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March 29, 2016

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

**RE: Parcel C-1 Phase II Area – Mashapaug Pond and Cove, Phase III Area – Northeast Upland and Parcel C Remedial Action Work Plan - Parcel C Groundwater Sampling Former Gorham Manufacturing Facility
333 Adelaide Avenue, Providence, Rhode Island
AMEC Project No. 3652150040**

Dear Mr. Martella:

This letter summarizes the February 10, 2016 collection of groundwater samples from locations on Parcel C/C-1 of the Former Gorham Manufacturing Site in Providence, Rhode Island (Figure 1). This activity was performed to supplement groundwater testing done in July and December 2015 and was conducted in accordance with the Remedial Action Work Plan (RAWP) dated March 11, 2015 and corresponding Rhode Island Department of Environmental Management (RIDEM) July 9, 2015 Order of Approval (Order of Approval).

Background

Extensive groundwater investigations were previously conducted throughout the upland portions of the Former Gorham Manufacturing Site property, including Parcel C, and Mashapaug Inner and Outer Coves (MACTEC, 2006a) which identified low levels of VOCs in groundwater immediately upgradient of and along the southern shore of the Inner Cove (Parcels C and C-1). Based on 2006-2010 groundwater data an historic low-level tetrachloroethylene and trichloroethylene (PCE/TCE) plume (a/k/a western plume) was identified that originates from the fill material in the northwestern corner of Parcel C. Groundwater and sediment data collected during the same period (2006-2010) demonstrated that a clear trend of decreasing contaminant concentrations within the western plume had occurred over time (AMEC 2014, 2015).

RIDEM's Order of Approval requires Textron to monitor Parcel C/C-1 groundwater following completion of the remedial action, by sampling six wells (MW-235S, MW-236S, MW-237S, MW-FS, MW-241, and MW-D) until data from three consecutive sampling rounds demonstrate that Parcel C groundwater is compliant with RIDEM's GB Groundwater Objectives with no increasing trends of volatile organic compounds (VOC), and that Parcel C-1 groundwater is

Textron, Inc.
Former Gorham Manufacturing Facility, Providence, RI
Remedial Action Work Plan – Phase II Area- Mashapaug Pond and Cove, Phase III Area – Northeast Upland and Parcel C
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compliant with the Massachusetts Department of Environmental Protection (MassDEP) GW-3 Standards with no increasing trends of VOC. The February 2016 sampling event is the third sampling round (following the RIDEM Order of Approval), which follows testing done in July and December 2015.

Work Activities Conducted

Amec Foster Wheeler Environment and Infrastructure, Inc., (Amec Foster Wheeler) sampled the six groundwater monitoring wells (MW-235S, MW-236S, MW-237S, MW-FS, MW-241, and MW-D) as shown on Figure 2, on February 10, 2016 using the U.S. Environmental Protection Agency (USEPA) low-flow methodology. Samples from this round were submitted under chain-of-custody control to an off-site laboratory for VOC analysis by USEPA Method 8260B. Field data records for the groundwater sampling event are included in Appendix A.

Groundwater Sampling Results

Table 1 summarizes the VOC concentrations detected during the February 2016 groundwater sampling event. VOC concentrations detected in deep wells in Parcel C (MW-D, MW-241) are measured against the RIDEM GB standards, and VOC concentrations detected in shallow wells in Parcel C-1 (MW-235S, MW-236S, MW-FS, and MW-237S) are measured against MassDEP GW-3 Standards in accordance with the Order of Approval. The analytical laboratory report for the February 2016 groundwater sampling event is included in Appendix B.

As shown in Table 1, at least one VOC was detected in each of the six monitoring wells. None of the detected VOC concentrations in samples collected from the monitoring wells located in Parcel C-1 exceeded the MassDEP GW-3 Standards.

TCE was detected in all six monitoring wells. However, only the groundwater sample from MW-D in Parcel C continues to show elevated concentrations of TCE above RIDEM GB Groundwater Objectives (1.71 mg/liter [L] vs. 0.54 mg/L), which was the highest detected concentration of TCE detected in the six wells during this sampling round. In shallow well MW-237S, TCE increased from 0.269 mg/L in December 2015 to 0.404 mg/L in February 2016, but remained below the MassDEP GW-3 Standard (5 mg/L). In all other monitoring wells sampled during this round, TCE concentrations exhibited a decreasing trend and remained below the GW-3/GB criteria. Excluding MW-D, detected TCE concentrations ranged from 0.0132 to 0.404 mg/L.

PCE was not detected in shallow well MW-236S and deep well MW-241, but was detected in the other four wells at concentrations ranging from 0.0029 to 0.0175 mg/L. However, these PCE detections show a pattern of decreasing concentrations from previous sampling rounds and continue to be below both RIDEM GB criteria (0.15 mg/L) and GW-3 criteria (30 mg/L).

The VOC 1,2-dichloroethylene (1,2-DCE) was not detected in any of the deep wells (MW-241 and MW-D) and was only present in shallow wells MW-236S and MW-237S in Parcel C-1. The February 2016 1,2-DCE detections ranged from 0.0015 mg/L to 0.0032 mg/L and show that 1,2-DCE concentrations are stable and continue to be below the MassDEP GW-3 Standard of 20

mg/L. The VOC cis-1,2-DCE was detected in all six groundwater monitoring wells at concentrations ranging from 0.0029 mg/L to 0.0759 mg/L. These detections show a decreasing trend from previous sampling rounds, and continue to be below both the RIDEM GB Groundwater Objective of 2.4 mg/L and the MassDEP GW-3 Standard of 50 mg/L.

Groundwater Monitoring Approach

Based on the extensive groundwater data collected historically and confirmation from the recent February 2016 groundwater sampling round, VOC concentrations within the western plume have been reduced and are decreasing. As shown in Table 1, continued biodegradation of VOCs via natural attenuation is also occurring in the groundwater. Planned reuse of the Parcel C/C-1 area by the City of Providence School Department is a soccer field. No buildings are planned in the area of the monitoring wells (located within the woods, detention basin and at the Inner Cove shoreline). The Draft Environmental Land Use Restrictions (ELUR) within the February 2016 Remedial Action Completion Report include the provision restricting the use of the groundwater for potable and non-potable use and that no subsurface structures can be constructed over the groundwater without prior approval from RIDEM. This ELUR will be signed and filed by the City of Providence within the Providence Land Use Records.

Textron will conduct the next groundwater monitoring round in April 2016 to monitor the continued degradation of VOCs and decreasing concentrations in the groundwater. We will conduct subsequent rounds in June and August 2016 pending compliance of the Parcel C groundwater with RIDEM's GB Groundwater Objectives with no increasing trends of VOC, and that Parcel C-1 groundwater continues to be compliant with the MassDEP GW-3 Standards with no increasing trends of VOC. A report will be prepared and submitted to the RIDEM in May 2016 to update the status of these wells.

Please contact the Greg Simpson (401-457-2635) or David Heislein if we can provide additional information or answer any questions concerning these groundwater monitoring data and planned sampling events.

Sincerely,

Amec Foster Wheeler Environment & Infrastructure, Inc.



Elizabeth Flannery
Environmental Engineer



David E. Heislein
Senior Project Manager

Enclosures: Table 1 – Summary of Parcel C/C-1 Groundwater Results 1989-2016
Figure 1 – Site Location Map
Figure 2 – Parcel C/C-1 Groundwater Monitoring Wells

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Former Gorham Manufacturing Facility, Providence, RI
Remedial Action Work Plan – Phase II Area- Mashapaug Pond and Cove, Phase III Area – Northeast Upland and Parcel C
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Appendix A – Field Data Records

Appendix B – Laboratory Reports – February 2016 Groundwater Sampling Event

cc: Don Gralnek, Executive Director - Providence Redevelopment Agency
G. Simpson, Textron, Inc. (Electronic)
Knight Memorial Library Repository
Shane Brackett, Paolino Properties (including tenants)
Amec Foster Wheeler Project File

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TABLE 1

Textron, Inc.
Former Gorham Manufacturing Facility, Providence, RI
Remedial Action Work Plan – Phase II Area- Mashapaug Pond and Cove, Phase III Area – Northeast Upland and Parcel C
Groundwater Sampling
March 29, 2016
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Table 1
Summary of Parcel C/C-1 Groundwater Results 1989 - 2016
Former Gorham Manufacturing Site
Providence, RI

Location:		MW-235S	MW-235S	MW-235S	MW-235S	MW-236S	MW-236S	MW-236S	MW-236S	MW-236S	MW-236S	MW-236S	MW-237S	MW-237S	MW-237S	MW-237S	MW-237S	MW-241	MW-241	MW-241	MW-241	
Sample ID:		GWMMW235S	MW-235S	MW-235S	MW-235S	GWMMW236S	GWMMW236S	GWMMW236S DUP	MW-236S	MW-236S	MW236S	GWMMW237S Dup	GWMMW237S	MW-237S	MW-237S	MW-237S	GWMMW241	MW-241	MW-241	MW-241	MW-241	
Sample Date:		11/30/2009	7/15/2015	12/16/2015	2/10/2016	11/30/2009	8/9/2010	8/9/2010	7/15/2015	12/16/2015	2/10/2016	11/30/2009	11/30/2009	7/15/2015	12/17/2015	2/10/2016	8/10/2010	7/15/2015	12/16/2015	2/10/2016		
Parameter Name	Units	GB	GW-3																			
Tetrachloroethene	MG/L	0.15	30	0.0069	0.0036	0.0029	0.0029	0.0153	0.0095	0.0096	0.001 U	0.001 U	0.001 U	0.0049	0.005	0.0212	0.0413	0.0312	0.001 U	0.001 U	0.001 U	0.001 U
Tetrahydrofuran	MG/L	NS	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Toluene	MG/L	1.7	40	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	MG/L	2.8	50	0.0003 J	0.001 U	0.001 U	0.001 U	0.0007 J	0.0006 J	0.0007 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0028	0.002	0.0014	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	MG/L	NS	NS	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U
Trichloroethene	MG/L	0.54	5	0.0672	0.0169	0.0126	0.0132	1.07 D	0.793 D	0.821 D	0.191 D	0.144 D	0.11 D	0.0499	0.0511	0.118 D	0.269 D	0.404 D	0.245 D	0.39 D	0.0527	0.072
Trichlorofluoromethane	MG/L	NS	NS	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0063	0.0075	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trihalomethanes, Total	MG/L	NS	NS	0.0036 U				0.0036 U	0.0036 U	0.0036 U				0.0036 U	0.0036 U				0.0036 U			
Trihalomethanes, Total	mg/L	NS	NS		0.001 U						0.001 U				0.001 U					0.001 U		
Vinyl acetate	MG/L	NS	NS	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Vinyl chloride	MG/L	NS	50	0.0021	0.001 U	0.001 U	0.001 U	0.0017	0.0014	0.0014	0.0018	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0005 J	0.001 U	0.001 U	0.001 U
Xylenes, Total	MG/L	NS	5	0.003 U	0.002 U			0.003 U	0.003 U	0.003 U	0.002 U			0.003 U	0.003 U	0.002 U			0.003 U	0.002 U		
Aluminum	MG/L	NS	NS																			
Antimony	MG/L	NS	8																			
Arsenic	MG/L	NS	0.9																			
Barium	MG/L	NS	50																			
Beryllium	MG/L	NS	0.2																			
Cadmium	MG/L	NS	0.004																			
Calcium	MG/L	NS	NS																			
Chromium	MG/L	NS	0.3																			
Cobalt	MG/L	NS	NS																			
Copper	MG/L	NS	NS																			
Iron	MG/L	NS	NS																			
Lead	MG/L	NS	0.01																			
Magnesium	MG/L	NS	NS																			
Manganese	MG/L	NS	NS																			
Mercury	MG/L	NS	0.02																			
Nickel	MG/L	NS	0.2																			
Potassium	MG/L	NS	NS																			
Selenium	MG/L	NS	0.1																			
Silver	MG/L	NS	0.007																			
Sodium	MG/L	NS	NS																			
Thallium	MG/L	NS	3																			
Vanadium	MG/L	NS	4																			
Zinc	MG/L	NS	0.9																			
Total Cyanide	MG/L	NS	0.03																			

Notes:
mg/L - milligrams per liter
NS - No Standard Established
U - Not detected
J - Estimated Value
D - Dilution

Comparison of Groundwater Criteria

RIDEM GB Groundwater Objectives:

MW-D and MW-241

MassDEP GW-3 Standards:

MW-235S, MW-236S, MW-237S, and MW-FS

Concentrations did not exceed Massachusetts Contingency Plan

GW-3 criteria per the approved April 2001 Remedial Action

Work Plan and July 2015 Order of Approval

Ambient Water Quality Criteria (AWQC) does not apply to the above
volatile organic compounds.

Yellow highlighted cells exceed the GB Criteria

Table 1
Summary of Parcel C/C-1 Groundwater Results 1989 - 2016
Former Gorham Manufacturing Site
Providence, RI

Parameter Name	Units	GB	GW-3	Location:																	
				MW-D/B-4	MW-D/B-4	MW-D/B-4	MW-D/B-4	MW-D/B-4	MW-D/B-4	MW-D/B-4	MW-D/B-4	MW-D/B-4	MW-D/B-4	MW-D/B-4	MW-FS/B-6S	MW-FS/B-6S	MW-FS/B-6S	MW-FS/B-6S			
				Sample ID: MW-D	GMMWXXDXX01XX	MW-D	MW-D	GWMWD	MW-D	DUP-01	MW-D	MW-D	MW-D	DUP-1	MW-FS	MW-FS	MW-FS	MW-FS	DUP-01	MW-FS	
Sample Date:	4/13/1989	9/21/1994	10/15/1997	12/9/1998	2/19/2010	7/15/2015	7/15/2015	12/17/2015	2/10/2016	2/10/2016	4/13/1989	12/9/1998	7/15/2015	12/16/2015	12/16/2015	2/10/2016					
1,1,1,2-Tetrachloroethane	MG/L	NS	50				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U			
1,1,1-Trichloroethane	MG/L	3.1	20	0.01 U	0.01 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	MG/L	NS	50				0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U		0.001 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,1,2-Trichloroethane	MG/L	NS	50				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	MG/L	NS	20	0.01 U	0.01 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	MG/L	0.007	30	0.01 U	0.01 U	0.005 U	0.001 U	0.0011	0.0026	0.0025	0.0114	0.0065	0.0069	0.005 U	0.001 U	0.0012	0.0013	0.0013	0.0013	0.0013	0.001 U
1,1-Dichloropropene	MG/L	NS	NS				0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	MG/L	NS	NS			0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2,3-Trichloropropane	MG/L	NS	NS				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	MG/L	NS	50				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2,4-Trimethylbenzene	MG/L	NS	NS			0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane	MG/L	0.002	NS				0.002 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.002 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dibromoethane (EDB)	MG/L	NS	50				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichlorobenzene	MG/L	NS	2				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane	MG/L	0.11	20	0.01 U	0.01 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,2-Dichloroethane (total)	MG/L	NS	NS	0.057										0.018							
1,2-Dichloropropane	MG/L	3	50				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3,5-Trimethylbenzene	MG/L	NS	NS				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichlorobenzene	MG/L	NS	50				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,3-Dichloropropane	MG/L	NS	NS				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dichlorobenzene	MG/L	NS	8				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,4-Dioxane	MG/L	NS	50					0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1-Chlorohexane	MG/L	NS	NS					0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2,2-Dichloropropane	MG/L	NS	NS				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone	MG/L	NS	50		0.1 U		0.02 U	0.025 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.02 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
2-Chlorotoluene	MG/L	NS	NS				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Hexanone	MG/L	NS	NS				0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
4-Chlorotoluene	MG/L	NS	NS				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
4-Isopropyltoluene	MG/L	NS	NS				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
4-Methyl-2-pentanone	MG/L	NS	50				0.01 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U		0.01 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Acetone	MG/L	NS	50	0.05 U	0.1 U	0.1 U	0.02 U	0.025 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.025 U	0.02 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Benzene	MG/L	0.14	10	0.01 U	0.01 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromobenzene	MG/L	NS	NS				0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		0.001 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Bromochloromethane	MG/L	NS	NS				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	MG/L	NS	50				0.001 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U		0.001 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U
Bromoform	MG/L	NS	50				0.002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromomethane	MG/L	NS	0.8				0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Carbon disulfide	MG/L	NS	NS				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Carbon tetrachloride	MG/L	0.07	5				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chlorobenzene	MG/L	3.2	1				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0014
Chloroethane	MG/L	NS	NS				0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Chloroform	MG/L	NS	20	0.01 U	0.01 U	0.005 U	0.002	0.0002 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloromethane	MG/L	NS	NS				0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
cis-1,2-Dichloroethene	MG/L	2.4	50		0.088	0.101	0.07	0.0392	0.0506	0.0466	0.136 D	0.0742	0.0791		0.029	0.0269	0.0346	0.0363	0.0208		
cis-1,3-Dichloropropene	MG/L	NS	NS				0.0005 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U		0.0005 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U
Dibromochloromethane	MG/L	NS	50				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dibromomethane	MG/L	NS	NS				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Dichlorodifluoromethane	MG/L	NS	NS				0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Diethyl ether	MG/L	NS	NS					0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U			0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Diisopropyl ether	MG/L	NS	NS					0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U			0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Ethyl tertiary-butyl ether	MG/L	NS	NS					0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U			0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Ethylbenzene	MG/L	1.6	5	0.01 U	0.01 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Hexachlorobutadiene	MG/L	NS	3			0.005 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U		0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.0006 U
Hexachloroethane	MG/L	NS	50					0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U			0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Isopropylbenzene	MG/L	NS	NS				0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
m,p-Xylene	MG/L	NS	5					0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U			0.002 U	0.002 U	0.002 U			

Table 1
Summary of Parcel C/C-1 Groundwater Results 1989 - 2016
Former Gorham Manufacturing Site
Providence, RI

Location:		MW-D/B-4	MW-D/B-4	MW-D/B-4	MW-D/B-4	MW-D/B-4	MW-D/B-4	MW-D/B-4	MW-D/B-4	MW-D/B-4	MW-D/B-4	MW-D/B-4	MW-FS/B-6S	MW-FS/B-6S	MW-FS/B-6S	MW-FS/B-6S	MW-FS/B-6S	MW-FS/B-6S	
Sample ID:		MW-D	GMMWXXDX01XX	MW-D	MW-D	GWMWD	MW-D	DUP-01	MW-D	MW-D	DUP-1	MW-FS	MW-FS	MW-FS	MW-FS	DUP-01	MW-FS		
Sample Date:		4/13/1989	9/21/1994	10/15/1997	12/9/1998	2/19/2010	7/15/2015	7/15/2015	12/17/2015	2/10/2016	2/10/2016	4/13/1989	12/9/1998	7/15/2015	12/16/2015	12/16/2015	2/10/2016		
Parameter Name	Units	GB	GW-3																
Tetrachloroethene	MG/L	0.15	30	0.013	0.016	0.012	0.008	0.0044	0.0017	0.0016	0.0037	0.0023	0.0024	0.006	0.041	0.0148	0.0228	0.0237	0.0175
Tetrahydrofuran	MG/L	NS	NS				0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.001 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Toluene	MG/L	1.7	40	0.01 U	0.01 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	MG/L	2.8	50		0.01 U	0.005 U	0.001 U	0.0004 J	0.0015	0.0013	0.004	0.0027	0.0031		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	MG/L	NS	NS				0.0005 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U		0.0005 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U
Trichloroethene	MG/L	0.54	5	0.28	0.298	0.37	0.272	0.761 D	0.826 D	0.851 D	3.06 D	1.73 D	1.71 D	0.02	0.1	0.129 D	0.27 D	0.289 D	0.168 D
Trichlorofluoromethane	MG/L	NS	NS				0.002 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.002 U	0.001 U	0.001 U	0.001 U	0.001 U
Trihalomethanes, Total	MG/L	NS	NS					0.0036 U											
Trihalomethanes, Total	mg/L	NS	NS						0.001 U	0.001 U						0.001 U			
Vinyl acetate	MG/L	NS	NS					0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U			0.005 U	0.005 U	0.005 U	0.005 U
Vinyl chloride	MG/L	NS	50	0.02 U	0.02 U	0.01 U	0.003	0.003	0.0033	0.003	0.0034	0.0024	0.001 U	0.01 U	0.002 U	0.001 U	0.001 U	0.001 U	0.001 U
Xylenes, Total	MG/L	NS	5	0.01 U	0.02 U	0.005 U	0.001 U	0.003 U	0.002 U	0.002 U				0.005 U	0.001 U	0.002 U			
Aluminum	MG/L	NS	NS		0.3														
Antimony	MG/L	NS	8		0.1 U														
Arsenic	MG/L	NS	0.9		0.01 U														
Barium	MG/L	NS	50		0.2 U														
Beryllium	MG/L	NS	0.2		0.01 U														
Cadmium	MG/L	NS	0.004		0.005 U														
Calcium	MG/L	NS	NS		49.3														
Chromium	MG/L	NS	0.3		0.05 U														
Cobalt	MG/L	NS	NS		0.05 U														
Copper	MG/L	NS	NS		0.02 U														
Iron	MG/L	NS	NS		0.1 U														
Lead	MG/L	NS	0.01		0.016		0.005 U								0.005 U				
Magnesium	MG/L	NS	NS		15.7														
Manganese	MG/L	NS	NS		0.47														
Mercury	MG/L	NS	0.02		0.0005 U														
Nickel	MG/L	NS	0.2		0.04 U														
Potassium	MG/L	NS	NS		1.8														
Selenium	MG/L	NS	0.1		0.01 U														
Silver	MG/L	NS	0.007		0.01 U														
Sodium	MG/L	NS	NS		25.1														
Thallium	MG/L	NS	3		0.01 U														
Vanadium	MG/L	NS	4		0.05 U														
Zinc	MG/L	NS	0.9		0.05														
Total Cyanide	MG/L	NS	0.03		0.01 U									0.01 U					

Notes:

- mg/L - milligrams per liter
- NS - No Standard Established
- U - Not detected
- J - Estimated Value
- D - Dilution

Comparison of Groundwater Criteria

RIDEM GB Groundwater Objectives:

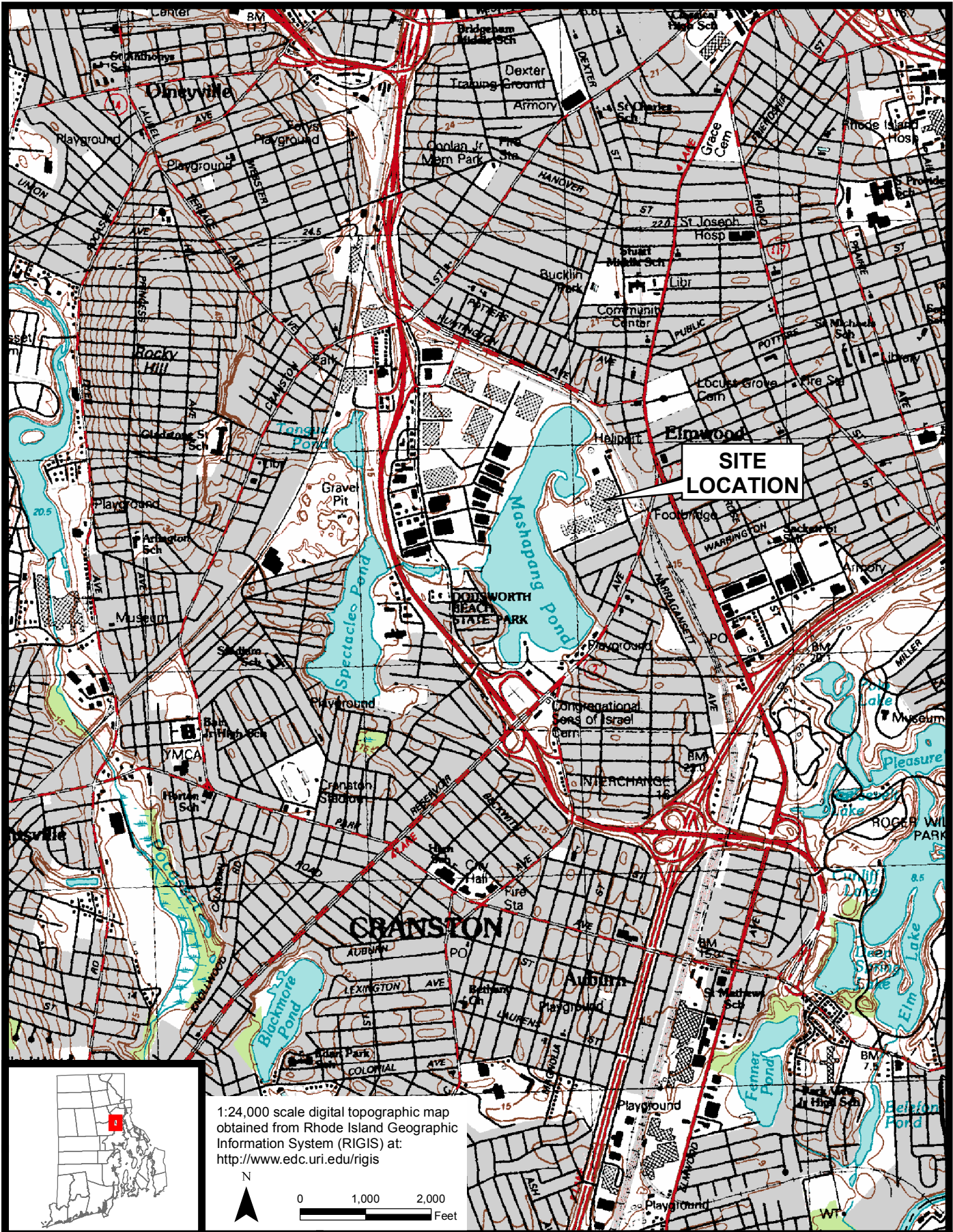
MW-D and MW-241

MassDEP GW-3 Standards:

MW-235S, MW-236S, MW-237S, and MW-FS

Concentrations did not exceed Massachusetts Contingency Plan
 GW-3 criteria per the approved April 2001 Remedial Action
 Work Plan and July 2015 Order of Approval
 Ambient Water Quality Criteria (AWQC) does not apply to the above
 volatile organic compounds.
 Yellow highlighted cells exceed the GB Criteria

FIGURES



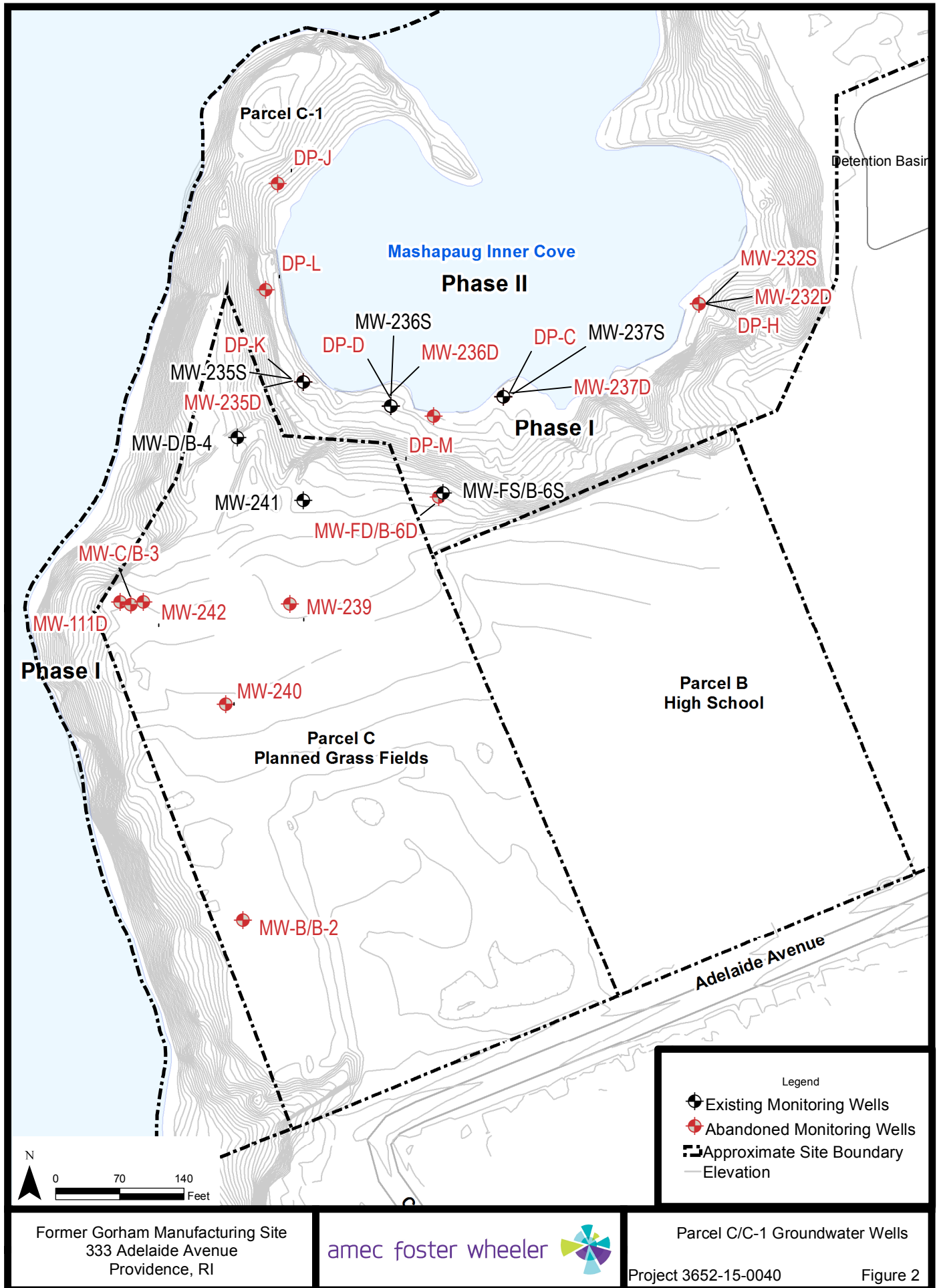
Former Gorham Manufacturing Site
 333 Adelaide Avenue
 Providence, RI



Site Location Map

Project 3652-15-0040

Figure 1



APPENDIX A

Field Data Records

February 10, 2016 Groundwater Sampling Event

FIELD INSTRUMENTATION CALIBRATION RECORD

PROJECT NAME: Texton Gunham
 PROJECT NUMBER: 365215000
 PROJECT LOCATION: Providence, RI
 WEATHER CONDITIONS (AM): Overcast Snow Showers 31 S
 WEATHER CONDITIONS (PM): _____

TASK NO: _____ DATE: 2-10-15
 FIELD CREW: _____
 SAMPLER NAME: Mark Messivz
 SAMPLER SIGNATURE: _____
 CHECKED BY: _____ DATE: _____

MULTI-PARAMETER WATER QUALITY METER

METER TYPE		AM CALIBRATION		
MODEL NO.		Start Time:	End Time:	
UNIT ID NO.				
	Units	Standard Value	Meter Value	*Acceptance Criteria (AM)
pH (4)	SU	4.0	<u>3.99</u>	+/- 0.1 pH Units
pH (7)	SU	7.0	<u>6.97</u>	+/- 0.1 pH Units
pH (10)	SU	10.0	<u>—</u>	+/- 0.1 pH Units
Redox	+/- mV	240	<u>210</u>	+/- 10 mV
Sp. Conductivity	µS/cm	1413	<u>1413</u>	+/- 3% of standard
DO (saturated)	%	100	<u>98.3</u>	+/- 2% of standard
DO (saturated)	mg/L (see Chart 1)		<u>11.15</u>	+/- 0.2 mg/L
DO (<0.1)	mg/L	<0.1	<u>—</u>	< 0.5 mg/L
Temperature	°C		<u>0.38</u>	
Baro. Press.	mmHg		<u>749.6</u>	

PM CALIBRATION CHECK		
Start Time:	End Time:	
Standard Value	Meter Value	*Acceptance Criteria (PM)
7.0	<u>7.10</u>	+/- 0.3 pH Units
240	<u>236</u>	+/- 10 mV
1413	<u>1414</u>	+/- 5% of standard
	<u>98.3</u>	%
	<u>13.15</u>	+/- 0.5 mg/L of sat. value
DO (<0.1)	<u>—</u>	< 0.5 mg/L
	<u>—</u>	°C
	<u>749.6</u>	mmHg

TURBIDITY METER

METER TYPE	Units	Standard Value	Meter Value	*Acceptance Criteria (PM)
<u>Hach</u>				
MODEL NO. <u>21000</u>				
UNIT ID NO. <u>m024-29</u>				
	Standard	NTU	<u>1000</u>	<u>0.27</u>
	Standard	NTU	20	<u>18.5</u>
	Standard	NTU	100	<u>27.2</u>
	Standard	NTU	800	<u>788</u>

PHOTOIONIZATION DETECTOR

METER TYPE	Background	ppmv	<0.1		<0.1	within 5 ppmv of BG
MODEL NO.						
UNIT ID NO.	Span Gas	ppmv	100		100	+/- 10% of standard

O₂-LEL 4 GAS METER

METER TYPE	Methane	%	50		50	+/- 10% of standard
MODEL NO.	O ₂	%	20.9		20.9	
UNIT ID NO.	H ₂ S	ppmv	25		25	
	CO	ppmv	50		50	

OTHER METER

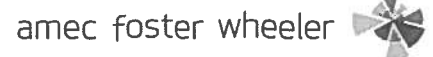
METER TYPE						See Notes Below for Additional Information
MODEL NO.						
UNIT ID NO.						

- Equipment calibrated within the Acceptance Criteria specified for each of the parameters listed above.
 Equipment (not) calibrated within the Acceptance Criteria specified for each of the parameters listed above**.

MATERIALS RECORD

	Cal. Standard Lot Number	Exp. Date
Deionized Water Source: _____	pH (4) <u>566497</u>	<u>7-17</u>
Lot#/Date Produced: _____	pH (7) <u>566037</u>	<u>7-17</u>
Trip Blank Source: _____ Lab _____	pH (10) _____	_____
Sample Preservatives Source: _____ Lab _____	ORP <u>8540</u>	<u>1-20</u>
Disposable Filter Type: _____ 0.45µm	Conductivity <u>567100</u>	<u>8-16</u>
Calibration Fluids / Standard Source:	<10 Turb. Stan. <u>m024-29sel</u>	<u>m024-29sel</u>
- DO Calibration Fluid (<0.1 mg/L) _____	20 Turb. Stan. _____	_____
- Other _____	100 Turb. Stan. _____	_____
- Other _____	800 Turb. Stan. _____	_____
- Other _____	PID Span Gas _____	_____
	O ₂ -LEL Span Gas _____	_____
	DO _____	_____

NOTES:



* = Unless otherwise noted, calibration procedures and acceptance criteria are in general accordance with USEPA Region 1 SOPs for Field Instrument Calibration (EQASOP-FieldCalibrat) and Low Stress Purging and Sampling (EQASOP-GW001), each dated 1/19/2010. Additional acceptance criteria obtained from instrument specific manufacturer recommendations.
 ** = If meter reading is not within acceptance criteria, clean/replace probe and re-calibrate, or use calibrated back-up meter if available. If project requirements necessitate use of the instrument, clearly document any deviations from acceptance criteria on all data sheets and log book entries.
 † = DO Saturated standard value is calculated based on Oxygen Solubility at Indicated Pressure Chart from the USEPA Region 1 SOP for Field Instrument Calibration (EQASOP-FieldCalibrat), dated 1/19/2010.

FIELD INSTRUMENTATION CALIBRATION RECORD

PROJECT NAME: Testan Gorchum
 PROJECT NUMBER: 36501-021
 PROJECT LOCATION: Providence, RI
 WEATHER CONDITIONS (AM): Overcast Show showers 30 S
 WEATHER CONDITIONS (PM): _____

TASK NO: _____ DATE: 2-10-15
 FIELD CREW: _____
 SAMPLER NAME: Melinda Rendle
 SAMPLER SIGNATURE: _____
 CHECKED BY: _____ DATE: _____

MULTI-PARAMETER WATER QUALITY METER

METER TYPE	AM CALIBRATION			
MODEL NO.	Start Time:	End Time:		
UNIT ID NO.	Units	Standard Value	Meter Value	*Acceptance Criteria (AM)
	pH (4)	SU	4.0	4.00 +/- 0.1 pH Units
	pH (7)	SU	7.0	6.99 +/- 0.1 pH Units
	pH (10)	SU	10.0	+/- 0.1 pH Units
	Redox	+/- mV	240	217 +/- 10 mV
	Sp. Conductivity	µS/cm	1413	1412 +/- 3% of standard
	DO (saturated)	%	100	99.2 +/- 2% of standard
	DO (saturated)	mg/L ¹ (see Chart 1)		14.25 +/- 0.2 mg/L
	DO (<0.1)	mg/L	<0.1	<0.5 mg/L
	Temperature	°C		0.61
	Baro. Press.	mmHg		752.9

PM CALIBRATION CHECK		
Start Time:	End Time:	
Standard Value	Meter Value	*Acceptance Criteria (PM)
7.0	7.11	+/- 0.3 pH Units
240	237	+/- 10 mV
1413	1431	+/- 5% of standard
	99.1	%
	14.25	+/- 0.5 mg/L of sat. value
DO (<0.1)		<0.5 mg/L
		°C
	753.1	mmHg

TURBIDITY METER		Units	Standard Value	Meter Value
METER TYPE	<u>Hach</u>			
MODEL NO.	<u>2100P</u>			
UNIT ID NO.	<u>MOA1</u>			
	Standard	NTU	10	9.72
	Standard	NTU	20	19.8
	Standard	NTU	100	97.9
	Standard	NTU	800	710

Standard Value	Meter Value	*Acceptance Criteria (PM)
10		+/- 5% of standard
20		
100		
800		

PHOTOIONIZATION DETECTOR			
METER TYPE	Background	ppmv	<0.1
MODEL NO.			
UNIT ID NO.	Span Gas	ppmv	100

<0.1		within 5 ppmv of BG
100		+/- 10% of standard

O ₂ -LEL 4 GAS METER			
METER TYPE	Methane	%	50
MODEL NO.	O ₂	%	20.9
UNIT ID NO.	H ₂ S	ppmv	25
	CO	ppmv	50

50		+/- 10% of standard
20.9		
25		
50		

OTHER METER			
METER TYPE			
MODEL NO.			
UNIT ID NO.			

See Notes Below for Additional Information

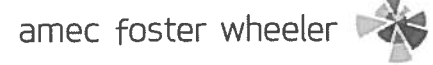
- Equipment calibrated within the Acceptance Criteria specified for each of the parameters listed above.
- Equipment (not) calibrated within the Acceptance Criteria specified for each of the parameters listed above**.

MATERIALS RECORD

Deionized Water Source: _____
 Lot#/Date Produced: _____
 Trip Blank Source: _____ Lab _____
 Sample Preservatives Source: _____ Lab _____
 Disposable Filter Type: _____ 0.45µm _____
 Calibration Fluids / Standard Source:
 - DO Calibration Fluid (<0.1 mg/L) _____
 - Other _____
 - Other _____
 - Other _____

	Cal. Standard Lot Number	Exp. Date
pH (4)	566497	7-17
pH (7)	566637	7-17
pH (10)		
ORP	7760	6-17
Conductivity	SG-H100	8-17
<10 Turb. Stan.	M02-1-29 Sel	M029-29 Sel
20 Turb. Stan.		
100 Turb. Stan.		
800 Turb. Stan.		
PID Span Gas		
O ₂ -LEL Span Gas		
DO		

NOTES:



* = Unless otherwise noted, calibration procedures and acceptance criteria are in general accordance with USEPA Region 1 SOPs for Field Instrument Calibration (EQASOP-FieldCalibrat) and Low Stress Purging and Sampling (EQASOP-GW001), each dated 1/19/2010. Additional acceptance criteria obtained from instrument specific manufacturer recommendations.
 ** = If meter reading is not within acceptance criteria, clean/replace probe and re-calibrate, or use calibrated back-up meter if available. If project requirements necessitate use of the instrument, clearly document any deviations from acceptance criteria on all data sheets and log book entries.
 1 = DO Saturated standard value is calculated based on Oxygen Solubility at Indicated Pressure Chart from the USEPA Region 1 SOP for Field Instrument Calibration (EQASOP-FieldCalibrat), dated 1/19/2010.

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: Texton Garden WELL ID: MW-FS
 SAMPLE ID: MW-FS SITE TYPE: RIDEM DATE: 2/10/16
 TIME START: 8:45 END: 9:35 JOB NUMBER: 3652/50040 BOTTLE TIME: 0930

WATER LEVEL / PUMP SETTINGS
 QC SAMPLE COLLECTED ID: _____
 INITIAL DEPTH TO WATER: 22.45 FT.
 FINAL DEPTH TO WATER: 22.45 FT.
 DRAWDOWN VOLUME (initial - final x 0.16 (2-inch) or x 0.65 (4-inch)): 0 GAL.
 TOTAL VOL. PURGED: 1.9 GAL.
 (purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/ml)

MEASUREMENT POINT
 TOP OF WELL RISER
 TOP OF PROTECTIVE CASING
 OTHER _____
 WELL DEPTH (TOR): 32 FT.
 SCREEN LENGTH: _____ FT.
 RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME PURGED: 0.01

PROTECTIVE CASING STICKUP (FROM GROUND): _____ FT.
PROTECTIVE CASING / WELL DIFFERENCE: _____ FT.
 PID AMBIENT AIR: _____ PPMV
 PID WELL MOUTH: _____ PPMV
 PRESSURE TO PUMP: _____ PSI
 REFILL TIMER SETTING: _____ SEC.

WELL DIAMETER: 7.5 IN.
WELL INTEGRITY: YES NO N/A
 CAP: / / /
 LOCKED: / / /
 COLLAR: / / /
 DISCHARGE TIMER SETTING: _____ SEC.

PURGE DATA

TIME (5 min.)	DEPTH TO WATER (ft.) (0.3 ft.)	PURGE RATE (ml/min) (100-400)	TEMP. (deg. C) (3%)	SPEC. COND. (uS/cm) (3%)	pH (units) (+/- 0.1)	DISS. O2 (mg/L) (10%) (>0.5)	TURBIDITY (NTU) (10%) (>5)	ORP (mV) (+/- 10 mV)	SAMPLE DEPTH	COMMENTS
0845	22.45	160	10.67	1735	6.41	22.74	34.5	288.4		
0850	22.45	160	11.58	1741	6.51	12.67	22.2	294.1		
0855	22.45	160	11.58	1758	6.51	6.85	22.9	326		
0900	22.45	140	12.10	1763	6.48	4.86	12.8	277.1		
0905	22.45	160	12.21	1767	6.49	4.55	13.6	262.9		
0910			12.36	1778	6.50	3.19	11.7	222.1		
0915			12.31	1787	6.52	2.72	10.1	192.1		
0920			12.41	1780	6.52	2.56	9.7	187.6		
0925			12.46	1785	6.53	2.52	9.2	179.3		
0930	collect samples									

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
 QED BLADDER
 SIMCO BLADDER
 GEOPUMP

TYPE OF TUBING
 TEFLON OR TEFLON LINED
 HIGH DENSITY POLYETHYLENE
 LDPE

TYPE OF PUMP MATERIAL
 POLYVINYL CHLORIDE
 STAINLESS STEEL
 SILICON (Dedicated)

TYPE OF BLADDER MATERIAL
 TEFLON
 OTHER _____

ANALYTICAL PARAMETERS

To Be Collected: VOCs

METHOD NUMBER: 8260B
 PRESERVATION METHOD: HCL / 4 DEG. C
 VOLUME REQUIRED: 3 X 40 mL VOA Vial
 SAMPLE COLLECTED: VOCs

PURGE OBSERVATIONS
 PURGE WATER CONTAINERIZED: YES NO
 NUMBER OF GALLONS GENERATED: 2.0

NOTES:
 amec foster wheeler 

SIGNATURE: Melinda Ruff

Prepared by: _____
 Checked by: _____

APPENDIX B

Laboratory Reports

February 10, 2016 Groundwater Sampling Event



CERTIFICATE OF ANALYSIS

Denise King
AMEC Foster Wheeler
271 Mill Road
Chelmsford, MA 01824

RE: Textron Gorham - Groundwater (3652150040)
ESS Laboratory Work Order Number: 1602237

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 3:57 pm, Feb 23, 2016

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with NELAC Standards, A2LA and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

SAMPLE RECEIPT

The following samples were received on February 10, 2016 for the analyses specified on the enclosed Chain of Custody Record.

The cooler temperature was not within the acceptance limit of <6°C, however, samples were delivered on ice.

Revision 1 February 23, 2016: This report has been revised to include corrected Trichloroethene results for sample 1602237-02.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
1602237-01	MW-FS	Ground Water	8260B
1602237-02	MW-237S	Ground Water	8260B
1602237-03	MW-241	Ground Water	8260B
1602237-04	MW-D	Ground Water	8260B
1602237-05	MW-235S	Ground Water	8260B
1602237-06	MW236S	Ground Water	8260B
1602237-07	DUP-1	Ground Water	8260B



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

PROJECT NARRATIVE

8260B Volatile Organic Compounds

- CB61139-BS1 **Blank Spike recovery is above upper control limit (B+).**
Hexachloroethane (134% @ 70-130%)
- CB61139-BSD1 **Blank Spike recovery is above upper control limit (B+).**
Hexachloroethane (133% @ 70-130%)
- CB61832-BS1 **Blank Spike recovery is above upper control limit (B+).**
Hexachloroethane (134% @ 70-130%)
- CB61832-BSD1 **Blank Spike recovery is above upper control limit (B+).**
Carbon Tetrachloride (131% @ 70-130%), Hexachloroethane (136% @ 70-130%)
- CB61832-MS1 **Matrix Spike recovery is above upper control limit (M+).**
2,2-Dichloropropane (132% @ 70-130%), cis-1,2-Dichloroethene (136% @ 70-130%), Hexachloroethane (135% @ 70-130%), Trichloroethene (1140% @ 70-130%)
- CB61832-MS1 **Reported above the quantitation limit; Estimated value (E).**
Trichloroethene
- CB61832-MSD1 **Matrix Spike recovery is above upper control limit (M+).**
1,2-Dichloropropane (186% @ 70-130%), 2,2-Dichloropropane (134% @ 70-130%),
Bromodichloromethane (132% @ 70-130%), cis-1,2-Dichloroethene (139% @ 70-130%),
Hexachloroethane (137% @ 70-130%), Trichloroethene (942% @ 70-130%)
- CB61832-MSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
1,2-Dichloropropane (56% @ 30%)
- CB61832-MSD1 **Reported above the quantitation limit; Estimated value (E).**
Trichloroethene
- CZB0161-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
Tertiary-amyl methyl ether (41% @ 30%)
- CZB0176-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
Bromomethane (38% @ 30%), Ethyl tertiary-butyl ether (32% @ 30%), Tertiary-amyl methyl ether (43% @ 30%)
- CZB0240-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
4-Methyl-2-Pentanone (34% @ 30%), Ethyl tertiary-butyl ether (36% @ 30%), Tertiary-amyl methyl ether (48% @ 30%)
- CZB0255-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
Ethyl tertiary-butyl ether (31% @ 30%), Tertiary-amyl methyl ether (43% @ 30%)

No other observations noted.

End of Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

DATA USABILITY LINKS

- [Definitions of Quality Control Parameters](#)
- [Semivolatile Organics Internal Standard Information](#)
- [Semivolatile Organics Surrogate Information](#)
- [Volatile Organics Internal Standard Information](#)
- [Volatile Organics Surrogate Information](#)
- [EPH and VPH Alkane Lists](#)

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

- 1010A - Flashpoint
- 6010C - ICP
- 6020A - ICP MS
- 7010 - Graphite Furnace
- 7196A - Hexavalent Chromium
- 7470A - Aqueous Mercury
- 7471B - Solid Mercury
- 8011 - EDB/DBCP/TCP
- 8015D - GRO/DRO
- 8081B - Pesticides
- 8082A - PCB
- 8100M - TPH
- 8151A - Herbicides
- 8260B - VOA
- 8270D - SVOA
- 8270D SIM - SVOA Low Level
- 9014 - Cyanide
- 9038 - Sulfate
- 9040C - Aqueous pH
- 9045D - Solid pH (Corrosivity)
- 9050A - Specific Conductance
- 9056A - Anions (IC)
- 9060A - TOC
- 9095B - Paint Filter
- MADEP 04-1.1 - EPH / VPH

Prep Methods

- 3005A - Aqueous ICP Digestion
- 3020A - Aqueous Graphite Furnace / ICP MS Digestion
- 3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
- 3060A - Solid Hexavalent Chromium Digestion
- 3510C - Separatory Funnel Extraction
- 3520C - Liquid / Liquid Extraction
- 3540C - Manual Soxhlet Extraction
- 3541 - Automated Soxhlet Extraction
- 3546 - Microwave Extraction
- 3580A - Waste Dilution
- 5030B - Aqueous Purge and Trap
- 5030C - Aqueous Purge and Trap
- 5035 - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater
Client Sample ID: MW-FS
Date Sampled: 02/10/16 09:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
ESS Laboratory Sample ID: 1602237-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,1-Dichloroethane	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,1-Dichloroethene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,1-Dichloropropene	ND (0.0020)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,2-Dibromoethane	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,2-Dichloroethane	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,2-Dichloropropane	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,3-Dichloropropane	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1,4-Dioxane - Screen	ND (0.500)		8260B		1	02/11/16 15:20	CZB0161	CB61139
1-Chlorohexane	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
2,2-Dichloropropane	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
2-Butanone	ND (0.0100)		8260B		1	02/11/16 15:20	CZB0161	CB61139
2-Chlorotoluene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
2-Hexanone	ND (0.0100)		8260B		1	02/11/16 15:20	CZB0161	CB61139
4-Chlorotoluene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
4-Isopropyltoluene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Acetone	ND (0.0100)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Benzene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Bromobenzene	ND (0.0020)		8260B		1	02/11/16 15:20	CZB0161	CB61139



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater
Client Sample ID: MW-FS
Date Sampled: 02/10/16 09:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
ESS Laboratory Sample ID: 1602237-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Bromochloromethane	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Bromodichloromethane	ND (0.0006)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Bromoform	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Bromomethane	ND (0.0020)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Carbon Disulfide	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Carbon Tetrachloride	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Chlorobenzene	0.0014 (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Chloroethane	ND (0.0020)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Chloroform	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Chloromethane	ND (0.0020)		8260B		1	02/11/16 15:20	CZB0161	CB61139
cis-1,2-Dichloroethene	0.0208 (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Dibromochloromethane	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Dibromomethane	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Dichlorodifluoromethane	ND (0.0020)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Diethyl Ether	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Di-isopropyl ether	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Ethylbenzene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Hexachlorobutadiene	ND (0.0006)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Hexachloroethane	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Isopropylbenzene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Methylene Chloride	ND (0.0020)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Naphthalene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
n-Butylbenzene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
n-Propylbenzene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
sec-Butylbenzene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Styrene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
tert-Butylbenzene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Tetrachloroethene	0.0175 (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater
Client Sample ID: MW-FS
Date Sampled: 02/10/16 09:30
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
ESS Laboratory Sample ID: 1602237-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Tetrahydrofuran	ND (0.0050)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Toluene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Trichloroethene	0.168 (0.0100)		8260B		10	02/12/16 16:31	CZB0161	CB61139
Trichlorofluoromethane	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Vinyl Acetate	ND (0.0050)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Vinyl Chloride	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Xylene O	ND (0.0010)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Xylene P,M	ND (0.0020)		8260B		1	02/11/16 15:20	CZB0161	CB61139
Xylenes (Total)	ND (0.0020)		8260B		1	02/11/16 15:20		[CALC]
Trihalomethanes (Total)	ND (0.0010)		8260B			02/11/16 15:20		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>117 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>101 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>115 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>107 %</i>		<i>70-130</i>



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater
Client Sample ID: MW-237S
Date Sampled: 02/10/16 10:05
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
ESS Laboratory Sample ID: 1602237-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,1-Dichloroethane	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,1-Dichloroethene	0.0015 (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,1-Dichloropropene	ND (0.0020)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,2-Dibromoethane	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,2-Dichloroethane	0.0015 (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,2-Dichloropropane	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,3-Dichloropropane	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1,4-Dioxane - Screen	ND (0.500)		8260B		1	02/11/16 15:45	CZB0161	CB61139
1-Chlorohexane	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
2,2-Dichloropropane	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
2-Butanone	ND (0.0100)		8260B		1	02/11/16 15:45	CZB0161	CB61139
2-Chlorotoluene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
2-Hexanone	ND (0.0100)		8260B		1	02/11/16 15:45	CZB0161	CB61139
4-Chlorotoluene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
4-Isopropyltoluene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Acetone	ND (0.0100)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Benzene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Bromobenzene	ND (0.0020)		8260B		1	02/11/16 15:45	CZB0161	CB61139



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater
Client Sample ID: MW-237S
Date Sampled: 02/10/16 10:05
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
ESS Laboratory Sample ID: 1602237-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Bromochloromethane	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Bromodichloromethane	ND (0.0006)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Bromoform	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Bromomethane	ND (0.0020)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Carbon Disulfide	0.0019 (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Carbon Tetrachloride	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Chlorobenzene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Chloroethane	ND (0.0020)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Chloroform	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Chloromethane	ND (0.0020)		8260B		1	02/11/16 15:45	CZB0161	CB61139
cis-1,2-Dichloroethene	0.0489 (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Dibromochloromethane	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Dibromomethane	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Dichlorodifluoromethane	ND (0.0020)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Diethyl Ether	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Di-isopropyl ether	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Ethylbenzene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Hexachlorobutadiene	ND (0.0006)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Hexachloroethane	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Isopropylbenzene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Methylene Chloride	ND (0.0020)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Naphthalene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
n-Butylbenzene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
n-Propylbenzene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
sec-Butylbenzene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Styrene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
tert-Butylbenzene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Tetrachloroethene	0.0312 (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
 Client Project ID: Textron Gorham - Groundwater
 Client Sample ID: MW-237S
 Date Sampled: 02/10/16 10:05
 Percent Solids: N/A
 Initial Volume: 5
 Final Volume: 5
 Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
 ESS Laboratory Sample ID: 1602237-02
 Sample Matrix: Ground Water
 Units: mg/L
 Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Tetrahydrofuran	ND (0.0050)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Toluene	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
trans-1,2-Dichloroethene	0.0014 (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Trichloroethene	0.404 (0.0100)		8260B		10	02/12/16 16:06	CZB0161	CB61139
Trichlorofluoromethane	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Vinyl Acetate	ND (0.0050)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Vinyl Chloride	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Xylene O	ND (0.0010)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Xylene P,M	ND (0.0020)		8260B		1	02/11/16 15:45	CZB0161	CB61139
Xylenes (Total)	ND (0.0020)		8260B		1	02/11/16 15:45		[CALC]
Trihalomethanes (Total)	ND (0.0010)		8260B			02/11/16 15:45		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>117 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>100 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>117 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>107 %</i>		<i>70-130</i>



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater
Client Sample ID: MW-241
Date Sampled: 02/10/16 10:15
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
ESS Laboratory Sample ID: 1602237-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,1-Dichloroethane	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,1-Dichloroethene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,1-Dichloropropene	ND (0.0020)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,2-Dibromoethane	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,2-Dichloroethane	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,2-Dichloropropane	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,3-Dichloropropane	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1,4-Dioxane - Screen	ND (0.500)		8260B		1	02/11/16 16:09	CZB0161	CB61139
1-Chlorohexane	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
2,2-Dichloropropane	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
2-Butanone	ND (0.0100)		8260B		1	02/11/16 16:09	CZB0161	CB61139
2-Chlorotoluene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
2-Hexanone	ND (0.0100)		8260B		1	02/11/16 16:09	CZB0161	CB61139
4-Chlorotoluene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
4-Isopropyltoluene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Acetone	ND (0.0100)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Benzene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Bromobenzene	ND (0.0020)		8260B		1	02/11/16 16:09	CZB0161	CB61139



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater
Client Sample ID: MW-241
Date Sampled: 02/10/16 10:15
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
ESS Laboratory Sample ID: 1602237-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Bromochloromethane	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Bromodichloromethane	ND (0.0006)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Bromoform	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Bromomethane	ND (0.0020)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Carbon Disulfide	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Carbon Tetrachloride	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Chlorobenzene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Chloroethane	ND (0.0020)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Chloroform	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Chloromethane	ND (0.0020)		8260B		1	02/11/16 16:09	CZB0161	CB61139
cis-1,2-Dichloroethene	0.0029 (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Dibromochloromethane	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Dibromomethane	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Dichlorodifluoromethane	ND (0.0020)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Diethyl Ether	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Di-isopropyl ether	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Ethylbenzene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Hexachlorobutadiene	ND (0.0006)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Hexachloroethane	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Isopropylbenzene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Methylene Chloride	ND (0.0020)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Naphthalene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
n-Butylbenzene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
n-Propylbenzene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
sec-Butylbenzene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Styrene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
tert-Butylbenzene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Tetrachloroethene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater
Client Sample ID: MW-241
Date Sampled: 02/10/16 10:15
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
ESS Laboratory Sample ID: 1602237-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Tetrahydrofuran	ND (0.0050)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Toluene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Trichloroethene	0.0720 (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Trichlorofluoromethane	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Vinyl Acetate	ND (0.0050)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Vinyl Chloride	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Xylene O	ND (0.0010)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Xylene P,M	ND (0.0020)		8260B		1	02/11/16 16:09	CZB0161	CB61139
Xylenes (Total)	ND (0.0020)		8260B		1	02/11/16 16:09		[CALC]
Trihalomethanes (Total)	ND (0.0010)		8260B			02/11/16 16:09		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>119 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>101 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>117 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>108 %</i>		<i>70-130</i>



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater
Client Sample ID: MW-D
Date Sampled: 02/10/16 12:15
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
ESS Laboratory Sample ID: 1602237-04
Sample Matrix: Ground Water
Units: mg/L
Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,1-Dichloroethane	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,1-Dichloroethene	0.0065 (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,1-Dichloropropene	ND (0.0020)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,2-Dibromoethane	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,2-Dichloroethane	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,2-Dichloropropane	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,3-Dichloropropane	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1,4-Dioxane - Screen	ND (0.500)		8260B		1	02/18/16 13:59	CZB0255	CB61832
1-Chlorohexane	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
2,2-Dichloropropane	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
2-Butanone	ND (0.0100)		8260B		1	02/18/16 13:59	CZB0255	CB61832
2-Chlorotoluene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
2-Hexanone	ND (0.0100)		8260B		1	02/18/16 13:59	CZB0255	CB61832
4-Chlorotoluene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
4-Isopropyltoluene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Acetone	ND (0.0100)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Benzene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Bromobenzene	ND (0.0020)		8260B		1	02/18/16 13:59	CZB0255	CB61832



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater
Client Sample ID: MW-D
Date Sampled: 02/10/16 12:15
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
ESS Laboratory Sample ID: 1602237-04
Sample Matrix: Ground Water
Units: mg/L
Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Bromochloromethane	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Bromodichloromethane	ND (0.0006)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Bromoform	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Bromomethane	ND (0.0020)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Carbon Disulfide	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Carbon Tetrachloride	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Chlorobenzene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Chloroethane	ND (0.0020)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Chloroform	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Chloromethane	ND (0.0020)		8260B		1	02/18/16 13:59	CZB0255	CB61832
cis-1,2-Dichloroethene	0.0742 (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Dibromochloromethane	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Dibromomethane	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Dichlorodifluoromethane	ND (0.0020)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Diethyl Ether	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Di-isopropyl ether	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Ethylbenzene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Hexachlorobutadiene	ND (0.0006)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Hexachloroethane	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Isopropylbenzene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Methylene Chloride	ND (0.0020)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Naphthalene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
n-Butylbenzene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
n-Propylbenzene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
sec-Butylbenzene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Styrene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
tert-Butylbenzene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Tetrachloroethene	0.0023 (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater
Client Sample ID: MW-D
Date Sampled: 02/10/16 12:15
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
ESS Laboratory Sample ID: 1602237-04
Sample Matrix: Ground Water
Units: mg/L
Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Tetrahydrofuran	ND (0.0050)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Toluene	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
trans-1,2-Dichloroethene	0.0027 (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Trichloroethene	1.73 (0.100)		8260B		100	02/18/16 13:34	CZB0255	CB61832
Trichlorofluoromethane	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Vinyl Acetate	ND (0.0050)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Vinyl Chloride	0.0024 (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Xylene O	ND (0.0010)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Xylene P,M	ND (0.0020)		8260B		1	02/18/16 13:59	CZB0255	CB61832
Xylenes (Total)	ND (0.0020)		8260B		1	02/18/16 13:59		[CALC]
Trihalomethanes (Total)	ND (0.0010)		8260B			02/18/16 13:59		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>113 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>98 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>112 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>108 %</i>		<i>70-130</i>



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater
Client Sample ID: MW-235S
Date Sampled: 02/10/16 12:15
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
ESS Laboratory Sample ID: 1602237-05
Sample Matrix: Ground Water
Units: mg/L
Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,1-Dichloroethane	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,1-Dichloroethene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,1-Dichloropropene	ND (0.0020)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,2-Dibromoethane	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,2-Dichloroethane	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,2-Dichloropropane	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,3-Dichloropropane	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1,4-Dioxane - Screen	ND (0.500)		8260B		1	02/11/16 16:34	CZB0161	CB61139
1-Chlorohexane	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
2,2-Dichloropropane	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
2-Butanone	ND (0.0100)		8260B		1	02/11/16 16:34	CZB0161	CB61139
2-Chlorotoluene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
2-Hexanone	ND (0.0100)		8260B		1	02/11/16 16:34	CZB0161	CB61139
4-Chlorotoluene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
4-Isopropyltoluene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Acetone	ND (0.0100)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Benzene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Bromobenzene	ND (0.0020)		8260B		1	02/11/16 16:34	CZB0161	CB61139



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater
Client Sample ID: MW-235S
Date Sampled: 02/10/16 12:15
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
ESS Laboratory Sample ID: 1602237-05
Sample Matrix: Ground Water
Units: mg/L
Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Bromochloromethane	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Bromodichloromethane	ND (0.0006)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Bromoform	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Bromomethane	ND (0.0020)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Carbon Disulfide	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Carbon Tetrachloride	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Chlorobenzene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Chloroethane	ND (0.0020)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Chloroform	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Chloromethane	ND (0.0020)		8260B		1	02/11/16 16:34	CZB0161	CB61139
cis-1,2-Dichloroethene	0.0086 (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Dibromochloromethane	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Dibromomethane	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Dichlorodifluoromethane	ND (0.0020)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Diethyl Ether	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Di-isopropyl ether	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Ethylbenzene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Hexachlorobutadiene	ND (0.0006)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Hexachloroethane	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Isopropylbenzene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Methylene Chloride	ND (0.0020)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Naphthalene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
n-Butylbenzene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
n-Propylbenzene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
sec-Butylbenzene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Styrene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
tert-Butylbenzene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Tetrachloroethene	0.0029 (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
 Client Project ID: Textron Gorham - Groundwater
 Client Sample ID: MW-235S
 Date Sampled: 02/10/16 12:15
 Percent Solids: N/A
 Initial Volume: 5
 Final Volume: 5
 Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
 ESS Laboratory Sample ID: 1602237-05
 Sample Matrix: Ground Water
 Units: mg/L
 Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Tetrahydrofuran	ND (0.0050)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Toluene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Trichloroethene	0.0132 (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Trichlorofluoromethane	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Vinyl Acetate	ND (0.0050)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Vinyl Chloride	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Xylene O	ND (0.0010)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Xylene P,M	ND (0.0020)		8260B		1	02/11/16 16:34	CZB0161	CB61139
Xylenes (Total)	ND (0.0020)		8260B		1	02/11/16 16:34		[CALC]
Trihalomethanes (Total)	ND (0.0010)		8260B			02/11/16 16:34		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>120 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>101 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>119 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>108 %</i>		<i>70-130</i>



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater
Client Sample ID: MW236S
Date Sampled: 02/10/16 12:55
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
ESS Laboratory Sample ID: 1602237-06
Sample Matrix: Ground Water
Units: mg/L
Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,1,2-Trichloroethane	0.0042 (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,1-Dichloroethane	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,1-Dichloroethene	0.0022 (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,1-Dichloropropene	ND (0.0020)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,2-Dibromoethane	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,2-Dichloroethane	0.0032 (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,2-Dichloropropane	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,3-Dichloropropane	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1,4-Dioxane - Screen	ND (0.500)		8260B		1	02/11/16 16:59	CZB0161	CB61139
1-Chlorohexane	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
2,2-Dichloropropane	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
2-Butanone	ND (0.0100)		8260B		1	02/11/16 16:59	CZB0161	CB61139
2-Chlorotoluene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
2-Hexanone	ND (0.0100)		8260B		1	02/11/16 16:59	CZB0161	CB61139
4-Chlorotoluene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
4-Isopropyltoluene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Acetone	ND (0.0100)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Benzene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Bromobenzene	ND (0.0020)		8260B		1	02/11/16 16:59	CZB0161	CB61139



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater
Client Sample ID: MW236S
Date Sampled: 02/10/16 12:55
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
ESS Laboratory Sample ID: 1602237-06
Sample Matrix: Ground Water
Units: mg/L
Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Bromochloromethane	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Bromodichloromethane	ND (0.0006)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Bromoform	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Bromomethane	ND (0.0020)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Carbon Disulfide	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Carbon Tetrachloride	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Chlorobenzene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Chloroethane	ND (0.0020)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Chloroform	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Chloromethane	ND (0.0020)		8260B		1	02/11/16 16:59	CZB0161	CB61139
cis-1,2-Dichloroethene	0.0759 (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Dibromochloromethane	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Dibromomethane	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Dichlorodifluoromethane	ND (0.0020)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Diethyl Ether	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Di-isopropyl ether	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Ethylbenzene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Hexachlorobutadiene	ND (0.0006)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Hexachloroethane	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Isopropylbenzene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Methylene Chloride	ND (0.0020)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Naphthalene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
n-Butylbenzene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
n-Propylbenzene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
sec-Butylbenzene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Styrene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
tert-Butylbenzene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Tetrachloroethene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater
Client Sample ID: MW236S
Date Sampled: 02/10/16 12:55
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
ESS Laboratory Sample ID: 1602237-06
Sample Matrix: Ground Water
Units: mg/L
Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Tetrahydrofuran	ND (0.0050)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Toluene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Trichloroethene	0.110 (0.0100)		8260B		10	02/12/16 15:41	CZB0161	CB61139
Trichlorofluoromethane	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Vinyl Acetate	ND (0.0050)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Vinyl Chloride	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Xylene O	ND (0.0010)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Xylene P,M	ND (0.0020)		8260B		1	02/11/16 16:59	CZB0161	CB61139
Xylenes (Total)	ND (0.0020)		8260B		1	02/11/16 16:59		[CALC]
Trihalomethanes (Total)	ND (0.0010)		8260B			02/11/16 16:59		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>117 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>103 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>116 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>109 %</i>		<i>70-130</i>



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater
Client Sample ID: DUP-1
Date Sampled: 02/10/16 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
ESS Laboratory Sample ID: 1602237-07
Sample Matrix: Ground Water
Units: mg/L
Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,1-Dichloroethane	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,1-Dichloroethene	0.0069 (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,1-Dichloropropene	ND (0.0020)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,2-Dibromoethane	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,2-Dichloroethane	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,2-Dichloropropane	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,3-Dichloropropane	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1,4-Dioxane - Screen	ND (0.500)		8260B		1	02/11/16 17:24	CZB0161	CB61139
1-Chlorohexane	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
2,2-Dichloropropane	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
2-Butanone	ND (0.0100)		8260B		1	02/11/16 17:24	CZB0161	CB61139
2-Chlorotoluene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
2-Hexanone	ND (0.0100)		8260B		1	02/11/16 17:24	CZB0161	CB61139
4-Chlorotoluene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
4-Isopropyltoluene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Acetone	ND (0.0100)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Benzene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Bromobenzene	ND (0.0020)		8260B		1	02/11/16 17:24	CZB0161	CB61139



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
 Client Project ID: Textron Gorham - Groundwater
 Client Sample ID: DUP-1
 Date Sampled: 02/10/16 00:00
 Percent Solids: N/A
 Initial Volume: 5
 Final Volume: 5
 Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
 ESS Laboratory Sample ID: 1602237-07
 Sample Matrix: Ground Water
 Units: mg/L
 Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Bromochloromethane	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Bromodichloromethane	ND (0.0006)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Bromoform	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Bromomethane	ND (0.0020)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Carbon Disulfide	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Carbon Tetrachloride	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Chlorobenzene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Chloroethane	ND (0.0020)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Chloroform	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Chloromethane	ND (0.0020)		8260B		1	02/11/16 17:24	CZB0161	CB61139
cis-1,2-Dichloroethene	0.0791 (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Dibromochloromethane	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Dibromomethane	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Dichlorodifluoromethane	ND (0.0020)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Diethyl Ether	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Di-isopropyl ether	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Ethylbenzene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Hexachlorobutadiene	ND (0.0006)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Hexachloroethane	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Isopropylbenzene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Methylene Chloride	ND (0.0020)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Naphthalene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
n-Butylbenzene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
n-Propylbenzene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
sec-Butylbenzene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Styrene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
tert-Butylbenzene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Tetrachloroethene	0.0024 (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater
Client Sample ID: DUP-1
Date Sampled: 02/10/16 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1602237
ESS Laboratory Sample ID: 1602237-07
Sample Matrix: Ground Water
Units: mg/L
Analyst: GEM

8260B Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Tetrahydrofuran	ND (0.0050)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Toluene	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
trans-1,2-Dichloroethene	0.0031 (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Trichloroethene	1.71 (0.100)		8260B		100	02/12/16 16:56	CZB0161	CB61139
Trichlorofluoromethane	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Vinyl Acetate	ND (0.0050)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Vinyl Chloride	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Xylene O	ND (0.0010)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Xylene P,M	ND (0.0020)		8260B		1	02/11/16 17:24	CZB0161	CB61139
Xylenes (Total)	ND (0.0020)		8260B		1	02/11/16 17:24		[CALC]
Trihalomethanes (Total)	ND (0.0010)		8260B			02/11/16 17:24		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>116 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>100 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>115 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>111 %</i>		<i>70-130</i>



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
 Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CB61139 - 5030B

Blank

1,1,1,2-Tetrachloroethane	ND	0.0010	mg/L							
1,1,1-Trichloroethane	ND	0.0010	mg/L							
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L							
1,1,2-Trichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethene	ND	0.0010	mg/L							
1,1-Dichloropropene	ND	0.0020	mg/L							
1,2,3-Trichlorobenzene	ND	0.0010	mg/L							
1,2,3-Trichloropropane	ND	0.0010	mg/L							
1,2,4-Trichlorobenzene	ND	0.0010	mg/L							
1,2,4-Trimethylbenzene	ND	0.0010	mg/L							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/L							
1,2-Dibromoethane	ND	0.0010	mg/L							
1,2-Dichlorobenzene	ND	0.0010	mg/L							
1,2-Dichloroethane	ND	0.0010	mg/L							
1,2-Dichloropropane	ND	0.0010	mg/L							
1,3,5-Trimethylbenzene	ND	0.0010	mg/L							
1,3-Dichlorobenzene	ND	0.0010	mg/L							
1,3-Dichloropropane	ND	0.0010	mg/L							
1,4-Dichlorobenzene	ND	0.0010	mg/L							
1,4-Dioxane - Screen	ND	0.500	mg/L							
1-Chlorohexane	ND	0.0010	mg/L							
2,2-Dichloropropane	ND	0.0010	mg/L							
2-Butanone	ND	0.0100	mg/L							
2-Chlorotoluene	ND	0.0010	mg/L							
2-Hexanone	ND	0.0100	mg/L							
4-Chlorotoluene	ND	0.0010	mg/L							
4-Isopropyltoluene	ND	0.0010	mg/L							
4-Methyl-2-Pentanone	ND	0.0250	mg/L							
Acetone	ND	0.0100	mg/L							
Benzene	ND	0.0010	mg/L							
Bromobenzene	ND	0.0020	mg/L							
Bromochloromethane	ND	0.0010	mg/L							
Bromodichloromethane	ND	0.0006	mg/L							
Bromoform	ND	0.0010	mg/L							
Bromomethane	ND	0.0020	mg/L							
Carbon Disulfide	ND	0.0010	mg/L							
Carbon Tetrachloride	ND	0.0010	mg/L							
Chlorobenzene	ND	0.0010	mg/L							
Chloroethane	ND	0.0020	mg/L							
Chloroform	ND	0.0010	mg/L							
Chloromethane	ND	0.0020	mg/L							
cis-1,2-Dichloroethene	ND	0.0010	mg/L							
cis-1,3-Dichloropropene	ND	0.0004	mg/L							



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CB61139 - 5030B

Dibromochloromethane	ND	0.0010	mg/L							
Dibromomethane	ND	0.0010	mg/L							
Dichlorodifluoromethane	ND	0.0020	mg/L							
Diethyl Ether	ND	0.0010	mg/L							
Di-isopropyl ether	ND	0.0010	mg/L							
Ethyl tertiary-butyl ether	ND	0.0010	mg/L							
Ethylbenzene	ND	0.0010	mg/L							
Hexachlorobutadiene	ND	0.0006	mg/L							
Hexachloroethane	ND	0.0010	mg/L							
Isopropylbenzene	ND	0.0010	mg/L							
Methyl tert-Butyl Ether	ND	0.0010	mg/L							
Methylene Chloride	ND	0.0020	mg/L							
Naphthalene	ND	0.0010	mg/L							
n-Butylbenzene	ND	0.0010	mg/L							
n-Propylbenzene	ND	0.0010	mg/L							
sec-Butylbenzene	ND	0.0010	mg/L							
Styrene	ND	0.0010	mg/L							
tert-Butylbenzene	ND	0.0010	mg/L							
Tertiary-amyl methyl ether	ND	0.0010	mg/L							
Tetrachloroethene	ND	0.0010	mg/L							
Tetrahydrofuran	ND	0.0050	mg/L							
Toluene	ND	0.0010	mg/L							
trans-1,2-Dichloroethene	ND	0.0010	mg/L							
trans-1,3-Dichloropropene	ND	0.0004	mg/L							
Trichloroethene	ND	0.0010	mg/L							
Trichlorofluoromethane	ND	0.0010	mg/L							
Trihalomethanes (Total)	ND	0.0010	mg/L							
Vinyl Acetate	ND	0.0050	mg/L							
Vinyl Chloride	ND	0.0010	mg/L							
Xylene O	ND	0.0010	mg/L							
Xylene P,M	ND	0.0020	mg/L							
Xylenes (Total)	ND	0.0020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	0.0298		mg/L	0.02500		119	70-130			
Surrogate: 4-Bromofluorobenzene	0.0253		mg/L	0.02500		101	70-130			
Surrogate: Dibromofluoromethane	0.0296		mg/L	0.02500		119	70-130			
Surrogate: Toluene-d8	0.0269		mg/L	0.02500		108	70-130			

LCS

1,1,1,2-Tetrachloroethane	10.2		ug/L	10.00		102	70-130			
1,1,1-Trichloroethane	11.7		ug/L	10.00		117	70-130			
1,1,2,2-Tetrachloroethane	9.36		ug/L	10.00		94	70-130			
1,1,2-Trichloroethane	9.56		ug/L	10.00		96	70-130			
1,1-Dichloroethane	9.69		ug/L	10.00		97	70-130			
1,1-Dichloroethene	10.5		ug/L	10.00		105	70-130			
1,1-Dichloropropene	10.4		ug/L	10.00		104	70-130			
1,2,3-Trichlorobenzene	9.82		ug/L	10.00		98	70-130			



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CB61139 - 5030B

1,2,3-Trichloropropane	9.49		ug/L	10.00		95	70-130			
1,2,4-Trichlorobenzene	9.24		ug/L	10.00		92	70-130			
1,2,4-Trimethylbenzene	9.31		ug/L	10.00		93	70-130			
1,2-Dibromo-3-Chloropropane	10.8		ug/L	10.00		108	70-130			
1,2-Dibromoethane	9.31		ug/L	10.00		93	70-130			
1,2-Dichlorobenzene	9.94		ug/L	10.00		99	70-130			
1,2-Dichloroethane	10.9		ug/L	10.00		109	70-130			
1,2-Dichloropropane	8.95		ug/L	10.00		90	70-130			
1,3,5-Trimethylbenzene	9.54		ug/L	10.00		95	70-130			
1,3-Dichlorobenzene	10.2		ug/L	10.00		102	70-130			
1,3-Dichloropropane	9.60		ug/L	10.00		96	70-130			
1,4-Dichlorobenzene	9.46		ug/L	10.00		95	70-130			
1,4-Dioxane - Screen	193		ug/L	200.0		96	0-332			
1-Chlorohexane	9.01		ug/L	10.00		90	70-130			
2,2-Dichloropropane	12.5		ug/L	10.00		125	70-130			
2-Butanone	47.5		ug/L	50.00		95	70-130			
2-Chlorotoluene	10.4		ug/L	10.00		104	70-130			
2-Hexanone	55.7		ug/L	50.00		111	70-130			
4-Chlorotoluene	9.75		ug/L	10.00		98	70-130			
4-Isopropyltoluene	10.3		ug/L	10.00		103	70-130			
4-Methyl-2-Pentanone	57.6		ug/L	50.00		115	70-130			
Acetone	50.0		ug/L	50.00		100	70-130			
Benzene	9.57		ug/L	10.00		96	70-130			
Bromobenzene	9.60		ug/L	10.00		96	70-130			
Bromochloromethane	10.1		ug/L	10.00		101	70-130			
Bromodichloromethane	11.2		ug/L	10.00		112	70-130			
Bromoform	10.9		ug/L	10.00		109	70-130			
Bromomethane	10.8		ug/L	10.00		108	70-130			
Carbon Disulfide	9.06		ug/L	10.00		91	70-130			
Carbon Tetrachloride	12.2		ug/L	10.00		122	70-130			
Chlorobenzene	9.38		ug/L	10.00		94	70-130			
Chloroethane	7.90		ug/L	10.00		79	70-130			
Chloroform	10.2		ug/L	10.00		102	70-130			
Chloromethane	11.1		ug/L	10.00		111	70-130			
cis-1,2-Dichloroethene	10.1		ug/L	10.00		101	70-130			
cis-1,3-Dichloropropene	9.32		ug/L	10.00		93	70-130			
Dibromochloromethane	10.0		ug/L	10.00		100	70-130			
Dibromomethane	10.4		ug/L	10.00		104	70-130			
Dichlorodifluoromethane	9.95		ug/L	10.00		100	70-130			
Diethyl Ether	9.46		ug/L	10.00		95	70-130			
Di-isopropyl ether	8.02		ug/L	10.00		80	70-130			
Ethyl tertiary-butyl ether	8.16		ug/L	10.00		82	70-130			
Ethylbenzene	9.19		ug/L	10.00		92	70-130			
Hexachlorobutadiene	10.7		ug/L	10.00		107	70-130			
Hexachloroethane	13.4		ug/L	10.00		134	70-130			B+



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CB61139 - 5030B

Isopropylbenzene	10.0		ug/L	10.00		100	70-130			
Methyl tert-Butyl Ether	8.44		ug/L	10.00		84	70-130			
Methylene Chloride	9.86		ug/L	10.00		99	70-130			
Naphthalene	10.0		ug/L	10.00		100	70-130			
n-Butylbenzene	9.20		ug/L	10.00		92	70-130			
n-Propylbenzene	10.2		ug/L	10.00		102	70-130			
sec-Butylbenzene	9.31		ug/L	10.00		93	70-130			
Styrene	8.78		ug/L	10.00		88	70-130			
tert-Butylbenzene	10.2		ug/L	10.00		102	70-130			
Tertiary-amyl methyl ether	7.81		ug/L	10.00		78	70-130			
Tetrachloroethene	8.26		ug/L	10.00		83	70-130			
Tetrahydrofuran	7.97		ug/L	10.00		80	70-130			
Toluene	10.1		ug/L	10.00		101	70-130			
trans-1,2-Dichloroethene	9.99		ug/L	10.00		100	70-130			
trans-1,3-Dichloropropene	9.30		ug/L	10.00		93	70-130			
Trichloroethene	10.4		ug/L	10.00		104	70-130			
Trichlorofluoromethane	10.1		ug/L	10.00		101	70-130			
Trihalomethanes (Total)	42.3		mg/L							
Vinyl Acetate	9.91		ug/L	10.00		99	70-130			
Vinyl Chloride	11.5		ug/L	10.00		115	70-130			
Xylene O	9.92		ug/L	10.00		99	70-130			
Xylene P,M	19.5		ug/L	20.00		98	70-130			
Xylenes (Total)	29.4		mg/L							
Surrogate: 1,2-Dichloroethane-d4	0.0296		mg/L	0.02500		118	70-130			
Surrogate: 4-Bromofluorobenzene	0.0261		mg/L	0.02500		104	70-130			
Surrogate: Dibromofluoromethane	0.0297		mg/L	0.02500		119	70-130			
Surrogate: Toluene-d8	0.0255		mg/L	0.02500		102	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	10.9		ug/L	10.00		109	70-130	6	25	
1,1,1-Trichloroethane	11.6		ug/L	10.00		116	70-130	1	25	
1,1,2,2-Tetrachloroethane	9.59		ug/L	10.00		96	70-130	2	25	
1,1,2-Trichloroethane	9.51		ug/L	10.00		95	70-130	0.5	25	
1,1-Dichloroethane	9.50		ug/L	10.00		95	70-130	2	25	
1,1-Dichloroethene	10.6		ug/L	10.00		106	70-130	0.9	25	
1,1-Dichloropropene	10.4		ug/L	10.00		104	70-130	0.1	25	
1,2,3-Trichlorobenzene	9.52		ug/L	10.00		95	70-130	3	25	
1,2,3-Trichloropropane	9.54		ug/L	10.00		95	70-130	0.5	25	
1,2,4-Trichlorobenzene	8.88		ug/L	10.00		89	70-130	4	25	
1,2,4-Trimethylbenzene	9.26		ug/L	10.00		93	70-130	0.5	25	
1,2-Dibromo-3-Chloropropane	10.6		ug/L	10.00		106	70-130	2	25	
1,2-Dibromoethane	10.1		ug/L	10.00		101	70-130	8	25	
1,2-Dichlorobenzene	9.80		ug/L	10.00		98	70-130	1	25	
1,2-Dichloroethane	10.6		ug/L	10.00		106	70-130	3	25	
1,2-Dichloropropane	8.76		ug/L	10.00		88	70-130	2	25	
1,3,5-Trimethylbenzene	9.42		ug/L	10.00		94	70-130	1	25	



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CB61139 - 5030B

1,3-Dichlorobenzene	10.0		ug/L	10.00		100	70-130	2	25	
1,3-Dichloropropane	10.5		ug/L	10.00		105	70-130	9	25	
1,4-Dichlorobenzene	9.88		ug/L	10.00		99	70-130	4	25	
1,4-Dioxane - Screen	183		ug/L	200.0		92	0-332	5	200	
1-Chlorohexane	9.65		ug/L	10.00		96	70-130	7	25	
2,2-Dichloropropane	12.3		ug/L	10.00		123	70-130	2	25	
2-Butanone	47.3		ug/L	50.00		95	70-130	0.5	25	
2-Chlorotoluene	10.2		ug/L	10.00		102	70-130	2	25	
2-Hexanone	54.3		ug/L	50.00		109	70-130	3	25	
4-Chlorotoluene	10.8		ug/L	10.00		108	70-130	11	25	
4-Isopropyltoluene	10.3		ug/L	10.00		103	70-130	0.2	25	
4-Methyl-2-Pentanone	53.9		ug/L	50.00		108	70-130	7	25	
Acetone	48.9		ug/L	50.00		98	70-130	2	25	
Benzene	9.43		ug/L	10.00		94	70-130	1	25	
Bromobenzene	9.61		ug/L	10.00		96	70-130	0.1	25	
Bromochloromethane	9.94		ug/L	10.00		99	70-130	1	25	
Bromodichloromethane	10.8		ug/L	10.00		108	70-130	3	25	
Bromoform	11.2		ug/L	10.00		112	70-130	3	25	
Bromomethane	9.93		ug/L	10.00		99	70-130	8	25	
Carbon Disulfide	8.96		ug/L	10.00		90	70-130	1	25	
Carbon Tetrachloride	12.1		ug/L	10.00		121	70-130	1	25	
Chlorobenzene	9.88		ug/L	10.00		99	70-130	5	25	
Chloroethane	7.72		ug/L	10.00		77	70-130	2	25	
Chloroform	10.1		ug/L	10.00		101	70-130	1	25	
Chloromethane	10.6		ug/L	10.00		106	70-130	4	25	
cis-1,2-Dichloroethene	9.91		ug/L	10.00		99	70-130	2	25	
cis-1,3-Dichloropropene	9.28		ug/L	10.00		93	70-130	0.4	25	
Dibromochloromethane	10.5		ug/L	10.00		105	70-130	5	25	
Dibromomethane	9.94		ug/L	10.00		99	70-130	4	25	
Dichlorodifluoromethane	9.62		ug/L	10.00		96	70-130	3	25	
Diethyl Ether	9.27		ug/L	10.00		93	70-130	2	25	
Di-isopropyl ether	8.19		ug/L	10.00		82	70-130	2	25	
Ethyl tertiary-butyl ether	8.44		ug/L	10.00		84	70-130	3	25	
Ethylbenzene	9.76		ug/L	10.00		98	70-130	6	25	
Hexachlorobutadiene	10.7		ug/L	10.00		107	70-130	0.09	25	
Hexachloroethane	13.3		ug/L	10.00		133	70-130	0.4	25	B+
Isopropylbenzene	10.1		ug/L	10.00		101	70-130	0.9	25	
Methyl tert-Butyl Ether	8.77		ug/L	10.00		88	70-130	4	25	
Methylene Chloride	9.54		ug/L	10.00		95	70-130	3	25	
Naphthalene	9.32		ug/L	10.00		93	70-130	7	25	
n-Butylbenzene	9.16		ug/L	10.00		92	70-130	0.4	25	
n-Propylbenzene	10.1		ug/L	10.00		101	70-130	1	25	
sec-Butylbenzene	10.7		ug/L	10.00		107	70-130	14	25	
Styrene	9.26		ug/L	10.00		93	70-130	5	25	
tert-Butylbenzene	10.2		ug/L	10.00		102	70-130	0.7	25	



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CB61139 - 5030B

Tertiary-amyl methyl ether	8.04		ug/L	10.00		80	70-130	3	25	
Tetrachloroethene	8.92		ug/L	10.00		89	70-130	8	25	
Tetrahydrofuran	7.98		ug/L	10.00		80	70-130	0.1	25	
Toluene	9.88		ug/L	10.00		99	70-130	2	25	
trans-1,2-Dichloroethene	9.81		ug/L	10.00		98	70-130	2	25	
trans-1,3-Dichloropropene	9.27		ug/L	10.00		93	70-130	0.3	25	
Trichloroethene	10.1		ug/L	10.00		101	70-130	4	25	
Trichlorofluoromethane	10.1		ug/L	10.00		101	70-130	0.2	25	
Trihalomethanes (Total)	42.7		mg/L							
Vinyl Acetate	10.0		ug/L	10.00		100	70-130	1	25	
Vinyl Chloride	11.4		ug/L	10.00		114	70-130	1	25	
Xylene O	10.5		ug/L	10.00		105	70-130	5	25	
Xylene P,M	20.9		ug/L	20.00		104	70-130	7	25	
Xylenes (Total)	31.4		mg/L							
Surrogate: 1,2-Dichloroethane-d4	0.0295		mg/L	0.02500		118	70-130			
Surrogate: 4-Bromofluorobenzene	0.0279		mg/L	0.02500		112	70-130			
Surrogate: Dibromofluoromethane	0.0297		mg/L	0.02500		119	70-130			
Surrogate: Toluene-d8	0.0276		mg/L	0.02500		110	70-130			

Batch CB61832 - 5030B

Blank										
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/L							
1,1,1-Trichloroethane	ND	0.0010	mg/L							
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L							
1,1,2-Trichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethene	ND	0.0010	mg/L							
1,1-Dichloropropene	ND	0.0020	mg/L							
1,2,3-Trichlorobenzene	ND	0.0010	mg/L							
1,2,3-Trichloropropane	ND	0.0010	mg/L							
1,2,4-Trichlorobenzene	ND	0.0010	mg/L							
1,2,4-Trimethylbenzene	ND	0.0010	mg/L							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/L							
1,2-Dibromoethane	ND	0.0010	mg/L							
1,2-Dichlorobenzene	ND	0.0010	mg/L							
1,2-Dichloroethane	ND	0.0010	mg/L							
1,2-Dichloropropane	ND	0.0010	mg/L							
1,3,5-Trimethylbenzene	ND	0.0010	mg/L							
1,3-Dichlorobenzene	ND	0.0010	mg/L							
1,3-Dichloropropane	ND	0.0010	mg/L							
1,4-Dichlorobenzene	ND	0.0010	mg/L							
1,4-Dioxane - Screen	ND	0.500	mg/L							
1-Chlorohexane	ND	0.0010	mg/L							
2,2-Dichloropropane	ND	0.0010	mg/L							
2-Butanone	ND	0.0100	mg/L							
2-Chlorotoluene	ND	0.0010	mg/L							



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CB61832 - 5030B

2-Hexanone	ND	0.0100	mg/L							
4-Chlorotoluene	ND	0.0010	mg/L							
4-Isopropyltoluene	ND	0.0010	mg/L							
4-Methyl-2-Pentanone	ND	0.0250	mg/L							
Acetone	ND	0.0100	mg/L							
Benzene	ND	0.0010	mg/L							
Bromobenzene	ND	0.0020	mg/L							
Bromochloromethane	ND	0.0010	mg/L							
Bromodichloromethane	ND	0.0006	mg/L							
Bromoform	ND	0.0010	mg/L							
Bromomethane	ND	0.0020	mg/L							
Carbon Disulfide	ND	0.0010	mg/L							
Carbon Tetrachloride	ND	0.0010	mg/L							
Chlorobenzene	ND	0.0010	mg/L							
Chloroethane	ND	0.0020	mg/L							
Chloroform	ND	0.0010	mg/L							
Chloromethane	ND	0.0020	mg/L							
cis-1,2-Dichloroethene	ND	0.0010	mg/L							
cis-1,3-Dichloropropene	ND	0.0004	mg/L							
Dibromochloromethane	ND	0.0010	mg/L							
Dibromomethane	ND	0.0010	mg/L							
Dichlorodifluoromethane	ND	0.0020	mg/L							
Diethyl Ether	ND	0.0010	mg/L							
Di-isopropyl ether	ND	0.0010	mg/L							
Ethyl tertiary-butyl ether	ND	0.0010	mg/L							
Ethylbenzene	ND	0.0010	mg/L							
Hexachlorobutadiene	ND	0.0006	mg/L							
Hexachloroethane	ND	0.0010	mg/L							
Isopropylbenzene	ND	0.0010	mg/L							
Methyl tert-Butyl Ether	ND	0.0010	mg/L							
Methylene Chloride	ND	0.0020	mg/L							
Naphthalene	ND	0.0010	mg/L							
n-Butylbenzene	ND	0.0010	mg/L							
n-Propylbenzene	ND	0.0010	mg/L							
sec-Butylbenzene	ND	0.0010	mg/L							
Styrene	ND	0.0010	mg/L							
tert-Butylbenzene	ND	0.0010	mg/L							
Tertiary-amyl methyl ether	ND	0.0010	mg/L							
Tetrachloroethene	ND	0.0010	mg/L							
Tetrahydrofuran	ND	0.0050	mg/L							
Toluene	ND	0.0010	mg/L							
trans-1,2-Dichloroethene	ND	0.0010	mg/L							
trans-1,3-Dichloropropene	ND	0.0004	mg/L							
Trichloroethene	ND	0.0010	mg/L							
Trichlorofluoromethane	ND	0.0010	mg/L							



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CB61832 - [CALC]

Trihalomethanes (Total)	ND	0.0010	mg/L							
Vinyl Acetate	ND	0.0050	mg/L							
Vinyl Chloride	ND	0.0010	mg/L							
Xylene O	ND	0.0010	mg/L							
Xylene P,M	ND	0.0020	mg/L							
Xylenes (Total)	ND	0.0020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	0.0300		mg/L	0.02500		120	70-130			
Surrogate: 4-Bromofluorobenzene	0.0246		mg/L	0.02500		98	70-130			
Surrogate: Dibromofluoromethane	0.0282		mg/L	0.02500		113	70-130			
Surrogate: Toluene-d8	0.0259		mg/L	0.02500		104	70-130			

LCS

1,1,1,2-Tetrachloroethane	11.6		ug/L	10.00		116	70-130			
1,1,1-Trichloroethane	12.4		ug/L	10.00		124	70-130			
1,1,2,2-Tetrachloroethane	9.74		ug/L	10.00		97	70-130			
1,1,2-Trichloroethane	9.52		ug/L	10.00		95	70-130			
1,1-Dichloroethane	9.73		ug/L	10.00		97	70-130			
1,1-Dichloroethene	11.0		ug/L	10.00		110	70-130			
1,1-Dichloropropene	10.8		ug/L	10.00		108	70-130			
1,2,3-Trichlorobenzene	9.99		ug/L	10.00		100	70-130			
1,2,3-Trichloropropane	9.55		ug/L	10.00		96	70-130			
1,2,4-Trichlorobenzene	9.29		ug/L	10.00		93	70-130			
1,2,4-Trimethylbenzene	9.49		ug/L	10.00		95	70-130			
1,2-Dibromo-3-Chloropropane	10.7		ug/L	10.00		107	70-130			
1,2-Dibromoethane	10.5		ug/L	10.00		105	70-130			
1,2-Dichlorobenzene	9.96		ug/L	10.00		100	70-130			
1,2-Dichloroethane	11.5		ug/L	10.00		115	70-130			
1,2-Dichloropropane	8.79		ug/L	10.00		88	70-130			
1,3,5-Trimethylbenzene	9.72		ug/L	10.00		97	70-130			
1,3-Dichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,3-Dichloropropane	10.8		ug/L	10.00		108	70-130			
1,4-Dichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,4-Dioxane - Screen	187		ug/L	200.0		94	0-332			
1-Chlorohexane	9.70		ug/L	10.00		97	70-130			
2,2-Dichloropropane	12.7		ug/L	10.00		127	70-130			
2-Butanone	48.3		ug/L	50.00		97	70-130			
2-Chlorotoluene	10.6		ug/L	10.00		106	70-130			
2-Hexanone	63.7		ug/L	50.00		127	70-130			
4-Chlorotoluene	11.0		ug/L	10.00		110	70-130			
4-Isopropyltoluene	10.5		ug/L	10.00		105	70-130			
4-Methyl-2-Pentanone	58.4		ug/L	50.00		117	70-130			
Acetone	52.8		ug/L	50.00		106	70-130			
Benzene	9.73		ug/L	10.00		97	70-130			
Bromobenzene	10.0		ug/L	10.00		100	70-130			
Bromochloromethane	10.0		ug/L	10.00		100	70-130			
Bromodichloromethane	11.4		ug/L	10.00		114	70-130			



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CB61832 - 5030B

Bromoform	11.7		ug/L	10.00		117	70-130			
Bromomethane	9.81		ug/L	10.00		98	70-130			
Carbon Disulfide	9.24		ug/L	10.00		92	70-130			
Carbon Tetrachloride	12.8		ug/L	10.00		128	70-130			
Chlorobenzene	10.3		ug/L	10.00		103	70-130			
Chloroethane	8.30		ug/L	10.00		83	70-130			
Chloroform	10.6		ug/L	10.00		106	70-130			
Chloromethane	11.8		ug/L	10.00		118	70-130			
cis-1,2-Dichloroethene	10.2		ug/L	10.00		102	70-130			
cis-1,3-Dichloropropene	9.38		ug/L	10.00		94	70-130			
Dibromochloromethane	11.1		ug/L	10.00		111	70-130			
Dibromomethane	10.4		ug/L	10.00		104	70-130			
Dichlorodifluoromethane	12.1		ug/L	10.00		121	70-130			
Diethyl Ether	9.85		ug/L	10.00		98	70-130			
Di-isopropyl ether	8.19		ug/L	10.00		82	70-130			
Ethyl tertiary-butyl ether	8.16		ug/L	10.00		82	70-130			
Ethylbenzene	10.1		ug/L	10.00		101	70-130			
Hexachlorobutadiene	11.2		ug/L	10.00		112	70-130			
Hexachloroethane	13.4		ug/L	10.00		134	70-130			B+
Isopropylbenzene	10.2		ug/L	10.00		102	70-130			
Methyl tert-Butyl Ether	8.75		ug/L	10.00		88	70-130			
Methylene Chloride	10.1		ug/L	10.00		101	70-130			
Naphthalene	10.2		ug/L	10.00		102	70-130			
n-Butylbenzene	9.10		ug/L	10.00		91	70-130			
n-Propylbenzene	10.2		ug/L	10.00		102	70-130			
sec-Butylbenzene	10.9		ug/L	10.00		109	70-130			
Styrene	9.43		ug/L	10.00		94	70-130			
tert-Butylbenzene	10.5		ug/L	10.00		105	70-130			
Tertiary-amyl methyl ether	7.64		ug/L	10.00		76	70-130			
Tetrachloroethene	8.87		ug/L	10.00		89	70-130			
Tetrahydrofuran	8.20		ug/L	10.00		82	70-130			
Toluene	10.2		ug/L	10.00		102	70-130			
trans-1,2-Dichloroethene	10.1		ug/L	10.00		101	70-130			
trans-1,3-Dichloropropene	9.23		ug/L	10.00		92	70-130			
Trichloroethene	10.3		ug/L	10.00		103	70-130			
Trichlorofluoromethane	11.0		ug/L	10.00		110	70-130			
Trihalomethanes (Total)	44.7		mg/L							
Vinyl Acetate	9.80		ug/L	10.00		98	70-130			
Vinyl Chloride	12.8		ug/L	10.00		128	70-130			
Xylene O	11.2		ug/L	10.00		112	70-130			
Xylene P,M	22.0		ug/L	20.00		110	70-130			
Xylenes (Total)	33.2		mg/L							
Surrogate: 1,2-Dichloroethane-d4	0.0308		mg/L	0.02500		123	70-130			
Surrogate: 4-Bromofluorobenzene	0.0283		mg/L	0.02500		113	70-130			
Surrogate: Dibromofluoromethane	0.0299		mg/L	0.02500		120	70-130			



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CB61832 - 5030B

<i>Surrogate: Toluene-d8</i>	<i>0.0274</i>		mg/L	<i>0.02500</i>		<i>110</i>	<i>70-130</i>			
LCS Dup										
1,1,1,2-Tetrachloroethane	12.0		ug/L	10.00		120	70-130	3	25	
1,1,1-Trichloroethane	12.4		ug/L	10.00		124	70-130	0.5	25	
1,1,2,2-Tetrachloroethane	9.95		ug/L	10.00		100	70-130	2	25	
1,1,2-Trichloroethane	9.88		ug/L	10.00		99	70-130	4	25	
1,1-Dichloroethane	10.0		ug/L	10.00		100	70-130	3	25	
1,1-Dichloroethene	11.3		ug/L	10.00		113	70-130	2	25	
1,1-Dichloropropene	11.2		ug/L	10.00		112	70-130	3	25	
1,2,3-Trichlorobenzene	9.88		ug/L	10.00		99	70-130	1	25	
1,2,3-Trichloropropane	9.62		ug/L	10.00		96	70-130	0.7	25	
1,2,4-Trichlorobenzene	9.42		ug/L	10.00		94	70-130	1	25	
1,2,4-Trimethylbenzene	9.59		ug/L	10.00		96	70-130	1	25	
1,2-Dibromo-3-Chloropropane	10.7		ug/L	10.00		107	70-130	0.3	25	
1,2-Dibromoethane	10.6		ug/L	10.00		106	70-130	0.4	25	
1,2-Dichlorobenzene	10.2		ug/L	10.00		102	70-130	2	25	
1,2-Dichloroethane	11.6		ug/L	10.00		116	70-130	0.7	25	
1,2-Dichloropropane	9.03		ug/L	10.00		90	70-130	3	25	
1,3,5-Trimethylbenzene	9.90		ug/L	10.00		99	70-130	2	25	
1,3-Dichlorobenzene	10.7		ug/L	10.00		107	70-130	3	25	
1,3-Dichloropropane	11.0		ug/L	10.00		110	70-130	2	25	
1,4-Dichlorobenzene	10.3		ug/L	10.00		103	70-130	1	25	
1,4-Dioxane - Screen	196		ug/L	200.0		98	0-332	4	200	
1-Chlorohexane	9.78		ug/L	10.00		98	70-130	0.8	25	
2,2-Dichloropropane	12.9		ug/L	10.00		129	70-130	2	25	
2-Butanone	48.8		ug/L	50.00		98	70-130	1	25	
2-Chlorotoluene	10.9		ug/L	10.00		109	70-130	3	25	
2-Hexanone	58.5		ug/L	50.00		117	70-130	9	25	
4-Chlorotoluene	11.0		ug/L	10.00		110	70-130	0.6	25	
4-Isopropyltoluene	10.5		ug/L	10.00		105	70-130	0.2	25	
4-Methyl-2-Pentanone	55.0		ug/L	50.00		110	70-130	6	25	
Acetone	52.8		ug/L	50.00		106	70-130	0.08	25	
Benzene	9.88		ug/L	10.00		99	70-130	2	25	
Bromobenzene	9.93		ug/L	10.00		99	70-130	0.8	25	
Bromochloromethane	10.4		ug/L	10.00		104	70-130	3	25	
Bromodichloromethane	11.5		ug/L	10.00		115	70-130	1	25	
Bromoform	12.0		ug/L	10.00		120	70-130	3	25	
Bromomethane	9.97		ug/L	10.00		100	70-130	2	25	
Carbon Disulfide	9.43		ug/L	10.00		94	70-130	2	25	
Carbon Tetrachloride	13.1		ug/L	10.00		131	70-130	2	25	B+
Chlorobenzene	10.6		ug/L	10.00		106	70-130	3	25	
Chloroethane	8.39		ug/L	10.00		84	70-130	1	25	
Chloroform	10.9		ug/L	10.00		109	70-130	3	25	
Chloromethane	11.8		ug/L	10.00		118	70-130	0.4	25	



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CB61832 - 5030B

cis-1,2-Dichloroethene	10.5		ug/L	10.00		105	70-130	3	25	
cis-1,3-Dichloropropene	9.52		ug/L	10.00		95	70-130	1	25	
Dibromochloromethane	11.2		ug/L	10.00		112	70-130	0.9	25	
Dibromomethane	10.4		ug/L	10.00		104	70-130	0.5	25	
Dichlorodifluoromethane	12.1		ug/L	10.00		121	70-130	0.2	25	
Diethyl Ether	9.95		ug/L	10.00		100	70-130	1	25	
Di-isopropyl ether	8.49		ug/L	10.00		85	70-130	4	25	
Ethyl tertiary-butyl ether	8.06		ug/L	10.00		81	70-130	1	25	
Ethylbenzene	10.6		ug/L	10.00		106	70-130	4	25	
Hexachlorobutadiene	11.1		ug/L	10.00		111	70-130	0.8	25	
Hexachloroethane	13.6		ug/L	10.00		136	70-130	1	25	B+
Isopropylbenzene	10.4		ug/L	10.00		104	70-130	2	25	
Methyl tert-Butyl Ether	8.98		ug/L	10.00		90	70-130	3	25	
Methylene Chloride	10.2		ug/L	10.00		102	70-130	1	25	
Naphthalene	9.81		ug/L	10.00		98	70-130	4	25	
n-Butylbenzene	9.15		ug/L	10.00		92	70-130	0.5	25	
n-Propylbenzene	10.4		ug/L	10.00		104	70-130	2	25	
sec-Butylbenzene	11.2		ug/L	10.00		112	70-130	2	25	
Styrene	10.1		ug/L	10.00		101	70-130	7	25	
tert-Butylbenzene	10.7		ug/L	10.00		107	70-130	2	25	
Tertiary-amyl methyl ether	7.64		ug/L	10.00		76	70-130	0	25	
Tetrachloroethene	9.06		ug/L	10.00		91	70-130	2	25	
Tetrahydrofuran	8.49		ug/L	10.00		85	70-130	3	25	
Toluene	10.5		ug/L	10.00		105	70-130	3	25	
trans-1,2-Dichloroethene	10.4		ug/L	10.00		104	70-130	3	25	
trans-1,3-Dichloropropene	9.45		ug/L	10.00		94	70-130	2	25	
Trichloroethene	10.4		ug/L	10.00		104	70-130	1	25	
Trichlorofluoromethane	11.0		ug/L	10.00		110	70-130	0.2	25	
Trihalomethanes (Total)	45.6		mg/L							
Vinyl Acetate	10.7		ug/L	10.00		107	70-130	9	25	
Vinyl Chloride	12.8		ug/L	10.00		128	70-130	0.2	25	
Xylene O	11.4		ug/L	10.00		114	70-130	2	25	
Xylene P,M	22.3		ug/L	20.00		111	70-130	1	25	
Xylenes (Total)	33.7		mg/L							
Surrogate: 1,2-Dichloroethane-d4	0.0298		mg/L	0.02500		119	70-130			
Surrogate: 4-Bromofluorobenzene	0.0286		mg/L	0.02500		115	70-130			
Surrogate: Dibromofluoromethane	0.0301		mg/L	0.02500		120	70-130			
Surrogate: Toluene-d8	0.0275		mg/L	0.02500		110	70-130			

Matrix Spike Source: 1602237-04

1,1,1,2-Tetrachloroethane	10.7		ug/L	10.00	ND	107	70-130			
1,1,1-Trichloroethane	12.5		ug/L	10.00	ND	125	70-130			
1,1,2,2-Tetrachloroethane	10.0		ug/L	10.00	ND	100	70-130			
1,1,2-Trichloroethane	10.5		ug/L	10.00	ND	105	70-130			
1,1-Dichloroethane	10.1		ug/L	10.00	ND	101	70-130			
1,1-Dichloroethene	18.1		ug/L	10.00	6.51	116	70-130			



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
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ESS Laboratory Work Order: 1602237

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CB61832 - 5030B

1,1-Dichloropropene	10.2		ug/L	10.00	ND	102	70-130			
1,2,3-Trichlorobenzene	9.20		ug/L	10.00	ND	92	70-130			
1,2,3-Trichloropropane	9.76		ug/L	10.00	ND	98	70-130			
1,2,4-Trichlorobenzene	8.73		ug/L	10.00	ND	87	70-130			
1,2,4-Trimethylbenzene	9.38		ug/L	10.00	ND	94	70-130			
1,2-Dibromo-3-Chloropropane	10.7		ug/L	10.00	ND	107	70-130			
1,2-Dibromoethane	9.86		ug/L	10.00	ND	99	70-130			
1,2-Dichlorobenzene	9.98		ug/L	10.00	ND	100	70-130			
1,2-Dichloroethane	11.7		ug/L	10.00	ND	117	70-130			
1,2-Dichloropropane	10.5		ug/L	10.00	ND	105	70-130			
1,3,5-Trimethylbenzene	9.85		ug/L	10.00	ND	98	70-130			
1,3-Dichlorobenzene	10.6		ug/L	10.00	ND	106	70-130			
1,3-Dichloropropane	10.2		ug/L	10.00	ND	102	70-130			
1,4-Dichlorobenzene	10.1		ug/L	10.00	ND	101	70-130			
1,4-Dioxane - Screen	201		ug/L	200.0	ND	100	0-332			
1-Chlorohexane	9.10		ug/L	10.00	ND	91	70-130			
2,2-Dichloropropane	13.2		ug/L	10.00	ND	132	70-130			M+
2-Butanone	49.4		ug/L	50.00	ND	99	70-130			
2-Chlorotoluene	10.6		ug/L	10.00	ND	106	70-130			
2-Hexanone	47.0		ug/L	50.00	ND	94	70-130			
4-Chlorotoluene	11.0		ug/L	10.00	ND	110	70-130			
4-Isopropyltoluene	10.4		ug/L	10.00	ND	104	70-130			
4-Methyl-2-Pentanone	50.7		ug/L	50.00	ND	101	70-130			
Acetone	52.7		ug/L	50.00	ND	105	70-130			
Benzene	9.90		ug/L	10.00	ND	99	70-130			
Bromobenzene	9.89		ug/L	10.00	ND	99	70-130			
Bromochloromethane	10.9		ug/L	10.00	ND	109	70-130			
Bromodichloromethane	12.5		ug/L	10.00	ND	125	70-130			
Bromoform	11.2		ug/L	10.00	ND	112	70-130			
Bromomethane	8.91		ug/L	10.00	ND	89	70-130			
Carbon Disulfide	9.47		ug/L	10.00	ND	95	70-130			
Carbon Tetrachloride	13.0		ug/L	10.00	ND	130	70-130			
Chlorobenzene	9.77		ug/L	10.00	ND	98	70-130			
Chloroethane	8.29		ug/L	10.00	ND	83	70-130			
Chloroform	11.3		ug/L	10.00	0.310	110	70-130			
Chloromethane	11.3		ug/L	10.00	ND	113	70-130			
cis-1,2-Dichloroethene	87.7		ug/L	10.00	74.2	136	70-130			M+
cis-1,3-Dichloropropene	10.2		ug/L	10.00	ND	102	70-130			
Dibromochloromethane	10.6		ug/L	10.00	ND	106	70-130			
Dibromomethane	10.8		ug/L	10.00	ND	108	70-130			
Dichlorodifluoromethane	12.3		ug/L	10.00	ND	123	70-130			
Diethyl Ether	9.55		ug/L	10.00	ND	96	70-130			
Di-isopropyl ether	8.20		ug/L	10.00	ND	82	70-130			
Ethyl tertiary-butyl ether	8.20		ug/L	10.00	ND	82	70-130			
Ethylbenzene	9.48		ug/L	10.00	ND	95	70-130			



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CB61832 - 5030B

Hexachlorobutadiene	10.5		ug/L	10.00	ND	105	70-130			
Hexachloroethane	13.5		ug/L	10.00	ND	135	70-130			M+
Isopropylbenzene	10.2		ug/L	10.00	ND	102	70-130			
Methyl tert-Butyl Ether	9.05		ug/L	10.00	ND	90	70-130			
Methylene Chloride	10.1		ug/L	10.00	ND	101	70-130			
Naphthalene	7.37		ug/L	10.00	ND	74	70-130			
n-Butylbenzene	8.61		ug/L	10.00	ND	86	70-130			
n-Propylbenzene	10.3		ug/L	10.00	ND	103	70-130			
sec-Butylbenzene	10.8		ug/L	10.00	ND	108	70-130			
Styrene	9.26		ug/L	10.00	ND	93	70-130			
tert-Butylbenzene	10.6		ug/L	10.00	ND	106	70-130			
Tertiary-amyl methyl ether	7.57		ug/L	10.00	ND	76	70-130			
Tetrachloroethene	10.3		ug/L	10.00	2.26	81	70-130			
Tetrahydrofuran	8.43		ug/L	10.00	ND	84	70-130			
Toluene	10.8		ug/L	10.00	ND	108	70-130			
trans-1,2-Dichloroethene	13.1		ug/L	10.00	2.67	105	70-130			
trans-1,3-Dichloropropene	9.88		ug/L	10.00	ND	99	70-130			
Trichloroethene	1840		ug/L	10.00	1730	NR	70-130			E, M+
Trichlorofluoromethane	11.1		ug/L	10.00	ND	111	70-130			
Trihalomethanes (Total)	45.5		mg/L							
Vinyl Acetate	10.5		ug/L	10.00	ND	105	70-130			
Vinyl Chloride	14.6		ug/L	10.00	2.38	123	70-130			
Xylene O	10.4		ug/L	10.00	ND	104	70-130			
Xylene P,M	20.4		ug/L	20.00	ND	102	70-130			
Xylenes (Total)	30.8		mg/L							
Surrogate: 1,2-Dichloroethane-d4	0.0295		mg/L	0.02500		118	70-130			
Surrogate: 4-Bromofluorobenzene	0.0262		mg/L	0.02500		105	70-130			
Surrogate: Dibromofluoromethane	0.0298		mg/L	0.02500		119	70-130			
Surrogate: Toluene-d8	0.0251		mg/L	0.02500		100	70-130			

Matrix Spike Dup Source: 1602237-04

1,1,1,2-Tetrachloroethane	11.7		ug/L	10.00	ND	117	70-130	9	30	
1,1,1-Trichloroethane	12.6		ug/L	10.00	ND	126	70-130	1	30	
1,1,2,2-Tetrachloroethane	10.1		ug/L	10.00	ND	101	70-130	1	30	
1,1,2-Trichloroethane	10.2		ug/L	10.00	ND	102	70-130	3	30	
1,1-Dichloroethane	9.96		ug/L	10.00	ND	100	70-130	1	30	
1,1-Dichloroethene	18.2		ug/L	10.00	6.51	117	70-130	0.4	30	
1,1-Dichloropropene	10.4		ug/L	10.00	ND	104	70-130	1	30	
1,2,3-Trichlorobenzene	9.90		ug/L	10.00	ND	99	70-130	7	30	
1,2,3-Trichloropropane	10.0		ug/L	10.00	ND	100	70-130	2	30	
1,2,4-Trichlorobenzene	9.11		ug/L	10.00	ND	91	70-130	4	30	
1,2,4-Trimethylbenzene	9.74		ug/L	10.00	ND	97	70-130	4	30	
1,2-Dibromo-3-Chloropropane	11.1		ug/L	10.00	ND	111	70-130	4	30	
1,2-Dibromoethane	10.6		ug/L	10.00	ND	106	70-130	7	30	
1,2-Dichlorobenzene	10.2		ug/L	10.00	ND	102	70-130	3	30	
1,2-Dichloroethane	11.6		ug/L	10.00	ND	116	70-130	0.7	30	



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8260B Volatile Organic Compounds

Batch CB61832 - 5030B

1,2-Dichloropropane	18.6		ug/L	10.00	ND	186	70-130	56	30	D+, M+
1,3,5-Trimethylbenzene	9.98		ug/L	10.00	ND	100	70-130	1	30	
1,3-Dichlorobenzene	10.4		ug/L	10.00	ND	104	70-130	2	30	
1,3-Dichloropropane	11.1		ug/L	10.00	ND	111	70-130	9	30	
1,4-Dichlorobenzene	10.6		ug/L	10.00	ND	106	70-130	5	30	
1,4-Dioxane - Screen	205		ug/L	200.0	ND	102	0-332	2	200	
1-Chlorohexane	9.91		ug/L	10.00	ND	99	70-130	9	30	
2,2-Dichloropropane	13.4		ug/L	10.00	ND	134	70-130	2	30	M+
2-Butanone	49.7		ug/L	50.00	ND	99	70-130	0.6	30	
2-Chlorotoluene	10.9		ug/L	10.00	ND	109	70-130	3	30	
2-Hexanone	53.3		ug/L	50.00	ND	107	70-130	13	30	
4-Chlorotoluene	11.2		ug/L	10.00	ND	112	70-130	2	30	
4-Isopropyltoluene	10.7		ug/L	10.00	ND	107	70-130	3	30	
4-Methyl-2-Pentanone	53.9		ug/L	50.00	ND	108	70-130	6	30	
Acetone	51.2		ug/L	50.00	ND	102	70-130	3	30	
Benzene	9.95		ug/L	10.00	ND	100	70-130	0.5	30	
Bromobenzene	10.1		ug/L	10.00	ND	101	70-130	2	30	
Bromochloromethane	10.5		ug/L	10.00	ND	105	70-130	3	30	
Bromodichloromethane	13.2		ug/L	10.00	ND	132	70-130	5	30	M+
Bromoform	11.8		ug/L	10.00	ND	118	70-130	6	30	
Bromomethane	9.88		ug/L	10.00	ND	99	70-130	10	30	
Carbon Disulfide	9.60		ug/L	10.00	ND	96	70-130	1	30	
Carbon Tetrachloride	12.8		ug/L	10.00	ND	128	70-130	2	30	
Chlorobenzene	10.5		ug/L	10.00	ND	105	70-130	8	30	
Chloroethane	8.45		ug/L	10.00	ND	84	70-130	2	30	
Chloroform	11.0		ug/L	10.00	0.310	107	70-130	2	30	
Chloromethane	11.6		ug/L	10.00	ND	116	70-130	3	30	
cis-1,2-Dichloroethene	88.1		ug/L	10.00	74.2	139	70-130	0.4	30	M+
cis-1,3-Dichloropropene	10.2		ug/L	10.00	ND	102	70-130	0.3	30	
Dibromochloromethane	11.5		ug/L	10.00	ND	115	70-130	8	30	
Dibromomethane	10.4		ug/L	10.00	ND	104	70-130	3	30	
Dichlorodifluoromethane	12.2		ug/L	10.00	ND	122	70-130	0.9	30	
Diethyl Ether	9.74		ug/L	10.00	ND	97	70-130	2	30	
Di-isopropyl ether	8.33		ug/L	10.00	ND	83	70-130	2	30	
Ethyl tertiary-butyl ether	8.12		ug/L	10.00	ND	81	70-130	1	30	
Ethylbenzene	10.5		ug/L	10.00	ND	105	70-130	11	30	
Hexachlorobutadiene	10.8		ug/L	10.00	ND	108	70-130	3	30	
Hexachloroethane	13.7		ug/L	10.00	ND	137	70-130	1	30	M+
Isopropylbenzene	10.7		ug/L	10.00	ND	107	70-130	4	30	
Methyl tert-Butyl Ether	9.02		ug/L	10.00	ND	90	70-130	0.3	30	
Methylene Chloride	10.1		ug/L	10.00	ND	101	70-130	0.5	30	
Naphthalene	8.93		ug/L	10.00	ND	89	70-130	19	30	
n-Butylbenzene	9.19		ug/L	10.00	ND	92	70-130	7	30	
n-Propylbenzene	10.6		ug/L	10.00	ND	106	70-130	3	30	
sec-Butylbenzene	11.3		ug/L	10.00	ND	113	70-130	5	30	



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
 Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
---------	--------	-----	-------	-------------	---------------	------	-------------	-----	-----------	-----------

8260B Volatile Organic Compounds

Batch CB61832 - 5030B

Styrene	9.57		ug/L	10.00	ND	96	70-130	3	30	
tert-Butylbenzene	10.8		ug/L	10.00	ND	108	70-130	2	30	
Tertiary-amyl methyl ether	7.67		ug/L	10.00	ND	77	70-130	1	30	
Tetrachloroethene	11.3		ug/L	10.00	2.26	91	70-130	9	30	
Tetrahydrofuran	8.25		ug/L	10.00	ND	82	70-130	2	30	
Toluene	10.8		ug/L	10.00	ND	108	70-130	0.6	30	
trans-1,2-Dichloroethene	13.2		ug/L	10.00	2.67	105	70-130	0.4	30	
trans-1,3-Dichloropropene	9.72		ug/L	10.00	ND	97	70-130	2	30	
Trichloroethene	1820		ug/L	10.00	1730	942	70-130	1	30	E, M+
Trichlorofluoromethane	11.1		ug/L	10.00	ND	111	70-130	0.09	30	
Trihalomethanes (Total)	47.4		mg/L							
Vinyl Acetate	10.4		ug/L	10.00	ND	104	70-130	0.8	30	
Vinyl Chloride	14.9		ug/L	10.00	2.38	125	70-130	2	30	
Xylene O	11.2		ug/L	10.00	ND	112	70-130	8	30	
Xylene P,M	22.4		ug/L	20.00	ND	112	70-130	9	30	
Xylenes (Total)	33.6		mg/L							
Surrogate: 1,2-Dichloroethane-d4	0.0293		mg/L	0.02500		117	70-130			
Surrogate: 4-Bromofluorobenzene	0.0283		mg/L	0.02500		113	70-130			
Surrogate: Dibromofluoromethane	0.0295		mg/L	0.02500		118	70-130			
Surrogate: Toluene-d8	0.0279		mg/L	0.02500		112	70-130			



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

Notes and Definitions

- U Analyte included in the analysis, but not detected
- M+ Matrix Spike recovery is above upper control limit (M+).
- E Reported above the quantitation limit; Estimated value (E).
- D+ Relative percent difference for duplicate is outside of criteria (D+).
- D Diluted.
- CD- Continuing Calibration %Diff/Drift is below control limit (CD-).
- B+ Blank Spike recovery is above upper control limit (B+).
- ND Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- MDL Method Detection Limit
- MRL Method Reporting Limit
- LOD Limit of Detection
- LOQ Limit of Quantitation
- DL Detection Limit
- I/V Initial Volume
- F/V Final Volume
- § Subcontracted analysis; see attached report
- 1 Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
- 2 Range result excludes concentrations of target analytes eluting in that range.
- 3 Range result excludes the concentration of the C9-C10 aromatic range.
- Avg Results reported as a mathematical average.
- NR No Recovery
- [CALC] Calculated Analyte
- SUB Subcontracted analysis; see attached report



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler
Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1602237

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutOfStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/documents/AllLabs.xls>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

http://www.depweb.state.pa.us/portal/server.pt/community/labs/13780/laboratory_accreditation_program/590095

ESS Laboratory Sample and Cooler Receipt Checklist

Client: AMEC Foster Wheeler - KPB/HDM
 Shipped/Delivered Via: ESS Courier

ESS Project ID: 1602237
 Date Received: 2/10/2016
 Project Due Date: 2/18/2016
 Days for Project: 5 Day

- | | |
|---|--|
| 1. Air bill manifest present? <input type="checkbox"/> No
Air No.: <u>NA</u>
2. Were custody seals present? <input type="checkbox"/> No
3. Is radiation count <100 CPM? <input type="checkbox"/> Yes
4. Is a Cooler Present? <input type="checkbox"/> Yes
Temp: <u>7.8</u> Iced with: <u>Ice Pack</u>
5. Was COC signed and dated by client? <input type="checkbox"/> Yes | 6. Does COC match bottles? <input type="checkbox"/> Yes
7. Is COC complete and correct? <input type="checkbox"/> Yes
8. Were samples received intact? <input type="checkbox"/> Yes
9. Were labs informed about short holds & rushes? Yes / No / NA
10. Were any analyses received outside of hold time? Yes <input checked="" type="checkbox"/> No |
|---|--|

- | | |
|---|---|
| 11. Any Subcontracting needed? Yes / <input checked="" type="checkbox"/> No
ESS Sample IDs: _____
Analysis: _____
TAT: _____
13. Are the samples properly preserved? <input checked="" type="checkbox"/> Yes / No
a. If metals preserved in SR: Date: _____ Time: _____ By: _____
b. Low Level VOAs brought to freezer: Date: _____ Time: _____ By: _____ | 12. Were VOAs received? <input checked="" type="checkbox"/> Yes / No
a. Air bubbles in aqueous VOAs? Yes / <input checked="" type="checkbox"/> No
b. Does methanol cover soil completely? Yes / No / <input checked="" type="checkbox"/> NA |
|---|---|

Sample Receiving Notes:

- ① SAMPLE ID MW-FS RECEIVED 3 VIALS - 1 VIAL EMPTY. ②
- ② COC = 2-10-14-1005 MW2375 LABEL = 2-10-14-1005 2-10-14
- ③ COC = 2-10-14-1215 MW235 LABEL = 2-10-14-1215 MW2355
- Was there a need to contact the client? Yes / No
 Who was contacted? _____ Date: _____ Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	7714	Yes	No	Yes	VOA Vial - HCl	HCL	
01	7715	Yes	No	Yes	VOA Vial - HCl	HCL	
02	7711	Yes	No	Yes	VOA Vial - HCl	HCL	
02	7712	Yes	No	Yes	VOA Vial - HCl	HCL	
02	7713	Yes	No	Yes	VOA Vial - HCl	HCL	
03	7708	Yes	No	Yes	VOA Vial - HCl	HCL	
03	7709	Yes	No	Yes	VOA Vial - HCl	HCL	
03	7710	Yes	No	Yes	VOA Vial - HCl	HCL	
04	7705	Yes	No	Yes	VOA Vial - HCl	HCL	
04	7706	Yes	No	Yes	VOA Vial - HCl	HCL	
04	7707	Yes	No	Yes	VOA Vial - HCl	HCL	
04	7717	Yes	No	Yes	VOA Vial - HCl	HCL	
04	7718	Yes	No	Yes	VOA Vial - HCl	HCL	
04	7719	Yes	No	Yes	VOA Vial - HCl	HCL	
04	7720	Yes	No	Yes	VOA Vial - HCl	HCL	
04	7721	Yes	No	Yes	VOA Vial - HCl	HCL	
04	7722	Yes	No	Yes	VOA Vial - HCl	HCL	
05	7702	Yes	No	Yes	VOA Vial - HCl	HCL	
05	7703	Yes	No	Yes	VOA Vial - HCl	HCL	
05	7704	Yes	No	Yes	VOA Vial - HCl	HCL	
06	7699	Yes	No	Yes	VOA Vial - HCl	HCL	
06	7700	Yes	No	Yes	VOA Vial - HCl	HCL	
06	7701	Yes	No	Yes	VOA Vial - HCl	HCL	

ESS Laboratory Sample and Cooler Receipt Checklist

Client: AMEC Foster Wheeler - KPB/HDM

ESS Project ID: 1602237

Date Received: 2/10/2016

07	7696	Yes	No	Yes	VOA Vial - HCl	HCL
07	7697	Yes	No	Yes	VOA Vial - HCl	HCL
07	7698	Yes	No	Yes	VOA Vial - HCl	HCL

2nd Review

Are barcode labels on correct containers? Yes / No

Completed By: [Signature] Date & Time: 2-10-16 1830
Reviewed By: [Signature] Date & Time: 2/10/16 1835

Project # 3652150040
2/11/16 DTK

CHAIN OF CUSTODY

ESS Laboratory

Division of Thielisch Engineering, Inc.

185 Frances Avenue, Cranston RI 02910-2211
Tel. (401)461-7181 Fax (401)461-4486
www.esslaboratory.com

ESS Lab # 1602237
Reporting Limits: _____
Electronic Deliverables *Excel Access PDF

AMEC FOSTER WHEELER

Denise King

271 MILL ROAD
Tel: (478) 392-5339

Project # 50040
3652150040
Project Name TEXTRON

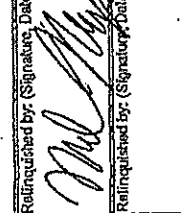
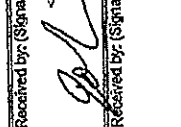
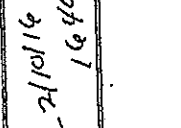
Proj. Location 333 Adelaide Ave. Providence RI

City, State CHELSEA, MA
email: DENISE.KING@AMECFW.COM
Zip 01824
PO# 001220685

ESS Lab ID	Date	Collection Time	Grab-G Composite-C	Matrix	Sample ID	Pres Code	# of Containers	Type of Container	Vol of Container	Analysis
1	2/10/16	0930	G	GW	MW-FS	2	3	V	40ml	X
2	2/10/16	1005	G	GW	MW-237S	2	3	V	40ml	X
3	2/10/16	1015	G	GW	MW-241	2	3	V	40ml	X
4	2/10/16	1215	G	GW	MW-D	2	9	V	40ml	X
5	2/10/16	1215	G	GW	MW-235S	2	3	V	40ml	X
6	2/10/16	1255	G	GW	MW-236S	2	3	V	40ml	X
7	2/10/16	XXXX	G	GW	DUP-1	2	3	V	40ml	X
	2/10/16	XXXX	G	GW	REP-BLANK-01					

Cooler Present Yes No
Seals Intact Yes No NA:
Cooler Temperature: 7.8 °C ⁵⁰ PPK

Internal Use Only
[] Pickup
[] Technician (20)

Received by: (Signature, Date & Time)
 2-10-16 1640
 Relinquished by: (Signature, Date & Time)
 2/10/16 1640
 Relinquished by: (Signature, Date & Time)
 2/11/16 DTK
 Relinquished by: (Signature, Date & Time)

Sampled by: M. Maggione + M. Ferullo
Comments:
Please fax to the laboratory all changes to Chain of Custody
Report Method Blank & Laboratory Control Sample Results

* By citing MA-MCP, client acknowledges samples were collected in accordance with MADEP CAM V1A

ESS Laboratory

Division of Thielsch Engineering, Inc.

185 Frances Avenue, Cranston RI 02910-2211

Tel. (401)461-7181 Fax (401)461-4486

www.esslaboratory.com

Co Name: **HMEC FOSTER WHEELER**

Contact Person

DENISE KING

Address

271 MILL ROAD

Tel. (978) 392-5339

City, State

CHELSEA, MA

email: **DENISE.KING@AMECFW.COM**

Project Name

TEXTRON

Project #

3652140032

Proj. Location

333 Adelaide Ave Providence RI

Zip

01824

PO #

00120685

CHAIN OF CUSTODY

Turn Time 5 Standard Other

Regulatory State: MA RI CT NH NJ NY ME Other

Is this project for any of the following: (please circle)

MA-MCP Navy USACE CT DEP Other

Project Name

TEXTRON

Project #

3652140032

Proj. Location

333 Adelaide Ave Providence RI

Zip

01824

PO #

00120685

ESS Lab # 1602237

Reporting Limits

Electronic Deliverables *Excel Access PDF

Analysis

8260 Full EPA

ESS Lab ID	Date	Collection Time	Grab-G Composite-C	Matrix	Sample ID	Pres Code	# of Containers	Type of Container	Vol of Container
1	2/10/16	0930	G	GW	MW-FS	2	3	V	40mL
2	2/10/16	1005	G	GW	MW-237S	2	3	V	40mL
3	2/10/16	1015	G	GW	MW-241	2	3	V	40mL
4	2/10/16	1215	G	GW	MW-D	2	3	V	40mL
5	2/10/16	1215	G	GW	MW-235S	2	3	V	40mL
6	2/10/16	1255	G	GW	MW-236S	2	3	V	40mL
7	2/10/16	XXXX	G	GW	DUP-1	2	3	V	40mL
	2/10/16	XXXX	G	GW	REP BLANK-01				

Cooler Present Yes No Internal Use Only

Seals Intact Yes No NA: Pickup

Cooler Temperature: 7.8 °C ^{FC} _{PK} Technician (20)

Sampled by: **M. Maggione + M. Ferullo**

Comments:

Relinquished by: (Signature, Date & Time)

[Signature] 2-10-16 1640

Received by: (Signature, Date & Time)

[Signature] 2/10/16 1640

Relinquished by: (Signature, Date & Time)

Relinquished by: (Signature, Date & Time)

Received by: (Signature, Date & Time)

Received by: (Signature, Date & Time)

* By circling MA-MCP, client acknowledges samples were collected in accordance with MADEP CAM V1A

Please fax to the laboratory all changes to Chain of Custody

Report Method Blank & Laboratory Control Sample Results

ESS Laboratory

Division of Thielsch Engineering, Inc.

185 Frances Avenue, Cranston RI 02910-2211

Tel. (401)461-7181 Fax (401)461-4486

www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 1002237

Turn Time 5 Standard Other

Reporting Limits -

Regulatory State: MA CT NH NJ NY ME Other

is this project for any of the following: (please circle)

MA-MCP Navy USACE CT DEP Other

Electronic Deliverables *Excel Access PDF

Co. Name AMEC FOSTER WHEELER

Contact Person

DENISE KING

City, State

271 MILL ROAD

Tel. (978) 392-5339

email: DENISE.KING@AMECFW.COM

Project # 3652140032

Proj. Location

333 ADELPHI AVE PROVIDENCE RI

City, State

CHELMSFORD, MA

Zip 01824

PO # 001220685

Project Name

TEXTROV

Analysis

Vol of Container

Type of Container

of Containers

Pres Code

Sample ID

Matrix

Grab-G Composite-C

Collection Time

Date

ESS Lab ID

1

2

3

4

5

6

7

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11

12

13

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16

17

18

19

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21

22

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25

26

27

28

29

30

Cooler Present Yes No

Seals Intact Yes No NA:

Cooler Temperature: 7.8 ^{FC} pick

Internal Use Only

[] Pickup

[] Technician (20)

Comments:

Sampled by: M. Maggione + M. Ferullo

Received by: (Signature, Date & Time)

Relinquished by: (Signature, Date & Time)

Received by: (Signature, Date & Time)

Relinquished by: (Signature, Date & Time)

Received by: (Signature, Date & Time)

Relinquished by: (Signature, Date & Time)

Received by: (Signature, Date & Time)

Relinquished by: (Signature, Date & Time)

Received by: (Signature, Date & Time)

Relinquished by: (Signature, Date & Time)

Please fax to the laboratory all changes to Chain of Custody

Report Method Blank & Laboratory Control Sample Results