



May 17, 2022

Mr. Matthew DeStefano Rhode Island Department of Environmental Management Office of Land Revitalization and Sustainable Materials Management 235 Promenade Street Providence, Rhode Island 02908

RE: Remedial Action Work Plan
William H. Morley Memorial Field
94 Moshassuck Street
(Plat 62A, Lots 291 and 309)
Pawtucket, Rhode Island 02860

Dear Mr. DeStefano:

On behalf of Blackstone Distribution Center LLC (Blackstone), Alliance Environmental Group / An F.W. Webb Company (F.W. Webb/AEG) has prepared this Remedial Action Work Plan (RAWP) for the above-referenced location (the "Site") in accordance with Rhode Island Department of Environmental Management (RIDEM) Policy entitled EXPRESS (Expedited Policy for Remediation of Environmental Simple Sites), Policy Memo 2013-01, as revised on February 20, 2019, which is referred to herein as the "Expedited Policy".

Payment of the \$1,000 RAWP filing fee was made to the State of Rhode Island General Treasurer using the RIDEM Remedial Action Approval Fee Application Form. Payment was made with F.W. Webb Company check number 001633556, dated May 10, 2022 and was delivered to RIDEM concurrently with this report.

A Site Location Map and Site Map are provided as **Figures 1** and **2**, respectively.

#### **Site Description**

Assessor's Designation	Plat 62A, Lots 291 and 309								
Site Ownership	According to the City of Pawtucket property cards, the owner of the two								
Information	Site parcels is the City of Pawtucket. Available information indicates that								
	the Site has been owned by the City since at least the early 1900s.								
Site Area	5.17 acres (both lots combined)								

Zoning	PO: Public Open (changed from MO in 1994)
Groundwater	Groundwater beneath the Site is classified by RIDEM as GB, which means
Classification	that it may not be suitable for drinking water use without treatment due
	to known or presumed degradation. The closest mapped GA area is
	located approximately 1.25 miles northwest of the Site.
<b>Public Water Supplies and</b>	The potable water source for the Site is the Pawtucket Water Supply
Local Source(s)	Board. These resources consist of groundwater and surface water within
	the Abbott Run watershed, a tributary of the Blackstone River. No other
	public water supplies are known to be located within one mile of the Site.
Surface Water	No surface water bodies are located on-Site. The closest mapped surface
	water body is the Moshassuck River, which abuts the Site to the west.
	The Moshassuck River is classified by RIDEM as a Class B freshwater
	stream, with designated uses of primary and secondary contact
	recreation and fish and wildlife habitat. The river flows in a generally
	southerly direction, and discharges into the Providence River and
	Narragansett Bay.
Flooding Conditions	According to Federal Emergency Management Agency (FEMA) mapping,
	the Site is located within a Zone X, which is defined as an area of minimal
	flood hazard located outside of the 500-year floodplain.
<b>Environmentally Sensitive</b>	No environmentally sensitive areas are known to be located within 500
Areas Within 500 Feet	feet of the Site based on available information including RIDEM
	environmental resource mapping tools.
Evaluation of Impacts to	Based on the analytical data collected to date, the release conditions
Off-Site Properties	identified at the Site are not expected to impact any off-Site areas utilized
	for residential or commercial/industrial purposes.

The approximate center of the Site is located at 41° 51′ 31.6″ north latitude and 71° 24′ 9.9″ west longitude. The Universal TransMercator (UTM) Zone 19 coordinates are 4636889 meters north and 300564 meters east. The Site is currently a public baseball field named William H. Morley Memorial Field. In the early 1900s, the Site was utilized as the City of Pawtucket Intermittent Downward Filtration Plant for sewage processing purposes. Use of the Site as baseball field looks to have begun in the 1970s or early 1980s. The property is reportedly no longer utilized for organized recreational activities, and is currently vacant.

A 645 square-foot building of masonry construction with a shingled roof, built on a concrete slab, and containing a small restroom, is located along the northern edge of the baseball field area. The building was previously used as a refreshment stand for the baseball field, and is no longer utilized. Known utilities at the Site are limited to water and sanitary sewer services for the former refreshment stand building, baseball field irrigation lines, a municipal sewer line in the eastern and northeastern portions of the property, and underground electrical conduits for the baseball field lighting. Stormwater catch basins are located along the northern edge of the parking area in the northern portion of the Site.



The Site is bordered to the north by Moshassuck Street, across which is a church (Tabernaculo El Nuevo Pacto). The Site is bordered to the south by Grenville Street, across which is a commercial shopping plaza containing several retail stores and other businesses. Directly to the east of the Site is a vacant property previously occupied by HP Fabrics – Microfibres, which is in the process of being redeveloped into a warehouse/distribution facility by Blackstone. To the west of the Site is the Moshassuck River, across which is Interstate 95.

### **Site History and Regulatory Status**

In February 2022, Blackstone provided F.W. Webb/AEG with the following documents associated with the Site:

- Phase I Environmental Site Assessment, prepared by Langan Engineering & Environmental Services, Inc. (Langan) of Boston, Massachusetts, dated May 24, 2021.
- Memorandum Environmental Site Investigation Summary, prepared by Langan, dated August 6, 2021.

The above reports were prepared for the collective parcels of land located at 1 Moshassuck Street (former HP Fabrics – Microfibres) and the subject Site at 94 Moshassuck Street. The Phase I ESA identified several RECs in relation to 1 Moshassuck Street and the surrounding properties. The Environmental Site Investigation focused on the installation and sampling of soil gas monitoring points, including three points located on-Site or along the eastern Site boundary (SG-1 through SG-4). RIDEM has not promulgated any soil gas standards for vapor intrusion evaluations. However, the following constituents were detected in one or more soil gas points the Site at levels above applicable United States Environmental Protection Agency (USEPA) and/or Massachusetts Department of Environmental Protection (MassDEP) criteria:

- Benzene was detected at concentrations above the USEPA Commercial/Industrial Vapor Intrusion Screening Level (VISL) in the samples collected from SG-2 and SG-4.
- Vinyl chloride was detected at a concentration above the USEPA Commercial/ Industrial VISL and the MassDEP Commercial/Industrial screening value in the sample collected from SG-2.

It is also noted that hydrogen sulfide, measured using field instrumentation, was detected at each of the four Site-related soil gas points at concentrations ranging from 2.0 to 17.0 parts per million (ppm). Methane was also detected using field instrumentation at each of the four Site-related soil gas points at levels ranging from 3.7 to 34.0 percent by volume (%).

A copy of the Memorandum – Environmental Site Investigation Summary, without laboratory attachments, was provided as an appendix to the Site Investigation Report (SIR) being submitted to RIDEM concurrently with this report.



On April 11, 2022, on behalf of Blackstone, F.W. Webb/AEG completed a Phase I ESA and Limited Subsurface Investigation (LSI) for the Site. The report discussed the advancement of five soil borings at the Site on March 14 and 15, 2022 (GZ-01 through GZ-05), each of which were completed as groundwater monitoring wells. The wells were installed by G&M Subsurface LLC (G&M) of Dighton, Massachusetts for geotechnical design purposes, and the drilling activities were supervised by representatives of GZA GeoEnvironmental, Inc. (GZA) of Providence, Rhode Island as well as F.W. Webb/AEG.

The boreholes were advanced using a Geoprobe with a split-spoon sampler. During drilling, soil samples were collected at regular intervals and screened for organic vapors using a photoionization detector (PID) equipped with a 10.6 electron-volt lamp and calibrated to an isobutylene response. The PID readings ranged from below the instrument detection limit of 0.5 parts per million by volume (ppmv) to a maximum detected reading of 3.1 ppmv during the installation of monitoring well GZ-02 at approximately 12-14 feet below ground surface (bgs).

The subsurface lithology encountered at the Site consisted primarily of fine- to medium-grained sand with varying amounts of silt and gravel. At each of the drilling locations, evidence of fill material including brick fragments, concrete and rubber debris and/or suspected refuse was identified at intermittent intervals between approximately six and 14 feet bgs. F.W. Webb/AEG collected soil samples at each location, and submitted the samples to ESS Laboratory (ESS) of Cranston, Rhode Island for analysis of volatile organic compounds (VOCs) via USEPA Method 8260, polycyclic aromatic hydrocarbons (PAHs) via USEPA Method 8270D, total petroleum hydrocarbons (TPH) via USEPA Method 8100M, and the eight Resource Conservation and Recovery Act (RCRA) metals.

Based on the ESS analytical results, the following exceedances of applicable or potentially applicable RIDEM criteria were identified:

- GZ-02 (0-3 feet bgs) northeastern portion of the Site
  - Lead was detected in soil at a concentration above the Residential Direct Exposure Criteria.
  - The PAHs benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene were detected in soil at concentrations above the Residential Direct Exposure Criteria.
  - The PAH benzo(a)pyrene was detected in soil at a concentration above the Residential Direct Exposure Criteria as well as the Commercial/Industrial Direct Exposure Criteria.
- GZ-03 (0-3 feet bgs) central portion of the Site
  - The PAHs benzo(a)pyrene and chrysene were detected in soil at concentrations above the Residential Direct Exposure Criteria.

On April 6, 2022, F.W. Webb/AEG advanced three additional soil borings at the Site using a hand auger. Since the exceedances at the GZ-02 and GZ-03 drilling locations were both detected in surficial samples (0-3 feet bgs), F.W. Webb/AEG advanced the borings to



depths of approximately two feet bgs at the GZ-01, GZ-04, and GZ-05 locations to determine if similar surficial soil impacts were present in these areas. Soil samples were collected from approximately 0-2 feet bgs at each boring (GZ-01A, GZ-04A, and GZ-05A), and were submitted to ESS for analysis of lead and PAHs. Based on the results, the lead and PAH concentrations were below applicable RIDEM soil criteria in each of the three samples.

F.W. Webb/AEG conducted groundwater sampling at the Site on March 16 and April 29, 2022. During these events, each of the five monitoring wells (GZ-01 through GZ-05) were gauged using a Solinst® interface probe to determine if non-aqueous phase liquid (NAPL) was present and to measure the depth to groundwater. NAPL was not detected in any of the wells during either event. During the March and April 2022 sampling events, one well (GZ-03) and three wells (GZ-01, GZ-03, and GZ-05), respectively, were purged of at least three well volumes and sampled using disposable bailers. The groundwater samples were submitted to ESS for analysis of VOCs via USEPA Method 8260B. Based on the analytical results, no VOCs were detected in any of the samples at concentrations above applicable RIDEM GB Groundwater Objectives.

A summary of soil quality data for the Site is provided in **Table 1**. Monitoring well gauging data and groundwater analytical results are summarized in **Table 2**. The soil and groundwater analytical reports for the sampling conducted by F.W. Webb/AEG in March and April 2022 were provided as appendices to the SIR being submitted concurrently with this report.

## SECTION 1.10.1 - REMEDIAL ACTION WORK PLAN

The information in the following sections describes the proposed implementation of the selected remedial alternatives for the Site.

#### **SECTION 1.10.2 – REMEDIAL OBJECTIVES**

The remedial objective is to address the exceedances of lead and PAHs detected in soil at the GZ-02 and GZ-03 soil boring/monitoring well locations. Since groundwater exceedances were not identified at the Site, groundwater remediation is not required.

#### Section 1.10.3 – Proposed Remedy

As further detailed in **Section 1.10.10**, the proposed remedy involves the use of engineering and institutional controls. The remedy will include the encapsulation of shallow impacted soils and filing of an ELUR, to be implemented to address the soil exceedances detected at the GZ-02 and GZ-03 locations. The ELUR will be recorded to help ensure that the capped surfaces are maintained, and that future activities which may require disturbance of the cap will be conducted in accordance with a Site-specific Soil Management Plan (SMP).



#### Section 1.10.4 – Remediation of Impacted Groundwater

As indicated above, no target analytes were detected in groundwater at concentrations above the associated GB Groundwater Objectives, where established for the VOCs analyzed. Therefore, groundwater remediation is not planned as part of the remedial actions at the Site.

#### Section 1.10.5 – Limited Design Investigation

A Limited Design Investigation has not been requested, and is not required in order to implement the selected remedy for the Site.

#### **SECTION 1.10.6 – POINTS OF COMPLIANCE**

The RIDEM Remediation Regulations define points of compliance for soil as points where the established soil objectives shall be attained. For this Site, F.W. Webb/AEG has defined these points to be the locations of soil borings/monitoring wells GZ-02 and GZ-03 and the immediately surrounding areas.

#### Section 1.10.7 – Proposed Schedule for Remediation

Completion of the proposed RAWP activities is expected to occur during summer and autumn 2022, after which a RAWP Completion Report will be filed with RIDEM. A draft ELUR and Post-Construction SMP will be submitted to RIDEM for review prior to, or concurrently with, the RAWP Completion Report.

Upon RIDEM approval, the final ELUR and Post-Construction SMP will be recorded at the Land Evidence Records for the City of Pawtucket. It is anticipated that the ELUR and Post-Construction SMP will be filed with the City of Pawtucket, and a stamped copy submitted to RIDEM, by March 31, 2023.

#### Section 1.10.8 – Contractors and/or Consultants

Qualified and knowledgeable personnel from F.W. Webb/AEG will supervise the implementation of the proposed remedial action. F.W. Webb/AEG contact personnel include the following:

- Matthew DiPirro: Operations Manager/Principal Scientist 832 Dyer Avenue, Cranston, Rhode Island 02920 Phone: (401) 732-7600, Email: Matt.Dipirro@fwwebb.com
- Joel Walcott, PE: Senior Principal Engineer
   832 Dyer Avenue, Cranston, Rhode Island 02920
   Phone: (401) 732-7600, Email: Joel.Walcott@fwwebb.com

The general contractor selected by Blackstone for the redevelopment activities at 1 and 94 Moshassuck Street, including installation of the proposed soil caps, is Macura



Excavating of North Grafton, Massachusetts. The contact information for Macura Excavating is as follows:

Michael Macura: President

Macura Excavating

22 Donahue Lane, North Grafton, Massachusetts 01536 Phone: (508) 284-8244, Email: Mike@macuraexcavating.com

It is not anticipated that confirmatory laboratory analysis will be required, as soil excavation is not planned as part of the proposed remedy. However, if laboratory analysis is needed, the designated laboratory will be ESS Laboratory of Cranston, Rhode Island. The contact information for ESS Laboratory is as follows:

Marc Levesque: Account Executive
 ESS Laboratory, a Division of Thielsch Engineering
 185 Frances Avenue, Cranston, Rhode Island 02910
 Phone: (401) 461-7181, Email: MLevesque@thielsch.com

#### SECTION 1.10.9 - SITE PLAN

A Site Plan showing current conditions on the property is provided as **Figure 2**. The Site Plan depicts the locations that will be addressed to achieve the remedial goals for the identified soil impacts.

#### Section 1.10.10 — Design Standards and Technical Specifications

The proposed remedial strategy (engineering and institutional controls) was outlined above in **Section 1.10.3**. Further technical specifications are provided in this section.

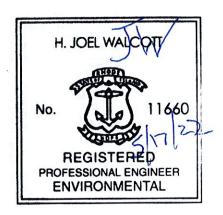
As mentioned above, the Site is proposed for use as a paved parking area for the warehouse/distribution facility that is being constructed at the easterly-abutting property located at 1 Moshassuck Street (RIDEM File No. SR-26-2013). Given the substantial downhill slope between Main Street (beyond 1 Moshassuck Street to the east) and the Moshassuck River, Blackstone's redevelopment plans include raising the surface elevation at the Site and the western portion of 1 Moshassuck Street to reduce the east/west slope across the new planned facility. As such, Blackstone is proposing to reuse excavated soils from 1 Moshassuck Street to help grade the Site. It is noted that no significantly impacted soils, based on visual/olfactory evidence during construction and the areas of known petroleum contamination at 1 Moshassuck Street, are proposed for reuse at the Site. The final Site surfaces in the areas of GZ-02 and GZ-03 will meet the specifications for an RIDEM-approved engineered cap in accordance with the Expedited Policy.

Given the planned Site usage, it is expected that the engineering controls throughout a majority of the property will consist of a minimum of four inches of asphalt or concrete pavement underlain by at least six inches of clean sub-base material. If any landscaped areas are to be installed in the areas of GZ-02 and/or GZ-03, these areas will be capped



with two feet of clean fill material or one foot of clean fill material underlain by a geotextile liner.

A RIDEM-approved ELUR will also be filed for the entire Site property. The ELUR will require that the capped surfaces be maintained, and that any future activities which may require disturbance of the caps be conducted in accordance with a Post-Construction SMP. The ELUR will also prohibit redevelopment of the Site for residential purposes, as well as the use of groundwater at the Site as a source of potable water. Once the ELUR is recorded, Blackstone and any future Site owners will be responsible for performance of the annual compliance inspections and associated certification submittals.



#### SECTION 1.10.11 - SET-UP PLANS

Since the remedial activities will be conducted concurrently with the redevelopment of 1 and 94 Moshassuck Street, the construction General Contractor (Macura Excavating) will be responsible for the establishment appropriate equipment staging areas and stockpiling locations (for incoming materials) at the Site. Macura Excavating and their authorized subcontractors will prepare project setup, work area layout and/or traffic management plans as required by applicable municipal and state agencies, and as necessary to ensure safe working conditions.

The equipment staging and stockpile areas will be isolated using traffic cones, flags and/or other physical barriers as needed to prevent any vehicles entering or exiting the Site from coming into contact with the equipment and materials being stored in these areas.

No other pre-operational staging or construction equipment requirements are expected to be needed to facilitate the implementation of the selected remedial actions at the Site.

#### Section 1.10.12 - Effluent Disposal

As discussed above, it is not anticipated that soils will need to be removed from the Site to facilitate the installation of the engineered controls. However, if required, soils excavated at the Site shall be placed on and covered with minimum six-mil polyethylene sheeting at all times. In any cases where soils are to be stockpiled for an extended period



of time (i.e. greater than one week), daily inspection of the stockpiles shall be made to ensure that any required controls are maintained and if needed, repaired.

Any soils to be disposed off-Site will be thoroughly characterized prior to transportation to a facility licensed to accept such material. Representative soil samples will be collected to ensure that the criteria for the destination facility are met, and advance approval from the facility will be obtained. All required soil testing will be completed by ESS or another Rhode Island-certified laboratory in accordance with applicable guidelines.

Copies of all soil disposal documentation (if applicable) will be provided in RAWP Progress Reports or the RAWP Completion Report to be submitted to RIDEM.

#### Section 1.10.13 - Contingency Plan

All Site construction personnel will be briefed on the nature of the Site contaminants and the required Site safety and/or control measures. Additionally, a Site-specific Health & Safety Plan (HASP) will be kept on-Site during the implementation of the proposed remedial actions. The HASP will outline emergency procedures, contact information, and directions to the designated medical facility to be utilized if needed.

If an emergency situation occurs during the completion of the Site work, communication with the following parties shall be established as soon as is it is safe to do so:

- Joel Walcott, PE: Senior Principal Engineer, F.W. Webb/AEG 832 Dyer Avenue, Cranston, Rhode Island 02888 Phone: (401) 732-7600, Email: Joel.Walcott@fwwebb.com
- Jordan Karlik: Principal, Blackstone Distribution Center LLC
   2 Seaview Boulevard, Suite #203, Port Washington, New York 11576
   Phone: (516) 622-7500, Email: Jordan@jkequities.com

Should any worker become injured or develop unusual symptoms while working on-Site, he/she shall be immediately transported to the following emergency care facility:

The Miriam Hospital (401) 793-2500 164 Summit Avenue Providence, Rhode Island 02906

### **Directions to The Miriam Hospital**

1)	Head east on Moshassuck or Grenville Street toward Main Street.	~0.1 miles
2)	Turn right onto Main Street.	0.1 miles
3)	Merge onto US Route 1 / Pawtucket Avenue.	0.2 miles
4)	Turn left onto 10 <sup>th</sup> Street.	0.1 miles
5)	Turn right at the first cross street onto Highland Avenue.	0.2 miles
6)	Turn left onto 5 <sup>th</sup> Street.	375 feet
7)	The Miriam Hospital will be on the left.	Arrived



#### Section 1.10.14 - Operating Log

During the completion of any fieldwork associated with the proposed remedy, daily records will be kept and pertinent documentation will be provided in the RAWP Completion Report. This information will be recorded in appropriate, weather-resistant environmental field/log books. At a minimum, F.W. Webb/AEG will record the dates and times of all remedial activities, records of any soil screening and sampling conducted, and descriptions of any instances during which implementation of the Continency Plan was required.

#### **SECTION 1.10.15 – SECURITY PROCEDURES**

Security restrictions consistent with Occupational Safety and Health Administration (OSHA) regulations will be implemented during the performance of any fieldwork associated with the proposed remedy. Any additional restrictions or security procedures, if determined to be warranted during performance of the remedial activities, will be selected and implemented by Blackstone and/or Macura Excavating.

#### Section 1.10.16 – Shut-Down, Closure and Post-Closure Requirements

No shut-down or Site closure requirements are anticipated to be required to achieve the established points of compliance. A RAWP Completion Report will be submitted to describe the implementation of the remedial actions. The monitoring wells recently installed at the Site will either continue to be maintained by Blackstone, or will be decommissioned during redevelopment in accordance with applicable RIDEM guidance.

Following recording of the ELUR and Post-Construction SMP, post-closure requirements will be limited to annual Site inspections and compliance certifications to ensure that the conditions of the ELUR are being upheld. These activities will be managed by Blackstone and any future owners of the Site property.

#### SECTION 1.10.17 – INSTITUTIONAL CONTROLS AND NOTICES

As discussed above, as part of the remedial action, an ELUR will be filed for the entire Site to institutionally control future uses of the property and to outline regulatory obligations. The ELUR will specify the conditions to be upheld at the Site, including the proper maintenance of all capped surfaces. The ELUR will also prohibit redevelopment of the Site for residential purposes, as well as the use of groundwater at the Site as a source of potable water.

With regard to notices, a draft public involvement letter and Site-specific fact sheet were prepared, and are included as part of the Expedited Policy submittal for the Site. Since the Site is located in an Environmental Justice Area, the public involvement letter and fact sheet were prepared in both English and Spanish. These documents provide brief descriptions of the Site investigation activities and proposed remedial actions, and outlined the opportunities for public review and comment. Once approved by RIDEM, the



public involvement letter and fact sheet will be mailed to all abutting property owners, easement holders, and the municipality.

#### Section 1.10.18 – Compliance Determination

When the remedial activities have been completed, a RAWP Completion Report will be submitted to RIDEM. A draft ELUR and Post-Construction SMP will be submitted to RIDEM for review prior to, or concurrently with, the RAWP Completion Report. Upon approval, the final ELUR and Post-Construction SMP will be recorded in the Land Evidence Records for the City of Pawtucket. A stamped/certified copy of this filing will be forwarded to RIDEM within 15 days of being recorded.

Once the ELUR is recorded, Blackstone and any future property owners will be responsible for completing the annual compliance inspections and associated RIDEM certification submittals to ensure that the ELUR conditions are being upheld at the Site, including the appropriate maintenance of all capped surfaces.

Please contact the undersigned of F.W. Webb/AEG any time at (401) 732-7600 if you have questions or comments regarding this submittal.

Very truly yours,

Alliance Environmental Group / An F.W. Webb Company

Joel Walcott, PE

Senior Principal Engineer

Rhode Island P.E. #11660

# Attachments:

Figure 1 Site Location Map

Figure 2 Site Plan

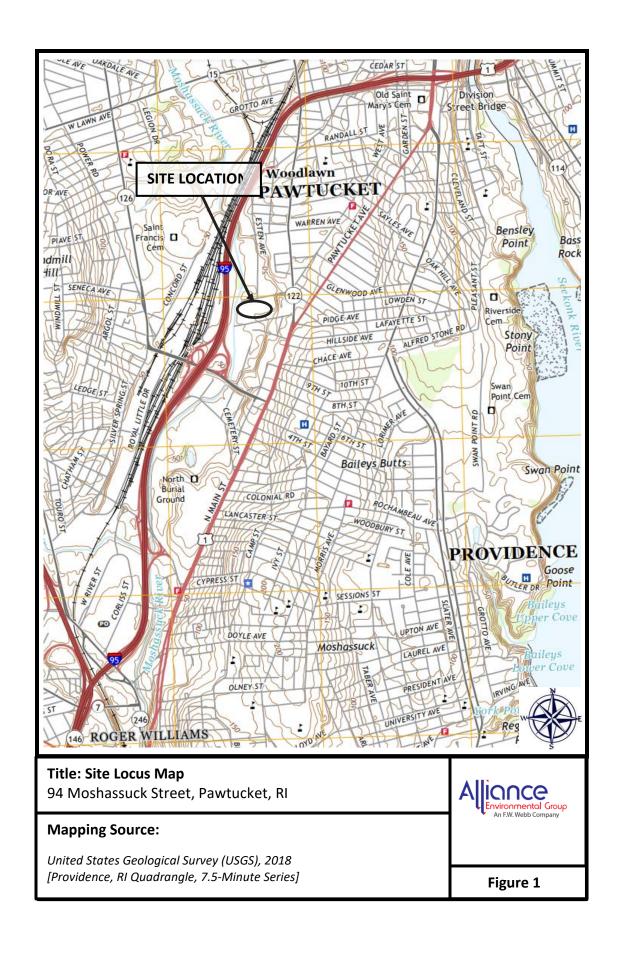
Table 1 Summary of Soil Analytical Data

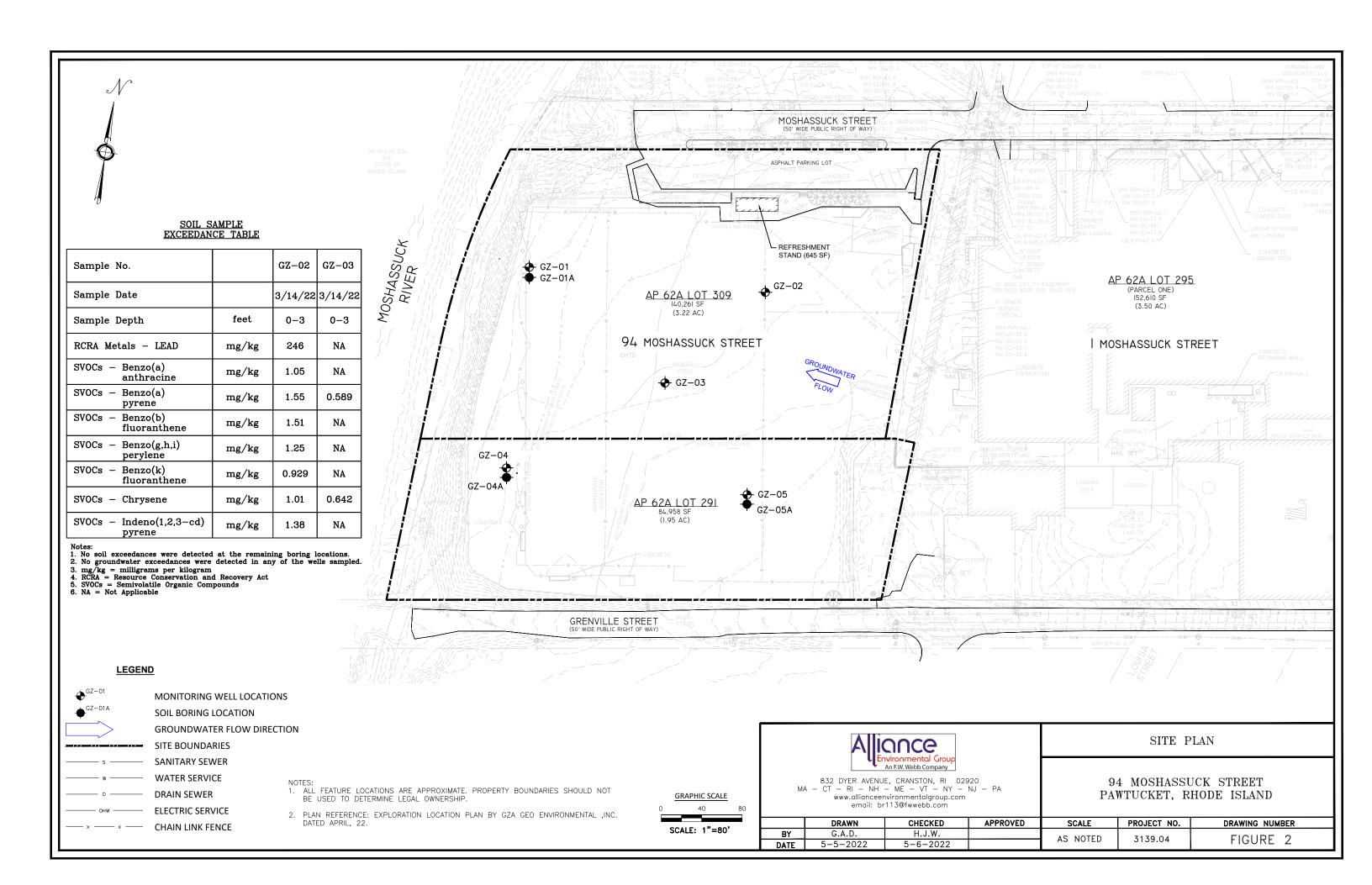
Table 2 Summary of Groundwater Analytical Data



# **FIGURES**







# **TABLES**





# Table 1 Summary of Soil Analytical Data 94 Moshassuck Street Pawtucket, Rhode Island 02860

Soil Boring/	Resource Conservation and Recovry Act (RCRA) Metals											Volatile Organic Compounds (VOCs)											
Monitoring	Sample		PID	Percent										Chloro-	1,4-Dichloro-	Ethyl-	Isopropyl-	Methylene	Naph-	n-butyl-	Tetrachloro-	-	1,2,4-Trimethyl-
Well	Depth	Sample	Reading	Solids	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	Benzene	benzene	benzene	benzene	benzene	Chloride	thalene	benzene	ethylene	Toluene	benzene
Identification	(feet)	Date	(ppmv)	(%)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
	RIDEM	Residential Dir	ect Exposure	Criteria	7.0	5,500	39	390	150	23	390	200	2.5	210	NS	71	27	NS	54	NS	12	190	NS
RIDEN	1 Commercia	l/Industrial Dir	ect Exposure	Criteria	7.0	10,000	1,000	10,000	500	610	10,000	10,000	200	10,000	NS	10,000	10,000	NS	10,000	NS	110	10,000	NS
		RIDEM GE	3 Leachability	Criteria	NS	NS	NS	NS	NS	NS	NS	NS	4.3	100	NS	62	NS	NS	NS	NS	4.2	54	NS
GZ-01	14-18	3/15/2022	<0.5	82	<1.75	76.6	1.27	14.2	116	0.176	<3.50	<0.70	0.183	0.138	<0.187	0.0206	0.0262	0.0486	0.0523	0.0355	<0.187	0.0972	0.0430
GZ-01A	0-2	4/6/2022	<0.5	91					20.4														
GZ-02	0-3	3/14/2022	<0.5	90	4.71	72.9	<0.39	12.3	246	0.066	<3.92	<1.18	<0.166	<0.166	<0.166	<0.166	<0.166	<0.333	0.0449	<0.166	<0.166	<0.166	0.0200
GZ-03	0-3	3/14/2022	<0.5	90	3.30	13.4	<0.36	7.38	28.4	<0.019	<3.60	<0.72	<0.161	<0.161	<0.161	<0.161	<0.161	<0.323	<0.161	<0.161	0.0355	<0.161	<0.161
GZ-03	12-17	3/14/2022	<0.5	86	<1.83	31.7	<0.37	5.66	31.4	0.049	<3.67	<0.37	<0.187	<0.187	0.0318	<0.187	<0.187	<0.374	<0.187	<0.187	<0.187	<0.187	<0.187
GZ-04	14-18	3/15/2022	<0.5	81	1.41	9.29	<0.25	4.22	7.57	0.073	<2.45	<0.49	<0.198	<0.198	<0.198	<0.198	<0.198	0.0455	<0.198	<0.198	0.0435	<0.198	<0.198
GZ-04A	0-2	4/6/2022	<0.5	91					5.52														
GZ-05	16-18	3/14/2022	<0.5	80	<1.22	10.3	<0.24	4.12	10.6	0.45	<2.45	<0.24	<0.216	<0.216	<0.216	<0.216	<0.216	<0.432	<0.216	<0.216	<0.216	<0.216	<0.216
GZ-05A	0-2	4/6/2022	<0.5	88					47.4														

Notes:

mg/kg = milligrams per kilogram.

PID = photoionization detector.

ppmv = parts per-million by volume.

RIDEM = Rhode Island Department of Environmental Management.

-- = not analyzed or sample not collected for this parameter.

NS = there is no standard established by RIDEM for this constituent.

**Bold** = detected concentration exceeds the RIDEM Residential Direct Exposure Criteria.

<u>Underlined</u> = detected concentration exceeds the RIDEM Commercial/Industrial Direct Exposure Criteria.

Shaded = detected concentration exceeds the RIDEM GB Leachability Criteria.



# Table 1 Summary of Soil Analytical Data 94 Moshassuck Street Pawtucket, Rhode Island 02860

Soil Boring/						Semi-Volatile Organic Compounds (SVOCs)													Total	Total			
Monitoring	Sample		PID	Percent	Acenaph-	Acenaph-	Anthra-	Benzo(a)	Benzo(a)	Benzo(b)	Benzo(g,h,i)	Benzo(k)		Dibenzo(a,h)	Fluor-		Indeno(1,2,3-	2-Methyl-	Naph-	Phenan-		Petroleum	Polychlorinated
Well	Depth	Sample	Reading	Solids	thene	thylene	cene	anthracene	pyrene	fluoranthene	perylene	fluoranthene	Chrysene	anthracene	anthene	Fluorene	cd)pyrene	naphthalene	thalene	threne	Pyrene	Hydrocarbons	
Identification	(feet)	Date	(ppmv)	(%)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
	RIDEM	Residential Dir	ect Exposure	e Criteria	43	23	35	0.9	0.4	0.9	0.8	0.9	0.4	0.4	20	28	0.9	123	54	40	13	500	10
RIDEN	l Commercia	I/Industrial Dir	ect Exposure	e Criteria	10,000	10,000	10,000	7.8	0.8	7.8	10,000	78	780	0.8	10,000	10,000	78	10,000	10,000	10,000	10,000	2,500	10
		RIDEM GE	3 Leachability	y Criteria	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2,500	10
GZ-01	14-18	3/15/2022	<0.5	82	<0.409	<0.409	<0.409	<0.409	<0.205	<0.409	<0.409	<0.409	<0.205	<0.205	<0.409	<0.409	<0.409	<0.409	<0.409	<0.409	<0.409	214	1.4
GZ-01A	0-2	4/6/2022	<0.5	91	<0.365	<0.365	<0.365	<0.365	<0.183	<0.365	<0.365	<0.365	<0.183	<0.183	<0.365	<0.365	<0.365	<0.365	<0.365	<0.365	<0.365		
GZ-02	0-3	3/14/2022	<0.5	90	<0.727	<0.727	<0.727	1.05	<u>1.55</u>	1.51	1.25	0.929	1.01	<0.365	1.79	<0.727	1.38	<0.727	<0.727	1.11	1.75	170	0.6
GZ-03	0-3	3/14/2022	<0.5	90	<0.365	<0.365	0.539	0.705	0.589	0.500	<0.365	0.388	0.642	<0.183	1.73	<0.365	0.370	<0.365	<0.365	1.88	1.59	<41.5	0.5
GZ-03	12-17	3/14/2022	<0.5	86	<0.390	<0.390	<0.390	<0.390	<0.195	<0.390	<0.390	<0.390	<0.195	<0.195	<0.390	<0.390	<0.390	<0.390	<0.390	<0.390	<0.390	<43.2	<0.27
GZ-04	14-18	3/15/2022	<0.5	81	<0.420	<0.420	<0.420	<0.420	<0.211	<0.420	<0.420	<0.420	<0.211	<0.211	<0.420	<0.420	<0.420	<0.420	<0.420	<0.420	<0.420	<47.0	<0.54
GZ-04A	0-2	4/6/2022	<0.5	91	<0.375	<0.375	<0.375	<0.375	<0.188	<0.375	<0.375	<0.375	<0.188	<0.188	<0.375	<0.375	<0.375	<0.375	<0.375	<0.375	<0.375		
GZ-05	16-18	3/14/2022	<0.5	80	<0.414	<0.414	<0.414	<0.414	<0.208	<0.414	<0.414	<0.414	<0.208	<0.208	<0.414	<0.414	<0.414	<0.414	<0.414	<0.414	<0.414	<47.9	<0.27
GZ-05A	0-2	4/6/2022	<0.5	88	<0.384	<0.384	<0.384	<0.384	<0.384	<0.384	<0.193	<0.384	0.199	<0.193	0.410	<0.384	<0.384	<0.384	<0.384	<0.384	<0.384		

#### Notes:

mg/kg = milligrams per kilogram.

PID = photoionization detector.

ppmv = parts per-million by volume.

RIDEM = Rhode Island Department of Environmental Management.

-- = not analyzed or sample not collected for this parameter.

NS = there is no standard established by RIDEM for this constituent.

**Bold** = detected concentration exceeds the RIDEM Residential Direct Exposure Criteria.

<u>Underlined</u> = detected concentration exceeds the RIDEM Commercial/Industrial Direct Exposure Criteria.

Shaded = detected concentration exceeds the RIDEM GB Leachability Criteria.



# Table 2 Summary of Groundwater Analytical Data 94 Moshassuck Street Pawtucket, Rhode Island 02860

				Volatile Organic Compounds*												
Monitoring	Sample	Depth to LNAPL	Depth to Water	Acetone	Benzene	n-Butyl- benzene	sec-Butyl- benzene	Chloro- benzene	1,2-Dichloro- benzene	1,4-Dichloro- benzene	Isopropyl- benzene	Naph- thalene	n-Propyl- benzene	1,2,4-Trimethyl- benzene	Total Xylenes	
Well	Date	(feet)	(feet)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	
	RIDEM	GB Groundwat	er Objectives:	NS	0.14	NS	NS	3.2	NS	NS	NS	NS	NS	NS	NS	
GZ-01	3/16/2022	3/16/2022 ND 15.38														
	4/29/2022	ND	13.08	<0.0010	<0.0010	<0.0010	<0.0010	0.0079	<0.0010	<0.0010	<0.0010	0.0011	<0.0010	<0.0010	<0.0020	
GZ-02	3/16/2022	ND	16.49													
	4/29/2022	ND	14.09													
GZ-03	3/16/2022	ND	14.37	0.0174	0.0137	0.0016	0.0014	0.0153	0.0060	0.0125	0.0062	0.0144	0.0042	0.0029	0.00731	
	4/29/2022	ND	15.73	<0.00100	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	
GZ-04	3/16/2022	ND	12.82													
	4/29/2022	ND	15.54													
GZ-05	3/16/2022	ND	13.91													
	4/29/2022	ND	16.63	<0.00100	<0.0010	<0.0010	<0.0010	0.0025	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	

#### Notes:

LNAPL = light non-aqueous phase liquid.

mg/L = milligrams per-liter.

ND = none detected.

NS = no standard established by the Rhode Island Department of Environmental Management (RIDEM).

<sup>\*</sup> Only compounds which were detected above the laboratory detection limits are listed. All other compounds are below detection limits.

<sup>-- =</sup> not analyzed or sample not collected for this parameter.