ND	0.035									
Trichloroethylene	ND	0.035									
Trichlorofluoromethane (Freon 11)	ND	0.14									
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14									
1,2,4-Trimethylbenzene	ND	0.035									
1,3,5-Trimethylbenzene	ND	0.035									
Vinyl Acetate	ND	0.70									
Vinyl Chloride	ND	0.035									
m&p-Xylene	ND	0.070									
o-Xylene	ND	0.035									
Surrogate: 4-Bromofluorobenzene (1)	*7.28*				*8.00*		*91.0*	*70-130*			
Surrogate: 4-Bromofluorobenzene (2)	*6.00*				*8.00*		*75.0*	*70-130*			
LCS (B252961-BS1)					Prepared & Analyzed: 02/24/20						
Acetone	5.43				5.00		109	70-130			
Benzene	4.08				5.00		81.6	70-130			
Benzyl chloride	4.66				5.00		93.1	70-130			
Bromodichloromethane	4.33				5.00		86.6	70-130			
Bromoform	4.92				5.00		98.3	70-130			
Bromomethane	4.07				5.00		81.4	70-130			
1,3-Butadiene	4.36				5.00		87.2	70-130			
2-Butanone (MEK)	4.61				5.00		92.1	70-130			
Carbon Disulfide	4.04				5.00		80.8	70-130			
Carbon Tetrachloride	4.48				5.00		89.5	70-130			
Chlorobenzene	4.43				5.00		88.5	70-130			
Chloroethane	4.34				5.00		86.8	70-130			
Chloroform	4.02				5.00		80.3	70-130			
Chloromethane	4.28				5.00		85.6	70-130			
Cyclohexane	3.72				5.00		74.4	70-130			
Dibromochloromethane	4.78				5.00		95.5	70-130			
1,2-Dibromoethane (EDB)	4.48				5.00		89.7	70-130			
1,2-Dichlorobenzene	4.39				5.00		87.9	70-130			
1,3-Dichlorobenzene	4.57				5.00		91.3	70-130			
1,4-Dichlorobenzene	4.39				5.00		87.9	70-130			
Dichlorodifluoromethane (Freon 12)	4.68				5.00		93.6	70-130			
1,1-Dichloroethane	4.04				5.00		80.8	70-130			
1,2-Dichloroethane	4.12				5.00		82.4	70-130			
1,1-Dichloroethylene	4.00				5.00		79.9	70-130			
cis-1,2-Dichloroethylene	3.83				5.00		76.7	70-130			
trans-1,2-Dichloroethylene	3.96				5.00		79.2	70-130			
1,2-Dichloropropane	4.28				5.00		85.6	70-130			

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Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B252961 - TO-15 Prep											
LCS (B252961-BS1)					Prepared & Analyzed: 02/24/20						
cis-1,3-Dichloropropene	3.81				5.00		76.2	70-130			
trans-1,3-Dichloropropene	4.23				5.00		84.5	70-130			
Ethanol	5.68				5.00		114	70-130			
Ethyl Acetate	3.80				5.00		76.0	70-130			
Ethylbenzene	4.47				5.00		89.5	70-130			
4-Ethyltoluene	4.58				5.00		91.7	70-130			
Heptane	4.17				5.00		83.5	70-130			
Hexachlorobutadiene	3.98				5.00		79.5	70-130			
Hexane	5.19				5.00		104	70-130			
2-Hexanone (MBK)	5.65				5.00		113	70-130			
Isopropanol	4.78				5.00		95.7	70-130			
Methyl tert-Butyl Ether (MTBE)	3.82				5.00		76.5	70-130			
Methylene Chloride	4.38				5.00		87.7	70-130			
Methyl methacrylate	4.44				5.00		88.8	70-130			
4-Methyl-2-pentanone (MIBK)	5.06				5.00		101	70-130			
Propene	4.64				5.00		92.8	70-130			
Styrene	4.52				5.00		90.4	70-130			
1,1,1,2-Tetrachloroethane	0.768				0.910		84.4	70-130			
1,1,2,2-Tetrachloroethane	4.66				5.00		93.1	70-130			
Tetrachloroethylene	4.15				5.00		82.9	70-130			
Tetrahydrofuran	4.31				5.00		86.3	70-130			
Toluene	4.52				5.00		90.4	70-130			
1,2,4-Trichlorobenzene	3.97				5.00		79.4	70-130			
1,1,1-Trichloroethane	4.06				5.00		81.1	70-130			
1,1,2-Trichloroethane	4.63				5.00		92.6	70-130			
Trichloroethylene	4.18				5.00		83.7	70-130			
Trichlorofluoromethane (Freon 11)	4.77				5.00		95.4	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	4.00				5.00		80.1	70-130			
1,2,4-Trimethylbenzene	4.63				5.00		92.7	70-130			
1,3,5-Trimethylbenzene	4.72				5.00		94.4	70-130			
Vinyl Acetate	4.10				5.00		82.0	70-130			
Vinyl Chloride	4.22				5.00		84.5	70-130			
m&p-Xylene	9.38				10.0		93.8	70-130			
o-Xylene	4.69				5.00		93.9	70-130			
Surrogate: 4-Bromofluorobenzene (1)	*7.29*				*8.00*		*91.1*	*70-130*			
Surrogate: 4-Bromofluorobenzene (2)	*5.96*				*8.00*		*74.4*	*70-130*			

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Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B253051 - TO-15 Prep											
Blank (B253051-BLK1)					Prepared & Analyzed: 02/25/20						
Acetone	ND	1.4									
Benzene	ND	0.035									
Benzyl chloride	ND	0.035									
Bromodichloromethane	ND	0.035									
Bromoform	ND	0.035									
Bromomethane	ND	0.035									
1,3-Butadiene	ND	0.035									
2-Butanone (MEK)	ND	1.4									
Carbon Disulfide	ND	0.35									
Carbon Tetrachloride	ND	0.035									
Chlorobenzene	ND	0.035									
Chloroethane	ND	0.035									
Chloroform	ND	0.035									
Chloromethane	ND	0.070									
Cyclohexane	ND	0.035									
Dibromochloromethane	ND	0.035									
1,2-Dibromoethane (EDB)	ND	0.035									
1,2-Dichlorobenzene	ND	0.035									
1,3-Dichlorobenzene	ND	0.035									
1,4-Dichlorobenzene	ND	0.035									
Dichlorodifluoromethane (Freon 12)	ND	0.035									
1,1-Dichloroethane	ND	0.035									
1,2-Dichloroethane	ND	0.035									
1,1-Dichloroethylene	ND	0.035									
cis-1,2-Dichloroethylene	ND	0.035									
trans-1,2-Dichloroethylene	ND	0.035									
1,2-Dichloropropane	ND	0.035									
cis-1,3-Dichloropropene	ND	0.035									
trans-1,3-Dichloropropene	ND	0.035									
Ethanol	ND	1.4									
Ethyl Acetate	ND	0.035									
Ethylbenzene	ND	0.035									
4-Ethyltoluene	ND	0.035									
Heptane	ND	0.035									
Hexachlorobutadiene	ND	0.035									
Hexane	ND	1.4									
2-Hexanone (MBK)	ND	0.035									
Isopropanol	ND	1.4									
Methyl tert-Butyl Ether (MTBE)	ND	0.035									
Methylene Chloride	ND	0.35									
Methyl methacrylate	ND	0.035									
4-Methyl-2-pentanone (MIBK)	ND	0.035									
Propene	ND	1.4									
Styrene	ND	0.035									
1,1,1,2-Tetrachloroethane	ND	0.064									
1,1,2,2-Tetrachloroethane	ND	0.035									

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Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B253051 - TO-15 Prep											
Blank (B253051-BLK1)					Prepared & Analyzed: 02/25/20						
Tetrachloroethylene	ND	0.035									
Tetrahydrofuran	ND	0.035									
Toluene	ND	0.035									
1,2,4-Trichlorobenzene	ND	0.035									
1,1,1-Trichloroethane	ND	0.035									
1,1,2-Trichloroethane	ND	0.035									
Trichloroethylene	ND	0.035									
Trichlorofluoromethane (Freon 11)	ND	0.14									
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14									
1,2,4-Trimethylbenzene	ND	0.035									
1,3,5-Trimethylbenzene	ND	0.035									
Vinyl Acetate	ND	0.70									
Vinyl Chloride	ND	0.035									
m&p-Xylene	ND	0.070									
o-Xylene	ND	0.035									
Surrogate: 4-Bromofluorobenzene (1)	*7.36*				*8.00*		*92.0*	*70-130*			
Surrogate: 4-Bromofluorobenzene (2)	*6.08*				*8.00*		*75.9*	*70-130*			
LCS (B253051-BS1)					Prepared & Analyzed: 02/25/20						
Acetone	5.21				5.00		104	70-130			
Benzene	3.96				5.00		79.1	70-130			
Benzyl chloride	4.36				5.00		87.2	70-130			
Bromodichloromethane	4.28				5.00		85.6	70-130			
Bromoform	4.66				5.00		93.2	70-130			
Bromomethane	3.95				5.00		79.0	70-130			
1,3-Butadiene	4.13				5.00		82.6	70-130			
2-Butanone (MEK)	4.48				5.00		89.5	70-130			
Carbon Disulfide	3.95				5.00		78.9	70-130			
Carbon Tetrachloride	4.37				5.00		87.4	70-130			
Chlorobenzene	4.19				5.00		83.9	70-130			
Chloroethane	4.16				5.00		83.2	70-130			
Chloroform	3.94				5.00		78.8	70-130			
Chloromethane	4.15				5.00		82.9	70-130			
Cyclohexane	3.64				5.00		72.9	70-130			
Dibromochloromethane	4.52				5.00		90.4	70-130			
1,2-Dibromoethane (EDB)	4.19				5.00		83.8	70-130			
1,2-Dichlorobenzene	4.08				5.00		81.5	70-130			
1,3-Dichlorobenzene	4.22				5.00		84.4	70-130			
1,4-Dichlorobenzene	4.08				5.00		81.6	70-130			
Dichlorodifluoromethane (Freon 12)	4.54				5.00		90.7	70-130			
1,1-Dichloroethane	3.96				5.00		79.3	70-130			
1,2-Dichloroethane	4.05				5.00		81.0	70-130			
1,1-Dichloroethylene	3.89				5.00		77.8	70-130			
cis-1,2-Dichloroethylene	3.75				5.00		75.0	70-130			
trans-1,2-Dichloroethylene	3.88				5.00		77.7	70-130			
1,2-Dichloropropane	4.17				5.00		83.4	70-130			

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Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B253051 - TO-15 Prep											
LCS (B253051-BS1)					Prepared & Analyzed: 02/25/20						
cis-1,3-Dichloropropene	3.70				5.00		73.9	70-130			
trans-1,3-Dichloropropene	4.10				5.00		81.9	70-130			
Ethanol	5.37				5.00		107	70-130			
Ethyl Acetate	3.80				5.00		76.0	70-130			
Ethylbenzene	4.23				5.00		84.7	70-130			
4-Ethyltoluene	4.33				5.00		86.6	70-130			
Heptane	4.13				5.00		82.7	70-130			
Hexachlorobutadiene	3.74				5.00		74.9	70-130			
Hexane	5.08				5.00		102	70-130			
2-Hexanone (MBK)	5.34				5.00		107	70-130			
Isopropanol	4.55				5.00		91.0	70-130			
Methyl tert-Butyl Ether (MTBE)	3.71				5.00		74.3	70-130			
Methylene Chloride	4.27				5.00		85.5	70-130			
Methyl methacrylate	4.30				5.00		86.0	70-130			
4-Methyl-2-pentanone (MIBK)	4.86				5.00		97.2	70-130			
Propene	4.52				5.00		90.4	70-130			
Styrene	4.20				5.00		84.0	70-130			
1,1,1,2-Tetrachloroethane	0.758				0.910		83.3	70-130			
1,1,2,2-Tetrachloroethane	4.38				5.00		87.7	70-130			
Tetrachloroethylene	3.88				5.00		77.5	70-130			
Tetrahydrofuran	4.25				5.00		85.1	70-130			
Toluene	4.26				5.00		85.1	70-130			
1,2,4-Trichlorobenzene	3.57				5.00		71.3	70-130			
1,1,1-Trichloroethane	3.99				5.00		79.9	70-130			
1,1,2-Trichloroethane	4.39				5.00		87.8	70-130			
Trichloroethylene	4.09				5.00		81.9	70-130			
Trichlorofluoromethane (Freon 11)	4.52				5.00		90.5	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	3.91				5.00		78.2	70-130			
1,2,4-Trimethylbenzene	4.34				5.00		86.7	70-130			
1,3,5-Trimethylbenzene	4.38				5.00		87.7	70-130			
Vinyl Acetate	3.93				5.00		78.6	70-130			
Vinyl Chloride	4.13				5.00		82.6	70-130			
m&p-Xylene	8.90				10.0		89.0	70-130			
o-Xylene	4.42				5.00		88.5	70-130			
Surrogate: 4-Bromofluorobenzene (1)	*7.40*				*8.00*		*92.4*	*70-130*			
Surrogate: 4-Bromofluorobenzene (2)	*5.99*				*8.00*		*74.8*	*70-130*			

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Note: Blank Subtraction is not performed unless otherwise noted

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
RL	Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
LCS Dup	Duplicate Laboratory Control Sample
MS	Matrix Spike Sample
MS Dup	Duplicate Matrix Spike Sample
REC	Recovery
QC	Quality Control
ppbv	Parts per billion volume
EPA	United States Environmental Protection Agency
% REC	Percent Recovery
ND	Not Detected
N/A	Not Applicable
DL	Detection Limit
NC	Not Calculated
LFB/LCS	Lab Fortified Blank/Lab Control Sample
ORP	Oxidation-Reduction Potential
wet	Not dry weight corrected
% wt	Percent weight
Kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
ng	Nanogram
L	Liter
mL	Milliliter
µL	Microliter
m3	Cubic Meter
EPH	Extractable Petroleum Hydrocarbons
VPH	Volatile Petroleum Hydrocarbons
APH	Air Petroleum Hydrocarbons
FID	Flame Ionization Detector
PID	Photo Ionization Detector
	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).

ANALYST

RLF	Rebecca Faust
RJM	Raymond J. McCarthy
STATION	PDF Management Station
NJP	Nicholas J. Pollard
BRF	Brittany R. Fisk

con-test® ANALYTICAL LABORATORY
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CERTIFICATIONS

Certified Analyses included in this Report

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

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CERTIFICATIONS

Certified Analyses included in this Report

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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2021
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332 20B0726
Fax: 413-525-6405
Email: info@contestlabs.com
39 Spruce Street
East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD (AIR)

RJM

Company Name: WorleE+I
Address: 271 Mill Rd - Chelmsford, MA 01824
Phone: 978-692-9090
Project Name: Textron Cumberland
Project Location: Providence, RI
Project Number: See PM
Project Manager: Herb Colby
Con-Test Quote Name/Number: See PM
Invoice Recipient:
Sampled By: Mark Maggio

Requested Turnaround Time
7-Day ☒ 10-Day ☐
Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☒ EXCEL ☒
Other: EDD
CLP Like Data Pkg Required: ☐
Email To:
Fax To #:

ANALYSIS REQUESTED

Lab Use	Client Use	Collection Data		Duration	Flow Rate	Matrix	Volume	TO-15 Full Scan				" Hg			Please fill out completely, sign, date and retain the yellow copy for your records
Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Total Minutes Sampled	☐ m³/min ☐ L/min	Code	☐ Liters ☐ m³					Initial Pressure	Final Pressure	Lab Receipt Pressure	Summa Can ID / Flow Controller ID
1	IA-1-021420	2/14/20 750	2/14/20 824	30	ok 200	IA	6	X				-29	-5	-16	1072 / 1202
2	IA-2-021420	2/14/20 810	2/14/20 840	30	ok 200	IA	6	X				-29	-6	-29	2025 / 1073
3	IA-3-021420	2/14/20 1362	2/14/20 1203	30	200	IA	6	X				-29	-5	-42	1302 / 1203
4	IA-4-021420	2/14/20 810	2/14/20 840	30	200	IA	6	X				-28	-5	-27	2183 / 1283
5	IA-5-021420	2/14/20 759	2/14/20 829	30	200	IA	6	X				-30	-6	-23	1972 / 1375
6	IA-6-021420	2/14/20 758	2/14/20 828	30	200	IA	6	X				-30	-6	-23	1811 / 1183
7	IA-7-021420	2/14/20 801	2/14/20 831	30	200	IA	6	Y				-30	-6	-36	1808 / 1366
8	AA-1-021420	2/14/20 807	2/14/20 837	30	200	AmB	6	Y				-30	-6	-47	01019 / 1177
9	EB-5-021420	2/14/20 842	2/14/20 912	30	200	SS	6	Y				-29.5	-6	-26	1658 / 1376

Summa canisters and flow controllers must be returned within 15 days of receipt or rental fees will apply

For summa canister and flow controller information please refer to Con-Test's Air Media Agreement

Comments:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Matrix Codes:
SG = SOIL GAS
IA = INDOOR AIR
AMB = AMBIENT
SS = SUB SLAB
D = DUP
BL = BLANK
O = Other

Relinquished by: (signature) Mark Maggio	Date/Time: 2/17/2020 0800	Detection Limit Requirements	Special Requirements
Received by: (signature)	Date/Time: 2/17/20 1100	MA	☐ MA MCP Required
Relinquished by: (signature)	Date/Time: 2/17/20 1545		MCP Certification Form Required
Received by: (signature)	Date/Time: 2/17/2015:45	CT ✓	☐ CT RCP Required
Relinquished by: (signature)	Date/Time:		RCP Certification Form Required
Received by: (signature)	Date/Time:	Other	☐ Other

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NELAC and AIHA-LAP, LLC Accredited

Project Entity
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

con-test ANALYTICAL LABORATORY

Phone: 413-525-2332 20B0726
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http://www.contestlabs.com

CHAIN OF CUSTODY RECORD (AIR)

Doc #378 Rev 1_03242017

39 Spruce Street
East Longmeadow, MA 01028

Company Name: Weavr E&P
Address: 271 Mill Rd. Chatham, MA 02633
Phone: 978-692-9090
Project Name: Textron Gorham
Project Location: Providence, RI
Project Number: See PM
Project Manager: Herb Colby
Con-Test Quote Name/Number: See PM
Invoice Recipient:
Sampled By: Mark Massoire

Requested Turnaround Time
7-Day ☑ 10-Day ☐
Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: EDP
CLP Like Data Pkg Required: ☐
Email To:
Fax To #:

ANALYSIS REQUESTED

Lab Use	Client Use	Collection Data		Duration	Flow Rate	Matrix	Volume	TO-15 Conc Level				" Hg			Please fill out completely, sign, date and retain the yellow copy for your records	
Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Total Minutes Sampled	☐ m³/min ☑ L/min	Code	☑ Liters ☐ m³					Initial Pressure	Final Pressure	Lab Receipt Pressure	Summa Can ID	Flow Controller ID
10	EW-6-021420	2/14/20 8:47	2/14/20 9:14	30	200	SS	6	X				-29.5	-6	-5.7	2206	11365
11 (12 Dup)	EW-7-021420	2/14/20 8:47	2/14/20 9:17	30	200	SS	6	X				-29	-6	-6.9	1725	11294
12 (11 Dup)	EW-Combined-021420	2/14/20 10:00	2/14/20 10:30	30	200	SS	6	X				-28	-4	-4.6	2003	4192
13	Post Carbon-021420	2/14/20 10:01	2/14/20 10:31	30	200	0	C	Y				-30	-7	-7.3	1029	4107

Comments:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Matrix Codes:
SG = SOIL GAS
IA = INDOOR AIR
AMB = AMBIENT
SS = SUB SLAB
D = DUP
BL = BLANK
O = Other_____

Relinquished by: (signature) Mark Massoire	Date/Time: 2/17/2020 Office	
Received by: (signature)	Date/Time: 2/17/20 1:00	
Relinquished by: (signature)	Date/Time: 2/17/20 3:40	
Received by: (signature)	Date/Time: 2/17/20 15:45	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ Other

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NELAC and AIHA-LAP, LLC Accredited

Project Entity
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ *AIHA-LAP, LLC*

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples_____

con-test® ANALYTICAL LABORATORY

Doc# 278 Rev 6 2017

Air Media Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Wood

Received By AP Date 2/17/20 Time 15:45

How were the samples received? In Cooler ____ On Ice ____ No Ice ____
In Box T Ambient ____ Melted Ice ____

Were samples within Temperature Compliance? 2-6°C NA By Gun # ____ Actual Temp - ____
By Blank # ____ Actual Temp - ____

Was Custody Seal Intact? N/A Were Samples Tampered with? N/A

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there any loose caps/valves on any samples? F

Is COC in ink/ Legible? T

Did COC Include all Client T Analysis T Sampler Name T
Pertinent Information? Project T ID's T Collection Dates/Times T

Are Sample Labels filled out and legible? T

Are there Rushes? F Who was notified? ____

Samples are received within holding time? T

Proper Media Used? T Individually Certified Cans? F

Are there Trip Blanks? F Is there enough Volume? T

Containers:	#	Size	Regulator	Duration	Accessories:			
Summa Cans	14	6L	14	30 min	Nut/Ferrule	5	IC Train	
Tedlar Bags					Tubing	15		
TO-17 Tubes					T-Connector		Shipping Charges	
Radiello					Syringe			
Pufs/TO-11s					Tedlar			

Can #'s					Reg #'s				
1072	1808				4202	4366			
2025	1019				4073	4177			
1302	1658				4203	4376			
2183	2206				4283	4365			
1972	1725				4375	4294			
1811	2003				4183	4192			
Unused Media	1029				Pufs/TO-17's	4107			
1881	4179								

Comments:

IA-3 has the can/reg for the sample time on COC, tag labeled 7:51 - 8:21

Appendix B

Analytical Laboratory Detection Limits

Con-Test Analytical Laboratory

1/30/2015

Analytical Method Information

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

Analytical Method Information

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

Appendix C

Outdoor Reference Sample Results

Appendix C.
Summary of Analytical Results - Outdoor Air Reference Sampling
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:		Outdoor Air Reference Location																								
Location:		AA-1																								
Sample ID:		AA-1	AA-1-020309	AA-1-021109	AA-1-021809	AA-1-022609	AA-1-030609	AA-1-033109	AA-1-041409	AA-1-042409	AA-1-051509	AA-1-061109	AA-1-091709	AA-1-092409	AA-1-100109	AA-1-100809	AA-1-122909	AA-1-012810	AA-1-020510	AA-1-021210	AA-1-021910	AA-1-032610	AA-1-043010	AA-1-052810	AA-1-070110
Sample Date:		1/16/2009	2/3/2009	2/11/2009	2/18/2009	2/26/2009	3/6/2009	3/31/2009	4/14/2009	4/24/2009	5/15/2009	6/11/2009	9/17/2009	9/24/2009	10/1/2009	10/8/2009	12/29/2009	1/28/2010	2/5/2010	2/12/2010	2/19/2010	3/26/2010	4/30/2010	5/28/2010	7/1/2010
Analyte	**Units**																									
1,1,1,2-Tetrachloroethane	ug/m3																									
1,1,1-Trichloroethane	ug/m3	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	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
1,1,2,2-Tetrachloroethane	ug/m3	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	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	ug/m3	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	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	ug/m3	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	0.2 U	0.2 U	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	ug/m3	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	0.2 U	0.2 U	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	ug/m3	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	0.75 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
1,2,4-Trimethylbenzene	ug/m3	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	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dibromoethane (EDB)	ug/m3	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	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	ug/m3	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	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	ug/m3	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	0.2 U	0.2 U	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	ug/m3	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	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	ug/m3	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	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	ug/m3	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	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3-Butadiene	ug/m3	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	0.11 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
1,3-Dichlorobenzene	ug/m3	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	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	ug/m3	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	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-Dioxane	ug/m3																									
2-Butanone	ug/m3	0.58	1.2	2.4	3.2	1.6	0.67	1.7	0.11 U	1.6	1.6	1.1	1.7	0.84	1.2	1.2	2	0.81	1.6	1.6	0.88	1.5	1.4	2.4	2.3
2-Hexanone	ug/m3	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	0.2 U	0.2 U	0.32	0.2 U	0.2 U	0.29	0.29	0.49	0.49
4-Ethyltoluene	ug/m3	0.25 U	0.25 U	0.25 U	0.6	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	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	ug/m3	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	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	0.2 U
Acetone	ug/m3	7.3	8	15	22	8.4	5.9	12	1.1	27	9.5	10	10	9.6	5.4	17	11	3.5	7.6	5	3.7	9.5	12	20	13
Benzene	ug/m3	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	0.42	0.79	0.68	0.63	0.41	0.69	0.35	0.19	0.16 U
Benzyl chloride	ug/m3	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.19 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	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	ug/m3	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	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	ug/m3	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	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	ug/m3	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	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	ug/m3	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	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
Carbon tetrachloride	ug/m3	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	0.39	0.42	0.39	0.31 U	0.43	0.49	0.47	0.52	0.51
Chlorobenzene	ug/m3	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	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	ug/m3	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	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	ug/m3	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	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Chloromethane	ug/m3	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	1.6	1.1	1.2	1.3	1.1	1.4	0.78	1.1	0.96
cis-1,2-Dichloroethene	ug/m3	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	0.2 U	0.2 U	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	ug/m3	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	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	ug/m3	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	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	ug/m3	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	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	ug/m3	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	2.1	2.3	2.4	2.5	2.9	1.8	2.1	2.5	2.4
Ethanol	ug/m3	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	3.8	5.4	5.1	7.2	1.2	4.9	4	3.3	4
Ethyl acetate	ug/m3	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	0.18 U	0.18 U	0.18 U	0.18 U	1.1	0.18 U	0.18 U	0.18 U	0.18 U
Ethylbenzene	ug/m3	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	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.82
Hexachlorobutadiene	ug/m3	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	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
Hexane	ug/m3	1.5	0.75	1.1	2.9	0.38	2.8	2.2	0.13 U	0.56	0.37	0.59	0.48	1.4	0.45	4.5	0.62	0.36	0.53	0.91	0.24	0.23	1.1	0.51	0.37
Isopropyl alcohol	ug/m3	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	0.54	0.56	2.7	1.5	0.8	0.73	0.69	1.6	0.79
m,p-Xylene	ug/m3	0.43 U	0.72	1.4	6.4	0.44	0.43 U	0.43 U	0.31 U	0.43 U	0.49	0.73	0.62	0.59	0.43 U	0.43 U	0.43 U	0.43 U	0.5	0.47	0.43 U	0.49	0.43 U	0.43 U	2.2
Methyl methacrylate	ug/m3																									
Methylene chloride	ug/m3	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	4.6	1.3	1.9	1.7	0.7 U	0.7 U	0.7 U	0.35 U	1.1
Methyl-t-butyl ether	ug/m3	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Naphthalene	ug/m3																									
n-Heptane	ug/m3	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	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
o-Xylene	ug/m3	0.22 U	0.27	0.53	2.2	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.24	0.27	0.23	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.46
Propylene (Propene)	ug/m3	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	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.87 U	0.87 U
Styrene	ug/m3	0.21 U	0.21 U	0.21 U	0.28	0.21 U	0.21 U	0.21 U	0.15 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Tetrachloroethene	ug/m3	0.34 U	0.34 U	0.73	0.77	0.34 U	0.34 U	0.34 U	0.24 U	0.34 U	0.34 U	0.34 U	0.52	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Tetrahydrofuran	ug/m3	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	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
Toluene	ug/m3	0.94	1.5	3.2	14	0.71	0.99	0.82	0.14 U	0.72	2.6	2.1	1.9	2	0.61	0.5	0.78	0.94	0.64	0.97	0.46	1.1	0.75	0.63	0.57
trans-1,2-Dichloroethene	ug/m3	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	0.2 U	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	ug/m3	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	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	ug/m3	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	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
Trichlorofluoromethane	ug/m3	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	2.2	1.2	1.2	1.6	1.5	1.5	1.2	1.4	1.3
Trichlorotrifluoroethane	ug/m3	0.68	0.53	0.5	0.47	0.64	0.48	0.51	0.27 U	0.64	0.67	0.56	0.47	0.49	0.45	0.46	0.54	0.49	0.55	0.54	0.54	0.62	0.45	0.58	0.56
Vinyl acetate	ug/m3	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	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
Vinyl chloride	ug/m3	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	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter

Prepared By: AKN, 2/28/2020
Checked By: HWC, 2/28/2020

Appendix C.
Summary of Analytical Results - Outdoor Air Reference Sampling
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:		Outdoor Air Reference Location																							
Location:		AA-1																							
Sample ID:		AA-1-091610	AA-1-120710	AA-1-021711	AA-1-060211	AA-1-091511	AA-1-120811	AA-1-030812	AA-1-061412	AA-1-091312	AA-1-010313	AA-1-031513	AA-1-060713	AA-1-090613	AA-1-100313	AA-1-121313	AA-1-030714	AA-1-061314	AA-1-091214	AA-1-121914	AA-01-032715	AA-1-061115	AA-1-091615	AA-1-121815	AA-1-021816
Sample Date:		9/16/2010	12/7/2010	2/17/2011	6/2/2011	9/15/2011	12/8/2011	3/8/2012	6/14/2012	9/13/2012	1/3/2013	3/15/2013	6/7/2013	9/6/2013	10/3/2013	12/13/2013	3/7/2014	6/13/2014	9/12/2014	12/19/2014	3/27/2015	6/11/2015	9/16/2015	12/18/2015	2/18/2016
Analyte	**Units**																								
1,1,1,2-Tetrachloroethane	ug/m3					0.62 U		0.37 U	0.37 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.42 U	0.44 U	0.44 U	0.44 U	0.25 U	0.44 U	0.44 U	0.44 U	0.44 U		0.44 U
1,1,1-Trichloroethane	ug/m3	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.29	0.082 U	0.1 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.18 U	0.19 U	0.19 U	0.19 U	0.055 U	0.19 U	0.19 U	0.19 U	0.073 J	0.19 U	0.19 U
1,1,2,2-Tetrachloroethane	ug/m3	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	0.24 U	0.24 U	0.24 U	0.23 U	0.24 U	0.24 U	0.24 U	0.069 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1,2-Trichloroethane	ug/m3	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.16 U	0.082 U	0.16 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.18 U	0.19 U	0.19 U	0.19 U	0.11 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1-Dichloroethane	ug/m3	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.063 J	0.061 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,1-Dichloroethene	ug/m3	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	0.14 U	0.14 U	0.14 U	0.13 U	0.14 U	0.14 U	0.16	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,4-Trichlorobenzene	ug/m3	0.37 U	0.37 U	0.37 U	0.37 U	0.74 U	0.62	0.45 U	0.12 J	0.52 U	0.52 U	0.52 U	0.26 U	0.26 U	0.25 U	0.26 U	0.26 U	0.26 U	0.15 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
1,2,4-Trimethylbenzene	ug/m3	0.94	0.25 U	1.1	0.25 U	0.25 U	0.16	0.15 U	0.15 U	0.26	0.17 U	0.069 J	0.21	0.17 U	0.19	0.17 U	0.17 U	0.51	0.069 J	0.17 U	0.2	0.059 J	0.29	0.31	0.17 U
1,2-Dibromoethane (EDB)	ug/m3	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.26 U	0.27 U	0.27 U	0.27 U	0.077 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dichlorobenzene	ug/m3	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	0.21 U	0.21 U	0.21 U	0.2 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethane	ug/m3	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.066 J	0.061 U	0.046 J	0.14 U	0.14 U	0.057 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.037 J	0.14 U	0.14 U	0.054 J	0.14 U	0.14 U	0.14 U
1,2-Dichloropropane	ug/m3	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.069 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.046 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,2-Dichlorotetrafluoroethane	ug/m3	0.35 U																						0.25 U	
1,3,5-Trimethylbenzene	ug/m3	0.28	0.25 U	0.33	0.25 U	0.25 U	0.068 J	0.15 U	0.15 U	0.16 J	0.17 U	0.17 U	0.17 U	0.17 U	0.047 J	0.17 U	0.17 U	0.18	0.098 U	0.17 U	0.062 J	0.17 U	0.076 J	0.17 U	0.17 U
1,3-Butadiene	ug/m3	0.29	0.11 U	0.11 U	0.11 U	0.11 U	0.066 U	0.066 U	0.066 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.075 U	0.078 U	0.078 U	0.078 U	0.044 U	0.078 U	0.078 U	0.078 U	0.18	0.23	0.078 U
1,3-Dichlorobenzene	ug/m3	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	0.21 U	0.21 U	0.2 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,4-Dichlorobenzene	ug/m3	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	0.21 U	0.21 U	0.2 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,4-Dioxane	ug/m3					0.18 U																		1.3 U	
2-Butanone	ug/m3	2.7	0.37	1.8 B	2.9 U	5.9 J	0.35 J	1.4 J	1.1 J	2 J	4.1 J	1.9 J	3.9 J	3.7 J	0.94 J	0.82 J	1.4 J	2.2 J	1.1 J	1.2 J	0.96 J	2.1 J	1 J	2 J	0.69 J
2-Hexanone	ug/m3	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	0.13 J	0.49	0.32	0.14 U	0.14 U	0.26	0.34	0.16	0.14 U	0.17	0.17	0.14 U	0.14 U	0.14 U
4-Ethyltoluene	ug/m3	0.3	0.25 U	0.34	0.25 U	0.25 U	0.053 J	0.15 U	0.15 U	0.093 J	0.17 U	0.17 U	0.17 U	0.17 U	0.063 J	0.17 U	0.17 U	0.18	0.098 U	0.17 U	0.079 J	0.17 U	0.093 J	0.17 U	0.17 U
4-Methyl-2-pentanone	ug/m3	2.8	0.2 U	0.2 U	0.2 U	0.2 J	0.12 U	0.12 U	0.23	0.1 J	0.14 U	0.083 J	0.24	0.14 U	0.14 U	0.14 U	0.14 U	0.2	0.036 J	0.14 U	0.092 J	0.14 U	0.14 U	0.14 U	0.14 U
Acetone	ug/m3	14	5.7 B	19 B	8.7 B	20	4.9	9.4	10	12 B	3.3	18	28	16	12	26	9.3	22	25	10	8.7	10	13	18	6.3
Benzene	ug/m3	1.2	0.28	2.3	0.16 U	0.19	0.4	0.29	0.2	0.68	0.11	1	0.31	0.7	0.95	0.43	1	0.94	0.2	0.58	0.67	0.41	0.82	1.4	0.45
Benzyl chloride	ug/m3	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.16 U	0.16 U	0.16 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.052 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromodichloromethane	ug/m3	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	0.24 U	0.24 U	0.23 U	0.24 U	0.24 U	0.24 U	0.067 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Bromoform	ug/m3	0.51 U	0.52 U	0.52 U	0.52 U	0.52 U	0.31 U	0.31 U	0.31 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.35 U	0.36 U	0.36 U	0.36 U	0.21 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Bromomethane	ug/m3	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.13 U	0.14 U	0.14 U	0.14 U	0.078 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Carbon disulfide	ug/m3	0.16 U	0.38	0.16 U	0.16 U	1.6 U	0.058 J	0.93 U	0.11 J	1.1 U	1.1 U	0.052 J	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.098 J	1.1 U	0.057 J	1.1 U	0.09 J	1.1 U	1.1 U
Carbon tetrachloride	ug/m3	0.43	0.42	0.48	0.53	0.48	0.49	0.43	0.43	0.36	0.22	0.41	0.55	0.47	0.43	0.45	0.22	0.42	0.45	0.36	0.34	0.36	0.43	0.55	0.38
Chlorobenzene	ug/m3	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.14 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.046 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Chloroethane	ug/m3	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.079 U	0.079 U	0.079 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.089 U	0.093 U	0.093 U	0.11	0.053 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U
Chloroform	ug/m3	0.24 U	0.24 U	0.24 U	0.24 U	0.24 J	0.094 J	0.073 U	0.067 J	0.096 J	0.17 U	0.21	0.17 U	0.17 U	0.1 J	0.17 U	0.17 U	0.17 U	0.082	0.082 J	0.065 J	0.11 J	0.18	0.31	0.17 U
Chloromethane	ug/m3	0.99	0.94	1	0.96	1.4	0.062 U	1.1	1.5	1.1	0.072	1.6	1.4	1.1	0.96	1.1	1.3	1.4	0.64	0.96	1.1	1.2	1.1	1.2	1
cis-1,2-Dichloroethene	ug/m3	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	0.092 J	0.14 U	0.16	0.13 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
cis-1,3-Dichloropropene	ug/m3	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.15 U	0.16 U	0.16 U	0.16 U	0.045 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Cyclohexane	ug/m3	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	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.31	0.069 U	0.12 U	0.12 U	0.12 U	0.12 U	0.59	0.12 U
Dibromochloromethane	ug/m3	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	0.3 U	0.3 U	0.29 U	0.3 U	0.3 U	0.3 U	0.085 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Dichlorodifluoromethane	ug/m3	2.9	1.9	3.1	1.9	1.7	2.5	2	2.4	2.8	0.17	1.7	3	2	1.7	2.7	1.4	2	2.2	2.1	1.4	2.3	1.7	2.7	1.6
Ethanol	ug/m3	14	2.3	12	2.7	5.8	1.5 J	4.1	7.4	5.2	2.6	1.2 J	6.1	6.7	6.7	5.4	9	17	2.9	2.7	2 J	4.8	12	7.3	2.5 J
Ethyl acetate	ug/m3	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.46	0.56	0.43	0.67	0.13	1.1	0.56	17	0.12 U	0.13 U	0.18	0.13 U	0.17	0.13 U	0.27	0.13 U	0.68	0.14	0.42
Ethylbenzene	ug/m3	1.4	0.22 U	1.1	0.22 U	0.22 J	0.31	0.13 U	0.065 J	0.19	0.15 U	0.12 J	0.16	0.15 U	0.21	0.15 U	0.16	0.44	0.047 J	0.046 J	0.19	0.1 J	0.37	0.46	0.15 U
Hexachlorobutadiene	ug/m3	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	0.32 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U	0.37 U	0.37 U	0.37 U	0.21 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Hexane	ug/m3	1.2	0.35 U	3.3	0.88	7 J	0.47 J	0.54 J	1.3 J	0.67 J	4.9 J	1.3 J	1.8 J	2.3 J	0.81 J	0.32 J	0.44 J	1.2 J	0.19 J	0.39 J	5.1	0.29 J	1 J	0.64 J	0.28 J
Isopropyl alcohol	ug/m3	0.25 U	0.29	2.4	1.2 U	4.9 J	0.6 J	0.88 J	2.9 U	0.58 J	3.4 J	0.52 J	1.3 J	6.2	3.3 U	0.77 J	0.92 J	3.1 J	0.61 J	3.4 U	0.65 J	0.44 J	2.7 J	0.68 J	3.4 U
m,p-Xylene	ug/m3	3.7	0.43 U	3.3	0.43 U	0.43 J	0.41	0.17 J	0.18 J	0.64	0.3 U	0.34	0.58	0.21 J	0.53	0.3 U	0.42	1.4	0.14 J	0.11 J	0.66	0.24 J	1.2	2	0.27 J
Methyl methacrylate	ug/m3		0.2 U	0.48	0.2 U	0.2 U	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.082 U	0.14 U	0.14 U		0.14 U		0.14 U
Methylene chloride	ug/m3	1.1	0.66	3	2.3	1.7 J	1.5	1.6	3	2.1 B	1.2	2.9	2.3	9.1	1 J	0.76 J	0.55 J	1.2 J	0.54 J	0.47 J	0.44 J	0.47 J	0.48 J	0.54 J	0.43 J
Methyl-t-butyl ether	ug/m3	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U	0.11 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.12 U	0.13 U	0.13 U	0.13 U	0.072 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Naphthalene	ug/m3																							0.18 U	
n-Heptane	ug/m3	0.91	0.2 U	0.95	0.2 U	0.2 U	0.12 J	0.089 J	0.11 J	0.18	0.14 U	0.12 J	0.21	0.15	0.18	0.14 U	0.21	0.62	0.054 J	0.14 U	0.19	0.14 U	0.39	0.49	0.14 U
o-Xylene	ug/m3	1.2	0.22 U	1.1	0.22 U	0.22 J	0.22	0.086 J	0.078 J	0.31	0.15 U	0.12 J	0.2	0.15 U	0.24	0.15 U	0.17	0.5	0.054 J	0.046 J	0.25	0.11 J	0.4	0.59	0.15 U
Propylene (Propene)	ug/m3	1.9	0.86 U	0.86 U	0.86 U	3.4 U	2.1 U	2.1 U	0.77 J	1.3 J	2.4 U	2.4 U	2.4 U	2.4 U	2.3 U	2.4 U	2.4 U	1.3 J	1.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Styrene	ug/m3	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.37	0.13 U	0.1 J	0.13 J	0.15 U	0.039 J	0.15 U	0.15 U	0.052 J	0.15 U	0.15 U	0.16	0.085 U	0.15 U	0.15 U	0.15 U	0.12 J	0.15 U	0.15 U
Tetrachloroethene	ug/m3	0.49	0.34 U	5.3	0.34 U	0.34 J	0.73	0.1 U	0.2 U	0.87	0.24 U	0.9	0.24 U	0.24 U	0.3	0.24 U	0.24 U	0.4	0.071	0.09 J	0.22 J	0.29	0.35	0.61	0.24 U
Tetrahydrofuran	ug/m3	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.057 J	0.088 U	0.088 U	0.43	0.1 U	0.1 U	0.1 U	1.4	0.1 U	0.1 U	0.23	0.1 U	0.059 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Toluene	ug/m3	10	0.19 U	5.3	0.52	0.47	0.56	0.37	0.42	0.81	0.13	0.74	1.2	1.4	1.3	0.35	1.2	2.6	0.33	0.35	1.3	0.51	2.9	3.2	0.75
trans-1,2-Dichloroethene	ug/m3	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	0.14 U	0.14 U	0.14 U	0.13 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
trans-1,3-Dichloropropene	ug/m3	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.15 U	0.16 U	0.16 U	0.16 U	0.045 U	0.16 U	0.064 J	0.16 U	0.16 U	0.16 U	0.16 U
Trichloroethene	ug/m3	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.67	0.081 U	0.045 J	0.091 J	0.19 U	0.26	0.19 U	0.19 U	0.11 J	0.19 U	0.19 U	0.19 U	0.052 J	0.19 U	0.19 U	0.19 U	1.1	0.19 U	0.19 U
Trichlorofluoromethane	ug/m3	11	1.2	1.7	1.5	1.5	1.7	1.1	1.7	1.5	0.2	1.3	1.8	11	3.3	1.5	1.1	1.4	1.3	1.3	1.1	1.5	1.2	1.7	1.1
Trichlorotrifluoroethane	ug/m3	0.44	0.56	0.66	0.69	0.58	0.89	0.43	0.53	0.59	0.27	0.66	1	0.6	0.55	0.55	0.46	0.54	0.57	0.63	0.49 J	0.65 J	0.57 J	0.6 J	0.51 J
Vinyl acetate	ug/m3	0.36 U	0.35 U	0.18 U	3.5 U	0.18 U	0.11 U	0.21 U	0.21 U	0.25 U	0.25 U	0.25 U	2.5 U	2.5 U	2.4 U	2.5 U	2.5 U	2.5 U	1.4 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Vinyl chloride	ug/m3	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	0.09 U	0.09 U	0.09 U	0.087 U	0.09 U	0.09 U	0.09 U	0.026 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter

Prepared By: AKN, 2/28/2020
Checked By: HWC, 2/28/2020

Appendix C.
Summary of Analytical Results - Outdoor Air Reference Sampling
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:		Outdoor Air Reference Location								
Location:		AA-1								
Sample ID:		AA-1-080516	AA-1-021017	AA-1-090717	AA-1-022818	AA-1-091218	AA-1-020819	AA-1-041119	AA-1-090619	AA-1-021420
Sample Date:		8/5/2016	2/10/2017	9/7/2017	2/28/2018	9/12/2018	2/8/2019	4/11/2019	9/6/2019	2/14/2020
Analyte	**Units**									
1,1,1,2-Tetrachloroethane	ug/m3		0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
1,1,1-Trichloroethane	ug/m3	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1,2,2-Tetrachloroethane	ug/m3	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1,2-Trichloroethane	ug/m3	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.42	0.19 U	0.19 U	0.19 U
1,1-Dichloroethane	ug/m3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,1-Dichloroethene	ug/m3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,4-Trichlorobenzene	ug/m3	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.52 U	0.26 U	0.26 U	0.26 U
1,2,4-Trimethylbenzene	ug/m3	0.17 U	0.17 U	0.17 U	0.12 J	0.18	0.17 U	0.17 U	0.17 U	0.17 U
1,2-Dibromoethane (EDB)	ug/m3	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dichlorobenzene	ug/m3	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.84 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethane	ug/m3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2-Dichloropropane	ug/m3	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,2-Dichlorotetrafluoroethane	ug/m3	0.25 U								
1,3,5-Trimethylbenzene	ug/m3	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
1,3-Butadiene	ug/m3	0.078 U	0.078 U	0.9	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U
1,3-Dichlorobenzene	ug/m3	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.49 J	0.21 U	0.21 U	0.21 U
1,4-Dichlorobenzene	ug/m3	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.5 J	0.21 U	0.21 U	0.21 U
1,4-Dioxane	ug/m3	1.3 U								
2-Butanone	ug/m3	1.2 J	0.91 J	2.4 J	1.8 J	1.2 J	2.1 J	0.71 J	0.63 J	1.6 J
2-Hexanone	ug/m3	0.14 U	0.14 U	0.14 U	0.43	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
4-Ethyltoluene	ug/m3	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
4-Methyl-2-pentanone	ug/m3	0.14 U	0.14 U	0.3	0.072 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Acetone	ug/m3	11	3.1 J	16	24	6.2	10	6.9	5.1	9.8
Benzene	ug/m3	0.35	0.37	2.2	0.47	0.39	1.4	0.22	0.24	0.34
Benzyl chloride	ug/m3	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromodichloromethane	ug/m3	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Bromoform	ug/m3	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Bromomethane	ug/m3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	1.4 U	0.27 U
Carbon disulfide	ug/m3	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Carbon tetrachloride	ug/m3	0.39	0.44	0.4	0.39	0.49	0.91	0.44	0.39	0.41
Chlorobenzene	ug/m3	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
Chloroethane	ug/m3	0.093 U	0.093 U	0.19 U	0.093 U	0.093 U	0.19 U	0.093 U	0.093 U	0.093 U
Chloroform	ug/m3	0.17 U	0.17 U	0.17 U	0.086 J	0.11 J	0.53	0.17 U	0.17 U	0.17 U
Chloromethane	ug/m3	1.2	1.2	1.2	1.2	0.93	1.3	1	0.87	1.5
cis-1,2-Dichloroethene	ug/m3	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.33	0.14 U	0.14 U	0.14 U
cis-1,3-Dichloropropene	ug/m3	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
Cyclohexane	ug/m3	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Dibromochloromethane	ug/m3	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.64	0.3 U	0.3 U	0.3 U
Dichlorodifluoromethane	ug/m3	0.64	1	1.5	1.7	2.1	2.2	1.3	1.7	1.6
Ethanol	ug/m3	5.5	2.5 J	2.2 J	6.7	2.1 J	12	4	5.9	3.9
Ethyl acetate	ug/m3	6.5	2.3	0.25 U	0.17	0.25 U	0.13 U	1.1	0.13 U	0.13 U
Ethylbenzene	ug/m3	0.16	0.15 U	0.67	0.17	0.18	0.68	0.15 U	0.17	0.15 U
Hexachlorobutadiene	ug/m3	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
Hexane	ug/m3	7.7	0.69 J	0.4 J	0.31 J	0.47 J	2.2 J	4.9 U	4.9 U	4.9 U
Isopropyl alcohol	ug/m3	0.88 J	0.76 J	0.52 J	0.55 J	0.46 J	1.6 J	1.2 J	0.18 J	0.53 J
m,p-Xylene	ug/m3	0.46	0.35	2.4	0.56	0.48	1.7	0.3 U	0.57	0.3 U
Methyl methacrylate	ug/m3		0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Methylene chloride	ug/m3	3.5	1 J	0.26 J	0.39 J	0.28 J	0.94 J	0.29 J	0.28 J	0.42 J
Methyl-t-butyl ether	ug/m3	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
Naphthalene	ug/m3	0.18 U								
n-Heptane	ug/m3	0.24	0.14 U	0.47	0.18	0.31	1.1	0.14 U	0.14 U	0.14 U
o-Xylene	ug/m3	0.17	0.12 J	0.67	0.21	0.2	0.72	0.15 U	0.22	0.15 U
Propylene (Propene)	ug/m3	2.4 U	0.63 J	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Styrene	ug/m3	0.15 U	0.15 U	0.46	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Tetrachloroethene	ug/m3	0.41	0.24 U	0.24 U	0.24 U	0.24 U	1.1	0.24 U	0.68	0.24 U
Tetrahydrofuran	ug/m3	0.1 U	0.1 U	0.21 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Toluene	ug/m3	1.1	2.4	2.2	0.77	1.1	2.8	0.31	0.68	0.26
trans-1,2-Dichloroethene	ug/m3	0.14 U	0.14 U	0.14 U	0.14 U	0.058 J	0.33 J	0.14 U	0.14 U	0.14 U
trans-1,3-Dichloropropene	ug/m3	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Trichloroethene	ug/m3	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.34	0.19 U
Trichlorofluoromethane	ug/m3	1.4	1.3	1.1	1.2	1.2	1.8	1.6	1.2	1.5
Trichlorotrifluoroethane	ug/m3	0.47 J	0.55 J	0.46 J	0.48 J	0.53 J	1.1 U	0.52 J	1.1 U	1.3
Vinyl acetate	ug/m3	1.6 J	2.5 U	2.5 U	0.99 J	0.72 J	2.5 U	2.5 U	2.5 U	2.5 U
Vinyl chloride	ug/m3	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter

Prepared By: AKN, 2/28/2020
Checked By: HWC, 2/28/2020

Appendix D1

Summary of All Analytical Results –
Indoor Air Samples for Small Retail Space

Appendix D1.
Summary of Analytical Results - Indoor Air Sampling for Small Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:			Eastern Small Retail Space																					
Location:			IA-5																					
Sample ID:			IA-5	IA-5-020309	IA-5-021109	IA-5-021809	IA-5-022609	IA-5-030609	IA-5-041409	IA-5-051509	IA-5-061109	IA-5-091709	IA-5-122909	IA-5-032610	IA-5-070110	IA-5-091610	IA-5-120810	IA-5-021711	IA-5-060211	IA-5-091511	IA-5-120811	IA-5-030812	IA-5-061412	IA-5-091312	IA-5-010313
Sample Date:			1/16/2009	2/3/2009	2/11/2009	2/18/2009	2/26/2009	3/6/2009	4/14/2009	5/15/2009	6/11/2009	9/17/2009	12/29/2009	3/26/2010	7/1/2010	9/16/2010	12/8/2010	2/17/2011	6/2/2011	9/15/2011	12/8/2011	3/8/2012	6/14/2012	9/13/2012	1/3/2013
Analyte	**Units**	**CT IACTIND 2003**																						
1,1,1,2-Tetrachloroethane	ug/m3	1.1																		0.62 U		0.37 U	0.37 U	0.44 U	0.44 U
1,1,1-Trichloroethane	ug/m3	500	48	0.92	0.27 U	0.27 U	0.27 U	0.27 U	0.98	0.27 U	0.27 U	0.27 U	0.27 U	0.38	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 J	0.15 J	0.082 U	0.065 J	0.19 U	0.19 U
1,1,2,2-Tetrachloroethane	ug/m3	0.14	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.16 J	0.1 U	0.21 U	0.24 U	0.24 U
1,1,2-Trichloroethane	ug/m3	12	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.14 J	0.082 U	0.16 U	0.19 U	0.19 U
1,1-Dichloroethane	ug/m3	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	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	ug/m3	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	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	ug/m3	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	0.37 U	0.37 U	0.74 U	22	0.45 U	0.45 U	0.52 U	0.52 U
1,2,4-Trimethylbenzene	ug/m3	52	0.25 U	0.32	0.33	0.36	0.25 U	0.25 U	0.2	0.25 U	0.35	0.25 U	0.25 U	0.25 U	0.25 U	0.73	0.25 U	0.25 U	0.25 U	0.25 J	1.3	0.15 U	0.16	0.29	0.17 U
1,2-Dibromoethane (EDB)	ug/m3	0.038	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U	0.27 U	0.27 U
1,2-Dichlorobenzene	ug/m3	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	0.3 U	0.3 U	0.3 U	23	0.18 U	0.18 U	0.21 U	0.21 U
1,2-Dichloroethane	ug/m3	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	0.2 U	0.2 U	0.2 U	0.066 J	0.061 U	0.044 J	0.14 U	0.14 U
1,2-Dichloropropane	ug/m3	0.42	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.069 U	0.067 J	0.16 U	0.16 U
1,2-Dichlorotetrafluoroethane	ug/m3	NA	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U									
1,3,5-Trimethylbenzene	ug/m3	52	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 J	0.39	0.15 U	0.077 J	0.11 J	0.17 U
1,3-Butadiene	ug/m3	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	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	ug/m3	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	0.3 U	0.3 U	0.3 U	0.076 J	0.18 U	0.18 U	0.21 U	0.21 U
1,4-Dichlorobenzene	ug/m3	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	0.3 U	0.3 U	0.3 U	0.37	0.18 U	0.18 U	0.21 U	0.21 U
1,4-Dioxane	ug/m3	NA															0.18 U			0.18 U					
2-Butanone	ug/m3	500	7.2	2.4	2.7	2.6	0.75	0.45	3.8	1.9	5.3	2.1	0.79	1.5	2.1	1.4	0.78	0.78 B	3.6	5.9 J	0.98 J	2 J	0.94 J	2.3 J	4.1 J
2-Hexanone	ug/m3	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	0.2 U	4.1 U	0.2 J	0.13	0.32	0.081 J	0.17	0.14
4-Ethyltoluene	ug/m3	NA	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25	0.15 U	0.053 J	0.097 J	0.17 U
4-Methyl-2-pentanone	ug/m3	200	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.18	0.2 U	0.68	0.23	0.2 U	0.2 U	0.2 U	1.1	0.2 U	0.2 U	0.31	0.2 U	0.13	0.18	0.34	0.22	0.14 U
Acetone	ug/m3	500	32	11	21	20	9.5	6.5	14	14	46	16	15	11	18	17	6.4 B	9.5 B	24 B	15	6.6	11	13	13 B	3.3
Benzene	ug/m3	3.3	0.79	0.6	0.99	1.6	0.41	0.55	0.62	0.49	0.53	0.35	0.45	0.65	0.16 U	1.1	0.26	1.1	0.33	0.29	0.38	0.34	0.2	0.53	0.11
Benzyl chloride	ug/m3	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.19 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.16 U	0.16 U	0.16 U	0.18 U	0.18 U
Bromodichloromethane	ug/m3	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	0.34 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	ug/m3	7.3	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.52 U	0.52 U	0.52 U	0.52 U	0.31 U	0.31 U	0.31 U	0.36 U	0.36 U
Bromomethane	ug/m3	NA	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.14 U	0.23	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U
Carbon disulfide	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.12 U	0.16 U	0.27	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	1.6 U	0.93 U	0.93 U	0.93 U	0.11 J	1.1 U
Carbon tetrachloride	ug/m3	0.54	0.33	0.44	0.5	**0.55**	0.47	**0.61**	0.44	**0.64**	0.46	0.39	0.41	0.48	0.53	0.44	0.54	**0.6**	**0.59**	0.48	0.49	0.46	0.42	0.38	0.22
Chlorobenzene	ug/m3	200	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.48	0.14 U	0.14 U	0.16 U	0.16 U
Chloroethane	ug/m3	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	0.13 U	0.13 U	0.13 U	0.079 U	0.079 U	0.079 U	0.059 J	0.093 U
Chloroform	ug/m3	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	0.24 U	0.24 U	0.24 J	0.49	0.073 U	0.14 J	0.17	0.17 U
Chloromethane	ug/m3	80	1.1	1	1.5	1.4	1.1	1.1	1.1	1	1.4	1	2	1.2	1	1	0.76	0.96	1.1	1.3	1	1.1	1.4	1.2	0.072
cis-1,2-Dichloroethene	ug/m3	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	0.2 U	0.2 U	0.2 U	0.18	0.059 U	0.12 U	0.14 U	0.14 U
cis-1,3-Dichloropropene	ug/m3	NA	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	0.23 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	ug/m3	NA	0.17 U	0.17 U	0.38	0.41	0.17 U	0.17 U	0.12 U	0.17 U	0.4	0.17 U	0.17 U	0.17 U	0.17 U	0.45	0.17 U	0.17 U	0.46	0.17 U	0.1 U	0.1 U	0.12	0.21	0.12 U
Dibromochloromethane	ug/m3	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	0.43 U	0.43 U	0.43 U	0.26 U	0.13 U	0.26 U	0.3 U	0.3 U
Dichlorodifluoromethane	ug/m3	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	2.3	3.1	1.7	2	2.6	2	2.9	2.8	0.17
Ethanol	ug/m3	NA	590	12	23	140	85	32	41	180	500	62	51	25	58	150	2.4	14	7.7	7.9	5.4	14	43	11	2.6
Ethyl acetate	ug/m3	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	0.18 U	0.18 U	0.18 U	0.11 U	0.48	0.21	0.66	0.13
Ethylbenzene	ug/m3	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	0.22 U	0.3	0.36	0.22 J	1.2	0.13 U	0.16	0.31	0.15 J
Hexachlorobutadiene	ug/m3	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	0.53 U	0.53 U	0.53 U	0.53 U	0.17 J	0.32 U	0.32 U	0.37 U	0.37 U
Hexane	ug/m3	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	0.3	1.3	1.7	7 J	0.36 J	0.48 J	0.57 J	1.2 J	4.9 J
Isopropyl alcohol	ug/m3	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	0.12 U	1.7	1.2 U	6.4	2.9 U	2.9 U	2.9 U	3.3 J	3.4 J
m,p-Xylene	ug/m3	NA	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	0.43 U	0.85	0.57	0.53	3	0.12 J	0.36	0.97	0.3
Methyl methacrylate	ug/m3	NA															0.2 U	0.2 U	0.2 U	0.2 U	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U
Methylene chloride	ug/m3	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	0.65	2.8	4.2	7.7	1.6	1.6	1.1	2.3 B	1.2
Methyl-t-butyl ether	ug/m3	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	0.18 U	0.18 U	0.18 U	0.18 U	0.039 J	0.11 U	0.11 U	0.18	0.13 U
Naphthalene	ug/m3	NA																							
n-Heptane	ug/m3	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	0.2 U	0.33	0.2 U	0.2 J	0.081 J	0.089 J	0.18	0.32	0.14 U
o-Xylene	ug/m3	NA	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	0.22 U	0.3	0.26	0.22 J	1	0.13 U	0.14	0.35	0.15
Propylene (Propene)	ug/m3	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	0.86 U	0.86 U	0.86 U	3.4 U	2.1 U	2.1 U	2.1 U	1.4 J	2.4 U
Styrene	ug/m3	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	0.21 U	0.21 U	0.21 U	0.21 J	1	0.13 U	0.76	0.24	0.15 U
Tetrachloroethene	ug/m3	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	0.39	2.4	0.34 U	0.58	**5.7**	0.15	0.15 J	1.6	0.24 U
Tetrahydrofuran	ug/m3	NA	3.2	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.11 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.1	0.088 U	0.1	0.1 U	0.1 U
Toluene	ug/m3	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	0.19 U	1.8	0.9	0.97	1.9	0.28	0.78	2	0.13
trans-1,2-Dichloroethene	ug/m3	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	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
trans-1,3-Dichloropropene	ug/m3	NA	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	0.23 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	ug/m3	1	**5.5**	0.39	0.27 U	0.27 U	0.27 U	0.27 U	0.22	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.28	0.27 U	0.27 U	0.27 U	0.27 J	0.63	0.081 U	0.045 J	0.1 J	0.19 U
Trichlorofluoromethane	ug/m3	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	1.3	1.7	1.4	1.7	1.1	0.98	1.7	1.6	0.2
Trichlorotrifluoroethane	ug/m3	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	0.52	0.66	0.69	0.63	0.69	0.46	0.53	0.6	0.27
Vinyl acetate	ug/m3	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	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
Vinyl chloride	ug/m3	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	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

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter
Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Prepared By: AKN, 2/28/2020
Checked By: HWC, 2/28/2020

Appendix D1.
Summary of Analytical Results - Indoor Air Sampling for Small Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:			Eastern Small Retail Space																				Small Center Retail Space	
Location:			IA-5																				IA-6	
Sample ID:			IA-5-031513	IA-5-060713	IA-5-090613	IA-5-121313	IA-5-030714	IA-5-061314	IA-5-091214	IA-5-121914	IA-05-032715	IA-5-061115	IA-5-091615	IA-5-121815	IA-5-021816	IA-5-080516	IA-5-021017	IA-5-090717	IA-5-022818	IA-5-091218	IA-5-020819	IA-5-090619	IA-5-021420	IA-6	IA-6-020309
Sample Date:			3/15/2013	6/7/2013	9/6/2013	12/13/2013	3/7/2014	6/13/2014	9/12/2014	12/19/2014	3/27/2015	6/11/2015	9/16/2015	12/18/2015	2/18/2016	8/5/2016	2/10/2017	9/7/2017	2/28/2018	9/12/2018	2/8/2019	9/6/2019	2/14/2020	1/16/2009	2/3/2009
Analyte	**Units**	**CT IACTIND 2003**																						
1,1,1,2-Tetrachloroethane	ug/m3	1.1	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.25 U	0.44 U	0.44 U	0.44 U	0.44 U		0.44 U		0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U		
1,1,1-Trichloroethane	ug/m3	500	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.079	0.19 U	0.042 J	0.19 U	0.077 J	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	110	3.9
1,1,2,2-Tetrachloroethane	ug/m3	0.14	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.069 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 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	0.34 U	0.34 U
1,1,2-Trichloroethane	ug/m3	12	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.11 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 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	0.27 U	0.27 U
1,1-Dichloroethane	ug/m3	430	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	3.9	0.2 U
1,1-Dichloroethene	ug/m3	20	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	1.2	0.2 U
1,2,4-Trichlorobenzene	ug/m3	NA	0.52 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.15 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.52 U	0.26 U	0.26 U	0.37 U	0.37 U
1,2,4-Trimethylbenzene	ug/m3	52	0.072 J	0.21	0.27	0.17 U	0.69	0.23	0.19	0.17 U	0.13 J	0.12 J	0.23	0.2	0.17 U	0.27	0.17 U	0.19	0.17 U	0.3	0.17 U	0.17 U	0.17 U	0.75	0.32
1,2-Dibromoethane (EDB)	ug/m3	0.038	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.077 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 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	0.38 U	0.38 U
1,2-Dichlorobenzene	ug/m3	410	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.67 J	0.21 U	0.21 U	0.3 U	0.3 U
1,2-Dichloroethane	ug/m3	0.31	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04	0.14 U	0.045 J	0.065 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.057 J	0.08 J	0.14 U	0.14 U	0.14 U	0.2 U	0.2 U
1,2-Dichloropropane	ug/m3	0.42	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.046 U	0.16 U	0.16 U	0.1 J	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.13 J	0.16 U	0.16 U	0.16 U	0.23 U	0.23 U
1,2-Dichlorotetrafluoroethane	ug/m3	NA												0.25 U		0.25 U								0.35 U	0.35 U
1,3,5-Trimethylbenzene	ug/m3	52	0.17 U	0.17 U	0.17 U	0.17 U	0.19	0.17 U	0.057 J	0.17 U	0.038 J	0.038 J	0.066 J	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.42	0.17 U	0.17 U	0.25 U	0.25 U
1,3-Butadiene	ug/m3	NA	0.078 U	0.078 U	0.078 U	0.078 U	0.58	0.078 U	0.044 U	0.078 U	0.078 U	0.078 U	0.19	0.14	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.057 J	0.078 U	0.078 U	0.078 U	0.11 U	0.11 U
1,3-Dichlorobenzene	ug/m3	410	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.5 J	0.21 U	0.21 U	0.3 U	0.3 U
1,4-Dichlorobenzene	ug/m3	24	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.28	0.57 J	0.21 U	0.21 U	0.3 U	0.3 U
1,4-Dioxane	ug/m3	NA												1.3 U		1.3 U									
2-Butanone	ug/m3	500	1.3 J	3.2 J	2.4 J	2.2 J	1.8 J	3.7 J	2.1 J	0.8 J	2.1 J	1.4 J	1.6 J	1.8 J	0.86 J	1.3 J	0.67 J	2.9 J	1.2 J	1.9 J	2.1 J	0.37 J	1.6 J	120	10
2-Hexanone	ug/m3	NA	0.16	0.48	0.44	0.14 U	0.32	0.52	0.29	0.14 U	0.43	0.16	0.14 U	0.14 U	0.15	0.31	0.14 U	0.57	0.26	0.14 U	0.14 U	0.14 U	0.14 U	0.2 U	0.42
4-Ethyltoluene	ug/m3	NA	0.17 U	0.17 U	0.17 U	0.17 U	0.22	0.17 U	0.09 J	0.17 U	0.17 U	0.041 J	0.079 J	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	0.25 U	0.25 U
4-Methyl-2-pentanone	ug/m3	200	0.14 U	0.19	0.14 U	0.14 U	0.24	0.35	0.17	0.14 U	0.19	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.37	0.078 J	0.14 U	0.14 U	0.14 U	0.14 U	0.2 U	0.2 U
Acetone	ug/m3	500	9.7	24	19	40	12	25	14	10	14	12	18	23	7.1	18	5.4	24	10	18	12	6.1	12	44	14
Benzene	ug/m3	3.3	0.8	0.27	0.68	0.55	2.9	0.55	0.25	0.4	0.54	0.33	0.76	0.93	0.45	0.29	0.45	0.53	0.57	0.44	1.1	0.41	0.38	1	0.6
Benzyl chloride	ug/m3	NA	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.052 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.26 U	0.26 U
Bromodichloromethane	ug/m3	0.46	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.067 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 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	0.33 U	0.33 U
Bromoform	ug/m3	7.3	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.21 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.51 U	0.51 U
Bromomethane	ug/m3	NA	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.078 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	1.4 U	0.27 U	0.19 U	0.19 U
Carbon disulfide	ug/m3	NA	1.1 U	1.1 U	0.13 J	1.1 U	1.1 U	1.1 U	0.041 J	1.1 U	1.1 U	0.096 J	0.098 J	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.063 J	0.19 J	1.1 UJ	1.1 U	1.1 U	0.16 U	0.16 U
Carbon tetrachloride	ug/m3	0.54	0.37	**0.59**	0.47	0.5	0.43	0.45	0.45	0.36	0.35	0.37	0.44	0.47	0.33	0.42	0.43	0.41	0.39	0.49	**0.88**	0.37	0.44	0.39	0.42
Chlorobenzene	ug/m3	200	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.046 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.23 U	0.23 U
Chloroethane	ug/m3	500	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.053 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.19 U	0.093 U	0.093 U	0.19 U	0.093 U	0.093 U	0.13 U	0.13 U
Chloroform	ug/m3	0.5	0.069 J	0.17 U	0.17	0.17 U	0.17 U	0.17 U	0.12	0.099 J	0.062 J	0.14 J	0.19	0.17	0.17 U	0.19	0.17	**0.84**	0.11 J	0.36	**0.55**	0.24	0.17 U	0.24 U	0.24 U
Chloromethane	ug/m3	80	1.2	1.5	1.2	1.3	1.3	1.2	0.67	0.81	0.97	1.3	1.1	1.3	0.91	1.1	1.2	2.4	1.2	1.2	1.3	0.97	1	1.3	0.9
cis-1,2-Dichloroethene	ug/m3	100	0.14 U	0.14 U	0.18	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.075 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.63	0.14 U	0.14 U	0.4	0.2 U
cis-1,3-Dichloropropene	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.045 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 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	0.22 U	0.22 U
Cyclohexane	ug/m3	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.4	0.12 U	0.069 U	0.12 U	0.12 U	0.12 U	0.18	0.39	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.17 U	0.17 U
Dibromochloromethane	ug/m3	NA	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.085 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	0.43 U	0.43 U
Dichlorodifluoromethane	ug/m3	500	1.6	3.4	1.9	2.5	1.3	2.2	2	1.9	1.3	2	1.7	2.4	2.5	0.54	1.1	1.3	1.7	2.1	2.3	1.6	1.5	2	2.1
Ethanol	ug/m3	NA	1.9 J	12	15	4.5	18	20	160	7.7	12	25	13	6.8	3.4	38	3.3	130	19	33	15	24	24	41	23
Ethyl acetate	ug/m3	NA	0.13 U	1.5	0.29	0.83	0.17	0.43	0.56	0.29	5	0.17	0.61	0.46	0.47	0.64	0.13 U	0.4	0.16	0.7	0.13 U	0.13 U	0.13 U	0.37 U	0.37 U
Ethylbenzene	ug/m3	290	0.091 J	0.15 U	0.26	0.15 U	0.65	0.3	0.13	0.12 J	0.17	0.12 J	0.34	0.44	0.26	0.2	0.15 U	0.43	0.098 J	0.47	0.55	0.15 U	0.15 U	0.29	0.25
Hexachlorobutadiene	ug/m3	NA	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.21 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.75 U	0.37 U	0.37 U	1.1 U	1.1 U
Hexane	ug/m3	NA	1.1 J	1.4 J	0.75 J	0.46 J	1.4 J	0.56 J	0.33 J	0.3 J	5.1	0.42 J	0.92 J	0.48 J	0.34 J	0.82 J	4.9 U	0.43 J	0.33 J	0.77 J	0.99 J	4.9 U	4.9 U	1.2	0.78
Isopropyl alcohol	ug/m3	NA	3.4 U	3.4 U	3.4 U	3.4 U	2.4 J	6.5	180	0.47 J	2.6 J	9.4	5.3	3.4 U	0.68 J	5.7	0.81 J	6.2	2.3 J	26	1.7 J	1.6 J	1.9 J	4.7	6.6
m,p-Xylene	ug/m3	NA	0.24 J	0.49	0.81	0.3	1.9	1	0.3	0.54	0.5	0.36	1	2.1	0.2 J	0.55	0.15 J	1.1	0.27 J	1.1	1.3	0.36	0.3 U	0.82	0.72
Methyl methacrylate	ug/m3	NA	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.082 U	0.14 U	0.14 U		0.14 U		0.14 U		0.14 U	0.14 U	0.15	0.1 J	0.14 U	0.14 U	0.14 U		
Methylene chloride	ug/m3	17	2	3	1.1 J	0.83 J	0.67 J	0.73 J	0.66 J	0.28 J	1 J	0.48 J	0.52 J	0.62 J	1.2 J	1.2 J	0.25 J	0.36 J	0.43 J	0.35 J	0.68 J	0.38 J	0.54 J	2.5	5.2
Methyl-t-butyl ether	ug/m3	190	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.072 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 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	0.18 U	0.18 U
Naphthalene	ug/m3	NA												0.18 U		0.2									
n-Heptane	ug/m3	NA	0.14 U	0.18	0.46	0.14 U	0.75	0.56	0.21	0.14 U	0.17	0.17	0.35	0.28	0.14 U	0.27	0.14 U	0.37	0.18	0.69	0.65	0.35	0.14 U	0.27	0.2 U
o-Xylene	ug/m3	NA	0.1 J	0.17	0.33	0.15 U	0.75	0.32	0.11	0.13 J	0.18	0.13 J	0.36	0.6	0.24	0.21	0.15 U	0.4	0.12 J	0.4	0.58	0.15 U	0.15 U	0.36	0.26
Propylene (Propene)	ug/m3	NA	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	1.1 J	1.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	0.78 J	1.6 J	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	0.18 U	0.18 U
Styrene	ug/m3	290	0.15 U	0.15 U	0.2	0.15 U	0.18	0.15 U	0.089	0.15 U	0.036 J	0.096 J	0.18	0.15 U	0.15 U	0.15 U	0.15 U	0.31	0.15 U	0.48	0.15 U	0.15 U	0.15 U	0.21 U	0.21 U
Tetrachloroethene	ug/m3	5	0.12 J	0.24 U	0.24 U	0.24 U	0.39	0.54	0.24	0.13 J	0.39	0.2 J	0.18 J	0.43	0.24 U	2	0.24 U	0.44	0.17 J	0.62	1.5	0.82	0.24 U	1.2	0.34 U
Tetrahydrofuran	ug/m3	NA	0.1 U	0.14	0.1 U	0.1 U	0.1 U	0.1 U	0.1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.13 J	0.1 U	0.17	0.1 U	0.1 U	0.1 U	77	2.8
Toluene	ug/m3	500	0.61	0.95	2.6	0.89	3.8	2.2	0.65	0.78	0.74	0.75	2.7	2.6	0.43	1.4	0.43	2.2	0.83	3	1.6	5.7	0.34	1.8	1.3
trans-1,2-Dichloroethene	ug/m3	200	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.13 J	0.33 J	0.14 U	0.14 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.045 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 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	0.22 U	0.22 U
Trichloroethene	ug/m3	1	0.19 U	0.19 U	0.19 U	0.19 U	0.23	0.19 U	0.075	0.19 U	0.083 J	0.19 U	0.17 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.15 J	0.93	0.45	0.19 U	**13**	**1.7**
Trichlorofluoromethane	ug/m3	500	1.3	2.1	1.6	1.6	1.7	1.4	1.3	1.3	1.1	1.5	1.3	1.8	1	1	1.3	1.1	1.1	1.2	1.8	1.2	1.2	4.8	1.3
Trichlorotrifluoroethane	ug/m3	NA	0.6	1.4	0.63	0.54	0.47	0.58	0.54	0.64	0.49 J	0.67 J	0.59 J	0.58 J	0.46 J	0.48 J	0.53 J	0.44 J	0.48 J	0.53 J	1.1 U	1.1 U	0.42 J	0.64	0.51
Vinyl acetate	ug/m3	NA	0.25 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	1.4 U	2.5 U	2.5 U	2.5 U	2.5 U	1.8 J	2.5 U	2.5 U	2.5 U	1.1 J	2.5 U	1.5 J	2.5 U	2.5 U	2.5 U	0.71 U	0.71 U
Vinyl chloride	ug/m3	1.9	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.026 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.13 U	0.13 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter
Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Prepared By: AKN, 2/28/2020
Checked By: HWC, 2/28/2020

Appendix D1.
Summary of Analytical Results - Indoor Air Sampling for Small Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:			Small Center Retail Space																						
Location:			IA-6																						
Sample ID:			IA-6-021109	IA-6-021809	IA-6-022609	IA-6-030609	IA-6-041409	IA-6-051509	IA-6-061109	IA-6-091709	IA-6-122909	IA-6-032610	IA-6-070110	IA-6-091610	IA-6-120710	IA-6-021711	IA-6-060211	IA-6-091511	IA-6-120811	IA-6-030812	IA-6-061412	IA-6-091312	IA-6-010313	IA-6-031513	IA-6-060713
Sample Date:			2/11/2009	2/18/2009	2/26/2009	3/6/2009	4/14/2009	5/15/2009	6/11/2009	9/17/2009	12/29/2009	3/26/2010	7/1/2010	9/16/2010	12/7/2010	2/17/2011	6/2/2011	9/15/2011	12/8/2011	3/8/2012	6/14/2012	9/13/2012	1/3/2013	3/15/2013	6/7/2013
Analyte	**Units**	**CT IACTIND 2003**																							
1,1,1,2-Tetrachloroethane	ug/m3	1.1																0.62 U		0.37 U	0.37 U	0.44 U	0.44 U	0.44 U	0.44 U
1,1,1-Trichloroethane	ug/m3	500	0.27 U	0.29	0.27 U	0.27 U	1.6	0.27 U	0.27 U	0.27 U	0.27 U	0.35	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.085 J	0.082 U	0.072 J	0.19 U	0.19 U	0.19 U	0.19 U
1,1,2,2-Tetrachloroethane	ug/m3	0.14	0.34 U	0.34 U	0.34 U	0.34 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.21 U	0.1 U	0.21 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1,2-Trichloroethane	ug/m3	12	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.16 U	0.082 U	0.16 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1-Dichloroethane	ug/m3	430	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	0.2 U	0.2 U	0.12 U	0.061 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U
1,1-Dichloroethene	ug/m3	20	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	0.2 U	0.2 U	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,4-Trichlorobenzene	ug/m3	NA	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	0.37 U	0.37 U	0.74 U	0.45 U	0.45 U	2.8	0.52 U	0.52 U	0.52 U	0.26 U
1,2,4-Trimethylbenzene	ug/m3	52	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	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	0.076 J	0.21
1,2-Dibromoethane (EDB)	ug/m3	0.038	0.38 U	0.38 U	0.38 U	0.38 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dichlorobenzene	ug/m3	410	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	0.3 U	0.3 U	0.18 U	0.18 U	1.7	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethane	ug/m3	0.31	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	0.2 U	0.2 U	0.056 J	0.061 U	0.056 J	0.14 U	0.14 U	0.14 U	0.14 U
1,2-Dichloropropane	ug/m3	0.42	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.069 U	0.061 J	0.16 U	0.16 U	0.16 U	0.16 U
1,2-Dichlorotetrafluoroethane	ug/m3	NA	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	ug/m3	52	0.25 U	0.38	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 J	0.059 J	0.15 U	0.091 J	0.17 U	0.17 U	0.17 U	0.17 U
1,3-Butadiene	ug/m3	NA	0.11 U	1.1	0.11 U	0.11 U	0.08 U	0.11 U	0.11 U	0.23 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.066 U	0.066 U	0.066 U	0.078 U	0.078 U	0.078 U	0.078 U
1,3-Dichlorobenzene	ug/m3	410	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	0.3 U	0.3 U	0.18 U	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U
1,4-Dichlorobenzene	ug/m3	24	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	0.3 U	0.3 U	0.3 U	0.3 U	0.3 J	0.18 U	0.18 U	0.13 J	0.21 U	0.21 U	0.21 U	0.21 U
1,4-Dioxane	ug/m3	NA																0.18 U							
2-Butanone	ug/m3	500	3.2	2.9	2.4	2.3	1	2.5	4.1	2.4	1.8	1.4	1.1	0.89	0.87	1.9 B	2.9 U	5.9 J	1.3 J	0.63 J	1.4 J	2.8 J	4.1 J	1.4 J	0.91 J
2-Hexanone	ug/m3	NA	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	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	0.14 U
4-Ethyltoluene	ug/m3	NA	0.25 U	0.47	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 J	0.15 U	0.15 U	0.08 J	0.17 U	0.17 U	0.17 U	0.17 U
4-Methyl-2-pentanone	ug/m3	200	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	0.4	0.2 U	0.2 U	0.28	0.31	0.13	0.12 U	0.92	0.25	0.14 U	0.14 U	0.14 U
Acetone	ug/m3	500	14	25	11	8.5	6.1	11	28	20	14	6.5	14	13	11 B	14 B	19 B	26	10	7.4	15	18 B	3.3	10	20
Benzene	ug/m3	3.3	0.98	**4.1**	0.41	0.7	0.59	0.47	0.43	0.31	0.4	0.55	0.19	0.6	0.44	1.3	0.29	0.31	0.42	0.39	0.2	0.49	0.11	0.8	0.23
Benzyl chloride	ug/m3	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.19 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.16 U	0.16 U	0.16 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromodichloromethane	ug/m3	0.46	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	0.34 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	0.24 U
Bromoform	ug/m3	7.3	0.51 U	0.51 U	0.51 U	0.51 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.52 U	0.52 U	0.52 U	0.52 U	0.31 U	0.31 U	0.31 U	0.36 U	0.36 U	0.36 U	0.36 U
Bromomethane	ug/m3	NA	0.19 U	0.19 U	0.19 U	0.19 U	0.14 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U
Carbon disulfide	ug/m3	NA	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	0.16 U	1.6 J	0.93 U	0.93 U	0.93 U	0.2 J	1.1 U	1.1 U	1.1 U
Carbon tetrachloride	ug/m3	0.54	0.52	**0.59**	0.47	**0.6**	0.42	**0.77**	0.45	0.42	0.4	0.43	**0.55**	0.44	0.46	**0.57**	**0.64**	0.52	0.46	0.48	0.44	0.37	0.22	0.42	**0.58**
Chlorobenzene	ug/m3	200	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.14 U	0.45	0.16 U	0.16 U	0.16 U	0.16 U
Chloroethane	ug/m3	500	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	0.13 U	0.13 U	0.13 U	0.079 U	0.079 U	0.079 U	0.093 U	0.093 U	0.093 U	0.093 U
Chloroform	ug/m3	0.5	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	0.36	0.24 U	0.24 U	0.24 U	0.24 J	0.1 J	0.073 U	0.24	0.17	0.17 U	0.075 J	0.17 U
Chloromethane	ug/m3	80	1.4	1.5	1	1.1	1.1	1.1	1.9	0.97	1.8	1.4	1	1.1	0.95	0.92	1.1	1.4	1.3	1.2	1.4	1.2	0.072	1.4	1.5
cis-1,2-Dichloroethene	ug/m3	100	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	0.2 U	0.2 U	0.098 J	0.059 U	0.052 J	0.042 J	0.14 U	0.14 U	0.14 U
cis-1,3-Dichloropropene	ug/m3	NA	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	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U
Cyclohexane	ug/m3	NA	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	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	0.12 U	0.12 U
Dibromochloromethane	ug/m3	NA	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	0.43 U	0.43 U	0.26 U	0.13 U	0.26 U	0.3 U	0.3 U	0.3 U	0.3 U
Dichlorodifluoromethane	ug/m3	500	2.6	2.8	2.6	2.6	2	2.7	2.5	2.2	1.9	1.6	2.4	1.6	1.9	3.1	1.8	1.9	2.9	2	2.9	2.8	0.17	1.7	3.4
Ethanol	ug/m3	NA	12	40	13	12	8.6	51	31	12	10	7.1	18	36	5.9	10	7.7	14	24	41	67	23	2.6	2.9	20
Ethyl acetate	ug/m3	NA	0.18 U	0.22	0.37 U	0.18 U	0.26 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.48	0.69	0.31	1	0.13	0.34	0.64
Ethylbenzene	ug/m3	290	0.33	1.6	0.22 U	0.22 U	0.21	0.22 U	0.24	0.23	0.22 U	0.22 U	0.22 U	0.43	0.22 U	0.45	0.22 U	0.22 J	0.15	0.22	0.71	0.23	0.15	0.11 J	0.18
Hexachlorobutadiene	ug/m3	NA	1.1 U	1.1 U	1.1 U	1.1 U	0.75 U	1.1 U	1.1 U	0.53 U	1.1 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	0.32 U	0.37 U	0.37 U	0.37 U	0.37 U
Hexane	ug/m3	NA	0.7	2.6	0.33	0.4	0.63	0.38	0.68	0.45	0.18 U	0.22	1.3	0.69	0.39	1.5	0.41	7 J	0.41 J	0.48 J	0.73 J	1 J	4.9 J	0.76 J	0.83 J
Isopropyl alcohol	ug/m3	NA	3.2	4.9	1.7	1.6	0.18 U	4.5	22	7	1.4	4.9	1	3.2	1.1	2.8	1.2 U	11	2.9 U	2.9 U	2.9 U	6.7	3.4 U	3.4 U	3.4 U
m,p-Xylene	ug/m3	NA	0.84	4.9	0.43 U	0.43 U	0.51	0.43 U	0.67	0.62	0.43 U	0.51	0.58	1.1	0.43 U	1.2	0.48	0.59	0.45	0.54	0.73	0.38	0.3	0.31	0.54
Methyl methacrylate	ug/m3	NA													0.2 U	0.2 U	0.2 U	0.2 U	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U
Methylene chloride	ug/m3	17	0.59	1.6	0.83	0.69	2	2	2.6	0.7 U	2.9	0.7 U	4.5	0.64	0.94	3	1	1.7 J	1.5	1.8	1.5	2.2 B	1.2	1.1 J	1.3
Methyl-t-butyl ether	ug/m3	190	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U	0.11 U	0.14	0.13 U	0.13 U	0.13 U
Naphthalene	ug/m3	NA																							
n-Heptane	ug/m3	NA	0.32	1.3	0.2 U	0.2 U	0.21	0.2 U	0.26	0.2 U	0.2 U	0.2 U	1.4	0.47	0.2 U	0.35	0.2 U	0.2	0.11 J	0.15	0.25	0.31	0.14 J	0.1 J	0.14
o-Xylene	ug/m3	NA	0.34	1.8	0.22 U	0.22 U	0.19	0.22 U	0.25	0.23	0.22 U	0.22 U	0.22 U	0.42	0.22 U	0.4	0.22 U	0.22	0.17	0.13	0.29	0.12 J	0.15	0.13 J	0.21
Propylene (Propene)	ug/m3	NA	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	0.86 U	0.86 U	0.86 U	3.4 U	2.1 U	2.1 U	2.1 U	1.4 J	2.4 U	2.4 U	2.4 U
Styrene	ug/m3	290	0.21 U	0.28	0.21 U	0.21 U	0.15 U	0.25	0.21 U	0.23	0.21 U	0.21 U	0.24	0.29	0.21 U	0.21 U	0.27	0.22	0.13 J	0.13 U	1.2	0.054 J	0.15 U	0.15 U	0.15 U
Tetrachloroethene	ug/m3	5	0.45	1.2	0.34 U	0.34 U	0.72	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	1.6	0.34 U	0.58	0.68	0.15	0.57	2.6	0.24 U	0.12 J	0.24 U
Tetrahydrofuran	ug/m3	NA	0.32	0.15 U	0.15 U	0.15 U	0.22	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15	0.12	0.088 U	0.088 U	0.1 U	0.1 U	0.1 U	0.1 U
Toluene	ug/m3	500	2.5	11	0.65	0.71	1.3	0.81	2	1.1	0.49	1.6	1.7	2.6	0.4	2.9	0.93	1.2	1.2	1.4	1.1	1.5	0.13	0.65	1.1
trans-1,2-Dichloroethene	ug/m3	200	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	0.2 U	0.2 U	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U
trans-1,3-Dichloropropene	ug/m3	NA	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	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U
Trichloroethene	ug/m3	1	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	0.3	0.27 U	0.27 U	0.27 U	0.27 U	0.19	0.081 U	0.24	0.2	0.19 U	0.072 J	0.19 U
Trichlorofluoromethane	ug/m3	500	1.7	2.5	1.5	1.7	1.4	1.2	2.2	1.2	1.7	1.3	1.5	3.1	1.1	1.6	1.1	1.7	1.4	1	1.6	1.7	0.2	1.3	2.1
Trichlorotrifluoroethane	ug/m3	NA	0.48	0.45	0.64	0.48	0.53	0.74	0.63	0.48	0.51	0.55	0.55	0.42	0.52	0.69	0.67	0.56	0.68	0.44	0.57	0.62	0.27	0.65	1
Vinyl acetate	ug/m3	NA	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	0.35 U	0.18 U	3.5 U	0.18 U	0.11 U	0.21 U	0.21 U	0.25 U	0.25 U	0.25 U	2.5 U
Vinyl chloride	ug/m3	1.9	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	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.09 U	0.09 U	0.33	0.09 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter
Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Prepared By: AKN, 2/28/2020
Checked By: HWC, 2/28/2020

Appendix D1.
Summary of Analytical Results - Indoor Air Sampling for Small Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:			Small Center Retail Space																		Western Small Retail Space			
Location:			IA-6																		IA-7			
Sample ID:			IA-6-090613	IA-6-121313	IA-6-030714	IA-6-061314	IA-6-091214	IA-6-121914	IA-06-032715	IA-6-061115	IA-6-091615	IA-6-121815	IA-6-021816	IA-6-080516	IA-6-021017	IA-6-090717	IA-6-022818	IA-6-091218	IA-6-020819	IA-6-090619	IA-6-021420	IA-7	IA-7-020309	IA-7-021109	IA-7-021809
Sample Date:			9/6/2013	12/13/2013	3/7/2014	6/13/2014	9/12/2014	12/19/2014	3/27/2015	6/11/2015	9/16/2015	12/18/2015	2/18/2016	8/5/2016	2/10/2017	9/7/2017	2/28/2018	9/12/2018	2/8/2019	9/6/2019	2/14/2020	1/16/2009	2/3/2009	2/11/2009	2/18/2009
Analyte	**Units**	**CT IACTIND 2003**																						
1,1,1,2-Tetrachloroethane	ug/m3	1.1	0.44 U	0.44 U	0.44 U	0.44 U	0.25 U	0.44 U	0.44 U	0.44 U	0.44 U		0.44 U		0.44 U	0.44 U	0.44 U	0.44 U	0.5 U	0.44 U	0.44 U				
1,1,1-Trichloroethane	ug/m3	500	0.19 U	0.19 U	0.19 U	0.19 U	0.12	0.19 U	0.19 U	0.19 U	0.14 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.39	0.19 U	44	2.4	0.4	1.3
1,1,2,2-Tetrachloroethane	ug/m3	0.14	0.24 U	0.24 U	0.24 U	0.24 U	0.069 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 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	0.34 U	0.34 U	0.34 U	0.34 U
1,1,2-Trichloroethane	ug/m3	12	0.19 U	0.19 U	0.19 U	0.19 U	0.11 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 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	0.27 U	0.27 U	0.27 U	0.27 U
1,1-Dichloroethane	ug/m3	430	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	1.3	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	ug/m3	20	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.52	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	ug/m3	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.15 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.52 U	0.26 U	0.26 U	0.37 U	0.37 U	0.37 U	0.37 U
1,2,4-Trimethylbenzene	ug/m3	52	0.27	0.17 U	0.55	0.21	0.29	0.17 U	0.13 J	0.13 J	0.066 J	0.17 U	0.17 U	0.31	0.17 U	0.15 J	0.17 U	0.33	0.17 U	0.29	0.17 U	0.25 U	0.34	0.34	0.99
1,2-Dibromoethane (EDB)	ug/m3	0.038	0.27 U	0.27 U	0.27 U	0.27 U	0.077 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 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	0.38 U	0.38 U	0.38 U	0.38 U
1,2-Dichlorobenzene	ug/m3	410	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.73 J	0.21 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-Dichloroethane	ug/m3	0.31	0.14 U	0.14 U	0.14 U	0.14 U	0.039 J	0.14 U	0.14 U	0.054 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.06 J	0.097 J	0.14 U	0.14 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	ug/m3	0.42	0.16 U	0.16 U	0.16 U	0.16 U	0.046 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.13 J	0.16 U	0.16 U	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2-Dichlorotetrafluoroethane	ug/m3	NA										0.25 U		0.25 U								0.35 U	0.35 U	0.35 U	0.35 U
1,3,5-Trimethylbenzene	ug/m3	52	0.17 U	0.17 U	0.17 U	0.17 U	0.071 J	0.17 U	0.038 J	0.052 J	0.17 U	0.17 U	0.17 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	0.25 U	0.25 U	0.25 U	0.25 U
1,3-Butadiene	ug/m3	NA	0.078 U	0.078 U	0.59	0.078 U	0.044 U	0.078 U	0.061 J	0.078 U	0.14	0.12	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.064 J	0.078 U	0.078 U	0.078 U	0.11 U	0.11 U	0.14	0.97
1,3-Dichlorobenzene	ug/m3	410	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.58 J	0.21 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dichlorobenzene	ug/m3	24	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.27	0.65 J	0.21 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dioxane	ug/m3	NA										1.3 U		1.3 U											
2-Butanone	ug/m3	500	2.8 J	2.2 J	1.6 J	3.1 J	0.66 J	0.81 J	1 J	1.2 J	1.1 J	0.73 J	0.51 J	1.8 J	0.65 J	3.7 J	0.91 J	2.5 J	2.9 J	0.85 J	0.59 J	70	6.5	3.9	5.2
2-Hexanone	ug/m3	NA	0.48	0.14 U	0.29	0.41	0.043 J	0.14 U	0.18	0.12 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.22	0.16	0.14 U	0.14 U	0.14 U	0.14 U	0.2 U	0.29	0.2 U	0.91
4-Ethyltoluene	ug/m3	NA	0.17 U	0.17 U	0.19	0.17 U	0.073 J	0.17 U	0.045 J	0.055 J	0.059 J	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.55	0.17 U	0.17 U	0.25 U	0.25 U	0.25 U	0.27
4-Methyl-2-pentanone	ug/m3	200	0.3	0.14 U	0.22	0.24	0.092	0.14 U	0.12 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.37	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.2 U	0.2 U	0.2 U	0.42
Acetone	ug/m3	500	29	27	12	26	9.2	8.2	9.2	11	17	9.3	5	21	7	38	7.8	29	14	11	7.7	29	12	13	32
Benzene	ug/m3	3.3	0.7	0.53	2.4	0.67	0.26	0.37	0.53	0.23	0.56	1.1	0.39	0.41	0.61	0.5	0.64	0.49	0.94	0.48	0.4	0.95	0.75	1.1	3.2
Benzyl chloride	ug/m3	NA	0.18 U	0.18 U	0.18 U	0.18 U	0.052 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.26 U	0.26 U	0.26 U	0.26 U
Bromodichloromethane	ug/m3	0.46	0.24 U	0.24 U	0.24 U	0.24 U	0.067 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 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	0.33 U	0.33 U	0.33 U	0.33 U
Bromoform	ug/m3	7.3	0.36 U	0.36 U	0.36 U	0.36 U	0.21 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U
Bromomethane	ug/m3	NA	0.14 U	0.14 U	0.14 U	0.14 U	0.078 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	1.4 U	0.27 U	0.19 U	0.19 U	0.19 U	0.19 U
Carbon disulfide	ug/m3	NA	0.13 J	1.1 U	1.1 U	0.23 J	0.057 J	1.1 U	0.039 J	0.083 J	0.16 J	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.32 J	1.1 U	1.1 U	1.1 U	0.16 U	0.16 U	0.16 U	0.16 U
Carbon tetrachloride	ug/m3	0.54	0.47	0.45	0.45	0.43	0.42	0.33	0.31	0.37	0.41	0.54	0.35	0.42	0.44	0.41	0.38	0.5	**0.92**	0.35	0.45	0.32	0.44	0.52	**0.56**
Chlorobenzene	ug/m3	200	0.16 U	0.16 U	0.16 U	0.16 U	0.046 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U
Chloroethane	ug/m3	500	0.093 U	0.093 U	0.093 U	0.2	0.053 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.19 U	0.093 U	0.093 U	0.19 U	0.093 U	0.093 U	0.13 U	0.13 U	0.13 U	0.13 U
Chloroform	ug/m3	0.5	0.19	0.17 U	0.17 U	0.25	0.11	0.082 J	0.069 J	0.15 J	0.18	0.17 U	0.17 U	0.17 U	0.17 U	0.2	0.1 J	0.45	0.17 U	0.17 U	0.17 U	0.24 U	0.24 U	0.24 U	0.24 U
Chloromethane	ug/m3	80	1.1	1.2	1.3	1.9	1	0.88	0.95	1.2	1.1	1.3	1	1.2	1.2	1.3	1.2	1.3	1.4	1	1.1	1.7	0.98	1.4	1.5
cis-1,2-Dichloroethene	ug/m3	100	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.1 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.29	0.2 U	0.2 U	0.2 U
cis-1,3-Dichloropropene	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.045 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U
Cyclohexane	ug/m3	NA	0.12 U	0.12 U	0.34	0.16	0.069 U	0.12 U	0.12 U	0.12 U	0.12 U	0.49	0.12 U	0.12 U	0.12 U	0.12 U	0.23	0.12 U	0.12 U	0.12 U	0.12 U	0.17 U	0.17 U	0.32	0.7
Dibromochloromethane	ug/m3	NA	0.3 U	0.3 U	0.3 U	0.3 U	0.085 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	0.43 U	0.43 U	0.43 U	0.43 U
Dichlorodifluoromethane	ug/m3	500	1.9	2.5	1.5	2.1	2.1	1.9	1.4	2.6	1.7	2.3	1.5	0.55	0.99	1.4	1.7	2.2	2.2	1.7	1.5	2.1	2.2	2.6	2.7
Ethanol	ug/m3	NA	21	6.1	20	38	160	9.4	17	29	31	8.5	3.6	15	6.5	21	29	59	49	30	41	7.3	16	11	26
Ethyl acetate	ug/m3	NA	0.42	0.13 U	0.17	0.34	1.7	0.13 U	0.3	0.13 U	0.51	1.6	0.13 U	40	30	1.9	0.13	0.74	0.13 U	0.13 U	0.13 U	0.37 U	0.37 U	0.18 U	0.21
Ethylbenzene	ug/m3	290	0.29	0.15 U	0.56	0.2	0.18	0.088 J	0.18	0.13 J	0.22	0.26	0.15 U	0.26	0.15 U	0.27	0.11 J	0.42	0.49	0.31	0.15 U	0.23	0.29	0.36	0.95
Hexachlorobutadiene	ug/m3	NA	0.37 U	0.37 U	0.37 U	0.37 U	0.21 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.75 U	0.37 U	0.37 U	1.1 U	1.1 U	1.1 U	1.1 U
Hexane	ug/m3	NA	0.85 J	0.38 J	1.2 J	0.69 J	0.35 J	0.29 J	4.9 J	0.32 J	0.72 J	0.9 J	4.9 U	2.1 J	1.8 J	0.75 J	0.35 J	1.4 J	4.9 U	0.35 J	4.9 U	0.9	0.87	0.91	2
Isopropyl alcohol	ug/m3	NA	3.4 U	0.85 J	1.7 J	8.1	3.4	0.52 J	3.1 J	4.7	7.7	3.4 U	3.4 U	3.3 J	1.6 J	3.4 J	6.4	35	3.1 J	3.9	2 J	3.7	6.2	3.6	8.3
m,p-Xylene	ug/m3	NA	0.81	0.2 J	1.6	0.64	0.36	0.31	0.44	0.35	0.53	0.87	0.2 J	0.77	0.22 J	0.81	0.27 J	1	1.1	0.9	0.3 U	0.61	0.82	0.94	2.8
Methyl methacrylate	ug/m3	NA	0.14 U	0.14 U	0.14 U	0.14 U	0.082 U	0.14 U	0.14 U		0.14 U		0.14 U		0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U				
Methylene chloride	ug/m3	17	1.1 J	0.71 J	0.64 J	0.83 J	0.64 J	0.28 J	0.49 J	0.41 J	0.49 J	1.2 J	0.37 J	2.6	2.1	0.52 J	0.45 J	1 J	0.77 J	0.39 J	0.56 J	1.9	5.7	0.92	1.5
Methyl-t-butyl ether	ug/m3	190	0.13 U	0.13 U	0.13 U	0.13 U	0.072 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 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	0.18 U	0.18 U	0.18 U	0.18 U
Naphthalene	ug/m3	NA										0.18 U		0.2											
n-Heptane	ug/m3	NA	0.47	0.14 U	0.71	1.1	0.16	0.14 U	0.15	0.14 J	0.24	0.36	0.14 U	0.49	0.14 U	0.23	0.22	0.88	0.72	0.51	0.14 U	0.2	0.2 U	0.37	1.2
o-Xylene	ug/m3	NA	0.32	0.15 U	0.64	0.24	0.14	0.085 J	0.18	0.13 J	0.17	0.29	0.15 U	0.29	0.15 U	0.28	0.12 J	0.41	0.52	0.33	0.15 U	0.24	0.31	0.39	0.97
Propylene (Propene)	ug/m3	NA	2.4 U	2.4 U	2.4 U	0.81 J	1.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	0.18 U	0.18 U	0.09 U	0.09 U
Styrene	ug/m3	290	0.22	0.15 U	0.16	0.15 U	0.077 J	0.15 U	0.036 J	0.093 J	0.06 J	0.15 U	0.15 U	0.22	0.15 U	0.16	0.15 U	0.68	0.15 U	0.15 U	0.15 U	0.21 U	0.21 U	0.21 U	0.26
Tetrachloroethene	ug/m3	5	0.24 U	0.24 U	0.24	0.32	0.49	0.12 J	0.72	0.21 J	0.34	0.33	0.24 U	0.24	0.24 U	0.21 J	0.2 J	1.2	0.99	2.6	0.24 U	1.6	0.34 U	0.65	0.63
Tetrahydrofuran	ug/m3	NA	0.1 U	0.1 U	0.1 U	0.17	0.046 J	0.1 U	0.1 U	0.1 U	0.077 J	0.1 U	0.1 U	0.1 U	0.1 U	0.17 J	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	45	2.1	0.74	0.43
Toluene	ug/m3	500	2.6	0.49	3.4	1.3	0.72	0.5	0.76	0.77	1.8	1.7	0.48	8.7	1.4	1.7	0.95	3.7	1.3	4.2	0.36	1.5	1.6	2.7	7.5
trans-1,2-Dichloroethene	ug/m3	200	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.17	0.14 U	0.14 U	0.14 U	0.14 U	0.34 J	0.14 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.045 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U
Trichloroethene	ug/m3	1	0.19 U	0.19 U	0.21	0.19 U	0.12	0.19 U	0.075 J	0.19 U	0.44	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.24	0.54	**1.5**	0.19 U	**4.6**	**1.1**	0.28	0.58
Trichlorofluoromethane	ug/m3	500	1.7	1.5	1.7	1.3	1.3	1.3	1	1.5	1.3	1.7	1.1	1.1	1.4	1.2	1.2	1.2	1.8	1.2	1.2	4.7	1.4	1.7	3.1
Trichlorotrifluoroethane	ug/m3	NA	0.66	0.58	0.46	0.53	0.54	0.64	0.47 J	0.67 J	0.58 J	0.61 J	0.48 J	0.5 J	0.54 J	0.45 J	0.48 J	0.54 J	1.1 U	1.1 U	0.42 J	0.62	0.57	0.47	0.44
Vinyl acetate	ug/m3	NA	2.5 U	2.5 U	2.5 U	2.5 U	1.4 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	3	2.5 U	2.5 U	2.5 U	0.71 U	0.71 U	0.18 U	0.18 U
Vinyl chloride	ug/m3	1.9	0.09 U	0.09 U	0.09 U	0.09 U	0.084	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.13 U	0.13 U	0.13 U	0.13 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter
Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Prepared By: AKN, 2/28/2020
Checked By: HWC, 2/28/2020

Appendix D1.
Summary of Analytical Results - Indoor Air Sampling for Small Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:			Western Small Retail Space																					
Location:			IA-7																					
Sample ID:			IA-7-022609	IA-7-030609	IA-7-041409	IA-7-051509	IA-7-061109	IA-7-091709	IA-7-122909	IA-7-032610	IA-7-070110	IA-7-091610	IA-7-120710	IA-7-021711	IA-7-060211	IA-7-091511	IA-7-120811	IA-7-030812	IA-7-061412	IA-7-091312	IA-7-010313	IA-7-031513	IA-7-060713	IA-7-090613	IA-7-100313
Sample Date:			2/26/2009	3/6/2009	4/14/2009	5/15/2009	6/11/2009	9/17/2009	12/29/2009	3/26/2010	7/1/2010	9/16/2010	12/7/2010	2/17/2011	6/2/2011	9/15/2011	12/8/2011	3/8/2012	6/14/2012	9/13/2012	1/3/2013	3/15/2013	6/7/2013	9/6/2013	10/3/2013
Analyte	**Units**	**CT IACTIND 2003**																						
1,1,1,2-Tetrachloroethane	ug/m3	1.1														0.62 U		0.37 U	0.37 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.42 U
1,1,1-Trichloroethane	ug/m3	500	0.27 U	0.27 U	0.87	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.069 J	0.082 U	0.088 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.18 U
1,1,2,2-Tetrachloroethane	ug/m3	0.14	0.34 U	0.34 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.21 U	0.1 U	0.21 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.23 U
1,1,2-Trichloroethane	ug/m3	12	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.16 U	0.082 U	0.16 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.18 U
1,1-Dichloroethane	ug/m3	430	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	0.12 U	0.061 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,1-Dichloroethene	ug/m3	20	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	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.13 U
1,2,4-Trichlorobenzene	ug/m3	NA	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	0.37 U	0.37 U	0.74 U	0.45 U	0.45 U	0.17 J	0.52 U	0.52 U	0.52 U	0.26 U	0.26 U	0.25 U
1,2,4-Trimethylbenzene	ug/m3	52	0.25 U	0.25 U	0.18 U	0.25 U	0.29	0.39	0.25 U	0.35	0.36	0.36	0.25 U	0.25 U	0.56	0.41	0.32	0.36	0.21	0.46	0.17 U	0.1 J	0.58	0.4	0.7
1,2-Dibromoethane (EDB)	ug/m3	0.038	0.38 U	0.38 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.26 U
1,2-Dichlorobenzene	ug/m3	410	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	0.18 U	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.2 U
1,2-Dichloroethane	ug/m3	0.31	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	0.07 J	0.061 U	0.051 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.11 J
1,2-Dichloropropane	ug/m3	0.42	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.3	0.23 U	0.23 U	0.23 U	0.63	0.23 J	0.14 U	0.069 U	0.14 U	0.094 J	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,2-Dichlorotetrafluoroethane	ug/m3	NA	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	ug/m3	52	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 J	0.1 J	0.15	0.083 J	0.26	0.17 U	0.17 U	0.17 U	0.17 U	0.23
1,3-Butadiene	ug/m3	NA	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	0.11 U	0.11 U	0.11 U	0.066 U	0.066 U	0.066 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.075 U
1,3-Dichlorobenzene	ug/m3	410	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	0.18 U	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.2 U
1,4-Dichlorobenzene	ug/m3	24	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	0.18 U	0.18 U	0.065 J	0.063 J	0.21 U	0.21 U	0.21 U	0.21 U	0.086 J
1,4-Dioxane	ug/m3	NA														0.18 U									
2-Butanone	ug/m3	500	2.2	1.3	1.3	2.3	7.3	2.2	0.49	2.1	4.3	1.8	0.42	1.7 B	4.7	5.9 J	2.1 J	0.97 J	1.1 J	2.8 J	4.1 J	1.9 J	1.7 J	1.6 J	3.8 J
2-Hexanone	ug/m3	NA	0.2 U	0.2 U	0.14 U	0.53	1.5	0.53	0.2 U	0.2 U	0.82	0.55	0.2 U	0.2 U	1.4 J	0.73	0.12 U	0.081 J	0.23	0.41	0.14	0.35	0.14 U	0.15	1.1
4-Ethyltoluene	ug/m3	NA	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 J	0.074 J	0.097 J	0.065 J	0.16 J	0.17 U	0.17 U	0.17 U	0.17 U	0.2
4-Methyl-2-pentanone	ug/m3	200	0.2 U	0.2 U	0.14 U	0.22	0.79	0.24	0.2 U	0.2 U	0.43	0.61	0.2 U	0.2 U	0.53	0.36	0.15	0.13	1.4	0.29	0.14	0.14 U	0.21	0.2	0.44
Acetone	ug/m3	500	7.8	6.6	6.5	10	31	22	31	12	41	27	12 B	15 B	48 B	38	17	13	18	24 B	3.3	15	49	46	46
Benzene	ug/m3	3.3	0.67	0.73	0.42	0.35	0.52	0.43	0.52	0.53	0.27	0.56	0.45	1.1	0.41	0.34	0.44	0.36	0.2	0.49	0.11	0.87	0.32	0.43	1.8
Benzyl chloride	ug/m3	NA	0.26 U	0.26 U	0.19 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.16 U	0.16 U	0.16 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromodichloromethane	ug/m3	0.46	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	0.34 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	0.24 U	0.24 U	0.23 U
Bromoform	ug/m3	7.3	0.51 U	0.51 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.52 U	0.52 U	0.52 U	0.52 U	0.31 U	0.31 U	0.31 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.35 U
Bromomethane	ug/m3	NA	0.19 U	0.19 U	0.14 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.13 U
Carbon disulfide	ug/m3	NA	0.16 U	0.16 U	0.26	0.16 U	0.16 U	0.26	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.27	1.6 J	0.93 U	0.93 U	0.93 U	0.09 J	1.1 U	1.1 U	0.16 J	0.6 J	0.14 J
Carbon tetrachloride	ug/m3	0.54	0.48	0.6	0.43	0.65	0.43	0.42	0.44	0.43	0.5	0.47	0.45	0.56	0.69	0.5	0.45	0.46	0.43	0.38	0.22	0.39	0.55	0.46	0.45
Chlorobenzene	ug/m3	200	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.14 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Chloroethane	ug/m3	500	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	0.079 U	0.079 U	0.079 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.089 U
Chloroform	ug/m3	0.5	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	0.38	0.24 U	0.24 U	0.24 U	0.34	0.12 J	0.073 U	0.13 J	0.2	0.17 U	0.082 J	0.21	0.47	0.17
Chloromethane	ug/m3	80	1	1.2	1.1	0.93	1.8	1.2	2.1	1.2	1.3	1.4	0.99	1	1.6	1.6	1.3	1.6	1.2	1.3	0.072	1.4	1.5	1.3	1.2
cis-1,2-Dichloroethene	ug/m3	100	0.2 U	0.2 U	0.14	0.2 U	0.2 U	0.2 U	0.27	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.064 J	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.13 U
cis-1,3-Dichloropropene	ug/m3	NA	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	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.15 U
Cyclohexane	ug/m3	NA	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	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	0.12 U	0.12 U	0.12 U	0.12 U
Dibromochloromethane	ug/m3	NA	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	0.26 U	0.13 U	0.26 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.29 U
Dichlorodifluoromethane	ug/m3	500	2.6	2.6	2	2.4	2.7	2.3	2.1	1.8	2.7	1.7	2	3.1	2.5	1.8	2.8	2.1	2.7	2.9	0.17	1.7	3.1	2.1	1.5
Ethanol	ug/m3	NA	7.9	8.4	7.1	11	14	11	10	13	39	240	13	14	28	76	60	70	110	60	2.6	11	45	21	40
Ethyl acetate	ug/m3	NA	0.37 U	0.18 U	0.26 U	0.18 U	0.24	2.6	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.7	0.21	1.8	0.94	0.39	0.57	0.13	0.13 U	5.5	1.3	1.9
Ethylbenzene	ug/m3	290	0.24	0.22 U	0.16 U	0.22 U	0.25	0.32	0.68	0.32	0.45	0.45	0.22 U	0.22 U	0.68	0.45	0.24	0.12 J	0.24	0.45	0.15	0.14 J	0.36	0.48	0.62
Hexachlorobutadiene	ug/m3	NA	1.1 U	1.1 U	0.75 U	1.1 U	1.1 U	0.53 U	1.1 U	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.32 U	0.32 U	0.32 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.36 U
Hexane	ug/m3	NA	1.1	0.6	0.69	0.33	1.5	0.88	0.25	0.33	0.7	0.64	0.5	1.3	0.58	7 J	3.9 J	0.8 J	0.67 J	0.97 J	4.9 J	0.87 J	2.9 J	1.3 J	0.97 J
Isopropyl alcohol	ug/m3	NA	0.25 U	2.7	0.18 U	7	14	4	1.9	18	5.8	28	2.8	11	1.2 U	77	2.9 U	2.9 U	48	22	3.4 J	3.4 U	3.4 U	3.4 U	6
m,p-Xylene	ug/m3	NA	0.73	0.43 U	0.31 U	0.43 U	0.72	0.86	2.8	0.82	1.2	1.2	0.43 U	0.43 J	1.5	1.1	0.72	0.3	0.54	1.4	0.3	0.4	1.1	1.2	1.8
Methyl methacrylate	ug/m3	NA											0.2 U	0.2 U	0.2 U	0.2 U	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Methylene chloride	ug/m3	17	6.3	1.4	4.2	2.3	5.7	0.7 U	2.9	0.7 U	1.3	0.6	1.3	2.5	1.1	1.7 J	13	2.8	1.4	2.3 B	1.2	1.4	6.1	1.3	1.1 J
Methyl-t-butyl ether	ug/m3	190	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U	0.11 U	0.11 J	0.13 U	0.13 U	0.13 U	0.13 U	0.12 U
Naphthalene	ug/m3	NA																							
n-Heptane	ug/m3	NA	0.2 U	0.2 U	0.17	0.2 U	0.34	0.37	0.2 U	0.29	0.5	0.68	0.33	0.47	2	1.1	0.46	0.47	0.65	0.99	0.14 U	0.16	0.42	1.1	1.6
o-Xylene	ug/m3	NA	0.24	0.22 U	0.16 U	0.22 U	0.25	0.31	0.6	0.28	0.43	0.43	0.22 U	0.22 U	0.69	0.41	0.3	0.17	0.2	0.56	0.15	0.15 J	0.4	0.44	0.85
Propylene (Propene)	ug/m3	NA	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	0.86 U	0.86 U	0.86 U	3.4 U	2.1 U	2.1 U	2.1 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.3 U
Styrene	ug/m3	290	0.21 U	0.21 U	0.15 U	0.21 U	0.29	0.39	0.21 U	0.26	0.7	0.39	0.21 U	0.21 U	0.97	0.63	0.18	0.097 J	0.26	0.89	0.15 U	0.081 J	0.29	2.6	0.37
Tetrachloroethene	ug/m3	5	0.34 U	0.34 U	0.48	0.34 U	0.34 U	0.34 U	1	0.34 U	0.34 U	0.36	0.34 U	1.7	0.34 U	0.62	0.66	0.14	0.15 J	1.7	0.24 U	0.15 J	0.24 U	5.5	0.22 J
Tetrahydrofuran	ug/m3	NA	0.15 U	0.15 U	0.27	0.15 U	0.15 U	0.51	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.24	0.18	0.088 U	0.088 U	0.088	0.1 U	0.1 U	0.1 U	0.1 U	0.65	0.15
Toluene	ug/m3	500	1.5	0.76	0.48	0.61	2.3	4	0.57	7.2	8.4	3.5	0.48	1.6	6.6	3.7	1.2	0.48	1.4	2.4	0.13	1	3.8	4.7	7.8
trans-1,2-Dichloroethene	ug/m3	200	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	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.13 U
trans-1,3-Dichloropropene	ug/m3	NA	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	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.15 U
Trichloroethene	ug/m3	1	0.27 U	0.27 U	0.3	0.27 U	0.27 U	0.27 U	0.4	0.27 U	0.27 U	0.77	0.27 U	0.27 U	0.27 U	0.27 U	0.16	0.081 U	0.077 J	0.15 J	0.19 U	0.068 J	0.19 U	0.53	0.14 J
Trichlorofluoromethane	ug/m3	500	1.6	1.7	1.3	1.1	1.9	1.3	1.7	1.3	1.3	2.9	1.2	1.6	1.3	1.6	1.3	1.1	1.7	1.8	0.2	1.5	2.5	1.8	1.9
Trichlorotrifluoroethane	ug/m3	NA	0.66	0.45	0.54	0.69	0.57	0.51	0.54	0.64	0.54	0.43	0.55	0.67	0.76	0.54	0.67	0.44	0.53	0.58	0.27	0.87	1	0.63	0.52
Vinyl acetate	ug/m3	NA	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	0.35 U	0.18 U	3.5 U	0.18 U	0.11 U	0.21 U	0.21 U	0.25 U	0.25 U	0.25 U	2.5 U	2.5 U	2.4 U
Vinyl chloride	ug/m3	1.9	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	0.077 U	0.038 U	0.077 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.087 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter
Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Prepared By: AKN, 2/28/2020
Checked By: HWC, 2/28/2020

Appendix D1.
Summary of Analytical Results - Indoor Air Sampling for Small Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

		Area:	Western Small Retail Space																	
		Location:	IA-7																	
		Sample ID:	IA-7-121313	IA-7-030714	IA-7-061314	IA-7-091214	IA-7-121914	IA-07-032715	IA-7-061115	IA-7-091615	IA-7-121815	IA-7-021816	IA-7-080516	IA-7-021017	IA-7-090717	IA-7-022818	IA-7-091218	IA-7-020819	IA-7-090619	IA-7-021420
		Sample Date:	12/13/2013	3/7/2014	6/13/2014	9/12/2014	12/19/2014	3/27/2015	6/11/2015	9/16/2015	12/18/2015	2/18/2016	8/5/2016	2/10/2017	9/7/2017	2/28/2018	9/12/2018	2/8/2019	9/6/2019	2/14/2020
Analyte	**Units**	**CT IACTIND 2003**																		
1,1,1,2-Tetrachloroethane	ug/m3	1.1	0.44 U	0.44 U	0.44 U	0.25 U	0.44 U	0.44 U	0.44 U	0.44 U		0.44 U		0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
1,1,1-Trichloroethane	ug/m3	500	0.19 U	0.19 U	0.19 U	0.055 U	0.19 U	0.19 U	0.19 U	0.054 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1,2,2-Tetrachloroethane	ug/m3	0.14	0.24 U	0.24 U	0.24 U	0.069 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1,2-Trichloroethane	ug/m3	12	0.19 U	0.19 U	0.19 U	0.11 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.4	0.19 U	0.19 U
1,1-Dichloroethane	ug/m3	430	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,1-Dichloroethene	ug/m3	20	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,4-Trichlorobenzene	ug/m3	NA	0.26 U	0.26 U	0.26 U	0.15 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.52 U	0.26 U	0.26 U
1,2,4-Trimethylbenzene	ug/m3	52	0.25	0.38	0.31	0.37	0.052 J	0.33	0.21	0.15 J	0.28	0.17 U	0.23	0.17 U	0.21	0.17 U	0.29	0.54	0.17 U	0.17 U
1,2-Dibromoethane (EDB)	ug/m3	0.038	0.27 U	0.27 U	0.27 U	0.077 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dichlorobenzene	ug/m3	410	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.65 J	0.21 U	0.21 U
1,2-Dichloroethane	ug/m3	0.31	0.14 U	0.14 U	0.14 U	0.15	0.14 U	0.065 J	0.19	0.18	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.062 J	**0.34**	0.14 U	**0.46**	0.14 U
1,2-Dichloropropane	ug/m3	0.42	0.16 U	0.16 U	0.16 U	0.085	0.16 U	0.16 U	0.16 U	0.16 J	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.097 J	0.4	**0.8**	0.16 U
1,2-Dichlorotetrafluoroethane	ug/m3	NA									0.25 U		0.25 U							
1,3,5-Trimethylbenzene	ug/m3	52	0.17 U	0.17 U	0.17 U	0.057 J	0.17 U	0.083 J	0.083 J	0.048 J	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.39	0.17 U	0.17 U
1,3-Butadiene	ug/m3	NA	0.078 U	0.48	0.078 U	0.044 U	0.078 U	0.078 U	0.078 U	0.078 U	0.14	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U
1,3-Dichlorobenzene	ug/m3	410	0.21 U	0.21 U	0.21 U	0.06 J	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	0.5	0.21 U	0.21 U
1,4-Dichlorobenzene	ug/m3	24	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.16 J	0.15 J	0.055 J	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.57	0.21 U	0.21 U
1,4-Dioxane	ug/m3	NA									1.3 U		1.3 U							
2-Butanone	ug/m3	500	0.69 J	1.5 J	3 J	2.2 J	0.75 J	1.4 J	1.7 J	1.7 J	2 J	0.59 J	1.9 J	0.81 J	2.4 J	1.9 J	1.3 J	2.1 J	1.1 J	0.91 J
2-Hexanone	ug/m3	NA	0.14 U	0.37	0.35	0.41	0.14 U	0.43	0.17	0.14 U	0.28	0.14 U	0.36	0.14 U	0.43	0.37	0.14 U	0.14 U	0.14 U	0.14 U
4-Ethyltoluene	ug/m3	NA	0.17 U	0.17 U	0.17 U	0.065 J	0.17 U	0.09 J	0.069 J	0.055 J	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.49	0.17 U	0.17 U
4-Methyl-2-pentanone	ug/m3	200	0.14 U	0.14 U	0.34	0.18	0.14 U	0.18	0.15	0.14 U	0.18	0.14 U	0.14 U	0.14 U	0.28	0.1 J	0.14 U	0.14 U	0.14 U	0.14 U
Acetone	ug/m3	500	20	15	30	41	12	16	24	39	15	9.1	33	7.5	37	14	23	13	18	26
Benzene	ug/m3	3.3	0.54	1.9	0.57	0.36	0.4	0.57	0.27	0.91	0.97	0.43	0.27	0.47	0.47	0.53	0.5	0.85	0.4	0.41
Benzyl chloride	ug/m3	NA	0.18 U	0.18 U	0.18 U	0.052 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromodichloromethane	ug/m3	0.46	0.24 U	0.24 U	0.24 U	0.067 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Bromoform	ug/m3	7.3	0.36 U	0.36 U	0.36 U	0.21 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Bromomethane	ug/m3	NA	0.14 U	0.14 U	0.14 U	0.056 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	1.4 U	0.27 U
Carbon disulfide	ug/m3	NA	1.1 U	1.1 U	0.15 J	0.11 J	1.1 U	0.042 J	0.1 J	0.15 J	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Carbon tetrachloride	ug/m3	0.54	0.49	0.42	0.45	0.46	0.33	0.34	0.36	0.39	0.51	0.37	0.45	0.42	0.4	0.37	0.5	**0.83**	0.43	0.43
Chlorobenzene	ug/m3	200	0.16 U	0.16 U	0.16 U	0.046 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Chloroethane	ug/m3	500	0.093 U	0.093 U	0.093 U	0.053 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.19 U	0.093 U	0.076 J	0.19 U	0.093 U	0.093 U
Chloroform	ug/m3	0.5	0.24	0.17 U	0.18	0.12	0.096 J	0.079 J	0.19	0.23	0.17 U	0.17 U	0.2	0.15 J	0.31	0.13 J	0.23	**0.57**	0.34	0.17 U
Chloromethane	ug/m3	80	1.2	1.4	1.4	0.76	0.86	1	1.3	1.3	1.4	1	1.4	1.2	1.5	1.3	1.9	0.14 U	0.14 U	1
cis-1,2-Dichloroethene	ug/m3	100	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.086 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
cis-1,3-Dichloropropene	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.045 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Cyclohexane	ug/m3	NA	0.12 U	0.3	0.12 U	0.069 U	0.12 U	0.12 U	0.12 U	0.12 U	0.46	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Dibromochloromethane	ug/m3	NA	0.3 U	0.3 U	0.3 U	0.085 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
Dichlorodifluoromethane	ug/m3	500	2.7	1.5	2.1	2.2	1.8	1.3	1.9	1.8	2.3	1.6	0.57	0.88	1.4	1.7	2.1	2.5	0.17 U	1.4
Ethanol	ug/m3	NA	25	50	79	96	39	110	110	440 E	33	13	23	15	95	46	28	45	200	190
Ethyl acetate	ug/m3	NA	0.34	0.56	0.41	0.37	0.13 U	0.64	0.39	1.1	0.31	0.32	1.4	3.5	1.7	0.17	0.35	0.13 U	0.13 U	0.13 U
Ethylbenzene	ug/m3	290	0.15 U	0.43	0.35	0.2	0.085 J	0.58	0.19	0.3	0.25	0.15 U	0.31	0.15 U	0.29	0.14 J	0.37	0.48	0.48	0.15 U
Hexachlorobutadiene	ug/m3	NA	0.37 U	0.37 U	0.37 U	0.21 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.75 U	0.37 U	0.37 U
Hexane	ug/m3	NA	0.39 J	1.1 J	0.9 J	0.37 J	0.35 J	4.9 J	0.36 J	0.67 J	0.52 J	0.28 J	1.9 J	0.36 J	0.65 J	0.29 J	0.78 J	4.9 U	4.9 U	4.9 U
Isopropyl alcohol	ug/m3	NA	40	1.9 J	11	2 U	1.4 J	30	11	30	3.4 U	4.8	3.4 U	8.5	3.4 U	3.8	92	5.6	18	8.9
m,p-Xylene	ug/m3	NA	0.25 J	1.2	1.1	0.54	0.29 J	0.67	0.48	0.64	0.84	0.27 J	0.93	0.16 J	0.82	0.3 J	1.1	1.1	1.5	0.23 J
Methyl methacrylate	ug/m3	NA	0.14 U	0.14 U	0.14 U	0.082 U	0.14 U	0.14 U		0.14 U		0.14 U		0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Methylene chloride	ug/m3	17	0.76 J	0.68 J	0.74 J	0.63 J	0.39 J	0.6 J	0.58 J	0.54 J	1.2 J	0.4 J	1.1 J	0.49 J	0.59 J	0.46 J	0.39 J	0.66 J	0.4 J	0.56 J
Methyl-t-butyl ether	ug/m3	190	0.13 U	0.13 U	0.13 U	0.072 U	0.13 U	0.13 U	0.063 J	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
Naphthalene	ug/m3	NA									0.18 U		0.21							
n-Heptane	ug/m3	NA	0.45	1.3	4.6	1.9	4.3	0.19	0.14 J	0.25	0.28	0.14 U	0.29	0.14 U	0.29	0.17	0.44	0.14 U	0.43	0.14 U
o-Xylene	ug/m3	NA	0.15 U	0.44	0.39	0.19	0.088 J	0.26	0.19	0.23	0.3	0.15 U	0.34	0.15 U	0.29	0.12 J	0.38	0.48	0.51	0.15 U
Propylene (Propene)	ug/m3	NA	2.4 U	2.4 U	1.5 J	1.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	0.78 J	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Styrene	ug/m3	290	0.15 U	0.17	0.29	0.24	0.15 U	0.096 J	0.29	0.27	0.18	0.15 U	0.41	0.15 U	0.59	0.13 J	0.42	0.15 U	0.33	0.15 U
Tetrachloroethene	ug/m3	5	0.24 U	0.4	0.34	0.13	0.13 J	0.23 J	0.25	0.23 J	0.36	0.24 U	0.38	0.24 U	0.34	0.24 U	0.6	0.88	1.6	1.9
Tetrahydrofuran	ug/m3	NA	0.1 U	0.1 U	0.14	0.13	0.1 U	0.11	0.15	0.11	0.1 U	0.1 U	0.1 U	0.1 U	0.21 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Toluene	ug/m3	500	1.1	2.8	2.2	1.3	0.72	1.1	1	2.1	1.6	0.59	1.8	0.51	1.8	0.95	2.6	1.2	3.9	0.42
trans-1,2-Dichloroethene	ug/m3	200	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.083 J	0.28 U	0.14 U	0.14 U
trans-1,3-Dichloropropene	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.045 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Trichloroethene	ug/m3	1	0.19 U	0.28	0.19 U	0.077	0.19 U	0.1 J	0.19 U	0.31	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.18 J	0.19 U	0.43	0.19 U
Trichlorofluoromethane	ug/m3	500	1.6	1.7	1.4	1.3	1.4	1.2	1.5	1.3	1.7	1.1	1.1	1.4	1.2	1.2	1.2	1.8	1.2	1.2
Trichlorotrifluoroethane	ug/m3	NA	0.6	0.45	0.52	0.58	0.63	0.64 J	0.65 J	0.59 J	0.6 J	0.46 J	0.48 J	0.58 J	0.46 J	0.49 J	0.54 J	1.1 U	1.1 U	0.41 J
Vinyl acetate	ug/m3	NA	2.5 U	2.5 U	2.5 U	1.4 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	1.6 J	2.5 U	1.2 J	2.5 U	2.5 U	2.5 U
Vinyl chloride	ug/m3	1.9	0.09 U	0.09 U	0.09 U	0.026 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter
Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Prepared By: AKN, 2/28/2020
Checked By: HWC, 2/28/2020

Appendix D2

Summary of All Analytical Results –
Extraction Well Samples for Small Retail Space

Appendix D2.
Summary of Analytical Results - Small Extraction Wells
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:		Extraction Well - Center Small Retail Space																						
Location:		EW-6																						
Sample ID:		EW-6-020309	EW-6-021109	EW-6-021809	EW-6-022609	EW-6-030609	EW-6-041409	EW-6-051509	EW-6-061109	EW-6-091709	EW-6-122909	EW-6-070110	EW-6-091610	EW-6-120710	EW-6-021711	EW-6-060211	EW-6-091511	EW-6-120811	EW-6-030812	EW-6-061412	EW-6-091312	EW-6-010313	EW-6-031513	EW-6-060713
Sample Date:		2/3/2009	2/11/2009	2/18/2009	2/26/2009	3/6/2009	4/14/2009	5/15/2009	6/11/2009	9/17/2009	12/29/2009	7/1/2010	9/16/2010	12/7/2010	2/17/2011	6/2/2011	9/15/2011	12/8/2011	3/8/2012	6/14/2012	9/13/2012	1/3/2013	3/15/2013	6/7/2013
Analyte	**Units**																							
1,1,1,2-Tetrachloroethane	ug/m3																25 U		1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
1,1,1-Trichloroethane	ug/m3	69000	32000	21000	16000	16000	5600	8200	5700	5400	1100	430	390	130	0.55 U	80	230	33	0.27 U	75	0.55 U	0.55 U	0.55 U	4.3
1,1,2,2-Tetrachloroethane	ug/m3	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	3.4 U	6.8 U	0.69 U	0.69 U	6.9 U	14 U	3.4 U	0.34 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
1,1,2-Trichloroethane	ug/m3	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	2.7 U	5.4 U	0.55 U	0.55 U	5.5 U	11 U	2.7 U	0.27 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U
1,1-Dichloroethane	ug/m3	5200	2500	2100	2200	1600	780	1200	1100	930	580	47	38	21	0.4 U	12	27	6.4	0.2 U	9.6	0.4 U	0.4 U	0.4 U	0.78
1,1-Dichloroethene	ug/m3	850	210	100	110	55	74	87	83	80	6.4	3.5	4 U	0.4 U	0.4 U	4 U	7.9 U	2 U	0.2 U	0.84	0.4 U	0.4 U	0.4 U	0.4 U
1,2,4-Trichlorobenzene	ug/m3	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 U	0.74 U	7.4 U	30 U	7.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	0.74 U
1,2,4-Trimethylbenzene	ug/m3	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 U	0.49 U	4.9 U	9.8 U	2.5 U	0.49 U	0.26 J	0.6	0.49 U	0.49 U	0.49 U
1,2-Dibromoethane (EDB)	ug/m3	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	76 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	7.6 U	0.77 U	0.77 U	7.7 U	15 U	3.8 U	0.38 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U
1,2-Dichlorobenzene	ug/m3	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 U	0.6 U	6 U	12 U	3 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
1,2-Dichloroethane	ug/m3	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 U	0.4 U	4 U	8.1 U	2 U	0.2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	ug/m3	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 U	0.46 U	4.6 U	9.2 U	2.3 U	0.23 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
1,2-Dichlorotetrafluoroethane	ug/m3	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	ug/m3	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 U	0.49 U	4.9 U	9.8 U	2.5 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
1,3-Butadiene	ug/m3	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 U	0.22 U	2.2 U	4.4 U	1.1 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,3-Dichlorobenzene	ug/m3	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 U	0.6 U	6 U	12 U	3 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
1,4-Dichlorobenzene	ug/m3	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 U	0.6 U	6 U	12 U	3 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
1,4-Dioxane	ug/m3																7.2 U							
2-Butanone	ug/m3	120	280	300	130	97	160	37	65	8.7	23	1800	110	20	1.9 B	59 U	240 J	13 J	2.1 J	200	3.7 J	12 J	1.9 J	120
2-Hexanone	ug/m3	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 U	0.41 U	82 U	8.2 U	2 U	0.41 U	0.7	0.52	0.41 U	0.41 U	0.41 U
4-Ethyltoluene	ug/m3	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 U	0.49 U	4.9 U	9.8 U	2.5 U	0.49 U	0.49 U	0.28 J	0.49 U	0.49 U	0.49 U
4-Methyl-2-pentanone	ug/m3	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 U	0.41 U	4.1 U	8.2 U	2 U	0.41 U	0.35 J	0.41 U	0.41 U	0.41 U	0.41 U
Acetone	ug/m3	580	64	81	33	22	410	16	20	4.8 U	27	490	70	15 B	15 B	48 U	190 J	21 J	9.9	36	25 B	9.5 J	6.3 J	42
Benzene	ug/m3	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	1.1	3.2 U	6.4 J	1.6 U	0.31 J	1.2	0.77	0.32	0.4	0.32 U
Benzyl chloride	ug/m3	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 U	0.52 U	5.2 U	10 U	2.6 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
Bromodichloromethane	ug/m3	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 U	0.67 U	6.7 U	13 U	3.4 U	0.34 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
Bromoform	ug/m3	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 U	1 U	10 U	21 U	5.2 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	ug/m3	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 U	0.39 U	3.9 U	7.8 U	1.9 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U
Carbon disulfide	ug/m3	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	0.31 U	11	62 J	7.1 J	3.1 U	29	3.1 U	3.1 U	3.1 U	0.35 J
Carbon tetrachloride	ug/m3	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 U	0.63 U	6.3 U	13 U	3.1 U	0.39	0.34 J	0.4 J	0.63 U	0.23 J	0.63 U
Chlorobenzene	ug/m3	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 U	0.46 U	4.6 U	9.2 U	2.3 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
Chloroethane	ug/m3	140	50	34	18	13	26 U	13	14	11	4	1.3 U	2.8	0.26 U	0.26 U	2.6 U	5.3 U	1.3 U	0.26 U	1.4	0.26 U	0.26 U	0.26 U	0.26 U
Chloroform	ug/m3	42	24	19	29	21	50	14	12	12	7.2	3.7	4.8 U	2.4	0.49 U	4.9 U	9.8 U	1 J	0.36	0.92	0.21 J	0.49 U	0.49 U	0.49 U
Chloromethane	ug/m3	2 U	2 U	2 U	2 U	2 U	34	1 U	1 U	1 U	1 U	38	40	0.21 U	1	16	45	2.9	1.5	7.8	1.3	0.21	1.2	1.3
cis-1,2-Dichloroethene	ug/m3	700	360	220	250	150	120	190	170	130	36	11	7.9	2.3	0.4 U	4 U	7.9 J	0.83 J	0.2 U	2.8	0.4 U	0.4 U	0.4 U	0.4 U
cis-1,3-Dichloropropene	ug/m3	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 U	0.45 U	4.5 U	9.1 U	2.3 U	0.23 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
Cyclohexane	ug/m3	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 U	0.34 U	3.4 U	6.9 U	1.7 U	0.34 U	0.34 U	0.49	0.34 U	0.34 U	0.34 U
Dibromochloromethane	ug/m3	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 U	0.85 U	8.5 U	17 U	4.3 U	0.43 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
Dichlorodifluoromethane	ug/m3	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	3.6	4.9 U	9.9 U	3	2.2	2.9	2.9	0.49	2.5	2.3
Ethanol	ug/m3	360	38	73	38	25	110	18	14	6.7	18	15	19 U	4.6	11	38 U	150 J	38 U	29	5.8 J	68	7.5	3.5 J	13
Ethyl acetate	ug/m3	7.3 U	3.6 U	3.6 U	7.3 U	3.6 U	73 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	3.6 U	0.36 U	0.36 U	3.6 U	7.2 U	1.8 U	0.52	1.2	24	0.36 U	0.36 U	0.94
Ethylbenzene	ug/m3	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	44 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	4.4 U	0.43 U	0.43 U	4.3 U	8.7 J	2.2 U	0.43 U	0.18 J	0.66	0.43 U	0.43 U	0.43 U
Hexachlorobutadiene	ug/m3	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 U	1.1 U	11 U	21 U	5.3 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Hexane	ug/m3	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 U	1.3	3.5 U	280 U	70 U	1.4 J	1.2 J	7.6 J	14 U	0.6 J	1.6 J
Isopropyl alcohol	ug/m3	210	18	33	15	10	230	8.2	11	20	2.5 U	1.2 U	9.4	0.49 U	2.9	25 U	200 J	49 U	1.3 J	9.8 U	7.6 J	9.8 J	9.8 U	9.8 U
m,p-Xylene	ug/m3	8.6 U	8.6 U	8.6 U	8.6 U	8.6 U	120	4.3 U	4.3 U	4.3 U	4.3 U	4.3 U	8.6 U	0.87 U	0.94	8.7 U	17 J	4.3 U	0.87 U	0.24 J	1.9	0.87 U	0.87 U	0.87 U
Methyl methacrylate	ug/m3														0.41 U	4.1 U	8.2 U	2 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
Methylene chloride	ug/m3	7 U	7 U	7.5	7 U	7 U	780	12	15	7 U	27	10	7 U	1.3	2.8	6.9 U	69 U	3.6 J	4.8	2.5 J	14 B	3.5 J	1.4 J	3.8
Methyl-t-butyl ether	ug/m3	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	36 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	3.6 U	0.36 U	0.36 U	3.6 U	7.2 U	1.8 U	0.36 U	0.36 U	0.13 J	0.36 U	0.36 U	0.36 U
Naphthalene	ug/m3																							
n-Heptane	ug/m3	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 U	0.41 U	4.1 U	8.2 U	2 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
o-Xylene	ug/m3	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	44 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	4.4 U	0.43 U	0.43 U	4.3 U	8.7 J	2.2 U	0.43 U	0.16 J	0.73	0.43 U	0.43 U	0.43 U
Propylene (Propene)	ug/m3	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 U	1.7 U	17 U	140 U	3.8 J	6.9 U	2.8 J	6.9 U	6.9 U	6.9 U	6.9 U
Styrene	ug/m3	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	42 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	4.2 U	0.43 U	0.43 U	4.3 U	8.5 U	2.1 U	0.43 U	0.2 J	0.35 J	0.43 U	0.43 U	0.43 U
Tetrachloroethene	ug/m3	330	290	130	290	190	300	190	210	250	68	34	23	8.1	1.2	6.8 U	17	2.4 J	0.76	4.6	0.88	0.68 U	0.68 U	0.68 U
Tetrahydrofuran	ug/m3	75	480	260	730	570	130	110	87	9.1	31	42000	53000	480	0.29 U	13000	32000	3900	3.7	8100	0.29 U	0.29 U	0.27 J	58
Toluene	ug/m3	12	3.8 U	3.8 U	3.8 U	3.8 U	38 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	3.8 U	0.38 U	2.4	3.8 U	9.8	1.9 U	0.36 J	0.7	5.3	0.38	0.31 J	0.5
trans-1,2-Dichloroethene	ug/m3	12	6.3	4.2	6.4	4 U	40 U	2.6	2.7	2	2.1	2 U	4 U	0.4 U	0.4 U	4 U	7.9 U	2 U	0.2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
trans-1,3-Dichloropropene	ug/m3	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 U	0.45 U	4.5 U	9.1 U	2.3 U	0.23 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
Trichloroethene	ug/m3	12000	6900	4200	4400	4800	3900	5400	4700	6100	2000	730	650	250	0.54 U	190	390	66	0.27 U	180	0.21 J	0.54 U	0.54 U	5.7
Trichlorofluoromethane	ug/m3	2300	870	630	350	250	150	230	440	700	320	6.7	25	28	1.7	11	34	11	1	15	2	0.56	1.3	4.7
Trichlorotrifluoroethane	ug/m3	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	76 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	7.6 U	0.77 U	0.86	7.7 U	15 U	3.8 U	0.38 U	0.77 U	0.6 J	0.77 U	0.63 J	0.77 U
Vinyl acetate	ug/m3	15 U	3.6 U	3.6 U	15 U	3.6 U	150 U	1.8 U	1.8 U	7.1 U	3.6 U	1.8 U	7.1 U	0.7 U	0.35 U	70 U	7 U	1.8 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	7 U
Vinyl chloride	ug/m3	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 U	0.26 U	2.6 U	5.1 J	1.3 U	0.13 U	1.5	0.26 U	0.26 U	0.26 U	0.26 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter

Prepared By: AKN, 9/16/2019
Checked By: HWC, 9/16/2019

Appendix D2.
Summary of Analytical Results - Small Extraction Wells
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:		Extraction Well - Center Small Retail Space																			Extraction Well - Eastern Small Retail Space			
Location:		EW-6																			EW-5			
Sample ID:		EW-6-090613	EW-6-121313	EW-6-030714	EW-6-061314	EW-6-091214	EW-6-121914	EW-06-032715	EW-6-061115	EW-6-091615	EW-6-121815	EW-6-021816	EW-6-080516	EW-6-021017	EW-6-090717	EW-6-022818	EW-6-091218	EW-6-020819	EW-6-090619	EW-6-021420	EW-5-020309	EW-5-021109	EW-5-021809	EW-5-022609
Sample Date:		9/6/2013	12/13/2013	3/7/2014	6/13/2014	9/12/2014	12/19/2014	3/27/2015	6/11/2015	9/16/2015	12/18/2015	2/18/2016	8/5/2016	2/10/2017	9/7/2017	2/28/2018	9/12/2018	2/8/2019	9/6/2019	2/14/2020	2/3/2009	2/11/2009	2/18/2009	2/26/2009
Analyte	**Units**																							
1,1,1,2-Tetrachloroethane	ug/m3	0.44 U	1.2 U	1.2 U	1.2 U	2.5 U	1.2 U	1.2 U	1.2 U	2.5 U		2.5 U		1.2 U	2.5 U	2.5 U	2.5 U	1.2 U	1.2 U	1.2 U				
1,1,1-Trichloroethane	ug/m3	71	18	13	26	58	19	14	13	5.9	27	10	180	4	3.9	2.6	27	0.55 U	0.55 U	0.55 U	190000	41000	17000	7100
1,1,2,2-Tetrachloroethane	ug/m3	0.24 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	1.4 U	1.4 U	1.4 U	6.9 U	0.69 U	1.4 U	1.4 U	1.4 U	0.69 U	0.69 U	0.69 U	6.8 U	6.8 U	6.8 U	6.8 U
1,1,2-Trichloroethane	ug/m3	0.19 U	0.55 U	0.55 U	0.55 U	1.1 U	0.55 U	0.55 U	0.55 U	1.1 U	1.1 U	1.1 U	5.5 U	0.55 U	1.1 U	1.1 U	1.1 U	0.55 U	0.55 U	0.55 U	5.4 U	5.4 U	5.4 U	5.4 U
1,1-Dichloroethane	ug/m3	13	2.7	2.2	4.7	8.2	3.5	2.8	2.5	1.1	3.1	1.7	24	0.88	0.58 J	0.45 J	4.1	0.4 U	0.4 U	0.4 U	11000	1900	890	770
1,1-Dichloroethene	ug/m3	1.1	0.4 U	0.4 U	0.4 U	0.52	0.4 U	0.4 U	0.4 U	0.79 U	0.79 U	0.79 U	4 U	0.4 U	0.79 U	0.79 U	0.79 U	1.1	0.4 U	0.4 U	2500	290	130	190
1,2,4-Trichlorobenzene	ug/m3	0.26 U	0.74 U	0.74 U	0.74 U	1.5 U	0.74 U	0.74 U	0.74 U	1.5 U	1.5 U	1.5 U	7.4 U	0.74 U	1.5 U	1.5 U	1.5 U	1.5 U	0.74 U	0.74 U	7.4 U	7.4 U	7.4 U	7.4 U
1,2,4-Trimethylbenzene	ug/m3	0.59	0.49 U	0.49 U	0.49 U	0.98 U	0.49 U	0.2 J	0.24 J	0.98 U	0.98 U	0.98 U	4.9 U	0.49 U	0.98 U	0.98 U	0.98 U	0.49 U	0.49 U	0.49 U	5 U	5 U	5 U	5 U
1,2-Dibromoethane (EDB)	ug/m3	0.27 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	1.5 U	1.5 U	1.5 U	7.7 U	0.77 U	1.5 U	1.5 U	1.5 U	0.77 U	0.77 U	0.77 U	7.6 U	7.6 U	7.6 U	7.6 U
1,2-Dichlorobenzene	ug/m3	0.21 U	0.6 U	0.6 U	0.6 U	1.2 U	0.6 U	0.6 U	0.6 U	1.2 U	1.2 U	1.2 U	6 U	0.6 U	1.2 U	1.2 U	1.2 U	2.4 U	0.6 U	0.6 U	6 U	6 U	6 U	6 U
1,2-Dichloroethane	ug/m3	0.14 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.81 U	0.81 U	0.81 U	4 U	0.4 U	0.81 U	0.81 U	0.81 U	0.4 U	0.4 U	0.4 U	4 U	4 U	4 U	4 U
1,2-Dichloropropane	ug/m3	0.16 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.92 U	0.92 U	0.92 U	4.6 U	0.46 U	0.92 U	0.92 U	0.92 U	0.46 U	0.46 U	0.46 U	4.6 U	4.6 U	4.6 U	4.6 U
1,2-Dichlorotetrafluoroethane	ug/m3										1.4 U		7 U								7 U	7 U	7 U	7 U
1,3,5-Trimethylbenzene	ug/m3	0.3	0.49 U	0.49 U	0.49 U	0.98 U	0.49 U	0.49 U	0.49 U	0.98 U	0.98 U	0.98 U	4.9 U	0.49 U	0.98 U	0.98 U	0.98 U	0.49 U	0.49 U	0.49 U	5 U	5 U	5 U	5 U
1,3-Butadiene	ug/m3	0.078 U	0.22 U	0.22 U	0.22 U	0.44 U	0.22 U	0.22 U	0.22 U	0.44 U	0.44 U	0.44 U	2.2 U	0.22 U	0.44 U	0.44 U	0.44 U	0.22 U	0.22 U	0.22 U	2.2 U	2.2 U	2.2 U	2.2 U
1,3-Dichlorobenzene	ug/m3	0.21 U	0.6 U	0.6 U	0.6 U	1.2 U	0.6 U	0.6 U	0.6 U	1.2 U	1.2 U	1.2 U	6 U	0.6 U	1.2 U	1.2 U	1.2 U	1.5 J	0.6 U	0.6 U	6 U	6 U	6 U	6 U
1,4-Dichlorobenzene	ug/m3	0.21 U	0.6 U	0.6 U	0.6 U	1.2 U	0.6 U	0.6 U	0.6 U	1.2 U	1.2 U	1.2 U	6 U	0.6 U	1.2 U	1.2 U	1.2 U	1.6 J	0.6 U	0.6 U	6 U	6 U	6 U	6 U
1,4-Dioxane	ug/m3										7.2 U		36 U											
2-Butanone	ug/m3	95	4 J	4 J	6.8 J	11 J	5.2 J	11 J	13	7 J	2.2 J	6.1 J	79 J	3.1 J	120	57	160	6.4 J	17	6.1 J	6.3	89	75	170
2-Hexanone	ug/m3	0.38	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.32 J	0.18 J	0.82 U	0.82 U	0.82 U	4.1 U	0.41 U	0.82 U	0.82 U	0.82 U	0.41 U	0.41 U	0.41 U	4 U	4 U	4 U	4 U
4-Ethyltoluene	ug/m3	0.17 U	0.49 U	0.49 U	0.49 U	0.98 U	0.49 U	0.49 U	0.12 J	0.98 U	0.98 U	0.98 U	4.9 U	0.49 U	0.98 U	0.98 U	0.98 U	0.49 U	0.49 U	0.49 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	ug/m3	0.14 U	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.13 J	0.41 U	0.82 U	0.82 U	0.82 U	4.1 U	0.41 U	0.82 U	0.82 U	0.82 U	0.41 U	0.41 U	0.41 U	4 U	4 U	4 U	4 U
Acetone	ug/m3	35	17	16	27	36	35	39	35	44	17 J	33	210	25	26	17 J	42	33	38	26	530	32	52	29
Benzene	ug/m3	1.2	0.42	0.96	0.73	1.1	0.7	0.65	0.56	0.56 J	0.64 U	0.64 U	9.6	1.3	0.46 J	0.58 J	0.91	2.5	1.2	0.69	13	12	6.2	4.8
Benzyl chloride	ug/m3	0.18 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	1 U	1 U	1 U	5.2 U	0.52 U	1 U	1 U	1 U	0.52 U	0.52 U	0.52 U	5.2 U	5.2 U	5.2 U	5.2 U
Bromodichloromethane	ug/m3	0.24 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	1.3 U	1.3 U	1.3 U	6.7 U	0.67 U	1.3 U	1.3 U	0.62 J	0.67 U	0.67 U	0.67 U	6.6 U	6.6 U	6.6 U	6.6 U
Bromoform	ug/m3	0.36 U	1 U	1 U	1 U	2.1 U	1 U	1 U	1 U	2.1 U	2.1 U	2.1 U	10 U	1 U	2.1 U	2.1 U	2.1 U	1 U	1 U	1 U	11 U	11 U	11 U	11 U
Bromomethane	ug/m3	0.14	0.39 U	0.39 U	0.39 U	0.78 U	0.39 U	0.39 U	0.39 U	0.78 U	0.78 U	0.78 U	3.9 U	0.39 U	0.78 U	0.78 U	0.78 U	0.39 U	3.9 U	0.78 U	3.8 U	3.8 U	3.8 U	3.8 U
Carbon disulfide	ug/m3	74	5.6	6.3	31	71	8	15	14	19	6.2 U	6 J	420	3.6	2.3 J	2 J	160	3.1 U	3.1 U	3.1 U	3.2 U	3.2 U	3.2 U	3.2 U
Carbon tetrachloride	ug/m3	0.48	0.63 U	0.63 U	0.63 U	0.63 U	0.35 J	0.3 J	0.36 J	0.4 J	1.3 U	1.3 U	6.3 U	0.63 U	1.3 U	1.3 U	0.45 J	2	0.36 J	0.63 U	6.2 U	6.2 U	6.2 U	6.2 U
Chlorobenzene	ug/m3	0.16 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.92 U	0.92 U	0.92 U	4.6 U	0.46 U	0.92 U	0.92 U	0.92 U	0.46 U	0.46 U	0.46 U	4.6 U	4.6 U	4.6 U	4.6 U
Chloroethane	ug/m3	1.7	0.26 U	0.26 U	0.67	1.1	0.26 U	0.26 U	0.26 U	0.53 U	0.53 U	0.53 U	2.6 U	0.26 U	1.1 U	0.53 U	0.53 U	0.53 U	0.26 U	0.26 U	260	23	16	11
Chloroform	ug/m3	1.7	0.49 U	0.49 U	0.64	1	0.63	0.37 J	0.45 J	0.39 J	0.98 U	0.98 U	4.9 U	0.49 U	0.98 U	0.98 U	0.74 J	3.3	0.49 U	0.49 U	83	32	20	16
Chloromethane	ug/m3	35	3.4	1.8	3.3	4.4	1.4	2.4	3.6	3.3	1.2	1.4	38	1.4	3.5	1.2	0.83 U	0.41 U	1.1	0.41 U	2 U	2 U	2 U	2 U
cis-1,2-Dichloroethene	ug/m3		0.4 U	0.4 U	0.71	1.1	0.21 J	0.29 J	0.25 J	0.79 U	0.79 U	0.79 U	4 U	0.4 U	0.79 U	0.79 U	0.4 J	0.4 U	0.4 U	0.4 U	2900	710	400	410
cis-1,3-Dichloropropene	ug/m3	0.16 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.91 U	0.91 U	0.91 U	4.5 U	0.45 U	0.91 U	0.91 U	0.91 U	0.45 U	0.45 U	0.45 U	4.4 U	4.4 U	4.4 U	4.4 U
Cyclohexane	ug/m3	0.12 U	0.34 U	0.34 U	0.34 U	0.69 U	0.34 U	0.34 U	0.34 U	0.69 U	0.69 U	0.69 U	3.4 U	0.34 U	0.69 U	0.69 U	0.69 U	0.34 U	0.34 U	0.34 U	3.4 U	3.4 U	3.4 U	3.4 U
Dibromochloromethane	ug/m3	0.3 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	1.7 U	1.7 U	1.7 U	8.5 U	0.85 U	1.7 U	1.7 U	1.7 U	0.85 U	0.85 U	0.85 U	8.6 U	8.6 U	8.6 U	8.6 U
Dichlorodifluoromethane	ug/m3	1.3	2.6	2.3	2	2.3	2.6	1.8	2.7	2.7	3.1	2.5	5.5	1.4	2.2	2.2	0.99 U	0.49 U	2.2	1.7	5 U	5 U	5 U	5 U
Ethanol	ug/m3	14	4.3 J	7.5 U	6.9 J	15 U	3.5 J	5.6 J	27	28	7.2 J	15 U	75 U	24	15	21	9.5 J	39	44	8.8	320	36	46	33
Ethyl acetate	ug/m3	0.13 U	0.36 U	0.36 U	0.36 U	0.72 U	0.36 U	0.37	0.36 U	0.72 U	0.72 U	0.72 U	9.4	140	5.9	0.72 U	1.4 U	59	0.36 U	0.36 U	7.3 U	3.6 U	3.6 U	7.3 U
Ethylbenzene	ug/m3	0.38	0.43 U	0.43 U	0.43 U	0.87 U	0.43 U	0.34 J	0.43 U	0.87 U	0.87 U	0.87 U	4.3 U	0.43 U	0.87 U	0.87 U	0.87 U	1.4	0.43 U	0.43 U	4.4 U	4.4 U	4.4 U	4.4 U
Hexachlorobutadiene	ug/m3	0.37 U	1.1 U	1.1 U	1.1 U	2.1 U	1.1 U	1.1 U	1.1 U	2.1 U	2.1 U	2.1 U	11 U	1.1 U	2.1 U	2.1 U	2.1 U	2.1 U	1.1 U	1.1 U	22 U	22 U	22 U	22 U
Hexane	ug/m3	0.89 J	14 U	14 U	14 U	28 U	14 U	7.3 J	14 U	28 U	28 U	28 U	16 J	5.3 J	28 U	28 U	28 U	14 U	14 U	14 U	5	3.6 U	3.6 U	3.6 U
Isopropyl alcohol	ug/m3	3.4 U	9.8 U	9.8 U	1.1 J	5.9 J	9.8 U	1.8 J	5 J	4.4 J	20 U	20 U	11 J	4.5 J	3.3 J	5.9 J	20 U	9.1 J	0.83 J	9.8 U	190	5.1	4.6	5 U
m,p-Xylene	ug/m3	0.76	0.87 U	0.87 U	0.52 J	1.7 U	0.87 U	0.35 J	0.3 J	1.7 U	1.7 U	1.7 U	8.7 U	0.87 U	1.7 U	1.7 U	1.7 U	2.9	0.76 J	0.87 U	8.6 U	8.6 U	8.6 U	8.6 U
Methyl methacrylate	ug/m3	0.14 U	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.41 U		0.82 U		0.82 U		0.41 U	0.82 U	0.82 U	0.82 U	0.41 U	0.41 U	0.41 U				
Methylene chloride	ug/m3	0.84 J	0.99 J	0.89 J	1.2 J	1.6 J	3.5 U	0.43 J	3.5 U	6.9 U	6.9 U	6.9 U	24 J	4.4	1.2 J	6.9 U	6.9 U	1.8 J	0.68 J	0.69 J	7.8	7 U	9.6	7 U
Methyl-t-butyl ether	ug/m3	0.13 U	0.36 U	0.36 U	0.36 U	0.72 U	0.36 U	0.36 U	0.36 U	0.72 U	0.72 U	0.72 U	3.6 U	0.36 U	0.72 U	0.72 U	0.72 U	0.36 U	0.36 U	0.36 U	3.6 U	3.6 U	3.6 U	3.6 U
Naphthalene	ug/m3										1 U		8.9											
n-Heptane	ug/m3	0.45	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.41 U	0.41 U	0.82 U	0.82 U	0.82 U	4.1 U	0.41 U	0.82 U	0.82 U	0.82 U	0.41 U	0.41 U	0.41 U	4 U	4 U	4 U	4 U
o-Xylene	ug/m3	0.37	0.43 U	0.43 U	0.43 U	0.87 U	0.43 U	0.16 J	0.43 U	0.87 U	0.87 U	0.87 U	4.3 U	0.43 U	0.87 U	0.87 U	0.87 U	1.4	0.43 U	0.43 U	4.4 U	4.4 U	4.4 U	4.4 U
Propylene (Propene)	ug/m3	2.4 U	6.9 U	6.9 U	1 J	2.1 J	0.84 J	0.91 J	6.9 U	14 U	14 U	14 U	11 J	1.3 J	14 U	14 U	14 U	6.9 U	6.9 U	6.9 U	3.5 U	1.8 U	1.8 U	3.5 U
Styrene	ug/m3	0.28	0.43 U	0.43 U	0.43 U	0.85 U	0.43 U	0.43 U	0.094 J	0.85 U	0.85 U	0.85 U	4.3 U	0.43 U	0.85 U	0.85 U	0.85 U	0.43 U	0.43 U	0.43 U	4.2 U	17	4.2 U	4.2 U
Tetrachloroethene	ug/m3	8.3	1.5	1.1	3.3	5.9	3.1	1.4	1.1	1.4 U	1.7	1.4 U	26	0.68 U	1.4 U	1.4 U	4.6	2.1	0.73	0.73	210	310	190	97
Tetrahydrofuran	ug/m3	35000	650	54	1200	4100	260	680	600	170	1.7	140	3600	21	65	27	4400	0.29 U	6.1	4	16	110	69	140
Toluene	ug/m3	2.5	0.38 U	1	0.97	0.68 J	0.25 J	0.49	0.66	0.92	0.75 U	0.75 U	7.4	4.1	1.7	1.1	2.5	4.8	2.1	0.38	13	4.7	3.8 U	3.8 U
trans-1,2-Dichloroethene	ug/m3	0.14 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.79 U	0.79 U	0.79 U	4 U	0.4 U	0.79 U	0.79 U	0.79 U	1.1 J	0.4 U	0.4 U	26	6.1	4 U	4.7
trans-1,3-Dichloropropene	ug/m3	0.16 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.91 U	0.91 U	0.91 U	4.5 U	0.45 U	0.91 U	0.91 U	0.91 U	0.45 U	0.45 U	0.45 U	4.4 U	4.4 U	4.4 U	4.4 U
Trichloroethene	ug/m3	150	36	28	60	110	44	33	25	2.4	47	25	350	3.3	6.4	5.1	64	0.54 U	0.37 J	3.8	51000	20000	14000	8900
Trichlorofluoromethane	ug/m3	6.2	12	6.9	14	21	15	8.6	12	4.4 J	20	7.3	66	7.4	4.6	3.5 J	3.8 J	3.1	1.3 J	1.2 J	3500	200	120	67
Trichlorotrifluoroethane	ug/m3	0.72	0.77 U	0.77 U	0.77 U	1.5 U	0.63 J	0.41 J	0.58 J	0.61 J	6.1 U	6.1 U	31 U	3.1 U	6.1 U	6.1 U	6.1 U	3.1 U	3.1 U	3.1 U	7.6 U	7.6 U	7.6 U	7.6 U
Vinyl acetate	ug/m3	2.5 U	7 U	7 U	7 U	2.1 J	7 U	7 U	7 U	14 U	0.79 J	14 U	8.6 J	7 U	14 U	0.77 J	14 U	7 U	7 U	7 U	15 U	3.6 U	3.6 U	15 U
Vinyl chloride	ug/m3	2.2	0.26 U	0.26 U	0.65	1.3	0.26 U	0.26 U	0.26 U	0.37 J	0.51 U	0.51 U	4.8	0.26 U	0.51 U	0.51 U	0.51 U	0.26 U	0.26 U	0.26 U	2.6 U	2.6 U	2.6 U	2.6 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter

Prepared By: AKN, 9/16/2019
Checked By: HWC, 9/16/2019

Appendix D2.
Summary of Analytical Results - Small Extraction Wells
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:		Extraction Well - Eastern Small Retail Space																					
Location:		EW-5																					
Sample ID:		EW-5-030609	EW-5-041409	EW-5-051509	EW-5-061109	EW-5-091709	EW-5-122909	EW-5-032610	EW-5-070110	EW-5-091610	EW-5-120710	EW-5-021711	EW-5-060211	EW-5-091511	EW-5-120811	EW-5-030812	EW-5-061412	EW-5-091312	EW-5-010313	EW-5-031513	EW-5-060713	EW-5-090613	EW-5-121313	EW-5-030714
Sample Date:		3/6/2009	4/14/2009	5/15/2009	6/11/2009	9/17/2009	12/29/2009	3/26/2010	7/1/2010	9/16/2010	12/7/2010	2/17/2011	6/2/2011	9/15/2011	12/8/2011	3/8/2012	6/14/2012	9/13/2012	1/3/2013	3/15/2013	6/7/2013	9/6/2013	12/13/2013	3/7/2014
Analyte	**Units**																						
1,1,1,2-Tetrachloroethane	ug/m3													25 U		12 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.39 J	1.2 U	1.2 U
1,1,1-Trichloroethane	ug/m3	1800	2600	3100	1900	3500	920	540	550	460	210	400	340	430	130	81	100	190	0.55 U	0.55 U	59	180	40	68
1,1,2,2-Tetrachloroethane	ug/m3	1.7 U	68 U	3.4 U	3.4 U	3.4 U	3.4 U	6.8 U	3.4 U	6.8 U	1.4 U	1.4 U	6.9 U	14 U	3.4 U	3.4 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.32 U	0.69 U	0.69 U
1,1,2-Trichloroethane	ug/m3	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 U	1.1 U	5.5 U	11 U	2.7 U	2.7 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.26 U	0.55 U	0.55 U
1,1-Dichloroethane	ug/m3	190	360	450	430	230	100	50	53	42	29	34	33	44	16	11	12	21	0.4 U	0.4 U	6.4	20	4.8	7
1,1-Dichloroethene	ug/m3	61	160	160	160	98	30	18	21	15	13	15	11	14	5	4.5	4.5	6.9	0.4 U	0.4 U	1.7	4.7	1.5	1.8
1,2,4-Trichlorobenzene	ug/m3	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 U	1.5 U	7.4 U	30 U	7.4 U	15 U	1.5 U	1.5 U	1.5 U	1.5 U	0.74 U	0.35 U	0.74 U	0.74 U
1,2,4-Trimethylbenzene	ug/m3	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 U	0.98 U	4.9 U	9.8 U	2.5 U	4.9 U	0.2 J	0.63	0.49 U	0.49 U	0.49 U	0.37	0.49 U	0.49 U
1,2-Dibromoethane (EDB)	ug/m3	1.9 U	76 U	3.8 U	3.8 U	3.8 U	3.8 U	7.6 U	3.8 U	7.6 U	1.5 U	1.5 U	7.7 U	15 U	3.8 U	3.8 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.36 U	0.77 U	0.77 U
1,2-Dichlorobenzene	ug/m3	1.5 U	60 U	3 U	3 U	3 U	3 U	6 U	3 U	6 U	1.2 U	1.2 U	6 U	12 U	3 U	6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.28 U	0.6 U	0.6 U
1,2-Dichloroethane	ug/m3	1 U	40 U	2 U	2 U	2 U	2 U	4 U	2 U	4 U	0.81 U	0.81 U	4 U	8.1 U	2 U	2 U	0.17 J	0.4 U	0.4 U	0.4 U	0.4 U	0.19 U	0.4 U	0.4 U
1,2-Dichloropropane	ug/m3	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 U	0.92 U	4.6 U	9.2 U	2.3 U	2.3 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.22 U	0.46 U	0.46 U
1,2-Dichlorotetrafluoroethane	ug/m3	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	ug/m3	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 U	0.98 U	4.9 U	9.8 U	2.5 U	4.9 U	0.49 U	0.19 J	0.49 U	0.49 U	0.49 U	0.23 U	0.49 U	0.49 U
1,3-Butadiene	ug/m3	0.55 U	22 U	1.1 U	1.1 U	2.3 U	1.1 U	2.2 U	1.1 U	2.2 U	0.44 U	0.44 U	2.2 U	4.4 U	1.1 U	2.2 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.1 U	0.22 U	0.22 U
1,3-Dichlorobenzene	ug/m3	1.5 U	60 U	3 U	3 U	3 U	3 U	6 U	3 U	6 U	1.2 U	1.2 U	6 U	12 U	3 U	6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.28 U	0.6 U	0.6 U
1,4-Dichlorobenzene	ug/m3	1.5 U	60 U	3 U	3 U	3 U	3 U	6 U	3 U	6 U	1.2 U	1.2 U	6 U	12 U	3 U	6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.28 U	0.6 U	0.6 U
1,4-Dioxane	ug/m3													7.2 U										
2-Butanone	ug/m3	3700	64000	100000	230000	110000	7800	18000	28000	15000	4000	7200 B	17000	13000	2700	1800	870	840	12 J	1.7 J	1900	31000	680	1200
2-Hexanone	ug/m3	1 U	40 U	2.7	2 U	2 U	2 U	4 U	2 U	4 U	0.82 U	0.82 U	82 U	8.2 U	2 U	4.1 U	0.43	0.41 U	0.41 U	0.41 U	0.41 U	0.49	0.41 U	0.53
4-Ethyltoluene	ug/m3	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 U	0.98 U	4.9 U	9.8 U	2.5 U	4.9 U	0.49 U	0.18 J	0.49 U	0.49 U	0.49 U	0.23 U	0.49 U	0.49 U
4-Methyl-2-pentanone	ug/m3	1 U	40 U	2 U	2 U	2 U	2 U	4 U	2 U	4 U	0.82 U	0.82 U	4.1 U	8.2 U	2 U	4.1 U	0.27 J	0.34 J	0.41 U	0.41 U	0.41 U	0.56	0.41 U	0.41 U
Acetone	ug/m3	460	5600	14000	6900	9200	1700	3200	6000	4500	2000 B	1800 B	2200 B	3400	710	400	440	670 B	9.5	8.5 J	610	6800	210	380
Benzene	ug/m3	5.6	32 U	11	7.1	11	6.3	5.5	8.2	5	4.2	4.5	4.2	6.4 J	2.8	2 J	1.1	3.7	0.32	0.47	1	7.1	2.4	3.8
Benzyl chloride	ug/m3	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 U	1 U	5.2 U	10 U	2.6 U	5.2 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.24 U	0.52 U	0.52 U
Bromodichloromethane	ug/m3	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 U	1.3 U	6.7 U	13 U	3.4 U	3.4 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.31 U	0.67 U	0.67 U
Bromoform	ug/m3	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 U	2.1 U	10 U	21 U	5.2 U	10 U	1 U	1 U	1 U	1 U	1 U	0.48 U	1 U	1 U
Bromomethane	ug/m3	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 U	0.78 U	3.9 U	7.8 U	1.9 U	3.9 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.18 U	0.39 U	0.39 U
Carbon disulfide	ug/m3	0.8 U	230	4	5.4	8.2	2.9	5.7	12	14	8	15	22	62 J	13 J	11 J	25	49	3.1 U	3.1 U	19	77	8.9	26
Carbon tetrachloride	ug/m3	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 U	1.3 U	6.3 U	13 U	1.2 J	3.1 U	0.4 J	0.38 J	0.63 U	0.39 J	0.63 U	0.47	0.63 U	0.63 U
Chlorobenzene	ug/m3	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 U	0.92 U	4.6 U	9.2 U	2.3 U	4.6 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.22 U	0.46 U	0.46 U
Chloroethane	ug/m3	4.5	26 U	11	15	7	6.5	3.5	3.6	5.5	3.1	3.4	2.6 U	7.5	1.3 U	2.6 U	2.9	5.3	0.26 U	0.26 U	1.5	4	0.86	1.9
Chloroform	ug/m3	2.8	48 U	7.2	6.5	5.8	2.6	4.8 U	2.4 U	4.8 U	1.1	1.2	4.9 U	9.8 U	1.1 J	2.4 U	0.98	1.1	0.49 U	0.49 U	0.59	1.6	0.49 U	0.59
Chloromethane	ug/m3	0.5 U	20 U	1 U	1 U	1 U	1 U	2 U	1 U	2 U	0.41 U	0.41 U	2.1 U	4.1 U	1 U	2.1 U	0.21 U	0.21 U	0.21	1.1	0.41 U	0.19 U	0.41 U	0.41 U
cis-1,2-Dichloroethene	ug/m3	100	150	270	250	170	58	32	43	31	17	27	27	35	11	6.9	8.6	14	0.4 U	0.4 U	4.3	13	1.9	4.1
cis-1,3-Dichloropropene	ug/m3	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 U	0.91 U	4.5 U	9.1 U	2.3 U	2.3 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.21 U	0.45 U	0.45 U
Cyclohexane	ug/m3	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 U	0.69 U	3.4 U	6.9 U	1.7 U	3.4 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.16 U	0.34 U	0.34 U
Dibromochloromethane	ug/m3	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 U	1.7 U	8.5 U	17 U	4.3 U	4.3 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.4 U	0.85 U	0.85 U
Dichlorodifluoromethane	ug/m3	2.7	50 U	3	3.2	2.5 U	2.5 U	5 U	2.5	5 U	2.4	3.7	4.9 U	9.9 U	2.8	4.9 U	2.9	2.6	0.49	2.5	2.1	1.7	2.5	2.1
Ethanol	ug/m3	22	130	30	26	3.8 U	45	28	68	89	23	19	24 J	150 J	12 J	290	14	100	7.5	3.5 J	13	3.5 U	39	43
Ethyl acetate	ug/m3	0.9 U	73 U	1.8 U	1.8 U	1.8 U	1.8 U	3.6 U	1.8 U	6.8	3.4	0.72 U	3.8	7.2 U	3.6	26	4.2	30	0.36 U	1.2	2.6	0.17 U	5.5	4.8
Ethylbenzene	ug/m3	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 U	0.87 U	4.3 U	8.7 U	2.2 U	4.3 U	0.12 J	0.69	0.43 U	0.43 U	0.43 U	0.41	0.43 U	0.43 U
Hexachlorobutadiene	ug/m3	5.4 U	220 U	11 U	11 U	5.3 U	11 U	22 U	5.3 U	11 U	2.1 U	2.1 U	11 U	21 U	4.2 J	11 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.5 U	1.1 U	1.1 U
Hexane	ug/m3	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 U	0.7 U	3.5 U	280 U	70 U	9.4 J	4.3 J	2 J	14 J	2.2 J	14 U	6.6 U	14 U	14 U
Isopropyl alcohol	ug/m3	4.6	290	24	57	35	2.5 U	20	54	59	11	13	25 U	200 J	49 U	13 J	9.8 U	11	9.8 J	9.8 U	9.8 U	4.6 U	2.9 J	6 J
m,p-Xylene	ug/m3	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 U	1.7 U	8.7 U	17 U	4.3 U	5.4 J	0.87 U	1.9	0.87 J	0.87 U	0.87 U	1.2	0.87 U	0.56 J
Methyl methacrylate	ug/m3											0.82 U	4.1 U	8.2 U	2 U	4.1 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.19 U	0.41 U	0.41 U
Methylene chloride	ug/m3	12	720	21	15	7 U	25	14 U	8.6	7 U	1.4 U	2	6.9 U	69 U	4.2 J	15 J	11	2.5 JB	3.5 J	6.9	1.1 J	3.4	1.1 J	0.79 J
Methyl-t-butyl ether	ug/m3	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 U	0.72 U	3.6 U	7.2 U	1.8 U	3.6 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.17 U	0.36 U	0.36 U
Naphthalene	ug/m3																							
n-Heptane	ug/m3	1 U	40 U	2 U	2 U	2 U	2 U	4 U	2 U	4 U	0.82 U	0.82 U	4.1 U	8.2 U	2 U	4.1 U	0.41 U	0.52	0.41 U	0.41 U	0.41 U	0.19 U	0.41 U	0.41 U
o-Xylene	ug/m3	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 U	0.87 U	4.3 U	8.7 U	2.2 U	4.3 U	0.14 J	0.73	0.43 U	0.43 U	0.43 U	0.5	0.43 U	0.43 U
Propylene (Propene)	ug/m3	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 U	3.4 U	17 U	140 U	4.1 J	15 J	6.9 U	3.9 J	6.9 U	6.9 U	6.9 U	2.3 J	6.9 U	6.9 U
Styrene	ug/m3	1.7	42 U	2.2	2.1 U	2.1 U	2.1 U	4.2 U	2.1 U	4.2 U	0.85 U	0.85 U	4.3 U	8.5 U	2.1 U	4.3 U	0.46	0.38 J	0.43 U	0.43 U	0.43 U	0.35	0.43 U	0.43 U
Tetrachloroethene	ug/m3	8	68 U	21	25	19	8.9	6.8 U	6.7	6.8 U	4	4100	6.8 U	14 J	3.5	3.4 U	0.92	2.1	0.68 U	0.68 U	0.71	1.7	0.68 U	0.69
Tetrahydrofuran	ug/m3	2200	42000	61000	150000	94000	9700	23000	37000	29000	8200	11000	30000	41000	11000	4500	7700	1000	0.29 U	0.29 U	2300	26000	1000	2900
Toluene	ug/m3	0.95 U	38 U	2.2	3.4	1.9 U	1.9 U	3.8 U	1.9 U	3.8 U	0.75 U	1.6	3.8 U	7.5 U	0.9 J	37	0.58	5.6	0.38	0.4	0.43	4.2	0.44	1.4
trans-1,2-Dichloroethene	ug/m3	1 U	40 U	2.6	2.8	2 U	2 U	4 U	2 U	4 U	0.79 U	0.79 U	4 U	7.9 U	2 U	2 U	0.4 U	0.18 J	0.4 U	0.4 U	0.4 U	0.19 U	0.4 U	0.4 U
trans-1,3-Dichloropropene	ug/m3	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 U	0.91 U	4.5 U	9.1 U	2.3 U	2.3 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.21 U	0.45 U	0.45 U
Trichloroethene	ug/m3	2400	3800	4400	2700	6800	1600	1100	1200	1100	410	660	790	940	290	170	220	400	0.54 U	0.54 U	150	770	80	190
Trichlorofluoromethane	ug/m3	16	56 U	27	41	2.8 U	53	7	7.4	5.8	5.1	5.8	5.6 U	11 J	3.4	5.6 U	4.9	8.5	0.56	1.4	2.9	4.6	3.6	2.7
Trichlorotrifluoroethane	ug/m3	1.9 U	76 U	3.8 U	3.8 U	3.8 U	3.8 U	7.6 U	3.8 U	7.6 U	1.5 U	1.5 U	7.7 U	15 U	3.8 U	3.8 U	0.77 U	0.57 J	0.77 U	0.61 J	0.77 U	0.64	0.77 U	0.77 U
Vinyl acetate	ug/m3	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 U	0.7 U	70 U	7 U	1.8 U	7 U	0.7 U	0.7 U	0.7 U	0.7 U	7 U	3.3 U	7 U	7 U
Vinyl chloride	ug/m3	0.65 U	26 U	1.3 U	5.3	1.3 U	3	3.4	3.1	4.3	2.4	3.7	3.3	6.2	1.3 U	1.3 U	2.9	4.7	0.26 U	0.26 U	0.26 U	3.5	0.26 U	1.1

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter

Prepared By: AKN,2/28/20
Checked By: HWC, 3/12/20

Appendix D2.
Summary of Analytical Results - Small Extraction Wells
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:		Extraction Well - Eastern Small Retail Space																Extraction Well - Western Small Retail Space						
Location:		EW-5																EW-7						
Sample ID:		EW-5-061314	EW-5-091214	EW-5-121914	EW-05-032715	EW-5-061115	EW-5-091615	EW-5-121815	EW-5-021816	EW-5-080516	EW-5-021017	EW-5-090717	EW-5-022818	EW-5-091218	EW-5-020819	EW-5-090619	EW-5-021420	EW-7-020309	EW-7-021109	EW-7-021809	EW-7-022609	EW-7-030609	EW-7-041409	EW-7-051509
Sample Date:		6/13/2014	9/12/2014	12/19/2014	3/27/2015	6/11/2015	9/16/2015	12/18/2015	2/18/2016	8/5/2016	2/10/2017	9/7/2017	2/28/2018	9/12/2018	2/8/2019	9/6/2019	2/14/2020	2/3/2009	2/11/2009	2/18/2009	2/26/2009	3/6/2009	4/14/2009	5/15/2009
Analyte	**Units**																							
1,1,1,2-Tetrachloroethane	ug/m3	1.2 U	2.5 U	1.2 U	1.2 U	1.2 U	2.5 U		2.5 U		1.2 U	2.5 U	12 U	2.5 U	1.2 U	1.2 U	1.2 U							
1,1,1-Trichloroethane	ug/m3	54	74	25	14	0.19 J	55	32	15	68	7.4	42	17	49	11	40	11	5600	8500	7800	8200	8100	1600	3600
1,1,2,2-Tetrachloroethane	ug/m3	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	3.4 U	1.4 U	1.4 U	6.9 U	0.69 U	1.4 U	6.9 U	1.4 U	0.69 U	0.69 U	0.69 U	6.8 U	1.4 U	1.7 U	1.7 U	1.7 U	6.8 U	3.4 U
1,1,2-Trichloroethane	ug/m3	0.55 U	1.1 U	0.55 U	0.55 U	0.55 U	2.7 U	1.1 U	1.1 U	5.5 U	0.55 U	1.1 U	5.5 U	1.1 U	0.55 U	0.55 U	0.55 U	5.4 U	1.1 U	1.4 U	1.4 U	1.4 U	5.4 U	2.7 U
1,1-Dichloroethane	ug/m3	7.4	9.3	4.2	2.9	0.4 U	6.9	4.4	2.8	7.5	1.8	6.2	2.3 J	5.9	0.4 U	4.9	1.7	1700	1800	1600	2100	1700	590	1000
1,1-Dichloroethene	ug/m3	2	2.4	1	0.9	0.4 U	1.5 J	1.1	0.84	4 U	0.4	1.3	4 U	1.3	0.4 U	0.4 U	0.4 U	14	15	8.5	9.4	6.6	4 U	4.2
1,2,4-Trichlorobenzene	ug/m3	0.74 U	1.5 U	0.74 U	0.74 U	0.74 U	3.7 U	1.5 U	1.5 U	7.4 U	0.74 U	1.5 U	7.4 U	1.5 U	1.5 U	0.74 U	0.74 U	7.4 U	1.5 U	1.9 U	1.9 U	1.9 U	7.4 U	3.7 U
1,2,4-Trimethylbenzene	ug/m3	0.49 U	0.98 U	0.49 U	0.16 J	0.22 J	2.5 U	0.98 U	0.98 U	4.9 U	0.49 U	0.98 U	4.9 U	0.98 U	1.4	0.49 U	0.49 U	5 U	1 U	1.3 U	1.3 U	1.3 U	5 U	2.5 U
1,2-Dibromoethane (EDB)	ug/m3	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	3.8 U	1.5 U	1.5 U	7.7 U	0.77 U	1.5 U	7.7 U	1.5 U	0.77 U	0.77 U	0.77 U	7.6 U	1.6 U	1.9 U	1.9 U	1.9 U	7.6 U	3.8 U
1,2-Dichlorobenzene	ug/m3	0.6 U	1.2 U	0.6 U	0.6 U	0.6 U	3 U	1.2 U	1.2 U	6 U	0.6 U	1.2 U	6 U	1.2 U	2.4 U	0.6 U	0.6 U	6 U	1.2 U	1.5 U	1.5 U	1.5 U	6 U	3 U
1,2-Dichloroethane	ug/m3	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	2 U	0.81 U	0.81 U	4 U	0.4 U	0.81 U	4 U	0.81 U	0.4 U	0.4 U	0.4 U	4 U	0.8 U	1 U	1 U	1 U	4 U	2 U
1,2-Dichloropropane	ug/m3	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	2.3 U	0.92 U	0.92 U	4.6 U	0.46 U	0.92 U	4.6 U	0.92 U	0.46 U	0.46 U	0.46 U	4.6 U	0.92 U	1.2 U	1.2 U	1.2 U	4.6 U	2.3 U
1,2-Dichlorotetrafluoroethane	ug/m3							1.4 U		7 U								7 U	1.4 U	1.8 U	1.8 U	1.8 U	7 U	3.5 U
1,3,5-Trimethylbenzene	ug/m3	0.49 U	0.98 U	0.49 U	0.49 U	0.11 J	2.5 U	0.98 U	0.98 U	4.9 U	0.49 U	0.98 U	4.9 U	0.98 U	0.49 U	0.49 U	0.49 U	5 U	1 U	1.3 U	1.3 U	1.3 U	5 U	2.5 U
1,3-Butadiene	ug/m3	0.22 U	0.44 U	0.22 U	0.22 U	0.22 U	1.1 U	0.44 U	0.44 U	2.2 U	0.22 U	0.44 U	2.2 U	0.42 J	0.22 U	0.22 U	0.22 U	2.2 U	0.44 U	0.55 U	0.55 U	0.55 U	2.2 U	1.1 U
1,3-Dichlorobenzene	ug/m3	0.6 U	1.2 U	0.6 U	0.6 U	0.6 U	3 U	1.2 U	1.2 U	6 U	0.6 U	1.2 U	6 U	1.2 U	1.6 J	0.6 U	0.6 U	6 U	1.2 U	1.5 U	1.5 U	1.5 U	6 U	3 U
1,4-Dichlorobenzene	ug/m3	0.6 U	1.2 U	0.6 U	0.6 U	0.6 U	3 U	1.2 U	1.2 U	6 U	0.6 U	1.2 U	6 U	1.2 U	1.6 J	0.6 U	0.6 U	6 U	1.2 U	1.5 U	1.5 U	1.5 U	6 U	3 U
1,4-Dioxane	ug/m3							7.2 U		36 U														
2-Butanone	ug/m3	2100	3800	260	91	9.1 J	1700 E	410	130	4800	29	4500	750	5500	110	7300	160	8.7	12	7.3	8.5	5.5	4.5	7.1
2-Hexanone	ug/m3	0.41 U	0.82 U	0.41 U	0.16 J	0.34 J	2 U	0.82 U	0.82 U	4.1 U	0.41 U	0.82 U	4.1 U	0.82 U	0.41 U	0.41 U	0.41 U	4 U	0.8 U	1 U	1 U	1 U	4 U	2 U
4-Ethyltoluene	ug/m3	0.49 U	0.98 U	0.49 U	0.49 U	0.49 U	2.5 U	0.98 U	0.98 U	4.9 U	0.49 U	0.98 U	4.9 U	0.98 U	0.49 U	0.49 U	0.49 U	5 U	1 U	1.3 U	1.3 U	1.3 U	5 U	2.5 U
4-Methyl-2-pentanone	ug/m3	0.46	0.82 U	0.41 U	0.41 U	0.41 U	2 U	0.82 U	0.82 U	4.1 U	0.41 U	0.82 U	4.1 U	0.82 U	0.41 U	0.41 U	0.41 U	4 U	0.8 U	1 U	1 U	1 U	4 U	2 U
Acetone	ug/m3	610	500	98	49	21	550	120	58	570	11	700	320	710	47	1700	66	580	38	58	30	24	15	24
Benzene	ug/m3	3	2.7	3.4	3.1	0.35	2.9	5	2.8	4	0.38	2.7	2 J	3.1	3.6	2.5	1.6	3.2 U	3.9	4.5	1.9	2.3	3.2 U	2.6
Benzyl chloride	ug/m3	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	2.6 U	1 U	1 U	5.2 U	0.52 U	1 U	5.2 U	1 U	0.52 U	0.52 U	0.52 U	5.2 U	1.1 U	1.3 U	1.3 U	1.3 U	5.2 U	2.6 U
Bromodichloromethane	ug/m3	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	3.4 U	1.3 U	1.3 U	6.7 U	0.67 U	1.3 U	6.7 U	1.2 J	0.67 U	0.67 U	0.67 U	6.6 U	1.4 U	1.7 U	1.7 U	1.7 U	6.6 U	3.3 U
Bromoform	ug/m3	1 U	2.1 U	1 U	1 U	1 U	5.2 U	2.1 U	2.1 U	10 U	1 U	2.1 U	10 U	2.1 U	1 U	1 U	1 U	11 U	2.1 U	2.6 U	2.6 U	2.6 U	11 U	5.1 U
Bromomethane	ug/m3	0.39 U	0.78 U	0.39 U	0.39 U	0.39 U	1.9 U	0.78 U	0.78 U	3.9 U	0.39 U	0.78 U	3.9 U	0.78 U	0.39 U	3.9 U	0.78 U	3.8 U	0.76 U	0.95 U	0.95 U	0.95 U	3.8 U	1.9 U
Carbon disulfide	ug/m3	35	46	13	7.4	0.98 J	56	19	6.1 J	100	1.2 J	120	62	200	66 J	210	44	5.7	3.4	2.7	3.7	3.3	3.2 U	3.2
Carbon tetrachloride	ug/m3	0.63 U	0.63 U	0.33 J	0.31 J	0.33 J	3.1 U	1.3 U	1.3 U	6.3 U	0.63 U	1.3 U	6.3 U	0.45 J	0.63 U	6	0.63 U	6.2 U	1.3 U	1.6 U	1.6 U	1.6 U	6.2 U	3.1 U
Chlorobenzene	ug/m3	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	2.3 U	0.92 U	0.92 U	4.6 U	0.46 U	0.92 U	4.6 U	0.92 U	0.46 U	0.46 U	0.46 U	4.6 U	0.92 U	1.2 U	1.2 U	1.2 U	4.6 U	2.3 U
Chloroethane	ug/m3	1.9	1.6	0.95	0.26 U	0.26 U	1.3 U	0.53 U	0.53 U	2.6 U	0.26 U	1.3	2.6 U	1.2	0.53 U	0.26 U	0.26 U	170	150	88	41	33	7.1	9.6
Chloroform	ug/m3	0.76	0.82	0.53	0.18 J	0.17 J	0.63 J	0.98 U	0.98 U	4.9 U	0.49 U	1	4.9 U	0.84 J	15	0.49 U	0.49 U	4.8 U	1	1.2 U	1.3	1.2 U	4.8 U	2.7
Chloromethane	ug/m3	0.41 U	61	0.41 U	0.41 U	0.41 U	2.1 U	83	0.83 U	4.1 U	0.41 U	76	4.1 U	0.83 U	0.41 U	0.41 U	0.41 U	2 U	0.4 U	0.5 U	0.5 U	0.5 U	2 U	1 U
cis-1,2-Dichloroethene	ug/m3	4.3	5	1.4	0.78	0.4 U	4	1.3	0.79 U	4 U	0.4 U	2.8	4 U	2.3	1.8	2.1	0.52	1100	1300	1200	1700	1200	520	1100
cis-1,3-Dichloropropene	ug/m3	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	2.3 U	0.91 U	0.91 U	4.5 U	0.45 U	0.91 U	4.5 U	0.91 U	0.45 U	0.45 U	0.45 U	4.4 U	0.88 U	1.1 U	1.1 U	1.1 U	4.4 U	2.2 U
Cyclohexane	ug/m3	0.34 U	0.69 U	0.34 U	0.34 U	0.34 U	1.7 U	0.69 U	0.69 U	3.4 U	0.34 U	0.69 U	3.4 U	0.69 U	0.34 U	0.34 U	0.34 U	3.4 U	5.6	5	3.7	2.1	3.4 U	1.7 U
Dibromochloromethane	ug/m3	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	4.3 U	1.7 U	1.7 U	8.5 U	0.85 U	1.7 U	8.5 U	1.7 U	0.85 U	0.85 U	0.85 U	8.6 U	1.8 U	2.2 U	2.2 U	2.2 U	8.6 U	4.3 U
Dichlorodifluoromethane	ug/m3	2	2.3	2.5	2	3.3	2.2 J	3.1	2.4	4.9 U	1.5	2.2	4.9 U	2.1	0.49 U	0.49 U	1.8	5 U	2.5	3.2	770	2.6	5 U	2.9
Ethanol	ug/m3	32	15	33	31	15	17 J	21	28	75 U	6.7 J	13 J	35 J	11 J	36	18	30	350	26	29	17	15	3.8 U	19
Ethyl acetate	ug/m3	3.4	3.6	3.6	2.6	0.36 U	1.8 U	2.8	0.72 U	3.6 U	2.5	5.2	3.6 U	2.6	0.36 U	0.36 U	0.36 U	7.3 U	0.72 U	0.9 U	1.9 U	0.9 U	7.3 U	1.8 U
Ethylbenzene	ug/m3	0.43 U	0.87 U	0.43 U	0.16 J	0.15 J	2.2 U	0.87 U	0.87 U	4.3 U	0.43 U	0.87 U	4.3 U	0.87 U	1.2	0.43 U	0.43 U	4.4 U	0.88 U	1.1 U	1.1 U	1.1 U	4.4 U	2.2 U
Hexachlorobutadiene	ug/m3	1.1 U	2.1 U	1.1 U	1.1 U	1.1 U	5.3 U	2.1 U	2.1 U	11 U	1.1 U	2.1 U	11 U	2.1 U	2.1 U	1.1 U	1.1 U	22 U	4.3 U	5.4 U	5.4 U	5.4 U	22 U	11 U
Hexane	ug/m3	14 U	28 U	14 U	7.4 J	1.4 J	70 U	28 U	28 U	140 U	1.4 J	28 U	140 U	28 U	14 U	14 U	14 U	10	10	7.6	5.5	3.1	3.6 U	4
Isopropyl alcohol	ug/m3	11	8.4 J	2 J	9.8 J	9.8 U	49 U	3 J	20 U	14 J	2 J	20 U	5.1 J	6.2 J	9.8 U	8.7 J	9.8 U	210	18	21	12	8.5	5 U	12
m,p-Xylene	ug/m3	0.81 J	1.7 U	0.24 J	0.39 J	0.54 J	4.3 U	1.3 J	1.7 U	8.7 U	0.87 U	1.7 U	8.7 U	1.7 U	2.6	0.87 U	0.87 U	8.6 U	1.8 U	2.2 U	2.2 U	2.2 U	8.6 U	4.3 U
Methyl methacrylate	ug/m3	0.41 U	0.82 U	0.41 U	0.41 U		2 U		0.82 U		0.41 U	0.82 U	4.1 U	0.82 U	0.41 U	0.41 U	0.41 U							
Methylene chloride	ug/m3	0.99 J	1.6 J	3.5 U	0.44 J	1.9 J	17 U	6.9 U	6.9 U	35 U	1.3 J	6.9 U	35 U	6.9 U	2.6 J	3.5 U	0.5 J	9.3	2.6	8	1.8	1.8 U	20	29
Methyl-t-butyl ether	ug/m3	0.36 U	0.72 U	0.36 U	0.36 U	0.36 U	1.8 U	0.72 U	0.72 U	3.6 U	0.36 U	0.72 U	3.6 U	0.72 U	0.36 U	0.36 U	0.36 U	3.6 U	3.5	2.9	4.9	3.1	3.6 U	1.8 U
Naphthalene	ug/m3							1 U		5.2 U														
n-Heptane	ug/m3	0.41 U	0.82 U	0.41 U	0.41 U	0.41 U	2 U	0.82 U	0.82 U	4.1 U	0.41 U	0.82 U	4.1 U	0.82 U	0.41 U	0.41 U	0.41 U	4 U	1.4	1 U	1 U	1 U	4 U	2 U
o-Xylene	ug/m3	0.43 U	0.87 U	0.43 U	0.15 J	0.25 J	2.2 U	0.87 U	0.87 U	4.3 U	0.43 U	0.87 U	4.3 U	0.87 U	1.3	0.43 U	0.43 U	4.4 U	0.88 U	1.1 U	1.1 U	1.1 U	4.4 U	2.2 U
Propylene (Propene)	ug/m3	6.9 U	14 U	6.9 U	6.9 U	6.9 U	34 U	14 U	14 U	69 U	6.9 U	14 U	4.3 J	14 U	6.9 U	6.9 U	6.9 U	3.5 U	160	110	0.87 U	0.45 U	3.5 U	0.9 U
Styrene	ug/m3	0.43 U	0.85 U	0.43 U	0.43 U	0.43 U	2.1 U	0.85 U	0.85 U	4.3 U	0.43 U	0.85 U	4.3 U	0.85 U	0.43 U	0.43 U	0.43 U	4.2 U	0.84 U	1.1 U	1.1 U	1.1 U	4.2 U	2.1 U
Tetrachloroethene	ug/m3	1.2	1.2	0.46 J	0.68 U	0.24 J	5.6	1.4 U	1.4 U	6.8 U	0.68 U	1.4 U	6.8 U	1.4 U	9.6	1.3	0.68 U	66	69	56	84	69	40	140
Tetrahydrofuran	ug/m3	2600	3300	460	320	1.9	2900 E	1100	250	4900	13	5300	1800	4200	240	4900	880	41	23	12	14	7.5	3 U	5.6
Toluene	ug/m3	1.7	1.1	0.36 J	0.55	0.83	0.72 J	0.95	0.86	3.8 U	0.43	0.83	3.8 U	1.5	2.1	1.9	0.45	14	2.9	3.6	1.7	0.95 U	3.8 U	1.9 U
trans-1,2-Dichloroethene	ug/m3	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	2 U	0.79 U	0.79 U	4 U	0.4 U	0.79 U	4 U	0.79 U	1.2 J	0.4 U	0.4 U	150	140	90	90	80	48	120
trans-1,3-Dichloropropene	ug/m3	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	2.3 U	0.91 U	0.91 U	4.5 U	0.45 U	0.91 U	4.5 U	0.91 U	0.45 U	0.45 U	0.45 U	4.4 U	0.88 U	1.1 U	1.1 U	1.1 U	4.4 U	2.2 U
Trichloroethene	ug/m3	160	200	66	38	0.54 U	160	94	37	210	16	150	44	140	18	130	30	230	210	180	180	200	110	330
Trichlorofluoromethane	ug/m3	3.4	4.1	3.1	1.9 J	1.7 J	3.1 J	4.1 J	2 J	22 U	2.2	2.8 J	22 U	3.2 J	3.9	3.1	1.8 J	1800	1400	900	690	640	190	310
Trichlorotrifluoroethane	ug/m3	0.77 U	1.5 U	0.63 J	0.44 J	0.64 J	15 U	6.1 U	6.1 U	31 U	3.1 U	6.1 U	31 U	6.1 U	3.1 U	3.1 U	3.1 U	7.6 U	1.6 U	1.9 U	1.9 U	1.9 U	7.6 U	3.8 U
Vinyl acetate	ug/m3	7 U	14 U	7 U	7 U	7 U	35 U	14 U	14 U	70 U	7 U	14 U	70 U	14 U	7 U	7 U	7 U	15 U	0.72 U	0.9 U	3.6 U	0.9 U	15 U	1.8 U
Vinyl chloride	ug/m3	1.3	0.26 U	0.28	0.15 J	0.26 U	0.87 J	0.51 U	0.51 U	2.6 U	0.26 U	1.2	2.6 U	0.51 U	0.26 U	0.26 U	0.26 U	280	370	180	48	21	2.6 U	2.7

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter

Prepared By: AKN, 9/16/2019
Checked By: HWC, 9/16/2019

Appendix D2.
Summary of Analytical Results - Small Extraction Wells
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:		Extraction Well - Western Small Retail Space																						
Location:		EW-7																						
Sample ID:		EW-7-061109	EW-7-091709	EW-7-122909	EW-7-032610	EW-7-070110	EW-7-091610	EW-7-120710	EW-7-021711	EW-7-060211	EW-7-091511	EW-7-120811	EW-7-030812	EW-7-061412	EW-7-091312	EW-7-010313	EW-7-031513	EW-7-060713	EW-7-090613	EW-7-100313	EW-7-121313	EW-7-030714	EW-7-061314	EW-7-091214
Sample Date:		6/11/2009	9/17/2009	12/29/2009	3/26/2010	7/1/2010	9/16/2010	12/7/2010	2/17/2011	6/2/2011	9/15/2011	12/8/2011	3/8/2012	6/14/2012	9/13/2012	1/3/2013	3/15/2013	6/7/2013	9/6/2013	10/3/2013	12/13/2013	3/7/2014	6/13/2014	9/12/2014
Analyte	**Units**																							
1,1,1,2-Tetrachloroethane	ug/m3										2.5 U		12 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.44 U	1.2 U	1.2 U	1.2 U	1.2 U	2.5 U
1,1,1-Trichloroethane	ug/m3	2600	1400	340	51	250	290	160	110	5.5 U	110	66	11	47	95	0.55 U	3.1	15	76	52	41	30	15	52
1,1,2,2-Tetrachloroethane	ug/m3	3.4 U	3.4 U	3.4 U	0.68 U	0.68 U	0.68 U	0.69 U	0.69 U	6.9 U	1.4 U	0.69 U	3.4 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.24 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
1,1,2-Trichloroethane	ug/m3	2.7 U	2.7 U	2.7 U	0.54 U	0.54 U	0.54 U	0.55 U	0.55 U	5.5 U	1.1 U	0.55 U	2.7 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.19 U	0.55 U	0.55 U	0.55 U	0.55 U	1.1 U
1,1-Dichloroethane	ug/m3	1100	970	470	85	320	340	220	150	45	150	80	6.4	42	100	0.4 U	2	7	51	25	12	6.9	5.4	20
1,1-Dichloroethene	ug/m3	4.2	4.5	2 U	0.4 U	0.81	0.94	0.63	0.4 U	4 U	0.79 J	0.13 J	2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.14 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2,4-Trichlorobenzene	ug/m3	3.7 U	3.7 U	7.5 U	1.5 U	0.74 U	0.74 U	0.74 U	0.74 U	7.4 U	3 U	1.5 U	15 U	1.5 U	1.5 U	1.5 U	1.5 U	0.74 U	0.26 U	0.74 U	0.74 U	0.74 U	0.74 U	1.5 U
1,2,4-Trimethylbenzene	ug/m3	2.5 U	2.5 U	2.5 U	2.5	0.5 U	0.5 U	0.49 U	0.49 U	4.9 U	0.98 J	0.32 J	4.9 U	0.32 J	0.97	0.49	0.3 J	0.49 U	0.5	0.77	0.58	0.49 U	0.49 U	0.98 U
1,2-Dibromoethane (EDB)	ug/m3	3.8 U	3.8 U	3.8 U	0.76 U	0.76 U	0.76 U	0.77 U	0.77 U	7.7 U	1.5 U	0.77 U	3.8 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.27 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U
1,2-Dichlorobenzene	ug/m3	3 U	3 U	3 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	6 U	1.2 U	0.6 U	6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.21 U	0.6 U	0.6 U	0.6 U	0.6 U	1.2 U
1,2-Dichloroethane	ug/m3	2 U	2 U	2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	4 U	0.81 U	0.4 U	2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.14 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	ug/m3	2.3 U	2.3 U	2.3 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	4.6 U	0.92 U	0.46 U	2.3 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.16 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
1,2-Dichlorotetrafluoroethane	ug/m3	3.5 U	3.5 U	3.5 U	0.7 U	0.7 U	0.7 U																	
1,3,5-Trimethylbenzene	ug/m3	2.5 U	2.5 U	2.5 U	1.1	0.5 U	0.5 U	0.49 U	0.49 U	4.9 U	0.98 U	0.49 U	4.9 U	0.49 U	0.5	0.49 U	0.49 U	0.49 U	0.24	0.32 J	0.49 U	0.49 U	0.49 U	0.98 U
1,3-Butadiene	ug/m3	1.1 U	2.3 U	1.1 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	2.2 U	0.44 U	0.22 U	2.2 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.078 U	0.22 U	0.22 U	0.22 U	0.22 U	0.44 U
1,3-Dichlorobenzene	ug/m3	3 U	3 U	3 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	6 U	1.2 U	0.6 U	6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.21 U	0.6 U	0.6 U	0.6 U	0.6 U	1.2 U
1,4-Dichlorobenzene	ug/m3	3 U	3 U	3 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	6 U	1.2 U	0.6 U	6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.21 U	0.6 U	0.6 U	0.6 U	0.6 U	1.2 U
1,4-Dioxane	ug/m3										0.72 U													
2-Butanone	ug/m3	16	4.9	3.5	31	3.8	1.8	4.1	5.3 B	59 U	24 J	6.2 J	100 J	14	3.6 J	12	210	99	12	8.5 J	5.9 J	3.8 J	9.3 J	7.2 J
2-Hexanone	ug/m3	2 U	2 U	2 U	0.4 U	1	0.4 U	0.41 U	0.41 U	82 U	0.82 J	0.14 J	4.1 U	0.28 J	0.64	0.41 U	0.39 J	0.41 U	0.51	0.41 U	0.41 U	0.41 U	0.49	0.82 U
4-Ethyltoluene	ug/m3	2.5 U	2.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.49 U	0.49 U	4.9 U	0.98 U	0.49 U	4.9 U	0.49 U	0.21 J	0.49 U	0.49 U	0.49 U	0.17 U	0.27 J	0.49 U	0.49 U	0.49 U	0.98 U
4-Methyl-2-pentanone	ug/m3	2 U	2 U	2 U	0.4 U	0.4 U	0.4 U	0.41 U	0.41 U	4.1 U	0.82 U	0.13 J	4.1 U	1.6	0.31 J	0.41	0.41 U	0.41 U	0.14 U	0.41 U	0.41 U	0.41 U	0.41 U	0.82 U
Acetone	ug/m3	24	7.9	49	26	25	12	42 B	35 B	48 U	23	12	46 J	31	17 B	9.5	55	28	24	35	14	6.9 J	19	18 J
Benzene	ug/m3	2.8	3	2.2	1.5	1.7	2.1	1.4	1.6	3.2 U	2.5	1.6	3.2 U	1.5	1.2	0.32	0.54	0.61	1.9	1.9	0.86	1.3	1.1	0.59 J
Benzyl chloride	ug/m3	2.6 U	2.6 U	2.6 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	5.2 U	1 U	0.52 U	5.2 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.18 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
Bromodichloromethane	ug/m3	3.3 U	3.3 U	3.3 U	0.66 U	0.66 U	0.66 U	0.67 U	0.67 U	6.7 U	1.3 U	0.67 U	3.4 U	3.2	0.67 U	0.67 U	0.67 U	0.67 U	0.24 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
Bromoform	ug/m3	5.1 U	5.1 U	5.1 U	1.1 U	1.1 U	1.1 U	1 U	1 U	10 U	2.1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	0.36 U	1 U	1 U	1 U	1 U	2.1 U
Bromomethane	ug/m3	1.9 U	1.9 U	1.9 U	0.38 U	0.38 U	0.38 U	0.39 U	0.39 U	3.9 U	0.78 U	0.39 U	3.9 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.14 U	0.39 U	0.39 U	0.39 U	0.39 U	0.78 U
Carbon disulfide	ug/m3	2.7	2.1	1.6 U	1.5	0.93	0.9	0.78	0.31 U	3.1 U	6.2 J	3.1 U	31 U	0.41 J	3.1 U	3.1 U	0.57 J	7.4	0.42 J	3.1 U	4.6	7.4	12	6.2 U
Carbon tetrachloride	ug/m3	3.1 U	3.1 U	3.1 U	0.62 U	0.62 U	0.62 U	0.63 U	0.63 U	6.3 U	1.3 U	0.34 J	3.1 U	0.3 J	0.33 J	0.63	0.47 J	0.63 U	0.38	0.4 J	0.63 U	0.63 U	0.63 U	0.63 U
Chlorobenzene	ug/m3	2.3 U	2.3 U	2.3 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	4.6 U	0.92 U	0.46 U	4.6 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.16 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
Chloroethane	ug/m3	10	8.1	6.5	1.6	2.2	3.6	2	0.26 U	2.6 U	1.9	0.26 U	2.6 U	0.82	0.26 U	0.26 U	0.26 U	0.92	0.093 U	0.61	0.63	1.6	1.4	0.53 U
Chloroform	ug/m3	2.6	4.6	2.7	1.1	4.2	4.4	3.9	3	4.9 U	5	3.8	2.4 U	3.1	4.1	0.49 U	0.36 J	2	6.6	2.7	2.6	2	2.4	3.8
Chloromethane	ug/m3	1 U	1 U	1 U	0.2 U	0.2 U	0.2 U	0.21 U	0.21 U	2.1 U	0.41 U	0.21 U	2.1 U	0.21 U	0.21 U	0.21	0.21 U	0.41 U	0.14 U	0.41 U	0.41 U	0.41 U	0.41 U	0.83 U
cis-1,2-Dichloroethene	ug/m3	1200	1300	680	120	660	490	350	250	65	210	99	5.1	53	120	0.4 U	1.4	5.1	54	24	6	5	4.7	18
cis-1,3-Dichloropropene	ug/m3	2.2 U	2.2 U	2.2 U	0.44 U	0.44 U	0.44 U	0.45 U	0.45 U	4.5 U	0.91 U	0.45 U	2.3 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.16 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
Cyclohexane	ug/m3	1.7 U	1.7 U	1.7 U	0.34 U	0.34 U	0.41	0.34 U	0.34 U	3.4 U	0.69 J	0.34 U	3.4 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.12 U	0.34 U	0.34 U	0.34 U	0.34 U	0.69 U
Dibromochloromethane	ug/m3	4.3 U	4.3 U	4.3 U	0.86 U	0.86 U	0.86 U	0.85 U	0.85 U	8.5 U	1.7 U	0.85 U	4.3 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.3 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
Dichlorodifluoromethane	ug/m3	3.3	2.5 U	2.5 U	1.5	2.2	1.5	2.1	0.49 U	4.9 U	2.7	2.6	4.9 U	3	0.49 U	0.49	2.5	2	1.5	0.49 U	2.4	2	1.9	2.5
Ethanol	ug/m3	18	12	18	37	31	1.9 U	1.9 U	18	38 U	22	23	160	31	140	75	27	22	14	30	12	13	32	18
Ethyl acetate	ug/m3	1.8 U	1.8 U	1.8 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	3.6 U	0.72 U	0.36 U	11	0.63	0.36 U	0.36 U	3	3.6	0.13 U	0.36 U	0.94	0.36 U	0.36 U	0.72 U
Ethylbenzene	ug/m3	2.2 U	2.2 U	2.2 U	0.57	0.44 U	0.44 U	0.43 U	0.43 U	4.3 U	0.87 J	0.26 J	4.3 U	0.21 J	0.47	0.43	0.13 J	0.43 U	0.44	0.56	0.43 U	0.43 U	0.43 U	0.87 U
Hexachlorobutadiene	ug/m3	11 U	5.3 U	11 U	2.2 U	1.1 U	1.1 U	1.1 U	1.1 U	11 U	2.1 U	1.1 U	11 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.37 U	1.1 U	1.1 U	1.1 U	1.1 U	2.1 U
Hexane	ug/m3	2.1	1.8 U	1.8 U	0.36 U	0.97	0.71 U	0.87	0.35 U	3.5 U	28 U	14 U	4 J	0.55 J	14 U	14 J	3.5 J	0.78 J	0.9 J	0.9 J	14 U	14 U	14 U	28 U
Isopropyl alcohol	ug/m3	17	2.5 U	2.5 U	80	2.2	2.6	2.8	0.25 U	25 U	30	9.8 U	98 U	14	9.8 U	9.8	9.8 U	9.8 U	3.4 U	17	13	9.8 U	1.8 J	20 U
m,p-Xylene	ug/m3	4.3 U	4.3 U	4.3 U	1.4	0.93	1	0.87 U	0.87 U	8.7 U	1.7 J	0.82 J	8.7 U	0.45 J	1.3	0.87	0.33 J	0.5 J	1	1.5	0.87 U	0.49 J	0.9	1.7 U
Methyl methacrylate	ug/m3								0.41 U	4.1 U	0.82 U	0.41 U	4.1 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.14 U	0.41 U	0.41 U	0.41 U	0.41 U	0.82 U
Methylene chloride	ug/m3	16	7 U	27	1.4 U	2.4	0.81	1.9	2.4	6.9 U	6.9 J	1.5 J	33 J	2.1 J	5.4 B	3.5	10	1.5 J	1.7	1.7 J	1.1 J	0.82 J	0.85 J	1.3 J
Methyl-t-butyl ether	ug/m3	1.8 U	1.8 U	1.8 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	3.6 U	0.72 J	0.36 U	3.6 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.13 U	0.36 U	0.36 U	0.36 U	0.36 U	0.72 U
Naphthalene	ug/m3																							
n-Heptane	ug/m3	2 U	2 U	2 U	0.4 U	0.4 U	0.4 U	0.41 U	0.41 U	4.1 U	0.82 J	0.22 J	4.1 U	0.49	0.75	0.41 U	0.41 U	0.41 U	0.59	1.1	0.41 U	0.44	2.2	0.57 J
o-Xylene	ug/m3	2.2 U	2.2 U	2.2 U	0.65	0.44 U	0.44 U	0.43 U	0.43 U	4.3 U	0.87 J	0.38 J	4.3 U	0.18 J	0.52	0.43	0.15 J	0.43 U	0.4	0.73	0.43 U	0.43 U	0.43 U	0.87 U
Propylene (Propene)	ug/m3	0.9 U	3.5 U	3.5 U	0.69 U	1.8 U	0.69 U	0.69 U	1.7 U	17 U	14 U	6.9 U	13 J	6.9 U	6.9 U	6.9 U	6.9 U	6.9 U	2.4 U	6.9 U	6.9 U	6.9 U	1.1 J	14 U
Styrene	ug/m3	2.1 U	2.1 U	2.1 U	0.42 U	0.67	0.47	0.43 U	0.43 U	4.3 U	0.85 J	0.49	4.3 U	0.66	0.41 J	0.43 U	0.14 J	0.43 U	0.41	0.45	0.43 U	0.43 U	0.45	0.85 U
Tetrachloroethene	ug/m3	230	410	130	74	510	610	190	110	120	450	170	5.6	130	200	0.68	3	100	410	150	140	81	110	370
Tetrahydrofuran	ug/m3	15	4.1	1.5 U	2800	0.7	18	6.1	2.7	3900	7.9	9.9	1000	13	1.1	0.29	120	2000	10	4.6	2100	1400	2100	4.6
Toluene	ug/m3	1.9 U	1.9 U	1.9 U	5.4	4.8	2.2	0.47	0.88	3.8 U	1.9	1.1	8.1	1.1	1.9	0.38	0.63	1.1	3.1	6.5	1	1.2	1.4	0.59 J
trans-1,2-Dichloroethene	ug/m3	140	150	84	22	120	110	78	58	4 U	82	54	3.8	37	45	0.4 U	2.1	7.1	64	32	13	9.2	7.7	28
trans-1,3-Dichloropropene	ug/m3	2.2 U	2.2 U	2.2 U	0.44 U	0.44 U	0.44 U	0.45 U	0.45 U	4.5 U	0.91 U	0.45 U	2.3 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.16 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
Trichloroethene	ug/m3	420	920	420	190	690	730	440	310	260	680	310	53	320	450	0.54	17	170	740	350	280	210	190	440
Trichlorofluoromethane	ug/m3	660	1400	620	210	690	700	530	740	330	2500	1000	180	1300	2000	0.56	91	280	1500	990	1100	690	300	1100
Trichlorotrifluoroethane	ug/m3	3.8 U	3.8 U	3.8 U	0.76 U	0.76 U	0.76 U	0.89	0.77 U	7.7 U	1.5 J	1	3.8 U	0.78	0.57 J	0.77 U	0.71 J	0.77 U	1.1	1.1	0.9	0.77 U	0.77 U	1 J
Vinyl acetate	ug/m3	1.8 U	7.1 U	3.6 U	0.71 U	0.36 U	0.71 U	0.7 U	0.35 U	70 U	0.7 U	0.35 U	7 U	2.2	0.7 U	0.7 U	0.7 U	7 U	2.5 U	7 U	7 U	7 U	7 U	1.2 J
Vinyl chloride	ug/m3	3.2	1.3 U	1.6	1	0.26 U	1.6	0.41	0.26 U	2.6 U	0.51 U	0.26 U	1.3 U	0.26 U	0.26 U	0.26 U	0.26 U	0.9	0.09 U	0.26 U	0.26 U	1.5	1.8	0.26 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter

Prepared By: AKN, 9/16/2019
Checked By: HWC, 9/16/2019

Appendix D2.
Summary of Analytical Results - Small Extraction Wells
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:		Extraction Well - Western Small Retail Space													
Location:		EW-7													
Sample ID:		EW-7-121914	EW-07-032715	EW-7-061115	EW-7-091615	EW-7-121815	EW-7-021816	EW-7-080516	EW-7-021017	EW-7-090717	EW-7-022818	EW-7-091218	EW-7-020819	EW-7-090619	EW-7-021420
Sample Date:		12/19/2014	3/27/2015	6/11/2015	9/16/2015	12/18/2015	2/18/2016	8/5/2016	2/10/2017	9/7/2017	2/28/2018	9/12/2018	2/8/2019	9/6/2019	2/14/2020
Analyte	**Units**														
1,1,1,2-Tetrachloroethane	ug/m3	1.2 U	1.2 U	1.2 U	2.5 U		2.5 U		1.2 U	2.5 U	2.5 U	2.5 U	1.2 U	1.2 U	1.2 U
1,1,1-Trichloroethane	ug/m3	6.1	25	14	63	40	1.1 U	160	30	1.2	20	7.9	8.7	8.3	9.4
1,1,2,2-Tetrachloroethane	ug/m3	0.69 U	0.69 U	0.69 U	1.4 U	1.4 U	1.4 U	6.9 U	0.69 U	1.4 U	1.4 U	1.4 U	0.69 U	0.69 U	0.69 U
1,1,2-Trichloroethane	ug/m3	0.55 U	0.55 U	0.55 U	1.1 U	1.1 U	1.1 U	5.5 U	0.55 U	1.1 U	1.1 U	1.1 U	0.55 U	0.55 U	0.55 U
1,1-Dichloroethane	ug/m3	1.8	4.9	3.7	16	6.5	0.81 U	30	6.3	0.81 U	2.2	1.3	0.4 U	1.3	0.81
1,1-Dichloroethene	ug/m3	0.4 U	0.4 U	0.4 U	0.79 U	0.79 U	0.79 U	4 U	0.4 U	0.79 U	0.79 U	0.79 U	0.4 U	0.4 U	0.4 U
1,2,4-Trichlorobenzene	ug/m3	0.74 U	0.74 U	0.74 U	1.5 U	1.5 U	1.5 U	7.4 U	0.74 U	1.5 U	1.5 U	1.5 U	1.5 U	0.74 U	0.74 U
1,2,4-Trimethylbenzene	ug/m3	0.49 U	1.4	0.44 J	0.98 U	0.98 U	0.98 U	4.9 U	0.49 U	0.98 U	0.98 U	0.98 U	0.49 U	0.49 U	0.49 U
1,2-Dibromoethane (EDB)	ug/m3	0.77 U	0.77 U	0.77 U	1.5 U	1.5 U	1.5 U	7.7 U	0.77 U	1.5 U	1.5 U	1.5 U	0.77 U	0.77 U	0.77 U
1,2-Dichlorobenzene	ug/m3	0.6 U	0.6 U	0.6 U	1.2 U	1.2 U	1.2 U	6 U	0.6 U	1.2 U	1.2 U	1.2 U	2.4 U	0.6 U	0.6 U
1,2-Dichloroethane	ug/m3	0.4 U	0.4 U	0.16 J	0.81 U	0.81 U	0.81 U	4 U	0.4 U	0.81 U	0.81 U	0.81 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	ug/m3	0.46 U	0.46 U	0.46 U	0.92 U	0.92 U	0.92 U	4.6 U	0.46 U	0.92 U	0.92 U	0.92 U	0.46 U	0.46 U	0.46 U
1,2-Dichlorotetrafluoroethane	ug/m3					1.4 U		7 U							
1,3,5-Trimethylbenzene	ug/m3	0.49 U	0.69	0.23 J	0.98 U	0.98 U	0.98 U	4.9 U	0.49 U	0.98 U	0.98 U	0.98 U	0.49 U	0.49 U	0.49 U
1,3-Butadiene	ug/m3	0.22 U	0.22 U	0.22 U	0.44 U	0.44 U	0.44 U	2.2 U	0.22 U	0.44 U	0.44 U	0.42 J	0.22 U	0.22 U	0.22 U
1,3-Dichlorobenzene	ug/m3	0.6 U	0.6 U	0.6 U	1.2 U	1.2 U	1.2 U	6 U	0.6 U	1.2 U	1.2 U	1.2 U	0.6 U	0.6 U	0.6 U
1,4-Dichlorobenzene	ug/m3	0.6 U	0.6 U	0.17 J	1.2 U	1.2 U	1.2 U	6 U	0.6 U	1.2 U	1.2 U	1.2 U	0.6 U	0.6 U	0.6 U
1,4-Dioxane	ug/m3					7.2 U		36 U							
2-Butanone	ug/m3	35	9.7 J	8.3 J	5 J	4.6 J	67	35 J	6 J	180	17 J	21 J	12 U	22	32
2-Hexanone	ug/m3	0.41 U	1	0.38 J	0.82 U	0.82 U	0.82 U	4.1 U	0.41 U	0.82 U	0.82 U	0.82 U	0.41 U	0.41 U	0.41 U
4-Ethyltoluene	ug/m3	0.49 U	0.33 J	0.12 J	0.98 U	0.98 U	0.98 U	4.9 U	0.49 U	0.98 U	0.98 U	0.98 U	0.49 U	0.49 U	0.49 U
4-Methyl-2-pentanone	ug/m3	0.41 U	0.46	0.41 U	0.82 U	0.82 U	0.82 U	4.1 U	0.41 U	0.82 U	0.82 U	0.82 U	0.41 U	0.41 U	0.41 U
Acetone	ug/m3	9.4 J	13	7.4 J	8.2 J	19 U	29	81 J	25	51	10 J	23	21	17	26
Benzene	ug/m3	0.49	2.1	2.3	2.3	1.3	1.2	3.2 U	0.44	0.42 J	0.74	1.6	2.1	1.4	1
Benzyl chloride	ug/m3	0.52 U	0.52 U	0.52 U	1 U	1 U	1 U	5.2 U	0.52 U	1 U	1 U	1 U	0.52 U	0.52 U	0.52 U
Bromodichloromethane	ug/m3	0.67 U	0.67 U	0.67 U	1.3 U	3.9	1.3 U	6.7 U	0.67 U	1.3 U	1.3 U	1 J	0.67 U	0.67 U	0.67 U
Bromoform	ug/m3	1 U	1 U	1 U	2.1 U	2.1 U	2.1 U	10 U	1 U	2.1 U	2.1 U	2.1 U	1 U	1 U	1 U
Bromomethane	ug/m3	0.39 U	0.39 U	0.39 U	0.78 U	0.78 U	0.78 U	3.9 U	0.39 U	0.78 U	0.78 U	0.78 U	0.39 U	3.9 U	0.78 U
Carbon disulfide	ug/m3	3.7	10	16	6.2 U	6.2 U	6.2 U	31 U	3.1 U	1.9 J	17	47	30 J	47	25
Carbon tetrachloride	ug/m3	0.36 J	0.21 J	0.33 J	0.38 J	1.3 U	1.3 U	6.3 U	0.63 U	1.3 U	1.3 U	0.48 J	0.63 U	0.63 U	0.63 U
Chlorobenzene	ug/m3	0.46 U	0.46 U	0.46 U	0.92 U	0.92 U	0.92 U	4.6 U	0.46 U	0.92 U	0.92 U	0.92 U	0.46 U	0.46 U	0.46 U
Chloroethane	ug/m3	0.26 U	0.97	1.3	0.45 J	0.53 U	0.53 U	2.6 U	0.26 U	1.1 U	0.53 U	0.53 U	0.53 U	0.26 U	0.26 U
Chloroform	ug/m3	0.91	2.1	2.6	4.1	2.8	0.98 U	9.3	2.2	0.98 U	1.5	1.4	2.1	1.7	0.86
Chloromethane	ug/m3	0.41 U	0.41 U	0.41 U	0.83 U	0.83 U	0.83 U	4.1 U	0.41 U	0.83 U	0.83 U	0.83 U	0.41 U	0.41 U	0.41 U
cis-1,2-Dichloroethene	ug/m3	0.99	3.1	2.5	9.1	2.7	0.79 U	19	2.7	0.79 U	1.3	1.1	1.7	1.2	0.59
cis-1,3-Dichloropropene	ug/m3	0.45 U	0.45 U	0.45 U	0.91 U	0.91 U	0.91 U	4.5 U	0.45 U	0.91 U	0.91 U	0.91 U	0.45 U	0.45 U	0.45 U
Cyclohexane	ug/m3	0.34 U	0.34 U	0.34 U	0.69 U	0.69 U	0.69 U	3.4 U	0.34 U	0.69 U	0.69 U	0.69 U	0.34 U	0.34 U	0.34 U
Dibromochloromethane	ug/m3	0.85 U	0.85 U	0.85 U	1.7 U	1.7 U	1.7 U	8.5 U	0.85 U	1.7 U	1.7 U	1.7 U	2.2	0.85 U	0.85 U
Dichlorodifluoromethane	ug/m3	2.6	1.5	2.3	2.9	3.2	2	6.9	1.1	2.2	0.99 U	2.2	0.49 U	0.49 U	1.7
Ethanol	ug/m3	11	7.5 U	42	93	14 J	18	49 J	13	65	8.6 J	19	7.5 U	63	140
Ethyl acetate	ug/m3	1.7	29	0.36 U	0.72 U	0.72 U	0.72 U	3.6 U	0.36 U	0.74 J	0.72 U	0.63 J	0.36 U	0.36 U	0.36 U
Ethylbenzene	ug/m3	0.43 U	1.2	0.23 J	0.87 U	0.87 U	0.87 U	4.3 U	0.43 U	0.87 U	0.87 U	0.87 U	1.3	0.43 U	0.43 U
Hexachlorobutadiene	ug/m3	1.1 U	1.1 U	1.1 U	2.1 U	2.1 U	2.1 U	11 U	1.1 U	2.1 U	2.1 U	2.1 U	2.1 U	1.1 U	1.1 U
Hexane	ug/m3	14 U	8.1 J	14 U	28 U	28 U	28 U	140 U	14 U	28 U	28 U	28 U	14 U	14 U	14 U
Isopropyl alcohol	ug/m3	4.8 J	12	6.6 J	22	20 U	6.4 J	98 U	5.1 J	11 J	3.9 J	47	5.4 J	4.6 J	11
m,p-Xylene	ug/m3	0.26 J	0.68 J	0.5 J	1.7 U	1.7 U	1.7 U	8.7 U	0.87 U	1.7 U	1.7 U	1.7 U	2.6	0.87 U	0.55 J
Methyl methacrylate	ug/m3	0.41 U	0.41 U		0.82 U		0.82 U		0.41 U	0.82 U	0.82 U	0.82 U	0.41 U	0.41 U	0.41 U
Methylene chloride	ug/m3	3.5 U	0.49 J	3.5 U	6.9 U	6.9 U	1.4 J	35 U	1.3 J	6.9 U	6.9 U	6.9 U	1.5 J	3.5 U	0.51 J
Methyl-t-butyl ether	ug/m3	0.36 U	0.36 U	0.36 U	0.72 U	0.72 U	0.72 U	3.6 U	0.36 U	0.72 U	0.72 U	0.72 U	0.36 U	0.36 U	0.36 U
Naphthalene	ug/m3					1 U		7.1							
n-Heptane	ug/m3	4.4	0.43	0.15 J	0.82 U	0.82 U	0.82 U	4.1 U	0.41 U	0.82 U	0.82 U	0.82 U	0.41 U	0.41 U	0.41 U
o-Xylene	ug/m3	0.43 U	0.57	0.22 J	0.87 U	0.87 U	0.87 U	4.3 U	0.43 U	0.87 U	0.87 U	0.87 U	1.3	0.43 U	0.43 U
Propylene (Propene)	ug/m3	6.9 U	0.96 J	1.6 J	1.3 J	14 U	14 U	69 U	0.77 J	14 U	14 U	14 U	6.9 U	6.9 U	6.9 U
Styrene	ug/m3	0.43 U	0.34 J	0.46	0.85 U	0.85 U	0.85 U	4.3 U	0.43 U	0.85 U	0.85 U	0.78 J	0.43 U	0.43 U	0.71
Tetrachloroethene	ug/m3	18	81	89	390	170	2.7	1200	27	5	95	62	15	93	45
Tetrahydrofuran	ug/m3	350	660	720	3.5	5.8	38	31	2.5	130	880	1100	220	2500	980
Toluene	ug/m3	0.63	0.72	0.99	0.59 J	0.75 U	0.75 U	5.7	0.39	1.2	0.99	2.1	2.4	1.5	0.61
trans-1,2-Dichloroethene	ug/m3	1.9	6.7	4.9	22	7.7	0.79 U	46	9	0.79 U	2.6	1.7	2.2 J	1.4	0.82
trans-1,3-Dichloropropene	ug/m3	0.45 U	0.45 U	0.45 U	0.91 U	0.91 U	0.91 U	4.5 U	0.45 U	0.91 U	0.91 U	0.91 U	0.45 U	0.45 U	0.45 U
Trichloroethene	ug/m3	46	180	170	610	380	6.2	1500	140	15	170	120	42	150	81
Trichlorofluoromethane	ug/m3	200	460	340	1300	850	23	2500	890	23	370	120	190	140	170
Trichlorotrifluoroethane	ug/m3	0.78	0.8 J	0.74 J	1.3 J	6.1 U	6.1 U	31 U	0.9 J	6.1 U	6.1 U	6.1 U	3.1 U	3.1 U	3.1 U
Vinyl acetate	ug/m3	7 U	7 U	7 U	14 U	14 U	14 U	8.8 J	7 U	14 U	14 U	14 U	7 U	7 U	7 U
Vinyl chloride	ug/m3	0.16 J	0.82	1.4	0.51 U	0.51 U	0.51 U	2.6 U	0.26 U	0.51 U	0.51 U	0.51 U	0.26 U	0.26 U	0.26 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter

Prepared By: AKN, 9/16/2019
Checked By: HWC, 9/16/2019

Appendix E1

Summary of All Analytical Results –
Indoor Air Samples for Large Retail Space

Appendix E1.
Summary of Analytical Results - Indoor Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:			Large Retail Space																							
Location:			AIR-13	AIR-4	AIR-5	AIR-6	AIR-7	AIR-8	IA-1																	
Sample ID:			AIR-13	AIR-4	AIR-5 DUP	AIR-6	AIR-7	AIR-8	IA-1	IA-1-020309	IA-1-021109	IA-1-021809	IA-1-022609	IA-1-030609	IA-1-033109	IA-1-041409	IA-1-042409	IA-1-091709	IA-1-092409	IA-1-100109	IA-1-100809	IA-1-120209	IA-1-010810	IA-1-012810	IA-1-020510
Sample Date:			9/12/2007	9/12/2007	9/12/2007	9/12/2007	9/12/2007	9/12/2007	1/16/2009	2/3/2009	2/11/2009	2/18/2009	2/26/2009	3/6/2009	3/31/2009	4/14/2009	4/24/2009	9/17/2009	9/24/2009	10/1/2009	10/8/2009	12/2/2009	1/8/2010	1/28/2010	2/5/2010
Analyte	**Units**	**CT IACTIND 2003**																								
1,1,1,2-Tetrachloroethane	ug/m3	1.1	0.137 U	0.137 U	0.137 U	0.137 U	0.327 U	0.137 U																		
1,1,1-Trichloroethane	ug/m3	500	1.54	2.35	2.11	1.68	1.81	2.11	10	0.56	1.1	0.99	0.35	1.8	1.5	1.4	2	0.27 U	0.27 U	0.27 U	0.27 U	0.24	0.27 U	0.27 U	0.76
1,1,2,2-Tetrachloroethane	ug/m3	0.14	0.137 U	0.137 U	0.137 U	0.137 U	0.327 U	0.137 U	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	0.24 U	0.34 U	0.34 U	0.34 U
1,1,2-Trichloroethane	ug/m3	12	0.109 U	0.109 U	0.109 U	0.109 U	0.26 U	0.109 U	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	0.19 U	0.27 U	0.27 U	0.27 U
1,1-Dichloroethane	ug/m3	430	0.182	0.321	0.233	0.224	0.218	0.235	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	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	ug/m3	20	0.104	0.098	0.091	0.08	0.189 U	0.086	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	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	ug/m3	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	0.37 U	0.52 U	0.37 U	0.37 U	0.37 U
1,2,4-Trimethylbenzene	ug/m3	52	0.176	0.236	0.265	0.212	0.234 U	0.22	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	0.52	0.37	0.25 U	0.26
1,2-Dibromoethane (EDB)	ug/m3	0.038	0.154 U	0.154 U	0.154 U	0.154 U	0.366 U	0.154 U	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	0.27 U	0.38 U	0.38 U	0.38 U
1,2-Dichlorobenzene	ug/m3	410	0.12 U	0.12 U	0.12 U	0.12 U	0.287 U	0.12 U	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	0.21 U	0.3 U	0.3 U	0.3 U
1,2-Dichloroethane	ug/m3	0.31	0.0809 U	0.0809 U	0.0809 U	0.0809 U	0.193 U	0.0809 U	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	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	ug/m3	0.42	0.0924 U	0.0924 U	0.0924 U	0.0924 U	0.22 U	0.0924 U	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	0.17 U	0.23 U	0.23 U	0.23 U
1,2-Dichlorotetrafluoroethane	ug/m3	NA	0.349 U	0.349 U	0.349 U	0.349 U	0.834 U	0.349 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U
1,3,5-Trimethylbenzene	ug/m3	52	0.0982 U	0.103	0.115	0.0982 U	0.234 U	0.0982 U	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	0.25 U	0.18	0.25 U	0.25 U	0.25 U
1,3-Butadiene	ug/m3	NA	0.0442 U	0.0442 U	0.0442 U	0.0442 U	0.106 U	0.0442 U	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	0.23 U	0.17	0.23 U	0.23 U	0.23 U
1,3-Dichlorobenzene	ug/m3	410	0.12 U	0.12 U	0.12 U	0.12 U	0.287 U	0.12 U	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	0.21 U	0.3 U	0.3 U	0.3 U
1,4-Dichlorobenzene	ug/m3	24	0.12 U	0.12 U	0.12 U	0.12 U	0.287 U	0.12 U	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	0.21 U	0.3 U	0.3 U	0.3 U
1,4-Dioxane	ug/m3	NA																							
2-Butanone	ug/m3	500	2.12	1.47 U	2.42	2.47	3.52 U	2.86	20	3.1	5.8	3.4	2.6	2.2	1.3	1.2	4.4	2	2.6	2.7	1.3	2.7	1.6	0.3 U	2.4
2-Hexanone	ug/m3	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	0.71	0.36	0.2 U	0.47
4-Ethyltoluene	ug/m3	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	0.25 U	0.18	0.25 U	0.25 U	0.25 U
4-Isopropyltoluene	ug/m3	370	2.74 U	2.74 U	2.74 U	2.74 U	6.55 U	2.74 U																	
4-Methyl-2-pentanone	ug/m3	200	2.05 U	2.05 U	2.05 U	2.05 U	4.88 U	2.05 U	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	0.34	0.2 U	0.2 U	0.2 U
Acetone	ug/m3	500	7.48	8.88	8.52	8.39	11.3 U	9.34	18	7.7	19	21	10	8.7	14	12	310	11	18	13	10	13	12	2	19
Acrylonitrile	ug/m3	NA	1.08 U	1.08 U	1.08 U	1.08 U	2.59 U	1.08 U																	
Benzene	ug/m3	3.3	0.46	0.663	0.731	0.621	0.746	0.707	1	0.68	1.9	3	0.69	0.87	0.71	0.56	0.78	0.49	0.47	0.39	0.48	1.1	1.2	0.16 U	0.98
Benzyl chloride	ug/m3	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	0.26 U	0.19 U	0.26 U	0.26 U	0.26 U
Bromodichloromethane	ug/m3	0.46	0.134 U	0.134 U	0.134 U	0.134 U	0.32 U	0.134 U	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	0.24 U	0.33 U	0.33 U	0.33 U
Bromoform	ug/m3	7.3	0.206 U	0.206 U	0.206 U	0.206 U	0.493 U	0.206 U	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	0.36 U	0.51 U	0.51 U	0.51 U
Bromomethane	ug/m3	NA	0.092	0.0776 U	0.086	0.0776 U	0.185 U	0.0776 U	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	0.14 U	0.19 U	0.19 U	0.19 U
Carbon disulfide	ug/m3	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	0.16 U	0.12 U	0.16 U	0.16 U	0.16 U
Carbon tetrachloride	ug/m3	0.54	0.412	0.414	0.522	0.402	0.408	0.505	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	0.48	0.43	0.31 U	0.4
Chlorobenzene	ug/m3	200	0.092 U	0.092 U	0.092 U	0.092 U	0.22 U	0.092 U	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	0.17 U	0.23 U	0.23 U	0.23 U
Chloroethane	ug/m3	500	0.0527 U	0.0527 U	0.0527 U	0.0527 U	0.126 U	0.0527 U	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	0.13 U	0.1 U	0.13 U	0.13 U	0.13 U
Chloroform	ug/m3	0.5	0.335	0.163	0.225	0.173	0.233 U	0.204	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	0.17 U	0.26	0.24 U	0.47
Chloromethane	ug/m3	80	2.44 U	2.44 U	2.44 U	2.44 U	5.82 U	2.44	1.1	1	1.4	1.5	1	1	1.2	1.1	1.3	1.1	1.1	0.98	0.95	1.3	1.1	1.4	1.3
cis-1,2-Dichloroethene	ug/m3	100	2.35	1.21	1.38	1.01	0.787	1.26	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	0.57	0.2 U	0.2 U	0.2 U
cis-1,3-Dichloropropene	ug/m3	NA	0.0907 U	0.0907 U	0.0907 U	0.0907 U	0.216 U	0.0907 U	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	0.22 U	0.22 U	0.22 U
Cyclohexane	ug/m3	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	0.17 U	0.28	0.17 U	0.17 U	0.17 U
Dibromochloromethane	ug/m3	NA	0.096 U	0.096 U	0.096 U	0.096 U	0.229 U	0.096 U	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	0.31 U	0.43 U	0.43 U	0.43 U
Dichlorodifluoromethane	ug/m3	500	1.92	1.98	2.38	1.95	1.95	2.2	1.8	2.1	2.6	2.8	2.6	2.6	3.1	2	8.3	2.4	2	2.3	2.1	1.6	3.1	2.4	2.4
Ethanol	ug/m3	NA							5.7	8.3	14	20	9.8	7.5	18	5	39	6.2	7	6.5	8.8	10	8.4	7	29
Ethyl acetate	ug/m3	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	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U
Ethylbenzene	ug/m3	290	0.18	0.278	0.288	0.223	0.207 U	0.238	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	0.4	0.22 U	0.32
Hexachlorobutadiene	ug/m3	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	0.53 U	0.53 U	0.53 U
Hexane	ug/m3	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	0.74	0.18 U	0.82
Isopropyl alcohol	ug/m3	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	2.4	0.25 U	9.4
Isopropylbenzene	ug/m3	120	2.46 U	2.46 U	2.46 U	2.46 U	5.86 U	2.46 U																	
m,p-Xylene	ug/m3	NA	0.616	0.998	1.08	0.859	0.688	0.894	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	1.1	0.43 U	1
Methyl methacrylate	ug/m3	NA																							
Methylene chloride	ug/m3	17	3.47 U	3.47 U	3.47 U	3.47 U	8.3 U	3.47 U	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	0.7 U	1.4	1.5
Methyl-t-butyl ether	ug/m3	190	0.072 U	0.072 U	0.072 U	0.072 U	0.172 U	0.072 U	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	0.18 U	0.18 U	0.18 U
Naphthalene	ug/m3	NA	0.262 U	0.262 U	0.262 U	0.262 U	0.625 U	0.262 U																	
n-Butylbenzene	ug/m3	410	2.74 U	2.74 U	2.74 U	2.74 U	6.55 U	2.74 U																	
n-Heptane	ug/m3	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	0.35	0.2 U	0.2 U
o-Xylene	ug/m3	NA	0.229	0.349	0.397	0.316	0.24	0.329	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	0.44	0.22 U	0.38
Propylene (Propene)	ug/m3	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	0.35 U	0.35 U	0.35 U
sec-Butylbenzene	ug/m3	410	2.74 U	2.74 U	2.74 U	2.74 U	6.55 U	2.74 U																	
Styrene	ug/m3	290	0.448	0.158	0.27	0.17	0.203 U	0.19	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	0.21 U	0.21 U	0.21 U
Tetrachloroethene	ug/m3	5	**9.07**	4.76	**5.58**	3.87	3.23	**5.2**	**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	0.34 U	0.34 U	0.34 U
Tetrahydrofuran	ug/m3	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	0.15 U	0.15 U	0.15 U
Toluene	ug/m3	500	1.18	1.3	1.28	1.01	0.911	1.16	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	2.1	0.19 U	0.82
trans-1,2-Dichloroethene	ug/m3	200	0.0792 U	0.0792 U	0.0792 U	0.0792 U	0.189 U	0.0792 U	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	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	ug/m3	NA	0.0907 U	0.0907 U	0.0907 U	0.0907 U	0.216 U	0.0907 U	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	0.22 U	0.22 U	0.22 U
Trichloroethene	ug/m3	1	**3.37**	**2.48**	**2.56**	**1.97**	**1.69**	**2.43**	**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	0.27 U	0.27 U	0.27 U
Trichlorofluoromethane	ug/m3	500	1.11	1.24	1.39	1.13	1.15	1.31	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	2.5	0.81	1.3
Trichlorotrifluoroethane	ug/m3	NA	0.478	0.513	0.625	0.466	0.914 U	0.564	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	0.63	0.38 U	0.71
Vinyl acetate	ug/m3	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	0.71 U	0.71 U	0.71 U
Vinyl chloride	ug/m3	1.9	0.352	0.174	0.202	0.146	0.133	0.191	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	0.13 U	0.13 U	0.13 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter
Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Prepared By: AKN, 9/16/2019
Checked By: HWC, 9/16/2019

Appendix E1.
Summary of Analytical Results - Indoor Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:			Large Retail Space																						
Location:			IA-1																						
Sample ID:			IA-1-021210	IA-1-021910	IA-1-032610	IA-1-043010	IA-1-052810	IA-1-070110	IA-1-091610	IA-1-120710	IA-1-021711	IA-1-060211	IA-1-091511	IA-1-120811	IA-1-030812	IA-1-061412	IA-1-091312	IA-1-010313	IA-1-031513	IA-1-060713	IA-1-090613	IA-1-121313	IA-1-030714	IA-1-061314	IA-1-091214
Sample Date:			2/12/2010	2/19/2010	3/26/2010	4/30/2010	5/28/2010	7/1/2010	9/16/2010	12/7/2010	2/17/2011	6/2/2011	9/15/2011	12/8/2011	3/8/2012	6/14/2012	9/13/2012	1/3/2013	3/15/2013	6/7/2013	9/6/2013	12/13/2013	3/7/2014	6/13/2014	9/12/2014
Analyte	**Units**	**CT IACTIND 2003**																							
1,1,1,2-Tetrachloroethane	ug/m3	1.1											0.62 U		0.37 U	0.37 U	0.44 U	0.44 U	0.44 U	0.44 U	0.35 J	0.44 U	0.44 U	0.44 U	0.37 U
1,1,1-Trichloroethane	ug/m3	500	0.3	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 J	0.082 U	0.16 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.11 J	0.19 U	0.2
1,1,2,2-Tetrachloroethane	ug/m3	0.14	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	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.1 U
1,1,2-Trichloroethane	ug/m3	12	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	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.16 U
1,1-Dichloroethane	ug/m3	430	0.2 U	0.2 U	0.2 U	0.2 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	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.061 U
1,1-Dichloroethene	ug/m3	20	0.2 U	0.2 U	0.2 U	0.2 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	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.059 U
1,2,4-Trichlorobenzene	ug/m3	NA	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	0.52 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.22 U
1,2,4-Trimethylbenzene	ug/m3	52	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 J	0.1 J	0.15 U	0.16	0.55	0.17 U	0.17 U	0.21	0.32	0.17 U	0.52	0.25	0.14 J
1,2-Dibromoethane (EDB)	ug/m3	0.038	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.12 U
1,2-Dichlorobenzene	ug/m3	410	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	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.18 U
1,2-Dichloroethane	ug/m3	0.31	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.056 J	0.061 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.061 U
1,2-Dichloropropane	ug/m3	0.42	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.069 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.069 U
1,2-Dichlorotetrafluoroethane	ug/m3	NA	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	ug/m3	52	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 J	0.044 J	0.15 U	0.059 J	0.32	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.16 J	0.17 U	0.068 J
1,3-Butadiene	ug/m3	NA	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	0.078 U	0.078 U	0.078 U	0.078 U	0.55	0.078 U	0.066 U
1,3-Dichlorobenzene	ug/m3	410	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	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.18 U
1,4-Dichlorobenzene	ug/m3	24	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	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.18 U
1,4-Dioxane	ug/m3	NA											0.18 U												
2-Butanone	ug/m3	500	1.1	1.2	1.3	0.78	2.6	3.3	0.85	0.68	1.7 B	2.9 U	5.9 J	1.8 J	1.2 J	1.4 J	3 J	4.1 J	0.64 J	2.9 J	2 J	0.92 J	1.6 J	3.1 J	2.8 J
2-Hexanone	ug/m3	NA	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	0.14 U	0.38	0.27	0.14 U	0.3	0.45	0.25
4-Ethyltoluene	ug/m3	NA	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 J	0.19	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17	0.17 U	0.15 U
4-Isopropyltoluene	ug/m3	370																							
4-Methyl-2-pentanone	ug/m3	200	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 J	0.26	0.14 U	0.14 U	0.24	0.52	0.14 U	0.23	0.49	0.33
Acetone	ug/m3	500	7.3	8.5	7	6.5	18	18	11	12 B	15 B	11 B	18	8	6	12	16 B	3.3	5	21	35	19	13	23	13
Acrylonitrile	ug/m3	NA																							
Benzene	ug/m3	3.3	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	0.11	0.72	0.28	0.75	0.54	2.3	0.46	0.39
Benzyl chloride	ug/m3	NA	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	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.078 U
Bromodichloromethane	ug/m3	0.46	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	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.1 U
Bromoform	ug/m3	7.3	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	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.31 U
Bromomethane	ug/m3	NA	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	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.12
Carbon disulfide	ug/m3	NA	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	1.1 U	1.1 U	0.23 J	0.2 J	1.1 U	0.21 J	0.11 J
Carbon tetrachloride	ug/m3	0.54	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	0.22	0.44	0.53	0.53	0.54	0.41	0.42	0.4
Chlorobenzene	ug/m3	200	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	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.069 U
Chloroethane	ug/m3	500	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.079 U	0.079 U	0.079 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.079 U
Chloroform	ug/m3	0.5	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 J	0.085 J	0.073 U	0.097 J	0.19	0.17 U	0.17 U	0.17 U	0.2	0.17 U	0.13 J	0.25	0.27
Chloromethane	ug/m3	80	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	0.072	1.1	1.4	1.2	1	1.3	1.3	0.76
cis-1,2-Dichloroethene	ug/m3	100	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	0.2 U	0.15	0.059 U	0.12 U	0.045 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.059 U
cis-1,3-Dichloropropene	ug/m3	NA	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.068 U
Cyclohexane	ug/m3	NA	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	0.12 U	0.12 U	0.12 U	0.12 U	0.32	0.12 U	0.1 U
Dibromochloromethane	ug/m3	NA	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	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.13 U
Dichlorodifluoromethane	ug/m3	500	2.6	3	1.6	2.2	2.3	2.7	1.7	2	3.1	1.5	2	2.6	2.1	2.7	2.7	0.17	1.7	3.2	1.9	2.4	1.7	2.1	2.2
Ethanol	ug/m3	NA	19	43	4.6	4.4	6	6.5	9	2.7	9	2.8	6.4	2.2 J	3.2	4.4	8.5	2.6	2 J	26	23	12	22	80	34
Ethyl acetate	ug/m3	NA	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	0.13	0.21	0.33	0.13 U	25	0.34	0.13 U	0.46
Ethylbenzene	ug/m3	290	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 J	0.14	0.1 J	0.11 J	0.47	0.15	0.15 U	0.19	0.35	0.15 U	0.53	0.23	0.17
Hexachlorobutadiene	ug/m3	NA	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	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.32 U
Hexane	ug/m3	NA	1.3	0.45	0.2	1.1	0.8	0.46	0.61	0.35 U	1.9	0.43	7 J	0.39 J	0.72 J	0.55 J	1.3 J	4.9 J	0.64 J	0.79 J	19	4.9 U	1.2 J	0.43 J	0.55 J
Isopropyl alcohol	ug/m3	NA	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 J	2.9 U	0.64 J	2.9 U	1.9 J	3.4 U	0.36 J	3.4 U	3.4 U	2.1 J	1.9 J	5.5	4
Isopropylbenzene	ug/m3	120																							
m,p-Xylene	ug/m3	NA	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 J	0.36	1.7	0.3	0.3 J	0.79	1	0.19 J	1.6	0.86	0.59
Methyl methacrylate	ug/m3	NA								0.2 U	0.2 U	0.2 U	0.2 U	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.15	0.14 U	0.14 U	0.14 U	0.15
Methylene chloride	ug/m3	17	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 J	1.6	3.3	1.2	1.8 B	1.2	1.9	1.3	**34**	0.68 J	0.8 J	0.67 J	0.9 J
Methyl-t-butyl ether	ug/m3	190	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	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.11 U
Naphthalene	ug/m3	NA																							
n-Butylbenzene	ug/m3	410																							
n-Heptane	ug/m3	NA	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	0.2 J	0.079 J	0.12 U	0.093 J	0.44	0.14 U	0.14 U	0.14 U	0.81	0.14 U	0.67	0.44	0.53
o-Xylene	ug/m3	NA	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 J	0.15	0.096 J	0.14	0.66	0.15	0.15 U	0.27	0.42	0.15 U	0.62	0.32	0.22
Propylene (Propene)	ug/m3	NA	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 J	1.7 J	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.1 U
sec-Butylbenzene	ug/m3	410																							
Styrene	ug/m3	290	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 J	0.14 J	0.15 U	0.15 U	0.15 U	0.27	0.15 U	0.16	0.29	0.11 J
Tetrachloroethene	ug/m3	5	0.34 U	1.2	0.34 U	4.5	0.55	1.1	0.34 U	3.3	**5.6**	0.34 U	0.47	0.84	0.21	0.065 J	2.7	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.21 J	0.31	0.13
Tetrahydrofuran	ug/m3	NA	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	0.1 U	0.1 U	0.1 U	0.27	0.1 U	0.1 U	0.16	0.14
Toluene	ug/m3	500	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	0.13	0.49	1	4.2	0.62	3.2	1.9	2.7
trans-1,2-Dichloroethene	ug/m3	200	0.2 U	0.2 U	0.2 U	0.2 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	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.059 U
trans-1,3-Dichloropropene	ug/m3	NA	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.068 U
Trichloroethene	ug/m3	1	0.31	0.39	0.27 U	**1.5**	0.27 U	0.4	0.27 U	**1.7**	0.27 U	0.27 U	0.27 U	0.25	0.081 U	0.16 U	0.21	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.25	0.19 U	0.081
Trichlorofluoromethane	ug/m3	500	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	0.2	1.3	1.9	2.4	1.4	1.6	1.4	1.3
Trichlorotrifluoroethane	ug/m3	NA	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	0.27	0.79	1.1	0.63	0.54	0.45	0.57	0.58
Vinyl acetate	ug/m3	NA	0.71 U	0.71 U	0.36 U	0.71 U	0.18 U	0.18 U	0.36 U	0.35 U	0.18 U	3.5 U	0.18 U	0.11 U	0.21 U	0.21 U	0.25 U	0.25 U	0.25 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.1 U
Vinyl chloride	ug/m3	1.9	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	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.038 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter
Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Prepared By: AKN, 9/16/2019
Checked By: HWC, 9/16/2019

Appendix E1.
Summary of Analytical Results - Indoor Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:			Large Retail Space																						
Location:			IA-1														IA-2								
Sample ID:			IA-1-121914	IA-01-032715	IA-1-061115	IA-1-091615	IA-1-121815	IA-1-021816	IA-1-080516	IA-1-021017	IA-1-090717	IA-1-022818	IA-1-091218	IA-1-020819	IA-1-090619	IA-1-021420	IA-2	IA-2-020309	IA-2-021109	IA-2-021809	IA-2-022609	IA-2-041409	IA-2-042409	IA-2-091709	IA-2-092409
Sample Date:			12/19/2014	3/27/2015	6/11/2015	9/16/2015	12/18/2015	2/18/2016	8/5/2016	2/10/2017	9/7/2017	2/28/2018	9/12/2018	2/8/2019	9/6/2019	2/14/2020	1/16/2009	2/3/2009	2/11/2009	2/18/2009	2/26/2009	4/14/2009	4/24/2009	9/17/2009	9/24/2009
Analyte	**Units**	**CT IACTIND 2003**																							
1,1,1,2-Tetrachloroethane	ug/m3	1.1	0.44 U	0.44 U	0.44 U	0.44 U		0.44 U		0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U									
1,1,1-Trichloroethane	ug/m3	500	0.16 J	0.05 J	0.19 U	0.28	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.43	0.19 U	0.19 U	9.9	0.63	1.1	1.1	0.44	1.4	2.1	0.27 U	0.27 U
1,1,2,2-Tetrachloroethane	ug/m3	0.14	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	0.34 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
1,1,2-Trichloroethane	ug/m3	12	0.19 U	0.19 U	0.19 U	0.065 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.42	0.19 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U
1,1-Dichloroethane	ug/m3	430	0.14 U	0.14 U	0.14 U	0.082 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.72	0.2 U	0.2 U	0.2 U	0.32	0.14 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	ug/m3	20	0.14 U	0.14 U	0.14 U	0.078 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.41	0.2 U	0.2 U	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	ug/m3	NA	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	0.52 U	0.26 U	0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.26 U	0.37 U	0.37 U	0.37 U
1,2,4-Trimethylbenzene	ug/m3	52	0.17 U	0.12 J	0.14 J	0.14 J	0.32	0.74	0.24	0.17 U	0.22	0.17 U	0.31	0.57	0.29	0.17 U	0.25 U	0.37	0.7	0.65	0.3	0.18 U	0.25 U	0.29	0.39
1,2-Dibromoethane (EDB)	ug/m3	0.038	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	0.38 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
1,2-Dichlorobenzene	ug/m3	410	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	0.7 J	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
1,2-Dichloroethane	ug/m3	0.31	0.14 U	0.14 U	0.06 J	0.099 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.06 J	0.14 U	0.14 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	0.2 U
1,2-Dichloropropane	ug/m3	0.42	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U
1,2-Dichlorotetrafluoroethane	ug/m3	NA					0.25 U		0.25 U								0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U
1,3,5-Trimethylbenzene	ug/m3	52	0.17 U	0.041 J	0.069 J	0.059 J	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.11 J	0.17 U	0.17 U	0.17 U	0.25 U	0.25 U	0.25	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U
1,3-Butadiene	ug/m3	NA	0.078 U	0.048 J	0.078 U	0.13	0.16	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.11 U	0.11 U	0.3	0.66	0.11 U	0.08 U	0.11 U	0.23 U	0.23 U
1,3-Dichlorobenzene	ug/m3	410	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	0.54 J	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
1,4-Dichlorobenzene	ug/m3	24	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	0.59 J	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
1,4-Dioxane	ug/m3	NA					1.3 U		1.3 U																
2-Butanone	ug/m3	500	0.84 J	1.5 J	1.1 J	1.2 J	1.4 J	0.5 J	1.6 J	0.72 J	2.1 J	1.4 J	2 J	0.88 J	0.73 J	1.1 J	21	4.1	4.6	3	2.9	0.95	1.6	1.1	2.3
2-Hexanone	ug/m3	NA	0.14 U	0.3	0.14 U	0.14 U	0.16	0.14 U	0.14 U	0.14 U	0.32	0.44	0.14 U	0.14 U	0.14 U	0.14 U	0.2 U	0.2 U	0.35	0.26	0.2 U	0.14 U	0.2 U	0.25	0.54
4-Ethyltoluene	ug/m3	NA	0.17 U	0.045 J	0.17 U	0.055 J	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	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U
4-Isopropyltoluene	ug/m3	370																							
4-Methyl-2-pentanone	ug/m3	200	0.14 U	0.14 J	0.08 J	0.14 U	0.21	0.14 U	0.33	0.14 U	0.32	0.083 J	0.14 U	0.45	0.14 U	0.14 U	0.2 U	0.2 U	0.35	0.2 U	0.2 U	0.14 U	0.2 U	0.2 U	0.39
Acetone	ug/m3	500	9.3	12	7.7	17	12	9.8	15	4.9	14	9.8	12	4.5	6.7	7.8	17	9.6	14	18	9.7	13	39	6.2	17
Acrylonitrile	ug/m3	NA																							
Benzene	ug/m3	3.3	0.38	0.53	0.23	0.46	0.98	1	0.27	0.44	0.5	0.48	0.47	0.91	0.41	0.36	1	0.67	1.8	3	0.77	0.58	0.44	0.41	0.47
Benzyl chloride	ug/m3	NA	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	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.19 U	0.26 U	0.26 U	0.26 U
Bromodichloromethane	ug/m3	0.46	0.24 U	0.24 U	0.24 U	0.12 J	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	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	0.33 U	0.33 U	0.33 U
Bromoform	ug/m3	7.3	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.36 U	0.51 U	0.51 U	0.51 U
Bromomethane	ug/m3	NA	0.14 U	0.14 U	0.14 U	0.095 J	0.14 U	0.14 U	0.14 U	0.14 U	0.13 J	0.14 U	0.14 U	0.14 U	1.4 U	0.27 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
Carbon disulfide	ug/m3	NA	1.1 U	1.1 U	0.22 J	0.97 J	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.12 U	0.16 U	0.16 U	0.16 U
Carbon tetrachloride	ug/m3	0.54	0.29	0.32	0.34	0.49	0.5	0.42	0.4	0.39	0.4	0.39	0.5	**0.87**	0.36	0.44	0.33	0.41	**0.55**	**0.57**	0.48	0.41	0.41	0.44	0.4
Chlorobenzene	ug/m3	200	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U
Chloroethane	ug/m3	500	0.093 U	0.093 U	0.093 U	0.096	0.093 U	0.093 U	0.093 U	0.093 U	0.19 U	0.093 U	0.093 U	0.19 U	0.093 U	0.093 U	0.13 U	0.13 U	0.42	0.13 U	0.13 U	0.1 U	0.13 U	0.13 U	0.13 U
Chloroform	ug/m3	0.5	0.13 J	0.075 J	0.14 J	0.3	**0.67**	0.17 U	0.42	0.17 U	0.16 J	0.14 J	0.16 J	0.5	0.18	0.17 U	0.24 U	0.24 U	0.24 U	0.24 U	0.25	0.17 U	0.24 U	0.24 U	0.24 U
Chloromethane	ug/m3	80	0.8	1	1.2	1.2	1.5	0.97	1.2	1.2	1.2	1.1	1.1	1.3	0.14 U	1.3	1.1	1	1.3	1.3	1	1.1	1.2	0.91	1.1
cis-1,2-Dichloroethene	ug/m3	100	0.14 U	0.14 U	0.14 U	0.15	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.35	0.14 U	0.14 U	2.1	0.24	1.1	1.1	0.95	0.59	1.6	0.2 U	0.2 U
cis-1,3-Dichloropropene	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.22 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
Cyclohexane	ug/m3	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.84	3.3	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.17 U	0.17 U	0.44	0.61	0.17 U	0.12 U	0.22	0.17 U	0.17 U
Dibromochloromethane	ug/m3	NA	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	0.68	0.3 U	0.3 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.31 U	0.43 U	0.43 U	0.43 U
Dichlorodifluoromethane	ug/m3	500	1.7	1.2	2.3	1.7	2.2	1.4	0.62	1.2	1.5	2.2	1.5	2.4	0.17 U	1.5	1.8	2.2	2.6	2.9	2.7	2.1	2.9	2	2.1
Ethanol	ug/m3	NA	29	9.1	11	21	22	51	20	3	15	94	6.8	17	16	5.1	5.5	8.8	12	17	7.9	4.9	7.5	4.8	6.7
Ethyl acetate	ug/m3	NA	0.2	0.57	0.13 U	0.65	0.13 U	0.39	0.13 U	0.13 U	0.38	0.1 J	0.25 U	0.13 U	0.13 U	0.13 U	0.37 U	0.37 U	0.18 U	0.18 U	0.37 U	0.26 U	0.37 U	0.18 U	0.18 U
Ethylbenzene	ug/m3	290	0.064 J	0.13 J	0.1 J	0.18	0.57	0.22	0.2	0.15 U	0.24	0.15 U	0.29	0.5	0.28	0.15 U	0.26	0.28	0.65	0.79	0.3	0.18	0.22 U	0.22 U	0.22
Hexachlorobutadiene	ug/m3	NA	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.75 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	0.53 U
Hexane	ug/m3	NA	0.32 J	5.5	0.35 J	0.68 J	2.2 J	4.4 J	0.51 J	0.29 J	0.3 J	0.3 J	0.62 J	4.9 U	4.9 U	4.9 U	0.88	0.57	1.3	1.6	0.69	0.72	0.74	0.41	0.42
Isopropyl alcohol	ug/m3	NA	1.5 J	2 J	2 J	2.3 J	3.4 U	3.4 U	5.1	0.91 J	2.4 J	2 J	5.3	1.6 J	1.4 J	3.4 U	3.7	3.1	4.5	4.5	4.7	5.6	28	340	5.7
Isopropylbenzene	ug/m3	120																							
m,p-Xylene	ug/m3	NA	0.24 J	0.36	0.34	0.58	3	0.58	0.78	0.15 J	0.92	0.24 J	1	1.1	0.99	0.3 U	0.76	0.88	2	2.6	0.93	0.61	0.63	0.71	0.93
Methyl methacrylate	ug/m3	NA	0.14 U	0.14 U		0.14 U		0.14 U		0.14 U	0.23	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U									
Methylene chloride	ug/m3	17	0.26 J	6	0.51 J	0.74 J	1.1 J	0.3 J	1 J	0.41 J	0.29 J	0.38 J	0.33 J	0.73 J	0.35 J	0.68 J	2	**30**	4	1.6	1.8	4	4.2	0.7 U	0.7 U
Methyl-t-butyl ether	ug/m3	190	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	0.18 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
Naphthalene	ug/m3	NA					0.18 U		0.18 U																
n-Butylbenzene	ug/m3	410																							
n-Heptane	ug/m3	NA	0.14 U	0.15	0.12 J	0.24	0.32	1.1	0.14 U	0.14 U	0.16	0.16	0.35	0.14 U	0.31	0.14 U	0.23	0.2 U	0.58	0.73	0.22	0.15	0.2 U	0.2 U	0.2 U
o-Xylene	ug/m3	NA	0.064 J	0.14 J	0.13 J	0.22	0.8	0.25	0.28	0.15 U	0.33	0.11 J	0.38	0.53	0.34	0.15 U	0.3	0.34	0.76	0.89	0.34	0.22	0.22	0.27	0.42
Propylene (Propene)	ug/m3	NA	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	0.64 J	0.8 J	1 J	2.4 U	2.4 U	2.4 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	0.35 U
sec-Butylbenzene	ug/m3	410																							
Styrene	ug/m3	290	0.15 U	0.15 U	0.042 J	0.12 J	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 J	0.15 U	0.15 U	0.15 U	0.21 U	0.21 U	0.21 U	0.23	0.21 U	0.15 U	0.21 U	0.21 U	0.21 U
Tetrachloroethene	ug/m3	5	0.3	0.24 U	0.22 J	1.2	**7**	0.32	0.35	0.24 U	0.34	0.15 J	0.26	0.74	0.16 J	0.24 U	**7.5**	0.64	4.2	3.2	3.3	2.2	**7.6**	0.34 U	0.35
Tetrahydrofuran	ug/m3	NA	0.1 U	0.1 U	0.1 U	0.099 J	0.1 U	0.1 U	0.1 U	0.1 U	0.083 J	0.1 U	0.17	0.1 U	0.1 U	0.1 U	12	1.2	1.2	0.49	0.41	0.21	0.28	0.15 U	0.15 U
Toluene	ug/m3	500	0.58	0.63	0.62	1.3	1.9	0.99	1.2	0.44	1.3	0.53	1.4	1.2	3.2	0.28	1.7	1.3	4	5.5	2.3	1	1.2	1.1	1.1
trans-1,2-Dichloroethene	ug/m3	200	0.14 U	0.14 U	0.14 U	0.053 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.32 J	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
trans-1,3-Dichloropropene	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.16 U	0.22 U	0.22 U	0.22 U
Trichloroethene	ug/m3	1	0.14 J	0.087 J	0.19 U	0.44	0.22	0.28	0.19 U	0.19 U	0.26	0.19 U	0.18 J	0.48	0.12 J	0.19 U	**4.4**	0.56	**1.6**	**1.4**	0.91	0.77	**1.9**	0.27 U	0.27 U
Trichlorofluoromethane	ug/m3	500	1.3	1.1	1.5	1.3	2.1	1	1	1.3	1.2	1.1	1.3	1.9	1.2	1.2	2	1.2	1.7	2.8	1.6	1.3	1.3	1.2	1.2
Trichlorotrifluoroethane	ug/m3	NA	0.62	0.47 J	0.63 J	0.87 J	0.6 J	0.44 J	0.48 J	0.55 J	0.46 J	0.49 J	0.53 J	1.4	1.1 U	0.43 J	0.69	0.58	0.49	0.46	0.64	0.56	0.74	0.5	0.47
Vinyl acetate	ug/m3	NA	2.5 U	2.5 U	2.5 U	2.5 U	1 J	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	1.2 J	2.5 U	2.5 U	2.5 U	0.71 U	0.71 U	0.18 U	0.18 U	0.71 U	0.5 U	0.71 U	0.71 U	0.71 U
Vinyl chloride	ug/m3	1.9	0.09 U	0.09 U	0.09 U	0.075 J	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.21	0.09 U	0.09 U	0.27	0.13 U	0.18	0.2	0.13 U	0.1 U	0.18	0.13 U	0.13 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter
Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Prepared By: AKN, 9/16/2019
Checked By: HWC, 9/16/2019

Appendix E1.
Summary of Analytical Results - Indoor Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:			Large Retail Space																						
Location:			IA-2																						
Sample ID:			IA-2-100109	IA-2-100809	IA-2-012810	IA-2-020510	IA-2-021210	IA-2-021910	IA-2-032610	IA-2-043010	IA-2-052810	IA-2-070110	IA-2-091610	IA-2-120710	IA-2-021711	IA-2-060211	IA-2-091511	IA-2-120811	IA-2-030812	IA-2-061412	IA-2-091312	IA-2-010313	IA-2-031513	IA-2-060713	IA-2-090613
Sample Date:			10/1/2009	10/8/2009	1/28/2010	2/5/2010	2/12/2010	2/19/2010	3/26/2010	4/30/2010	5/28/2010	7/1/2010	9/16/2010	12/7/2010	2/17/2011	6/2/2011	9/15/2011	12/8/2011	3/8/2012	6/14/2012	9/13/2012	1/3/2013	3/15/2013	6/7/2013	9/6/2013
Analyte	**Units**	**CT IACTIND 2003**																							
1,1,1,2-Tetrachloroethane	ug/m3	1.1															0.62 U		0.37 U	0.37 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
1,1,1-Trichloroethane	ug/m3	500	0.27 U	0.27 U	0.44	0.73	0.27 U	0.27 U	0.27 U	1	0.27 U	0.28	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.13 J	0.082 U	0.16 U	0.08 J	0.19 U	0.19 U	0.19 U	0.19 U
1,1,2,2-Tetrachloroethane	ug/m3	0.14	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	0.24 U	0.24 U	0.24 U
1,1,2-Trichloroethane	ug/m3	12	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	0.19 U	0.19 U	0.19 U
1,1-Dichloroethane	ug/m3	430	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 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	0.043 J	0.14 U	0.14 U	0.14 U	0.14 U
1,1-Dichloroethene	ug/m3	20	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 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	0.045 J	0.14 U	0.14 U	0.14 U	0.14 U
1,2,4-Trichlorobenzene	ug/m3	NA	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	0.52 U	0.26 U	0.26 U
1,2,4-Trimethylbenzene	ug/m3	52	0.27	0.52	0.55	0.25 U	0.25 U	0.25 U	0.25 U	0.31	0.35	0.48	0.52	0.25 U	0.52	0.25 U	0.25 J	0.088 J	0.15 U	0.19	0.48	0.17	0.13 J	0.43	0.2
1,2-Dibromoethane (EDB)	ug/m3	0.038	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	0.27 U	0.27 U	0.27 U
1,2-Dichlorobenzene	ug/m3	410	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	0.21 U	0.21 U
1,2-Dichloroethane	ug/m3	0.31	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.063 J	0.061 U	0.051 J	0.08 J	0.14	0.14 U	0.14 U	0.14 U
1,2-Dichloropropane	ug/m3	0.42	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	0.11 J	0.16 U	0.16 U
1,2-Dichlorotetrafluoroethane	ug/m3	NA	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	ug/m3	52	0.25 U	0.25 U	0.59	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 J	0.15 U	0.15 U	0.08 J	0.26	0.17	0.17 U	0.17 U	0.17 U
1,3-Butadiene	ug/m3	NA	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	0.078 U	0.078 U	0.078 U
1,3-Dichlorobenzene	ug/m3	410	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	0.08 J	0.21 U	0.21 U	0.21 U	0.21 U
1,4-Dichlorobenzene	ug/m3	24	0.3 U	0.3 U	0.34	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	0.093 J	0.21 U	0.21 U	0.21 U	0.21 U
1,4-Dioxane	ug/m3	NA															0.18 U								
2-Butanone	ug/m3	500	0.81	1	2.1	0.7	0.44	0.3 U	0.96	1.3	3.1	3.4	0.96	0.36	1.9 B	2.9 U	5.9 J	0.93 J	0.84 J	1.4 J	2.8 J	4.1	2.4 J	4.2	2.1 J
2-Hexanone	ug/m3	NA	0.2 U	0.26	0.51	0.2 U	0.2 U	0.2 U	0.2 U	0.26	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	0.14	0.22	0.51	0.41
4-Ethyltoluene	ug/m3	NA	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.15 U	0.15 U	0.086 J	0.19	0.17	0.17 U	0.17 U	0.17 U
4-Isopropyltoluene	ug/m3	370																							
4-Methyl-2-pentanone	ug/m3	200	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.28	0.49	0.34	0.2 U	0.2 U	0.2 U	0.24	0.1 J	0.11 J	0.12 J	0.19	0.14	0.14 U	0.54	0.46
Acetone	ug/m3	500	11	8.8	17	7.8	3.1	0.48 U	6.3	8.2	18	20	11	9.8 B	15 B	8.9 B	18	6.2	5.4	14	17 B	3.3	46	32	22
Acrylonitrile	ug/m3	NA																							
Benzene	ug/m3	3.3	0.39	0.54	1.2	0.86	0.67	0.16 U	0.58	0.63	0.47	0.48	0.72	0.48	1.5	0.26	0.3	0.39	0.36	0.24	0.62	0.11	0.91	0.56	0.32
Benzyl chloride	ug/m3	NA	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	0.18 U	0.18 U
Bromodichloromethane	ug/m3	0.46	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	0.24 U	0.24 U
Bromoform	ug/m3	7.3	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	0.36 U	0.36 U	0.36 U
Bromomethane	ug/m3	NA	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.22	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Carbon disulfide	ug/m3	NA	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	0.47 J	0.39 J	0.33 J
Carbon tetrachloride	ug/m3	0.54	0.46	0.42	0.31 U	0.4	0.31 U	0.31 U	0.43	0.47	0.5	0.52	0.5	0.48	0.31 U	**0.62**	0.52	0.49	0.48	0.45	0.43	0.22	0.45	**0.58**	0.45
Chlorobenzene	ug/m3	200	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	0.16 U	0.16 U	0.16 U
Chloroethane	ug/m3	500	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	0.14	0.093 U	0.093 U
Chloroform	ug/m3	0.5	0.24 U	0.24 U	0.24 U	0.47	0.4	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	**3.4**	0.24 U	0.24 U	0.24 U	0.24 J	0.085 J	0.073 U	0.14 J	0.25	0.17 U	0.15 J	0.17 U	0.17 U
Chloromethane	ug/m3	80	0.96	0.98	1.2	1.3	1.3	1.4	1.3	0.8	1.2	1.2	1.1	0.96	0.97	0.95	1.2	0.93	1	1.4	1.3	0.072	2.7	1.7	0.98
cis-1,2-Dichloroethene	ug/m3	100	0.79	0.48	0.58	0.2 U	0.2 U	0.2 U	0.2 U	1	0.2 U	0.61	0.2 U	1.7	0.2 U	0.2 U	0.2 U	0.17	0.059 U	0.12 U	0.064 J	0.14 U	0.14 U	0.14 U	0.14 U
cis-1,3-Dichloropropene	ug/m3	NA	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	0.16 U	0.16 U
Cyclohexane	ug/m3	NA	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	0.2	0.17 U	0.17 U	0.17 U	0.17 U	0.1 U	0.1 U	0.1 U	0.26	0.12	0.12 U	0.12 U	0.12 U
Dibromochloromethane	ug/m3	NA	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	0.3 U	0.3 U
Dichlorodifluoromethane	ug/m3	500	2.3	2.1	2.2	2.5	2.6	3	1.6	2	2.4	2.6	1.7	1.9	3.2	1.6	2	2.7	2.1	2.7	2.8	0.17	1.7	3.3	1.8
Ethanol	ug/m3	NA	7.8	6.2	14	35	17	20	4.4	4.9	5	7.6	9	2.7	10	2.5	8.5	2.1 J	2.1 J	10	9.8	2.6	380	66	46
Ethyl acetate	ug/m3	NA	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	0.22	0.24	3.5	0.71	0.13	2	0.39	0.28
Ethylbenzene	ug/m3	290	0.22 U	0.31	0.42	0.34	0.22 U	0.22 U	0.22 U	0.23	0.24	0.29	0.46	0.22 U	0.5	0.22 U	0.22 J	0.13 J	0.13 U	0.13 U	0.41	0.15	0.25	0.39	0.17
Hexachlorobutadiene	ug/m3	NA	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	0.37 U	0.37 U	0.37 U
Hexane	ug/m3	NA	0.71	1	0.61	0.64	1.4	0.18 U	0.27	1.6	0.51	0.49	0.53	0.35 U	1.6	0.31	7 J	0.32 J	0.34 J	2.6 J	2.4 J	4.9	2.3 J	1.6 J	0.65 J
Isopropyl alcohol	ug/m3	NA	3.3	0.25 U	0.25 U	3.6	0.25 U	0.25 U	0.63	3.2	0.12 U	1.2	0.25 U	0.25 U	2	1.2 U	4.9 J	2.9 U	0.76 J	2.9 U	2.8 J	3.4 U	3.6	3.4 U	1.7 J
Isopropylbenzene	ug/m3	120																							
m,p-Xylene	ug/m3	NA	0.78	1.1	1.3	1.1	0.43 U	0.43 U	0.47	0.75	0.96	1.3	1.5	0.43 U	1.5	0.36 J	0.57	0.39	0.18 J	0.38	1.3	0.3	0.92	1.4	0.48
Methyl methacrylate	ug/m3	NA												0.2 U	0.2 U	0.2 U	0.2 U	0.12 U	0.12 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Methylene chloride	ug/m3	17	0.7 U	0.7 U	1.4	0.9	1.9	0.7 U	0.7 U	0.7 U	0.35 U	1.3	0.53	0.61	4.2	1	7.5	1.1	1.2	6.6	6.4 B	1.2 J	3.6	1.5	1.1 J
Methyl-t-butyl ether	ug/m3	190	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U	0.11 U	0.18	0.13 U	0.13 U	0.13 U	0.13 U
Naphthalene	ug/m3	NA																							
n-Butylbenzene	ug/m3	410																							
n-Heptane	ug/m3	NA	0.2 U	0.34	0.83	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.8	0.34	0.2 U	0.48	0.2 U	0.2 U	0.091 J	0.12 U	0.11 J	0.4	0.14	0.33	0.41	0.2
o-Xylene	ug/m3	NA	0.3	0.44	0.46	0.4	0.22 U	0.22 U	0.22 U	0.29	0.44	0.57	0.63	0.22 U	0.56	0.22 U	0.23	0.14	0.083 J	0.17	0.55	0.15	0.33	0.52	0.2
Propylene (Propene)	ug/m3	NA	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	2.1 U	2.4 U	2.4 U	2.4 U	2.4 U	0.7 J
sec-Butylbenzene	ug/m3	410																							
Styrene	ug/m3	290	0.21 U	0.21 U	0.41	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.25	0.36	0.24	0.21 U	0.21 U	0.21 U	0.21 J	0.059 J	0.13 U	0.097 J	0.19	0.15	0.12 J	0.15 U	0.17
Tetrachloroethene	ug/m3	5	1.7	1	2.3	0.34 U	0.34 U	0.34 U	0.34 U	3.6	0.43	1.4	0.34 U	3.2	**5.2**	0.34 U	0.45	0.92	0.23	0.09 J	2	0.24	0.18 J	0.64	0.25
Tetrahydrofuran	ug/m3	NA	0.15 U	0.15 U	1.6	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.27	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.097	0.088 U	0.048 J	0.1 U	0.1	0.1 U	0.1 U	0.1 U
Toluene	ug/m3	500	1.2	1.5	2.4	0.93	0.64	0.19 U	0.8	1.3	0.91	1.3	2.2	0.41	2.9	0.55	0.99	1.6	0.24	0.9	2.6	0.13	1.5	2.8	1.3
trans-1,2-Dichloroethene	ug/m3	200	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 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	0.14 U	0.14 U	0.14 U
trans-1,3-Dichloropropene	ug/m3	NA	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	0.16 U	0.16 U
Trichloroethene	ug/m3	1	0.99	0.57	0.79	0.27 U	0.27 U	0.27 U	0.27 U	**1.2**	0.27 U	0.53	0.27 U	**1.7**	0.27 U	0.27 U	0.27 U	0.27	0.081 U	0.16 U	0.2	0.19 U	0.053 J	0.19 U	0.19 U
Trichlorofluoromethane	ug/m3	500	1.2	1.2	1.2	1.3	1.4	1.1	1.4	1.3	1.3	1.6	2.5	1.2	1.8	1.2	1.9	1.1	0.94	1.8	2.6	0.2	1.3	2	1.3
Trichlorotrifluoroethane	ug/m3	NA	0.46	0.54	0.46	0.53	0.61	0.38 U	0.51	0.44	0.53	0.94	0.45	0.59	0.71	0.71	0.61	0.71	0.42	0.57	0.64	0.27	0.7	1.7	0.6
Vinyl acetate	ug/m3	NA	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	0.25 U	2.5 U	2.5 U
Vinyl chloride	ug/m3	1.9	0.16	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.14	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter
Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Prepared By: AKN, 9/16/2019
Checked By: HWC, 9/16/2019

Appendix E1.
Summary of Analytical Results - Indoor Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:			Large Retail Space																							
Location:			IA-2																				IA-3			
Sample ID:			IA-2-121313	IA-2-030714	IA-2-061314	IA-2-091214	IA-2-121914	IA-02-032715	IA-2-061115	IA-2-091615	IA-2-121815	IA-2-021816	IA-2-080516	IA-2-021017	IA-2-090717	IA-2-022818	IA-2-091218	IA-2-020819	IA-2-041119	IA-2-090619	IA-2-021420	IA-3	IA-3-020309	IA-3-021109	IA-3-021809
Sample Date:			12/13/2013	3/7/2014	6/13/2014	9/12/2014	12/19/2014	3/27/2015	6/11/2015	9/16/2015	12/18/2015	2/18/2016	8/5/2016	2/10/2017	9/7/2017	2/28/2018	9/12/2018	2/8/2019	4/11/2019	9/6/2019	2/14/2020	1/16/2009	2/3/2009	2/11/2009	2/18/2009
Analyte	**Units**	**CT IACTIND 2003**																								
1,1,1,2-Tetrachloroethane	ug/m3	1.1	0.44 U	0.44 U	0.44 U	0.25 U	0.44 U	0.44 U	0.44 U	0.44 U		0.44 U		0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U				
1,1,1-Trichloroethane	ug/m3	500	0.19 U	0.19 U	0.19 U	0.055 U	0.16 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.1 J	0.19 U	8	0.61	0.19 U	0.19 U	9.8	0.57	1.1	1.1
1,1,2,2-Tetrachloroethane	ug/m3	0.14	0.24 U	0.24 U	0.24 U	0.069 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	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	0.34 U	0.34 U	0.34 U	0.34 U
1,1,2-Trichloroethane	ug/m3	12	0.19 U	0.19 U	0.19 U	0.11 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 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	0.27 U	0.27 U	0.27 U	0.27 U
1,1-Dichloroethane	ug/m3	430	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.68	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	ug/m3	20	0.14 U	0.14 U	0.15	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	1.2	0.14 U	0.14 U	0.14 U	0.35	0.2 U	0.2 U	0.2 U
1,2,4-Trichlorobenzene	ug/m3	NA	0.26 U	0.26 U	0.26 U	0.15 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.52 U	0.26 U	0.26 U	0.26 U	0.37 U	0.37 U	0.37 U	0.37 U
1,2,4-Trimethylbenzene	ug/m3	52	0.17 U	0.57	0.27	0.2	0.17 U	0.25	0.23	0.17 U	0.48	0.27	0.21	0.17 U	0.17	0.42	0.17 U	0.62	0.17 U	0.31	0.17 U	0.25 U	0.36	0.68	0.61
1,2-Dibromoethane (EDB)	ug/m3	0.038	0.27 U	0.27 U	0.27 U	0.077 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	**0.67**	0.27 U	0.27 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2-Dichlorobenzene	ug/m3	410	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.74 J	0.21 U	0.21 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U
1,2-Dichloroethane	ug/m3	0.31	0.14 U	0.14 U	0.14 U	0.04	0.14 U	0.14 U	0.065 J	0.051 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.062 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	ug/m3	0.42	0.16 U	0.16 U	0.16 U	0.046 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	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	0.23 U	0.23 U	0.23 U	0.23 U
1,2-Dichlorotetrafluoroethane	ug/m3	NA									0.25 U		0.25 U									0.35 U	0.35 U	0.35 U	0.35 U
1,3,5-Trimethylbenzene	ug/m3	52	0.17 U	0.17 J	0.17 U	0.059 J	0.17 U	0.079 J	0.069 J	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.47	0.17 U	0.17 U	0.17 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3-Butadiene	ug/m3	NA	0.078 U	0.44	0.11	0.044 U	0.078 U	0.078 U	0.078 U	0.15	0.2	0.078 U	0.078 U	0.087	0.078 U	0.078 U	0.07 J	0.078 U	0.078 U	0.078 U	0.078 U	0.11 U	0.11 U	0.3	0.77
1,3-Dichlorobenzene	ug/m3	410	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.57	0.21 U	0.21 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dichlorobenzene	ug/m3	24	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.063 J	0.097 J	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.64	0.21 U	0.21 U	0.21 U	0.3 U	0.3 U	0.3 U	0.3 U
1,4-Dioxane	ug/m3	NA									1.3 U		1.3 U												
2-Butanone	ug/m3	500	1.2 J	1.8 J	1.6 J	4.9	0.92 J	1.7 J	1.8 J	1.7 J	1.9 J	1.3 J	1.3 J	0.74 J	2.2 J	2.4 J	1.5 J	2.5 J	0.78 J	0.68 J	1.3 J	20	4.2	4.6	4
2-Hexanone	ug/m3	NA	0.14 U	0.39	0.14 U	0.16	0.14 U	0.2	0.12 J	0.14 U	0.18	0.2	0.14 U	0.14 U	0.37	0.72	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.2 U	0.26	0.33	0.3
4-Ethyltoluene	ug/m3	NA	0.17 U	0.18	0.17 U	0.049 J	0.17 U	0.072 J	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.57	0.17 U	0.17 U	0.17 U	0.25 U	0.25 U	0.25 U	0.25 U
4-Isopropyltoluene	ug/m3	370																							
4-Methyl-2-pentanone	ug/m3	200	0.18	0.57	1.1	1.3	0.14 U	0.84	0.9	1.2	1.1	0.39	1.4	0.14 U	2	0.73	1.6	0.91	0.14 U	0.47	0.14 U	0.2 U	0.2 U	0.29	0.34
Acetone	ug/m3	500	32	32	29	37	9.7	40	29	170 E	33	26	36	8.8	31	43	10	10	6.3	6.4	7.9	18	12	17	24
Acrylonitrile	ug/m3	NA																							
Benzene	ug/m3	3.3	0.66	2	0.62	0.3	0.36	0.67	0.39	0.66	1.1	0.52	0.25	0.49	0.55	0.57	0.48	0.85	0.31	0.39	0.36	1	0.71	1.9	3.1
Benzyl chloride	ug/m3	NA	0.18 U	0.18 U	0.18 U	0.052 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.26 U	0.26 U	0.26 U	0.26 U
Bromodichloromethane	ug/m3	0.46	0.24 U	0.24 U	0.24 U	0.067 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 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	0.33 U	0.33 U	0.33 U	0.33 U
Bromoform	ug/m3	7.3	0.36 U	0.36 U	0.36 U	0.21 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U
Bromomethane	ug/m3	NA	0.14 U	0.14 U	0.14 U	0.078 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	1.4 U	0.27 U	0.19 U	0.19 U	0.19 U	0.19 U
Carbon disulfide	ug/m3	NA	0.17 J	0.17 J	0.56 J	0.49 J	1.1 U	0.29 J	0.39 J	0.41 J	0.26 J	0.13 J	0.34 J	1.1 U	0.34 J	0.16 J	0.29 J	1.1 U	1.1 U	1.1 U	1.1 U	0.16 U	0.16 U	0.16 U	0.16 U
Carbon tetrachloride	ug/m3	0.54	0.46	0.41	0.42	0.43	0.37	0.36	0.35	0.32	0.49	0.38	0.4	0.45	0.41	0.4	0.47	**0.97**	0.35	0.37	0.42	0.34	0.45	0.52	**0.6**
Chlorobenzene	ug/m3	200	0.16 U	0.16 U	0.16 U	0.046 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	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	0.23 U	0.23 U	0.23 U	0.23 U
Chloroethane	ug/m3	500	0.093 U	0.093 U	0.093 U	0.053 U	0.093 U	0.061 J	0.093 U	0.059 J	0.093 U	0.093 U	0.093 U	0.093 U	0.19 U	0.093 U	0.093 U	0.19 U	0.093 U	0.093 U	0.093 U	0.13 U	0.13 U	0.43	0.13 U
Chloroform	ug/m3	0.5	0.37	0.29	**0.53**	**1**	0.13 J	0.41	**0.62**	0.24	0.33	0.21	**0.73**	0.17 U	**0.68**	**2.4**	0.21	**0.86**	0.29	0.19	0.17 U	0.24 U	0.24 U	0.24 U	0.24 U
Chloromethane	ug/m3	80	1.1	1.3	1.2	0.71	0.8	1.4	1.3	1.1	1.7	0.97	1.4	1.3	1.4	1.3	1.2	1.3	1.6	0.9	1	1.1	0.98	1.2	1.4
cis-1,2-Dichloroethene	ug/m3	100	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.053 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.48	0.14 U	8.5	0.41	0.14 U	0.19	1.9	0.2 U	1.1	1.1
cis-1,3-Dichloropropene	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.045 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 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	0.22 U	0.22 U	0.22 U	0.22 U
Cyclohexane	ug/m3	NA	0.12 U	0.32	0.22	0.069 U	0.12 U	0.12 U	0.12 U	0.14	0.89	0.15	0.12 U	0.12 U	0.12 U	0.3	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.17 U	0.17 U	0.46	0.6
Dibromochloromethane	ug/m3	NA	0.3 U	0.3 U	0.3 U	0.085 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	0.43 U	0.43 U	0.43 U	0.43 U
Dichlorodifluoromethane	ug/m3	500	2.6	1.5	2	2.1	1.8	1.4	2.4	1.7	2.4	1.5	0.63	0.95	1.4	2.2	1.9	2.8	1.4	1.6	1.4	1.9	2.3	2.5	2.9
Ethanol	ug/m3	NA	89	130	240	140	27	150	220	51	72	110	180	48	320	990	11	12	4.5	22	5.6	5.5	9.2	13	18
Ethyl acetate	ug/m3	NA	13	0.36	0.25	0.35	0.17	0.45	0.49	7.5	0.75	0.13 U	0.39	0.23	1.6	0.39	0.25 U	0.13 U	1.1	0.13 U	0.13 U	0.37 U	0.37 U	0.18 U	0.18 U
Ethylbenzene	ug/m3	290	0.15 U	0.56	0.27	0.14	0.076 J	0.2	0.15	0.16	0.73	0.2	0.16	0.15 U	0.19	0.15 J	0.23	0.52	0.15 U	0.39	0.15 U	0.25	0.29	0.64	0.77
Hexachlorobutadiene	ug/m3	NA	0.37 U	0.37 U	0.37 U	0.21 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	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	1.1 U	1.1 U	1.1 U	1.1 U
Hexane	ug/m3	NA	4.9 J	1.2 J	0.74 J	0.56 J	0.29 J	5	0.44 J	1.1 J	2.4 J	0.4 J	0.47 J	0.27 J	0.39 J	0.4 J	0.67 J	0.91 J	4.9 U	4.9 U	4.9 U	0.94	0.87	1.3	1.9
Isopropyl alcohol	ug/m3	NA	9.7	4.1	3.4 U	4.4	1.5 J	7.3	3.8	5.4	3.4 U	2.3 J	12	1.6 J	14	49	1.8 J	3.4 U	1.1 J	0.8 J	3.4 U	3.5	4.1	5.5	4.9
Isopropylbenzene	ug/m3	120																							
m,p-Xylene	ug/m3	NA	0.25 J	1.6	0.88	0.44	0.31	0.61	0.45	0.32	4	0.59	0.5	0.29 J	0.69	0.41	0.72	1.2	0.3 U	1.3	0.3 U	0.75	0.9	2	2.6
Methyl methacrylate	ug/m3	NA	0.14 U	0.14 U	0.14 U	0.082 U	0.14 U	0.14 U		0.14 U		0.14 U		0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U				
Methylene chloride	ug/m3	17	7.7	0.65 J	0.65 J	0.56 J	0.27 J	0.6 J	0.45 J	0.59 J	1.1 J	0.31 J	0.43 J	0.23 J	0.3 J	0.47 J	0.3 J	0.71 J	0.32 J	0.39 J	0.64 J	2.2	**31**	3.1	3.5
Methyl-t-butyl ether	ug/m3	190	0.13 U	0.13 U	0.13 U	0.072 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 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	0.18 U	0.18 U	0.18 U	0.18 U
Naphthalene	ug/m3	NA									0.18 U		0.28												
n-Butylbenzene	ug/m3	410																							
n-Heptane	ug/m3	NA	0.14 U	0.64	0.39	0.18	0.14 U	0.21	0.2	0.35	0.41	0.62	0.36	0.14 U	0.26	0.43	0.35	0.56	0.14 U	0.32	0.14 U	0.22	0.2 U	0.61	0.77
o-Xylene	ug/m3	NA	0.15 U	0.66	0.34	0.17	0.088 J	0.25	0.19	0.1 J	0.98	0.23	0.19	0.15 U	0.24	0.17	0.27	0.53	0.15 U	0.46	0.15 U	0.28	0.33	0.79	0.86
Propylene (Propene)	ug/m3	NA	2.4 U	2.4 U	2.7	1.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	0.18 U	0.18 U	0.09 U	0.09 U
sec-Butylbenzene	ug/m3	410																							
Styrene	ug/m3	290	0.15 U	0.2	0.35	0.4	0.15 U	0.18	0.23	0.15 U	0.22	0.15 U	0.25	0.15 U	0.34	0.13 J	0.25	0.15 U	0.15 U	0.15 U	0.15 U	0.21 U	0.21 U	0.21 U	0.21 U
Tetrachloroethene	ug/m3	5	0.24 U	0.28	0.34	0.13	0.32	0.65	0.4	0.41	0.67	0.24 U	0.32	0.33	0.47	1.7	0.3	**48**	3.5	0.24 U	0.59	**6.1**	0.56	4.3	3.3
Tetrahydrofuran	ug/m3	NA	0.1 U	0.058 J	0.12	0.09	0.1 U	0.3	0.12	0.11	0.1 U	0.1 U	0.1 U	0.1 U	0.12 J	0.12	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	12	1.1	1.3	0.49
Toluene	ug/m3	500	1	3.2	1.9	1.6	0.64	1.4	1.3	4.7	3	3.1	1.5	1.3	1.8	1.1	1.5	1.2	0.53	1.3	0.3	1.7	1.5	4.7	5.8
trans-1,2-Dichloroethene	ug/m3	200	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.28 U	0.14 U	0.14 U	0.14 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.045 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 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	0.22 U	0.22 U	0.22 U	0.22 U
Trichloroethene	ug/m3	1	0.19 U	0.23	0.19 U	0.064	0.14 J	0.079 J	0.19 U	0.44	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.49	0.19 U	**12**	0.71	0.19 U	0.19 U	**3.9**	0.49	**1.7**	**1.5**
Trichlorofluoromethane	ug/m3	500	1.6	1.2	1.3	1.3	1.4	1.3	1.5	1.2	2.3	1.2	1	1.3	1.2	1.1	1.3	1.9	1.7	1.1	1.2	1.9	1.3	1.8	2.8
Trichlorotrifluoroethane	ug/m3	NA	0.57	0.46	0.54	0.56	0.63	0.48 J	0.62 J	0.54 J	0.59 J	0.55 J	0.49 J	0.53 J	0.46 J	0.5 J	0.54 J	1.1 U	0.53 J	1.1 U	0.42 J	0.6	0.58	0.49	0.44
Vinyl acetate	ug/m3	NA	2.5 U	2.5 U	2.5 U	1.4 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.3 J	0.88 J	2.5 U	2.5 U	2.5 U	2.5 U	0.71 U	0.71 U	0.18 U	0.18 U
Vinyl chloride	ug/m3	1.9	0.09 U	0.09 U	0.09 U	0.026 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	1	0.09 U	0.09 U	0.09 U	0.23	0.13 U	0.19	0.21

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter
Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Prepared By: AKN, 9/16/2019
Checked By: HWC, 9/16/2019

Appendix E1.
Summary of Analytical Results - Indoor Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:			Large Retail Space																						
Location:			IA-3																						
Sample ID:			IA-3-022609	IA-3-041409	IA-3-042409	IA-3-091709	IA-3-092409	IA-3-100109	IA-3-100809	IA-3-012810	IA-3-020510	IA-3-021210	IA-3-021910	IA-3-032610	IA-3-043010	IA-3-052810	IA-3-070110	IA-3-091610	IA-3-120710	IA-3-021711	IA-3-060211	IA-3-091511	IA-3-120811	IA-3-030812	IA-3-061412
Sample Date:			2/26/2009	4/14/2009	4/24/2009	9/17/2009	9/24/2009	10/1/2009	10/8/2009	1/28/2010	2/5/2010	2/12/2010	2/19/2010	3/26/2010	4/30/2010	5/28/2010	7/1/2010	9/16/2010	12/7/2010	2/17/2011	6/2/2011	9/15/2011	12/8/2011	3/8/2012	6/14/2012
Analyte	**Units**	**CT IACTIND 2003**																							
1,1,1,2-Tetrachloroethane	ug/m3	1.1																				0.62 U		0.37 U	0.37 U
1,1,1-Trichloroethane	ug/m3	500	0.28	1.5	2.2	0.27 U	0.27 U	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	0.11 J	0.082 U	0.16 U
1,1,2,2-Tetrachloroethane	ug/m3	0.14	0.34 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	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
1,1,2-Trichloroethane	ug/m3	12	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.16 U	0.082 U	0.16 U
1,1-Dichloroethane	ug/m3	430	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	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
1,1-Dichloroethene	ug/m3	20	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	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
1,2,4-Trichlorobenzene	ug/m3	NA	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	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
1,2,4-Trimethylbenzene	ug/m3	52	0.25 U	0.18 U	0.25 U	0.29	0.4	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 J	0.071 J	0.1 J	0.19
1,2-Dibromoethane (EDB)	ug/m3	0.038	0.38 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.23 U	0.12 U	0.23 U
1,2-Dichlorobenzene	ug/m3	410	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	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
1,2-Dichloroethane	ug/m3	0.31	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	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.056 J	0.061 U	0.051 J
1,2-Dichloropropane	ug/m3	0.42	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.069 U	0.14 U
1,2-Dichlorotetrafluoroethane	ug/m3	NA	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U							
1,3,5-Trimethylbenzene	ug/m3	52	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	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 J	0.15 U	0.15 U	0.074 J
1,3-Butadiene	ug/m3	NA	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	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.066 U	0.066 U	0.066 U
1,3-Dichlorobenzene	ug/m3	410	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	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
1,4-Dichlorobenzene	ug/m3	24	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	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
1,4-Dioxane	ug/m3	NA																				0.18 U			
2-Butanone	ug/m3	500	1.7	1.6	2.5	2	2.6	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 J	1.2 J	0.45 J	2.4 J
2-Hexanone	ug/m3	NA	0.2 U	0.14 U	0.38	0.51	0.58	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 J	0.12 U	0.33
4-Ethyltoluene	ug/m3	NA	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 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 J
4-Isopropyltoluene	ug/m3	370																							
4-Methyl-2-pentanone	ug/m3	200	0.2 U	0.14 U	0.22	0.2 U	0.42	0.2 U	0.2 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	0.2 U	0.084 J	0.12 U	0.19
Acetone	ug/m3	500	9.7	7.5	50	11	19	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
Acrylonitrile	ug/m3	NA																							
Benzene	ug/m3	3.3	0.69	0.6	0.46	0.41	0.5	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
Benzyl chloride	ug/m3	NA	0.26 U	0.19 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.16 U	0.16 U	0.16 U
Bromodichloromethane	ug/m3	0.46	0.33 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 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
Bromoform	ug/m3	7.3	0.51 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 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
Bromomethane	ug/m3	NA	0.19 U	0.14 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.12 U	0.12 U	0.31
Carbon disulfide	ug/m3	NA	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	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
Carbon tetrachloride	ug/m3	0.54	0.43	0.22 U	0.42	0.4	0.43	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
Chlorobenzene	ug/m3	200	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.14 U	0.14 U
Chloroethane	ug/m3	500	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	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
Chloroform	ug/m3	0.5	0.24 U	0.17 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	**0.53**	0.48	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	**3.7**	0.24 U	0.24 U	0.24 U	0.24 J	0.079 J	0.073 U	0.15
Chloromethane	ug/m3	80	1.1	1.2	1.2	0.91	1.1	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
cis-1,2-Dichloroethene	ug/m3	100	0.55	0.61	1.5	0.2 U	0.2 U	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	0.2 U	0.17	0.059 U	0.12 U
cis-1,3-Dichloropropene	ug/m3	NA	0.22 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 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
Cyclohexane	ug/m3	NA	0.17 U	0.15	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	0.17 U	0.18	0.17 U	0.17 U	0.17 U	0.17 U	0.1 U	0.1 U	0.1 U
Dibromochloromethane	ug/m3	NA	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	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
Dichlorodifluoromethane	ug/m3	500	2.6	2	2.9	2.1	2.1	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
Ethanol	ug/m3	NA	7.9	4.2	9	6.2	7.5	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 J	2.2 J	4.4
Ethyl acetate	ug/m3	NA	0.37 U	0.26 U	0.37 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.73	0.37
Ethylbenzene	ug/m3	290	0.22 U	0.16	0.22 U	0.22 U	0.23	0.22 U	0.24	0.43	0.22 U	0.22 U	0.22 U	0.22 U	0.26	0.23	0.29	0.47	0.22 U	0.47	0.36	0.22 J	0.12 J	0.11 J	0.14
Hexachlorobutadiene	ug/m3	NA	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	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
Hexane	ug/m3	NA	3.7	0.37	0.77	0.96	0.47	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 J	0.35 J	0.37 J	0.74 J
Isopropyl alcohol	ug/m3	NA	3.1	0.18 U	33	180	5.9	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 J	2.9 U	0.56 J	2.9 U
Isopropylbenzene	ug/m3	120																							
m,p-Xylene	ug/m3	NA	0.65	0.57	0.66	0.7	0.99	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 J	0.4
Methyl methacrylate	ug/m3	NA																	0.2 U	0.2 U	0.2 U	0.2 U	0.12 U	0.12 U	0.12 U
Methylene chloride	ug/m3	17	**33**	1.2	3.6	2.4	0.7 U	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 J	1.5	1.1	1.3
Methyl-t-butyl ether	ug/m3	190	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.11 U	0.11 U	0.11 U
Naphthalene	ug/m3	NA																							
n-Butylbenzene	ug/m3	410																							
n-Heptane	ug/m3	NA	0.2 U	0.14 U	0.2 U	0.2 U	0.2 U	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	0.2 J	0.074 J	0.12 U	0.11 J
o-Xylene	ug/m3	NA	0.23	0.22	0.24	0.26	0.45	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 J	0.16
Propylene (Propene)	ug/m3	NA	0.18 U	0.13 U	0.18 U	0.35 U	0.35 U	0.18 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.87 U	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 J
sec-Butylbenzene	ug/m3	410																							
Styrene	ug/m3	290	0.21 U	0.15 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.4	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 J	0.13 U	0.1 J
Tetrachloroethene	ug/m3	5	1.9	2.2	**7.1**	0.34 U	0.34 U	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**	0.34 U	0.47	0.91	0.23	0.16 J
Tetrahydrofuran	ug/m3	NA	0.15 U	0.24	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.4	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 J	0.088 U	0.088 U
Toluene	ug/m3	500	2.1	1	1.2	1.2	1.1	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
trans-1,2-Dichloroethene	ug/m3	200	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	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
trans-1,3-Dichloropropene	ug/m3	NA	0.22 U	0.16 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.068 U	0.14 U
Trichloroethene	ug/m3	1	0.53	0.77	**1.8**	0.27 U	0.27 U	**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
Trichlorofluoromethane	ug/m3	500	1.8	1.2	1.3	1.4	1.2	1.2	1.2	1.2	1.3	1.4	1.6	1.3	1.2	1.3	1.5	2.8	1.2	1.7	1.6	1.7	1	0.92	1.6
Trichlorotrifluoroethane	ug/m3	NA	0.69	0.53	0.74	0.51	0.46	0.49	0.47	0.49	0.52	0.57	0.52	0.57	0.45	0.52	0.54	0.45	0.55	0.67	0.74	0.54	0.69	0.44	0.56
Vinyl acetate	ug/m3	NA	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	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
Vinyl chloride	ug/m3	1.9	0.13 U	0.1 U	0.17	0.13 U	0.13 U	0.18	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.14	0.13 U	0.13 U	0.13 U	0.13	0.13 U	0.13 U	0.13 U	0.077 U	0.038 U	0.077 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter
Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Prepared By: AKN, 9/16/2019
Checked By: HWC, 9/16/2019

Appendix E1.
Summary of Analytical Results - Indoor Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

		Area:	Large Retail Space																						
		Location:	IA-3																						
		Sample ID:	IA-3-091312	IA-3-010313	IA-3-031513	IA-3-060713	IA-3-090613	IA-3-121313	IA-3-030714	IA-3-061314	IA-3-091214	IA-3-121914	IA-3-032715	IA-3-061115	IA-3-091615	IA-3-121815	IA-3-021816	IA-3-080516	IA-3-021017	IA-3-090717	IA-3-022818	IA-3-091218	IA-3-020819	IA-3-090619	IA-3-021420
		Sample Date:	9/13/2012	1/3/2013	3/15/2013	6/7/2013	9/6/2013	12/13/2013	3/7/2014	6/13/2014	9/12/2014	12/19/2014	3/27/2015	6/11/2015	9/16/2015	12/18/2015	2/18/2016	8/5/2016	2/10/2017	9/7/2017	2/28/2018	9/12/2018	2/8/2019	9/6/2019	2/14/2020
Analyte	**Units**	**CT IACTIND 2003**																							
1,1,1,2-Tetrachloroethane	ug/m3	1.1	0.44 U	0.44 U	0.44 U	0.44 U	0.46	0.44 U	0.44 U	0.44 U	0.25 U	0.44 U	0.44 U	0.44 U	0.44 U		0.44 U		0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
1,1,1-Trichloroethane	ug/m3	500	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	0.16 J	0.05 J	0.19 U	0.092 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.49	0.19 U	0.19 U
1,1,2,2-Tetrachloroethane	ug/m3	0.14	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.069 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1,2-Trichloroethane	ug/m3	12	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.11 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.55	0.19 U	0.19 U
1,1-Dichloroethane	ug/m3	430	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,1-Dichloroethene	ug/m3	20	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,4-Trichlorobenzene	ug/m3	NA	0.52 U	0.52 U	0.52 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.15 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.52 U	0.26 U	0.26 U
1,2,4-Trimethylbenzene	ug/m3	52	0.47	0.17 U	0.076 J	0.26	0.33	0.17 U	0.53	0.23	0.32	0.12 J	0.12 J	0.13 J	0.13 J	0.17 U	0.17 U	0.26	0.17 U	0.21	0.17 U	0.17 U	0.17 U	0.39	0.17 U
1,2-Dibromoethane (EDB)	ug/m3	0.038	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.077 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	**0.72**	0.27 U	0.27 U
1,2-Dichlorobenzene	ug/m3	410	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.84 U	0.21 U	0.21 U
1,2-Dichloroethane	ug/m3	0.31	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.032 J	0.14 U	0.14 U	0.057 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.057 J	0.14 U	0.14 U
1,2-Dichloropropane	ug/m3	0.42	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.046 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	**1.3**	0.16 U
1,2-Dichlorotetrafluoroethane	ug/m3	NA														0.25 U		0.25 U							
1,3,5-Trimethylbenzene	ug/m3	52	0.22	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.069 J	0.17 U	0.038 J	0.079 J	0.041 J	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.32	0.17 U	0.17 U	0.17 U
1,3-Butadiene	ug/m3	NA	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.55	0.078 U	0.044 U	0.078 U	0.045 J	0.078 U	0.062 J	0.17	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U
1,3-Dichlorobenzene	ug/m3	410	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.58 J	0.21 U	0.21 U	0.21 U
1,4-Dichlorobenzene	ug/m3	24	0.059 J	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.068 J	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.62 J	0.21 U	0.21 U
1,4-Dioxane	ug/m3	NA														1.3 U		1.3 U							
2-Butanone	ug/m3	500	2.7 J	4.1 J	2.2 J	2 J	2.9 J	0.66 J	1.1 J	1.5 J	2.1 J	1.1 J	1.4 J	1.5 J	0.96 J	0.99 J	0.8 J	2.3 J	0.62 J	2.5 J	1.2 J	2 J	2.7 J	1.2 J	0.71 J
2-Hexanone	ug/m3	NA	0.22	0.14 U	0.32	0.28	0.31	0.14 U	0.14 U	0.14 U	0.21	0.14 U	0.27	0.14	0.14 U	0.14 U	0.14 U	0.47	0.14 U	0.31	0.28	0.14 U	0.14 U	0.14 U	0.14 U
4-Ethyltoluene	ug/m3	NA	0.15 J	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.18	0.17 U	0.051 J	0.059 J	0.086 J	0.045 J	0.066 J	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.11 J	0.17 U	0.4	0.17 U
4-Isopropyltoluene	ug/m3	370																							
4-Methyl-2-pentanone	ug/m3	200	0.21	0.14 U	0.14 U	0.19	0.36	0.14 U	0.17	0.35	0.26	0.27	0.15	0.13 J	0.14 U	0.24	0.14 U	0.14 U	0.14 U	0.39	0.086 J	0.47	0.14 U	0.87	0.14 U
Acetone	ug/m3	500	12 B	3.3	12	28	16	14	11	15	42	29	11	10	15	9.9	8.5	19	4.9	14	7.9	12	13	8.5	6.7
Acrylonitrile	ug/m3	NA																							
Benzene	ug/m3	3.3	0.66	0.11	0.75	0.23	0.75	0.54	2.4	0.41	0.29	0.5	0.5	0.28	0.43	1.1	0.55	0.62	0.43	0.5	0.51	0.51	0.94	0.48	0.35
Benzyl chloride	ug/m3	NA	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.052 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromodichloromethane	ug/m3	0.46	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.067 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Bromoform	ug/m3	7.3	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.21 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Bromomethane	ug/m3	NA	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.16	0.099	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14	0.14 U	0.14 U	0.14 U	1.4 U	0.27 U
Carbon disulfide	ug/m3	NA	1.1 U	1.1 U	1.1 U	1.1 U	0.25 J	1.1 U	1.1 U	0.15 J	0.16 J	0.24 J	1.1 U	0.092 J	0.13 J	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Carbon tetrachloride	ug/m3	0.54	0.38	0.22	0.39	0.42	0.47	0.47	0.45	0.44	0.42	0.34	0.36	0.36	0.39	0.53	0.41	0.43	0.42	0.39	0.4	0.51	0.22 U	0.37	0.42
Chlorobenzene	ug/m3	200	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.046 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Chloroethane	ug/m3	500	0.093 U	0.093 U	0.093 U	0.098	0.093 U	0.093 U	0.093 U	0.093 U	0.053 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.19 U	0.093 U	0.093 U	0.19 U	0.093 U	0.093 U
Chloroform	ug/m3	0.5	0.19	0.17 U	0.075 J	0.17 U	0.21	0.17 U	0.17 U	0.24	0.28	0.4	0.065 J	0.14 J	0.21	0.28	0.17 U	**0.55**	0.17 U	0.16 J	0.14 J	0.18	0.17 U	0.17 U	0.17 U
Chloromethane	ug/m3	80	1.3	0.072	1.3	1.3	1.1	1	1.3	1.2	0.73	0.85	0.99	1.7	1.1	1.4	0.99	1.4	1.2	1.2	1.2	2.3	1.3	1	1.1
cis-1,2-Dichloroethene	ug/m3	100	0.14 U	0.14 U	0.14 U	0.14 U	0.19	0.14 U	0.14 U	0.14 U	0.04 U	0.46	0.14 U	0.14 U	0.11 J	0.15	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
cis-1,3-Dichloropropene	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.045 U	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
Cyclohexane	ug/m3	NA	0.27	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.34	0.12 U	0.069 U	0.12 U	0.12 U	0.12 U	0.12 U	1	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Dibromochloromethane	ug/m3	NA	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.085 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	0.73	0.3 U	0.3 U
Dichlorodifluoromethane	ug/m3	500	2.8	0.17	1.8	2.7	1.8	2.7	1.5	2.1	2.2	1.8	1.4	2.3	1.6	2.4	1.6	0.64	0.87	1.4	2.3	2.2	2.3	0.17 U	1.5
Ethanol	ug/m3	NA	6.6	2.6	2.5 J	21	27	11	24	64	41	580	8.7	16	25	14	61	21	2.8	16	94	11	18	24	4.1
Ethyl acetate	ug/m3	NA	0.51	0.13	0.44	0.28	0.34	2.6	2.5	0.13 U	0.25	0.47	0.27	0.13 U	4.5	0.13 U	1.1	0.13 U	0.83	0.22 J	0.15	0.25 U	6	3.4	0.13 U
Ethylbenzene	ug/m3	290	0.42	0.15	0.098 J	0.18	0.36	0.15 U	0.55	0.22	0.17	0.14 J	0.13 J	0.12 J	0.15 J	0.41	0.15 U	0.22	0.15 U	0.22	0.088 J	0.34	0.55	0.66	0.15 U
Hexachlorobutadiene	ug/m3	NA	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.21 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.75 U	0.37 U	0.37 U
Hexane	ug/m3	NA	1.4 J	4.9 J	1 J	0.68 J	0.94 J	0.76 J	2.1 J	0.44 J	0.43 J	0.41 J	5.1	0.45 J	0.72 J	1.9 J	0.49 J	0.59 J	0.23 J	0.64 J	0.28 J	0.68 J	4.9 U	0.42 J	4.9 U
Isopropyl alcohol	ug/m3	NA	1.7 J	3.4 J	0.62 J	3.4 U	3.4 U	1.9 J	2.1 J	5.2	4.8	7.7	1.9 J	0.87 J	2.1 J	3.4 U	3.4 U	5.4	0.93 J	2.5 J	2.1 J	8	2.7 J	4.6	3.4 U
Isopropylbenzene	ug/m3	120																							
m,p-Xylene	ug/m3	NA	1.5	0.3	0.31	0.72	1.1	0.19 J	1.6	0.84	0.62	0.58	0.37	0.39	0.5	1.7	0.42	0.81	0.15 J	0.9	0.26 J	1.1	1.3	2.3	0.3 U
Methyl methacrylate	ug/m3	NA	0.14 U	0.14 U	0.14 U	0.14 U	0.18	0.14 U	0.14 U	0.14 U	0.16	0.14 U	0.14 U		0.14 U		0.14 U		0.14 U	0.26	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Methylene chloride	ug/m3	17	2.7 B	1.2	2.1	1.1 J	1.2	1.3	2.2	0.77 J	0.58 J	0.29 J	2.1	0.54 J	0.73 J	1.2	0.69 J	0.71 J	0.29 J	0.29 J	0.43 J	0.36 J	0.87 J	0.54 J	0.5 J
Methyl-t-butyl ether	ug/m3	190	0.22	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.072 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	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
Naphthalene	ug/m3	NA														0.18 U		0.18 U							
n-Butylbenzene	ug/m3	410																							
n-Heptane	ug/m3	NA	0.41	0.14 U	0.083 J	0.15	0.83	0.14 U	0.65	0.43	0.52	0.14 U	0.13 J	0.19	0.17	0.39	0.2	0.22	0.14 U	0.44	0.13 J	0.38	0.65	0.63	0.14 U
o-Xylene	ug/m3	NA	0.57	0.15	0.13 J	0.26	0.46	0.15 U	0.62	0.3	0.22	0.18	0.14 J	0.14 J	0.19	0.41	0.17	0.29	0.15 U	0.29	0.11 J	0.43	0.57	0.74	0.15 U
Propylene (Propene)	ug/m3	NA	1.8 J	2.4 U	1.1 J	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	1.8	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	0.87 J	0.69 J	1.1 J	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
sec-Butylbenzene	ug/m3	410																							
Styrene	ug/m3	290	0.14 J	0.15 U	0.15 U	0.15 U	0.3	0.15 U	0.18	0.16	0.15	0.12 J	0.15 U	0.033 J	0.087 J	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.16	0.15 U	0.15 U	0.15 U
Tetrachloroethene	ug/m3	5	2.3	0.24	0.095 J	0.3	0.24 U	0.24 U	0.24 U	0.3	0.12	1.9	0.24 U	0.26	0.2 J	**13**	0.24 U	0.5	0.24 U	0.3	0.16 J	0.3	0.83	0.21 J	0.24 U
Tetrahydrofuran	ug/m3	NA	0.072 J	0.1 U	0.1 U	0.14	0.73	0.1 U	0.1 U	0.13	0.16	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.18	0.1 U	0.075 J	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Toluene	ug/m3	500	2.8	0.13	0.56	0.9	4.6	0.66	3.4	1.8	2.5	1.3	0.63	0.77	1.3	1.6	1	1.2	0.43	1.3	0.57	1.7	1.6	7.1	0.26
trans-1,2-Dichloroethene	ug/m3	200	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.083 J	0.37 J	0.14 U	0.14 U
trans-1,3-Dichloropropene	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.045 U	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
Trichloroethene	ug/m3	1	0.17 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.26	0.19 U	0.075	0.64	0.072 J	0.19 U	0.22	0.64	0.19 U	0.19 U	0.19 U	0.24	0.19 U	0.18 J	0.6	0.2	0.19 U
Trichlorofluoromethane	ug/m3	500	1.5	0.2	1.3	1.5	1.6	1.4	1.7	1.4	1.3	1.3	1	1.7	1.3	1.6	1.2	1	1.3	1.1	1.1	1.2	1.9	1.2	1.2
Trichlorotrifluoroethane	ug/m3	NA	0.54	0.27	0.65	0.65	0.62	0.61	0.51	0.59	0.57	0.63	0.47 J	0.69 J	0.55 J	0.59 J	0.54 J	0.56 J	0.59 J	0.44 J	0.48 J	1.1 U	1.1 U	1.1 U	0.41 J
Vinyl acetate	ug/m3	NA	0.25 U	0.25 U	0.25 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	1.4 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	0.98 J	2.5 U	1.4 J	2.5 U	2.5 U	2.5 U
Vinyl chloride	ug/m3	1.9	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.026 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter
Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Prepared By: AKN, 9/16/2019
Checked By: HWC, 9/16/2019

Appendix E1.
Summary of Analytical Results - Indoor Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:			Large Retail Space																					
Location:			IA-4																					
Sample ID:			IA-4	IA-4-020309	IA-4-021109	IA-4-021809	IA-4-022609	IA-4-041409	IA-4-042409	IA-4-091709	IA-4-092409	IA-4-100109	IA-4-100809	IA-4-012810	IA-4-020510	IA-4-021210	IA-4-021910	IA-4-032610	IA-4-043010	IA-4-052810	IA-4-070110	IA-4-091610	IA-4-120710	IA-4-021711	IA-4-060211
Sample Date:			1/16/2009	2/3/2009	2/11/2009	2/18/2009	2/26/2009	4/14/2009	4/24/2009	9/17/2009	9/24/2009	10/1/2009	10/8/2009	1/28/2010	2/5/2010	2/12/2010	2/19/2010	3/26/2010	4/30/2010	5/28/2010	7/1/2010	9/16/2010	12/7/2010	2/17/2011	6/2/2011
Analyte	**Units**	**CT IACTIND 2003**																						
1,1,1,2-Tetrachloroethane	ug/m3	1.1																						
1,1,1-Trichloroethane	ug/m3	500	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	0.76	0.29	0.89	0.27 U	1.1	0.28	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,1,2,2-Tetrachloroethane	ug/m3	0.14	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	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
1,1,2-Trichloroethane	ug/m3	12	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,1-Dichloroethane	ug/m3	430	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	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	ug/m3	20	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	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	ug/m3	NA	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.75 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
1,2,4-Trimethylbenzene	ug/m3	52	0.26	0.37	0.74	0.65	0.29	0.18 U	0.25 U	0.25 U	0.41	0.28	0.41	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.34	0.41	0.44	0.25 U	0.49	0.25 U
1,2-Dibromoethane (EDB)	ug/m3	0.038	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	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
1,2-Dichlorobenzene	ug/m3	410	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	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	ug/m3	0.31	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	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	ug/m3	0.42	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	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
1,2-Dichlorotetrafluoroethane	ug/m3	NA	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.25 U	0.35 U	0.35 U	0.35 U	0.35 U	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	ug/m3	52	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3-Butadiene	ug/m3	NA	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	0.11 U	0.23 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
1,3-Dichlorobenzene	ug/m3	410	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	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	ug/m3	24	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	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	ug/m3	NA																						
2-Butanone	ug/m3	500	21	4.4	6	3.2	2.5	1.1	1.6	1.5	2	1.3	1.2	0.3 U	0.69	1.2	0.5	1.6	1.5	2.2	4.8	2.4	0.96	1 B	2.9 U
2-Hexanone	ug/m3	NA	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	0.2 U	0.39	0.54	1	0.59	0.2 U	0.2 U	0.21 J
4-Ethyltoluene	ug/m3	NA	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-Isopropyltoluene	ug/m3	370																							
4-Methyl-2-pentanone	ug/m3	200	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	0.2 U	0.2 U	0.2 U	0.43	0.45	0.2 U	0.2 U	0.2 U
Acetone	ug/m3	500	17	10	15	20	7.8	7.9	20	9.3	16	9.3	10	2.3	4.9	5.9	2.5	6.9	8.7	15	31	19	13 B	12 B	12 B
Acrylonitrile	ug/m3	NA																							
Benzene	ug/m3	3.3	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	0.57	0.64	0.48	0.47	0.66	0.49	1.4	0.31
Benzyl chloride	ug/m3	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.19 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Bromodichloromethane	ug/m3	0.46	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	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
Bromoform	ug/m3	7.3	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	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.52 U	0.52 U	0.52 U
Bromomethane	ug/m3	NA	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.14 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Carbon disulfide	ug/m3	NA	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	0.16 U	0.16 U	0.31	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Carbon tetrachloride	ug/m3	0.54	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	0.43	0.47	0.52	0.48	0.44	0.46	**0.57**	**0.68**
Chlorobenzene	ug/m3	200	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.17 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Chloroethane	ug/m3	500	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	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	ug/m3	0.5	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	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	**3.3**	0.24 U	0.24 U
Chloromethane	ug/m3	80	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	1.1	0.77	1.2	1.2	1	0.95	0.95	1.1
cis-1,2-Dichloroethene	ug/m3	100	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	0.2 U	1.3	0.2 U	0.44	0.2 U	1.8	0.2 U	0.2 U
cis-1,3-Dichloropropene	ug/m3	NA	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	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U
Cyclohexane	ug/m3	NA	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	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	ug/m3	NA	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	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	ug/m3	500	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	1.7	2.1	2.5	2.6	1.5	2	3.2	1.8
Ethanol	ug/m3	NA	5.3	8.9	12	18	8	5.2	5.5	6	6.5	4.9	5.6	7.7	34	17	31	3.9	4.9	6.1	8.7	9.8	3.4	8.9	5.3
Ethyl acetate	ug/m3	NA	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	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.26	0.18 U
Ethylbenzene	ug/m3	290	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	0.22 U	0.25	0.25	0.29	0.44	0.22 U	0.49	0.22 U
Hexachlorobutadiene	ug/m3	NA	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	1.1 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U
Hexane	ug/m3	NA	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	0.19	1.3	0.55	2.8	0.61	0.38	1.7	1
Isopropyl alcohol	ug/m3	NA	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	0.66	3.4	4.4	1.8	8.3	0.48	1.7	1.2 U
Isopropylbenzene	ug/m3	120																							
m,p-Xylene	ug/m3	NA	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	0.49	0.8	0.98	1.1	1.4	0.43 U	1.4	0.41 J
Methyl methacrylate	ug/m3	NA																					0.2 U	0.2 U	0.2 U
Methylene chloride	ug/m3	17	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	0.7 U	0.7 U	0.35 U	7.7	0.68	0.79	5.1	3.2
Methyl-t-butyl ether	ug/m3	190	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.13 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Naphthalene	ug/m3	NA																							
n-Butylbenzene	ug/m3	410																							
n-Heptane	ug/m3	NA	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	0.2 U	0.2 U	0.2 U	0.22	0.32	0.2 U	0.51	0.2 U
o-Xylene	ug/m3	NA	0.27	0.33	0.78	0.87	0.33	0.22	0.22 U	0.22 U	0.42	0.28	0.4	0.22 U	0.31	0.22 U	0.22 U	0.22 U	0.3	0.44	0.5	0.57	0.22 U	0.53	0.22 U
Propylene (Propene)	ug/m3	NA	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	0.35 U	0.35 U	0.87 U	1.1	0.35 U	0.86 U	0.86 U	0.86 U
sec-Butylbenzene	ug/m3	410																							
Styrene	ug/m3	290	0.21 U	0.21 U	0.22	0.23	0.21 U	0.15 U	0.21 U	0.21 U	0.21	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.22	0.29	0.21 U	0.21 U	0.21 U	0.21 U
Tetrachloroethene	ug/m3	5	**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	0.34 U	4.4	0.44	1.1	0.34 U	3.4	5	0.34 U
Tetrahydrofuran	ug/m3	NA	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	0.15 U	0.15 U	0.19	0.24	0.15 U	0.15 U	0.15 U	0.15 U
Toluene	ug/m3	500	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	0.83	1.4	0.98	1	2	0.43	2.7	0.56
trans-1,2-Dichloroethene	ug/m3	200	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	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	ug/m3	NA	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	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.23 U	0.23 U	0.23 U
Trichloroethene	ug/m3	1	**4.7**	0.48	**1.7**	**1.5**	0.88	0.78	**2**	0.27 U	0.27 U	**1.1**	0.57	0.27 U	0.27 U	0.27 U	0.4	0.27 U	**1.4**	0.27 U	0.44	0.27 U	**1.8**	0.27 U	0.27 U
Trichlorofluoromethane	ug/m3	500	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	1.5	1.3	1.3	1.9	2.4	1.2	1.8	1.4
Trichlorotrifluoroethane	ug/m3	NA	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	1.3	0.48	0.51	0.59	0.43	0.54	0.7	0.71
Vinyl acetate	ug/m3	NA	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	0.36 U	0.71 U	0.18 U	0.18 U	0.36 U	0.38	0.18 U	3.5 U
Vinyl chloride	ug/m3	1.9	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	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.16	0.13 U	0.13 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter
Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Prepared By: AKN, 9/16/2019
Checked By: HWC, 9/16/2019

Appendix E1.
Summary of Analytical Results - Indoor Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:			Large Retail Space																						
Location:			IA-4																						
Sample ID:			IA-4-091511	IA-4-120811	IA-4-030812	IA-4-061412	IA-4-091312	IA-4-010313	IA-4-031513	IA-4-060713	IA-4-090613	IA-4-121313	IA-4-030714	IA-4-061314	IA-4-091214	IA-4-121914	IA-04-032715	IA-4-061115	IA-4-091615	IA-4-121815	IA-4-021816	IA-4080516	IA-4-021017	IA-4-090717	IA-4-022818
Sample Date:			9/15/2011	12/8/2011	3/8/2012	6/14/2012	9/13/2012	1/3/2013	3/15/2013	6/7/2013	9/6/2013	12/13/2013	3/7/2014	6/13/2014	9/12/2014	12/19/2014	3/27/2015	6/11/2015	9/16/2015	12/18/2015	2/18/2016	8/5/2016	2/10/2017	9/7/2017	2/28/2018
Analyte	**Units**	**CT IACTIND 2003**																							
1,1,1,2-Tetrachloroethane	ug/m3	1.1	0.62 U		0.37 U	0.37 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.25 U	0.44 U	0.44 U	0.44 U	0.44 U		0.44 U		0.44 U	0.44 U	0.44 U
1,1,1-Trichloroethane	ug/m3	500	0.27 U	0.14 J	0.082 U	0.16 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.055 U	0.28	0.19 U	0.19 U	0.054 J	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.14 J
1,1,2,2-Tetrachloroethane	ug/m3	0.14	0.34 U	0.21 U	0.1 U	0.21 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.069 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1,2-Trichloroethane	ug/m3	12	0.27 U	0.16 U	0.082 U	0.16 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.11 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1-Dichloroethane	ug/m3	430	0.2 U	0.12 U	0.061 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,1-Dichloroethene	ug/m3	20	0.2 U	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2,4-Trichlorobenzene	ug/m3	NA	0.74 U	0.45 U	0.45 U	0.45 U	0.52 U	0.52 U	0.52 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.15 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
1,2,4-Trimethylbenzene	ug/m3	52	0.25 J	0.094 J	0.15 U	0.19	0.38	0.17	0.13 J	0.47	0.2	0.17 U	0.56	0.26	0.17	0.14 J	0.25	0.2	0.22	0.45	0.24	0.2	0.17 U	0.18	0.36
1,2-Dibromoethane (EDB)	ug/m3	0.038	0.38 U	0.23 U	0.12 U	0.23 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.077 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,2-Dichlorobenzene	ug/m3	410	0.3 U	0.18 U	0.18	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,2-Dichloroethane	ug/m3	0.31	0.2 U	0.063 J	0.061 U	0.12 U	0.14 U	0.14	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.051 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,2-Dichloropropane	ug/m3	0.42	0.23 U	0.14 U	0.069 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.046 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,2-Dichlorotetrafluoroethane	ug/m3	NA																		0.25 U		0.25 U			
1,3,5-Trimethylbenzene	ug/m3	52	0.25 J	0.15 U	0.15 U	0.08 J	0.12 J	0.17	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.098 U	0.17 U	0.066 J	0.066 J	0.066 J	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
1,3-Butadiene	ug/m3	NA	0.11 U	0.066 U	0.066 U	0.066 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.078 U	0.47	0.11	0.044 U	0.078 U	0.078 U	0.078 U	0.16	0.1	0.078 U	0.078 U	0.093	0.078 U	0.078 U
1,3-Dichlorobenzene	ug/m3	410	0.3 U	0.18 U	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,4-Dichlorobenzene	ug/m3	24	0.3 U	0.18 U	0.18 U	0.18 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.08 J	0.063 J	0.12 J	0.084 J	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
1,4-Dioxane	ug/m3	NA	0.18 U																	1.3 U		1.3 U			
2-Butanone	ug/m3	500	5.9 J	1 J	1.5 J	0.97 J	2.3 J	4.1	2.3 J	3.9 J	0.95 J	1.2 J	1.1 J	2.9 J	4.6	1.1 J	1.9 J	1.9 J	1.8 J	2.5 J	1.1 J	1.6 J	0.98 J	1.9 J	2.1 J
2-Hexanone	ug/m3	NA	0.35	0.086 J	0.32	0.098 J	0.18	0.14	0.25	0.51	0.14 U	0.14 U	0.15	0.36	0.2	0.14 U	0.25	0.14 U	0.14 U	0.22	0.14 U	0.14 U	0.14 U	0.35	0.69
4-Ethyltoluene	ug/m3	NA	0.25 U	0.15 U	0.15 U	0.068 J	0.12 J	0.17	0.17 U	0.17 U	0.17 U	0.17 U	0.18	0.17 U	0.098 U	0.055 J	0.069 J	0.041 J	0.076 J	0.17 U	0.17 U	0.18	0.17 U	0.17 U	0.17 U
4-Isopropyltoluene	ug/m3	370																							
4-Methyl-2-pentanone	ug/m3	200	0.2 J	0.098 J	0.15	0.13	0.14 U	0.14	0.28	0.56	0.47	0.16	0.48	1.3	1	0.34	0.89	0.97	1.6	1.5	0.52	0.14 U	0.13 J	2.1	0.6
Acetone	ug/m3	500	15	7.4	6.8	9.1	12 B	3.3	44	36	18	29	29	37	38	27	42	28	170 E	28	31	38	11	31	36
Acrylonitrile	ug/m3	NA																							
Benzene	ug/m3	3.3	0.3	0.38	0.35	0.23	0.64	0.11	0.82	0.55	0.47	0.56	2.2	0.68	0.39	0.47	0.69	0.36	0.79	1.1	0.54	0.25	0.48	0.58	0.56
Benzyl chloride	ug/m3	NA	0.26 U	0.16 U	0.16 U	0.16 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.052 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromodichloromethane	ug/m3	0.46	0.34 U	0.2 U	0.1 U	0.2 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.067 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Bromoform	ug/m3	7.3	0.52 U	0.31 U	0.31 U	0.31 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.21 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Bromomethane	ug/m3	NA	0.19 U	0.12 U	0.12 U	0.24	0.14 U	0.14 U	0.13 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.078 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Carbon disulfide	ug/m3	NA	1.6 J	0.93 U	0.93 U	0.052 J	1.1 U	1.1	0.52 J	0.38 J	0.39 J	0.15 J	0.19 J	0.62 J	0.46 J	0.27 J	0.31 J	0.35 J	0.44 J	0.31 J	0.14 J	0.3 J	1.1 U	0.34 J	0.14 J
Carbon tetrachloride	ug/m3	0.54	0.52	0.48	0.47	0.43	0.36	0.22	0.41	**0.65**	0.45	0.46	0.45	0.4	0.39	0.37	0.35	0.31	0.41	0.54	0.36	0.44	0.43	0.38	0.41
Chlorobenzene	ug/m3	200	0.23 U	0.14 U	0.14 U	0.14 U	0.16 U	0.16	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.046 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Chloroethane	ug/m3	500	0.13 U	0.079 U	0.079 U	0.079 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.053 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.093 U	0.19 U	0.093 U
Chloroform	ug/m3	0.5	0.24 J	0.085 J	0.073 U	0.13 J	0.19	0.17 U	0.11 J	0.17 U	0.27	0.44	0.46	**0.84**	**1.2**	**0.69**	0.39	**1.2**	0.28	0.34	0.24	**0.74**	0.17 U	**0.69**	**1.9**
Chloromethane	ug/m3	80	1.5	1.4	1	1.3	1.3	0.072	1.3	1.6	1	1.1	1.4	1.2	0.89	0.97	1.2	1.8	1.2	1.3	1.2	1.3	1.2	1.4	1.3
cis-1,2-Dichloroethene	ug/m3	100	0.2 U	0.19	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.18	0.14 U	0.14 U	0.14 U	0.04 U	0.87	0.14 U	0.14 U	0.053 J	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.63
cis-1,3-Dichloropropene	ug/m3	NA	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.045 U	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
Cyclohexane	ug/m3	NA	0.17 U	0.1 U	0.1 U	0.1 U	0.26	0.12	0.12 U	0.12 U	0.12 U	0.12 U	0.33	0.12 U	0.069 U	0.12 U	0.12 U	0.12 U	0.12 U	1.3	0.12 U	0.12 U	0.12 U	0.12 U	0.26
Dibromochloromethane	ug/m3	NA	0.43 U	0.26 U	0.13 U	0.26 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	0.085 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
Dichlorodifluoromethane	ug/m3	500	1.7	2.8	2	2.9	2.8	0.17	1.7	3.3	1.8	2.7	1.3	2.1	2.1	1.7	1.4	2.1	1.7	2.2	1.6	0.61	0.91	1.5	2.4
Ethanol	ug/m3	NA	7	2.4	2.5	9.4	7.3	2.6	46	79	71	91	83	240	150	260	190	330	57	69	120	2.6 U	47	290	550
Ethyl acetate	ug/m3	NA	0.18 U	0.16	0.21	0.38	2.4	0.13 U	0.73	0.94	0.13 U	0.13 U	0.88	0.26	0.38	0.46	0.69	0.69	9.9	0.6	0.73	1.5	0.31	1.5	0.41
Ethylbenzene	ug/m3	290	0.22 J	0.16	0.17	0.14	0.38	0.15	0.32	0.43	0.19	0.15 U	0.57	0.27	0.12	0.14 J	0.19	0.16	0.34	0.86	0.17	0.17	0.15 U	0.17	0.15 J
Hexachlorobutadiene	ug/m3	NA	0.53 U	0.32 U	0.32 U	0.32 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.21 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
Hexane	ug/m3	NA	7 J	0.35 J	0.55 J	0.47 J	5	4.9	0.89 J	2.8 J	0.53 J	4.9 U	1.3 J	0.75 J	0.58 J	0.44 J	5.6	0.45 J	1.6 J	2.5 J	0.42 J	0.81 J	0.3 J	0.35 J	0.36 J
Isopropyl alcohol	ug/m3	NA	4.9 J	2.9 U	2.9 U	2.9 U	1.4 J	3.4 J	3.4 U	4	1.6 J	8.4	4.4	3.9	4.8	8.2	7.1	3.9	7.1	3.4 U	2.7 J	3.4 U	1.5 J	13	27
Isopropylbenzene	ug/m3	120																							
m,p-Xylene	ug/m3	NA	0.53	0.41	0.27	0.38	1.2	0.3	1.1	1.6	0.53	0.28 J	1.6	0.86	0.4	0.56	0.62	0.46	1.1	4.4	0.53	0.53	0.24 J	0.64	0.43
Methyl methacrylate	ug/m3	NA	0.2 U	0.12 U	0.12 U	0.13	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.082 U	0.14 U	0.14 U		0.14 U		0.14 U		0.14 U	0.14 U	0.14 U
Methylene chloride	ug/m3	17	1.7 J	1.5	2	0.72 J	12 B	1.2	0.97 J	3.1	0.89 J	0.69 J	0.72 J	0.61 J	0.64 J	0.29 J	1.5	0.45 J	1.7	0.94 J	0.53 J	0.95 J	0.25 J	0.31 J	0.45 J
Methyl-t-butyl ether	ug/m3	190	0.18 U	0.11 U	0.11 U	0.11 U	0.19	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.072 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
Naphthalene	ug/m3	NA																		0.18 U		0.22			
n-Butylbenzene	ug/m3	410																							
n-Heptane	ug/m3	NA	0.2 J	0.071 J	0.12 U	0.11 J	0.41	0.14	0.32	0.53	0.16	0.14 U	0.66	0.39	0.17	0.11 J	0.22	0.17	0.42	0.49	0.56	0.45	0.14 U	0.22	0.34
o-Xylene	ug/m3	NA	0.22 J	0.15	0.11 J	0.17	0.41	0.15	0.43	0.57	0.23	0.15 U	0.66	0.33	0.16	0.17	0.25	0.19	0.4	1.1	0.21	0.2	0.15 U	0.22	0.18
Propylene (Propene)	ug/m3	NA	3.4 U	2.1 U	2.1 U	2.1 U	1.7 J	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	3	1.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
sec-Butylbenzene	ug/m3	410																							
Styrene	ug/m3	290	0.21 U	0.077 J	0.092 J	0.55	0.093 J	0.15	0.099 J	0.15 U	0.15 U	0.15 U	0.23	0.46	0.4	0.15 J	0.19	0.38	0.29	0.24	0.15 U	0.3	0.15 U	0.39	0.17
Tetrachloroethene	ug/m3	5	0.45	1.2	0.31	0.12 J	1.7	0.24 J	0.21 J	0.45	0.3	0.24 U	0.31	0.32	0.23	3.2	0.98	0.36	0.58	0.5	0.24 U	0.36	0.36	0.47	2.1
Tetrahydrofuran	ug/m3	NA	0.15 U	0.076 J	0.088 U	0.055 J	0.1 U	0.1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12	0.094	0.1 U	0.24	0.11	0.11	0.1 U	0.1 U	0.1 U	0.1 U	0.1 J	0.085 J
Toluene	ug/m3	500	0.95	1.6	0.32	0.8	2.9	0.13	1.5	3	1.4	0.75	3.4	1.9	1.4	1.4	1.4	1.2	7.1	3	2.9	1.7	0.96	1.8	1
trans-1,2-Dichloroethene	ug/m3	200	0.2 U	0.12 U	0.059 U	0.12 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.04 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
trans-1,3-Dichloropropene	ug/m3	NA	0.23 U	0.14 U	0.068 U	0.14 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.045 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Trichloroethene	ug/m3	1	0.27 U	0.35	0.15	0.052 J	0.12 J	0.19 U	0.057 J	0.19 U	0.19 U	0.19 U	0.24	0.19 U	0.054 U	**1.2**	0.083 J	0.19 U	0.51	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.64
Trichlorofluoromethane	ug/m3	500	1.8	1.3	0.87	1.5	1.7	0.2	1.2	2.2	1.3	1.5	1.3	1.4	1.3	1.3	1.4	1.4	1.3	1.6	1.2	1	1.3	1.2	1.1
Trichlorotrifluoroethane	ug/m3	NA	0.52	0.71	0.44	0.56	0.59	0.27	0.66	1.6	0.65	0.58	0.49	0.54	0.55	0.62	0.52 J	0.65 J	0.58 J	0.6 J	0.55 J	0.49 J	0.59 J	0.46 J	0.5 J
Vinyl acetate	ug/m3	NA	0.18 U	0.11 U	0.21 U	0.21 U	0.25 U	0.25 U	0.25 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	1.4 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	1.7 J
Vinyl chloride	ug/m3	1.9	0.13 U	0.077 U	0.038 U	0.077 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.026 U	0.072 J	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter
Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Prepared By: AKN, 9/16/2019
Checked By: HWC, 9/16/2019

Appendix E1.
Summary of Analytical Results - Indoor Air Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:			Large Retail Space														
Location:			IA-4					LRAIR01	LRAIR02	LRAIR03	LRAIR04	LRAIR05	LRAIR06	LRAIR07	LRAIR08	LRAIR09	LRAIR10
Sample ID:			IA-4-091218	IA-4-020819	IA-4-041119	IA-4-090619	IA-4-021420	LRAIR01	LRAIR02	LRAIR03	LRAIR04	LRAIR05	LRAIR06	LRAIR07	LRAIR08	LRAIR09	LRAIR10
Sample Date:			9/12/2018	2/8/2019	4/11/2019	9/6/2019	2/14/2020	5/15/2009	5/15/2009	5/15/2009	5/15/2009	5/15/2009	5/15/2009	5/15/2009	5/15/2009	5/15/2009	5/15/2009
Analyte	**Units**	**CT IACTIND 2003**															
1,1,1,2-Tetrachloroethane	ug/m3	1.1	0.44 U	0.44 U	0.44 U	0.5 U	0.44 U										
1,1,1-Trichloroethane	ug/m3	500	0.19 U	8	0.78	0.22 U	0.19 U	0.45	0.52	0.65	0.57	0.51	0.44	0.69	0.5	0.49	0.53
1,1,2,2-Tetrachloroethane	ug/m3	0.14	0.24 U	0.24 U	0.24 U	0.27 U	0.24 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
1,1,2-Trichloroethane	ug/m3	12	0.19 U	0.19 U	0.19 U	0.22 U	0.19 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U
1,1-Dichloroethane	ug/m3	430	0.14 U	0.14 U	0.14 U	0.16 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
1,1-Dichloroethene	ug/m3	20	0.14 U	0.14 U	0.14 U	0.16 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
1,2,4-Trichlorobenzene	ug/m3	NA	0.26 U	0.52 U	0.26 U	0.3 U	0.26 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
1,2,4-Trimethylbenzene	ug/m3	52	0.21	0.6	0.17 U	0.27	0.17 U	0.25 U	0.25 U	0.25 U	0.29	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dibromoethane (EDB)	ug/m3	0.038	0.27 U	**0.66**	0.27 U	0.31 U	0.27 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2-Dichlorobenzene	ug/m3	410	0.21 U	0.72 J	0.21 U	0.24 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
1,2-Dichloroethane	ug/m3	0.31	0.14 U	0.14 U	0.14 U	0.16 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
1,2-Dichloropropane	ug/m3	0.42	0.16 U	0.16 U	0.16 U	0.18 U	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,2-Dichlorotetrafluoroethane	ug/m3	NA						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	ug/m3	52	0.17 U	0.44	0.17 U	0.2 U	0.17 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,3-Butadiene	ug/m3	NA	0.078 U	0.078 U	0.078 U	0.088 U	0.078 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
1,3-Dichlorobenzene	ug/m3	410	0.21 U	0.59 J	0.21 U	0.24 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
1,4-Dichlorobenzene	ug/m3	24	0.21 U	0.21 U	0.21 U	0.24 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
1,4-Dioxane	ug/m3	NA															
2-Butanone	ug/m3	500	1.6 J	4.1 U	0.35 J	0.52 J	1.6 J	3.3	3.4	2.1	2.6	2	1.6	3.1	2.5	2.6	1.4
2-Hexanone	ug/m3	NA	0.14 U	0.14 U	0.14 U	0.16 U	0.14 U	0.73	0.66	0.38	0.51	0.37	0.38	0.61	0.48	0.43	0.29
4-Ethyltoluene	ug/m3	NA	0.17 U	0.17 U	0.17 U	0.2 U	0.17 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
4-Isopropyltoluene	ug/m3	370															
4-Methyl-2-pentanone	ug/m3	200	1.7	0.14 U	0.14 U	0.16 U	0.14 U	0.42	0.39	0.32	0.36	0.54	0.27	0.32	0.3	0.61	0.23
Acetone	ug/m3	500	11	5	4	5.9	9.3	12	13	10	11	8.5	7.7	13	11	9.8	6.9
Acrylonitrile	ug/m3	NA															
Benzene	ug/m3	3.3	0.46	0.84	0.24	0.43	0.37	0.54	0.6	0.67	0.55	0.56	0.51	0.53	0.6	0.51	0.57
Benzyl chloride	ug/m3	NA	0.18 U	0.18 U	0.18 U	0.21 U	0.18 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Bromodichloromethane	ug/m3	0.46	0.24 U	0.24 U	0.24 U	0.27 U	0.24 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Bromoform	ug/m3	7.3	0.36 U	0.36 U	0.36 U	0.41 U	0.36 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U
Bromomethane	ug/m3	NA	0.14 U	0.14 U	0.14 U	1.6 U	0.27 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	ug/m3	NA	0.28 J	1.1 U	1.1 U	1.2 U	1.1 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	ug/m3	0.54	0.49	**0.97**	0.44	0.37	0.45	**0.7**	**0.68**	**0.71**	**0.68**	**0.68**	**0.63**	**0.68**	**0.7**	**0.64**	**0.66**
Chlorobenzene	ug/m3	200	0.16 U	0.16 U	0.16 U	0.18 U	0.16 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Chloroethane	ug/m3	500	0.093 U	0.19 U	0.093 U	0.11 U	0.093 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	ug/m3	0.5	0.21	0.17 U	0.17 U	0.2 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	0.24 U	0.24 U	0.24 U
Chloromethane	ug/m3	80	1.1	1.2	1.1	1.2	1	1	0.98	1	0.95	1	1	0.92	1.1	0.91	1.2
cis-1,2-Dichloroethene	ug/m3	100	0.14 U	9.1	0.53	0.16 U	0.41	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21	0.2 U	0.2 U	0.2 U
cis-1,3-Dichloropropene	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.18 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
Cyclohexane	ug/m3	NA	0.12 U	0.12 U	0.12 U	0.14 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	0.17 U
Dibromochloromethane	ug/m3	NA	0.3 U	0.3 U	0.3 U	0.34 U	0.3 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	ug/m3	500	2.2	2.9	1.4	1.5	1.4	2.5	2.3	2.6	2.4	2.7	2.4	2.4	2.8	2.3	2.7
Ethanol	ug/m3	NA	11	12	2.9	22	6.7	65	9	6.5	5.9	6	5.6	5.9	14	44	14
Ethyl acetate	ug/m3	NA	0.25 U	3.5	0.13 U	0.14 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
Ethylbenzene	ug/m3	290	0.26	0.52	0.15 U	0.39	0.15 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	0.27	0.22 U
Hexachlorobutadiene	ug/m3	NA	0.37 U	0.75 U	0.37 U	0.43 U	0.37 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U
Hexane	ug/m3	NA	0.71 J	4.9 U	4.9 U	0.28 J	4.9 U	1.1	0.21	0.18 U	0.18	0.24	0.18 U	0.19	0.21	0.2	0.18 U
Isopropyl alcohol	ug/m3	NA	2 J	2 J	3.4 U	0.87 J	3.4 U	3.3	3.4	3.7	3.5	3.6	3.4	4.4	3.6	2.8	3.2
Isopropylbenzene	ug/m3	120															
m,p-Xylene	ug/m3	NA	0.78	1.2	0.3 U	1.2	0.3 U	0.58	0.57	0.58	0.55	0.49	0.5	0.48	0.53	1	0.5
Methyl methacrylate	ug/m3	NA	0.086 J	0.14 U	0.14 U	0.16 U	0.14 U										
Methylene chloride	ug/m3	17	0.31 J	0.92 J	0.26 J	0.43 J	0.58 J	5.9	1.5	1.5	1.6	1.9	1.6	1.5	1.6	1.6	1.4
Methyl-t-butyl ether	ug/m3	190	0.13 U	0.13 U	0.13 U	0.14 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
Naphthalene	ug/m3	NA															
n-Butylbenzene	ug/m3	410															
n-Heptane	ug/m3	NA	0.41	0.14 U	0.14 U	0.56	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
o-Xylene	ug/m3	NA	0.3	0.54	0.15 U	0.44	0.15 U	0.28	0.28	0.27	0.27	0.25	0.26	0.25	0.27	0.34	0.26
Propylene (Propene)	ug/m3	NA	2.4 U	2.4 U	2.4 U	2.8 U	2.4 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
sec-Butylbenzene	ug/m3	410															
Styrene	ug/m3	290	0.28	0.15 U	0.15 U	0.17 U	0.15 U	0.23	0.21 U	0.21 U	0.22	0.21 U	0.21 U	0.37	0.21 U	0.21 U	0.21 U
Tetrachloroethene	ug/m3	5	0.31	**51**	4.5	0.27 U	1.4	0.47	0.47	0.54	0.66	0.64	0.6	0.73	0.53	0.46	0.46
Tetrahydrofuran	ug/m3	NA	0.1 U	0.1 U	0.1 U	0.12 U	0.1 U	0.15 U	0.15 U	0.15 U	0.15 U	0.2	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Toluene	ug/m3	500	1.7	1.4	0.33	1.4	0.3	0.73	0.7	0.58	0.59	0.51	0.53	0.57	0.53	0.54	0.47
trans-1,2-Dichloroethene	ug/m3	200	0.14 U	0.45 J	0.14 U	0.16 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
trans-1,3-Dichloropropene	ug/m3	NA	0.16 U	0.16 U	0.16 U	0.18 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
Trichloroethene	ug/m3	1	0.19 U	**13**	0.91	0.21 U	0.42	0.27 U	0.28	0.27	0.29	0.34	0.27	0.28	0.27 U	0.27 U	0.27 U
Trichlorofluoromethane	ug/m3	500	1.3	1.9	1.6	1.2	1.2	1.3	1.3	1.2	1.1	1.4	1.3	1.1	1.4	1	1.4
Trichlorotrifluoroethane	ug/m3	NA	0.53 J	1.1 U	0.56 J	0.42 J	0.41 J	0.63	0.6	0.65	0.62	0.64	0.57	0.59	0.68	0.62	0.58
Vinyl acetate	ug/m3	NA	0.88 J	2.5 U	2.5 U	2.8 U	2.5 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Vinyl chloride	ug/m3	1.9	0.09 U	1	0.12	0.1 U	0.09 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter
Bolded and shaded values are above the CT target indoor air concentration for industrial/commercial scenarios

Prepared By: AKN, 9/16/2019
Checked By: HWC, 9/16/2019

Appendix E2

Summary of All Analytical Results –
Extraction Well and Post-Treatment Samples for Large Retail Space

Appendix E2.
Summary of Analytical Results - Extraction Well and Post-Treatment Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:		Extraction Well - Large Retail Space																							
Location:		EW-1		EW-2		EW-3		EW-4		EW-Combined															
Sample ID:		EW-1-030609	EW-1-033109	EW-2-030609	EW-2-033109	EW-3-030609	EW-3-033109	EW-4-030609	EW-4-033109	EW-Combined-020309	EW-COMBINED-021109	EW-COMBINED-021809	EW-COMBINED-022609	EW-COMBINED-041409	EW-COMBINED-042409	EW-COMBINED-091709	EW-COMBINED-092409	EW-COMBINED-100109	EW-COMBINED-100809	EW-COMBINED-012810	EW-COMBINED-020510	EW-COMBINED-021210	EW-COMBINED-021910	EW-COMBINED-043010	EW-COMBINED-052810
Sample Date:		3/6/2009	3/31/2009	3/6/2009	3/31/2009	3/6/2009	3/31/2009	3/6/2009	3/31/2009	2/3/2009	2/11/2009	2/18/2009	2/26/2009	4/14/2009	4/24/2009	9/17/2009	9/24/2009	10/1/2009	10/8/2009	1/28/2010	2/5/2010	2/12/2010	2/19/2010	4/30/2010	5/28/2010
Analyte	**Units**																								
1,1,1,2-Tetrachloroethane	ug/m3																								
1,1,1-Trichloroethane	ug/m3	59000	66000	26000	30000	54000	72000	11000	14000	190000	91000	73000	32000	3500	19000	11000	8100	7900	6800	1500	2500	150	1200	1400	1700
1,1,2,2-Tetrachloroethane	ug/m3	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	1.7 U	6.8 U	6.8 U	6.8 U	14 U	14 U	6.8 U	0.34 U	3.4 U	6.8 U	14 U	14 U	0.68 U	6.8 U	0.34 U	0.68 U	0.68 U	6.8 U
1,1,2-Trichloroethane	ug/m3	6.4	10	5.4 U	5.4 U	5.4 U	5.4 U	1.4 U	5.4 U	5.4 U	5.4 U	11 U	11 U	5.4 U	0.65	2.7 U	5.4 U	11 U	11 U	0.54 U	5.4 U	0.27 U	0.54 U	0.54 U	5.4 U
1,1-Dichloroethane	ug/m3	4100	4400	5700	7000	1600	2300	690	1400	19000	7800	5300	4800	390	2200	1600	1900	1900	1700	280	370	31	310	200	270
1,1-Dichloroethene	ug/m3	570	1200	330	640	340	560	97	210	7800	1800	1000	630	73	420	310	250	260	280	52	66	7.3	62	30	40
1,2,4-Trichlorobenzene	ug/m3	7.4 U	7.4 U	7.4 U	7.4 U	7.4 U	7.4 U	1.9 U	7.4 U	7.4 U	7.4 U	15 U	15 U	7.4 U	0.37 U	3.7 U	7.4 U	15 U	15 U	0.74 U	7.4 U	0.37 U	0.74 U	0.74 U	7.4 U
1,2,4-Trimethylbenzene	ug/m3	5 U	5 U	5 U	5 U	5 U	5 U	1.3 U	5 U	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	0.5 U	5 U
1,2-Dibromoethane (EDB)	ug/m3	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	1.9 U	7.6 U	7.6 U	7.6 U	16 U	16 U	7.6 U	0.38 U	3.8 U	7.6 U	16 U	16 U	0.76 U	7.6 U	0.38 U	0.76 U	0.76 U	7.6 U
1,2-Dichlorobenzene	ug/m3	6 U	6 U	6 U	6 U	6 U	6 U	1.5 U	6 U	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	0.6 U	6 U
1,2-Dichloroethane	ug/m3	4 U	4 U	4 U	4 U	4 U	4 U	1 U	4 U	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	0.4 U	4 U
1,2-Dichloropropane	ug/m3	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	1.2 U	4.6 U	4.6 U	4.6 U	9.2 U	9.2 U	4.6 U	0.23 U	2.3 U	4.6 U	9.2 U	9.2 U	0.46 U	4.6 U	0.23 U	0.46 U	0.46 U	4.6 U
1,2-Dichlorotetrafluoroethane	ug/m3	7 U	7 U	7 U	7 U	7 U	7 U	1.8 U	7 U	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	0.7 U	7 U
1,3,5-Trimethylbenzene	ug/m3	5 U	5 U	5 U	5 U	5 U	5 U	1.3 U	5 U	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	0.5 U	5 U
1,3-Butadiene	ug/m3	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	0.55 U	2.2 U	2.2 U	2.2 U	4.4 U	4.4 U	2.2 U	0.11 U	2.3 U	4.5 U	8.9 U	8.9 U	0.45 U	4.5 U	0.23 U	0.45 U	0.45 U	2.2 U
1,3-Dichlorobenzene	ug/m3	6 U	6 U	6 U	6 U	6 U	6 U	1.5 U	6 U	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	0.6 U	6 U
1,4-Dichlorobenzene	ug/m3	6 U	6 U	6 U	6 U	6 U	6 U	1.5 U	6 U	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	0.6 U	6 U
1,4-Dioxane	ug/m3																								
2-Butanone	ug/m3	3.5	8.9	12	11	36	10	36	6.4	37	32	48	60	21	40	7.8	31	30	21	4	11	10	9	12	22
2-Hexanone	ug/m3	4 U	4 U	4 U	4 U	4 U	4 U	1 U	4 U	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	0.4 U	4 U
4-Ethyltoluene	ug/m3	5 U	5 U	5 U	5 U	5 U	5 U	1.3 U	5 U	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	0.5 U	5 U
4-Methyl-2-pentanone	ug/m3	4 U	4 U	4 U	4 U	4 U	4 U	1 U	4 U	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	0.4 U	4 U
Acetone	ug/m3	35	16	9.6 U	9.6 U	53	24	26	12	1600	31	75	63	4.8 U	0.24 U	20	9.6 U	20 U	20 U	31	9.6 U	13	0.96 U	16	24
Benzene	ug/m3	5.3	11	5.6	7.8	3.2 U	6.8	1.4	3.2 U	14	7.3	8.4	6.4 U	3.2 U	2.5	2.7	3.2 U	6.4 U	6.4 U	0.61	3.2 U	0.63	0.43	0.74	5.5
Benzyl chloride	ug/m3	5.2 U	5.2 U	5.2 U	5.2 U	5.2 U	5.2 U	1.3 U	5.2 U	5.2 U	5.2 U	11 U	11 U	5.2 U	0.26 U	2.6 U	5.2 U	11 U	11 U	0.52 U	5.2 U	0.26 U	0.52 U	0.52 U	5.2 U
Bromodichloromethane	ug/m3	6.6 U	6.6 U	6.6 U	6.6 U	6.6 U	6.6 U	1.7 U	6.6 U	6.6 U	6.6 U	14 U	14 U	6.6 U	0.33 U	3.3 U	6.6 U	14 U	14 U	0.66 U	6.6 U	0.33 U	0.66 U	0.66 U	6.6 U
Bromoform	ug/m3	11 U	11 U	11 U	11 U	11 U	11 U	2.6 U	11 U	11 U	11 U	21 U	21 U	11 U	0.51 U	5.1 U	11 U	21 U	21 U	1.1 U	11 U	0.51 U	1.1 U	1.1 U	11 U
Bromomethane	ug/m3	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	0.95 U	3.8 U	3.8 U	3.8 U	7.6 U	7.6 U	3.8 U	0.19 U	1.9 U	3.8 U	7.6 U	7.6 U	0.38 U	3.8 U	0.19 U	0.38 U	0.38 U	3.8 U
Carbon disulfide	ug/m3	3.2 U	3.2 U	27	25	3.2 U	3.2 U	1.8	3.2 U	3.2 U	63	32	20	3.2 U	4.6	1.6 U	3.2 U	6.4 U	6.4 U	4.3	3.2 U	0.17	3.8	0.77	3.2 U
Carbon tetrachloride	ug/m3	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	6.2 U	1.6 U	6.2 U	6.2 U	6.2 U	13 U	13 U	6.2 U	0.57	3.1 U	6.2 U	13 U	13 U	0.62 U	6.2 U	0.38	0.62 U	0.62 U	6.2 U
Chlorobenzene	ug/m3	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	1.2 U	4.6 U	4.6 U	4.6 U	9.2 U	9.2 U	4.6 U	0.23 U	2.3 U	4.6 U	9.2 U	9.2 U	0.46 U	4.6 U	0.23 U	0.46 U	0.46 U	7.2
Chloroethane	ug/m3	170	250	700	590	41	44	17	33	3400	1700	1200	450	42	220	110	94	92	88	9.8	11	1.3	9.9	4.8	7.2
Chloroform	ug/m3	20	34	9.6	15	13	23	3.6	7.5	27	17	20	17	4.8 U	8.8	12	14	11	11	4.1	5.8	0.49	6.2	6	7.9
Chloromethane	ug/m3	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	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	0.2 U	2 U
cis-1,2-Dichloroethene	ug/m3	2000	2200	6100	7600	610	1200	560	1300	14000	4700	6300	4200	300	1600	1600	1500	1300	1200	190	280	21	240	180	260
cis-1,3-Dichloropropene	ug/m3	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	4.4 U	4.4 U	4.4 U	8.8 U	8.8 U	4.4 U	0.22 U	2.2 U	4.4 U	8.8 U	8.8 U	0.44 U	4.4 U	0.22 U	0.44 U	0.44 U	4.4 U
Cyclohexane	ug/m3	3.4 U	5.7	8.4	8.8	3.4 U	3.4 U	0.85 U	3.4 U	3.4 U	3.4 U	6.8 U	6.8 U	3.4 U	0.17 U	1.7 U	3.4 U	6.8 U	6.8 U	0.34 U	3.4 U	0.17 U	0.34 U	0.34 U	3.4 U
Dibromochloromethane	ug/m3	8.6 U	8.6 U	8.6 U	8.6 U	8.6 U	8.6 U	2.2 U	8.6 U	8.6 U	8.6 U	18 U	18 U	8.6 U	0.43 U	4.3 U	8.6 U	18 U	18 U	0.86 U	8.6 U	0.43 U	0.86 U	0.86 U	8.6 U
Dichlorodifluoromethane	ug/m3	5 U	170	5 U	5 U	5.4	7	2.6	5 U	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	1.7	5 U
Ethanol	ug/m3	33	40	12	8.3	39	1.8 U	8.6	1.8 U	960	81	120	120	17	21	200	96	32	33	39	60	23	62	10	19 U
Ethyl acetate	ug/m3	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	0.9 U	3.6 U	7.3 U	3.6 U	7.2 U	15 U	7.3 U	0.37 U	1.8 U	3.6 U	7.2 U	7.2 U	0.36 U	3.6 U	0.18 U	0.36 U	0.36 U	3.6 U
Ethylbenzene	ug/m3	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	4.4 U	9.4	4.4 U	8.8 U	8.8 U	4.4 U	0.22 U	2.2 U	4.4 U	8.8 U	8.8 U	0.44 U	4.4 U	0.22 U	0.44 U	0.44 U	4.4 U
Hexachlorobutadiene	ug/m3	22 U	22 U	22 U	22 U	22 U	22 U	5.4 U	22 U	22 U	22 U	43 U	43 U	22 U	1.1 U	5.3 U	11 U	22 U	22 U	1.1 U	11 U	0.53 U	1.1 U	1.1 U	11 U
Hexane	ug/m3	3.6 U	3.6 U	3.6 U	6.6	3.6 U	3.6 U	3.2	3.6 U	16	4.9	270	7.2 U	3.6 U	2.3	1.9	3.6 U	7.2 U	7.2 U	0.36 U	3.6 U	0.74	0.36 U	0.92	3.6 U
Isopropyl alcohol	ug/m3	28	2.4 U	2.4 U	2.4 U	26	5.9	7.5	7.1	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	0.5 U	2.6	2.4 U
m,p-Xylene	ug/m3	8.6 U	8.6 U	8.6 U	8.6 U	8.6 U	8.6 U	2.2 U	8.6 U	25	8.6 U	18 U	18 U	8.6 U	0.43 U	4.3 U	8.6 U	18 U	18 U	0.86 U	8.6 U	0.49	0.86 U	0.86 U	8.6 U
Methyl methacrylate	ug/m3																								
Methylene chloride	ug/m3	7 U	19	7 U	17	7 U	13	19	12	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	1.4 U	7 U
Methyl-t-butyl ether	ug/m3	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	0.9 U	3.6 U	3.6 U	3.6 U	7.2 U	7.2 U	3.6 U	0.18 U	1.8 U	3.6 U	7.2 U	7.2 U	0.36 U	3.6 U	0.18 U	0.36 U	0.36 U	3.6 U
Naphthalene	ug/m3																								
n-Heptane	ug/m3	4 U	4 U	4 U	4 U	4 U	4 U	1 U	4 U	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	0.4 U	4 U
o-Xylene	ug/m3	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	4.4 U	8.4	4.4 U	8.8 U	8.8 U	4.4 U	0.22 U	2.2 U	4.4 U	8.8 U	8.8 U	0.44 U	4.4 U	0.22 U	0.44 U	0.44 U	4.4 U
Propylene (Propene)	ug/m3	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	0.45 U	1.8 U	3.5 U	100	3.6 U	6.9 U	3.5 U	0.18 U	3.5 U	6.9 U	6.9 U	14 U	0.69 U	6.9 U	0.35 U	0.69 U	0.69 U	18 U
Styrene	ug/m3	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	4.2 U	1.1 U	4.2 U	4.2 U	4.2 U	8.4 U	8.4 U	4.2 U	0.21 U	2.1 U	4.2 U	8.4 U	8.4 U	0.42 U	4.2 U	0.21 U	0.42 U	0.42 U	4.2 U
Tetrachloroethene	ug/m3	600	1200	2300	2500	73	310	31	170	140	60	430	540	47	110	110	260	67	72	4.6	200	4.8	45	450	1300
Tetrahydrofuran	ug/m3	6.3	21	19	3 U	32	14	37	5.1	77	77	150	180	66	110	1.5 U	96	85	67	15	32	28	43	34	54
Toluene	ug/m3	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	1.4	3.8 U	36	3.8 U	7.6 U	7.6 U	3.8 U	0.59	3.4	4.7	7.6 U	7.6 U	0.38 U	3.8 U	3.6	0.38 U	0.75	3.8 U
trans-1,2-Dichloroethene	ug/m3	9.2	23	69	180	4 U	8.8	2.5	8	110	61	47	47	4.6	33	29	34	30	26	3.4	4.6	0.36	4.1	3	4.6
trans-1,3-Dichloropropene	ug/m3	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	1.1 U	4.4 U	4.4 U	4.4 U	8.8 U	8.8 U	4.4 U	0.22 U	2.2 U	4.4 U	8.8 U	8.8 U	0.44 U	4.4 U	0.22 U	0.44 U	0.44 U	4.4 U
Trichloroethene	ug/m3	31000	42000	25000	25000	8600	19000	2700	5500	36000	17000	26000	13000	1400	6200	4000	3600	4000	4300	390	1400	58	460	1200	2000
Trichlorofluoromethane	ug/m3	520	540	1300	1800	430	840	240	370	9900	2300	1800	1000	98	600	1800	1400	1500	1500	260	230	29	230	210	300
Trichlorotrifluoroethane	ug/m3	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	7.6 U	1.9 U	7.6 U	7.6 U	7.6 U	16 U	16 U	7.6 U	0.74	3.8 U	7.6 U	16 U	16 U	0.76 U	7.6 U	0.53	0.76 U	0.76 U	7.6 U
Vinyl acetate	ug/m3	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	0.9 U	3.6 U	15 U	3.6 U	7.2 U	29 U	15 U	0.71 U	7.1 U	15 U	29 U	29 U	1.5 U	15 U	0.71 U	1.5 U	1.5 U	3.6 U
Vinyl chloride	ug/m3	2.7	4.8	9.4	8.1	2.6 U	2.6 U	0.65	2.6 U	110	20	10	5.2 U	2.6 U	3.4	1.3 U	2.6 U	5.2 U	5.2 U	0.26 U	2.6 U	0.13 U	0.26 U	0.26 U	2.6 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter

Prepared By: AKN, 9/16/2019
Checked By: HWC, 9/16/2019

Appendix E2.
Summary of Analytical Results - Extraction Well and Post-Treatment Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:		Extraction Well - Large Retail Space																						
Location:		EW-Combined																						
Sample ID:		EW-COMBINED-070110	EW-COMBINED-091610	EW-COMBINED-120710	EW-COMBINED-021711	EW-COMBINED-091511	EW-Combined-120811	EW-Combined-030812	EW-Combined-061412	EW-Combined-091312	EW-Combined-010313	EW-Combined-031513	EW-Combined-060713	EW-Combined-090613	EW-Combined-121313	EW-Combined-030714	EW-Combined-061314	EW-Combined-091214	EW-Combined-121914	EW-Combined-032715	EW-Combined-061115	EW-Combined-091615	EW-combined-121815	EW-combined-021816	EW-Combined-080516
Sample Date:		7/1/2010	9/16/2010	12/7/2010	2/17/2011	9/15/2011	12/8/2011	3/8/2012	6/14/2012	9/13/2012	1/3/2013	3/15/2013	6/7/2013	9/6/2013	12/13/2013	3/7/2014	6/13/2014	9/12/2014	12/19/2014	3/27/2015	6/11/2015	9/16/2015	12/18/2015	2/18/2016	8/5/2016
Analyte	**Units**																							
1,1,1,2-Tetrachloroethane	ug/m3					2.5 U		12 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	0.44 U	1.2 U	1.2 U	1.2 U	2.5 U	1.2 U	1.2 U	1.2 U	2.5 U		2.5 U	
1,1,1-Trichloroethane	ug/m3	2000	4700	280	2500	2400	340	1100	1800	2800	5.5	610	850	1900	1500	780	770	1300	420	500	1200	3400 E	1600	320	4000
1,1,2,2-Tetrachloroethane	ug/m3	0.68 U	0.68 U	0.69 U	0.69 U	1.4 U	0.69 U	3.4 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.24 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	1.4 U	1.4 U	1.4 U	6.9 U
1,1,2-Trichloroethane	ug/m3	0.54 U	0.55	0.55 U	0.55 U	1.1 U	0.55 U	2.7 U	0.55 U	0.26 J	0.55 U	0.55 U	0.55 U	0.19 U	0.55 U	0.55 U	0.55 U	1.1 U	0.55 U	0.55 U	0.28 J	1.1 U	1.1 U	1.1 U	5.5 U
1,1-Dichloroethane	ug/m3	290	330	36	170	200	70	78	130	200	0.4	59	68	150	62	53	68	130	55	49	100	190	69	25	360
1,1-Dichloroethene	ug/m3	52	81	7.3	58	44	21	34	42	15	0.4	24	38	56	24	27	40	52	14	22	46	160	21	9	160
1,2,4-Trichlorobenzene	ug/m3	0.74 U	0.74 U	0.74 U	0.74 U	3 U	1.5 U	3800	1.5 U	1.5 U	1.5 U	1.5 U	0.74 U	0.26 U	0.74 U	0.74 U	0.74 U	1.5 U	0.74 U	0.74 U	0.74 U	1.5 U	1.5 U	1.5 U	7.4 U
1,2,4-Trimethylbenzene	ug/m3	0.5 U	0.5 U	0.49 U	0.49 U	0.98 U	1.2	4.9 U	0.57	0.24 J	0.49 U	14	0.49 U	0.21	0.49 U	0.49 U	0.49 U	0.98 U	0.49 U	0.49 U	0.49 U	0.98 U	0.98 U	0.98 U	4.9 U
1,2-Dibromoethane (EDB)	ug/m3	0.76 U	0.76 U	0.77 U	0.77 U	1.5 U	0.77 U	3.8 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.27 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	1.5 U	1.5 U	1.5 U	7.7 U
1,2-Dichlorobenzene	ug/m3	0.6 U	0.6 U	0.6 U	0.6 U	1.2 U	0.6 U	7.3	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.21 U	0.6 U	0.6 U	0.6 U	1.2 U	0.6 U	0.6 U	0.6 U	1.2 U	1.2 U	1.2 U	6 U
1,2-Dichloroethane	ug/m3	0.4 U	0.4 U	0.4 U	0.4 U	0.81 U	0.4 U	2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.14 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.81 U	0.81 U	0.81 U	4 U
1,2-Dichloropropane	ug/m3	0.46 U	0.46 U	0.46 U	0.46 U	0.92 U	0.46 U	2.3 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.16 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.92 U	0.92 U	0.92 U	4.6 U
1,2-Dichlorotetrafluoroethane	ug/m3	0.7 U	0.7 U																				1.4 U		7 U
1,3,5-Trimethylbenzene	ug/m3	0.5 U	0.5 U	0.49 U	0.49 U	0.98 U	0.29 J	4.9 U	0.15 J	0.49 U	0.49 U	3.9	0.49 U	0.17 U	0.49 U	0.49 U	0.49 U	0.98 U	0.49 U	0.49 U	0.49 U	0.98 U	0.98 U	0.98 U	4.9 U
1,3-Butadiene	ug/m3	0.22 U	0.22 U	0.22 U	0.22 U	0.44 U	0.22 U	2.2 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.078 U	0.22 U	0.22 U	0.22 U	0.44 U	0.22 U	0.22 U	0.22 U	0.44 U	0.44 U	0.44 U	2.2 U
1,3-Dichlorobenzene	ug/m3	0.6 U	0.6 U	0.6 U	0.6 U	1.2 U	0.6 U	6 U	0.6 U	0.6 U	0.6 U	1.1	0.6 U	0.21 U	0.6 U	0.6 U	0.6 U	1.2 U	0.6 U	0.6 U	0.6 U	1.2 U	1.2 U	1.2 U	6 U
1,4-Dichlorobenzene	ug/m3	0.6 U	0.6 U	0.6 U	0.6 U	1.2 U	0.6 U	6 U	0.6 U	0.6 U	0.6 U	0.64	0.6 U	0.21 U	0.6 U	0.6 U	0.6 U	1.2 U	0.6 U	0.6 U	0.6 U	1.2 U	1.2 U	1.2 U	6 U
1,4-Dioxane	ug/m3					0.72 U																	7.2 U		36 U
2-Butanone	ug/m3	22	10	4.5	4.5 B	24 J	1.3 J	120 U	110	16	12 J	22	5.3 J	7.6	0.97 J	2.5 J	5.1 J	3.3 J	1.4 J	1.2 J	1.2 J	1.3 J	1.5 J	24 U	14 J
2-Hexanone	ug/m3	0.4 U	0.4 U	0.41 U	0.41 U	0.82 J	0.16 J	4.1 U	0.31 J	0.41 U	0.41 U	1.4	0.41 U	0.26	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.41 U	0.41 U	0.82 U	0.82 U	0.82 U	4.1 U
4-Ethyltoluene	ug/m3	0.5 U	0.5 U	0.49 U	0.49 U	0.98 U	0.27 J	4.9 U	0.49 U	0.49 U	0.49 U	3.4	0.49 U	0.17 U	0.49 U	0.49 U	0.49 U	0.98 U	0.49 U	0.49 U	0.49 U	0.98 U	0.98 U	0.98 U	4.9 U
4-Methyl-2-pentanone	ug/m3	0.4 U	0.4 U	0.41 U	0.41 U	0.82 U	0.16 J	4.1 U	0.38 J	0.41 U	0.41 U	8.7	0.41 U	0.14 U	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.13 J	0.41 U	0.82 U	0.82 U	0.82 U	4.1 U
Acetone	ug/m3	16	6.6	11 B	6.3 B	19 J	6.6 J	22 J	19	14 B	9.5	75	12	11	6.6 J	15	9.8	19 U	6.2 J	6.1 J	9.5 U	12 J	6.7 J	19 U	39 J
Benzene	ug/m3	0.84	1.7	0.5	0.72	0.77	0.56	3.2 U	1	0.96	0.32	5	0.32 U	0.82	0.32 U	0.63	0.66	0.35 J	0.33	0.39	0.36	0.55 J	0.69	0.64 U	3.2 U
Benzyl chloride	ug/m3	0.52 U	0.52 U	0.52 U	0.52 U	1 U	0.52 U	5.2 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.18 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	1 U	1 U	1 U	5.2 U
Bromodichloromethane	ug/m3	0.66 U	0.66 U	0.67 U	0.67 U	1.3 U	0.67 U	3.4 U	10	0.67 U	0.67 U	0.67 U	0.67 U	0.24 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	1.3 U	9.1	1.3 U	6.7 U
Bromoform	ug/m3	1.1 U	1.1 U	1 U	1 U	2.1 U	1 U	10 U	1 U	1 U	1 U	1 U	1 U	0.36 U	1 U	1 U	1 U	2.1 U	1 U	1 U	1 U	2.1 U	2.1 U	2.1 U	10 U
Bromomethane	ug/m3	0.38 U	0.38 U	0.39 U	0.39 U	0.78 U	0.39 U	3.9 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.14 U	0.39 U	0.39 U	0.39 U	0.78 U	0.39 U	0.39 U	0.39 U	0.78 U	0.78 U	0.78 U	3.9 U
Carbon disulfide	ug/m3	1.1	1.3	0.31 U	0.73	6.2 J	3.1 U	31 U	1.7 J	3.6	3.1 J	0.82 J	3.1 U	0.73 J	3.1 U	3.1 U	0.4 J	0.52 J	0.33 J	0.24 J	0.37 J	1 J	6.2 U	6.2 U	31 U
Carbon tetrachloride	ug/m3	0.73	1.1	0.63 U	0.63	1.3 J	0.48 J	3.1 U	0.5 J	0.74	0.63 U	0.63 U	0.63 U	0.68	0.63 U	0.63 U	0.63 U	0.58 J	0.4 J	0.28 J	0.49 J	0.75 J	1.3 U	1.3 U	6.3 U
Chlorobenzene	ug/m3	0.46 U	0.46 U	0.46 U	0.46 U	0.92 U	0.46 U	4.6 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.16 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.92 U	0.92 U	0.92 U	4.6 U
Chloroethane	ug/m3	9.4	17	1	3.6	6.7	2.1	2.6 U	3	5.3	0.26	1.1	1.4	3.3	1.2	1	1.5	1.8	0.77	0.44	1	2.7	0.93	0.53 U	8.6
Chloroform	ug/m3	8	8.3	1.6	6.9	7.6	2.7	3.2	6.3	8.5	0.49	3.5	2.3	7	1.5	3.1	3.4	4.9	3.4	2.5	6.4	4.1	3.1	1.6	20
Chloromethane	ug/m3	0.2 U	0.2 U	0.21 U	0.21 U	0.41 U	0.21 U	2.1 U	20	0.21 U	0.21 U	0.21 U	0.41 U	0.14 U	0.41 U	0.41 U	0.41 U	0.83 U	0.41 U	0.41 U	0.41 U	0.83 U	15	0.83 U	4.1 U
cis-1,2-Dichloroethene	ug/m3	260	360	28	120	160	38	47	75	150	0.4	30	24	93	12	25	30	57	25	21	52	41	20	12	160
cis-1,3-Dichloropropene	ug/m3	0.44 U	0.44 U	0.45 U	0.45 U	0.91 U	0.45 U	2.3 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.16 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.91 U	0.91 U	0.91 U	4.5 U
Cyclohexane	ug/m3	0.34 U	0.55	0.34 U	0.34 U	0.69 U	0.34 U	3.4 U	0.34 U	0.34 U	0.34 U	21	0.34 U	0.12 U	0.34 U	0.34 U	0.34 U	0.69 U	0.34 U	0.34 U	0.34 U	0.69 U	0.69 U	0.69 U	3.4 U
Dibromochloromethane	ug/m3	0.86 U	0.86 U	0.85 U	0.85 U	1.7 U	0.85 U	4.3 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.3 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	1.7 U	1.7 U	1.7 U	8.5 U
Dichlorodifluoromethane	ug/m3	2.5	1.6	3	4.1	2.9	2.9	4.9 U	2.9	2.9	0.49	2.5	2.1	11	3.2	2.4	2.1	2.5	2.7	1.8	2.9	2.6	3.2	2.7	5
Ethanol	ug/m3	15	1.9 U	8.2	17	15 J	9.2	75 U	7.2 J	12	7.5	320	34	30	11	38	41	15	12	5.2 J	5.1 J	20	18	9.5 J	140
Ethyl acetate	ug/m3	0.36 U	0.36 U	0.36 U	0.36 U	0.72 U	1.2	3.6 U	1.3	0.36 U	0.36 U	110	0.36 U	0.13 U	1.8	1.8	0.36 U	0.72 U	0.36 U	11	1.3	0.72 U	0.72 U	0.72 U	3.6 U
Ethylbenzene	ug/m3	0.44 U	0.58	0.43 U	0.43 U	0.87 U	0.58	4.3 U	0.28 J	0.21 J	0.43 U	13	0.43 U	0.2	0.43 U	0.43 U	0.43 U	0.87 U	0.43 U	0.43 U	0.43 U	0.87 U	0.87 U	0.87 U	4.3 U
Hexachlorobutadiene	ug/m3	1.1 U	1.1 U	1.1 U	1.1 U	2.1 U	1.1 U	11 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	0.37 U	1.1 U	1.1 U	1.1 U	2.1 U	1.1 U	1.1 U	1.1 U	2.1 U	2.1 U	2.1 U	11 U
Hexane	ug/m3	0.44	0.71 U	0.7 U	0.8	28 U	0.66 J	140 U	0.91 J	1.5 J	14 J	6.8 J	14 U	2.2 J	1.2 J	0.8 J	14 U	28 U	14 U	7.9 J	14 U	1.6 J	28 U	28 U	140 U
Isopropyl alcohol	ug/m3	0.24 U	0.5 U	0.84	0.25 U	20 J	9.8 U	98 U	3.1 J	2.9 J	9.8 U	27	9.8 U	3.4 U	3 J	1.6 J	1.6 J	2.7 J	9.8 U	9.8 U	3.8 J	3.7 J	20 U	20 U	98 U
m,p-Xylene	ug/m3	0.86 U	1.6	0.87 U	0.87 J	1.7 U	1.6	8.7 U	0.51 J	0.59 J	0.87 U	34	0.87 U	0.4	0.87 U	0.57 J	0.95	1.7 U	0.25 J	0.87 U	0.87 U	1.7 U	1.7 U	1.7 U	8.7 U
Methyl methacrylate	ug/m3				0.41 U	0.82 U	0.41 U	4.1 U	0.41 U	0.41 U	0.41 U	3.5	0.41 U	0.14 U	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.41 U		0.82 U		0.82 U	
Methylene chloride	ug/m3	2.1	0.9	0.78	2.9	6.9 J	2.2 J	8.1 J	2.3 J	2.2 JB	3.5 J	2.4 J	1.3 J	4.6	2.1 J	1.7 J	1.1 J	1.4 J	3.5 U	3.5 U	3.5 U	5.3 J	6.9 U	6.9 U	35 U
Methyl-t-butyl ether	ug/m3	0.36 U	0.36 U	0.36 U	0.36 U	0.72 U	0.24 J	3.6 U	1.1	0.17 J	0.36 U	0.36 U	0.36 U	0.17	0.36 U	0.36 U	0.36 U	0.72 U	0.36 U	0.2 J	0.2 J	0.72 U	0.72 U	0.72 U	3.6 U
Naphthalene	ug/m3																						1 U		5.2 U
n-Heptane	ug/m3	0.4 U	0.4 U	0.41 U	0.41 U	0.82 U	0.23 J	4.1 U	0.41 U	0.41 U	0.41 U	4.4	0.41 U	0.14 U	0.41 U	0.41 U	0.41 U	0.82 U	0.41 U	0.41 U	0.41 U	0.82 U	0.82 U	0.82 U	4.1 U
o-Xylene	ug/m3	0.44 U	0.56	0.43 U	0.43 U	0.87 U	0.69	4.3 U	0.28 J	0.25 J	0.43 U	16	0.43 U	0.2	0.43 U	0.43 U	0.43 U	0.87 U	0.43 U	0.43 U	0.43 U	0.87 U	0.87 U	0.87 U	4.3 U
Propylene (Propene)	ug/m3	1.8 U	0.69 U	1.8	1.7 U	14 U	6.9 U	13 J	3.8 J	6.9 U	6.9 U	6.9 U	6.9 U	2.4 U	6.9 U	6.9 U	6.9 U	14 U	6.9 U	1.6 J	6.9 U	14 U	14 U	14 U	8.2 J
Styrene	ug/m3	0.42 U	0.42 U	0.43 U	0.43 U	0.85 J	0.21 J	4.3 U	0.54	0.39 J	0.43 U	14	0.43 U	0.15 U	0.43 U	0.43 U	0.43 U	0.85 U	0.43 U	0.43 U	0.43 U	0.85 U	0.85 U	0.85 U	4.3 U
Tetrachloroethene	ug/m3	640	750	160	920	440	8.1	170	530	910	6.8	60	23	250	7	260	82	230	100	400	1400	63	86	37	870
Tetrahydrofuran	ug/m3	65	31	11	11	21	0.27 J	8.3	3800	110	0.29	4.1	7.2	10	0.79	1.7	4.7	2.9	0.85	1.2	0.65	0.59 U	0.59 U	0.59 U	9.4
Toluene	ug/m3	0.41	3.5	0.38	1.4	0.75 J	2.5	3.8 U	1.4	0.87	0.38 U	74	0.57	0.67	0.38 U	1.1	1.8	0.75 U	0.43	0.2 J	0.15 J	1.2	1.3	0.75 U	6.6
trans-1,2-Dichloroethene	ug/m3	5.5	6.6	0.6	1.9	3.5	1.1	2 U	1.7	1.9	0.4	0.86	0.62	2.6	0.4 U	0.59	0.89	1.4	0.6	0.65	1.1	0.97	0.79 U	0.79 U	4
trans-1,3-Dichloropropene	ug/m3	0.44 U	0.44 U	0.45 U	0.45 U	0.91 U	0.45 U	2.3 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.16 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.91 U	0.91 U	0.91 U	4.5 U
Trichloroethene	ug/m3	1700	3200	240	1800	1900	97	730	1500	2600	5.4	380	280	1200	160	560	560	800	480	490	1300	1200 E	880	200	3200
Trichlorofluoromethane	ug/m3	440	410	71	200	610	200	150	260	100	0.56	130	140	410	200	98	160	360	200	80	170	340	230	93	1200
Trichlorotrifluoroethane	ug/m3	0.76 U	0.76 U	0.77 U	0.77 U	1.5 J	0.89	3.8 U	0.77 U	0.37 J	0.77 U	0.92	1.4	1.3	0.77 U	0.77 U	0.77 U	0.86 J	0.89	0.54 J	0.89 J	0.89 J	6.1 U	6.1 U	31 U
Vinyl acetate	ug/m3	0.36 U	0.71 U	0.7 U	0.35 U	0.7 U	0.35 U	7 U	1.4	0.7 U	0.7 U	0.7 U	7 U	2.5 U	7 U	7 U	7 U	14 U	7 U	7 U	7 U	14 U	14 U	14 U	70 U
Vinyl chloride	ug/m3	0.26 U	0.4	0.26 U	0.26 U	0.51 U	0.26 U	1.3 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.09 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.51	0.51 U	0.51 U	2.6 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter

Prepared By: AKN, 9/16/2019
Checked By: HWC, 9/16/2019

Appendix E2.
Summary of Analytical Results - Extraction Well and Post-Treatment Sampling for Large Retail Space
Former Gorham Manufacturing Site
Providence, Rhode Island

Area:		Extraction Well - Large Retail Space							Post Treatment - Large Retail Space											
Location:		EW-Combined							PostCarbon											
Sample ID:		EW-Combined-021017	EW-Combined-090717	EW-Combined-022818	EW-Combined-091218	EW-Combined-020819	EW-Combined-090619	EW-Combined-021420	Post carbon-020309	POST CARBON-021109	POST CARBON-021809	POST CARBON-022609	POST CARBON-041409	POST CARBON-100809	Post-Carbon-010810	Post-Carbon-121914	Post Carbon-091218	Post Carbon-020819	Post Carbon-090619	Post Carbon-021420
Sample Date:		2/10/2017	9/7/2017	2/28/2018	9/12/2018	2/8/2019	9/6/2019	2/14/2020	2/3/2009	2/11/2009	2/18/2009	2/26/2009	4/14/2009	10/8/2009	1/8/2010	12/19/2014	9/12/2018	2/8/2019	9/6/2019	2/14/2020
Analyte	**Units**																			
1,1,1,2-Tetrachloroethane	ug/m3	1.2 U	2.5 U	2.5 U	2.5 U	1.2 U	1.2 U	1.2 U								1.2 U	2.5 U	1.2 U	1.2 U	1.2 U
1,1,1-Trichloroethane	ug/m3	260	530	150	690	62	670	200	1	15	45	1.9	13000	0.56	450	380	740	0.55 U	2.3	2.4
1,1,2,2-Tetrachloroethane	ug/m3	0.69 U	1.4 U	1.4 U	1.4 U	0.69 U	0.69 U	0.69 U	0.34 U	1.7 U	0.68 U	0.68 U	68 U	0.34 U	0.34 U	0.69 U	1.4 U	0.69 U	0.69 U	0.69 U
1,1,2-Trichloroethane	ug/m3	0.55 U	1.1 U	1.1 U	1.1 U	0.55 U	0.55 U	0.55 U	0.27 U	1.4 U	0.54 U	0.54 U	54 U	0.27 U	0.27 U	0.55 U	1.1 U	0.55 U	0.55 U	0.55 U
1,1-Dichloroethane	ug/m3	25	67	19	73	13	45	19	0.2 U	1 U	5.4	11000	490	370	610	21	80	0.4 U	2.8	17
1,1-Dichloroethene	ug/m3	11	24	10	27	10	24	10	0.2 U	1 U	0.4 U	6400	96	78	87	3.8	30	0.4 U	9.8	9.1
1,2,4-Trichlorobenzene	ug/m3	0.74 U	1.5 U	1.5 U	1.5 U	1.5 U	0.74 U	0.74 U	0.37 U	1.9 U	0.74 U	0.74 U	74 U	0.37 U	0.37 U	0.74 U	1.5 U	1.5 U	0.74 U	0.74 U
1,2,4-Trimethylbenzene	ug/m3	0.49 U	0.98 U	0.98 U	0.98 U	1.2	0.49 U	0.49 U	0.25 U	1.3 U	0.5 U	0.5 U	50 U	0.25 U	0.25 U	0.49 U	0.98 U	0.49 U	8.1	0.49 U
1,2-Dibromoethane (EDB)	ug/m3	0.77 U	1.5 U	1.5 U	1.5 U	0.77 U	0.77 U	0.77 U	0.38 U	1.9 U	0.76 U	0.76 U	76 U	0.38 U	0.38 U	0.77 U	1.5 U	0.77 U	0.77 U	0.77 U
1,2-Dichlorobenzene	ug/m3	0.6 U	1.2 U	1.2 U	1.2 U	2 J	0.6 U	0.6 U	0.3 U	1.5 U	0.6 U	0.6 U	60 U	0.3 U	0.3 U	0.6 U	1.2 U	2.4 U	0.6 U	0.6 U
1,2-Dichloroethane	ug/m3	0.4 U	0.81 U	0.81 U	0.81 U	0.4 U	0.4 U	0.4 U	0.2 U	1 U	0.4 U	0.4 U	40 U	0.2 U	0.2 U	0.4 U	0.81 U	0.4 U	0.4 U	0.4 U
1,2-Dichloropropane	ug/m3	0.46 U	0.92 U	0.92 U	0.92 U	0.46 U	0.46 U	0.46 U	0.23 U	1.2 U	0.46 U	0.46 U	46 U	0.23 U	0.23 U	0.46 U	0.92 U	0.46 U	110	0.46 U
1,2-Dichlorotetrafluoroethane	ug/m3								0.35 U	1.8 U	0.7 U	0.7 U	70 U	0.35 U	0.35 U					
1,3,5-Trimethylbenzene	ug/m3	0.49 U	0.98 U	0.98 U	0.98 U	1.2	0.49 U	0.49 U	2.1	1.3 U	0.5 U	0.5 U	50 U	0.25 U	0.25 U	0.49 U	0.98 U	0.49 U	2.9	0.49 U
1,3-Butadiene	ug/m3	0.22 U	0.44 U	0.44 U	0.44 U	0.22 U	0.22 U	0.22 U	0.11 U	0.55 U	0.22 U	0.22 U	22 U	0.23 U	0.23 U	0.22 U	0.44 U	0.22 U	0.22 U	0.22 U
1,3-Dichlorobenzene	ug/m3	0.6 U	1.2 U	1.2 U	1.2 U	0.6 U	0.6 U	0.6 U	2.9	1.5 U	0.6 U	0.6 U	60 U	0.3 U	0.3 U	0.6 U	1.2 U	1.4 J	0.6 U	0.6 U
1,4-Dichlorobenzene	ug/m3	0.6 U	1.2 U	1.2 U	1.2 U	0.6 U	0.6 U	0.6 U	0.3 U	1.5 U	0.6 U	0.6 U	60 U	0.3 U	0.3 U	0.6 U	1.2 U	1.5 J	0.6 U	0.6 U
1,4-Dioxane	ug/m3																			
2-Butanone	ug/m3	0.59 J	2.5 J	1.3 J	1.9 J	3.1 J	1.6 J	2 J	10	6.3	9.4	5.5	330	1.9	2	2.5 J	0.52 J	12 U	27	1.9 J
2-Hexanone	ug/m3	0.41 U	0.82 U	0.82 U	0.82 U	0.41 U	0.41 U	0.41 U	0.2 U	1 U	0.4 U	0.4 U	13000	0.27	0.34	0.41 U	0.82 U	0.41 U	0.41 U	0.41 U
4-Ethyltoluene	ug/m3	0.49 U	0.98 U	0.98 U	0.98 U	0.49 U	0.49 U	0.49 U	2.1	1.3 U	0.5 U	0.5 U	50 U	0.25 U	0.25 U	0.49 U	0.98 U	0.49 U	9.5	0.49 U
4-Methyl-2-pentanone	ug/m3	0.41 U	0.82 U	0.82 U	0.82 U	0.41 U	0.41 U	0.41 U	5	1 U	0.4 U	0.4 U	40 U	0.2 U	0.2 U	0.41 U	0.82 U	0.41 U	28	0.41 U
Acetone	ug/m3	3.7 J	8.7 J	19 U	19 U	9.4 J	4.9 J	12	1200	11	19	12	430	3.6	5.7	21	19 U	3.5 J	71	10
Benzene	ug/m3	0.33	0.51 J	0.4 J	0.49 J	1.4	0.4	0.33	1.3	0.8 U	0.32 U	0.32 U	32 U	0.16 U	0.16 U	0.33	0.55 J	1.2	1.6	0.32 U
Benzyl chloride	ug/m3	0.52 U	1 U	1 U	1 U	0.52 U	0.52 U	0.52 U	0.26 U	1.3 U	0.52 U	0.52 U	52 U	0.26 U	0.26 U	0.52 U	1 U	0.52 U	0.52 U	0.52 U
Bromodichloromethane	ug/m3	1.6	1.3 U	1.3 U	1.3 U	0.67 U	0.67 U	0.67 U	0.33 U	1.7 U	0.66 U	0.66 U	66 U	0.33 U	0.33 U	0.67 U	1.3 U	0.67 U	0.67 U	0.67 U
Bromoform	ug/m3	1 U	2.1 U	2.1 U	2.1 U	1 U	1 U	1 U	0.51 U	2.6 U	1.1 U	1.1 U	110 U	0.51 U	0.51 U	1 U	2.1 U	1 U	1 U	1 U
Bromomethane	ug/m3	0.39 U	0.78 U	0.78 U	0.78 U	0.39 U	3.9 U	0.78 U	0.19 U	0.95 U	0.38 U	0.38 U	38 U	0.19 U	0.19 U	0.39 U	0.78 U	0.39 U	3.9 U	0.78 U
Carbon disulfide	ug/m3	3.1 U	6.2 U	6.2 U	6.2 U	3.1 U	3.1 U	3.1 U	0.16 U	0.8 U	4.1	27	250	0.16 U	0.2	3.1 U	6.2 U	3.1 U	3.1 U	3.1 U
Carbon tetrachloride	ug/m3	0.63 U	1.3 U	1.3 U	0.58 J	0.63 U	89	0.63 U	0.38	1.6 U	0.62 U	0.62 U	62 U	0.31 U	0.31 U	0.35 J	1.3 U	0.63 U	0.63 U	0.63 U
Chlorobenzene	ug/m3	0.46 U	0.92 U	0.92 U	0.92 U	0.46 U	0.46 U	0.46 U	0.23 U	1.2 U	0.46 U	0.46 U	46 U	0.23 U	0.23 U	0.46 U	0.92 U	0.46 U	0.46 U	0.46 U
Chloroethane	ug/m3	0.31	1.3	0.53 U	0.53 U	0.53 U	0.26 U	0.26 U	0.13 U	5100	1800	480	64	19	10	0.26 U	0.53 U	0.53 U	0.26 U	0.26 U
Chloroform	ug/m3	1.5	4.1	1.9	5.1	1.8	3.2	1	0.24 U	1.2 U	0.48 U	0.67	48 U	0.24 U	6.8	1.2	6.5	1.2	0.49 U	0.49 U
Chloromethane	ug/m3	5.7	0.83 U	0.83 U	0.83 U	0.41 U	0.41 U	0.41 U	0.59	0.5 U	0.2 U	0.2 U	23	0.1 U	0.1 U	0.41 U	0.83 U	0.41 U	0.41 U	0.41 U
cis-1,2-Dichloroethene	ug/m3	7.3	41	9.5	42	5.8	27	6.4	0.27	1 U	3.9	5200	820	230	570	8.7	54	1.2	2.3	9.4
cis-1,3-Dichloropropene	ug/m3	0.45 U	0.91 U	0.91 U	0.91 U	0.45 U	0.45 U	0.45 U	0.22 U	1.1 U	0.44 U	0.44 U	44 U	0.22 U	0.22 U	0.45 U	0.91 U	0.45 U	0.45 U	0.45 U
Cyclohexane	ug/m3	0.53	0.69 U	0.69 U	0.69 U	0.34 U	0.34 U	0.34 U	0.93	0.85 U	0.34 U	0.34 U	34 U	0.17 U	0.17 U	0.34 U	0.69 U	0.34 U	0.34 U	0.34 U
Dibromochloromethane	ug/m3	0.85 U	1.7 U	1.7 U	1.7 U	0.85 U	0.85 U	0.85 U	0.43 U	2.2 U	0.86 U	0.86 U	86 U	0.43 U	0.43 U	0.85 U	1.7 U	0.85 U	0.85 U	0.85 U
Dichlorodifluoromethane	ug/m3	1.3	2.2	2.3	2.2	0.49 U	0.49 U	1.7	0.76	4.1	3	2.4	50 U	1.7	1.9	2	2.2	0.49 U	0.49 U	1.6
Ethanol	ug/m3	5.9 J	16	12 J	14 J	25	25	14	740	36	25	9.8	110	0.38 U	2.8	4.7 J	15 U	11	360	6.8 J
Ethyl acetate	ug/m3	0.36 U	2.5	0.72 U	1.4 U	0.36 U	0.36 U	0.36 U	0.37 U	0.9 U	0.36 U	0.73 U	73 U	0.18 U	0.18 U	0.36 U	1.4 U	0.36 U	180	0.36 U
Ethylbenzene	ug/m3	0.43 U	0.87 U	0.87 U	0.87 U	1.1	0.43 U	0.43 U	10	1.1 U	0.44 U	0.44 U	44 U	0.22 U	0.22 U	0.43 U	0.87 U	1.1	33	0.43 U
Hexachlorobutadiene	ug/m3	1.1 U	2.1 U	2.1 U	2.1 U	2.1 U	1.1 U	1.1 U	1.1 U	5.4 U	2.2 U	2.2 U	220 U	0.53 U	0.53 U	1.1 U	2.1 U	2.1 U	1.1 U	1.1 U
Hexane	ug/m3	14 U	28 U	28 U	28 U	14 U	14 U	14 U	3	0.9 U	46	0.36 U	36 U	0.18 U	0.23	0.74 J	28 U	14 U	14 U	14 U
Isopropyl alcohol	ug/m3	0.66 J	1.6 J	20 U	20 U	2.2 J	9.8 U	2.3 J	450	2.9	3.1	47	290	0.25 U	1.4	9.8 U	20 U	9.8 U	230	1.5 J
m,p-Xylene	ug/m3	0.87 U	1.7 U	1.7 U	1.7 U	2.4	1	0.87 U	27	2.2 U	0.86 U	0.86 U	86 U	0.43 U	0.43 U	0.87 U	1.7 U	2.4	120	0.87 U
Methyl methacrylate	ug/m3	0.41 U	0.82 U	0.82 U	0.82 U	0.41 U	0.41 U	0.41 U								0.41 U	0.82 U	0.41 U	0.41 U	0.41 U
Methylene chloride	ug/m3	3.5 U	6.9 U	6.9 U	6.9 U	1.3 J	3.5 U	3.5 U	20	76	17	3	810	0.7 U	0.72	0.55 J	6.9 U	1.2 J	10	0.75 J
Methyl-t-butyl ether	ug/m3	0.36 U	0.72 U	0.72 U	0.72 U	0.36 U	0.36 U	0.36 U	0.18 U	0.9 U	0.36 U	0.36 U	36 U	0.18 U	0.18 U	0.36 U	0.72 U	0.36 U	0.36 U	0.36 U
Naphthalene	ug/m3																			
n-Heptane	ug/m3	0.41 U	0.82 U	0.82 U	0.82 U	0.41 U	0.41 U	0.41 U	1.8	1 U	0.4 U	0.4 U	40 U	0.2 U	0.2 U	0.41 U	0.82 U	0.41 U	15	0.41 U
o-Xylene	ug/m3	0.43 U	0.87 U	0.87 U	0.87 U	1.1	0.43 U	0.43 U	9.5	1.1 U	0.44 U	0.44 U	44 U	0.22 U	0.22 U	0.43 U	0.87 U	1.2	36	0.43 U
Propylene (Propene)	ug/m3	1.4 J	14 U	1.5 J	14 U	6.9 U	6.9 U	6.9 U	0.18 U	98	0.18 U	0.35 U	35 U	0.35 U	0.35 U	2.1 J	14 U	6.9 U	6.9 U	6.9 U
Styrene	ug/m3	0.43 U	0.85 U	0.85 U	0.85 U	0.43 U	0.43 U	0.43 U	3.4	1.1 U	0.42 U	0.42 U	42 U	0.21 U	0.21 U	0.43 U	0.85 U	0.43 U	10	0.43 U
Tetrachloroethene	ug/m3	66	260	66	220	20	110	20	0.72	1.7 U	1.1	0.68 U	68 U	0.52	1.9	19	3	10	7.7	7
Tetrahydrofuran	ug/m3	0.29 U	1.2 U	0.48 J	0.53 J	0.29 U	3.2	0.29 U	6.8	22	40	18	210	4.1	6.5	0.35	0.59 U	0.29 U	0.29 U	0.29 U
Toluene	ug/m3	0.36 J	1.3	0.72 J	1.1	2	1.8	0.57	29	0.95 U	0.65	0.38 U	38 U	0.19 U	0.36	0.28 J	0.39 J	2.1	340	0.38 U
trans-1,2-Dichloroethene	ug/m3	0.4 U	0.81	0.79 U	0.79 U	1.1 J	0.55	0.4 U	0.2 U	1 U	0.4 U	28	40 U	7.7	15	0.18 J	1.2	0.93 J	0.78	0.4 U
trans-1,3-Dichloropropene	ug/m3	0.45 U	0.91 U	0.91 U	0.91 U	0.45 U	0.45 U	0.45 U	0.22 U	1.1 U	0.44 U	0.44 U	44 U	0.22 U	0.22 U	0.45 U	0.91 U	0.45 U	0.45 U	0.45 U
Trichloroethene	ug/m3	180	670	160	800	29	520	100	2	11	16	2.7	54 U	1	1	250	1600	8.2	11	5.9
Trichlorofluoromethane	ug/m3	88	220	67	280	62	230	51	0.71	1.4 U	23	6700	84	180	210	42	280	2.2 J	44	110
Trichlorotrifluoroethane	ug/m3	3.1 U	6.1 U	6.1 U	0.64 J	3.1 U	3.1 U	1 J	1.3	1.9 U	0.76 U	0.76 U	76 U	0.38 U	0.51	0.74 J	0.64 J	3.1 U	3.1 U	3.1 U
Vinyl acetate	ug/m3	0.56 J	14 U	14 U	14 U	7 U	7 U	7 U	0.71 U	0.9 U	0.36 U	1.5 U	150 U	0.71 U	0.71 U	0.8 J	0.49 J	7 U	7 U	7 U
Vinyl chloride	ug/m3	0.26 U	0.51 U	0.51 U	0.51 U	0.26 U	0.26 U	0.26 U	0.13 U	30	13	4.5	26 U	0.13 U	0.13 U	0.26 U	0.51 U	0.26 U	0.26 U	0.26 U

Notes:
NA - not available
U - Not detected, value is the detection limit
B - Compounds detected in method blank as well as field sample
J - Indicates compound was detected at an estimated value.
D - Result from diluted analyses
ug/m3 - micrograms per cubic meter

Prepared By: AKN, 9/16/2019
Checked By: HWC, 9/16/2019