

GZA
GeoEnvironmental, Inc.

*Engineers and
Scientists*

October 1, 2010 (Revised January 10, 2011)
File No. 05.0043654.00-C

Mr. Joseph Martella
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02908



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<http://www.gza.com>

Re: *Short-Term Response Action Plan* (Revised)
Former Tidewater Facility
Pawtucket, Rhode Island
RIDEM Case No. 95-022

Dear Mr. Martella:

On behalf of The Narragansett Electric Company d/b/a National Grid (National Grid), GZA GeoEnvironmental, Inc. (GZA) is pleased to present to the Rhode Island Department of Environmental Management (RIDEM) this *Short-Term Response Action Plan* (STRAP) for the former Tidewater Manufactured Gas Plant (MGP) and Power Plant site located in Pawtucket, Rhode Island (herein referred to as the "Site"). A *Site Locus Plan* is presented as Figure 1.

This STRAP was originally submitted to RIDEM on October 1, 2010. This version has been revised to address RIDEM comments.

PROJECT OBJECTIVE

This STRAP has been prepared to address one specific area of concern at the Site: an above ground portion of a former steel process pipe associated with former MGP facility operations. This section of piping runs parallel to the Seekonk River and is located in close proximity to the river edge. Certain sections of the piping are in disrepair and contain residual coal tar-like material. These coal tar-like materials have been observed on the ground surface and river embankment beneath this piping which may be contributing to intermittent sheen outbreaks recently observed along a limited portion of the Seekonk River adjacent to the Former Gas Plant Area (FGPA) of the Site. Photographs of this area of concern are attached in Appendix A. The observation of this sheen warrants response actions prior to completion of the *Site Investigation Report* and preparation of a *Remedial Action Work Plan* for the remainder of the property, in accordance with Section 6 of RIDEM's *Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases* (Remediation Regulations) amended February 2004. This STRAP is designed to describe the procedures to mitigate potential releases from this former process piping and address observed surficial impacts.

BACKGROUND

This Site was the location of the former Tidewater Manufactured Gas Plant (MGP) and the former Pawtucket No. 1 Power Station. The majority of the Site is currently vacant with the exception of an active natural gas regulating station, and active switching and electrical substations, both owned and operated by National Grid. The Site consists of approximately 23 acres located on the western bank of the Seekonk River in Pawtucket, Rhode Island.



A multi-colored sheen has been periodically observed since approximately May 2010 on the water surface of the Seekonk River adjacent to the FGPA, approximately 150 feet north of the existing temporary cap area (installed in December 2009 to mitigate a sheen area migrating from a portion of the riverbank, as described in a *Short Term Response Summary Report* dated February 1, 2010), as shown on Figure 2. National Grid responded by placing oil snares along the area of this newer sheen area; however a specific source of the sheen was not initially identified. During a waterfront survey conducted on August 30, 2010, an approximately 150-foot long above ground steel pipe, varying in diameter from 4 to 6 inches, was observed running parallel to the Seekonk River, approximately 150 feet north of the existing temporary cap area and approximately 700 feet of the Site's western border along Taft Street, as shown on Figure 2. The northern end of the pipe was observed to be capped above grade and the southern end terminates below grade. Upon further inspection, certain sections of this piping were noted to be in disrepair and solidified coal-tar like materials were observed on the ground surface and river embankment beneath the piping. As described above, the presence of this piping and coal tar residuals may be contributing to the intermittent sheens observed in adjacent portions of the Seekonk River.

In an effort to mitigate these conditions, National Grid proposes to remove the above ground portions of this former process piping and coal tar-impacted surface materials adjacent to the pipe. The response action is intended to be a limited remedy for this locally observed condition only. National Grid is currently completing a *Site Investigation Report (SIR)* for the Site. As part of the SIR, a Site-wide remedy will be developed.

PROPOSED RESPONSE ACTIONS

The following sections present a description of the proposed response actions.

Pipe Removal

The approximately 150-feet of above ground sections of pipe will be removed and disposed off-Site at a licensed disposal facility; the underground section of pipe on the southern end will be capped above grade with a blind flange. An approximately 5 square foot area of coal tar-impacted surface material observed in the vicinity of the damaged pipe will be removed and disposed off-Site at a licensed disposal facility. A non-woven geotextile will be placed over the removal area and the area will be backfilled to match surrounding grade with engineered material designed to stabilize the slope. In addition, residual, hardened coal tar-like material located on the river embankment will be manually removed and containerized with the removed surface soil described above and transported off-Site to a licensed receiving facility for thermal treatment or disposal.

Site preparation will include limited clearing of vegetation along a path to the work area to accommodate construction equipment working to remove the pipe and impacted surface materials. The pipe will be cut and removed in manageable lengths (approximately 10 to 15 feet) to minimize the need for clearing. The path to the work area will be flagged in the field and will be selected to minimize tree removal.

Environmental Protection Measures and Monitoring

The following measures will be employed during construction to limit potential environmental impacts and monitor site conditions during the work:



- Maintain the existing oil snares in place during STRAP activities. Hay bales will be placed along the river on the north and south sides of the work area for approximately 30 feet on each side to limit sediment entering the river.
- GZA will monitor air quality for total VOCs and total particulates using hand-held instruments (photoionization detector and dust meter). Air quality measurements will be collected within the work zone for the purpose of evaluating worker health and safety as well as at the work zone perimeter during these activities. In addition, GZA's on-site personnel will qualitatively evaluate odors while the work is being performed. Routine qualitative evaluations will be made on an approximately hourly basis within the work zone, beyond the work zone and at the Site's western border.

In the event total VOCs are detected in excess of 2 ppm above background or total particulates are detected at greater than 150 ug/m³ at the work zone perimeter or unacceptable odors are detected, environmental control measures such as the application of water and/or covering of exposed residual materials with polyethylene sheeting will be employed. We do not anticipate any significant air quality or odor issues given the relatively short duration of this activity (as indicated below, the work described in this STRAP is anticipated to be completed within one week which includes one day to mobilize and set-up necessary erosion controls, two to three days to perform the work, and one day for demobilization), the manner in which the work will be performed, and the limited volume and areal extent of planned soil disturbance. As described previously, this is limited to an approximately 5 square foot area of coal tar-impacted surface material observed in the vicinity of the damaged pipe. The depth of removal over this 5 square foot area is anticipated to be less than 1 foot which will result in the generation of no more than 1-2 drums of impacted material. Upon removal, these materials will be immediately transferred into drums. Similarly, the above grade piping will be placed on and covered with polyethylene sheeting upon removal and prior to loading for off-Site disposal.

- All necessary permits will be obtained prior to the start of work. Based on the proposed work area, which is adjacent to the Seekonk River, an application package dated October 4, 2010 was submitted to the Rhode Island Coastal Resource Management Council (CRMC) for their review and approval. CRMC approval for this activity was received on October 6, 2010.
- Once the area of concern has been addressed, a *Short Term Response Action Report* will be prepared in accordance with Rule 6.09 of the Remediation Regulations. The report will summarize field activities performed.

Schedule

As described above, we have received approval for this activity from CRMC and would anticipate initiating these activities within two weeks of RIDEM approval. The following summarizes the anticipated implementation schedule. As described above, we anticipate that this work will be completed within one week. Please note, this schedule may require modification in the event of inclement weather.



Mobilization and Set-up of Erosion Controls	1 day
Pipe and Limited Soil Removal	2 to 3 days
Demobilization	1 day

We trust the information presented in this letter report meets your current needs. If you have any questions or need additional information, please feel free to contact either of the undersigned or Michele Leone from National Grid at 781-907-3651.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

A handwritten signature in blue ink, appearing to read 'Margaret S. Kilpatrick'.

Margaret S. Kilpatrick, P.E.
Senior Project Manager

A handwritten signature in blue ink, appearing to read 'John P. Hartley'.

John P. Hartley
Project Reviewer

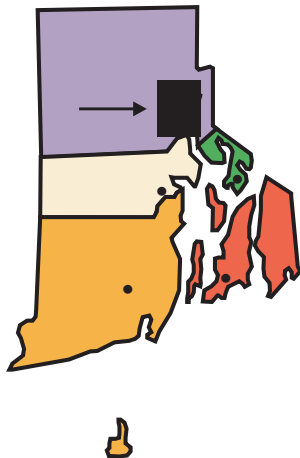
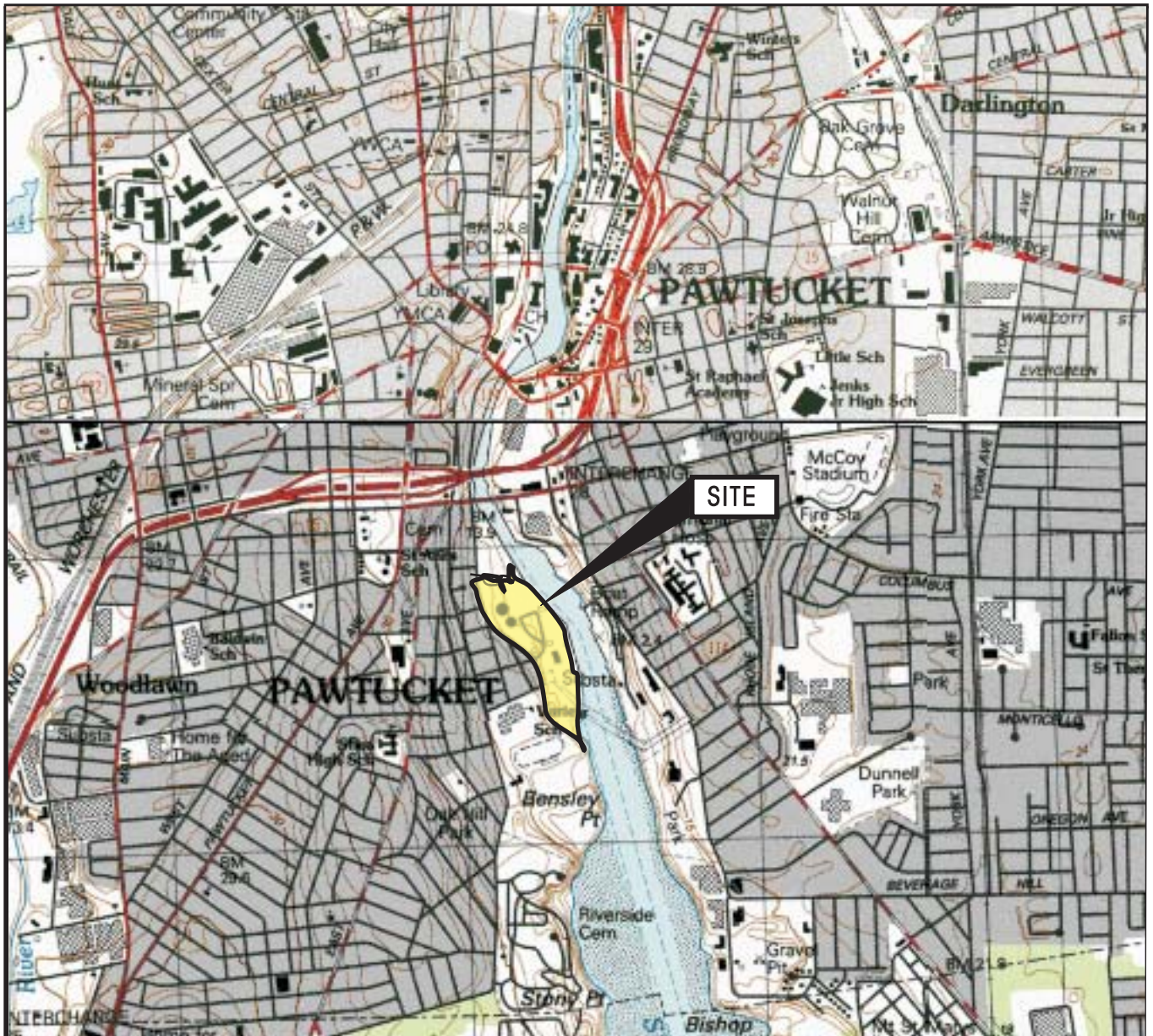
A handwritten signature in blue ink, appearing to read 'James J. Clark'.

for
James J. Clark, P.E.
Principal

MSK/JJC:tja

Attachments: Figures 1 and 2
Appendix A – Photographs

cc. Michele Leone, National Grid



FROM USGS PROVIDENCE, RI QUADRANGLE MAP
 (DIGITAL TOPOGRAPHIC MAPS PROVIDED BY MAPTECH, INC.)
 (CONTOUR ELEVATIONS ARE IN METERS ABOVE NGVD, AT 3 METER INTERVALS)

APPROXIMATE SCALE IN FEET



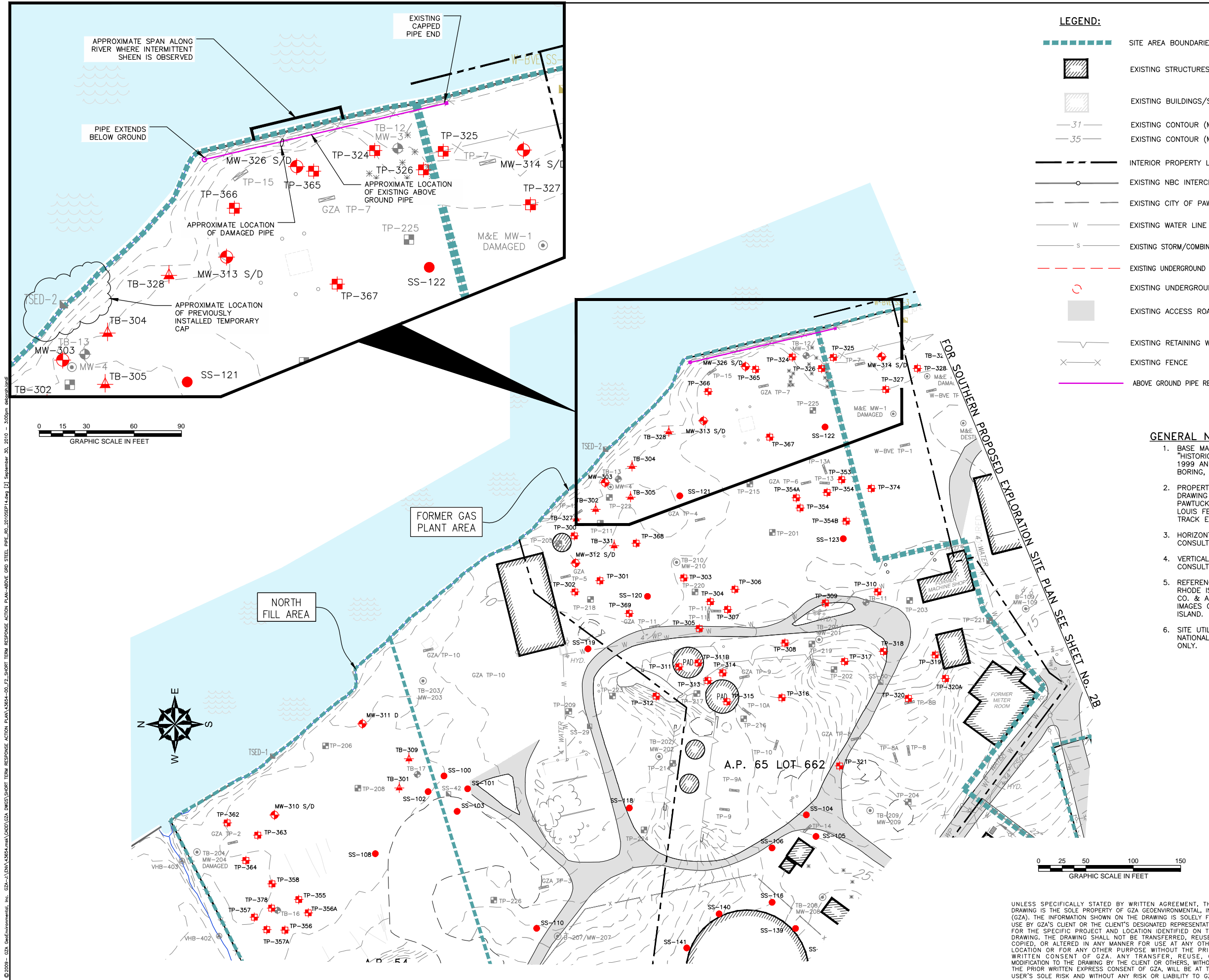
TIDEWATER FACILITY

PAWTUCKET
 RHODE ISLAND

LOCUS PLAN

JANUARY 2007

FIGURE NO. 1



LEGEND:

- SITE AREA BOUNDARIES
- EXISTING STRUCTURES ON-SITE
- EXISTING BUILDINGS/STRUCTURES OFF-SITE
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- INTERIOR PROPERTY LINE
- EXISTING NBC INTERCEPTOR SANITARY SEWER
- EXISTING CITY OF PAWTUCKET STORM DRAIN
- EXISTING WATER LINE
- EXISTING STORM/COMBINED SAN. SEWER OVERFLOW
- EXISTING UNDERGROUND ELECTRIC CABLE IN CONDUIT
- EXISTING UNDERGROUND ELECTRIC MH/STRUCTURE
- EXISTING ACCESS ROAD
- EXISTING RETAINING WALLS
- EXISTING FENCE
- ABOVE GROUND PIPE RELATED TO FORMER FACILITY OPERATIONS

- SAMPLE LEGEND**
- SS-9 ATLANTIC SURFACE SOIL SAMPLE LOCATION
 - TSED-6 ATLANTIC SEDIMENT SAMPLE LOCATION
 - W-BVE SS-3 WESTON/BLACKSTONE VALLEY ELECTRIC SEDIMENT SAMPLE LOCATION
 - TB-109/MW-109 MONITORING WELL/BORING (VHB) SURVEYED
 - TP-3A ATLANTIC TEST PIT LOCATION
 - W-BVE TP-1 WESTON/BLACKSTONE VALLEY ELECTRIC TEST PIT AND SOIL SAMPLE LOCATION
 - GZA TP-8 GZA/VALLEY GAS TEST PIT AND SOIL SAMPLE LOCATION
 - TB-15 ATLANTIC SOIL BORING LOCATION
 - MW-3 ATLANTIC MONITORING WELL LOCATION
 - M&E MW-1 METCALF & EDDY MONITORING WELL LOCATION
 - VHB-400 VHB BORING NON-SURVEYED
 - TP-204 VHB TEST PIT (2006)
 - GZ-TP-101 GZA TEST PIT (2009)
 - TP-300 GZA TEST BORING LOCATION (2010)
 - MW-320 S/D GZA MONITORING WELL LOCATION (2010)
 - TP-306 GZA TEST PIT LOCATION (2010)
 - SS-100 GZA SOIL SAMPLE LOCATION (2010)

GENERAL NOTES:

1. BASE MAP DEVELOPED FROM ELECTRONIC FILES FROM GEI CONSULTANTS, INC. ENTITLED "HISTORIC STRUCTURES AND SAMPLE LOCATIONS", ORIGINAL SCALE 1"=80', DATED JULY 1999 AND ELECTRONIC FILES FROM VANASSE HANGEN BRUSTLIN, INC. ENTITLED "SOIL BORING, TEST PITS AND MONITOR WELL LOCATION", SCALE: 1"=60'.
2. PROPERTY LINES AND LOT INFORMATION ESTABLISHED FROM INFORMATION PROVIDED ON A DRAWING ENTITLED "PERIMETER SURVEY OF LAND AT THE TIDEWATER FORMER MGP SITE IN PAWTUCKET, RHODE ISLAND FOR ATLANTIC ENVIRONMENTAL SERVICES INC." DEVELOPED BY LOUIS FEDERICI AND ASSOCIATES AND AN AUTO CAD FILE ENTITLED "MAX READ FIELD TRACK EXPANSION 2007" PROVIDED BY THE CITY OF PAWTUCKET.
3. HORIZONTAL DATUM IS BASED ON NAD 1983 FROM BASE MAPPING PROVIDED BY GEI CONSULTINGS, INC.
4. VERTICAL DATUM IS BASED ON NGVD 1929 (MSL) FROM BASE MAPPING PROVIDED BY GEI CONSULTINGS, INC.
5. REFERENCE SEWER DATA FROM SCANNED IMAGE PROVIDED BY THE CITY OF PAWTUCKET, RHODE ISLAND, ENTITLED "STUDY OF SEWERAGE FACILITIES" BY WATERMAN ENGINEERING CO. & ANDERSON NICHOLS CO. DATED NOV. 1975, ORIGINAL SCALE 1"=400' & SCANNED IMAGES OF HISTORIC PLAN & PROFILE DRAWINGS PROVIDE CITY OF PAWTUCKET, RHODE ISLAND.
6. SITE UTILITIES TAKEN FROM 1984 SANBORN MAP AND HISTORIC FIGURES PROVIDED BY NATIONAL GRID. ALL UTILITY LOCATIONS ARE APPROXIMATE AND SHOWN FOR REFERENCE ONLY.

NO.	ISSUE/DESCRIPTION	BY	DATE
FORMER TIDEWATER FACILITY			
PAWTUCKET, RHODE ISLAND			
SHORT TERM RESPONSE ACTION PLAN ABOVE GROUND STEEL PIPE			
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists 530 BROADWAY PROVIDENCE, RHODE ISLAND 02909 (401) 421-4140		PREPARED FOR: NATIONAL GRID	
PROJ MGR: MSK	REVIEWED BY: MSK	CHECKED BY: MSK	FIGURE
DESIGNED BY: SMA	DRAWN BY: CRD	SCALE: 1"=50"	2
DATE: JULY 2010	PROJECT NO.: 43654.00	REVISION NO.:	
			SHEET NO. 2 OF 8

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G:\J\ENV\43654\mk\CADD\GZA DWGS\SHORT TERM RESPONSE ACTION PLAN\43654-00_F2_SHORT TERM RESPONSE ACTION PLAN-ABOVE GRD STEEL PIPE_R0_2010SEP14.dwg [2] September 30, 2010 - 3:00pm deborah.landl

APPENDIX A
PHOTOGRAPHS

FORMER TIDEWATER MANUFACTURED GAS PLANT PAWTUCKET, RHODE ISLAND

Photo 1: Shoreline area along FGPA where intermittent sheen is observed.



Photo 2: Broken pipe along riverbank. Pipe leak of apparent coal tar-like material.



**FORMER TIDEWATER MANUFACTURED GAS PLANT
PAWTUCKET, RHODE ISLAND**

Photo 3: Close-up of damaged pipe and associated pipe leak.



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