



April 24, 2017

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 Groundwater Sampling  
Former Gorham Manufacturing Facility  
333 Adelaide Avenue, Providence, Rhode Island  
AMEC Project No. 3652150040.03**

Dear Mr. Martella:

This letter summarizes the March 27, 2017 collection of groundwater samples from Parcel C/C-1 at 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 February, April, July, September and December 2016. This groundwater sampling was conducted in accordance with the Remedial Action Work Plan (RAWP) dated March 11, 2015 and the 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 within the Mashapaug Inner and Outer Coves (MACTEC, 2006a). The groundwater investigations identified low levels of volatile organic compounds (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 low-level tetrachloroethylene and trichloroethylene (PCE/TCE) groundwater impacts are present in the northwestern corner of Parcel C. Groundwater and Inner Cove sediment data collected during the same period (2006-2010) demonstrated that a clear trend of decreasing contaminant concentrations within the groundwater 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 in December 2015, by sampling six wells (MW-235S, MW-236S, MW-237S, MW-D, MW-241, and MW-FS) until data from three consecutive sampling rounds demonstrate that Parcel C groundwater is compliant with RIDEM's GB Groundwater Objectives with no increasing concentrations of VOCs, and that Parcel C-1 groundwater is compliant with the Massachusetts Department of Environmental Protection (MassDEP) GW-3 Standards with no increasing concentrations of VOCs. The April 2016 sampling event confirmed that both MW-FS and MW-237S met the required criteria of three consecutive decreasing rounds of groundwater

data and data below the MassDEP GW-3 Standards. These two wells were eliminated from the groundwater monitoring program (April 2016 groundwater monitoring report). Three more wells were eliminated from monitoring following the July 2016 sampling round, including MW-235S, MW-236S, and MW-241, in accordance with the Order of Approval. The September and December 2016 and March 2017 rounds of groundwater sampling were exclusive to the one remaining groundwater monitoring well MW-D located on Parcel C.

### **Work Activities Conducted**

Amec Foster Wheeler Environment & Infrastructure, Inc., (Amec Foster Wheeler) gauged the depth to water in 13 monitoring wells located along the southern shoreline of the Inner Cove on March 27, 2017. These well locations and the associated groundwater contours are shown on Figure 2 and include MW-235S, MW-236S, MW-237S, MW-238S/D, MW-231S/D, MW-244, MW-D, MW-241, MW-FS, GZA-3 and MW-109D.

Amec Foster Wheeler then sampled the one remaining groundwater monitoring well, MW-D (Figure 2), using the U.S. Environmental Protection Agency (USEPA) low-flow methodology. Sample collection included a duplicate groundwater sample from MW-D. Samples from this March 27, 2017 round were submitted under chain-of-custody control to an off-site laboratory for VOC analysis by USEPA Method 8260B. Field data records for this groundwater sampling event are included in Appendix A.

### **Groundwater Sampling Results**

Table 1 summarizes the historic VOC concentrations detected in MW-D including the March 2017 groundwater sampling event. VOC concentrations detected in Parcel C (MW-D) are measured against the RIDEM GB standards. The analytical laboratory report for the March 2017 groundwater sampling event is included in Appendix B.

As shown in Table 1, both 1,1-dichloroethene (DCE) and TCE exceeded the GB criteria in March 2017. 1,1-DCE was below the GB criteria through July 2016, but the concentration increased in September. Since peaking in September 2016 (0.0148 mg/L), the concentration has continued to drop so that it is now just above the GB criteria (0.0078 vs 0.007 mg/L). The concentration of TCE within MW-D was at its highest concentration in September 2016 (2.81D/3.32D mg/L). In December 2016, the concentration dropped to 2.2 mg/L (vs 0.54 mg/L) and then leveled at 2.6D/2.55D in March 2017. The December 2016 and March 2017 concentrations of 1,1-DCE and TCE are lower than those measured in MW-D in December 2015 that followed the October 2015 completion of the Parcel C construction.

### **Groundwater Monitoring Approach**

Based on the extensive groundwater data collected, VOC concentrations within the northwestern area of Parcel C have been reduced. Only MW-D exceeds the RIDEM GB criteria for TCE, while the 1,1-DCE concentration is just above the GB criteria (0.0078 vs 0.007 mg/L). As shown in Table 1, continued biodegradation of VOCs via natural attenuation is 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 MW-D and it is currently located within the woods on the downhill side of a detention basin. The final Environmental Land

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  
April 24, 2017  
Project No.: 3652150040.03

Use Restrictions (ELUR) and Soil Management Plan (SMP) is being signed by the City of Providence and will then be filed in the Providence Land Evidence Records. A copy of this signed ELUR and SMP will be submitted to RIDEM for their records. This ELUR includes 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.

Due to the stabilization of the TCE concentration in the Parcel C groundwater, but exceedance of the GB criteria, Textron proposes to monitor the groundwater quality at MW-D on a semi-annual basis, pending compliance with RIDEM's GB Groundwater Objectives and no increasing trends of VOCs. The next scheduled sampling event is scheduled for September 2017. A report will be prepared and submitted to the RIDEM in October 2017 to update the status of this one monitoring well.

Please contact the Greg Simpson (401-457-2635) or David Heislein (978-392-5327) if we can provide additional information or answer any questions concerning these groundwater monitoring data and planned sampling of MW-D in September 2017.

Sincerely,

**Amec Foster Wheeler Environment & Infrastructure, Inc.**



Annette McLean  
Project Scientist



David E. Heislein  
Senior Project Manager

Enclosures: Table 1 – Summary of Parcel C/C-1 Groundwater Results 1989 – 2017  
Figure 1 – Site Location Map  
Figure 2 – Parcel C/C-1 Groundwater Contours March 2017  
Appendix A – Field Data Record March 2017 Sampling Event  
Appendix B – Laboratory Reports March 2017 Sampling Event

cc: Robert Azar, Deputy Director - Providence Planning & Development  
G. Simpson, Textron, Inc. (Electronic)  
Knight Memorial Library Repository  
Amec Foster Wheeler Project File

P:\BOS\Textron\3652150040 - Textron Gorham GW Sampling\8.0 Proj Deliverables\8.1 Reports\Draft March 2017 GW Sampling Ltr 042417.docx

Table

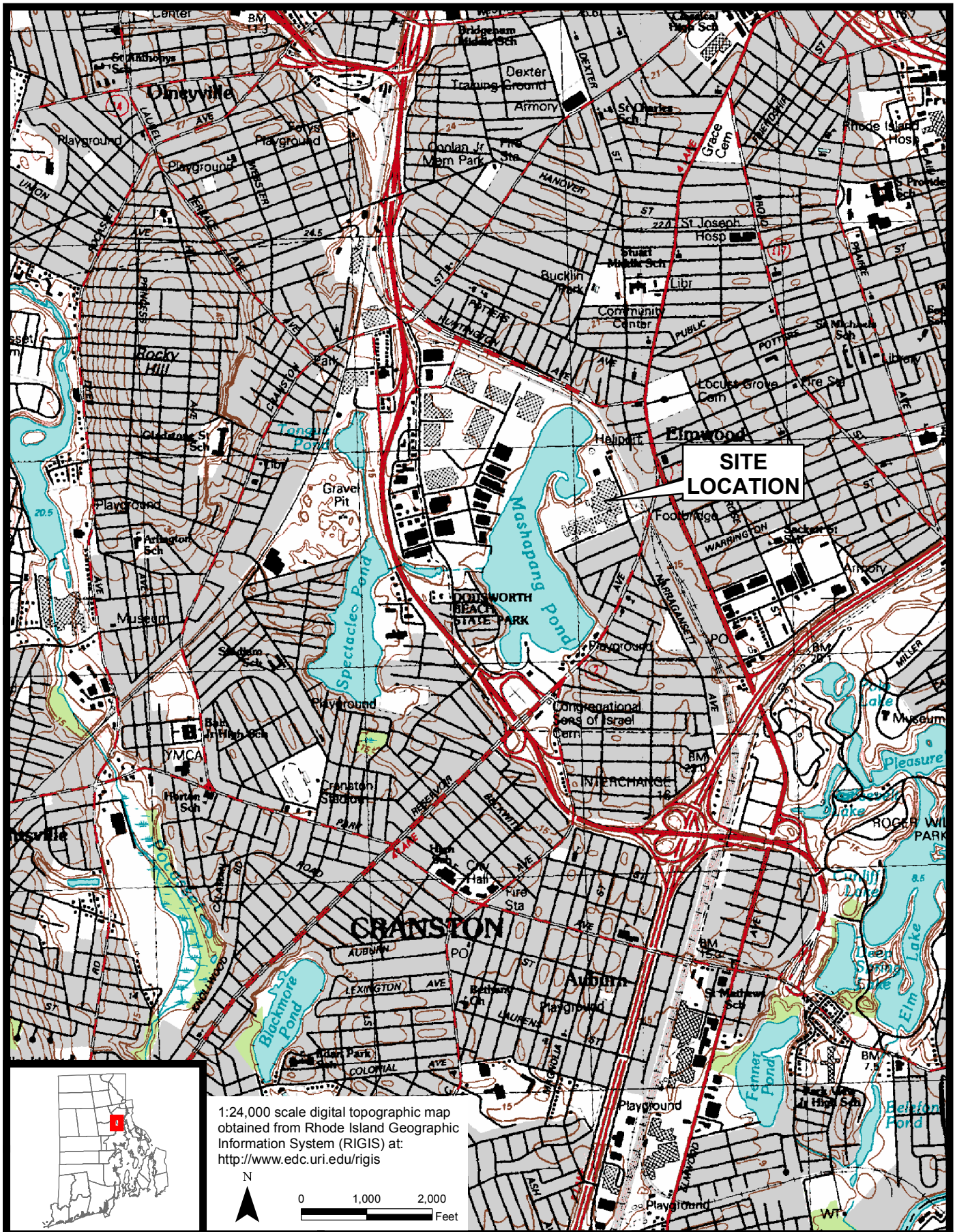


**Table 1**  
**Groundwater Results 1989 - 2017**  
**Former Gorham Manufacturing Site**  
**Providence, RI**

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-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	
Sample ID:				MW-D	GMMWXXDXXX01XX	MW-D	MW-D	GMMWWD	MW-D	DUP-01	MW-D	MW-D	DUP-1	MW-D	Dup-01	MW-D	Dup-01	MW-D	Dup-01	MW-D	Dup-01	MW-D	DUP-1
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	4/28/2016	4/28/2016	7/6/2016	7/6/2016	9/26/2016	9/26/2016	12/9/2016	12/9/2016	3/27/2017	3/27/2017
Parameter Name	Units	GB	GW-3																				
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																
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																		

Notes:  
mg/L - milligrams per liter  
NS - No Standard Established  
U - Not detected  
J - Estimated Value  
D - Dilution  
Ambient Water Quality Criteria (AWQC) does not apply to the above  
volatile organic compounds.  
Yellow highlighted cells exceed the applicable GB Criteria

## Figures



Former Gorham Manufacturing Site  
 333 Adelaide Avenue  
 Providence, RI

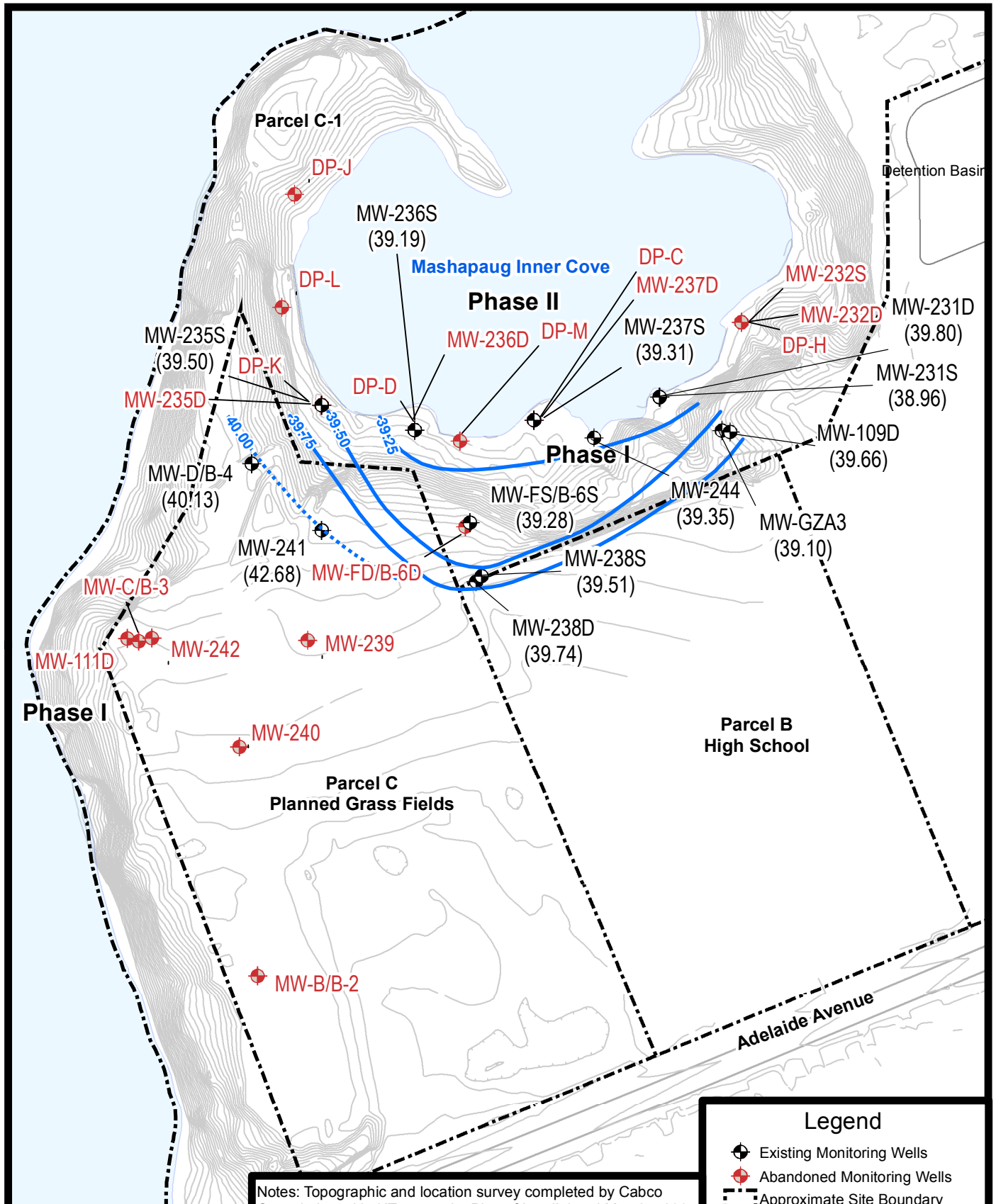


Site Location Map

Project 3652-15-0040

Figure 1

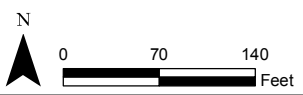




Notes: Topographic and location survey completed by Cabco Consult, Inc. titled 'Topographic Plan of Land' dated May 24, 2007. Parcel B topography and field survey completed by Edward Rowse Architects Titled "Providence High School, Gorham Mills, Providence Rhode Island, Site Plan" dated 2007.

**Legend**

- Existing Monitoring Wells
- Abandoned Monitoring Wells
- Approximate Site Boundary
- Elevation
- Groundwater Contour
- Inferred Groundwater Contour



Former Gorham Manufacturing Site  
333 Adelaide Avenue  
Providence, RI



Parcel C/C-1 Groundwater Contours  
March 27, 2017  
Project 3652-15-0040 Figure 2

## Appendix A

**FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING**

PROJECT: Textron/Beham WELL ID: MU-D  
 SAMPLE ID: MU-D SITE TYPE: RI DATE: 3-27-17  
 TIME START: 1019 END: 1100 JOB NUMBER: 3652150046 BOTTLE TIME: 1100

**WATER LEVEL / PUMP SETTINGS**

QC SAMPLE COLLECTED: Dp-cl / ms/msd

MEASUREMENT POINT:  TOP OF WELL RISER,  TOP OF PROTECTIVE CASING,  OTHER

PROTECTIVE CASING STICKUP (FROM GROUND):          FT. PROTECTIVE CASING / WELL DIFFERENCE:          FT.

INITIAL DEPTH TO WATER: 20.73 FT. WELL DEPTH (TOR): 32 FT. PID AMBIENT AIR:          PPMV WELL DIAMETER: 2 IN.

FINAL DEPTH TO WATER: 20.73 FT. SCREEN LENGTH: 10 FT. PID WELL MOUTH:          PPMV WELL INTEGRITY: CAP          YES NO N/A, CASING         , LOCKED         , COLLAR         

DRAWDOWN VOLUME: 0 GAL. (initial - final x 0.16 [2-inch] or x 0.65 [4-inch]) RATIO OF DRAWDOWN VOLUME TO TOTAL VOLUME PURGED: 6001 PRESSURE TO PUMP:          PSI

TOTAL VOL. PURGED: 2.1 GAL. (purge rate (milliliters per minute) x time duration (minutes) x 0.00026 gal/ml) REFILL TIMER SETTING:          SEC. 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
1019	20.73	200 - start purge							30	
1032	20.73	200	11.12	634	5.81	3.12	2.52	161		
1039	20.73	200	11.35	628	5.94	3.03	2.48	145		
1042	20.73	200	11.50	628	6.02	3.01	2.99	136		
1017	20.73	200	11.52	632	6.01	1.94	1.94	122		
1052	20.73	200	11.55	633	6.03	1.92	1.81	118		
1057	20.73	200	11.55	633	6.08	1.90	1.80	115		
1100										

**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	METHOD NUMBER	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED
<input checked="" type="checkbox"/> VOCs	8260B	HCL / 4 DEG. C	3 X 40 mL VOA Vial	<input checked="" type="checkbox"/> VOCs
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>

**PURGE OBSERVATIONS**

PURGE WATER CONTAINERIZED: YES  NO

NUMBER OF GALLONS GENERATED: 2.0

**NOTES:**

amec foster wheeler 

SIGNATURE: [Signature]

Prepared by: \_\_\_\_\_  
Checked by: \_\_\_\_\_

# FIELD INSTRUMENTATION CALIBRATION RECORD

DATE: 3-27-17

PROJECT NAME: Weston Center  
 PROJECT NUMBER: 305215000  
 PROJECT LOCATION: Prudencetown, NJ  
 WEATHER CONDITIONS (AM): Overcast drizzle 40-45°F  
 WEATHER CONDITIONS (PM): TC

TASK NO: \_\_\_\_\_  
 FIELD CREW: \_\_\_\_\_  
 SAMPLER NAME: Matt Massion  
 SAMPLER SIGNATURE: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

## MULTI-PARAMETER WATER QUALITY METER

### AM CALIBRATION

METER TYPE: VST  
 MODEL NO.: 576  
 UNIT ID NO.: M015-14

Start Time: 9:00 End Time: 9:15

Parameter	Units	Standard Value	Meter Value	*Acceptance Criteria (AM)
pH (4)	SU	4.0	<u>4.03</u>	+/- 0.1 pH Units
pH (7)	SU	7.0	<u>6.93</u>	+/- 0.1 pH Units
pH (10)	SU	10.0	_____	+/- 0.1 pH Units
Redox	+/- mV	240	<u>241</u>	+/- 10 mV
Sp. Conductivity	µS/cm	1413	<u>1433</u>	+/- 3% of standard
DO (saturated)	%	100	<u>100.5</u>	+/- 2% of standard
DO (saturated) mg/L	1 (see Chart 1)	_____	<u>10.46</u>	+/- 0.2 mg/L
DO (<0.1)	mg/L	<0.1	_____	<0.5 mg/L
Temperature	°C	_____	<u>11.34</u>	_____
Baro. Press.	mmHg	_____	<u>766.3</u>	_____

## PM CALIBRATION CHECK

Start Time: \_\_\_\_\_ End Time: \_\_\_\_\_

Standard Value	Meter Value	*Acceptance Criteria (PM)
7.0	_____	+/- 0.3 pH Units
240	_____	+/- 10 mV
1413	_____	+/- 5% of standard
_____	_____	+/- 0.5 mg/L of sat. value
DO (<0.1)	_____	<0.5 mg/L
_____	_____	°C
_____	_____	mmHg

## TURBIDITY METER

METER TYPE: Hach  
 MODEL NO.: 2100A  
 UNIT ID NO.: M024-34

Standard	Units	Standard Value	Meter Value
Standard	NTU	10	<u>10.2</u>
Standard	NTU	20	<u>21.6</u>
Standard	NTU	100	<u>100</u>
Standard	NTU	800	<u>800</u>

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

## PHOTOIONIZATION DETECTOR

METER TYPE: \_\_\_\_\_  
 MODEL NO.: \_\_\_\_\_  
 UNIT ID NO.: \_\_\_\_\_

Background	Units	Standard Value	Meter Value
Background	ppmv	<0.1	_____
Span Gas	ppmv	100	_____

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

## O<sub>2</sub>-LEL 4 GAS METER

METER TYPE: \_\_\_\_\_  
 MODEL NO.: \_\_\_\_\_  
 UNIT ID NO.: \_\_\_\_\_

Gas	Units	Standard Value	Meter Value
Methane	%	50	_____
O <sub>2</sub>	%	20.9	_____
H <sub>2</sub> 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

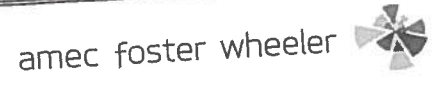
- Equipment calibrated within the Acceptance Criteria specified for each of the parameters listed above.  
 Equipment (not) calibrated within the Acceptance Criteria specified for each of the parameters listed above\*\*.

## 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)	_____
pH (7)	_____
pH (10)	_____
ORP	_____
Conductivity	_____
<10 Turb. Stan.	_____
20 Turb. Stan.	_____
100 Turb. Stan.	_____
800 Turb. Stan.	_____
PID Span Gas	_____
O <sub>2</sub> -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.

## Appendix B



**ESS Laboratory**

*Division of Thielsch Engineering, Inc.*

**BAL Laboratory**

*The Microbiology Division  
of Thielsch Engineering, Inc.*



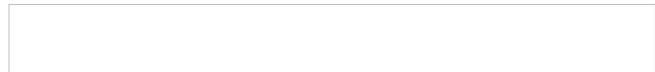
*CERTIFICATE OF ANALYSIS*

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

**RE: Textron Gorham - Groundwater (3652150040)**  
**ESS Laboratory Work Order Number: 1703591**

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



**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 TNI and relative state standards, 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: 1703591

**SAMPLE RECEIPT**

The following samples were received on March 27, 2017 for the analyses specified on the enclosed Chain of Custody Record.

**Revision 1 April 4, 2017: This report has been revised to include VOA MS/MSD.**

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
1703591-01	MW-D	Ground Water	8260B
1703591-02	DUP-1	Ground Water	8260B



*CERTIFICATE OF ANALYSIS*

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

ESS Laboratory Work Order: 1703591

**PROJECT NARRATIVE**

**8260B Volatile Organic Compounds**

C7C0462-CCV1 [Continuing Calibration %Diff/Drift is below control limit \(CD-\).](#)  
1,4-Dioxane - Screen (47% @ 30%)

C7C0506-CCV1 [Continuing Calibration %Diff/Drift is above control limit \(CD+\).](#)  
4-Methyl-2-Pentanone (31% @ 30%)

C7C0506-CCV1 [Continuing Calibration %Diff/Drift is below control limit \(CD-\).](#)  
Acetone (78% @ 30%)

CC72941-MS1 [Due to high target values, matrix spike analyte\(s\) is masked \(MT\).](#)  
cis-1,2-Dichloroethene (-639% @ 70-130%), Trichloroethene (-14400% @ 70-130%)

CC72941-MSD1 [Due to high target values, matrix spike analyte\(s\) is masked \(MT\).](#)  
cis-1,2-Dichloroethene (-689% @ 70-130%), Trichloroethene (-15400% @ 70-130%)

No other observations noted.

End of Project Narrative.

**DATA USABILITY LINKS**

*To ensure you are viewing the most current version of the documents below, please clear your internet cookies for [www.ESSLaboratory.com](http://www.ESSLaboratory.com). Consult your IT Support personnel for information on how to clear your internet cookies.*

[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](#)





*CERTIFICATE OF ANALYSIS*

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

ESS Laboratory Work Order: 1703591

**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
- 8015C - 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-D  
Date Sampled: 03/27/17 11:00  
Percent Solids: N/A  
Initial Volume: 5  
Final Volume: 5  
Extraction Method: 5030B

ESS Laboratory Work Order: 1703591  
ESS Laboratory Sample ID: 1703591-01  
Sample Matrix: Ground Water  
Units: mg/L  
Analyst: MD

**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	03/29/17 20:33	C7C0462	CC72941
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1,1-Dichloroethane	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
<b>1,1-Dichloroethene</b>	<b>0.0078</b> (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1,1-Dichloropropene	ND (0.0020)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1,2-Dibromoethane	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1,2-Dichloroethane	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1,2-Dichloropropane	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1,3-Dichloropropane	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1,4-Dioxane - Screen	ND (0.500)		8260B		1	03/29/17 20:33	C7C0462	CC72941
1-Chlorohexane	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
2,2-Dichloropropane	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
2-Butanone	ND (0.0100)		8260B		1	03/29/17 20:33	C7C0462	CC72941
2-Chlorotoluene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
2-Hexanone	ND (0.0100)		8260B		1	03/29/17 20:33	C7C0462	CC72941
4-Chlorotoluene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
4-Isopropyltoluene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Acetone	ND (0.0100)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Benzene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Bromobenzene	ND (0.0020)		8260B		1	03/29/17 20:33	C7C0462	CC72941



*CERTIFICATE OF ANALYSIS*

Client Name: AMEC Foster Wheeler  
Client Project ID: Textron Gorham - Groundwater  
Client Sample ID: MW-D  
Date Sampled: 03/27/17 11:00  
Percent Solids: N/A  
Initial Volume: 5  
Final Volume: 5  
Extraction Method: 5030B

ESS Laboratory Work Order: 1703591  
ESS Laboratory Sample ID: 1703591-01  
Sample Matrix: Ground Water  
Units: mg/L  
Analyst: MD

**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	03/29/17 20:33	C7C0462	CC72941
Bromodichloromethane	ND (0.0006)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Bromoform	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Bromomethane	ND (0.0020)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Carbon Disulfide	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Carbon Tetrachloride	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Chlorobenzene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Chloroethane	ND (0.0020)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Chloroform	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Chloromethane	ND (0.0020)		8260B		1	03/29/17 20:33	C7C0462	CC72941
<b>cis-1,2-Dichloroethene</b>	<b>0.188</b> (0.0500)		8260B		50	03/31/17 15:33	C7C0462	CC72941
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Dibromochloromethane	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Dibromomethane	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Dichlorodifluoromethane	ND (0.0020)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Diethyl Ether	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Di-isopropyl ether	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Ethylbenzene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Hexachlorobutadiene	ND (0.0006)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Hexachloroethane	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Isopropylbenzene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Methylene Chloride	ND (0.0020)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Naphthalene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
n-Butylbenzene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
n-Propylbenzene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
sec-Butylbenzene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Styrene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
tert-Butylbenzene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
<b>Tetrachloroethene</b>	<b>0.0046</b> (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941



*CERTIFICATE OF ANALYSIS*

Client Name: AMEC Foster Wheeler  
Client Project ID: Textron Gorham - Groundwater  
Client Sample ID: MW-D  
Date Sampled: 03/27/17 11:00  
Percent Solids: N/A  
Initial Volume: 5  
Final Volume: 5  
Extraction Method: 5030B

ESS Laboratory Work Order: 1703591  
ESS Laboratory Sample ID: 1703591-01  
Sample Matrix: Ground Water  
Units: mg/L  
Analyst: MD

**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	03/29/17 20:33	C7C0462	CC72941
Toluene	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
<b>trans-1,2-Dichloroethene</b>	<b>0.0037</b> (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	03/29/17 20:33	C7C0462	CC72941
<b>Trichloroethene</b>	<b>2.60</b> (0.0500)		8260B		50	03/31/17 15:33	C7C0462	CC72941
Trichlorofluoromethane	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Vinyl Acetate	ND (0.0050)		8260B		1	03/29/17 20:33	C7C0462	CC72941
<b>Vinyl Chloride</b>	<b>0.0046</b> (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Xylene O	ND (0.0010)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Xylene P,M	ND (0.0020)		8260B		1	03/29/17 20:33	C7C0462	CC72941
Xylenes (Total)	ND (0.0020)		8260B		1	03/29/17 20:33		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	97 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	103 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	105 %		70-130
<i>Surrogate: Toluene-d8</i>	98 %		70-130



*CERTIFICATE OF ANALYSIS*

Client Name: AMEC Foster Wheeler  
Client Project ID: Textron Gorham - Groundwater  
Client Sample ID: DUP-1  
Date Sampled: 03/27/17 00:00  
Percent Solids: N/A  
Initial Volume: 5  
Final Volume: 5  
Extraction Method: 5030B

ESS Laboratory Work Order: 1703591  
ESS Laboratory Sample ID: 1703591-02  
Sample Matrix: Ground Water  
Units: mg/L  
Analyst: MD

**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	03/29/17 21:00	C7C0462	CC72941
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1,1-Dichloroethane	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
<b>1,1-Dichloroethene</b>	<b>0.0079</b> (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1,1-Dichloropropene	ND (0.0020)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1,2-Dibromoethane	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1,2-Dichloroethane	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1,2-Dichloropropane	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1,3-Dichloropropane	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1,4-Dioxane - Screen	ND (0.500)		8260B		1	03/29/17 21:00	C7C0462	CC72941
1-Chlorohexane	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
2,2-Dichloropropane	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
2-Butanone	ND (0.0100)		8260B		1	03/29/17 21:00	C7C0462	CC72941
2-Chlorotoluene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
2-Hexanone	ND (0.0100)		8260B		1	03/29/17 21:00	C7C0462	CC72941
4-Chlorotoluene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
4-Isopropyltoluene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Acetone	ND (0.0100)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Benzene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Bromobenzene	ND (0.0020)		8260B		1	03/29/17 21:00	C7C0462	CC72941



*CERTIFICATE OF ANALYSIS*

Client Name: AMEC Foster Wheeler  
Client Project ID: Textron Gorham - Groundwater  
Client Sample ID: DUP-1  
Date Sampled: 03/27/17 00:00  
Percent Solids: N/A  
Initial Volume: 5  
Final Volume: 5  
Extraction Method: 5030B

ESS Laboratory Work Order: 1703591  
ESS Laboratory Sample ID: 1703591-02  
Sample Matrix: Ground Water  
Units: mg/L  
Analyst: MD

**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	03/29/17 21:00	C7C0462	CC72941
Bromodichloromethane	ND (0.0006)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Bromoform	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Bromomethane	ND (0.0020)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Carbon Disulfide	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Carbon Tetrachloride	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Chlorobenzene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Chloroethane	ND (0.0020)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Chloroform	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Chloromethane	ND (0.0020)		8260B		1	03/29/17 21:00	C7C0462	CC72941
<b>cis-1,2-Dichloroethene</b>	<b>0.111</b> (0.0500)		8260B		50	03/31/17 15:59	C7C0462	CC72941
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Dibromochloromethane	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Dibromomethane	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Dichlorodifluoromethane	ND (0.0020)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Diethyl Ether	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Di-isopropyl ether	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Ethylbenzene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Hexachlorobutadiene	ND (0.0006)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Hexachloroethane	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Isopropylbenzene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Methylene Chloride	ND (0.0020)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Naphthalene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
n-Butylbenzene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
n-Propylbenzene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
sec-Butylbenzene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Styrene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
tert-Butylbenzene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
<b>Tetrachloroethene</b>	<b>0.0046</b> (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941



*CERTIFICATE OF ANALYSIS*

Client Name: AMEC Foster Wheeler  
Client Project ID: Textron Gorham - Groundwater  
Client Sample ID: DUP-1  
Date Sampled: 03/27/17 00:00  
Percent Solids: N/A  
Initial Volume: 5  
Final Volume: 5  
Extraction Method: 5030B

ESS Laboratory Work Order: 1703591  
ESS Laboratory Sample ID: 1703591-02  
Sample Matrix: Ground Water  
Units: mg/L  
Analyst: MD

**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	03/29/17 21:00	C7C0462	CC72941
Toluene	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
<b>trans-1,2-Dichloroethene</b>	<b>0.0035</b> (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	03/29/17 21:00	C7C0462	CC72941
<b>Trichloroethene</b>	<b>2.55</b> (0.0500)		8260B		50	03/31/17 15:59	C7C0462	CC72941
Trichlorofluoromethane	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Vinyl Acetate	ND (0.0050)		8260B		1	03/29/17 21:00	C7C0462	CC72941
<b>Vinyl Chloride</b>	<b>0.0037</b> (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Xylene O	ND (0.0010)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Xylene P,M	ND (0.0020)		8260B		1	03/29/17 21:00	C7C0462	CC72941
Xylenes (Total)	ND (0.0020)		8260B		1	03/29/17 21:00		[CALC]

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>95 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>102 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>100 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>100 %</i>		<i>70-130</i>



*CERTIFICATE OF ANALYSIS*

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

ESS Laboratory Work Order: 1703591

**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 CC72941 - 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: 1703591

**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 CC72941 - 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							
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	0.0234		mg/L	0.02500		94	70-130			
Surrogate: 4-Bromofluorobenzene	0.0252		mg/L	0.02500		101	70-130			
Surrogate: Dibromofluoromethane	0.0256		mg/L	0.02500		102	70-130			
Surrogate: Toluene-d8	0.0244		mg/L	0.02500		98	70-130			

**LCS**

1,1,1,2-Tetrachloroethane	10.2		ug/L	10.00		102	70-130			
1,1,1-Trichloroethane	11.1		ug/L	10.00		111	70-130			
1,1,2,2-Tetrachloroethane	9.90		ug/L	10.00		99	70-130			
1,1,2-Trichloroethane	9.41		ug/L	10.00		94	70-130			
1,1-Dichloroethane	9.48		ug/L	10.00		95	70-130			
1,1-Dichloroethene	9.82		ug/L	10.00		98	70-130			
1,1-Dichloropropene	9.51		ug/L	10.00		95	70-130			
1,2,3-Trichlorobenzene	10.3		ug/L	10.00		103	70-130			
1,2,3-Trichloropropane	9.73		ug/L	10.00		97	70-130			



*CERTIFICATE OF ANALYSIS*

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

ESS Laboratory Work Order: 1703591

**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 CC72941 - 5030B**

1,2,4-Trichlorobenzene	10.3		ug/L	10.00		103	70-130			
1,2,4-Trimethylbenzene	10.5		ug/L	10.00		105	70-130			
1,2-Dibromo-3-Chloropropane	8.43		ug/L	10.00		84	70-130			
1,2-Dibromoethane	10.3		ug/L	10.00		103	70-130			
1,2-Dichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,2-Dichloroethane	9.91		ug/L	10.00		99	70-130			
1,2-Dichloropropane	9.23		ug/L	10.00		92	70-130			
1,3,5-Trimethylbenzene	10.4		ug/L	10.00		104	70-130			
1,3-Dichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,3-Dichloropropane	10.4		ug/L	10.00		104	70-130			
1,4-Dichlorobenzene	10.4		ug/L	10.00		104	70-130			
1,4-Dioxane - Screen	301		ug/L	200.0		151	0-332			
1-Chlorohexane	10.0		ug/L	10.00		100	70-130			
2,2-Dichloropropane	10.9		ug/L	10.00		109	70-130			
2-Butanone	47.2		ug/L	50.00		94	70-130			
2-Chlorotoluene	10.2		ug/L	10.00		102	70-130			
2-Hexanone	45.4		ug/L	50.00		91	70-130			
4-Chlorotoluene	10.2		ug/L	10.00		102	70-130			
4-Isopropyltoluene	10.7		ug/L	10.00		107	70-130			
4-Methyl-2-Pentanone	46.7		ug/L	50.00		93	70-130			
Acetone	48.6		ug/L	50.00		97	70-130			
Benzene	10.3		ug/L	10.00		103	70-130			
Bromobenzene	11.1		ug/L	10.00		111	70-130			
Bromochloromethane	10.5		ug/L	10.00		105	70-130			
Bromodichloromethane	10.2		ug/L	10.00		102	70-130			
Bromoform	8.44		ug/L	10.00		84	70-130			
Bromomethane	9.61		ug/L	10.00		96	70-130			
Carbon Disulfide	10.7		ug/L	10.00		107	70-130			
Carbon Tetrachloride	10.9		ug/L	10.00		109	70-130			
Chlorobenzene	10.4		ug/L	10.00		104	70-130			
Chloroethane	9.56		ug/L	10.00		96	70-130			
Chloroform	11.2		ug/L	10.00		112	70-130			
Chloromethane	9.82		ug/L	10.00		98	70-130			
cis-1,2-Dichloroethene	11.8		ug/L	10.00		118	70-130			
cis-1,3-Dichloropropene	9.19		ug/L	10.00		92	70-130			
Dibromochloromethane	9.51		ug/L	10.00		95	70-130			
Dibromomethane	10.1		ug/L	10.00		101	70-130			
Dichlorodifluoromethane	9.82		ug/L	10.00		98	70-130			
Diethyl Ether	9.26		ug/L	10.00		93	70-130			
Di-isopropyl ether	9.76		ug/L	10.00		98	70-130			
Ethyl tertiary-butyl ether	9.98		ug/L	10.00		100	70-130			
Ethylbenzene	9.78		ug/L	10.00		98	70-130			
Hexachlorobutadiene	11.7		ug/L	10.00		117	70-130			
Hexachloroethane	9.18		ug/L	10.00		92	70-130			
Isopropylbenzene	10.3		ug/L	10.00		103	70-130			



CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 1703591

**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 CC72941 - 5030B**

Methyl tert-Butyl Ether	10.8		ug/L	10.00		108	70-130			
Methylene Chloride	9.78		ug/L	10.00		98	70-130			
Naphthalene	10.7		ug/L	10.00		107	70-130			
n-Butylbenzene	10.6		ug/L	10.00		106	70-130			
n-Propylbenzene	10.1		ug/L	10.00		101	70-130			
sec-Butylbenzene	10.9		ug/L	10.00		109	70-130			
Styrene	10.0		ug/L	10.00		100	70-130			
tert-Butylbenzene	11.0		ug/L	10.00		110	70-130			
Tertiary-amyl methyl ether	9.68		ug/L	10.00		97	70-130			
Tetrachloroethene	9.57		ug/L	10.00		96	70-130			
Tetrahydrofuran	10.4		ug/L	10.00		104	70-130			
Toluene	9.67		ug/L	10.00		97	70-130			
trans-1,2-Dichloroethene	9.04		ug/L	10.00		90	70-130			
trans-1,3-Dichloropropene	10.2		ug/L	10.00		102	70-130			
Trichloroethene	10.0		ug/L	10.00		100	70-130			
Trichlorofluoromethane	9.35		ug/L	10.00		94	70-130			
Vinyl Acetate	9.75		ug/L	10.00		98	70-130			
Vinyl Chloride	9.43		ug/L	10.00		94	70-130			
Xylene O	10.0		ug/L	10.00		100	70-130			
Xylene P,M	20.2		ug/L	20.00		101	70-130			
Xylenes (Total)	30.2		mg/L							
Surrogate: 1,2-Dichloroethane-d4	0.0250		mg/L	0.02500		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.0262		mg/L	0.02500		105	70-130			
Surrogate: Dibromofluoromethane	0.0272		mg/L	0.02500		109	70-130			
Surrogate: Toluene-d8	0.0260		mg/L	0.02500		104	70-130			

**LCS Dup**

1,1,1,2-Tetrachloroethane	10.4		ug/L	10.00		104	70-130	2	25	
1,1,1-Trichloroethane	10.9		ug/L	10.00		109	70-130	2	25	
1,1,2,2-Tetrachloroethane	9.97		ug/L	10.00		100	70-130	0.7	25	
1,1,2-Trichloroethane	9.81		ug/L	10.00		98	70-130	4	25	
1,1-Dichloroethane	9.89		ug/L	10.00		99	70-130	4	25	
1,1-Dichloroethene	10.2		ug/L	10.00		102	70-130	4	25	
1,1-Dichloropropene	9.82		ug/L	10.00		98	70-130	3	25	
1,2,3-Trichlorobenzene	10.0		ug/L	10.00		100	70-130	2	25	
1,2,3-Trichloropropane	9.37		ug/L	10.00		94	70-130	4	25	
1,2,4-Trichlorobenzene	10.3		ug/L	10.00		103	70-130	0	25	
1,2,4-Trimethylbenzene	10.0		ug/L	10.00		100	70-130	4	25	
1,2-Dibromo-3-Chloropropane	8.76		ug/L	10.00		88	70-130	4	25	
1,2-Dibromoethane	10.6		ug/L	10.00		106	70-130	4	25	
1,2-Dichlorobenzene	10.3		ug/L	10.00		103	70-130	0.8	25	
1,2-Dichloroethane	10.3		ug/L	10.00		103	70-130	4	25	
1,2-Dichloropropane	9.81		ug/L	10.00		98	70-130	6	25	
1,3,5-Trimethylbenzene	10.4		ug/L	10.00		104	70-130	0	25	
1,3-Dichlorobenzene	10.4		ug/L	10.00		104	70-130	0.3	25	
1,3-Dichloropropane	10.1		ug/L	10.00		101	70-130	3	25	



*CERTIFICATE OF ANALYSIS*

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

ESS Laboratory Work Order: 1703591

**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 CC72941 - 5030B**

1,4-Dichlorobenzene	10.5		ug/L	10.00		105	70-130	0.6	25	
1,4-Dioxane - Screen	200		ug/L	200.0		100	0-332	40	200	
1-Chlorohexane	10.0		ug/L	10.00		100	70-130	0.3	25	
2,2-Dichloropropane	10.6		ug/L	10.00		106	70-130	3	25	
2-Butanone	45.7		ug/L	50.00		91	70-130	3	25	
2-Chlorotoluene	9.98		ug/L	10.00		100	70-130	2	25	
2-Hexanone	46.5		ug/L	50.00		93	70-130	2	25	
4-Chlorotoluene	10.2		ug/L	10.00		102	70-130	0.4	25	
4-Isopropyltoluene	10.3		ug/L	10.00		103	70-130	4	25	
4-Methyl-2-Pentanone	47.4		ug/L	50.00		95	70-130	2	25	
Acetone	48.0		ug/L	50.00		96	70-130	1	25	
Benzene	10.1		ug/L	10.00		101	70-130	2	25	
Bromobenzene	10.7		ug/L	10.00		107	70-130	4	25	
Bromochloromethane	10.9		ug/L	10.00		109	70-130	3	25	
Bromodichloromethane	10.1		ug/L	10.00		101	70-130	0.9	25	
Bromoform	8.06		ug/L	10.00		81	70-130	5	25	
Bromomethane	9.40		ug/L	10.00		94	70-130	2	25	
Carbon Disulfide	10.5		ug/L	10.00		105	70-130	2	25	
Carbon Tetrachloride	10.7		ug/L	10.00		107	70-130	2	25	
Chlorobenzene	10.2		ug/L	10.00		102	70-130	1	25	
Chloroethane	9.42		ug/L	10.00		94	70-130	1	25	
Chloroform	10.7		ug/L	10.00		107	70-130	5	25	
Chloromethane	9.35		ug/L	10.00		94	70-130	5	25	
cis-1,2-Dichloroethene	11.3		ug/L	10.00		113	70-130	4	25	
cis-1,3-Dichloropropene	9.02		ug/L	10.00		90	70-130	2	25	
Dibromochloromethane	9.64		ug/L	10.00		96	70-130	1	25	
Dibromomethane	10.2		ug/L	10.00		102	70-130	1	25	
Dichlorodifluoromethane	10.1		ug/L	10.00		101	70-130	3	25	
Diethyl Ether	9.24		ug/L	10.00		92	70-130	0.2	25	
Di-isopropyl ether	9.86		ug/L	10.00		99	70-130	1	25	
Ethyl tertiary-butyl ether	10.1		ug/L	10.00		101	70-130	2	25	
Ethylbenzene	10.3		ug/L	10.00		103	70-130	5	25	
Hexachlorobutadiene	10.3		ug/L	10.00		103	70-130	13	25	
Hexachloroethane	8.81		ug/L	10.00		88	70-130	4	25	
Isopropylbenzene	10.0		ug/L	10.00		100	70-130	3	25	
Methyl tert-Butyl Ether	10.9		ug/L	10.00		109	70-130	0.4	25	
Methylene Chloride	9.86		ug/L	10.00		99	70-130	0.8	25	
Naphthalene	10.8		ug/L	10.00		108	70-130	1	25	
n-Butylbenzene	10.1		ug/L	10.00		101	70-130	5	25	
n-Propylbenzene	10.1		ug/L	10.00		101	70-130	0.3	25	
sec-Butylbenzene	10.6		ug/L	10.00		106	70-130	4	25	
Styrene	10.3		ug/L	10.00		103	70-130	3	25	
tert-Butylbenzene	10.6		ug/L	10.00		106	70-130	4	25	
Tertiary-amyl methyl ether	9.64		ug/L	10.00		96	70-130	0.4	25	
Tetrachloroethene	9.36		ug/L	10.00		94	70-130	2	25	



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler  
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ESS Laboratory Work Order: 1703591

**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 CC72941 - 5030B**

Tetrahydrofuran	8.79		ug/L	10.00		88	70-130	17	25	
Toluene	10.2		ug/L	10.00		102	70-130	6	25	
trans-1,2-Dichloroethene	8.87		ug/L	10.00		89	70-130	2	25	
trans-1,3-Dichloropropene	9.73		ug/L	10.00		97	70-130	5	25	
Trichloroethene	9.81		ug/L	10.00		98	70-130	2	25	
Trichlorofluoromethane	9.26		ug/L	10.00		93	70-130	1	25	
Vinyl Acetate	9.13		ug/L	10.00		91	70-130	7	25	
Vinyl Chloride	8.84		ug/L	10.00		88	70-130	6	25	
Xylene O	10.4		ug/L	10.00		104	70-130	4	25	
Xylene P,M	21.1		ug/L	20.00		105	70-130	4	25	
Xylenes (Total)	31.5		mg/L							
Surrogate: 1,2-Dichloroethane-d4	0.0263		mg/L	0.02500		105	70-130			
Surrogate: 4-Bromofluorobenzene	0.0269		mg/L	0.02500		108	70-130			
Surrogate: Dibromofluoromethane	0.0275		mg/L	0.02500		110	70-130			
Surrogate: Toluene-d8	0.0264		mg/L	0.02500		105	70-130			

**Matrix Spike Source: 1703591-01**

1,1,1,2-Tetrachloroethane	9.95		ug/L	10.00	0.00	100	70-130			
1,1,1-Trichloroethane	11.6		ug/L	10.00	0.00	116	70-130			
1,1,2,2-Tetrachloroethane	10.1		ug/L	10.00	0.00	101	70-130			
1,1,2-Trichloroethane	11.0		ug/L	10.00	0.00	110	70-130			
1,1-Dichloroethane	10.1		ug/L	10.00	0.00	101	70-130			
1,1-Dichloroethene	18.5		ug/L	10.00	7.82	107	70-130			
1,1-Dichloropropene	9.91		ug/L	10.00	0.00	99	70-130			
1,2,3-Trichlorobenzene	8.92		ug/L	10.00	0.00	89	70-130			
1,2,3-Trichloropropane	9.31		ug/L	10.00	0.00	93	70-130			
1,2,4-Trichlorobenzene	9.07		ug/L	10.00	0.00	91	70-130			
1,2,4-Trimethylbenzene	10.1		ug/L	10.00	0.00	101	70-130			
1,2-Dibromo-3-Chloropropane	7.79		ug/L	10.00	0.00	78	70-130			
1,2-Dibromoethane	10.3		ug/L	10.00	0.00	103	70-130			
1,2-Dichlorobenzene	10.7		ug/L	10.00	0.00	107	70-130			
1,2-Dichloroethane	10.9		ug/L	10.00	0.00	109	70-130			
1,2-Dichloropropane	9.68		ug/L	10.00	0.00	97	70-130			
1,3,5-Trimethylbenzene	10.4		ug/L	10.00	0.00	104	70-130			
1,3-Dichlorobenzene	9.83		ug/L	10.00	0.00	98	70-130			
1,3-Dichloropropane	10.5		ug/L	10.00	0.00	105	70-130			
1,4-Dichlorobenzene	10.4		ug/L	10.00	0.00	104	70-130			
1,4-Dioxane - Screen	57.7		ug/L	200.0	0.00	29	0-332			
1-Chlorohexane	9.54		ug/L	10.00	0.00	95	70-130			
2,2-Dichloropropane	10.3		ug/L	10.00	0.00	103	70-130			
2-Butanone	48.2		ug/L	50.00	0.00	96	70-130			
2-Chlorotoluene	10.1		ug/L	10.00	0.00	101	70-130			
2-Hexanone	47.2		ug/L	50.00	0.00	94	70-130			
4-Chlorotoluene	9.81		ug/L	10.00	0.00	98	70-130			
4-Isopropyltoluene	10.2		ug/L	10.00	0.00	102	70-130			
4-Methyl-2-Pentanone	51.3		ug/L	50.00	0.00	103	70-130			



CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 1703591

**Quality Control Data**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>8260B Volatile Organic Compounds</b>										
<b>Batch CC72941 - 5030B</b>										
Acetone	44.4		ug/L	50.00	0.00	89	70-130			
Benzene	11.2		ug/L	10.00	0.210	110	70-130			
Bromobenzene	11.0		ug/L	10.00	0.00	110	70-130			
Bromochloromethane	11.6		ug/L	10.00	0.00	116	70-130			
Bromodichloromethane	11.8		ug/L	10.00	0.00	118	70-130			
Bromoform	8.22		ug/L	10.00	0.00	82	70-130			
Bromomethane	10.7		ug/L	10.00	0.00	107	70-130			
Carbon Disulfide	11.1		ug/L	10.00	0.00	111	70-130			
Carbon Tetrachloride	11.3		ug/L	10.00	0.00	113	70-130			
Chlorobenzene	10.2		ug/L	10.00	0.00	102	70-130			
Chloroethane	10.0		ug/L	10.00	0.00	100	70-130			
Chloroform	11.8		ug/L	10.00	0.480	114	70-130			
Chloromethane	10.6		ug/L	10.00	0.00	106	70-130			
cis-1,2-Dichloroethene	124		ug/L	10.00	188	NR	70-130			MT
cis-1,3-Dichloropropene	10.0		ug/L	10.00	0.00	100	70-130			
Dibromochloromethane	9.59		ug/L	10.00	0.00	96	70-130			
Dibromomethane	10.4		ug/L	10.00	0.00	104	70-130			
Dichlorodifluoromethane	10.4		ug/L	10.00	0.00	104	70-130			
Diethyl Ether	9.55		ug/L	10.00	0.00	96	70-130			
Di-isopropyl ether	10.4		ug/L	10.00	0.00	104	70-130			
Ethyl tertiary-butyl ether	10.6		ug/L	10.00	0.00	106	70-130			
Ethylbenzene	10.3		ug/L	10.00	0.00	103	70-130			
Hexachlorobutadiene	8.51		ug/L	10.00	0.00	85	70-130			
Hexachloroethane	8.31		ug/L	10.00	0.00	83	70-130			
Isopropylbenzene	10.2		ug/L	10.00	0.00	102	70-130			
Methyl tert-Butyl Ether	11.1		ug/L	10.00	0.00	111	70-130			
Methylene Chloride	11.0		ug/L	10.00	0.00	110	70-130			
Naphthalene	10.1		ug/L	10.00	0.00	101	70-130			
n-Butylbenzene	9.45		ug/L	10.00	0.00	94	70-130			
n-Propylbenzene	10.1		ug/L	10.00	0.00	101	70-130			
sec-Butylbenzene	10.4		ug/L	10.00	0.00	104	70-130			
Styrene	10.2		ug/L	10.00	0.00	102	70-130			
tert-Butylbenzene	10.3		ug/L	10.00	0.00	103	70-130			
Tertiary-amyl methyl ether	11.0		ug/L	10.00	0.00	110	70-130			
Tetrachloroethene	13.8		ug/L	10.00	4.62	92	70-130			
Tetrahydrofuran	9.49		ug/L	10.00	0.00	95	70-130			
Toluene	11.0		ug/L	10.00	0.00	110	70-130			
trans-1,2-Dichloroethene	13.1		ug/L	10.00	3.72	94	70-130			
trans-1,3-Dichloropropene	10.3		ug/L	10.00	0.00	103	70-130			
Trichloroethene	1160		ug/L	10.00	2600	NR	70-130			MT
Trichlorofluoromethane	9.75		ug/L	10.00	0.00	98	70-130			
Vinyl Acetate	9.62		ug/L	10.00	0.00	96	70-130			
Vinyl Chloride	14.2		ug/L	10.00	4.56	96	70-130			
Xylene O	10.4		ug/L	10.00	0.00	104	70-130			
Xylene P,M	21.3		ug/L	20.00	0.00	106	70-130			



CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 1703591

**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 CC72941 - [CALC]**

Xylenes (Total)	31.6		mg/L							
Surrogate: 1,2-Dichloroethane-d4	0.0275		mg/L	0.02500		110	70-130			
Surrogate: 4-Bromofluorobenzene	0.0258		mg/L	0.02500		103	70-130			
Surrogate: Dibromofluoromethane	0.0297		mg/L	0.02500		119	70-130			
Surrogate: Toluene-d8	0.0253		mg/L	0.02500		101	70-130			

**Matrix Spike Dup Source: 1703591-01**

1,1,1,2-Tetrachloroethane	10.0		ug/L	10.00	0.00	100	70-130	1	30	
1,1,1-Trichloroethane	11.2		ug/L	10.00	0.00	112	70-130	3	30	
1,1,2,2-Tetrachloroethane	10.5		ug/L	10.00	0.00	105	70-130	4	30	
1,1,2-Trichloroethane	10.6		ug/L	10.00	0.00	106	70-130	4	30	
1,1-Dichloroethane	10.5		ug/L	10.00	0.00	105	70-130	3	30	
1,1-Dichloroethene	17.7		ug/L	10.00	7.82	99	70-130	8	30	
1,1-Dichloropropene	9.72		ug/L	10.00	0.00	97	70-130	2	30	
1,2,3-Trichlorobenzene	9.36		ug/L	10.00	0.00	94	70-130	5	30	
1,2,3-Trichloropropane	9.65		ug/L	10.00	0.00	96	70-130	4	30	
1,2,4-Trichlorobenzene	9.63		ug/L	10.00	0.00	96	70-130	6	30	
1,2,4-Trimethylbenzene	10.3		ug/L	10.00	0.00	103	70-130	1	30	
1,2-Dibromo-3-Chloropropane	8.93		ug/L	10.00	0.00	89	70-130	14	30	
1,2-Dibromoethane	10.6		ug/L	10.00	0.00	106	70-130	3	30	
1,2-Dichlorobenzene	10.6		ug/L	10.00	0.00	106	70-130	0.8	30	
1,2-Dichloroethane	10.8		ug/L	10.00	0.00	108	70-130	0.5	30	
1,2-Dichloropropane	9.71		ug/L	10.00	0.00	97	70-130	0.3	30	
1,3,5-Trimethylbenzene	10.0		ug/L	10.00	0.00	100	70-130	3	30	
1,3-Dichlorobenzene	10.6		ug/L	10.00	0.00	106	70-130	8	30	
1,3-Dichloropropane	9.97		ug/L	10.00	0.00	100	70-130	5	30	
1,4-Dichlorobenzene	9.97		ug/L	10.00	0.00	100	70-130	4	30	
1,4-Dioxane - Screen	162		ug/L	200.0	0.00	81	0-332	95	200	
1-Chlorohexane	9.27		ug/L	10.00	0.00	93	70-130	3	30	
2,2-Dichloropropane	9.25		ug/L	10.00	0.00	92	70-130	11	30	
2-Butanone	47.3		ug/L	50.00	0.00	95	70-130	2	30	
2-Chlorotoluene	10.0		ug/L	10.00	0.00	100	70-130	0.6	30	
2-Hexanone	47.5		ug/L	50.00	0.00	95	70-130	0.6	30	
4-Chlorotoluene	10.2		ug/L	10.00	0.00	102	70-130	4	30	
4-Isopropyltoluene	10.0		ug/L	10.00	0.00	100	70-130	2	30	
4-Methyl-2-Pentanone	51.4		ug/L	50.00	0.00	103	70-130	0.3	30	
Acetone	47.9		ug/L	50.00	0.00	96	70-130	7	30	
Benzene	10.5		ug/L	10.00	0.210	103	70-130	7	30	
Bromobenzene	10.8		ug/L	10.00	0.00	108	70-130	2	30	
Bromochloromethane	10.6		ug/L	10.00	0.00	106	70-130	9	30	
Bromodichloromethane	11.0		ug/L	10.00	0.00	110	70-130	8	30	
Bromoform	8.11		ug/L	10.00	0.00	81	70-130	1	30	
Bromomethane	9.94		ug/L	10.00	0.00	99	70-130	7	30	
Carbon Disulfide	10.7		ug/L	10.00	0.00	107	70-130	3	30	
Carbon Tetrachloride	10.3		ug/L	10.00	0.00	103	70-130	10	30	
Chlorobenzene	9.81		ug/L	10.00	0.00	98	70-130	4	30	



CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler  
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ESS Laboratory Work Order: 1703591

**Quality Control Data**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>8260B Volatile Organic Compounds</b>										
<b>Batch CC72941 - 5030B</b>										
Chloroethane	9.58		ug/L	10.00	0.00	96	70-130	4	30	
Chloroform	11.4		ug/L	10.00	0.480	109	70-130	4	30	
Chloromethane	10.9		ug/L	10.00	0.00	109	70-130	3	30	
cis-1,2-Dichloroethene	119		ug/L	10.00	188	NR	70-130	NR	30	MT
cis-1,3-Dichloropropene	8.80		ug/L	10.00	0.00	88	70-130	13	30	
Dibromochloromethane	9.46		ug/L	10.00	0.00	95	70-130	1	30	
Dibromomethane	10.0		ug/L	10.00	0.00	100	70-130	3	30	
Dichlorodifluoromethane	9.98		ug/L	10.00	0.00	100	70-130	4	30	
Diethyl Ether	9.37		ug/L	10.00	0.00	94	70-130	2	30	
Di-isopropyl ether	10.5		ug/L	10.00	0.00	105	70-130	2	30	
Ethyl tertiary-butyl ether	10.0		ug/L	10.00	0.00	100	70-130	5	30	
Ethylbenzene	10.1		ug/L	10.00	0.00	101	70-130	2	30	
Hexachlorobutadiene	8.49		ug/L	10.00	0.00	85	70-130	0.2	30	
Hexachloroethane	8.12		ug/L	10.00	0.00	81	70-130	2	30	
Isopropylbenzene	10.2		ug/L	10.00	0.00	102	70-130	0.2	30	
Methyl tert-Butyl Ether	10.4		ug/L	10.00	0.00	104	70-130	6	30	
Methylene Chloride	10.2		ug/L	10.00	0.00	102	70-130	8	30	
Naphthalene	10.3		ug/L	10.00	0.00	103	70-130	2	30	
n-Butylbenzene	9.73		ug/L	10.00	0.00	97	70-130	3	30	
n-Propylbenzene	10.2		ug/L	10.00	0.00	102	70-130	1	30	
sec-Butylbenzene	10.3		ug/L	10.00	0.00	103	70-130	1	30	
Styrene	9.95		ug/L	10.00	0.00	100	70-130	2	30	
tert-Butylbenzene	10.2		ug/L	10.00	0.00	102	70-130	0.4	30	
Tertiary-amyl methyl ether	10.2		ug/L	10.00	0.00	102	70-130	8	30	
Tetrachloroethene	13.7		ug/L	10.00	4.62	91	70-130	1	30	
Tetrahydrofuran	8.42		ug/L	10.00	0.00	84	70-130	12	30	
Toluene	10.1		ug/L	10.00	0.00	101	70-130	8	30	
trans-1,2-Dichloroethene	13.2		ug/L	10.00	3.72	95	70-130	1	30	
trans-1,3-Dichloropropene	9.82		ug/L	10.00	0.00	98	70-130	5	30	
Trichloroethene	1060		ug/L	10.00	2600	NR	70-130	NR	30	MT
Trichlorofluoromethane	9.21		ug/L	10.00	0.00	92	70-130	6	30	
Vinyl Acetate	9.09		ug/L	10.00	0.00	91	70-130	6	30	
Vinyl Chloride	13.7		ug/L	10.00	4.56	92	70-130	5	30	
Xylene O	10.5		ug/L	10.00	0.00	105	70-130	1	30	
Xylene P,M	20.7		ug/L	20.00	0.00	104	70-130	3	30	
Xylenes (Total)	31.2		mg/L							
Surrogate: 1,2-Dichloroethane-d4	0.0265		mg/L	0.02500		106	70-130			
Surrogate: 4-Bromofluorobenzene	0.0259		mg/L	0.02500		104	70-130			
Surrogate: Dibromofluoromethane	0.0282		mg/L	0.02500		113	70-130			
Surrogate: Toluene-d8	0.0263		mg/L	0.02500		105	70-130			





# ESS Laboratory

Division of Thielsch Engineering, Inc.

# BAL Laboratory

The Microbiology Division  
of Thielsch Engineering, Inc.



## CERTIFICATE OF ANALYSIS

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

ESS Laboratory Work Order: 1703591

### Notes and Definitions

- U Analyte included in the analysis, but not detected
- MT Due to high target values, matrix spike analyte(s) is masked (MT).
- D Diluted.
- CD+ Continuing Calibration %Diff/Drift is above control limit (CD+).
- CD- Continuing Calibration %Diff/Drift is below control limit (CD-).
- 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: 1703591

**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](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/meecd/environmental-health/dwp/partners/labCert.shtml>

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](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.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

## ESS Laboratory Sample and Cooler Receipt Checklist

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

ESS Project ID: 1703591  
 Date Received: 3/27/2017  
 Project Due Date: 4/3/2017  
 Days for Project: 5 Day

1. Air bill manifest present?  No  
 Air No.: NA
2. Were custody seals present?  No
3. Is radiation count <100 CPM?  Yes
4. Is a Cooler Present?  Yes  
 Temp: 3.8 Iced with: Ice
5. Was COC signed and dated by client?  Yes

6. Does COC match bottles?  Yes
7. Is COC complete and correct?  Yes
8. Were samples received intact?  Yes
9. Were labs informed about short holds & rushes? Yes / No /  NA
10. Were any analyses received outside of hold time? Yes /  No

11. Any Subcontracting needed? Yes /  No  
 ESS Sample IDs: \_\_\_\_\_  
 Analysis: \_\_\_\_\_  
 TAT: \_\_\_\_\_

12. Were VOAs received?  Yes /  No  
 a. Air bubbles in aqueous VOAs?  Yes /  No  
 b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved?  Yes / No  
 a. If metals preserved upon receipt: Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_  
 b. Low Level VOA vials frozen: Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_

**Sample Receiving Notes:**

VOA in Sample 1 not labeled with a Sample ID. Should be MW-10 @ 3/27/17 12:16

14. Was there a need to contact Project Manager? Yes /  No  
 a. 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	112922	Yes	No	Yes	VOA Vial - HCl	HCl	
01	112923	Yes	No	Yes	VOA Vial - HCl	HCl	
01	112924	Yes	No	Yes	VOA Vial - HCl	HCl	
01	112925	Yes	No	Yes	VOA Vial - HCl	HCl	
01	112926	Yes	No	Yes	VOA Vial - HCl	HCl	
01	112927	Yes	No	Yes	VOA Vial - HCl	HCl	
01	112928	Yes	No	Yes	VOA Vial - HCl	HCl	
01	112929	Yes	No	Yes	VOA Vial - HCl	HCl	
01	112930	Yes	No	Yes	VOA Vial - HCl	HCl	
02	112931	Yes	No	Yes	VOA Vial - HCl	HCl	
02	112932	Yes	No	Yes	VOA Vial - HCl	HCl	
02	112933	Yes	No	Yes	VOA Vial - HCl	HCl	

**2nd Review**

Are barcode labels on correct containers?  Yes / No

Completed By: [Signature] Date & Time: 3/27/17 12:17  
 Reviewed By: [Signature] Date & Time: 3/27/17 12:21  
 Delivered By: [Signature] Date & Time: 3/27/17 12:21

**ESS Laboratory**

Division of Thielsch Engineering, Inc.  
 185 Frances Avenue, Cranston RI 02910  
 Tel. (401) 461-7181 Fax (401) 461-4486  
 www/esslaboratory.com

**CHAIN OF CUSTODY**

ESS Lab # **1703591**

Turn Time <b>STAT</b> Rush		Reporting Limits	
Regulatory State <b>RI</b>		Electronic Deliverables <input type="checkbox"/> Limit Checker <input type="checkbox"/> Standard Excel <input type="checkbox"/>	
Is this project for any of the following?: <input type="radio"/> OCT RCP <input type="radio"/> OMA MCP <input type="radio"/> ORGP		Other (Please Specify →)	
Project # <b>365215040</b>	Project Name <b>Teston Gushen</b>	Analysis	
Address <b>271 MILL RD.</b>	Address	VOC	
State <b>MA</b>	Zip Code <b>01824</b>	X - Rms/Mg/D	
FAX Number	Email Address <b>Denise.King@amesfor.com</b>	X	
Sample Type	Sample Matrix		
<b>Water</b>	<b>GW</b>		
<b>Groundwater</b>	<b>GW</b>		
Collection Date <b>3-27-17</b>	Collection Time <b>11:00</b>		
<b>3-27-17</b>	<b>-</b>		
Container Type: AC-Air Cassette	AG-Amber Glass	B-BOD Bottle	C-Cubitainer
Container Volume: 1-100 mL	2-2.5 gal	3-250 mL	4-300 mL
Preservation Code: 1-Non Preserved	2-HCl	3-H2SO4	4-HNO3
	5-NaOH	6-Methanol	7-Na2S2O3
	8-ZnAc2	9-NH4Cl	10-DI H2O
	11-Ascorbic Acid	12-Other	
Number of Containers per Sample: <b>3</b>			

Sampled by: **Mark Kravagis, LLC** 335-627-3757  
 Comments: Please specify "Other" preservative and containers types in this space

Cooler Present: \_\_\_\_\_  
 Seals Intact: **N**  
 Cooler Temperature: **Ice/cool 38°C** 11:55 3/27/17

Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)
<b>[Signature]</b> 3-27-17 11:52	<b>[Signature]</b> 3/27/17 11:50
Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)



## CERTIFICATE OF ANALYSIS

Client Name: AMEC Foster Wheeler

Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1703591

### *Items for Project Management Review*

#### 8260B Volatile Organic Compounds

C7C0462-CCV1	1,4-Dioxane - Screen	CD-: Continuing Calibration %Diff/Drift is below control (CD-).
C7C0506-CCV1	1,4-Dioxane - Screen 4-Methyl-2-Pentanone Acetone	Exceeds lower control limit Exceeds upper control limit CD-: Continuing Calibration %Diff/Drift is below control (CD-).
CC72941-MS1	Acetone cis-1,2-Dichloroethene cis-1,2-Dichloroethene  Trichloroethene Trichloroethene	Exceeds lower control limit Exceeds lower control limit MT: Due to high target values, matrix spike analyte(s) is masked (MT). Exceeds lower control limit MT: Due to high target values, matrix spike analyte(s) is masked (MT).
CC72941-MSD1	Xylenes (Total) cis-1,2-Dichloroethene  cis-1,2-Dichloroethene Trichloroethene  Trichloroethene Xylenes (Total)	No source result for 1703591-01 MT: Due to high target values, matrix spike analyte(s) is masked (MT). Exceeds lower control limit MT: Due to high target values, matrix spike analyte(s) is masked (MT). Exceeds lower control limit No source result for 1703591-01



*CERTIFICATE OF ANALYSIS*

Client Name: AMEC Foster Wheeler

Client Project ID: Textron Gorham - Groundwater

ESS Laboratory Work Order: 1703591

**PROJECT COMPLETION CHECKLIST**

All Reports:

- |  |     |    |     |
|--|-----|----|-----|
| 1. Has Report been Paginated?                              | Yes | No |     |
| 2. Has Report been Digitally Signed?                       | Yes | No |     |
| 3. Has MCP/PC Sheet been filled out?                       | Yes | No | N/A |
| 4. Have PRM and Fax Sheet been removed from the Project?   | Yes | No |     |
| 5. Is the correct Chain of Custody attached to the Report? | Yes | No |     |
| 6. Is the correct Cooler Receipt attached to the Report?   | Yes | No | N/A |

Contact Person: \_\_\_\_\_

EDD: \_\_\_\_\_

E-Mail: \_\_\_\_\_

- |  |     |    |     |
|--|-----|----|-----|
| 1. Does e-mail address in Element match the COC/CSR?           | Yes | No |     |
| 1a. If No, did you contact Customer Service?                   | Yes | No | N/A |
| 2. Are there any CCs for the report?                           | Yes | No |     |
| 3a. If Yes, did you include them?                              | Yes | No | N/A |
| 4. Did you save a copy of the e-mail in the Work Order Folder? | Yes | No |     |

Client Connect: \_\_\_\_\_

- |   |     |    |     |
|---|-----|----|-----|
| 1. Did you save Report in CORRECT ClientConnect Folder? | Yes | No | N/A |
| 2. Did you save EDD in CORRECT ClientConnect Folder?    | Yes | No | N/A |

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

- |  |     |    |     |
|--|-----|----|-----|
| 1. Does fax number in Element match the COC? | Yes | No |     |
| 1a. Did you contact Customer Service?        | Yes | No | N/A |
| 2. Was the fax "rejected" for any reason?    | Yes | No |     |
| 2a. Was the project re-faxed?                | Yes | No | N/A |
| 2b. Was Customer Service notified?           | Yes | No | N/A |

Updated to Faxed:      Yes      No      N/A      Initials: \_\_\_\_\_      Date: \_\_\_\_\_

# ESS Laboratory

Division of Thielsch Engineering, Inc.



## FAX

Date: \_\_\_\_\_

To: Denise King \_\_\_\_\_

Company: AMEC Foster Wheeler \_\_\_\_\_

Project Name: Textron Gorham - Groundwater \_\_\_\_\_

ESS Work Order: 1703591 \_\_\_\_\_

Fax: (978) 692-6633 \_\_\_\_\_

**Comments:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Our certified laboratory provides a full range of services, including the following:

- Soil Characterization
- Petroleum Fingerprinting
- Priority Pollutant Analysis
- Groundwater, Wastewater and Drinking Water Analyses
- PCBs and Pesticides Analysis
- Trace Metals (ICAP/Furnace) Analysis
- Inorganic Analysis by Classic Methods, Flow Analyzer, and Ion Chromatography
- Organics by GC/Mass Spectroscopy
- Microbiology Analysis
- Massachusetts EPH/VPH Analysis
- Siloxanes
- Field Screening and Sample Technician Services

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Number of pages (including this cover): \_\_\_\_\_

Date: \_\_\_\_\_ Faxed: \_\_\_\_\_ Initials: \_\_\_\_\_ Time: \_\_\_\_\_