

November 17, 2004  
Project 101960

Mr. Joseph T. Martella, II  
Rhode Island Department of Environmental Management  
Office of Waste Management  
235 Promenade Street  
Providence, RI 02908-5767

**Re:**

**Monthly Status Report-October 2004  
Former Gorham Manufacturing Facility  
333 Adelaide Avenue, Providence, RI  
Site Remediation Case No. 97-030**

Dear Mr. Martella:

Shaw Environmental, Inc. (Shaw) has prepared this monthly status report on behalf of Textron, Inc. (Textron). This status report is for the remediation of tetrachloroethene (PCE) contaminated groundwater at the former Gorham Manufacturing Facility in Providence, Rhode Island (Figure 1).

The Former Gorham Manufacturing facility is located at 333 Adelaide Avenue, Providence, Rhode Island (the Site). The contaminant of concern for groundwater is primarily PCE. As discussed in the Remedial Action Work Plan and subsequent revisions, the PCE source area in the vicinity of the former building W is the area of concern being treated, using an in-situ application of sodium permanganate, to achieve the site-specific remedial goal of 7,700 micrograms per liter (ug/L).

## **FIELD ACTIVITIES**

The following field activities were conducted in October 2004:

### Permanganate Injection

The permanganate injections were completed on October 4, 2004. Per the Revised RAWP 24,400 pounds of oxidant as sodium permanganate was applied to the treatment zone. The liquid sodium permanganate solution (40%) was mixed with water to produce a 10% solution for injection.

The final injection volumes for each injection well are listed below:

<b>Injection Well Location</b>	<b>Injection Volume (gallons)</b>
04IS01	3,434
04IS02	2,913
04IS03	2,491
04IS04	3,531
04IS05	2,841
04IN01	1,460
04IN02	1,450
04IN03	1,362
04IN04	1,415
Total	20,897

### Monitoring Activities

Field parameters were measured in treatment area wells weekly during the month of October, 2004. Field measurements included oxidation/reduction potential (ORP), dissolved oxygen (DO), pH, temperature, and specific conductance (SC). Groundwater elevation measurements were also collected. These results are presented in Table 1 and Table 2.

### **SUMMARY OF ANALYTICAL DATA**

None this period.

### **FUTURE ACTIVITIES**

Field parameter measurements will continue to be collected monthly for ORP, DO, temperature, pH, and SC in November and December, 2004 (one event per month). Groundwater samples will be collected for VOC analysis (EPA Method 8260) at the end of the month of November, 2004 (approximately eight weeks post-injection) from seven wells within the treatment area (MW-112, MW-209D, MW-205, MW 101-S&D, and MW-202S&D).

Groundwater samples will be collected from all 21 source area monitoring wells for VOC analysis (EPA Method 8260) approximately 12 to 16 weeks post-injection. The samples collected 12 to 16 weeks post-injection will constitute the first round of quarterly sampling.

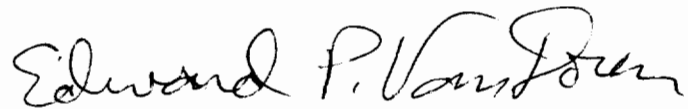
Following the 12 to 16 week post-injection groundwater sampling for VOCs, the quarterly monitoring program will begin, and an additional three (3) quarters of groundwater sampling will be conducted. Field parameter measurements will also be conducted during the quarterly groundwater sampling events.

Mr. Joseph T. Martella, II  
November 17, 2004  
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If you have any questions, please contact Ed Van Doren at (978) 691-2130.

Sincerely,

**SHAW ENVIRONMENTAL, INC.**

A handwritten signature in black ink that reads "Edward P. Van Doren". The signature is written in a cursive, flowing style.

Edward P. Van Doren, PE  
Project Manager

**Attachments**

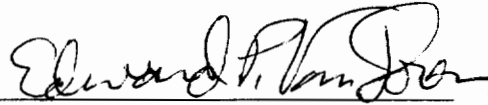
cc: Craig Roy, RIDEM OWR  
Greg Simpson, Textron  
Dave McCabe, Textron  
Jamieson Schiff, Textron  
Thomas Dellar, City of Providence  
Karriem Van Leesten, City of Providence  
Amelie Mailloux, Stop & Shop

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## CERTIFICATIONS

The following certifications are provided pursuant to Rule 9.19 of the Remediation Regulations:

I, Edward P. Van Doren, as an authorized representative of Shaw Environmental, Inc. and the person responsible for the preparation of this Monthly Status Report dated November 17, 2004, certify that the information contained in this report is complete and accurate to the best of my knowledge.



Edward P. Van Doren, P.E.  
Project Manager

11-29-04

Date:

We, Textron, Inc., as the party responsible for submittal of this Monthly Status Report, certify that this report is a complete and accurate representation of the contaminated site and the release, and contains all known facts surrounding the release, to the best of our knowledge.

Certification on behalf of Textron Inc.

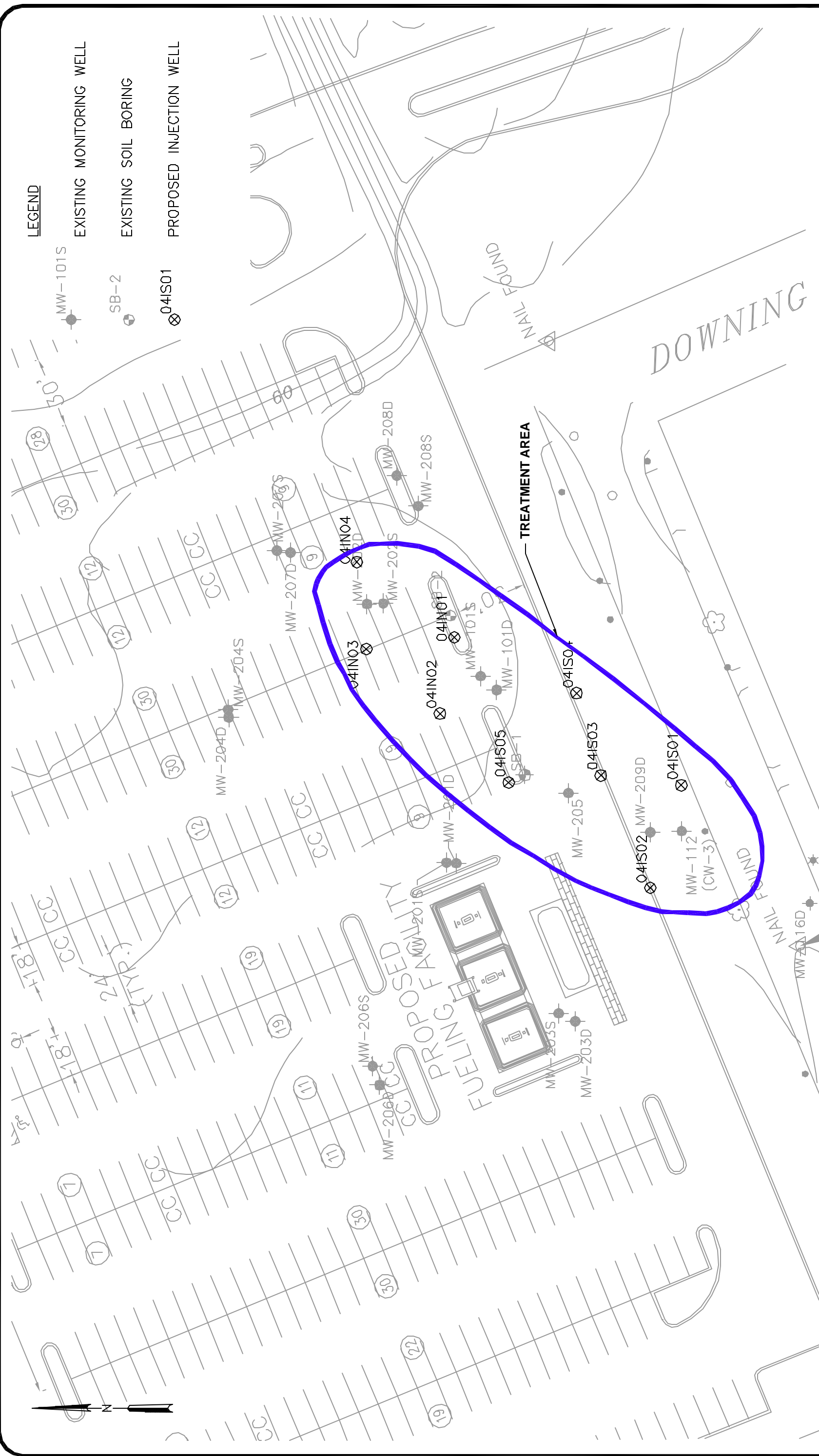


Gregory L. Simpson  
Project Manager

11/22/04

Date:





**LEGEND**

- EXISTING MONITORING WELL
- EXISTING SOIL BORING
- PROPOSED INJECTION WELL

DATE	5/11/04
DWN	J.O.D.
APP	
REV	
PROJECT NO.	101980

**FIGURE 2**  
 TEXTRON PROVIDENCE  
 333 ADELAIDE AVENUE  
 PROVIDENCE, RHODE ISLAND  
**PROPOSED INJECTION WELL LOCATIONS**



**TABLE 1**  
**Groundwater Field Parameters**  
**October 2004 - Weekly Measurements**

**Textron Gorham**  
**Providence, Rhode Island**

<b>WELL ID</b>	<b>DATE</b>	<b>pH Field</b>	<b>Temperature Field (deg.c)</b>	<b>Conductivity Field (ms/cm)</b>	<b>Dissolved Oxygen Field (mg/l)</b>	<b>Oxidation Reduction Potential Field (mv)</b>
MW-101D	10/7/2004	Well water purple				
MW-101D	10/12/2004	6.67	14.61	8.291	2.28	684.3
MW-101D	10/15/2004	7.09	14.76	0.042	8.16	160.5
MW-101D	10/25/2004	6.49	14.88	0.062	3.67	272.0
MW-101S	10/7/2004	5.46	14.92	1.070	2.26	184.0
MW-101S	10/12/2004	6.59	14.67	1.129	1.50	252.3
MW-101S	10/15/2004	5.68	14.95	1.065	0.52	93.9
MW-101S	10/25/2004	5.84	14.81	0.922	0.88	284.6
MW-112	10/7/2004	4.92	14.64	0.840	4.00	353.0
MW-112	10/12/2004	5.63	14.28	1.239	1.23	310.3
MW-112	10/15/2004	5.16	14.64	1.064	1.63	285.1
MW-112	10/25/2004	5.22	14.64	1.011	1.28	288.3
MW-116D	10/7/2004	5.10	14.26	0.573	3.87	342.0
MW-116D	10/12/2004	5.85	14.50	0.208	0.93	263.8
MW-116D	10/15/2004	5.64	14.92	0.165	1.27	259.9
MW-116D	10/25/2004	5.89	14.60	0.169	0.71	469.3
MW-116S	10/7/2004	5.32	16.77	0.539	7.14	325.0
MW-116S	10/12/2004	6.11	14.22	0.523	3.26	220.1
MW-201D	10/7/2004	6.94	14.56	0.885	7.80	331.0
MW-201D	10/12/2004	6.36	14.01	3.841	0.22	294.3
MW-201D	10/15/2004	6.27	14.73	0.231	4.91	217.7
MW-201D	10/25/2004	6.49	14.38	0.211	0.57	249.1
MW-201S	10/7/2004	7.09	14.77	3.333	3.34	330.0
MW-201S	10/12/2004	6.54	14.51	2.606	1.51	225.6
MW-201S	10/15/2004	6.41	15.10	2.218	1.66	242.1
MW-201S	10/25/2004	6.60	14.62	2.050	0.76	283.6
MW-202D	10/7/2004	5.78	14.96	0.899	6.58	341.0
MW-202D	10/12/2004	6.37	14.03	0.291	0.31	294.3
MW-202D	10/15/2004	5.98	15.20	0.784	0.47	187.4
MW-202D	10/25/2004	6.32	14.21	0.562	0.81	223.5
MW-202S	10/7/2004	5.77	15.04	0.827	9.55	340.0
MW-202S	10/12/2004	6.14	14.15	0.942	2.35	225.6
MW-202S	10/15/2004	6.17	15.14	0.665	0.76	152.9
MW-202S	10/25/2004	6.67	14.62	0.485	0.75	118.0
MW-203D	10/7/2004	6.73	14.59	1.162	1.80	278.0
MW-203D	10/12/2004	6.12	14.27	0.740	0.55	247.1
MW-203D	10/15/2004	6.13	15.00	0.527	0.64	225.5
MW-203D	10/25/2004	6.42	14.84	0.514	0.63	284.9
MW-203S	10/7/2004	7.03	15.78	1.975	2.14	270.0
MW-203S	10/12/2004	6.14	14.50	0.742	2.35	225.6
MW-203S	10/15/2004	6.22	15.08	1.252	0.51	244.2

**TABLE 1**  
**Groundwater Field Parameters**  
**October 2004 - Weekly Measurements**

**Textron Gorham**  
**Providence, Rhode Island**

<b>WELL ID</b>	<b>DATE</b>	<b>pH Field</b>	<b>Temperature Field (deg.c)</b>	<b>Conductivity Field (ms/cm)</b>	<b>Dissolved Oxygen Field (mg/l)</b>	<b>Oxidation Reduction Potential Field (mv)</b>
MW-203S	10/25/2004	6.56	14.69	1.152	1.26	295.1
MW-204D	10/12/2004	6.71	13.99	1.204	0.67	230.8
MW-204D	10/15/2004	6.73	14.63	1.005	0.53	196.7
MW-204D	10/25/2004	6.93	14.20	0.907	0.45	162.8
MW-204S	10/12/2004	6.62	14.05	0.993	1.82	219.6
MW-204S	10/15/2004	6.57	14.64	0.475	1.88	200.4
MW-204S	10/25/2004	6.78	14.27	0.220	1.67	184.7
MW-205	10/7/2004	6.79	14.96	2.114	3.89	286.0
MW-205	10/12/2004	6.23	14.44	1.536	2.29	290.6
MW-205	10/15/2004	6.39	15.11	0.756	1.50	185.4
MW-205	10/25/2004	6.47	14.46	0.589	0.95	179.6
MW-206D	10/7/2004	5.76	14.90	0.590	7.78	310.0
MW-206D	10/12/2004	6.41	14.14	0.543	0.82	245.6
MW-206D	10/15/2004	5.99	14.78	0.390	2.97	228.6
MW-206D	10/25/2004	6.27	14.48	0.325	1.45	241.2
MW-206S	10/7/2004	5.51	15.05	1.951	5.51	340.0
MW-206S	10/12/2004	6.30	14.54	2.235	2.78	225.1
MW-206S	10/15/2004	6.28	15.08	1.875	2.38	230.0
MW-206S	10/25/2004	6.40	14.58	1.813	1.95	277.1
MW-207D	10/7/2004	5.69	14.76	0.557	3.01	347.0
MW-207D	10/12/2004	6.64	14.05	0.885	0.43	269.9
MW-207D	10/15/2004	5.95	15.13	0.111	0.88	208.5
MW-207D	10/25/2004	6.19	14.46	0.116	0.61	190.6
MW-207S	10/7/2004	5.33	14.96	0.526	4.13	340.0
MW-207S	10/12/2004	6.73	14.26	0.970	1.18	156.0
MW-207S	10/15/2004	5.58	15.30	0.119	0.85	229.2
MW-207S	10/25/2004	5.78	14.44	0.129	0.73	230.1
MW-208D	10/7/2004	5.43	14.67	0.785	2.07	292.0
MW-208D	10/12/2004	6.38	14.16	0.635	0.54	280.3
MW-208D	10/15/2004	5.69	15.09	0.603	0.53	196.3
MW-208D	10/25/2004	5.90	14.23	0.584	4.80	223.7
MW-208S	10/7/2004	5.42	14.83	0.740	3.51	328.0
MW-208S	10/12/2004	6.45	14.34	0.768	1.20	271.9
MW-208S	10/15/2004	5.65	14.91	0.745	0.51	205.5
MW-208S	10/25/2004	5.86	14.50	0.539	3.05	227.1
MW-209D	10/7/2004	Well water purple				
MW-209D	10/12/2004	Well water purple				
MW-209D	10/15/2004	Well water purple				
MW-209D	10/25/2004	Well water purple				



**TABLE 2  
WATER TABLE ELEVATION  
(October 2004)**

**Textron Gorham  
Providence, Rhode Island**

<b>Location</b>	<b>Date</b>	<b>Reference Elevation (Feet)</b>	<b>Depth to Water (Feet)</b>	<b>Groundwater Elevation (Feet)</b>
MW-101D	10/12/2004	98.91	24.51	74.40
MW-101D	10/15/2004	98.91	25.01	73.90
MW-101D	10/25/2004	98.91	25.02	73.89
MW-101S	10/7/2004	98.90	24.81	74.09
MW-101S	10/12/2004	98.90	24.50	74.40
MW-101S	10/15/2004	98.90	25.04	73.86
MW-101S	10/25/2004	98.90	25.08	73.82
MW-112	10/7/2004	100.63	26.62	74.01
MW-112	10/12/2004	100.63	25.97	74.66
MW-112	10/15/2004	100.63	26.68	73.95
MW-112	10/25/2004	100.63	26.83	73.80
MW-116D	10/12/2004	98.92	25.21	73.71
MW-116D	10/15/2004	98.92	24.95	73.97
MW-116D	10/25/2004	98.92	25.01	73.91
MW-116S	10/7/2004	99.40	25.35	74.05
MW-116S	10/12/2004	99.40	24.67	74.73
MW-116S	10/15/2004	99.40	25.42	73.98
MW-116S	10/25/2004	99.40	26.53	72.87
MW-201D	10/7/2004	98.80	24.83	73.97
MW-201D	10/12/2004	98.80	24.90	73.90
MW-201D	10/15/2004	98.80	24.90	73.90
MW-201D	10/25/2004	98.80	24.90	73.90
MW-201S	10/7/2004	98.75	24.79	73.96
MW-201S	10/12/2004	98.75	24.93	73.82
MW-201S	10/15/2004	98.75	24.84	73.91
MW-201S	10/25/2004	98.75	24.91	73.84
MW-202D	10/7/2004	98.17	24.24	73.93
MW-202D	10/12/2004	98.17	25.02	73.15
MW-202D	10/15/2004	98.17	24.32	73.85
MW-202D	10/25/2004	98.17	24.37	73.80
MW-202S	10/7/2004	98.06	24.13	73.93
MW-202S	10/12/2004	98.06	25.13	72.93
MW-202S	10/15/2004	98.06	24.21	73.85
MW-202S	10/25/2004	98.06	24.27	73.79
MW-203D	10/7/2004	98.91	24.93	73.98
MW-203D	10/12/2004	98.91	25.11	73.80
MW-203D	10/15/2004	98.91	24.95	73.96
MW-203D	10/25/2004	98.91	25.03	73.88
MW-203S	10/7/2004	98.92	24.94	73.98
MW-203S	10/12/2004	98.92	25.02	73.90
MW-203S	10/15/2004	98.92	24.98	73.94
MW-203S	10/25/2004	98.92	25.02	73.90
MW-204D	10/12/2004	98.88	25.35	73.53
MW-204D	10/15/2004	98.88	25.07	73.81
MW-204D	10/25/2004	98.88	25.08	73.80

**TABLE 2  
WATER TABLE ELEVATION  
(October 2004)**

**Textron Gorham  
Providence, Rhode Island**

<b>Location</b>	<b>Date</b>	<b>Reference Elevation (Feet)</b>	<b>Depth to Water (Feet)</b>	<b>Groundwater Elevation (Feet)</b>
MW-204S	10/12/2004	98.84	25.41	73.43
MW-204S	10/15/2004	98.84	25.02	73.82
MW-204S	10/25/2004	98.84	25.06	73.78
MW-205	10/7/2004	99.47	25.48	73.99
MW-205	10/12/2004	99.47	25.33	74.14
MW-205	10/15/2004	99.47	26.54	72.93
MW-205	10/25/2004	99.47	25.61	73.86
MW-206D	10/7/2004	98.71	24.8	73.91
MW-206D	10/12/2004	98.71	25.26	73.45
MW-206D	10/15/2004	98.71	24.85	73.86
MW-206D	10/25/2004	98.71	24.92	73.79
MW-206S	10/7/2004	98.55	24.63	73.92
MW-206S	10/12/2004	98.55	25.23	73.32
MW-206S	10/15/2004	98.55	24.68	73.87
MW-206S	10/25/2004	98.55	24.76	73.79
MW-207D	10/7/2004	98.18	24.27	73.91
MW-207D	10/12/2004	98.18	25.63	72.55
MW-207D	10/15/2004	98.18	24.35	73.83
MW-207D	10/25/2004	98.18	24.40	73.78
MW-207S	10/7/2004	98.28	24.35	73.93
MW-207S	10/12/2004	98.28	25.55	72.73
MW-207S	10/15/2004	98.28	24.44	73.84
MW-207S	10/25/2004	98.28	24.50	73.78
MW-208D	10/7/2004	99.68	25.74	73.94
MW-208D	10/12/2004	99.68	26.23	73.45
MW-208D	10/15/2004	99.68	25.82	73.86
MW-208D	10/25/2004	99.68	25.88	73.80
MW-208S	10/7/2004	99.50	25.57	73.93
MW-208S	10/12/2004	99.50	26.12	73.38
MW-208S	10/15/2004	99.50	25.65	73.85
MW-208S	10/25/2004	99.50	25.71	73.79
MW-209D	10/15/2004	100.47	26.51	73.96
MW-209D	10/25/2004	100.47	26.62	73.85