



Shaw Environmental, Inc.
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Andover, MA 01810-1141
978.691.2100
Fax: 978.691.2101

April 22, 2004
Project 101960

Mr. Joseph T. Martella, II
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908-5025

Re:
Monthly Status Report-March 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. The Rhode Island Department of Environmental Management (RIDEM) originally approved the groundwater remediation in a Revised Order of Approval dated March 15, 2002. Another revised RAWP was prepared by Shaw dated May 20, 2003 proposing a follow-on injection of sodium permanganate as part of the remediation of PCE contaminated groundwater.

This status report discusses additional site investigation activities associated with the follow-on injections and the installation of groundwater compliance monitoring wells and sampling of the compliance wells as proposed in the RAWP dated April 2001.

INTRODUCTION

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).

CHRONOLOGY OF FIELD ACTIVITIES

The following field activities were conducted in March 2004:

- Shaw completed the installation of perimeter compliance monitoring wells (which had not been previously installed) and conducted an initial round of groundwater sampling associated with the compliance wells. These activities were conducted from March 10, 2004 to April 1, 2004.
- Shaw conducted investigation activities associated with the follow-on treatment. Shaw conducted well installation, soil sampling, and groundwater sampling from March 10, 2004 to April 1, 2004.

COMPLIANCE WELL INSTALLATIONS

The compliance monitoring plan describes monitoring at six well locations (existing monitoring wells MW-112, GZA-5, and GZA-6 will be used as three of the compliance wells). Shaw installed the remaining three compliance monitoring wells at the locations indicated on Figure 1 (i.e., CW-1, CW-2, and CW-6). The tables below describe the well locations, screen intervals, and analytical methods to be used during sampling of the compliance wells.

New Compliance Well Installations			
Well ID	Location	Screen Interval	Analytical Method
CW-1	Approximately 30 ft. up-gradient of the 80-inch sewer interceptor (near entrance driveway)	45 to 55 ft. bgs	VOCs by EPA Method 8260B
CW-2	Approximately 30 ft. up-gradient of the 80-inch sewer interceptor (approximately 130 feet north of CW-1)	45 to 55 ft. bgs	VOCs by EPA Method 8260B
CW-6	Down-gradient of the TPH UCL/NAPL remediation area	Approximately 25 to 35 ft. bgs (a water table well)	TPH by EPA Method 8100M

Existing Wells to Serve as Compliance Wells			
Well ID	Location	Screen Interval	Analytical Method
MW-112 (CW-3)	Between PCE source area	25 to 35 ft. bgs	VOCs by EPA

	and Adelaide Avenue		Method 8260B
GZA-5 (CW-5)	Up-gradient of Mashpaug Cove	30 to 40 ft. bgs	VOCs by EPA Method 8260B
GZA-6 (CW-4)	Up-gradient of Mashpaug Cove	5 to 15 ft. bgs	VOCs by EPA Method 8260B

MONITORING WELL INSTALLATIONS/SOIL BORINGS

A shallow and deep well pair was installed east of the treatment area, identified as MW-208S&D (Figure 2). These wells were installed to comply with RIDEM's request for additional monitoring wells east of the treatment area.

Shaw installed a deep well between MW-205 and MW-112 (identified as MW-209D) to help define the horizontal and vertical extent of the southwestern edge of the treatment area. Samples were also collected for soil oxidant demand (SOD) and total organic carbon (TOC) testing.

Two soil borings (SB-1 and SB-2) were advanced in the center of the treatment area to collect samples for VOC analysis to investigate the possible presence of DNAPL (both in the vadose zone and in saturated soils). Samples were also collected for soil oxidant demand (SOD) and total organic carbon (TOC) testing. One of these locations was completed as a future injection well point (SB-1).

SUMMARY OF ANALYTICAL DATA

Soil Sampling- 3/11/04 to 3/15/04

Soil samples (8) were collected and analyzed for VOCs by EPA Method 8260.
Soil samples (6) were collected and analyzed for soil oxidant demand (SOD), fraction of organic carbon (Foc), and total organic carbon (TOC).

Groundwater Sampling- 3/30/04 to 4/01/04

Groundwater samples (25) were collected and analyzed for the following:

- VOCs by EPA Method 8260 – 24 samples including a duplicate
- Chloride by EPA Method 300.0 Part A – 24 samples including a duplicate
- Chemical Oxygen Demand (COD) by EPA Method 410.2 – 24 samples including a duplicate
- Total petroleum hydrocarbons (TPH) by EPA Method 8100M- 1 sample

Shaw is currently evaluating the analytical data. A summary of the analytical results and a copy of the laboratory reports will be provided in the next monthly status report.

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FUTURE ACTIVITIES

Shaw will complete its evaluation of the recent field and analytical data. Shaw will review the currently proposed follow-on application based on the newly collected data and may make revisions to the RAWP based on these results.

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

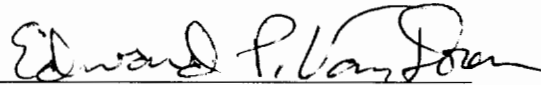
Attachments

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

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 4-22-04, 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

4-22-04

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.

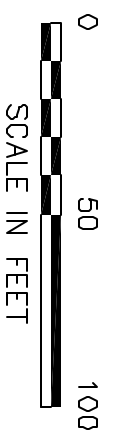
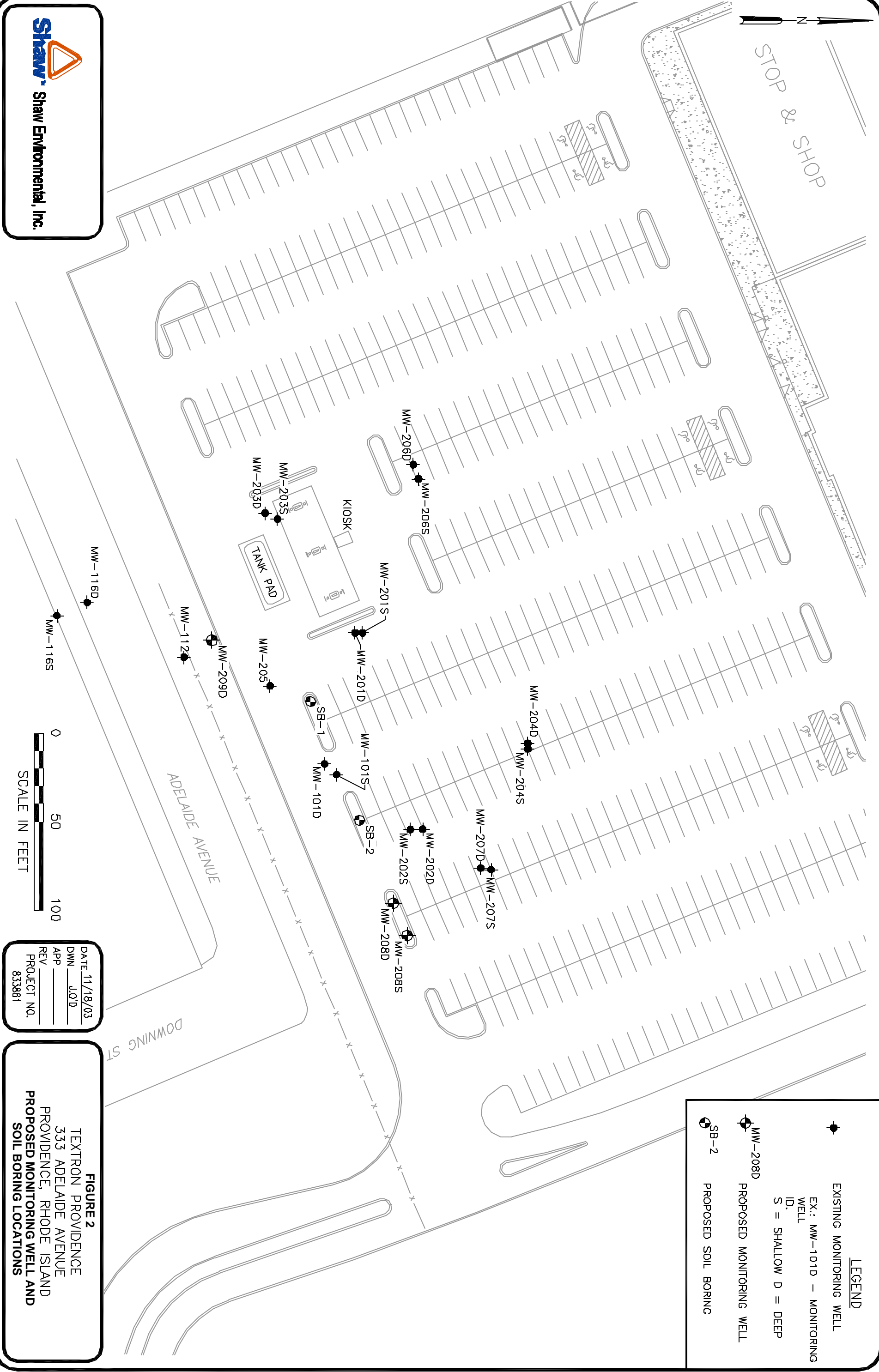
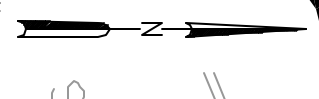
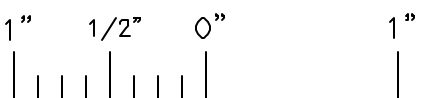
Certification on behalf of Textron Inc.



David M. McCabe, P.G.
Manager, Site Remediation

4/21/04

Date:

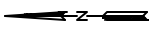


DATE	11/18/03
DWN	JOD
APP	
REV	
PROJECT NO.	833861

FIGURE 2
 TETRAN PROVIDENCE
 333 ADELAIDE AVENUE
 PROVIDENCE, RHODE ISLAND
 PROPOSED MONITORING WELL AND
 SOIL BORING LOCATIONS

LEGEND

	EXISTING MONITORING WELL
	EX.: MW-101D - MONITORING WELL ID.
	S = SHALLOW D = DEEP
	MW-208D PROPOSED MONITORING WELL
	SB-2 PROPOSED SOIL BORING



- LEGEND**
- ◊ EXISTING MONITORING WELL
 - ⬇ PROPOSED MONITORING WELL

NOTES:

1. EXISTING MONITORING WELLS (NW-112, GZA-5, AND GZA-6) WILL BE USED AS COMPLIANCE MONITORING WELL LOCATIONS AS INDICATED.
2. NEW COMPLIANCE MONITORING WELLS (CW-1, CW-2 AND, CW-6) WILL BE INSTALLED AT THE INDICATED LOCATIONS.

REV	DATE	DESCRIPTION	DES BY	CHK BY	APP BY
01	12/10/21	J.L.O.D.			



TEXTRON PROVIDENCE
 333 ADELAIDE AVENUE
 PROVIDENCE, RHODE ISLAND

PROPOSED
 COMPLIANCE MONITORING WELL LOCATIONS

DRAWING NO.
1
 PROJECT NO.
 833881