SITE INVESTIGATION REPORT

Blackstone River Bikeway – Segment 1A

Portions of Providence Assessor's Lot 8/Plat 17; Lots 66, 446 & 456/Plat 15; and a Portion of Beach Street, Providence, RI

PREPARED FOR

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JULY 24, 2015

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1.0 Introduction and Objectives (Rule 7.03A)

The Rhode Island Department of Environmental Management (RIDEM) has under design, Segment 1A of the Blackstone River Bikeway as shown on **Figure 1**. In general, Segment 1A extends from East Transit Street northerly towards Pitman Street in Providence, Rhode Island. The RIDEM's Division of Planning and Development (the Client) engaged Vanasse Hangen Brustlin, Inc. (VHB) to conduct Site Investigation activities of Segment 1A along the Seekonk River in the area of Gano Park from East Transit Street to Pitman Street. Portions of Segment 1A, as shown on **Figure 2**, are proposed to cross the following properties that are RIDEM identified State Hazardous Waste Sites (SHWS) that have existing Environmental Land Usage Restrictions (ELURs) recorded for them:

- East Transit Boat Ramp (SHWS ETBR-HWM);
- East Side Marketplace (SHWS ESMP-NJD and ADLE-HWM); and
- EPOCH Senior Living Center (SHWS KOFF-HWM).

The RIDEM Division of Planning is aware of these ELURs and associated Soil Management Plans (SMPs) and any proposed construction activities on these sites will be in accordance with the provisions of their respective ELURs. The portions of Segment 1A that traverse these SHWS were **not** further assessed during VHB's investigations and are **not** considered part of the subject property described herein (the Site).

Site Investigation activities were conducted in accordance with the RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations) and were focused on the remaining sections of Segment 1A which includes **portions** of the following Providence Tax Assessor plats and lots where the proposed bikeway will pass:

- Lot 8/Plat 17;
- Lots 66, 446 and 456/Plat 15;

- Portions of Beach Street (a paper street shown on Plat Map 17); and
- A portion of the I-195 westbound Exit 3 off-ramp area.

The proposed bikeway path through these lots is shown on **Figure 2** and is the Site that was investigated as described in this Site Investigation Report (SIR). This SIR was prepared in accordance with Rule 7.0 of the RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations), and the Limitations provided in **Appendix A.**

Soil contamination above reportable concentrations was discovered during due diligence activities performed by VHB. The exceedances were reported to the RIDEM on May 30, 2015 as described in Section 2.0. On June 12, 2015, RIDEM's Office of Waste Management (OWM) issued a Voluntary Procedure Letter (VPL) to the Division of Planning and Development. The VPL included requirements for a Public Notice and Public Meeting to inform Site abutters and other interested parties (e.g. municipalities, legislators, etc.) about previously completed activities conducted during due diligence and to provide them with an opportunity to comment on the potential need to conduct additional assessment activities. The public notice was issued, the public meeting was held, and the public comment period was completed between July 7, 2015 and July 21, 2015. Five members of the local community attended the public meeting on July 7, 2015. The following four comments/questions were received:

1. Where were samples collected?
2. Is off-Site disposal of soil anticipated?
3. What are the next steps in the RIDEM process?
4. Is the data available for viewing?

VHB prepared a summary of the public comments and responses and submitted it to the RIDEM on July 23, 2015. A copy of the letter is provided in **Appendix B**.

A copy of the VPL and the Public Notice Summary submitted to RIDEM on June 17, 2015 that included copies of the public notification letters, the abutter and interested party mailing list, and a copy of the public meeting advertisement, is also provided in **Appendix B**.

2.0 Release Notification Form (Rule 7.03B)

Based on the results of soil sampling and analysis conducted by VHB in December 2014 as part of due diligence, the RIDEM Division of Planning and Development submitted a *Hazardous Material Release Notification Form* (RNF) to RIDEM's OWM in accordance with Rule 5.00 of the Remediation Regulations on May 30, 2015. The

notification reported the presence of benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, benzo(a)anthracene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, arsenic, and lead in soil at concentrations above the residential direct exposure criteria (RDEC) set forth in the Remediation Regulations. Arsenic, lead, and benzo(a)pyrene were also reported at concentrations above the industrial/commercial direct exposure criteria (I/CDEC) set forth in the Remediation Regulations. A copy of the RNF submittal, which includes a copy of the Preliminary Site Investigation (PSI) completed in February 2015, is provided in **Appendix C**.

3.0 Incident and Release History (Rule 7.03C)

The Site runs along the western shore of the Seekonk River as shown on **Figures 1 and 2.** The land in this area was previously part of the Seekonk River and was created over time by filling. The type and origin of the fill material is unknown. Files associated with the three ELURs previously described were reviewed at the RIDEM. In general, contamination at these sites was reported as including heavy metals and semi-volatile organic compounds (SVOCs) and was described by other consultants as "urban fill." A portion of the bike path is also located along an earthern berm in Gano Park. VHB was also unable to determine the type and origin of the material used to construct this berm.

No other incident or releases were identified for the Site.

4.0 Owners, Operators and Property Transfers (Rule 7.03D)

According to records at Providence City Hall the following entities are the current owners of the Site:

- Lot 8/Plat 17 - City of Providence;
- Lot 66/Plat 15 - State of Rhode Island;
- Lot 446/Plat 15 - City of Providence;
- Lot 456/Plat 15 - City of Providence;
- Beach Street (paper street) - City of Providence; and
- I-195 westbound Exit 3 off-ramp area – State of Rhode Island.

The property field cards, which were accessed online from the Vision Appraisal Website, are provided in **Appendix D**.

5.0 Site Reports and Plans (Rule 7.03E)

VHB conducted Site investigations that included inspections, historical research, and soil sampling and analysis. The results of these investigations identified exceedances of the Residential Direct Exposure Criteria (RDEC) and the Industrial/Commercial Direct Exposure Criteria (I/C DEC) for arsenic, lead, and a variety of polycyclic aromatic hydrocarbons (PAHs). VHB prepared a Release Notification on behalf of the Client that included a Preliminary Site Investigation Report (PSI) entitled *Hazardous Material Release Notification, Blackstone River Bikeway-Segment 1A, Portions of Plat 17, Lot 8; Plat 15, Lots 446, 456, and 66; Portion of Paper Street Named Beach Street in Providence, RI* that was dated May 29, 2015 and sent to RIDEM. This submittal consisted of 2 Volumes. Volume 1 included the RIDEM Release Notification Form, a soil data table, and laboratory Certificates of Analysis. Volume 2 contained the PSI which included, but was not limited to, the results of investigation, site plans and figures, historical maps, city directory searches, an environmental database report, summary of file reviews conducted at RIDEM, summary of municipal research, a summary of findings and conclusions. The Release Notification and PSI are provided in **Appendix C.**

Any information necessary to fulfill the requirements of an SIR as set forth in the Remediation Regulations that were not included in the Release Notification and PSI are provided in the sections below as appropriate. It is VHB's opinion that the Release Notification, PSI and this SIR fulfill the requirements of the Remediation Regulations.

6.0 Historic Site Operations, Site Inspection and Zoning (Rule 7.03F)

6.1 Historic Site Operations

This information can be found in **Section 4.0** on Page 63 of the PSI provided in **Appendix C**.

6.2 Current Site Operations

The portions of Plat 17, Lot 8, Plat 17, Lots 66, 446, and 456; and a portion of the paper street known as Beach Street that make up the Site are currently vacant of any

buildings and are used for recreational purposes, including a community boat ramp, a dog park, and athletic fields.

6.3 Historic Hazardous Materials Usage and Waste Generation

As the Site has been vacant throughout history, there is no historic hazardous materials usage or waste generation at the Site.

6.4 Existing Site Conditions and Site Inspection

6.4.1 Methodology and Limiting Conditions

This SIR was prepared in accordance with the following:

- Rule 7.0 of the RIDEM Remediation Regulations.
- The Scope of Work between VHB and the State of Rhode Island and Providence Plantations.
- The Limitations provided in **Appendix A**.

6.4.2 Interior Observations

VHB did not inspect the interior of any buildings during the PSI completed in February 2015 or other due diligence activities because all of the buildings located on lots previously mentioned were outside the scope of the project corridor and are not part of the Site.

6.4.3 Exterior Observations

This information can be found in **Section 8.0** on Pages 77 - 80 of the PSI provided in **Appendix C**.

7.0 Adjoining Properties

The Site is bounded to the north by a commercial property which contains a small shopping plaza and grocery store (East Side Marketplace); to the south by the Interstate 195 west Exit 3 off-ramp; to the west by recreational land (athletic fields); and to the east by the Seekonk River.

7.1 Historic Operations

This information can be found in **Section 4.0** on Pages 63 - 68 of the PSI provided in **Appendix C**.

7.2 Current Operations

This information can be found in **Section 1.0** on Page 61 and **Section 4.0** on Page 66 of the PSI provided in **Appendix C**.

7.3 Records Review

This information can be found in **Section 6.0** on Pages 70 – 76 and **Section 7.0** on Pages 76 – 77 of the PSI provided in **Appendix C**.

8.0 Plans and Figures (Rule 7.03 G and H)

A locus map showing the location of the Site is provided as **Figure 1**, a Site Detail Plan is included as **Figure 2**, and **Figures 3a** through **3b** are Sampling Location Plans. Collectively, these figures show (if present):

- Buildings;
- Activities;
- Structures;
- North Arrow;
- Wells;
- Underground Injection Control (UIC) systems, piping and other underground structures as appropriate (none identified);
- Outdoor hazardous materials storage and handling areas (none identified);
- Location of environmental samples collected;
- Waste management and disposal areas (none identified); and
- Property lines.

9.0 Site and Surrounding Area Characterization (Rule 7.03 I)

9.1 Surface Water Bodies and Wetlands within 500 Feet (Rule 7.03I[i])

State-regulated Freshwater Wetlands as defined in the *Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act* (Rules) [RIDEM, 2007 as amended] are not present within the limited areas of the Site Investigation. However, the Site is located within 200' of the Seekonk River. This river is tidally influenced and as such any work conducted within 200' Contiguous Area is subject to the jurisdiction of the Rhode Island Coastal Resources Management Council (CRMC).

The Flood Insurance Rate Map for the Providence County, Rhode Island (Community Panel No. 44007C0309J, dated September 18, 2013) indicates that the Site is located in both an "Other Flood Areas" and a Special Flood Hazard Areas (SFHA). SFHAs denote 100-year flood zone, which has a one percent chance of being equaled or exceeded in any given year. Specifically, the Site is located in SFHA Zone VE, which is a coastal flood zone with velocity hazard (wave action) and where Base Flood Elevations have been determined. The "Other Flood Areas" indicates that the remainder of the Site is in areas of 0.2% annual chance flood, areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood.

9.2 Environmentally Sensitive Areas within 500 Feet (Rule 7.03I[ii])

According to the RIDEM Environmental Resource Map, Lots 446 and 456 on Plat 15 and a portion of Lot 8 on Plat 17 are designated as Local Conservation Land. The land is protected for easement interest, in which the easement type is classified as recreation.

9.3 Potable Water Sources and Locations (Rule 7.03I[iii and iv])

This information can be found in **Section 3.0** on Page 62 of the PSI provided in **Appendix C**.

9.4 Off-Site Impacts (Rule 7.03I[V])

Based upon the findings of this investigation and previous assessments, releases (e.g., PAHs and metals in soil greater than applicable RIDEM criteria) identified at the Site within surficial soils are not considered to be mobile and do not present any significant potential to impact off-Site residential or industrial/commercial properties.

9.5 Groundwater Classification (Rule 7.03I[vi])

This information can be found in **Section 3.0** on Page 62 of the PSI provided in **Appendix C**.

10.0 Surface Water and Groundwater Classification (Rule 7.03J)

This information can be found in **Section 3.0** on Page 62 of the PSI provided in **Appendix C**.

11.0 Investigation and Description of Impacts (Rule 7.03K)

11.1 Soil Sampling Locations, Procedures and Analytical Data

This information can be found in **Section 9.0** on Pages 80 - 81 of the PSI provided in **Appendix C**. The Certificates of Analysis are included in **Appendix E**. Soil analytical data is summarized in **Table 1**. The location of all borings completed at the Site are shown on **Figures 3a** and **3b.**

11.2 Hazardous Substances in Excess of Regulatory Criteria

11.2.1 Soil

The following constituents were identified through laboratory analysis as being present in Site soils above the RIDEM RDEC and/or I/CDEC (refer to **Table 1** and **Appendix E**):

Metals

- Arsenic
- Lead

PAHs

- Benzo(a)anthracene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Benzo(g,h,i)perylene
- Benzo(a)pyrene
- Chrysene
- Dibenzo(a,h)anthracene
- Indeno(1,2,3-cd)pyrene

11.3 Impacts to Environmentally Sensitive Areas

The contaminants found within the surficial Site soils are not considered to be mobile, and are not present at concentrations above the GB Leachability Criteria, and therefore are unlikely to impact local environmentally sensitive areas such as the adjacent Seekonk River.

11.4 Contamination of Manmade Structures

The proposed bikeway path is generally undeveloped. Several manholes were observed in the general Site area. These manholes were labeled "NBC" and appear to be associated with the NBC sewer easement in the area. It is unlikely that the types of contaminants and concentrations detected would have an impact on the NBC sewer.

11.5 Odors or Stained Soil

VHB did not detect any unusual odors on the days we were working on Site. VHB did not observe an overt, visual staining of soil in areas we inspected and/or sampled.

11.6 Stressed Vegetation

VHB did not observe any visual evidence of stressed vegetation in the areas inspected.

11.7 Excavated or Stockpiled Material

VHB did not observe any excavated or stockpiled soils at the Site on the days we were present.

11.8 Regulatory Jurisdiction

State-regulated Freshwater Wetlands as defined in the *Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act* (Rules) [RIDEM, 2007 as amended] are not present within the limited areas of the Site Investigation. However, the Site is located within 200' of the Seekonk River. This river is tidally influenced and as such any work conducted within 200' Contiguous Area is subject to the jurisdiction of the Rhode Island Coastal Resources Management Council (CRMC).

VHB has not identified any other current or future RIDEM regulatory jurisdictions related to the investigation or remediation of the Site.

12.0 Concentration Gradients (Rule 7.03L)

12.1 Soil Concentration Gradients

VHB compared soil concentration data to the RIDEM RDEC, I/CDEC and GB Leachability Criteria (GB-LC) established in the Remediation Regulations.

The soil data indicated exceedances for arsenic, lead, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene at concentrations above the RIDEM RDEC at the Site as previously described. The soil data also indicated exceedances for arsenic, lead, and benzo(a)pyrene at concentrations above the RIDEM I/CDEC at the Site as previously described.

Soil samples collected and analyzed during VHB's investigation did not reveal any exceedances of the GB-LC.

13.0 Background Concentrations (Rule 7.03M)

VHB did not conduct any background assessments during this investigation.

14.0 Site and Surrounding Area Characterization (Rule 7.03N and O)

14.1 Surficial Geology, Topography, and Runoff Patterns

This information can be found in **Section 3.0** on Page 62 of the PSI provided in **Appendix C**.

14.2 Natural and Man-made Barriers/Conduits for Contamination Migration

VHB did not identify any apparent barriers to, or conduits for, contamination migration during investigatory activities conducted at the Site.

14.3 Bedrock Geology

This information can be found in **Section 3.0** on Page 62 of the PSI provided in **Appendix C**.

14.4 Groundwater Flow Direction

This information can be found in **Section 3.0** on Page 62 of the PSI provided in **Appendix C**.

15.0 Potential for Contaminant Volatilization into Structures (Rule 7.03P)

Potential for contaminant volatilization into structures at the Site does not exist since there are no structures and the Site is being developed as a bikeway. The substances detected in the Site soils above the RIDEM RDEC are not volatile and are not anticipated to cause indoor air concerns to any adjacent buildings.

16.0 Potential for Entrainment by Wind and Erosion (Rule 7.03Q)

The majority of the Site is lightly vegetated with grass and some small shrubbery along the eastern portion of the Site adjacent to the banks of the Seekonk River. Erosion is a possibility in the grassy portions of the Site. A small portion of Plat 17, Lot 8 is currently paved with asphalt and used as a parking lot. During redevelopment of the Site, controls such as the application of water for dust suppression (if necessary) are suggested to reduce the potential for entrainment by wind.

17.0 Protocols for Fate and Transport Models (Rule 7.03R)

No fate and transport modeling has been conducted for the Site. Given the contaminant types and concentrations, VHB does not believe that fate and transport modeling is necessary.

18.0 Sample Collection and Analysis (Rule 7.03S)

The results of analysis for all soil samples collected from the Site are summarized in **Table 1**. Certificates of Analysis are provided in **Appendix E**, and the locations of the soil samples are shown on **Figures 3a and 3b.**

19.0 Boring Logs (Rule 7.03T)

Due to the shallow nature, approximately 1 to 1.5 feet below ground surface, of the seven soil borings advanced via hand auger in December 2014, VHB did not complete any soil boring logs.

20.0 Management of Investigation Derived Wastes (Rule 7.03U)

Soil cuttings were backfilled into their respective boreholes.

21.0 Quality Assurance and Quality Control Evaluation Summary (Rule 7.03V)

Sample jars and bottles were ordered directly from R.I. Analytical and were delivered to VHB's office in Providence, Rhode Island. All sample bottles were labeled with the following information prior to sample collection:

- Sample Identification
- Date
- Preservatives

During the Site investigation, protective gloves were worn during soil sampling activities and were changed in between soil sampling intervals. Soil samples were collected directly from the hand auger and placed directly into laboratory prepared sampling jars. Once sealed, the jars were immediately placed into a cooler on ice. Samples remained on ice until delivery to R.I. Analytical under proper Chain of Custody protocols for analysis.

22.0 Public Involvement Considerations (Rule 7.03W and Rule 13.03)

Pre-Site Investigation public involvement activities have been completed (refer to **Appendix B**), including a pre-Site investigation abutters notice, a public meeting, and a public comment period. Upon receipt of a Program Letter from RIDEM, a second public notice will be sent to all abutting property owners and the municipalities associated with the Site. The notice will inform that the Site Investigation is complete, it will describe the preferred remedial alternative (refer to **Section 23.0**), and will provide for an opportunity to submit comments on the technical feasibility of said preferred remedial alternative.

The Site does lie within an Environmental Justice Area. In accordance with Rule 7.07B, VHB compiled a Site-specific fact sheet presenting the known history of the Site, the suspected contamination, the point in the process where the Contaminated-Site is and the expected path moving forward. This fact sheet, along with applicable RIDEM contact information was provided as part of the Pre-Site Investigation public notice. The fact sheet was provided in both English and Spanish. These materials are provided in **Appendix B**.

23.0 Remedial Alternatives (Rule 7.04)

Proposed development of the Site as a bike path will involve very limited surficial soil intrusive activities (e.g., shallow excavations and regrading). Therefore, groundwater is not anticipated be encountered during the bikeway construction project and a groundwater investigation was not completed. As such, evaluation of groundwater remediation alternatives is not applicable .

Soil impacts were identified in excess of the RIDEM RDEC in samples collected at locations HA-1, HA-2, HA-3, HA-4, HA-5, HA-6, and HA-7. Contaminants included arsenic, lead, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene.

Soil impacts were also identified in excess of the RIDEM I/CDEC in samples collected at locations HA-1, HA-4, HA-6, and HA-7. Contaminants included arsenic, lead, and benzo(a)pyrene.

VHB has developed the following summary of remedial alternatives to address site impacts.

23.1 Presentation of Alternatives – Soil

23.1.1 Option 1 – No Action/Natural Attenuation

The No Action/Natural Attenuation remedial response action is most appropriate for sites where the migration of contaminants is expected to be minimal, the concentration of contaminants poses no significant risk to human health or the environment, and the substances are amenable to natural biodegradation process. PAHs, such as benzo(a)pyrene and chrysene, are generally considered to be persistent in soil with little potential to naturally attenuate.

23.1.2 Option 2 – Excavation of All Impacted Soils and Off Site Disposal

This option would involve the excavation, off-Site disposal and replacement of contaminated soils above the RIDEM RDEC and the RIDEM I/CDEC criteria. This option would result in no land use restrictions; however, it must be evaluated in consideration of costs associated with excavation of impacted soils, transportation and off-Site soil disposal, confirmatory sampling and analysis, and purchase/placement of clean fill materials given the proposed use of the Site.

23.1.3 Option 3 – Limited Soil Excavation/Off-Site Disposal, Capping, and/or Implementation of an ELUR

Exposure pathways associated with PAHs and metals can be eliminated by a combination of soil excavation, capping, and the placement of an ELUR on the Site.

Excess regulated soils in defined areas of PAH and/or metal contamination that are generated during the proposed bikeway construction will be disposed of off-Site. Clean fill materials (e.g., bikeway base material, loam, etc.) and paved surfaces will form a cap to limit exposure to subsurface impacted soils left in place. An ELUR will impose restrictions on the property (e.g., no residential use, no intrusive soil activities without RIDEM approval, implementation of a Soil Management Plan, etc.) which will further eliminate or reduce the potential for exposure to the PAH compounds and metals of concern.

Areas proposed to be capped would consist of any one, or a combination, of the following:

- Two feet of clean soil;
- One foot of clean soil and a geotextile fabric; and/or
- Four inches of pavement (concrete or asphalt) overlying six inches of clean base material.

Time and cost would be minimized since remediation via a combination of these methods could be combined with construction activities.

Leachability is not a concern since no contaminants were identified in soil above applicable GB Leachability Criteria . Therefore, pervious caps can be used as appropriate.

The use of a cap to eliminate direct contact with impacted soils would necessitate an ELUR for the Site. The ELUR would identify the cap area, associated restrictions, and soil management requirements. An ELUR is a legal document drafted for the purpose of placing a notice of restrictions on the use or physical condition of a property for the protection of human health. The ELUR will require that the capped portions of the property remain in place and be properly maintained.

Excavation and disposal or capping impacted areas of the Site eliminates the potential for transport of hazardous substances from the Site by wind, erosion, and runoff.

23.2 Recommended Remedial Alternative

VHB recommends Remedial Option 3 because it will:

- Eliminate direct exposure with impacted soil;
- Be timely and cost effective relative to other options; and
- Significantly reduce the potential for entrainment of impacted soil via wind, erosion, and runoff.

23.3 Compliance with RIDEM Risk Management Provisions

The recommended remedial option will meet the Method 1 Standards of Risk Management outlined in Section 8.00 of the RIDEM Remediation Regulations by eliminating the exposure pathway of direct contact, and restricting future residential use of the Site.

23.4 Technical Feasibility

The Remedial Alternative selected is not an innovative or unproven remedial technology. Soil excavation and removal, and land use restrictions are well-established approaches to Site management and eliminate risk to human health associated with direct exposure to PAHs and metals.

23.5 Compliance with Federal, State, and Local Regulations

The proposed Remedial Alternative will be designed and constructed in accordance with applicable federal, state, and local regulations.

23.6 Ability of Performing Party to Implement Remedial Alternative

The RIDEM, as the performing party or in conjunction with a developer, fully anticipates being able to implement the proposed remedial alternative.

24.0 Certifications (Rule 7.05)

As mandated by Section 7.05 of the Remediation Regulations, VHB submits the following statements of certification.

Certification of Preparer:

I, Shelby A. Miller, an employee of Vanasse Hangen Brustlin, Inc. have reviewed this report and certify that it is accurate and complete to the best of my knowledge.

Shelby A. Miller — Preparer's Signature

7/30/2015 — Date

Certification of Reviewer:

I, Peter M. Grivers, P.E., LSP, an employee of Vanasse Hangen Brustlin, Inc. have reviewed this report and certify that it is accurate and complete to the best of my

Suzanne C. Guntoxanche for Peter Grivers — Reviewer's Signature

7/30/2015 — Date

Certification by Owner/Operator:

I certify that the information contained in this report is a complete and accurate representation of the circumstances known about the release and the subsequent response activities to the best of my knowledge.

Owner/Operator Signature

7/29/15 — Date

Chief, RIDEM, Planning + Development — Title

25.0 Progress Reports (Rule 7.06)

No progress reports are required for the Site at this time.

References

Environmental Data Resources, Inc. Certified Sanborn® Map Report (No. 4117038.3), October 29, 2014.

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Rhode Island Department of Environmental Management Topo Map & Aerial Photo Viewer, July 2015.

Rhode Island Department of Environmental Management Water Quality Regulations, December 2010.

Statewide Planning Program Aerial Photographs dated 1939, 1951-52, 1962, 1972, 1976, 1981, 1988, 1992, and 2008.

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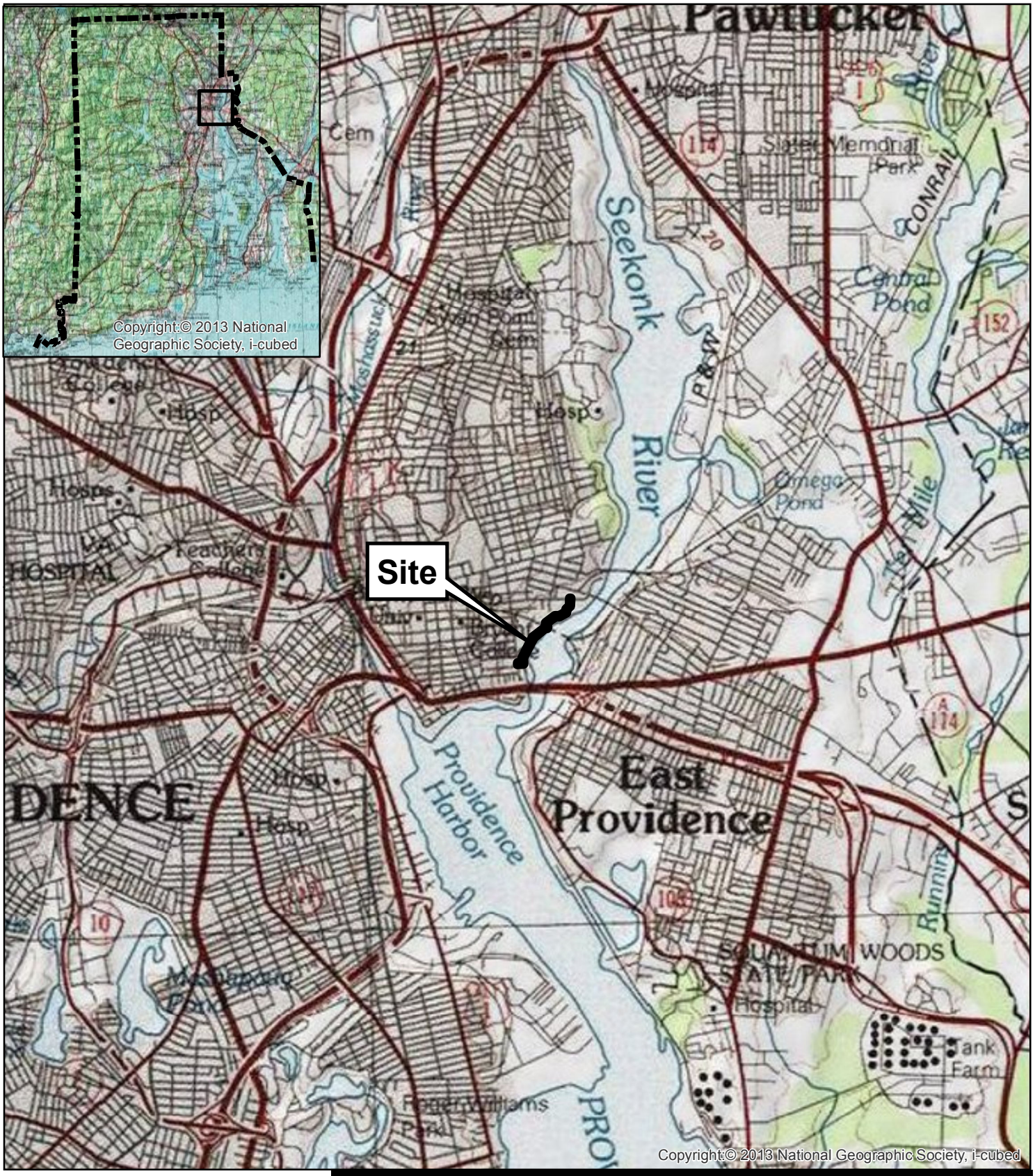
Vanasse Hangen Brustlin, Inc., Preliminary Site Investigation, February 2015.

Figures



Legend

Study Corridor

0 0.375 0.75 1.5 Miles

Site Location Map

Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street
Providence, Rhode Island 02906

Sources: National Geographic Society

Figure 1
July 23, 2015

vhb

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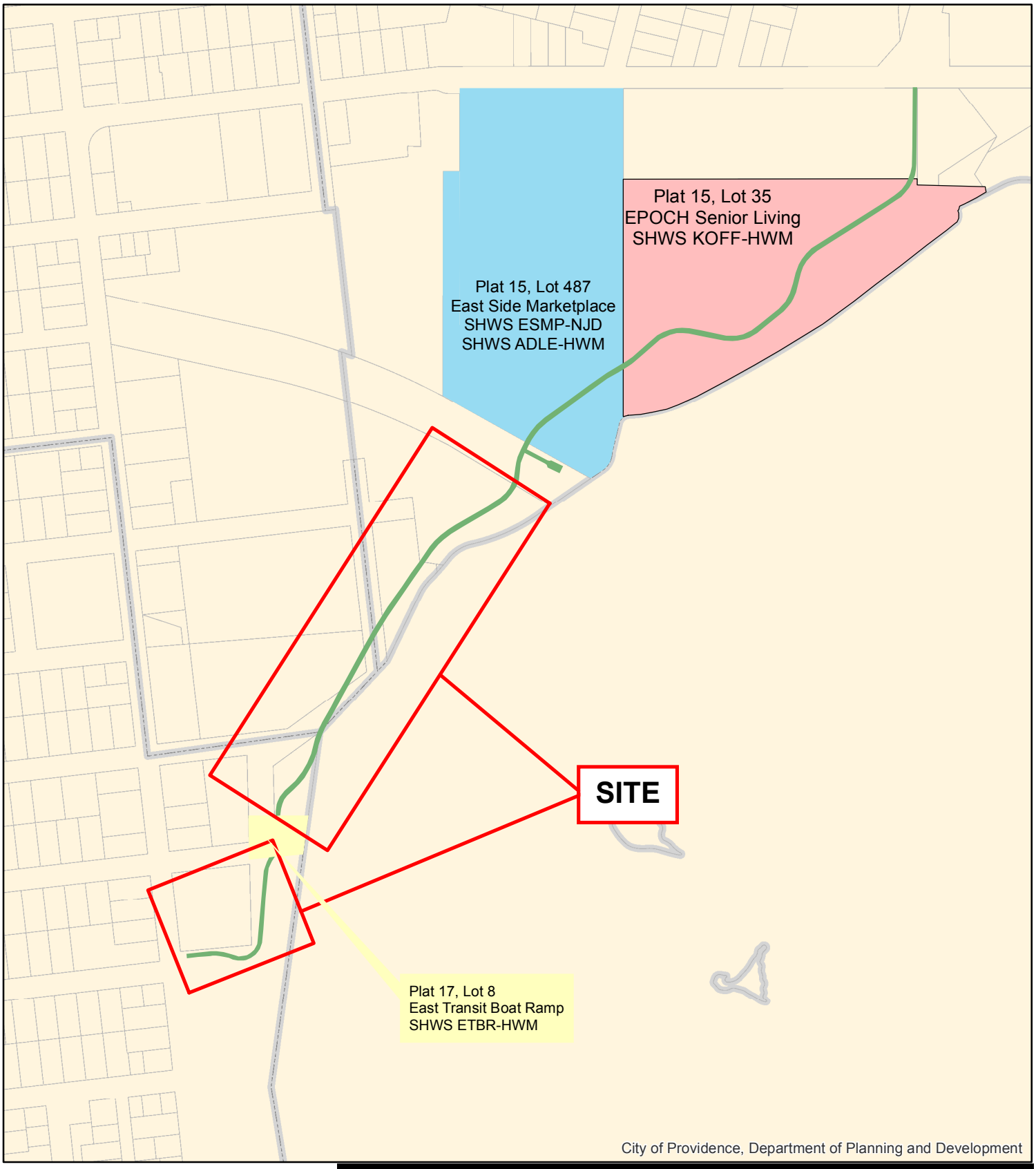

Legend

- Proposed Bikeway Segment 1A
- Parcel Outlines
- Plat Boundaries

Site Detail Map

Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street
Providence, Rhode Island 02906

Figure 2
July 24, 2015

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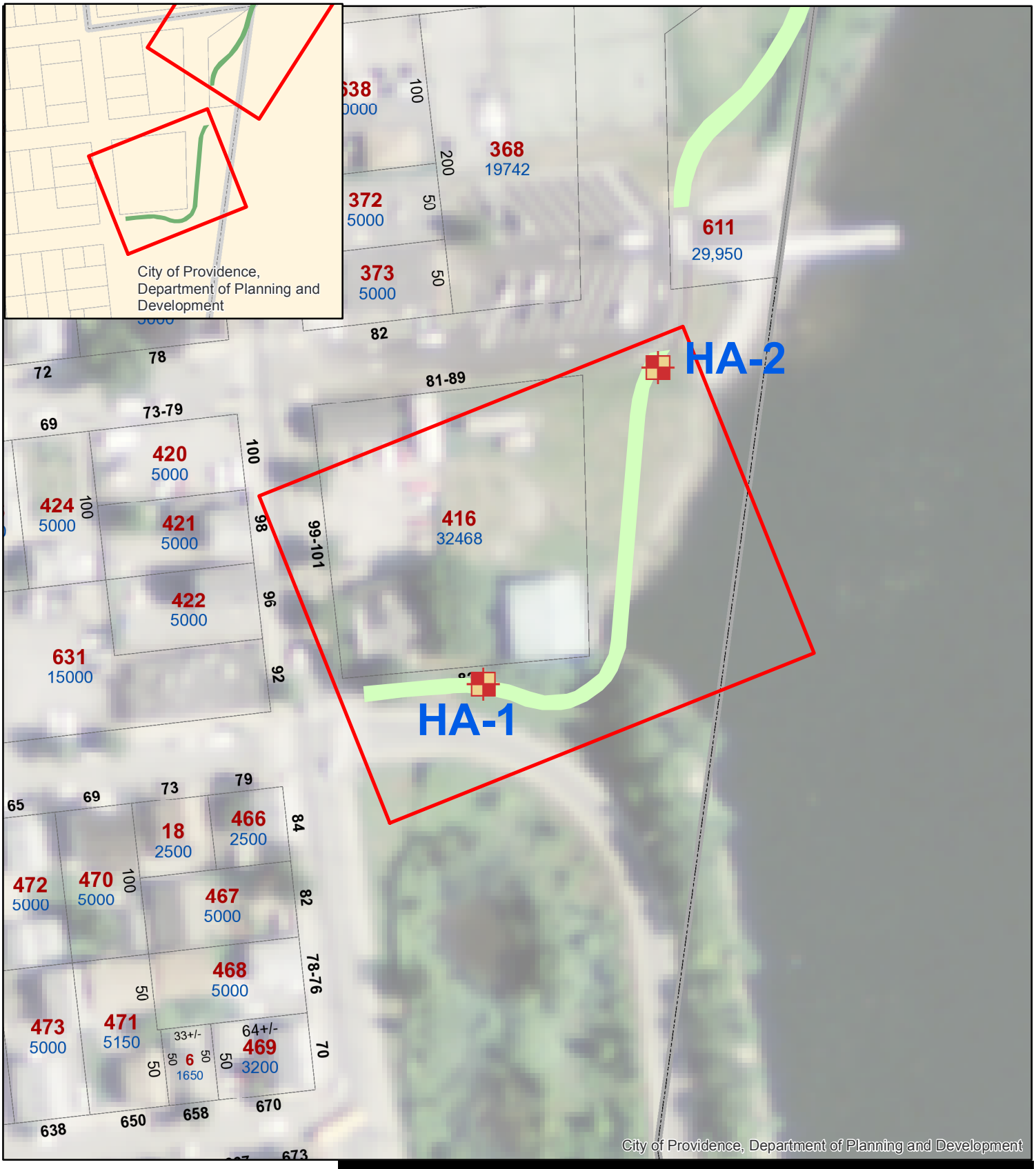

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- Hand Auger Locations
- Proposed Bikeway Segment 1A
- Parcel Outlines

Sample Location Map

Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street
Providence, Rhode Island 02906

Figure 3a
July 24, 2015

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- Hand Auger Locations
- Proposed Bikeway Segment 1A
- Parcel Outlines

Sample Location Map

Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street
Providence, Rhode Island 02906

Figure 3b
July 24, 2015

vhb

Tables

Soil Data Table
Blackstone River Bikeway - Segment 1A
Providence, RI
VHB Project No. 72017.01

Soil Sample Designation	RIDEM RDEC (mg/kg)	RIDEM I/CDEC (mg/kg)	GB Leachability	HA-1	HA-2	HA-3	HA-4	HA-5	HA-6	HA-7	Trip Blank
Sample Depth (ft.)				0.5-1.5'	0.5-1.5'	0.5-1.5'	0.5-1.5'	0.5-1.5'	0.5-1.5'	0.5-1.5'	-
Date Sampled				12/23/2014	12/23/2014	12/23/2014	12/23/2014	12/23/2014	12/23/2014	12/23/2014	-
RCRA 8 Metals (mg/kg)											
Arsenic	**7**	**7**	**NS**	**9.8**	ND <2.8	**5.2**	**5.5**	**4.7**	**12**	**21**	-
Barium	**5,500**	**10,000**	**NS**	**50**	**34**	**68**	**120**	**59**	**320**	**31**	-
Cadmium	**39**	**1,000**	**NS**	**0.46**	ND <0.28	**0.45**	**0.36**	ND <0.27	**1.5**	ND <0.27	-
Chromium	**390**	**10,000**	**NS**	**14**	**10**	**22**	**11**	**10**	**38**	**20**	-
Lead	**150**	**500**	**NS**	**130**	**63**	**180**	**500**	**110**	**510**	**22**	-
Mercury	**23**	**610**	**NS**	**0.19**	**0.15**	**0.5**	**0.44**	**0.29**	**2.7**	ND <0.093	-
Selenium	**390**	**10,000**	**NS**	ND <6.5	ND <5.16	ND <5.9	ND <5.6	ND <5.4	ND <5.7	ND <5.4	-
Silver	**200**	**10,000**	**NS**	**1.4**	ND <1.1	**1.7**	**1.3**	**1.4**	**3.9**	**1.5**	-
TCLP Metals (mg/L)											
Lead			**NS**	-	-	-	**0.53**	-	**3.8**	-	-
Semi-Volatile Organic Compounds (mg/kg)											
Acenaphthene	**43**	**10,000**	**NS**	ND <0.43	ND <0.38	-	ND <0.38	ND <0.36	-	ND <0.36	-
Acenaphthylene	**23**	**10,000**	**NS**	ND <0.43	ND <0.38	-	**0.42**	ND <0.36	-	ND <0.36	-
Anthracene	**35**	**10,000**	**NS**	ND <0.43	ND <0.38	-	**1.3**	ND <0.36	-	ND <0.36	-
Benzo(a)anthracene	**0.9**	**7.8**	**NS**	ND <0.43	ND <0.38	-	**3.5**	**0.78**	-	ND <0.36	-
Benzo(b)fluoranthene	**0.9**	**7.8**	**NS**	ND <0.43	**0.49**	-	**2.6**	**0.56**	-	ND <0.36	-
Benzo(k)fluoranthene	**0.9**	**78**	**NS**	ND <0.43	**0.44**	-	**2.4**	**0.66**	-	ND <0.36	-
Benzo(g,h,i)perylene	**0.8**	**10,000**	**NS**	ND <0.43	ND <0.38	-	**1.6**	**0.49**	-	ND <0.36	-
Benzo(a)pyrene	**0.4**	**0.8**	**NS**	ND <0.40	**0.43**	-	**2.8**	**0.78**	-	ND <0.36	-
Chrysene	**0.4**	**780**	**NS**	ND <0.40	**0.44**	-	**3.2**	**0.8**	-	ND <0.36	-
Dibenzo(a,h)anthracene	**0.4**	**0.8**	**NS**	ND <0.40	ND <0.38	-	**0.42**	ND <0.36	-	ND <0.36	-
Fluoranthene	**20**	**10,000**	**NS**	**0.71**	**0.65**	-	**7.5**	**1.6**	-	ND <0.36	-
Fluorene	**28**	**10,000**	**NS**	ND <0.43	ND <0.38	-	**0.38**	ND <0.36	-	ND <0.36	-
Indeno(1,2,3-cd)pyrene	**0.9**	**7.8**	**NS**	ND <0.43	ND <0.38	-	**1.5**	**0.46**	-	ND <0.36	-
2-Methylnaphthalene	**123**	**10,000**	**NS**	ND <0.43	ND <0.38	-	ND <0.38	ND <0.36	-	ND <0.36	-
Naphthalene	**54**	**10,000**	**NS**	ND <0.43	ND <0.38	-	ND <0.38	ND <0.36	-	ND <0.36	-
Phenanthrene	**40**	**10,000**	**NS**	ND <0.43	ND <0.38	-	**5.2**	**0.67**	-	ND <0.36	-
Pyrene	**13**	**10,000**	**NS**	**0.62**	**0.65**	-	**6.3**	**1.4**	-	ND <0.36	-
Total Petroleum Hydrocarbons (mg/kg)											
TPH	**500**	**2,500**	**NS**	**500**	-	**380**	-	**140**	-	-	-
Volatile Organic Compounds (mg/kg)											
Acetone	**7,800**	**10,000**	**NS**	ND <0.0509	-	ND <0.0475	-	-	-	ND <0.0418	ND <0.0500
Benzene	**2.5**	**200**	**4.3**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Bromodichloromethane	**10**	**92**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Bromoform	**81**	**720**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Bromomethane	**0.8**	**2900**	**NS**	ND <0.0102	-	ND <0.0095	-	-	-	ND <0.0084	ND <0.0100
Carbon Tetrachloride	**1.5**	**44**	**5.0**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Chlorobenzene	**210**	**10,000**	**100**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Dibromochloromethane	**7.6**	**68**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Chloroform	**1.2**	**940**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
1,2-Dibromo-3-Chloropropane	**0.5**	**4.1**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
1,2-Dichloropropane	**1.9**	**84**	**70**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Ethylbenzene	**71**	**10,000**	**62**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Isopropylbenzene	**27**	**10,000**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Methyl tert-Butyl Ether	**390**	**10,000**	**100**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Naphthalene	**54**	**10,000**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Styrene	**13**	**190**	**64**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Tetrachloroethene	**12**	**110**	**4.2**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Toluene	**190**	**10,000**	**54**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Vinyl Chloride	**0.02**	**3**	**NS**	ND <0.0102	-	ND <0.0095	-	-	-	ND <0.0084	ND <0.0100
o-Xylene	**110**	**10,000**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
m,p-Xylene	**110**	**10,000**	**NS**	ND <0.0102	-	ND <0.0095	-	-	-	ND <0.0084	ND <0.0100
Pesticides (mg/kg)											
Chlorodane	**0.5**	**4.4**	**NS**	-	-	-	ND <0.4	-	ND <0.4	-	-
Dieldrin	**0.04**	**0.4**	**NS**	-	-	-	ND <0.04	-	ND <0.04	-	-
Polychlorinated Biphenyls (mg/kg)											
Aroclor-1016	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-
Aroclor-1221	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-
Aroclor-1232	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-
Aroclor-1242	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-
Aroclor-1248	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-
Aroclor-1254	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-
Aroclor-1260	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-

Notes:

1. Units: mg/Kg (milligrams per kilogram) or mg/L (milligrams per liter) as noted.
2. RIDEM RDEC, I/CDEC and GB Groundwater Leachability as defined in Section 8.0 of the *Remediation Regulations.*
3. **Bold** indicates a concentration above the laboratory detection limits.
4. Lightly shaded indicates a concentration above RIDEM RDEC.
5. Dark shaded and underlined indicates a concentration above RIDEM I/CDEC.
6. *Italics* indicate a concentration above RIDEM GB Groundwater Leachability.
7. - Not Analyzed
8. NS - No Standard exists within the Remediation Regulations

Appendix A: Limitations

Limitations

Blackstone River Bikeway, Segment 1A
Providence, Rhode Island

This report has been prepared for the sole and exclusive use of the Client. It is subject to and issued in connection with the Agreement and the provisions thereof. Any use or reliance upon information provided in this report, without the specific written authorization of the Client and VHB, shall be at the User's sole risk.

In conducting this assessment, VHB has obtained and relied upon information from multiple sources to form certain conclusions regarding potential environmental issues at and in the vicinity of the subject property. Except as otherwise noted, no attempt has been made to verify the accuracy or completeness of such information.

The objectives of the assessment described in this report were to assess the physical characteristics of the subject property with respect to overt evidence of past or present use, storage, and/or disposal of oil or hazardous materials as defined in applicable state and federal environmental laws and regulations, and to gather information regarding current and past operations and environmental conditions at and in the vicinity of the subject property.

Where access was denied or conditions obscured, VHB makes no report on such areas.

No attempt has been made to assess the compliance status of any past or present Owner or Operator of the Site with any federal, state, or local laws or regulations.

The findings, observations, and conclusions presented in this report are limited by the scope of services outlined in our Master Services Agreement between VHB and the State of Rhode Island and Providence Plantations. No other warranties, expressed or implied, are made as to the professional services provided under the terms of our contract and as included in this report.

The assessment presented in this report is based solely upon information gathered to date. Should further environmental or other relevant information be developed at a later, date, Client should bring the information to the attention of VHB as soon as possible. Based upon an evaluation, VHB may modify the report and its conclusions.

Appendix B:
VPL and Public Notice Summary

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

VOLUNTARY PROCEDURE LETTER
File No. SR-28-1774

June 12, 2015

VIA HAND DELIVERY

Lisa Primiano, Chief
Rhode Island Department of Environmental Management
Division of Planning and Development
235 Promenade Street
Providence, RI 02908

RE: Blackstone River Bikeway – Segment 1A
East Transit Street to Pitman Street, Providence, RI
Portions of Plat Map 15, Lots 446, 456, and 66
Portions of Plat Map 17, Lot 8
Portion of a paper street (Beach Street)

Dear Ms. Primiano:

On November 9, 2011, the Rhode Island Department of Environmental Management (the Department) enacted the amended Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations). The purpose of these Regulations is to create an integrated program requiring reporting, investigation, and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in a timely and cost-effective manner. A Voluntary Procedure Letter (VPL) is a preliminary document used to define the relationship between the Department and a Performing Party under the Remediation Regulations. In the case of a Voluntary Procedure Letter, a Performing Party may be a Voluntary Party or a Bona Fide Prospective Purchaser.

Please be advised of the following facts:

1. The above referenced property is located along the Seekonk River from East Transit Street to Pitman Street in Providence, RI and includes portions of Plat 17, Lot 8; Plat 15, Lots 446, 456, and 66; and a portion of a paper street (Beach Street).

2. The Department is in receipt of the following document:

   a. Hazardous Waste Release Notification Form with Supporting Documentation, received by the Department on May 29, 2015, and prepared by Vanasse Hangen Brustlin, Inc. (VHB);

3. The above referenced document identifies concentrations of various polycyclic aromatic hydrocarbons (PAHs), arsenic, and lead in Site soils that exceed the Department's Method 1 Direct Exposure Criteria, as referenced in the Remediation Regulations.

4. Based on the presence and nature of these Hazardous Substances the Department concurs that a Release of Hazardous Materials has occurred as defined by Rules 3.33, 3.34, and 3.63 of the Remediation Regulations.

The Department requests that the Division of Planning and Development, as Performing Party, provide the Department with the requested information listed below in order to complete the requirements of Section 7.00 of the Remediation Regulations:

1. If necessary, prior to the implementation of any additional site investigation field activities and in accordance with Rule 7.07(A)(i) of the Remediation Regulations, the Division of Planning and Development must notify all abutting property owners, tenants, easement holders, and the municipalities that an investigation is about to occur. The notice should briefly indicate the purpose of the investigation, the work to be performed, and the approximate scheduled dates of activities. Please submit a draft notification to the Department via E-mail for review and approval prior to distribution. A boilerplate notification to be distributed can be found online at:

   http://www.dem.ri.gov/programs/benviron/waste/topicrem.htm#process.

   The Department will require a copy of the public notice letter and a list of all recipients. Failure to comply with the aforementioned items may result in enforcement actions as specified in Rhode Island General Laws 23-19.1-17 and 23-19.1-18.

2. Ensure that the requirements of Rhode Island General Law (RIGL), Title 23, *Health and Safety*, Chapter 23-19.14, *Industrial Property Remediation and Reuse Act*, Section 23-19.14-5, *Environmental Equity and Public Participation*, have been fulfilled.

3. In accordance with the above referenced Industrial Property Remediation and Reuse Act, prior to the establishment of a final scope of investigation for the Site and after the completion of All Appropriate Inquiries (AAI), hold a public meeting for the purposes of obtaining information about conditions at the Site and the environmental history at the Site that may be useful in establishing the scope of the investigation and/or establishing the objectives for the environmental clean-up of the Site.

   a. The public meeting shall be held in the City or Town in which the Site is located.
   b. Public notice shall be given of the meeting at least ten (10) business days prior to the meeting.
   c. Following the meeting, the record of the meeting shall be open for a period of not less than ten (10) and not more than twenty (20) business days for the receipt of public comment.

d. The results of all appropriate inquiries, analysis and the public meeting, including the comment period and responses to all comments received, shall be documented in a written report submitted to the Department.

   No work (remediation or construction) shall be permitted at the property until the public meeting and comment period regarding the Site's proposed reuse has closed. The above detailed required public notice, meeting and comment period shall be in addition to any other requirements for public notice and comment relating to the investigation or remedy of the Site and may be part of another meeting pertaining to the Site provided that the minimum standards established by RIGL Section 23-19.14-5 for notice and comment are met.

4. Conduct further investigation of the Site soil and groundwater, if warranted, in accordance with Section 7.00 of the Remediation Regulations.

5. Upon completion of the additional site investigation submit a Site Investigation Report (SIR) in accordance with Section 7.00 of the Remediation Regulations within ninety (90) days from the date of this letter. Given that some limited environmental investigation has already been performed at the Site, you may incorporate portions of the information already gathered and work already performed to address the items covered in Section 7.00. The SIR should include at least two remedial alternatives other than no action/natural attenuation and include future plans for the re-use or redevelopment (if applicable) of the property.

6. Submit an SIR checklist in accordance with Rule 7.08 of the Remediation Regulations. The SIR checklist was created as a supplemental tool to expedite the review and approval process by cross-referencing the specific sections and pages within the SIR that provide the detailed information that addresses each stated requirement within Section 7.00 of the Remediation Regulations.

7. Upon approval by the Department of the SIR, be prepared to bring the Site into compliance with the Remediation Regulations.

Please be advised that the Division of Planning and Development, as the Performing Party, is responsible for the proper investigation and remediation of hazardous substances at this site. Also be advised that any remedial alternative that proposes to leave contaminated media on-site at levels which exceed the Department's Residential Direct Exposure Criteria, applicable Leachability Criteria, or applicable Groundwater Criteria will, at a minimum, necessitate the recording of an institutional control in the form of an Environmental Land Usage Restriction (ELUR) on the deed for the site, and will likely require implementation of additional engineered controls to restrict human exposure.

Please notify this office within seven days of the receipt of this letter of your plans to address these items. All correspondences should be sent to the attention of:

Nicholas J. Noons
RIDEM / Office of Waste Management
235 Promenade Street
Providence, RI 02908

If you have any questions regarding this letter or would like the opportunity to meet with Department personnel, please contact me by telephone at (401) 222-2797, ext. 7517, or by E-mail at nicholas.noons@dem.ri.gov.

Sincerely,

Nicholas J. Noons
Sanitary Engineer
Office of Waste Management

cc: Kelly Owens, RIDEM/Office of Waste Management
Ashley Blauvelt, RIDEM/Office of Waste Management
Robert Bailey, RIDEM/Division of Planning and Development
Lambri Zerva, Rhode Island Department of Transportation
Peter Grivers, Vanasse Hangen Brustlin, Inc.
Scott D'Amelio, Vanasse Hangen Brustlin, Inc.
John Marsland, Blackstone River Watershed Council / Friends of the Blackstone

July 23, 2015

Ref: 72017.01

Mr. Nicholas J. Noons
Sanitary Engineer
Office of Waste Management
235 Promenade Street
Providence, RI 02908

Re: Summary of Pre-Site Investigation Public Notice
Blackstone River Bikeway - Segment 1A
Providence, Rhode Island

Dear Mr. Noons:

This correspondence serves to provide a summary of the Pre-Site Investigation Public Notice completed for the subject Site between July 7 and July 21, 2015.

- On June 24, 2015, a public notice mailing (in both English and Spanish) consisting of a cover letter, an Environmental Justice Fact Sheet, a RIDEM Fact Sheet explaining their project role , a RIDEM Fact Sheet explaining the Site Remediation Program, and a Brownfields publication was sent to 20 abutters and other interested parties. The content of the mailing was approved by your office prior to mailing. A copy of the mailing list and the mailing is attached. The cover letter indicated that RIDEM would be accepting questions and comments regarding the proposed Site Investigation activities at a Public Meeting on July 7, 2015, or sent directly to RIDEM until 4:00 pm on July 21, 2015.
- On June 30, 2015, two signs were posted at the Site notifying the public that a Site Investigation was in progress. One sign was posted on the fence of the basketball court near the southern end of the project area, facing the public parking lot for the East Transit Street Boat Ramp. The other sign was posted on the fence of one of the baseball fields near the northern end of the project area, facing the public parking area for Gano Park, off Power Street. The sign included your name and contact information as the RIDEM Case Manager for the Site. The sign remains at the Site as of the date of this letter. A copy of the wording included on the sign is attached.
- On June 25, 2015, a newspaper notice was published in the Providence Journal advertising the date and time of a Pre-Site Investigation Meeting to be held at the Fox Point Library on July 7, 2015 from 5:00 – 6:00 pm. The notice also indicated that questions and comments could be submitted to RIDEM through 4:00 pm on July 21, 2015. A copy of the notice is attached.
- On July 7, 2015, VHB and RIDEM attended the public meeting at the Fox Point Library. Five members of the general public attended the meeting. A copy of the Meeting Sign-In Sheet is

www.vhb.com

Engineers | Scientists | Planners | Designers

1 Cedar Street
Suite 400
Providence, RI 02903
P 401.272.8100
F 401.277.8400

attached. Four questions relative to the environmental work at the Site were asked during the public meeting, as summarized below:

1) Stephen Hosseld, a resident of Eastside Commons, asked "Where were the samples collected?"
   - Peter Grivers, a VHB Senior Project Manager, discussed the location of the seven soil samples collected, the general findings of the laboratory analysis and the reason for no sampling north of the railroad tracks. It was stated that this information would be available on the RIDEM website (see Comment 4).
2) Stephen Hosseld asked "Do you anticipate any off-Site disposal of soils?"
   - You answered that there was the possibility of off-Site disposal if excess soil is excavated. Other soils will be capped on Site.
3) Fred Rosenzweig, a resident of Eastside Commons, asked "What is the next step in the process?"
   - Nicholas Noons discussed the steps that would be taken as part of the Site Remediation process, including completion of the pre-Site Investigation Public Comment Period, completion of a Site Investigation Report, a post-Site Investigation Public Comment Period, the development of a Remedial Action Work Plan and final approval by RIDEM.
4) Stephen Hosseld asked to see a copy of the data.
   - You stated that reports and data would be posted on RIDEM's website and an email would be sent to the attendees of the public meeting, letting them know when the information was available.

➢ At 4:00 pm on July 21, 2015, the pre-Site Investigation Public Notice period closed. No public comments or questions were received by VHB or RIDEM during the comment period. Therefore, no additional formal response to comments or questions by VHB was required or performed.

If you have any questions, or require additional information, please feel free to contact me or Peter Grivers.

Very Truly Yours,

VANASSE HANGEN BRUSTLIN, INC.

Shelby A. Miller

Shelby A. Miller

Environmental Scientist
samiller@vhb.com

Copy of Mailing List and Public Notice Package

Blackstone River Bikeway Segment 1A – Pre Site Investigation Public Notice Mailing List

Owner	Address	Mailing Address	Plat	Lot	Land Use
State of Rhode Island	177 Gano Street	State House 82 Smith Street Providence, RI 02903	14	195	Vacant
City of Providence	293 Power Street	City Hall 25 Dorrance Street Providence, RI 02903	14	316	Recreational
City of Providence	10 Beach	City Hall 25 Dorrance Street Providence, RI 02903	14	328	Recreational
City of Providence	260 Power Street	City Hall 25 Dorrance Street Providence, RI 02903	14	566	Recreational
One Wayland Avenue Condominiums	1 Wayland Avenue	1 Wayland Avenue Providence, RI 02906	14	589	Residential
State of Rhode Island	41 Wayland Avenue	State House 82 Smith Street Providence, RI 02903	15	66	Vacant
City of Providence	86 Wayland Avenue	City Hall 25 Dorrance Street Providence, RI 02903	15	446	Recreational
City of Providence	88 Wayland Avenue	City Hall 25 Dorrance Street Providence, RI 02903	15	456	Recreational
City of Providence	84 Wayland Avenue	City Hall 25 Dorrance Street Providence, RI 02903	15	457	Recreational
Riverview Retail LLC	2 Butler Street	10 Memorial Boulevard Unit 901 Providence, RI 02903	15	487	Commercial
Riverview Retail LLC	133 Pitman Street	10 Memorial Boulevard Unit 901 Providence, RI 02903	15	493	Commercial
City of Providence	Off Gano	City Hall 25 Dorrance Street Providence, RI 02903	17	8	Recreational

Owner	Address	Mailing Address	Plat	Lot	Land Use
State of Rhode Island	177 Gano Street	State House 82 Smith Street Providence, RI 02903	14	195	Vacant
City of Providence	87 Fremont Street	City Hall 25 Dorrance Street Providence, RI 02903	17	368	Recreational
HV Collins Company	101 Gano Street	99 Gano Street Providence, RI 02906	17	416	Commercial
Lori L. Hagen, City Clerk	City Hall	City Hall – Room 311 25 Dorrance Street Providence, RI 02903			
Councilman Seth Yurdin	City Hall	City Hall – Room 310 25 Dorrance Street Providence, RI 02903			
Bonnie Nickerson, AICP, Planning & Development Director	City Hall	444 Westminster Street Providence, RI 02903			
State Senator Gayle L. Goldin	Statehouse	Statehouse Room 317 Providence, RI 02903			
State Representative Christopher R. Blazejewski	Statehouse	Statehouse Room 323 Providence, RI 02903			

June 24, 2015

Ref: 72017.01

State of Rhode Island
State House
82 Smith Street
Providence, RI 02903

177 Gano Street (Plat 14, Lot 195)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Portions of Plat Map 15, Lots 446, 456, and 66
Portions of Plat Map 17, Lot 8
Portions of a paper street (Beach Street)
RIDEM File No. SR-28-1774

To Whom It May Concern:

Vanasse Hangen Brustlin, Inc. (VHB), on behalf of the Rhode Island Department of Environmental Management (RIDEM) and the City of Providence, submits this letter to inform you of Site Investigation activities at the above-referenced property. The property includes areas along the Seekonk River from East Transit Street to Pitman Street (portions of Plat Map 15, Lots 446, 456, and 66; portions of Plat Map 17, Lot 8; and a portion of a paper Street, Beach Street) in Providence, Rhode Island. These properties are currently used for recreational activities, including sporting fields and a dog park.

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1 Cedar Street
Suite 400
Providence, RI 02903
P 401.272.8100
F 401.277.8400

If you have any questions or comments regarding these activities, they may be asked or submitted at the public meeting on July 7, 2015 or you may submit them to the RIDEM contact person listed below no later than 4:00 pm on July 21, 2015.

Nicholas J. Noons, Sanitary Engineer
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02908
Telephone: 401-222-2797 x7517
Email: Nicholas.Noons@dem.ri.gov

Sincerely,

Peter M. Grivers, PE, LSP
Senior Project Engineer
pgrivers@vhb.com

CC: Robert Bailey, RIDEM, Planning and Development
Lambri Zerva, RIDOT
Scott D'Amelio, VHB

June 24, 2015

Ref: 72017.01

City of Providence
City Hall
25 Dorrance Street
Providence, RI 02903

293 Power Street (Plat 14, Lot 316)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Portions of Plat Map 15, Lots 446, 456, and 66
Portions of Plat Map 17, Lot 8
Portions of a paper street (Beach Street)
RIDEM File No. SR-28-1774

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Scott D'Amelio, VHB

June 24, 2015

Ref: 72017.01

City of Providence
City Hall
25 Dorrance Street
Providence, RI 02903

10 Beach Street (Plat 14, Lot 328)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Portions of Plat Map 15, Lots 446, 456, and 66
Portions of Plat Map 17, Lot 8
Portions of a paper street (Beach Street)
RIDEM File No. SR-28-1774

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Scott D'Amelio, VHB

June 24, 2015

Ref: 72017.01

City of Providence
City Hall
25 Dorrance Street
Providence, RI 02903

260 Power Street (Plat 14, Lot 566)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Portions of Plat Map 15, Lots 446, 456, and 66
Portions of Plat Map 17, Lot 8
Portions of a paper street (Beach Street)
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Scott D'Amelio, VHB

June 24, 2015

Ref: 72017.01

One Wayland Avenue Condominiums
1 Wayland Avenue
Providence, RI 02906

1 Wayland Avenue (Plat 14, Lot 589)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Portions of Plat Map 15, Lots 446, 456, and 66
Portions of Plat Map 17, Lot 8
Portions of a paper street (Beach Street)
RIDEM File No. SR-28-1774

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Suite 400
Providence, RI 02903
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Scott D'Amelio, VHB

June 24, 2015

Ref: 72017.01

State of Rhode Island
State House
82 Smith Street
Providence, RI 02903

41 Wayland Avenue (Plat 15, Lot 66)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Portions of Plat Map 15, Lots 446, 456, and 66
Portions of Plat Map 17, Lot 8
Portions of a paper street (Beach Street)
RIDEM File No. SR-28-1774

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www.vhb.com

Engineers | Scientists | Planners | Designers

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Scott D'Amelio, VHB

June 24, 2015

Ref: 72017.01

City of Providence
City Hall
25 Dorrance Street
Providence, RI 02903

86 Wayland Avenue (Plat 15, Lot 446)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Portions of Plat Map 15, Lots 446, 456, and 66
Portions of Plat Map 17, Lot 8
Portions of a paper street (Beach Street)
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June 24, 2015

Ref: 72017.01

City of Providence
City Hall
25 Dorrance Street
Providence, RI 02903

88 Wayland Street (Plat 15, Lot 456)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Portions of Plat Map 15, Lots 446, 456, and 66
Portions of Plat Map 17, Lot 8
Portions of a paper street (Beach Street)
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Scott D'Amelio, VHB

June 24, 2015

Ref: 72017.01

City of Providence
City Hall
25 Dorrance Street
Providence, RI 02903

84 Wayland Avenue (Plat 15, Lot 457)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Portions of Plat Map 15, Lots 446, 456, and 66
Portions of Plat Map 17, Lot 8
Portions of a paper street (Beach Street)
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Lambri Zerva, RIDOT
Scott D'Amelio, VHB

June 24, 2015

Ref: 72017.01

Riverview Retail LLC
10 Memorial Boulevard, Unit 901
Providence, RI 02903

2 Butler Street (Plat 15, Lot 487)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Portions of Plat Map 15, Lots 446, 456, and 66
Portions of Plat Map 17, Lot 8
Portions of a paper street (Beach Street)
RIDEM File No. SR-28-1774

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Lambri Zerva, RIDOT
Scott D'Amelio, VHB

June 24, 2015

Ref: 72017.01

Riverview Retail LLC
10 Memorial Boulevard, Unit 901
Providence, RI 02903

133 Pitman Street (Plat 15, Lot 493)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Portions of Plat Map 15, Lots 446, 456, and 66
Portions of Plat Map 17, Lot 8
Portions of a paper street (Beach Street)
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1 Cedar Street
Suite 400
Providence, RI 02903
P 401.272.8100
F 401.277.8400

If you have any questions or comments regarding these activities, they may be asked or submitted at the public meeting on July 7, 2015 or you may submit them to the RIDEM contact person listed below no later than 4:00 pm on July 21, 2015.

Nicholas J. Noons, Sanitary Engineer
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02908
Telephone: 401-222-2797 x7517
Email: Nicholas.Noons@dem.ri.gov

Sincerely,

Peter M. Grivers, PE, LSP
Senior Project Engineer
pgrivers@vhb.com

CC: Robert Bailey, RIDEM, Planning and Development
Lambri Zerva, RIDOT
Scott D'Amelio, VHB

June 24, 2015

Ref: 72017.01

City of Providence
City Hall
25 Dorrance Street
Providence, RI 02903

Off Gano Street (Plat 17, Lot 8)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Portions of Plat Map 15, Lots 446, 456, and 66
Portions of Plat Map 17, Lot 8
Portions of a paper street (Beach Street)
RIDEM File No. SR-28-1774

To Whom It May Concern:

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June 24, 2015

Ref: 72017.01

State of Rhode Island
State House
82 Smith Street
Providence, RI 02903

177 Gano Street (Plat 14, Lot 195)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Portions of Plat Map 15, Lots 446, 456, and 66
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Lambri Zerva, RIDOT
Scott D'Amelio, VHB

June 24, 2015

Ref: 72017.01

City of Providence
City Hall
25 Dorrance Street
Providence, RI 02903

87 Fremont Street (Plat 17, Lot 368)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Portions of Plat Map 15, Lots 446, 456, and 66
Portions of Plat Map 17, Lot 8
Portions of a paper street (Beach Street)
RIDEM File No. SR-28-1774

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Engineers | Scientists | Planners | Designers

1 Cedar Street
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Sincerely,

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Lambri Zerva, RIDOT
Scott D'Amelio, VHB

June 24, 2015

Ref: 72017.01

HV Collins Company
99 Gano Street
Providence, RI 02906

101 Gano Street (Plat 17, Lot 146)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Portions of Plat Map 15, Lots 446, 456, and 66
Portions of Plat Map 17, Lot 8
Portions of a paper street (Beach Street)
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Lambri Zerva, RIDOT
Scott D'Amelio, VHB

June 24, 2015

Ref: 72017.01

Lori L. Hagen, City Clerk
City Hall – Room 311
25 Dorrance Street
Providence, RI 02903

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Portions of Plat Map 15, Lots 446, 456, and 66
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Lambri Zerva, RIDOT
Scott D'Amelio, VHB

June 24, 2015

Ref: 72017.01

Councilman Seth Yurdin
City Hall – Room 310
25 Dorrance Street
Providence, RI 02903

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
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Lambri Zerva, RIDOT
Scott D'Amelio, VHB

June 24, 2015

Ref: 72017.01

Bonnie Nickerson, AICP
Planning & Development Director
City Hall
444 Westminster Street
Providence, RI 02903

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Portions of Plat Map 15, Lots 446, 456, and 66
Portions of Plat Map 17, Lot 8
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Scott D'Amelio, VHB

June 24, 2015

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State Senator Gayle L. Goldin
Statehouse
Statehouse, Room 317
Providence, RI 02903

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
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Portions of a paper street (Beach Street)
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Lambri Zerva, RIDOT
Scott D'Amelio, VHB

June 24, 2015

Ref: 72017.01

State Representative Christopher R. Blazejewski
Statehouse
Statehouse Room 323
Providence, RI 02903

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Portions of Plat Map 15, Lots 446, 456, and 66
Portions of Plat Map 17, Lot 8
Portions of a paper street (Beach Street)
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Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

State of Rhode Island
State House
82 Smith Street
Providence, RI 02903

177 Gano Street (Plat 14, Lot 195)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
Partes del mapa 17 Plat, lote 8
Partes de una calle de papel (Beach Street)
RIDEM File No. SR-28-1774

A quien corresponda,

Vanasse Hangen Brustlin, Inc. (VHB), en nombre del Departamento de gestión ambiental de Rhode Island (RIDEM) y la ciudad de Providence, envía esta carta para informarle de las actividades de investigación del sitio a la propiedad arriba mencionada. La propiedad incluye áreas a lo largo del río Seekonk de este tránsito de la calle a calle de Pitman (porciones de 15 mapa de Plat, mucha 446 y 456 66; porciones de Plat mapa 17, lote 8; y una porción de un documento de la calle, Beach Street) en Providence, Rhode Island. Estas propiedades se utilizan actualmente para actividades recreativas, como campos deportivos y un parque para perros.

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Engineers | Scientists | Planners | Designers

1 Cedar Street
Suite 400
Providence, RI 02903
P 401.272.8100
F 401.277.8400

Cualquier persona interesada en aprender más información sobre investigación en el terreno y de las condiciones ambientales en el sitio se le invita a asistir a una reunión pública desde las 5:00 - 6:00 pm del martes, 7 de Julio, 2015 en la Fox Punto Biblioteca ubicada a 90 Ives Street, Providence, RI.

Si tiene alguna pregunta o comentarios en cuanto a estas actividades, se pueden preguntar o presentarse en la reunión pública el 7 de julio de 2015 o los puede presentar al RIDEM persona de contacto que aparece a continuación antes de las 4:00 pm el 21 de julio de 2015.

Nicholas J. Noons, Ingenieroaingeniera sanitarioasanitaria
Rhode Island Departamento de Gestión Ambiental
Oficina de Gestión de Residuos
235 Promenade Street
Providence, Rhode Island 02908
Teléfono: 401-222-2797 x7517
El correo electrónico: Nicholas.Noons@dem.ri.gov

Sinceramente,

Peter M. Grivers, PE, LSP
Ingeniero Senior de Proyectos
pgrivers@vhb.com

CC: Robert Bailey, RIDEM, Planificación y Desarrollo
Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

City of Providence
City Hall
25 Dorrance Street
Providence, RI 02903

293 Power Street (Plat 14, Lot 316)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
Partes del mapa 17 Plat, lote 8
Partes de una calle de papel (Beach Street)
RIDEM File No. SR-28-1774

A quien corresponda,

Vanasse Hangen Brustlin, Inc. (VHB), en nombre del Departamento de gestión ambiental de Rhode Island (RIDEM) y la ciudad de Providence, envía esta carta para informarle de las actividades de investigación del sitio a la propiedad arriba mencionada. La propiedad incluye áreas a lo largo del río Seekonk de este tránsito de la calle a calle de Pitman (porciones de 15 mapa de Plat, mucha 446 y 456 66; porciones de Plat mapa 17, lote 8; y una porción de un documento de la calle, Beach Street) en Providence, Rhode Island. Estas propiedades se utilizan actualmente para actividades recreativas, como campos deportivos y un parque para perros.

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1 Cedar Street
Suite 400
Providence, RI 02903
P 401.272.8100
F 401.277.8400

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Rhode Island Departamento de Gestión Ambiental
Oficina de Gestión de Residuos
235 Promenade Street
Providence, Rhode Island 02908
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El correo electrónico: Nicholas.Noons@dem.ri.gov

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Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

City of Providence
City Hall
25 Dorrance Street
Providence, RI 02903

10 Beach Street (Plat 14, Lot 328)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
Partes del mapa 17 Plat, lote 8
Partes de una calle de papel (Beach Street)
RIDEM File No. SR-28-1774

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1 Cedar Street
Suite 400
Providence, RI 02903
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F 401.277.8400

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Oficina de Gestión de Residuos
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Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

City of Providence
City Hall
25 Dorrance Street
Providence, RI 02903

260 Power Street (Plat 14, Lot 566)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
Partes del mapa 17 Plat, lote 8
Partes de una calle de papel (Beach Street)
RIDEM File No. SR-28-1774

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1 Cedar Street
Suite 400
Providence, RI 02903
P 401.272.8100
F 401.277.8400

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Rhode Island Departamento de Gestión Ambiental
Oficina de Gestión de Residuos
235 Promenade Street
Providence, Rhode Island 02908
Teléfono: 401-222-2797 x7517
El correo electrónico: Nicholas.Noons@dem.ri.gov

Sinceramente,

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Ingeniero Senior de Proyectos
pgrivers@vhb.com

CC: Robert Bailey, RIDEM, Planificación y Desarrollo
Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

One Wayland Avenue Condominiums
1 Wayland Avenue
Providence, RI 02906

1 Wayland Avenue (Plat 14, Lot 589)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
Partes del mapa 17 Plat, lote 8
Partes de una calle de papel (Beach Street)
RIDEM File No. SR-28-1774

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1 Cedar Street
Suite 400
Providence, RI 02903
P 401.272.8100
F 401.277.8400

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Rhode Island Departamento de Gestión Ambiental
Oficina de Gestión de Residuos
235 Promenade Street
Providence, Rhode Island 02908
Teléfono: 401-222-2797 x7517
El correo electrónico: Nicholas.Noons@dem.ri.gov

Sinceramente,

Peter M. Grivers, PE, LSP
Ingeniero Senior de Proyectos
pgrivers@vhb.com

CC: Robert Bailey, RIDEM, Planificación y Desarrollo
Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

State of Rhode Island
State House
82 Smith Street
Providence, RI 02903

41 Wayland Avenue (Plat 15, Lot 66)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
Partes del mapa 17 Plat, lote 8
Partes de una calle de papel (Beach Street)
RIDEM File No. SR-28-1774

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1 Cedar Street
Suite 400
Providence, RI 02903
P 401.272.8100
F 401.277.8400

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Oficina de Gestión de Residuos
235 Promenade Street
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El correo electrónico: Nicholas.Noons@dem.ri.gov

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Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

City of Providence
City Hall
25 Dorrance Street
Providence, RI 02903

86 Wayland Avenue (Plat 15, Lot 446)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
Partes del mapa 17 Plat, lote 8
Partes de una calle de papel (Beach Street)
RIDEM File No. SR-28-1774

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Suite 400
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Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

City of Providence
City Hall
25 Dorrance Street
Providence, RI 02903

88 Wayland Avenue (Plat 15, Lot 456)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
Partes del mapa 17 Plat, lote 8
Partes de una calle de papel (Beach Street)
RIDEM File No. SR-28-1774

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Providence, Rhode Island 02908
Teléfono: 401-222-2797 x7517
El correo electrónico: Nicholas.Noons@dem.ri.gov

Sinceramente,

Peter M. Grivers, PE, LSP
Ingeniero Senior de Proyectos
pgrivers@vhb.com

CC: Robert Bailey, RIDEM, Planificación y Desarrollo
Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

City of Providence
City Hall
25 Dorrance Street
Providence, RI 02903

84 Wayland Avenue (Plat 15, Lot 457)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
Partes del mapa 17 Plat, lote 8
Partes de una calle de papel (Beach Street)
RIDEM File No. SR-28-1774

A quien corresponda,

Vanasse Hangen Brustlin, Inc. (VHB), en nombre del Departamento de gestión ambiental de Rhode Island (RIDEM) y la ciudad de Providence, envía esta carta para informarle de las actividades de investigación del sitio a la propiedad arriba mencionada. La propiedad incluye áreas a lo largo del río Seekonk de este tránsito de la calle a calle de Pitman (porciones de 15 mapa de Plat, mucha 446 y 456 66; porciones de Plat mapa 17, lote 8; y una porción de un documento de la calle, Beach Street) en Providence, Rhode Island. Estas propiedades se utilizan actualmente para actividades recreativas, como campos deportivos y un parque para perros.

Una limitada investigación subsuperficial realizado en la propiedad en diciembre de 2014 identificado metales (plomo y arsénico) y los hidrocarburos aromáticos policíclicos (HAP) en el suelo que exceden los criterios del Departamento de gestión ambiental de Rhode Island (RIDEM) para uso residencial o industrial y comercial de la tierra. Como consecuencia de estos resultados y el desarrollo previsto de la propiedad como una propiedad recreativa de uso público (es decir, el carril bicicletas), VHB a llevar a cabo una reunión pública para proporcionar información sobre las condiciones ambientales identificadas en el sitio y solicitar comentarios orales y escritos de la opinión pública que puede ser útil en determinar si las actividades de investigación adicionales son necesarias y si es así, para ayudar a establecer el alcance de la investigación del sitio según Rhode Island Ley General título 23, capítulo 23-19.14 (corrección de Propiedad Industrial y ley de reutilización) y regla 7.07(A)(i) de RIDEM reglas y reglamentos para la investigación y remediación de liberaciones de materiales peligrosos.

1 Cedar Street
Suite 400
Providence, RI 02903
P 401.272.8100
F 401.277.8400

Cualquier persona interesada en aprender más información sobre investigación en el terreno y de las condiciones ambientales en el sitio se le invita a asistir a una reunión pública desde las 5:00 - 6:00 pm del martes, 7 de Julio, 2015 en la Fox Punto Biblioteca ubicada a 90 Ives Street, Providence, RI.

Si tiene alguna pregunta o comentarios en cuanto a estas actividades, se pueden preguntar o presentarse en la reunión pública el 7 de julio de 2015 o los puede presentar al RIDEM persona de contacto que aparece a continuación antes de las 4:00 pm el 21 de julio de 2015.

Nicholas J. Noons, Ingenieroaingeniera sanitarioasanitaria
Rhode Island Departamento de Gestión Ambiental
Oficina de Gestión de Residuos
235 Promenade Street
Providence, Rhode Island 02908
Teléfono: 401-222-2797 x7517
El correo electrónico: Nicholas.Noons@dem.ri.gov

Sinceramente,

Peter M. Grivers, PE, LSP
Ingeniero Senior de Proyectos
pgrivers@vhb.com

CC: Robert Bailey, RIDEM, Planificación y Desarrollo
Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

Riverview Retail LLC
10 Memorial Boulevard, Unit 901
Providence, RI 02903

2 Butler Street (Plat 15, Lot 487)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
Partes del mapa 17 Plat, lote 8
Partes de una calle de papel (Beach Street)
RIDEM File No. SR-28-1774

A quien corresponda,

Vanasse Hangen Brustlin, Inc. (VHB), en nombre del Departamento de gestión ambiental de Rhode Island (RIDEM) y la ciudad de Providence, envía esta carta para informarle de las actividades de investigación del sitio a la propiedad arriba mencionada. La propiedad incluye áreas a lo largo del río Seekonk de este tránsito de la calle a calle de Pitman (porciones de 15 mapa de Plat, mucha 446 y 456 66; porciones de Plat mapa 17, lote 8; y una porción de un documento de la calle, Beach Street) en Providence, Rhode Island. Estas propiedades se utilizan actualmente para actividades recreativas, como campos deportivos y un parque para perros.

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1 Cedar Street
Suite 400
Providence, RI 02903
P 401.272.8100
F 401.277.8400

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Nicholas J. Noons, Ingenieroaingeniera sanitarioasanitaria
Rhode Island Departamento de Gestión Ambiental
Oficina de Gestión de Residuos
235 Promenade Street
Providence, Rhode Island 02908
Teléfono: 401-222-2797 x7517
El correo electrónico: Nicholas.Noons@dem.ri.gov

Sinceramente,

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Ingeniero Senior de Proyectos
pgrivers@vhb.com

CC: Robert Bailey, RIDEM, Planificación y Desarrollo
Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

Riverview Retail LLC
10 Memorial Boulevard, Unit 901
Providence, RI 02903

133 Pitman Street (Plat 15, Lot 493)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
Partes del mapa 17 Plat, lote 8
Partes de una calle de papel (Beach Street)
RIDEM File No. SR-28-1774

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Vanasse Hangen Brustlin, Inc. (VHB), en nombre del Departamento de gestión ambiental de Rhode Island (RIDEM) y la ciudad de Providence, envía esta carta para informarle de las actividades de investigación del sitio a la propiedad arriba mencionada. La propiedad incluye áreas a lo largo del río Seekonk de este tránsito de la calle a calle de Pitman (porciones de 15 mapa de Plat, mucha 446 y 456 66; porciones de Plat mapa 17, lote 8; y una porción de un documento de la calle, Beach Street) en Providence, Rhode Island. Estas propiedades se utilizan actualmente para actividades recreativas, como campos deportivos y un parque para perros.

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1 Cedar Street
Suite 400
Providence, RI 02903
P 401.272.8100
F 401.277.8400

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Nicholas J. Noons, Ingenieroaingeniera sanitarioasanitaria
Rhode Island Departamento de Gestión Ambiental
Oficina de Gestión de Residuos
235 Promenade Street
Providence, Rhode Island 02908
Teléfono: 401-222-2797 x7517
El correo electrónico: Nicholas.Noons@dem.ri.gov

Sinceramente,

Peter M. Grivers, PE, LSP
Ingeniero Senior de Proyectos
pgrivers@vhb.com

CC: Robert Bailey, RIDEM, Planificación y Desarrollo
Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

City of Providence
City Hall
25 Dorrance Street
Providence, RI 02903

Off Gano Street (Plat 17, Lot 8)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
Partes del mapa 17 Plat, lote 8
Partes de una calle de papel (Beach Street)
RIDEM File No. SR-28-1774

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Engineers | Scientists | Planners | Designers

1 Cedar Street
Suite 400
Providence, RI 02903
P 401.272.8100
F 401.277.8400

Cualquier persona interesada en aprender más información sobre investigación en el terreno y de las condiciones ambientales en el sitio se le invita a asistir a una reunión pública desde las 5:00 - 6:00 pm del martes, 7 de Julio, 2015 en la Fox Punto Biblioteca ubicada a 90 Ives Street, Providence, RI.

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Nicholas J. Noons, Ingenieroaingeniera sanitarioasanitaria
Rhode Island Departamento de Gestión Ambiental
Oficina de Gestión de Residuos
235 Promenade Street
Providence, Rhode Island 02908
Teléfono: 401-222-2797 x7517
El correo electrónico: Nicholas.Noons@dem.ri.gov

Sinceramente,

Peter M. Grivers, PE, LSP
Ingeniero Senior de Proyectos
pgrivers@vhb.com

CC: Robert Bailey, RIDEM, Planificación y Desarrollo
Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

State of Rhode Island
State House
82 Smith Street
Providence, RI 02903

177 Gano Street (Plat 14, Lot 195)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
Partes del mapa 17 Plat, lote 8
Partes de una calle de papel (Beach Street)
RIDEM File No. SR-28-1774

A quien corresponda,

Vanasse Hangen Brustlin, Inc. (VHB), en nombre del Departamento de gestión ambiental de Rhode Island (RIDEM) y la ciudad de Providence, envía esta carta para informarle de las actividades de investigación del sitio a la propiedad arriba mencionada. La propiedad incluye áreas a lo largo del río Seekonk de este tránsito de la calle a calle de Pitman (porciones de 15 mapa de Plat, mucha 446 y 456 66; porciones de Plat mapa 17, lote 8; y una porción de un documento de la calle, Beach Street) en Providence, Rhode Island. Estas propiedades se utilizan actualmente para actividades recreativas, como campos deportivos y un parque para perros.

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Engineers | Scientists | Planners | Designers

1 Cedar Street
Suite 400
Providence, RI 02903
P 401.272.8100
F 401.277.8400

Cualquier persona interesada en aprender más información sobre investigación en el terreno y de las condiciones ambientales en el sitio se le invita a asistir a una reunión pública desde las 5:00 - 6:00 pm del martes, 7 de Julio, 2015 en la Fox Punto Biblioteca ubicada a 90 Ives Street, Providence, RI.

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Nicholas J. Noons, Ingenieroaingeniera sanitarioasanitaria
Rhode Island Departamento de Gestión Ambiental
Oficina de Gestión de Residuos
235 Promenade Street
Providence, Rhode Island 02908
Teléfono: 401-222-2797 x7517
El correo electrónico: Nicholas.Noons@dem.ri.gov

Sinceramente,

Peter M. Grivers, PE, LSP
Ingeniero Senior de Proyectos
pgrivers@vhb.com

CC: Robert Bailey, RIDEM, Planificación y Desarrollo
Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

City of Providence
City Hall
25 Dorrance Street
Providence, RI 02903

87 Fremont Street (Plat 17, Lot 368)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
Partes del mapa 17 Plat, lote 8
Partes de una calle de papel (Beach Street)
RIDEM File No. SR-28-1774

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Engineers | Scientists | Planners | Designers

1 Cedar Street
Suite 400
Providence, RI 02903
P 401.272.8100
F 401.277.8400

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Nicholas J. Noons, Ingenieroaingeniera sanitarioasanitaria
Rhode Island Departamento de Gestión Ambiental
Oficina de Gestión de Residuos
235 Promenade Street
Providence, Rhode Island 02908
Teléfono: 401-222-2797 x7517
El correo electrónico: Nicholas.Noons@dem.ri.gov

Sinceramente,

Peter M. Grivers, PE, LSP
Ingeniero Senior de Proyectos
pgrivers@vhb.com

CC: Robert Bailey, RIDEM, Planificación y Desarrollo
Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

HV Collins Company
99 Gano Street
Providence, RI 02906

101 Gano Street (Plat 17, Lot 416)

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
Partes del mapa 17 Plat, lote 8
Partes de una calle de papel (Beach Street)
RIDEM File No. SR-28-1774

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1 Cedar Street
Suite 400
Providence, RI 02903
P 401.272.8100
F 401.277.8400

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Nicholas J. Noons, Ingenieroaingeniera sanitarioasanitaria
Rhode Island Departamento de Gestión Ambiental
Oficina de Gestión de Residuos
235 Promenade Street
Providence, Rhode Island 02908
Teléfono: 401-222-2797 x7517
El correo electrónico: Nicholas.Noons@dem.ri.gov

Sinceramente,

Peter M. Grivers, PE, LSP
Ingeniero Senior de Proyectos
pgrivers@vhb.com

CC: Robert Bailey, RIDEM, Planificación y Desarrollo
Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

Lori L. Hagen, City Clerk
City Hall – Room 311
25 Dorrance Street
Providence, RI 02903

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
Partes del mapa 17 Plat, lote 8
Partes de una calle de papel (Beach Street)
RIDEM File No. SR-28-1774

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Cualquier persona interesada en aprender más información sobre investigación en el terreno y de las condiciones ambientales en el sitio se le invita a asistir a una reunión pública desde las 5:00 - 6:00 pm del martes, 7 de Julio, 2015 en la Fox Punto Biblioteca ubicada a 90 Ives Street, Providence, RI.

1 Cedar Street
Suite 400
Providence, RI 02903
P 401.272.8100
F 401.277.8400

Si tiene alguna pregunta o comentarios en cuanto a estas actividades, se pueden preguntar o presentarse en la reunión pública el 7 de julio de 2015 o los puede presentar al RIDEM persona de contacto que aparece a continuación antes de las 4:00 pm el 21 de julio de 2015.

Nicholas J. Noons, Ingenieroaingeniera sanitarioasanitaria
Rhode Island Departamento de Gestión Ambiental
Oficina de Gestión de Residuos
235 Promenade Street
Providence, Rhode Island 02908
Teléfono: 401-222-2797 x7517
El correo electrónico: Nicholas.Noons@dem.ri.gov

Sinceramente,

Peter M. Grivers, PE, LSP
Ingeniero Senior de Proyectos
pgrivers@vhb.com

CC: Robert Bailey, RIDEM, Planificación y Desarrollo
Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

Councilman Seth Yurdin
City Hall – Room 310
25 Dorrance Street
Providence, RI 02903

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
Partes del mapa 17 Plat, lote 8
Partes de una calle de papel (Beach Street)
RIDEM File No. SR-28-1774

A quien corresponda,

Vanasse Hangen Brustlin, Inc. (VHB), en nombre del Departamento de gestión ambiental de Rhode Island (RIDEM) y la ciudad de Providence, envía esta carta para informarle de las actividades de investigación del sitio a la propiedad arriba mencionada. La propiedad incluye áreas a lo largo del río Seekonk de este tránsito de la calle a calle de Pitman (porciones de 15 mapa de Plat, mucha 446 y 456 66; porciones de Plat mapa 17, lote 8; y una porción de un documento de la calle, Beach Street) en Providence, Rhode Island. Estas propiedades se utilizan actualmente para actividades recreativas, como campos deportivos y un parque para perros.

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F 401.277.8400

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El correo electrónico: Nicholas.Noons@dem.ri.gov

Sinceramente,

Peter M. Grivers, PE, LSP
Ingeniero Senior de Proyectos
pgrivers@vhb.com

CC: Robert Bailey, RIDEM, Planificación y Desarrollo
Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

Bonnie Nickerson, AICP
Planning & Development Director
City Hall
444 Westminster Street
Providence, RI 02903

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
Partes del mapa 17 Plat, lote 8
Partes de una calle de papel (Beach Street)
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F 401.277.8400

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Oficina de Gestión de Residuos
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Sinceramente,

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CC: Robert Bailey, RIDEM, Planificación y Desarrollo
Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

State Senator Gayle L. Goldin
Statehouse, Room 317
Providence, RI 02903

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
Porciones del mapa de Plat 15, lotes 446 y 456 66
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P 401.272.8100
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Rhode Island Departamento de Gestión Ambiental
Oficina de Gestión de Residuos
235 Promenade Street
Providence, Rhode Island 02908
Teléfono: 401-222-2797 x7517
El correo electrónico: Nicholas.Noons@dem.ri.gov

Sinceramente,

Peter M. Grivers, PE, LSP
Ingeniero Senior de Proyectos
pgrivers@vhb.com

CC: Robert Bailey, RIDEM, Planificación y Desarrollo
Lambri Zerva, RIDOT
Scott D'Amelio, VHB

24 de Junio, 2015

Ref: 72017.01

State Representative Christopher R. Blazejewski
Statehouse Room 323
Providence, RI 02903

Re: Blackstone River Bikeway - Segment 1A
East Transit Street to Pitman Street, Providence, Rhode Island
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Engineers | Scientists | Planners | Designers

1 Cedar Street
Suite 400
Providence, RI 02903
P 401.272.8100
F 401.277.8400

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Rhode Island Departamento de Gestión Ambiental
Oficina de Gestión de Residuos
235 Promenade Street
Providence, Rhode Island 02908
Teléfono: 401-222-2797 x7517
El correo electrónico: Nicholas.Noons@dem.ri.gov

Sinceramente,

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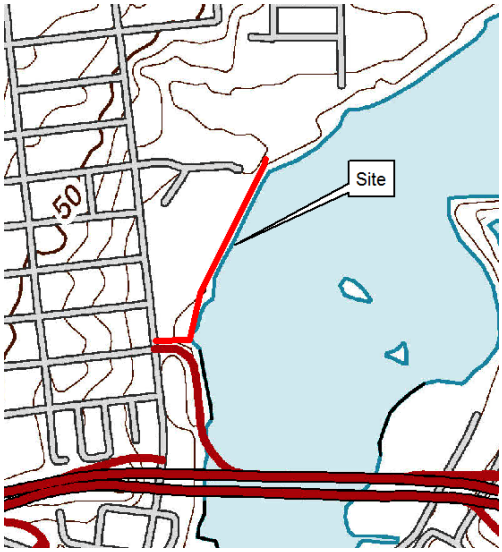
pgrivers@vhb.com

CC: Robert Bailey, RIDEM, Planificación y Desarrollo
Lambri Zerva, RIDOT
Scott D'Amelio, VHB

Environmental Justice Site-Specific Fact Sheet

Site Location

East Transit Street to Pitman Street
Providence, Rhode Island



Site Characteristics

- The Site consists of four parcels of land, Lots 446, 456 and 66 on the City of Providence Tax Assessor's Map No. 15 and Lot 8 on the City of Providence Tax Assessor's Map No. 17. The Site also contains a portion of a paper street, Beach Street.
- The Site area is estimated to be approximately 0.5 acres in total size.
- All four lots are used for recreational purposes, including athletic fields and a dog park. A majority of the ground surface is vegetated with grass.
- The Site is located in an area which has a groundwater classification of "GB"; "GB" areas are defined as groundwater resources "known or presumed unsuitable for drinking water use without treatment."

Site History

- The Site appears to have formally been part of the Seekonk River, prior to filling activities beginning in the early 1950s.
- Railroad tracks were constructed in the northern portion of the Site (Plat Map 15, Lot 66), traveling east-west, sometime between 1894 and 1939. The railroad tracks ceased operation around 1976.
- Warehouses and industrial activities have been occurring along Gano Street and Pitman Street since at least 1939.
- Athletic fields began to be utilized at the Site sometime between 1951 and 1962.
- A boat launch was constructed in 2014 on Plat Map 17, Lot 8.

Project Status

- A limited subsurface investigation was completed for the Site in December 2014.
- A Preliminary Site Investigation for the Site was completed in February 2015.
- A Hazardous Material Release Notification Form was submitted to the Rhode Island Department of Environmental Management (RIDEM) Office of Waste Management on May 30, 2015 by the RIDEM Division of Planning and Development.
- A Voluntary Procedure Letter was issued to the RIDEM Division of Planning and Development by the RIDEM Office of Waste Management on June 12, 2015. The Site has been assigned File No. SR-28-1774 by RIDEM.

Suspected and/or Known Contaminants

- Polycyclic Aromatic Hydrocarbons (PAHs), Arsenic (As), and Lead (Pb) were detected in soil at the Site above the RIDEM Direct Exposure Criteria (DEC) for Industrial/Commercial (I/C) and Residential (R) Land Use.
- Groundwater will not be encountered during Site development.

Project Plan

- No further Site investigation is proposed at this time.
- During Site development, soil contamination will be handled using a soil management plan to ensure compliance with applicable RIDEM Regulations. As part of Site development, the Site will be capped and an Environmental Land Usage Restriction (ELUR) will be applied.

Contact Information

Mr. Nicholas J. Noons, Sanitary Engineer
RIDEM – Office of Waste Management
235 Promenade Street
Providence, RI 02908
(401) 222-2797 x7517
nicholas.noons@dem.ri.gov

Hoja de datos específica de justicia ambiental

Ubicación del sitio
East Transit Street a Pitman Street
Providence, Rhode Island

Características del sitio
- El Sitio consiste en cuatro parcelas de tierra, Partes 446, 456 y 66 en la Ciudad del Mapa núm. 15 del Asesor del Impuesto de la Providencia y Parte 8 en la Ciudad del Mapa núm. 17 del Asesor del Impuesto de la Providencia. El Sitio también contiene una parte de una calle de papel, Beach Street.
- El área del sitio es de aproximadamente 0,5 acres de tamaño total.
- Cuatro partes son usadas con objetivos recreativos, incluso campos atléticos y un parque del perro. Una mayoría de la superficie de la tierra es vegetada con la hierba.
- El Sitio está localizado en un área que tiene una clasificación del agua subterránea “del GB”; las áreas del “GB” son definidas como recursos del agua subterránea “conocidos o supuestos inadecuados para el uso de agua potable sin el tratamiento”.

Historia del sitio
- El sitio parece haber sido formalmente parte del río Seekonk, antes de llenar de actividades a partir de principios de los años cincuenta.
- Las vías del ferrocarril fueron construidas en la parte del norte del Sitio (el Mapa 15 de Plat, Parte 66), viajando Este - Oeste, algún día entre 1894 y 1939. Las vías del tren dejó de funcionar en 1976.
- Los depósitos y las actividades industriales han estado ocurriendo a lo largo de Gano Street y Pitman Street desde al menos 1939.
- Los campos atléticos comenzaron a ser utilizados en el Sitio algún día entre 1951 y 1962.
- El lanzamiento de un barco fue construido en el 2014 en Plat mapa 17, lote 8.

Estado del proyecto
- Una investigación subsuperficial limitada fue completada para el Sitio en el diciembre de 2014.
- Una investigación preliminar para el sitio fue completado en 2015 Febrero.
- Un formulario de notificación de liberación Material peligroso fue presentado a la Oficina de Gestión de Residuos de Departamento de Gestión Ambiental de Rhode Island (RIDEM) en 30 de mayo de 2015 por la RIDEM División de planificación y desarrollo.
- Una carta voluntaria de procedimiento fue emitida RIDEM División de planificación y desarrollo por la oficina de gestión de residuos de RIDEM en 12 de junio de 2015. El sitio ha sido asignado el expediente no. SR-28-1774 por RIDEM.

Contaminantes sospechados y/o Conocidos
- Policíclico hidrocarburos aromáticos (PAHs), arsénico (As) y plomo (Pb) fueron detectados en el suelo en el sitio por encima de los criterios de exposición directa de RIDEM (DEC) para Industrial y comercial (I / C) y residencial (R) uso de la tierra.
- El agua subterránea no será encontrada durante el desarrollo del Sitio.

Plan de proyecto
- Ninguna otra investigación de sitio se propone en este momento.
- Durante el desarrollo del sitio, la contaminación del suelo se tratarán mediante un plan de manejo de suelo para asegurar el cumplimiento con los reglamentos aplicables de RIDEM. Como parte del desarrollo del sitio, el sitio se limitará y una restricción de uso ambiental de la Tierra (ELUR) se va a aplicar.

Información de contacto
Mr. Nicholas J. Noons, Ingenieroaingeniera Sanitarioasanitaria
RIDEM – Oficina de Gestión de Residuos
235 Promenade Street
Providence, RI 02908
(401) 222-2797 x7517
nicholas.noons@dem.ri.gov

Rhode Island Department of Environmental Management

Working to Protect Rhode Island's Environment

Who We Are....

The Rhode Island Department of Environmental Management (DEM) is the state agency responsible for preserving the quality of Rhode Island's environment for you and everyone who calls Rhode Island home. Our main office is conveniently located in Providence. We help protect the **AIR** you breathe, the **LAND** your homes, businesses and schools are built on, and the **WATER** you use for swimming and fishing.

What We Do....

DEM takes citizen complaints about pollution seriously and is committed to responding to complaints as quickly as possible. By contacting us, your complaint can be addressed and the investigation process can begin. Or maybe you don't have a complaint – maybe you have a question or need information about something happening in your neighborhood. We can help.

DEM receives complaints and questions about many subjects, including: illegal dumping, odor complaints from industrial facilities, illegal discharges into streams/rivers, dust problems, and similar threats to public health and the environment.

How We Can Help You....

DEM encourages your participation in helping us protect the environment and health of your community. We are here to answer your questions and investigate your complaints. Are you looking for information about a particular pollutant such as mercury or exterior lead paint?

Or maybe you are interested in learning more about a piece of property under construction near your home, or how to properly dispose of used oil? Are you concerned about illegal dumping or strange odors in your neighborhood?

We are here to serve you – please do not hesitate to contact us if you have questions, need to file a complaint about something happening in your community, or want more information about the many programs DEM runs that may directly impact you or your neighborhood. You can raise an issue anonymously or leave your name to get follow-up information.

VISIT OR CALL US:

IN PERSON:
MONDAY-FRIDAY, 8:30 AM-4:00 PM
235 PROMENADE STREET PROVIDENCE, RI
(2nd FLOOR INFORMATION DESK)

AT OUR WEB SITE:
www.dem.ri.gov

STILL HAVE QUESTIONS? CALL US:

GENERAL INFORMATION: **401-222-6800**
TDD LINE: **401-222-4462**

NEED TO FILE A COMPLAINT?
401-222-1360

AFTER HOURS
EMERGENCIES/COMPLAINTS:
401-222-3070

STILL DON'T KNOW WHO TO CALL?
TRY DEM'S OFFICE OF TECHNICAL & CUSTOMER ASSISTANCE:
401-222-6822

Rhode Island Department of Environmental Management
Office of Waste Management
State Site Remediation & Brownfields Program

Who We Are....

The Rhode Island Department of Environmental Management's (DEM) Office of Waste Management (OWM) Site Remediation & Brownfields Program was established to provide fair, comprehensive and consistent regulation of the investigation and remediation of hazardous waste and hazardous material releases, implemented in a timely and cost-effective manner. The program is designed to determine if a site poses a threat to human health and the environment and evaluate whether or not proposed remedies effectively provide protection.

This program also supports the redevelopment and reuse of contaminated sites through the Brownfields program. Sites are identified, evaluated, cleaned up and brought back to beneficial reuse in Rhode Island communities.

What We Do....

OWM's Site Remediation & Brownfields Program regulates and provides technical oversight for the investigation and remediation of releases of hazardous waste and/or hazardous materials to the environment; ensures that those investigations and remedial activities are conducted in a consistent manner that adequately protects human health and the environment; and enforces regulations regarding the proper disposal of abandoned hazardous wastes and hazardous materials.

The Process ....

Cleaning a contaminated site requires investigation, planning and action. The *Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases* (http://www.dem.ri.gov/pubs/regs/regs/waste/remreg04.pdf) define the specific documents that are needed, or may be needed, as part of that process:

- Notification of Release;
- Site Investigation Work Plan (SIWP);
- Public Notice of Investigation;
- Site Investigation Report (SIR);
- Public Notice of Completed Site Investigation & Public Comment Period on Technical Feasibility of Proposed Remedy;
- Remedial Action Work Plan (RAWP);
- Remedial Action;
- Closure Report; and, if applicable,
- Environmental Land Usage Restriction (ELUR).

We are here to serve you – please do not hesitate to contact us if you have any questions or would like more information about one of the properties within the program that may directly impact you or your neighborhood. Under the Freedom of Information Act you have a right to review site files.

FOR MORE INFORMATION CONTACT US:

AT OUR WEB SITES:

http://www.dem.ri.gov

http://www.dem.ri.gov/brownfields/default.htm

STILL HAVE QUESTIONS?
CALL OR EMAIL US:

GENERAL INFORMATION: **401-222-2797**
TDD LINE: **401-222-4462**

Email: *brownfields@dem.ri.gov*

Departamento de Gestión Ambiental en Rhode Island

Cómo se trabaja para proteger el medioambiente en Rhode Island

Quiénes somos...

El Departamento de Gestión Ambiental en Rhode Island (DEM) es la agencia estatal responsable de preservar la calidad del medioambiente en Rhode Island para usted y para todo aquél que considera que Rhode Island es su hogar. Nuestra oficina principal está ubicada convenientemente en Providence. Ayudamos a proteger el **AIRE** que usted respira, la **TIERRA** en donde está construido su hogar, su negocio o su escuela y el **AGUA** en donde nada o pesca.

Qué hacemos...

El DEM toma muy en serio las quejas de polución que los ciudadanos presentan y se siente comprometido a responder tales quejas tan pronto como le es posible. Al comunicarse con nosotros, se puede tratar su queja y dar comienzo a un proceso de investigación. O quizás usted no tenga una queja, quizás sea una pregunta o necesite información sobre algo que ocurrió en su vecindario. Podemos ayudar.

El DEM recibe quejas y preguntas sobre muchos temas, incluyendo: desechar basura ilegalmente, quejas de malos olores emitidos por instalaciones industriales, arrojar productos ilegales en riachuelos o ríos, problemas con el polvo y otras amenazas similares a la salud del público y del medioambiente.

Cómo podemos ayudarle...

El DEM anima su participación para ayudarnos a proteger el medioambiente y la salud de su comunidad. Estamos aquí para contestar sus preguntas e investigar sus quejas. ¿Busca información sobre un contaminante en particular, tal como el mercurio o pintura exterior con plomo?

¿ O quizás esté interesado en obtener más información sobre una propiedad en construcción cerca de su hogar o quiera saber cómo disponer apropiadamente de aceite ya usado? ¿Se preocupa por la manera ilegal en que se desecha basura o por olores extraños en su vecindario?

Estamos aquí para servirle; por favor no dude en comunicarse con nosotros si tiene alguna pregunta, si necesita presentar una queja por algo que esté pasando en su comunidad o si desea obtener más información con respecto a los muchos programas que el DEM tiene a su cargo y que pudieran tener un impacto directo en usted o en su vecindario. Puede presentar un tema de manera anónima o puede dejar su nombre para obtener más información.

VISÍTENOS O LLÁMENOS:

PERSONALMENTE:
DE LUNES A VIERNES, DE 8:30AM A 4:00PM
235 PROMENADE STREET, PROVIDENCE, RI
(QUIOSCO DE INFORMACIÓN EN EL 2do PISO)

EN NUESTRO SITIO WEB:
www.dem.ri.gov

¿AÚN TIENE PREGUNTAS? LLÁMENOS:

INFORMACIÓN GENERAL: **401-222-6800**
LÍNEA TDD: **711**

¿DESEA PRESENTAR UNA QUEJA?
401-222-1360

EMERGENCIAS O QUEJAS DESPUÉS DE HORAS HÁBILES:
401-222-3070

¿AÚN NO SABE A QUIÉN LLAMAR?
LLAME A LA OFICINA DE AYUDA TÉCNICA Y DE AYUDA AL CLIENTE DEL DEM
401-222-6822

Rhode Island Department of Environmental Management
Office of Waste Management
State Site Remediation & Brownfields Program

Who We Are….

The Rhode Island Department of Environmental Management's (DEM) Office of Waste Management (OWM) Site Remediation & Brownfields Program was established to provide fair, comprehensive and consistent regulation of the investigation and remediation of hazardous waste and hazardous material releases, implemented in a timely and cost-effective manner. The program is designed to determine if a site poses a threat to human health and the environment and evaluate whether or not proposed remedies effectively provide protection.

This program also supports the redevelopment and reuse of contaminated sites through the Brownfields program. Sites are identified, evaluated, cleaned up and brought back to beneficial reuse in Rhode Island communities.

What We Do….

OWM's Site Remediation & Brownfields Program regulates and provides technical oversight for the investigation and remediation of releases of hazardous waste and/or hazardous materials to the environment; ensures that those investigations and remedial activities are conducted in a consistent manner that adequately protects human health and the environment; and enforces regulations regarding the proper disposal of abandoned hazardous wastes and hazardous materials.

How You Can Help…

Under the Freedom of Information Act you have a right to review site files. OWM wants to hear from you if you have any environmental information that we are unaware of about a property before we approve a clean up. If you have any issues regarding a property's proposed reuse, please contact us and we will put you in contact with the appropriate municipal official.

The Process….

Cleaning a contaminated site requires investigation, planning and action. The *Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases* (http://www.dem.ri.gov/pubs/regs/regs/waste/remreg04.pdf) define the specific documents that are needed, or may be needed, as part of that process:

- Notification of Release;
- Site Investigation Work Plan (SIWP);
- Public Notice of Investigation;
- Site Investigation Report (SIR);
- Public Notice of Completed Site Investigation & Public Comment Period on Technical Feasibility of Proposed Remedy;
- Remedial Action Work Plan (RAWP);
- Remedial Action;
- Closure Report; and, if applicable,
- Environmental Land Usage Restriction (ELUR).

FOR MORE INFORMATION CONTACT US:

AT OUR WEB SITES:
http://www.dem.ri.gov

http://www.dem.ri.gov/brownfields/default.htm

STILL HAVE QUESTIONS?
CALL OR EMAIL US:
GENERAL INFORMATION: **401-222-2797**
TDD RI Relay: **Dial *711***
Email: *brownfields@dem.ri.gov*

Departamento de Gestión Ambiental en Rhode Island
Oficina de Gestión de Desperdicios
Programa de Remediación en Lugares Estatales y de lugares designados como Brownfields

Quiénes somos...

El Programa de Remediación de Sitios Estatales y de Terrenos Baldíos (otros lugares designados como "Brownfields") de la Oficina de Gestión de Desperdicios (OWM), una división del Departamento de Gestión Ambiental de Rhode Island (DEM), fue establecido para proveer regulaciones justas, completas y consistentes relacionadas a la investigación y remediación de la presencia y escape de materiales peligrosos y de materiales peligrosos, que han de implementarse dentro de un tiempo prudencial y a un costo razonable. El programa está diseñado para determinar si un lugar representa una amenaza tanto a la salud humana o al medioambiente, mientras que también evalúa si las soluciones que se proponen proveen o no protección eficaz.

De la misma manera, el Programa para Terrenos Baldíos , este programa promueve reurbanización y la reutilización de lugares contaminados. Los lugares se identifican, evalúan, limpian y son devueltos a su reutilización práctica dentro de las comunidades en Rhode Island.

Qué hacemos...

El Programa de Remediación de Sitios Estatales y Terrenos Baldíos de OWM regula y provee supervisión técnica para la investigación y remediación de escapes de desperdicios peligrosos y/o de materiales peligrosos al medioambiente; asimismo, asegura que esas investigaciones y actividades de remediación se lleven a cabo de tal manera consistente que protejan de forma adecuada la salud humana y el medioambiente; de la misma manera, refuerza las regulaciones referentes a la eliminación apropiada de desperdicios abandonados peligrosos y de materiales peligrosos en general.

Cómo usted puede ayudar...

De acuerdo a lo estipulado en la Ley o acceso a documentos públicos, usted tiene derecho a revisar los expedientes de dichos lugares. La OWM desea escucharlo en caso de que tenga alguna información medioambiental de alguna propiedad de la que no tengamos conocimiento, antes de que aprobemos su limpieza. Si tiene alguna inquietud con respecto a la reutilización de una propiedad, por favor comuníquese con nosotros y le conectaremos con el funcionario municipal apropiado.

El proceso...

El limpiar de un lugar contaminado requiere investigación, planificación y acción. *Las reglas y regulaciones para la investigación y remediación de escape de materiales peligrosos* (http://www.dem.ri.gov/pubs/regs/regs/waste/remre04.pdf) indican los documentos específicos que son necesarios o que pudieran ser necesarios, como parte de ese proceso:

- Notificación de la divulgación:
- Plan de trabajo para iniciar investigación del lugar (SIWP);
- Aviso público de investigación;
- Reporte de investigación del lugar (SIR);
- Aviso público de que la investigación en el lugar ha concluido y Periodo de comentario público con respecto a la viabilidad técnica de la remediación que se propone;
- Plan de trabajo de la acción de remediación a tomarse (RAWP);
- Acción de remediación;
- Informe de clausura y, de ser aplicable,
- Restricciones del uso de la tierra por razones medioambientales (ELUR).

PARA OBTENER MÁS INFORMACIÓN COMUNÍQUESE CON NOSOTROS

EN NUESTRO SITIO WEB:
http://www.dem.ri.gov
http://www.dem.ri.gov/brownfields/default.htm

¿AÚN TIENE PREGUNTAS?
LLÁMENOS O ENVÍENOS UN CORREO ELECTRÓNICO:
INFORMACIÓN GENERAL: **401-222-2797**
TDD RI Relay: **Marque 711**
Correo electrónico: *brownfields@dem.ri.gov*

BROWNFIELDS:

Turning
bad spaces
into
good ones

How
communities
can get
involved

What is inside this booklet:

What is a Brownfield?

This booklet is about unused or abandoned *(a BAN dund)* buildings and places called Brownfields. They are dirty, sometimes dangerous places in neighborhoods. Usually Brownfields are places where old factories or other businesses were. Many times they are very messy and trashy places.

Brownfields can have all kinds of dangers—mess, falling down buildings and even dangerous, toxic *(Tok sick)* chemicals. Toxic means these chemicals are dangerous to human health. When a Brownfield is cleaned up, neighborhoods are better places in so many ways.

All around the country Brownfields are being cleaned up and redeveloped *(re da VEL upt)*—turned into better, cleaner places—new businesses, parks and other uses. This booklet will explain what you need to know to get involved and ask good questions about Brownfield reuse and redevelopment.

The more you know about a Brownfield site then the more you can take part in planning. For example, let's say a Brownfield site is going to be redeveloped into a school with a community playground. Residents can get involved to help decide:

- **Is this plan for redevelopment and reuse good for the neighborhood?**
- **Is the new place going to be safe for neighborhood people?**

Why can Brownfields be dangerous places?

#1 Dangers you can see

There are two kinds of dangers or risks at Brownfield sites – things you can see, and things you can't see. Things you can see, like broken windows and glass, rotted wood floors, rusty nails and pipes, and old barrels, are a problem. All of these things are dangerous. Children playing at an old Brownfield site have the most risk to get hurt. They can find old underground storage tanks, and they can fall in.

#2 Dangers you can't see

Chemicals can be at a Brownfield and you can't see them. Some chemicals can be dangerous to human health. They can be toxic. Toxic chemicals can make people sick if they eat them, breathe them or get them on their skin.

Chemicals

Where did the chemicals come from?

Sometimes when factories or businesses left a place, they left chemicals in pipes, barrels and buried oil tanks. These can leak. When they leak (or *leach*) into the ground, the chemicals can get into the soil and into well water and river water. Scientists test to see if the soil and water are safe.

When is a chemical dangerous?

Think of this: chemicals are everywhere and in everything we eat and drink. Our own bodies are made up of chemicals. And most chemicals are natural and safe. But some chemicals, in the right amounts, can be dangerous.

Old businesses can leave behind dangerous chemicals. For example, an old dry cleaning business can leave dangerous VOCs—volatile (*vo la TILE)* organic compounds—in the ground. VOCs are chemicals that can get into the air that we breathe.

Understanding chemicals

Chemical Tested	Everyday/Household Use	Business/Industry Use
Pesticides	Roach powder Rat poison	Farming or chemical company
VOC's	Gasoline Dry cleaners Moth balls	Oil refinery
Semi-volatiles	Soot	Incinerators
Metals	Batteries Thermometers	Jewelry or plating company

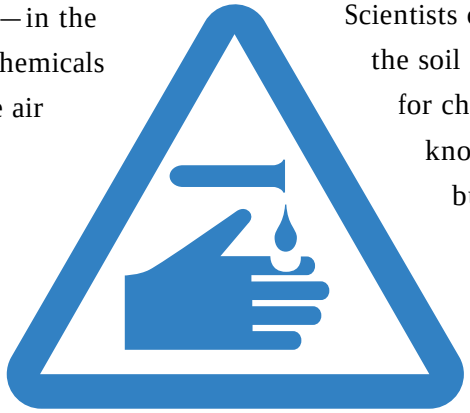
▲ This chart shows some of the kinds of chemicals that may be at a Brownfield site. In the *left* column is the name of the chemical. In the *middle* column you see how we use that chemical everyday, even at home. The *right* column shows what kinds of big businesses use these chemicals. This chart shows that there are many ways to use chemicals.

Testing chemical levels—how much do they find?

If chemicals are in everything, how do the experts know what to test for?

Scientists often will test the soil and the water for chemicals. If they know what type of business was there before, this will help scientists decide what to test for. Some of these tests are very expensive. So, they do the basic tests first. They may do more tests after they look at the first results.

To do the tests scientists dig holes, or test wells, into the ground and take samples of the water in the ground.



Standards for chemicals: how much is too much?

When scientists test a Brownfield site (the ground or the water) they want to find out how much of a chemical there is. The government sets safe amounts or levels for chemicals. The safe level is called a standard. If they find a level that is higher than the safe standard, then they make plans to do something to keep people safe.

What happens if a test is too high?

If the level is too high, scientists take action in different ways. Depending on the risk, they will do some or all of the following:

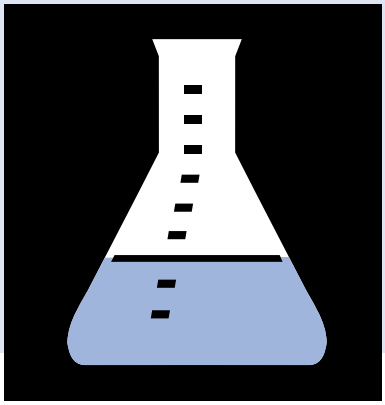
- Remove the contamination
- Cover it up
- Fence in the area
- Plant trees and grass
- Teach people about how to use an area
- Do more tests

Each Brownfield site is different, but the list above will give you a good idea of the kinds of actions that a contaminated site may need.

How to understand standards

Here is an example of a "standard."

Let's say soil at a Brownfield site was tested for lead. The test level was 3,500 ppm (parts per million). The EPA (Federal Environmental Protection Agency) action level is 400 ppm. So, the level is higher than the standard (3,500 ppm is higher than 400 ppm). This means something needs to be done to be sure people can be safe at or near this Brownfield site.



What is risk?

There is no such thing as living in a world with no risks. Even crossing the street can be risky. The important question is "What is an acceptable risk?" "What is a risk I am willing to take?"

Sometimes it's hard to know what is a risk? Who is at risk? For example if children are playing in a crumbling building this can be a high risk. Children can fall, get cut or get seriously hurt. Another example is if the air is filled with dust. This may be risky for people with asthma or older people.

Questions to ask about risk

- Is there a risk?
- Who is most at risk?
- What is the acceptable standard for this chemical?
- Is this standard for a normal size man or woman?
- Is this standard for a child?
- When can this chemical make me unhealthy?
- What could happen to me or my children?
- What about pregnant women?
- How would I know if I am sick from this chemical?
- If you say this level is safe here, does that mean this level is safe for every other place in the country?
- How can I protect myself—minimize the risk (keep the risk low)?
- How can I learn more about this risk? Who can I talk to?
- Is there something I can read?

Remember! There is no such thing as living in a world with no risks. The important thing is to understand what the risks are.
Go to the back page of this booklet for a list of agencies and phone numbers you can use.

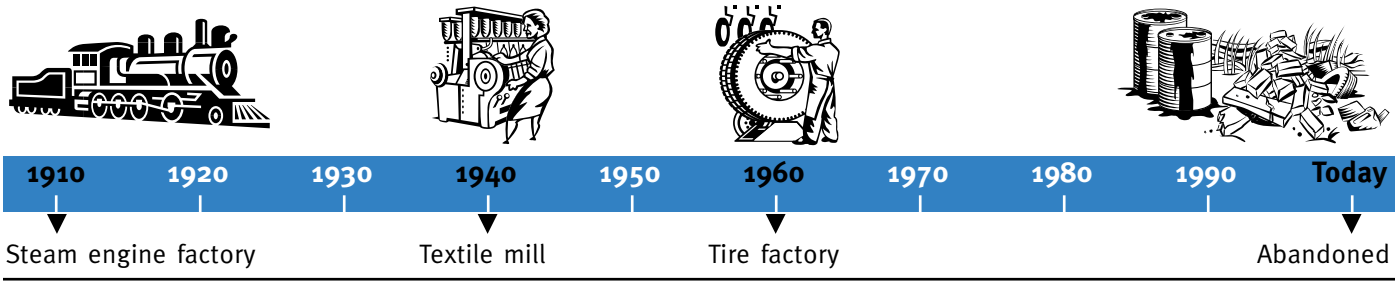
An example of standards

The safe standard dose of aspirin for the average adult is 2 aspirin every 4 hours. Some adults can take even more than 2 aspirin safely. But if you are a small child, 2 aspirin is way too much. The standard for adults (2 apsirin) is not **the standard** for children.

You can get involved

Residents know some important history

The past history of a site is important. Talk to the people who have lived in the neighborhood for a long time. Maybe you are one of those people! People who worked in the factories and businesses may know what kinds of chemicals were used. This information will help the planners and scientists.



Brownfields get redeveloped into all kinds of different spaces – schools, businesses, playgrounds. Community people can help decide if the plan to build is a good one. As a resident, you can help decide:

- **Is this plan for redevelopment and reuse good for the neighborhood?**
- **Is the new place going to be safe for neighborhood people?**

There are 2 important times you can get involved with a Brownfield site:

1. Get involved when the city or developer is *planning* to cleanup, reuse or build something new at a Brownfield. For example, a developer is planning to build a new business on an old brownfield site. It will have lots of hills and driveways to make it pretty. The developers think only adults will go to the business site. They want to follow cleanup standards for adults.

But neighborhood people know that the hills may attract lots of neighborhood children. This can be dangerous for kids. The cleanup standards for adults may not be safe for children. So you can give the developers good information. For example, you could ask them to make the land less inviting for kids.

Call or write your elected officials *(see sample letter and phone calls on pages 8 and 9)*. Ask:

- **What is happening with this site?**
- **Are there plans to develop it?**
- **What are the plans?**
- **Will you hold any public meetings to talk about plans?**

2. Get involved with the cleanup plans.

The scientists and the contractors may schedule local meetings so that you can come and see and hear about the plans for cleanup. This is one of the times that you and your neighbors can be the most help and have the biggest impact. You can help decide if the plans for cleanup are good.

Questions to ask about Brownfields cleanup in your neighborhood

We have already talked about contamination and risk questions on page 4.

- When will the job start? How will you tell the neighborhood?
- Will there be a lot of noise during the cleanup?
- Will any of the waste be treated on the site? Will any chemicals be released during cleanup?
- Is it safe to truck it through the neighborhood?
- Where is the waste being taken?
- What if some of it spills out?
- Will the site be dusty during cleanup?
- What is being done about dust control? Is the dust dangerous?
- Will the chemicals smell? Will the fumes be toxic?
- Who do I complain to if I see something I think is wrong?
- What kind of signs will be posted while the work is going on?
- Will the signs be in different languages? Will they have pictures?
- Will there be guards at the street crossings to help with the truck traffic?
- Will there be a night watchman at the place where the work is being done?
- Will the site be fenced off?

What to expect during cleanup

Abandoned cars, used tires and other trash will need to be hauled away. Buildings and structures need to be taken down. Also, old fencing, asphalt parking lots and unused railroad lines will be removed. Metals, glass, boilers, old machinery and any of the wooden pieces of the building will also be put into dumpsters and taken away to a landfill.

Trucks

Machines will be digging holes and loading trucks. Large trucks will be traveling back and forth

over the local roads. So you want to know what is the time of day and what days of the week will they be working. Usually the contractor wants to start around 6:30 or 7:00 am and work until 3:30 or 4:00 pm. Unless there is a real rush to get the work done, they will work Monday-Friday. So you might ask the question, "Do you plan to work any overtime on this project?"

What streets will the trucks use?

Find out what roads the trucks will be using. The people who plan these projects aren't always aware of the kinds of traffic that happen in your neighborhood. You know the local roads—where people walk and drive, and where children play. Maybe there are elderly or sick people on some streets. Usually the truck drivers have more than one choice about what roads they use. You can give them good information about the best routes.

How much truck traffic and how messy?

The contractor should have an idea about how much dirt he needs to take out and bring in. So he can figure out roughly how many loads there will be—1 truck per hour, 10 trucks per hour or something in between.

Trucks can get dirty. Ask, "Are you going to have a wash down place for the trucks leaving the job?" A wash down is a platform that the contractor builds and the trucks ride up on it. While the truck is on the platform, workers with hoses spray high-pressure water to clean the trucks before they go out onto the neighborhood roads. This keeps the mud on the job and keeps your neighborhood clean.

How long will the cleanup take?

Most of the time the developers have a good idea how long the project will take before they begin. But sometimes they are surprised by the things they find. Although the developers may not be able to give you an exact answer about when the job will be done, they should be able to give a best guess for an ending date.

Children and Brownfields

Talk to your children about Brownfields and cleanup. Explain the dangers of playing at or near the site. Remember truck drivers cannot see every spot around their trucks. Tell your children:

- Be extra careful when you cross streets.
- Don't play near the Brownfield.

Older people should also be more careful. If you know of an older person in the neighborhood let them know that the noise and dust will only be temporary.

Take action: write letters

This is a sample letter you can use to write to officials about a Brownfield site.
Turn to the back page to find the names and addresses of agencies and people.

To _____ (write name here)
_____ (include address)

Date _____

Dear Mr./Ms. (write name here),

I am a resident of _____ Street and I am writing to express my concern about the traffic around the Valley Mills cleanup. The trucks begin at about 6:30 in the morning during the week. This is a **problem** for a number of reasons. We have older people living on this street, and children are also walking to school between 7:30 and 8:30 am.

I would like to **request** that two things happen. I believe the trucks should not start until 9:00 and stop at 4:30. Also, I believe Pine Street would be a better traffic pattern for the trucks entering and leaving the site.

I am eager to see the site cleaned up. But I am equally concerned that this cleanup is done in the best way for our neighborhood. Please call me at _____ (your phone number) or write to me at _____ (your address).

Thank you for your time.

Sincerely,

_____ (your signature)

_____ (Print your name clearly here)

◀ **1st paragraph:**
What is the problem?

◀ **2nd paragraph:**
What are you asking for?

◀ **3rd paragraph:**
How can someone get in touch with you?

Take action: make phone calls

Phone call #1: Talking about truck traffic during the cleanup.

Turn to the back page to find the names and phone numbers of agencies and people.

Resident: Hello. I would like to speak to someone about the clean up of Valley Mills. I live in the neighborhood.

Operator: Just a minute please. I'll transfer you.

Planner: Hello. Can I help you.

Resident: Yes. I am calling about the truck traffic at the cleanup site of Valley Mills. My name is _____. I live in the neighborhood ◄ Say who you are. and I would like to talk about the truck traffic.

Planner: What seems to be the problem?

Resident: I think the trucks are starting too early in the morning and causing ◄ What is the problem? problems for older people. The trucks begin coming out of the site at 6:30 in the morning. This is much too early for this neighborhood. We have many older people living here and this traffic is a problem. I want the planners to ◄ What are you asking for? know that I am calling to say that the trucks should not start until 8:00 in the morning.

Planner: I will give the traffic manager your message.

Resident: Thank you. And who is the traffic manager? Could you please spell her name for me. Before we hang up I would like ◄ Get the person's name (write it down) your name. Please spell it for me. Also I would like to give you my name and phone number. I would like someone to call me back. *(Give your name, spell it and phone number.)*

Thank you very much and I will wait to hear from _____ (the traffic manager's name).

Phone call #2: Finding out if there are any *plans* for a Brownfield site near you.

Resident: Hello. I would like to speak to someone about the empty building and vacant lot on Mills Street I live in the neighborhood.

Operator: Just a minute please. I'll transfer you.

Planner: Hello. Can I help you?

Resident: Yes. I am calling about the empty building and vacant lot on Mills Street. My name is _____. I live in the neighbor- ◄ Say who you are. hood and I would like to know if the city has any plans to redevelop or reuse this land. Who would know about this land? ◄ What are you asking for?

Planner: You will need to speak with Ms. James. Her phone number is _____.

Resident: Thank you. And can I have your name, please? ◄ Get the person's name (write it down)

Where to call or write

Here are some important phone numbers you can call to get more information about Brownfields in your neighborhood.

City of Providence, Department of Planning & Development
400 Westminster St., Providence, RI 02903
(401) 351-4300
The Providence Department of Planning and Development reviews proposals and prepares re-development plans. Residents can contact the Department to review and get involved with redevelopment plans for their neighborhood. The Department also gives low interest loans for economic development projects.

Rhode Island Department of Environmental Management (RI DEM)
Office of Waste Management
235 Promenade St., Providence, RI 02908
(401) 222-2797
The Rhode Island Department of Environmental Management (RI DEM) is a state agency responsible for regulating Brownfields reuse and redevelopment. RI DEM directs soil, air and water testing at Brownfields sites, and the agency reviews any plan for the future use. It also makes sure that contractors doing work at Brownfields follow all laws. RI DEM helps make legal agreements with developers of Brownfields sites.

Rhode Island Department of Health
Office of Environmental Health Risk Assessment
Three Capitol Hill, Providence, RI 02908
(401) 222-4948
The Rhode Island Department of Health, Office of Environmental Health Risk Assessment provides information on the health effects of chemicals in people's homes, workplaces, or neighborhoods.

Environmental Protection Agency (EPA)
US EPA-NE, One Congress St., Boston, MA 02114-2023
1-800-EPA-REG1 (1-800-372-7341)
The EPA Brownfields Team provides a variety of technical and financial support involving the assessment and cleanup of Brownfields properties.Activities include community outreach; funding for assessments, job training and revolving loan funds; and expertise in hazardous materials.

Agency for Toxic Substances and Disease Registry (ATSDR)
Office of Urban Affairs, 1600 Clifton Rd, Atlanta, GA 30333
1-888-42-ATSDR (1-888-422-8737)
in Boston: ATSDR Region 1, US EPA-NE, One Congress St., Suite 1100 (HBT), Boston, MA 02114-2023
(617) 918-1495
ATSDR is the main federal public health agency that deals with hazardous waste issues. ATSDR gives states and others advice about what could be the health problems from chemicals and toxic sites.

This project would like to thank The Providence Plan and the following community residents who took such an active role in this booklet's development. They are: Angela Burgio, Joseph H. Burgio, Carlos Corchado, Marisa Corchado, Mayra Corchado, William O'Brien, David G. Sifuentes, Rosa Solis, Victor Solis, and J. Taylor.

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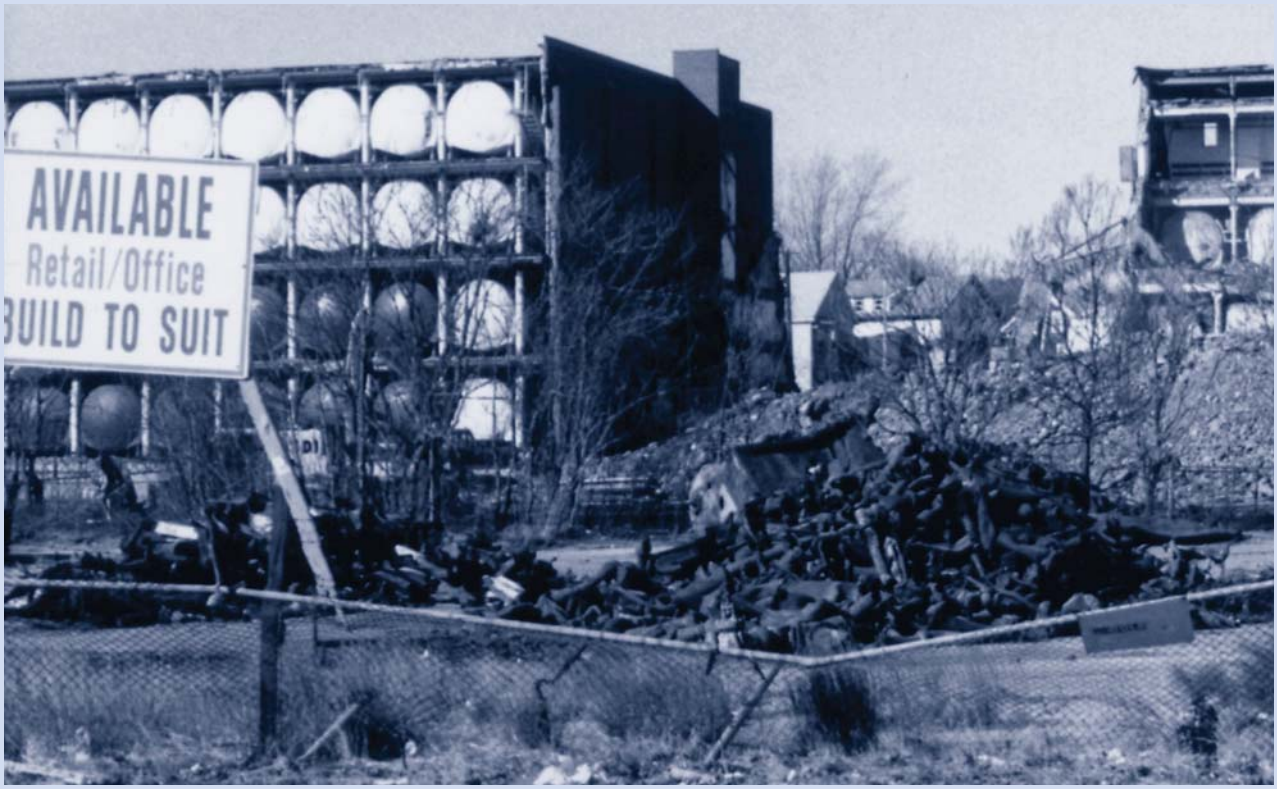
LOS TERRENOS BALDIOS:



Convertiendo
lugares malos
en lugares
buenos

Cómo pueden
participar
las
comunidades

El contenido de esta guía:

Qué es un terreno baldío?

Esta guía es sobre edificios sin uso o abandonados y sitios en la ciudad llamados terrenos baldíos. Son lugares sucios y a veces peligrosos en su vecindario. Usualmente los terrenos baldíos son los lugares en donde funcionaban fábricas u otras industrias. Muchas veces son lugares muy sucios y llenos de basura.

Los terrenos baldíos pueden estar llenos de cosas peligrosas—suciedad, edificios en ruinas y aún sustancias químicas peligrosas y tóxicas *(tóc-si-cas)*. Tóxico significa que esas sustancias químicas son peligrosas para la salud de los seres humanos. Cuando se limpia un terreno baldío, el vecindario se convierte en un lugar mejor.

Por todo el país se están limpiando los terrenos baldíos y se los reurbaniza (convierte) en lugares mejores y más limpios—por ejemplo nuevas industrias, parques o se les da otros usos. Esta guía le explicará qué es lo que usted necesita hacer para participar (ayudar) y hacer buenas preguntas sobre el nuevo uso y la nueva urbanización de los terrenos baldíos.

Mientras usted sepa más sobre terrenos baldíos usted podrá participar en la planificación y mejora de esos lugares. Por ejemplo, supongamos que el terreno baldío será urbanizado nuevamente y se edificará una escuela con un lugar de juegos para toda la comunidad. Los vecinos pueden participar y ayudar a decidir:

- **¿Es el plan de urbanizar nuevamente y usar los terrenos de nuevo es bueno para el vecindario?**
- **¿Será el nuevo lugar seguro para la gente del vecindario?**

¿Por qué los terrenos baldíos pueden ser lugares peligrosos?

#1 Peligros que usted puede ver

Hay dos tipos de riesgos en los lugares baldíos—cosas que usted puede ver y cosas que usted no puede ver. Las cosas que usted puede ver, como las ventanas y vidrios rotos, los pisos de madera podrida, los clavos y las cañerías oxidadas y los antiguos barriles son un problema. Todas esas cosas son peligrosas. Los niños que juegan en un terreno baldío viejo corren un gran riesgo. Pueden encontrar, bajo tierra, tanques de almacenamiento y caer dentro de ellos.

#2 Peligros que usted no puede ver

Un terreno baldío puede tener sustancias químicas que usted no ve. Algunas sustancias químicas pueden ser peligrosas para la salud de los seres humanos. Las sustancias químicas pueden ser tóxicas y pueden producir enfermedades si las personas ingieren, respiran o tienen contacto con ellas.

Las sustancias químicas

¿De dónde vienen las sustancias químicas?

Algunas veces las antiguas fábricas o negocios dejaron en el lugar que abandonaron químicos en las cañerías, barriles y tanques de petróleo enterrados, estos pueden tener un escape. Cuando tienen un escape (o *gotean*) en el suelo, los químicos pueden entrar en el terreno y dentro del agua de pozos y de ríos. Los científicos (investigadores) analizan para ver si el agua y el suelo son seguros.

¿Cuándo es una sustancia química peligrosa?

Piense lo siguiente: las sustancias químicas están en todas partes y en todo lo que nosotros comemos y bebemos. Nuestros cuerpos tienen sustancias químicas. La mayoría de estos químicos son naturales y seguros. Pero algunos químicos, en cantidades diferentes, pueden ser peligrosos.

Los negocios antiguos pueden dejar residuos químicos peligrosos. Por ejemplo, un antiguo negocio de limpieza en seco puede dejar peligrosos residuos de COV (compuestos orgánicos volátiles) en el suelo.

Comprendiendo las sustancias químicas

Químico analizado	Uso común Uso en la casa	Uso en la industria o negocios de:
Pesticidas	Polvo para cucarachas Veneno para ratas	Agricultura o Cías químicas
COV	Gasolina Limpiadores en seco Bolitas de naftalina	Refinería de petróleo
Semi-volátiles	Hollín	Incineradores
Metales	Bateriás Termómetros	Cías de enchapado

▲

Este gráfico demuestra algunas de las clases de químicos que se pueden encontrar en un terreno baldío. En la columna de la *izquierda* se encuentra el nombre de la sustancia química, en la columna del *medio* usted podrá ver el uso diario del químico, aún en el hogar. La columna de la *derecha* muestra qué tipo de grandes industrias usan estos químicos. Este gráfico indica que hay varias formas de usar las sustancias químicas.

Los COV son sustancias químicas que pueden estar en el aire que respiramos.

Cuando analizan los niveles de los químicos ¿qué cantidad encuentran?

Si los químicos están en todos lados ¿cómo saben los expertos lo que tienen que analizar?

Los científicos, usualmente, analizan el terreno y el agua para descubrir químicos. Si ellos saben qué tipo de industria estaba ahí antes, eso ayudará a los científicos a decidir qué es lo que tienen que analizar. Algunos de esos análisis son muy caros. Por lo tanto ellos primero hacen el análisis básico. Se harán más análisis después de obtener los primeros resultados.

Para hacer los análisis, los científicos cavan hoyos, o pozos, dentro de la tierra y toman muestras del agua dentro de la tierra.

El estándard para sustancias químicas: ¿cuánto es demasiado?

Cuando los científicos analizan el terreno baldío (la tierra o el agua) quieren saber los niveles de químicos que hay. El gobierno establece cuales son las cantidades o niveles seguros para los químicos. El nivel seguro es llamado **estándar**. Si ellos encuentran un nivel que es mayor al estándar, planifican hacer algo para mantener segura a la gente.

¿Qué pasa si el análisis es muy alto?

Si el nivel es muy alto los científicos toman acciones en diferentes formas. Dependiendo del riesgo pueden hacer lo siguiente:

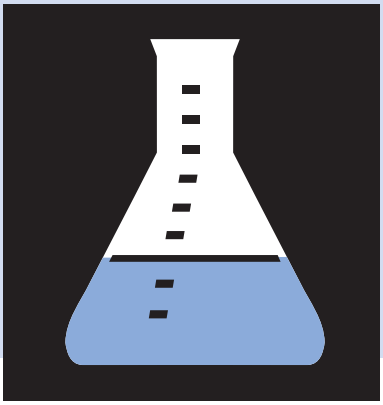
- Remover la contaminación
- Cubrirla
- Cercar el área
- Plantar árboles y césped
- Enseñarle a la gente cómo usar el área
- Hacer más análisis

Cada terreno baldío es diferente, pero la lista mencionada le da a usted una buena idea del tipo de acciones a seguir en un lugar contaminado.

Cómo entender el estándar

Veamos un ejemplo de "estándar"

Digamos que la tierra de un terreno baldío fue analizada para saber si contenía plomo. El nivel de análisis fue de 3.500 ppm (partes por millón). El nivel de acción de la Agencia Federal de Protección al Medio Ambiente (EPA, sus siglas en inglés) es de 400 ppm. Por lo tanto el nivel es mayor que el estándar seguro (3.500 ppm es mayor que 400 ppm). Esto significa que se necesita hacer algo para asegurarse que la gente esté segura en el terreno baldío o cerca de él.



¿Qué es riesgo?

No hay ninguna cosa en el mundo que no tenga riesgos. Aún el cruzar la calle puede ser riesgoso. La pregunta importante es "¿Qué es un riesgo aceptable?". "¿Qué es un riesgo que estoy dispuesto a aceptar?".

A veces es difícil saber qué es un riesgo y quién está en riesgo. Por ejemplo si los niños están jugando en un edificio en ruinas eso puede ser un gran riesgo. Los niños se pueden caer, cortarse o lesionarse seriamente. Otro ejemplo es si el aire está lleno de polvo. Eso puede ser riesgoso para la gente con asma o para la gente mayor.

Preguntas para hacer acerca de un riesgo

- ¿Hay riesgo?
- ¿Quién está más en riesgo?
- ¿Cuál es el nivel estándar aceptable para este químico?
- ¿Cuál es el riesgo estándar para la talla de un hombre o mujer normal?
- ¿Cuál es el riesgo estándar para un niño?
- ¿Cuándo es una sustancia química insalubre?
- ¿Qué me puede suceder a mí o a mis hijos?
- ¿Qué pasa con mujeres embarazadas?
- ¿Cómo sabré si me he enfermado debido a este químico?
- Si usted dice que aquí el nivel es seguro aqui, ¿esto quiere decir que el nivel es seguro en otros lugares del país?
- ¿Cómo me puedo proteger o minimizar el riesgo (mantener bajo el riesgo)?
- ¿Cómo puedo aprender más sobre este riesgo? ¿Con quién puedo hablar?
- ¿Hay algo que yo pueda leer?

¡Recuerde! No existe un mundo sin riesgos. Lo importante es saber cuáles son los riesgos.

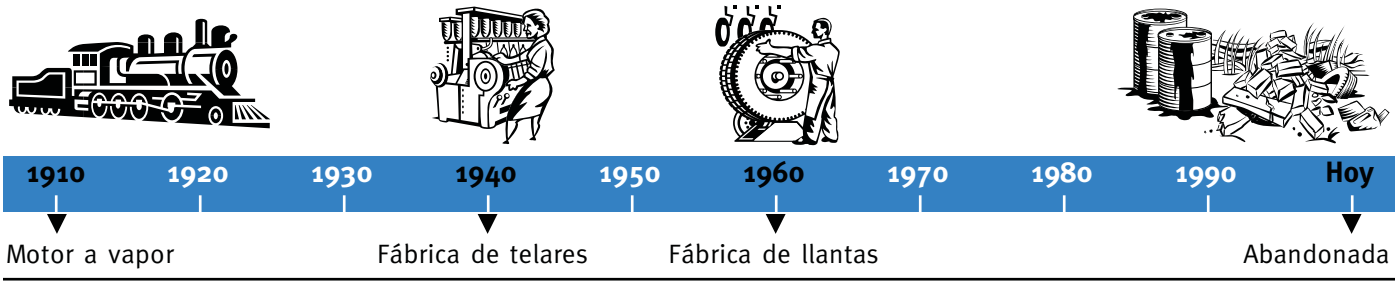
Diríjase a la última página para ver una lista de agencias y números telefónicos que puede utilizar.

Un ejemplo de estandares

La dosis estándar segura de la aspirina para el adulto promedio es de 2 aspirinas cada 4 horas. De hecho, ciertos adultos pueden tomar más de dos aspirinas y estar seguros. Pero si es un niño pequeño, 2 aspirinas es mucho. La dosis estándar segura (de 2 aspirinas) no es la dosis **estándar** para los niños.

Usted puede participar

Los residentes conocen una historia importante
El pasado histórico de un lugar es importante. Hable con la gente que ha vivido por un largo tiempo en el vecindario °Quizás usted es una de esas personas! La gente que trabajó en esas fábricas o industrias pueden saber qué tipos de químicos se usaron. Esta información ayudará a los planificadores y a los científicos.



Los terrenos baldíos se reurbanizan en todo tipo de lugares—escuelas, negocios, lugares de juego. La gente de la comunidad puede ayudar a decidir si es bueno el plan de construcción. Como residente, usted puede ayudar a decidir:

- **¿Es este plan para la reurbanización bueno para la comunidad?**
- **¿Será seguro el nuevo lugar para la gente del vecindario?**

Hay 2 momentos importantes en los cuales usted puede participar en un terreno baldío:

1. Participe cuando la ciudad o los urbanizadores están *planificando* limpiar, reusar o construir algo nuevo en el sitio baldío.
Por ejemplo, digamos que los urbanizadores piensan construir una nueva industria en un terreno baldío viejo. Para ser atractivo tendrá muchas lomas y entradas de autos. Los planificadores piensan que sólo los adultos irán al área industrial. Quieren seguir los estandares de limpieza para los adultos.

Pero la gente del vecindario sabe que las lomas pueden atraer a muchos niños del vecindario. Este puede ser peligroso para los niños. Puede ser que los estandares de limpieza para los adultos no son seguros para los niños. Pida a los planificadores que no hagan el lugar tentador para los niños.

Llame o escriba a sus funcionarios electos *(vea los ejemplos de la carta y de llamadas telefónicas en las páginas 8 y 9)*. Pregunte:

- **¿Qué está pasando con el lugar?**
- **¿Hay planes de urbanizarlo?**
- **¿Cuáles son los planes?**
- **¿Usted llamará a reuniones públicas para hablar sobre los planes?**

2. Participe cuando empiecen los planes de limpieza

Puede ser que los científicos y los contratistas propongan un calendario con reuniones locales, por lo tanto usted podrá ir, ver y escuchar sobre los planes para la limpieza. Este es el momento en que usted y sus vecinos pueden ser de gran ayuda y tener el mayor impacto. Usted puede ayudar a decidir si los planes de limpieza son buenos.

Preguntas que pueda hacer sobre la limpieza del terreno baldío en su vecindario

Ya hemos hablado sobre la contaminación y preguntas sobre el riesgo. **Vea la página 4.**

- ¿Cuándo empezará el trabajo? ¿Cómo usted notificará al vecindario?
- ¿Habrá mucho ruido durante la limpieza?
- ¿Algunos de esos desperdicios serán tratados en el lugar? ¿Va a haber emanaciones de químicos durante la limpieza?
- ¿Es seguro transportarlos en camiones por el vecindario?
- ¿Adónde se llevan los desperdicios?
- ¿Qué sucede si hay un derrame de algún desperdicio?
- ¿Durante la limpieza habrá mucho polvo en el lugar?
- ¿Qué se está haciendo para controlar el polvo? ¿Es peligroso el polvo?
- ¿Los químicos emitirán olores? ¿Los gases serán tóxicos?
- ¿A quién reclamo si veo algo que creo que es incorrecto?
- ¿Qué tipos de letreros serán colocados cuando empiece el trabajo?
- ¿Los letreros serán en diferentes idiomas? ¿Tendrán dibujos?
- ¿Habrá guardianes en los cruces de las calles para ayudar con el tránsito de los camiones?
- ¿Habrá guardianes de noche en el lugar en donde se está trabajando?
- ¿El lugar será cercado?

Qué esperar durante la limpieza

Los autos abandonados, las llantas usadas y otra basura tendrá que ser transportada a otro lado. Se necesitará demoler los edificios y las estructuras. También se tendrá que remover las antiguas cercas, el asfalto de los lugares de estacionamiento y los carriles de trén abandonados. Los metales, vidrios, calderas y maquinarias antiguas o cualquiera de las partes de madera del edificio serán puestas dentro de un recipiente para desperdicios y se los llevará a un basurero.

Camiones

Las máquinas excavarán hoyos y cargarán camiones. Camiones

grandes viajarán de ida y de vuelta sobre los caminos locales. Por lo tanto usted necesita saber durante qué horas del día y qué días de la semana estarán trabajando. Usualmente el contratista desea empezar alrededor de 6:30 ó 7:00 am y trabajar hasta las 3:30 ó 4:00 pm. Si no existe un apuro real para terminar el trabajo, ellos trabajarán de lunes a viernes. Entonces usted puede preguntar: "Planea usted trabajar tiempo extra en este proyecto?".

¿Qué calles usarán los camiones?

Averigüe qué caminos usarán los camiones. La gente que planea este proyecto no siempre está consciente del tipo de tráfico que hay en su vecindario. Usted conoce los caminos locales—por donde la gente camina y conduce y en dónde juegan los niños. Quizás hay personas ancianas o enfermas en algunas calles. Usualmente los conductores de camiones tienen más de una posibilidad para elegir la ruta que pueden usar. Usted puede informarles de las rutas mejores.

¿Cuánto tránsito de camiones habrá y cuán sucio será?

El contratista deberá tener una idea sobre cuánta tierra necesita sacar y traer. Por lo tanto él puede calcular aproximadamente cuántas cargas habrá: 1 camión por hora, 10 camiones por hora o entre 1 ó 10 camiones por hora.

Los camiones se ensucian. Pregunte, "Habrá un lavadero para los camiones que salen del área del trabajo?". Un lavadero es una plataforma que el contratista construye y por la cual los camiones pasan. Mientras el camión está sobre la plataforma, los trabajadores provistos con mangueras de alta presión lanzan agua para lavar al camión antes de salir a rodar por los caminos del vecindario. Esto mantiene el barro en el trabajo y mantiene limpio a su vecindario.

¿Cuánto tiempo tomará la limpieza?

La mayoría de los urbanizadores, antes de empezar el proyecto, tienen una buena idea de cuánto se demorarán. Pero a veces tienen sorpresas por las cosas que encuentran. Aunque los planificadores no puedan darle a usted una respuesta exacta sobre cuándo se acabará el trabajo, ellos podrán darle un cálculo estimado de la fecha de terminación.

Los niños y los terrenos baldíos

Hable con sus niños sobre los terrenos baldíos y su limpieza. Explique los peligros de jugar en el lugar o cerca de él y los peligros de los camiones. Recuerde que los conductores de los camiones no pueden ver cada lugar alrededor de sus camiones. Dígale a sus niños que:

- Sean más cuidadosos cuando crucen la calle.
- No jueguen cerca del terreno baldío.

También la gente de edad tiene que ser más cuidadosa. Si usted conoce a una persona de edad en el vecindario, hágale saber que el ruido y el polvo sólo será transitorio.

Tome acción: escriba cartas

Este es un ejemplo de una carta que usted puede escribir a los funcionarios sobre el terreno baldío.
Diríjase a la última página para ver una lista de agencias y números telefónicos.

A _____ (escriba el numbre)
_____ (incluya domicilio)

Fecha _____

Estimado Sr./Estimada Sra. (escriba el nombre):

Yo vivo en la calle _____ y le escribo para expresar mi preocupación sobre el tráfico de la limpieza de las fábricas Valley. Los camiones comienzan a transitar durante la semana cerca de las 6:30 Hs. en la mañana. Este es un **problema** por varias razones. Tenemos ancianos viviendo en esta calle y también tenemos a niños caminando entre las 7:30 y las 8:30 am.

Quisiera pedirle dos cosas. Creo que los camiones no deben empezar a transitar hasta las 9:00 y parar a las 4:30. También creo que la calle Pine sería una buena ruta para los camiones que entran y salen del lugar.

Estoy ansioso por ver este lugar limpio. Pero también me preocupa que esta limpieza sea hecha en la mejor forma para mi vecindario. Por favor llámeme al _____ (su número de teléfono)o escríbame a _____ (su domicilio).

Gracias por su atención.

Atentamente,

_____ (su firma)

_____ (escribid su nombre claramente aqui)

◀ **1er párrafo:**
¿Cuál es el problema?

◀ **2do párrafo:**
¿Qué está pidiendo?

◀ **3er párrafo:**
¿Como pueden ponerse en contacto con usted?

Tome acción: haga llamadas

Llamada telefónica #1: Haciendo un reclamo sobre problemas de tráfico de camiones durante la limpieza.

Diríjase a la última página para ver una lista de agencias y números telefónicos.

Vecino: Hola. Quisiera hablar con alguien sobre la limpieza de las fábricas Valley. Yo vivo en el vecindario.

Operador: Un minuto por favor. Transferiré su llamada.

Planificador: Hola. ¿en qué puedo ayudarle?

Vecino: Estoy llamando por el tráfico de camiones en el sitio de limpieza de las fábricas Valley. Yo vivo en el vecindario y quisiera hablar sobre el tránsito de los camiones. ◄ Identifíquese

Planificador: ¿Cuál es el problema?

Vecino: Pienso que los camiones comienzan a transitar muy temprano en la mañana y están causando problemas a las personas de edad. Los camiones comienzan a salir a las 6:30 de la mañana del terreno. Es muy temprano para el vecindario. Nosotros tenemos a muchos ancianos viviendo acá y este tráfico es un problema. Quisiera que los planificadores supieran de que estoy llamando para decirles que los camiones no deberían empezar hasta las 8:00 de la mañana. ◄ ¿Cuál es el problema? ◄ ¿Qué está pidiendo?

Planificador: Bueno, le daré su mensaje al administrador del tráfico.

Vecino: Gracias. ¿Quién es el administrador del tráfico? ¿Me podría. deletrear su nombre.? Antes de colgar, quisiera su nombre y también quisiera darle a usted mi nombre y mi número de teléfono. Le agradecería si alguien me puede llamar. *(De su nombre, deletréelo y de su número de teléfono.)* ◄ Anote el nombre y escríbalo

Muchas gracias y espero la llamada _____

(nombre del administrador del tráfico).

Llamada telefónica #2: Averigüando si hay *planes* para un sitio baldío cerca de su vecindario.

Vecino: Hola. Quisiera hablar con alguien sobre el edificio vacío y el terreno baldío en la calle Fábricas. Yo vivo en el vecindario.

Operador: Un minuto por favor. Transferiré su llamada.

Planificador: Hola. ¿En qué puedo ayudarle?

Vecino: Estoy llamando sobre el edificio vacío y el terreno baldío en la calle Fábricas. Vivo en la vecindad y quisiera saber si la municipalidad tiene algún plan para reurbanizarlo o reusar ese terreno. ¿Quién es la persona que podría darme esta información? ◄ Identifíquese ◄ ¿Qué está pidiendo?

Planificador: Necesitará hablar con Srta. Rios. Su número de teléfono es _____.

Vecino: Gracias. ¿Me podría dar su nombre, por favor? ◄ Anote el nombre y escríbalo

¿Dónde llamar o escribir?

En esta página encontrará números de teléfono importantes así usted puede obtener más información acerca de los terrenos baldíos de su vecindario.

Ciudad de Providence, Departamento de Planificación y Desarrollo
400 Westminster St., Providence, RI 02903
(401) 351-4300
El Departamento de Planificación y Desarrollo hace la revisión de las propuestas y prepara los planes para el desarrollo.
Los residentes pueden contactar al Departamento para revisar y asistir con los planes de desarrollo para el vecindario. El Departamento también da préstamos con bajos intereses para el desarrollo económico de proyectos.

Departamento de Medio Ambiente de Rhode Island (RI DEM)
Oficina de Administración de Desperdicios (Waste Management en inglés)
235 Promenade St., Providence, RI 02908
(401) 222-2797
El Departamento de Medio Ambiente de Rhode Island (RI DEM—siglas en inglés) es una agencia estatal responsable por la regulación, el reuso y redesarrollo de los terrenos baldíos.
RI DEM inspecciona el análisis de la tierra, aire y agua en los terrenos baldíos y la agencia revisa los planes para los futuros usos de estos terrenos. También asegura que el contratista trabaja siguiendo las leyes o reglamentos. RI DEM ayuda a hacer arreglos legales con las personas a cargo del desarrollo de los terrenos baldíos.

Departamento de Salud Pública de Rhode Island
Oficina de Evaluación de Riesgos de salud del medio ambiente
Three Capitol Hill, Providence, RI 02908
(401) 222-4948
El Departamento de Salud Pública de Rhode Island—Oficina de Evaluación de Riesgos de salud del medio ambiente provee información sobre los efectos de las sustancias químicas en la salud de la población en sus casas, lugares de trabajos o vecindario.

Agencia de Protección del Medio Ambiente (EPA)
US EPA-NE, One Congress St., Boston, MA 02114-2023
1-800-EPA-REG1 (1-800-372-7341)
El equipo de EPA (siglas en inglés) para los terrenos baldíos provee una variedad de ayuda técnica y financiera incluyendo la evaluación y limpieza de las propiedades de terrenos baldíos. Las actividades incluyen contactar a la comunidad, tratar de generar dinero para la evaluación, entrenamiento para trabajos y conseguir fondos para préstamos y experiencia con materiales peligrosos.

Agencia de Sustancias Tóxicas y Registro de Enfermedades (ATSDR)
Office of Urban Affairs, 1600 Clifton Rd, Atlanta, GA 30333
1-888-42-ATSDR (1-888-422-8737)
en Boston: ATSDR Region 1, US EPA-NE, One Congress St., Suite 1100 (HBT), Boston, MA 02114-2023
(617) 918-1495
ATSDR es la principal agencia federal de salud pública que se dedica a los asuntos de desperdicios peligrosos. ATSDR aconseja a los estados y otras entidades acerca de cuáles pueden ser los problemas de salud derivados de los lugares con químicos y sustancias tóxicas.

Este proyecto quiere agradecer al Plan de Providence y a los residentes de las siguientes comunidades quienes tuvieron un role muy importante en el desarrollo de este librillo. Ellos son: Angela Burgio, Joseph H. Burgio, Carlos Corchado, Marisa Corchado, Mayra Corchado, William O'Brien, David G. Sifuentes, Rosa Solis, Victor Solis, y J. Taylor.

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F 401.277.8400

Environmental Justice Signage for Blackstone River Bikeway Segment 1A Project:

Rhode Island Department of Environmental Management
Site Investigation In Progress

RIDEM Case No. SR-28-1774

For more information, please contact:

Mr. Nicholas J. Noons
RIDEM – Office of Waste Management
235 Promenade Street
Providence, RI 02908
(401) 222-2797 x7517
nicholas.noons@dem.ri.gov

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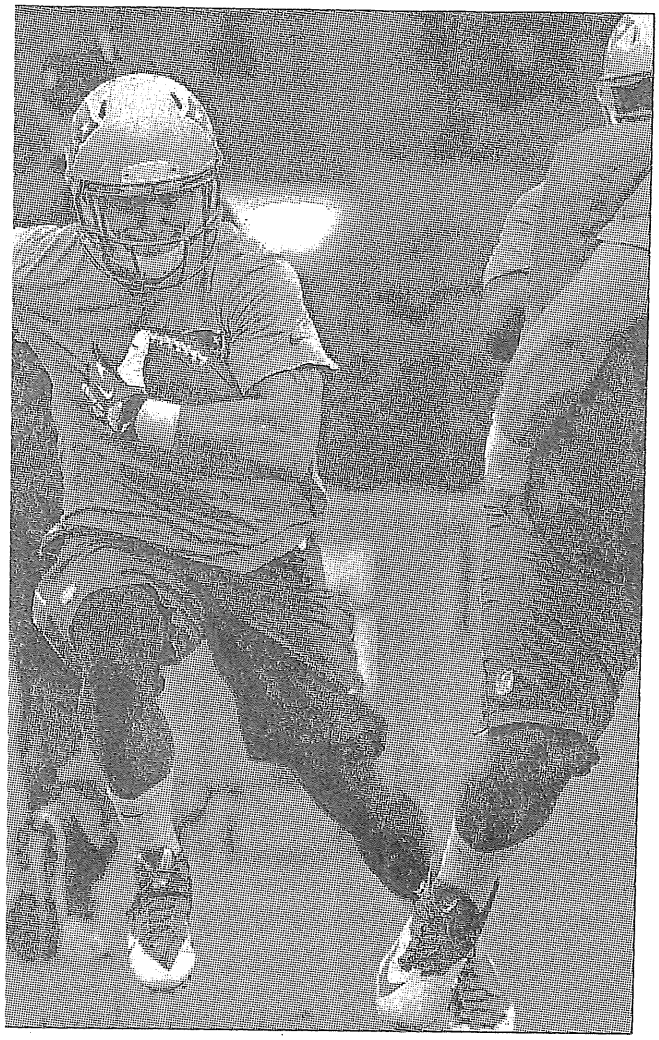
...will vie for roster spot



Tyler Gaffney spent last year on injured reserve but is ready to compete for a roster spot this season.

THE PROVIDENCE JOURNAL/ BOB BREIDENBACH

...up in ...d him

...e rest Patri- ...ture/ ...31. ...times ...I love ...o I'm team ...what ...ing to ...of my ...starts ...e and ...y and ...phill ...s this ...have ...cause ...ant to ...w off

"Dion has done a good job. It's good to have them. I think they'll be competitive in the group. We'll see how it goes."

Gaffney's biggest competition just might be Jonas Gray. Standing 6 feet and weighing 220 pounds, Gray is a bigger back who would compete for carries on first and second down. It is unlikely that Lewis would take carries away from LeGarrette Blount, but it will be interesting to see if he can push Gray for the top backup spot.

Last week, Gaffney said he had his head in the playbook all last season and isn't opposed to catching passes on third down.

Lewis stood out at times during organized team activities and minicamp. He'll you have to be able to catch the ball and you have to be able to block," Lewis said. "So every day I'm focusing on those three things and trying to get better so I can hopefully become a total package and try to make this team."

Both players will fight for a similar goal — to play football for a living. Gaffney hasn't really tasted what that's like, but Lewis certainly has and wants to make the most out of the situation.

"My parents raised me well; they raised me to never give up," Lewis said. "It took a lot of hard work to get to where I am now and I wouldn't have felt right if I didn't keep trying, because this is what I love to do and I'm not happy when I'm not doing it. So I just

LEGALS

NOTICE OF PRE-SITE INVESTIGATION MEETING BLACKSTONE RIVER BIKEWAY – SEGMENT 1A EAST TRANSIT STREET TO PITMAN STREET PORTIONS OF PLAT MAP 15, LOTS 446, 456, AND 66 PORTIONS OF PLAT MAP 17, LOT 8 PORTION OF A PAPER STREET (BEACH STREET) PROVIDENCE, RHODE ISLAND

Meeting Date and Time:
July 7, 2015 at
5:00 – 6:00 pm

Meeting Location:
Fox Point Library, 90 Ives Street, Providence, RI

On behalf of the Rhode Island Department of Environmental Management (RIDEM), Vanasse Hangen Brustlin, Inc. (VHB) will hold a public meeting in advance of a Site Investigation to be performed at the proposed location for the Segment 1A of the Blackstone River Bikeway at portions of Plat Map 15, Lots 446, 456, and 66; portions of Plat Map 17, Lot 8; and a portion of a paper street (Beach Street) in Providence (the Site). Previous assessment activities at the Site identified arsenic, lead and polycyclic aromatic hydrocarbons in soil. In accordance with the RI Industrial Property Remediation and Reuse Act, the purpose of the meeting will be to provide information about the Site history, the previous assessment findings, future development plans for the Site, and general information regarding the RIDEM Site Remediation Program. Written and oral comments will be accepted at the meeting relative to the Site conditions and environmental history that may be useful in establishing the scope of the Site Investigation and/or establishing the objectives for the future environmental clean-up of the Site.

Interested persons are invited to attend the public meeting between 5:00 – 6:00 pm on July 7, 2015 at the Fox Point Library located at 90 Ives Street in Providence.

Written comments may also be submitted to RIDEM no later than 4:00 pm on July 21, 2015. Written comments are to be submitted by hand delivery, regular mail, or email to:

RI Department of Environmental Management
Office of Waste Management
c/o Nicholas Noons
235 Promenade Street
Providence, RI 02908
nicholas.noons@DEM.RI.GOV

Constable Sale
State of Rhode Island and Providence Plantations, SC.

By virtue and in pursuance of an execution numberWC-2014-0954 issued out of Superior Court holden at Wakefield within the State of Rhode Island in and for the County of Washington on the 2nd day of March, AD 2015 and returnable to the said Court on the 2nd day of March, AD 2015 upon judgment by said Court on the 2nd day of March, AD 2015 in favor of Premier Capital, LLC, plaintiff, and against Paul P. Fiano and Valerie Fiano, defendants, I have this 9th day of June, 2015 at 12 o'clock and 06 minutes levied by recording the said execution on all the right, title, and interest which the defendants, Paul P. Fiano and Valarie Fiano, had on the 9th day of June, AD, 2015 at 12 o'clock and 06 minutes and to the following goods and chattels; viz: All the right title, and interest on the within named defendants, Paul P. Fiano and Valerie Fiano, including but not limited to those certain one property laid out and designed on 14 Larkin Road, Westerly, RI 02891. Notice is given that I will sell all the right and interest which the within-named defendants had at the time of levy on original writ, in and to the above-described levy at a Public Auction to be, subject to all prior liens and encumbrances and such matters which may constitute valid liens or encumbrances after sale held at 14 Larkin Road, Westerly, RI 02891. In said Town of Westerly, RI. In said County of Washington on the 10th day of August AD, 2015 at 0900 o'clock AM for the satisfaction of said execution, debt, interest on same, cost of suit, my own fees, and all contingent expenses, if sufficient. Terms: cash or certified check.

Constable Paul Hughes # 40
(401) 944-8980

NOTICE OF MORTGAGEE'S SALE
150 Summit Street
East Providence, Rhode Island
Assessor's Mblu:
105/ 06/ 005/ 00/

Will be sold, subject to any and all prior liens and encumbrances, at public auction on June 15, 2015 at 2:00 PM Local Time, on the premises by virtue of the Power of Sale contained in the certain Mortgage Deed made and executed by Roderick W. Geary dated October 27, 2004 and recorded in Book 2357 at Page 2, et seq. with the Records of Land Evidence of the City of East Providence, County of Providence, State of Rhode Island, the conditions of said Mort-

NOTICE OF MORTGAGEE'S SALE
153-155 Whitmarsh Street
Providence, Rhode Island

The premises described in the mortgage will be sold, subject to all encumbrances, prior liens and such matters which may constitute valid liens or encumbrances after sale, at public auction on July 16, 2015 at 1:00 PM, on the premises by virtue of the power of sale in said mortgage made by Cecilia K. Tarty and Alben D. Tarty, dated April 9, 2007, and recorded in the Providence, RI Land Evidence Records in Book 8627 at Page 309, the conditions of said mortgage having been broken.

$5,000.00 in cash, certified or bank check required to bid. Other terms to be announced at the sale.

SHECHTMAN HALPERIN SAVAGE, LLP
1080 Main Street
Pawtucket, Rhode Island
Attorney for the present Holder of the Mortgage

BOARD OF LICENSES CITY OF PROVIDENCE ROOM 112 – CITY HALL

TRANSFER CLASS BV WITH NEW BX
D'Vine Restaurant Group LLC
145 Spruce Street
To AJG Corp
145 Spruce Street

TRANSFER CLASS A
Black Emerald LLC
22 Pontiac Avenue
To Black Emerald LLC
661 Atwells Avenue

TRANSFER CLASS A
Cosmo Inc
210 Wayland Square
To Cosmo Inc
18A South Angell Street.

The Board of Licenses will be in its office on Monday June 29, 2015 at 1:00 PM, in Room 112, City Hall, at which time and place all owners of the land within 200 feet of these locations may file their objections to the granting of these licenses. Remonstrance must be filed on or before the time of the Hearing.

MORTGAGEE'S SALE
ASSESSOR'S PLAT# 45
AND LOT# 97
73 S Main Street
Coventry, Rhode Island

The premises described in the mortgage will be sold subject to all encumbrances and prior liens on July 16, 2015 at 2:00 pm on the premises by virtue of the Power of Sale in said mortgage made by Billie Jo Anne Delgizzo, dated January 2, 2013, and recorded in Book 1944 at Page 167, et seq. of the Coventry Land Evidence Records, the conditions of said mortgage having been broken:

$5,000.00 in cash, bank check or certified check at

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WASTE MANAGEMENT
PUBLIC MEETING SIGN IN SHEET

Site Name: Blackstone River Bikeway – Segment 1A
Site Address: Gano Street to Pitman Street, Providence
Meeting Date: Tuesday, July 7, 2015 at 5:00 P.M.
Meeting Location: Fox Point Library, 90 Ives Street, Providence

Name	Affiliation/Representing/Program	Phone No.	E-mail
Nicholas Noons	RIDEM/Waste Management – Site Remediation	(401) 222-2797 x7517	nicholas.noons@dem.ri.gov
Peter Grivers	VHB	401-272-8100	pgrivers@vhb.com
Fred Rosenzweig	East Side Commons Resident	401 274-9308	hotdog kid@aol.com
Marcia Rosenzweig	East Side Commons	401-274-9308	gazpachomt@aol.com
Stephen Hosselet	East Side Commons	914-772-7051	shosselet@optonline.net
Scott DAMELIO	VHB	401 272-8100	SDAMELIO@VHB.com
Patrick Collins	H.V. Collins Company	401 421-4080	pcollins@hvcollins.com
Harry Collins	H.V. Collins Company	401 421 2080	

Appendix C: Hazardous Material Release Notification Form

Blackstone River Bikeway – Segment 1A – Vol. 1 of 2

Portions of Plat 17, Lot 8; Plat 15, Lots 446, 456, and 66; Portion of Paper Street Named Beach Street in Providence, RI

PREPARED FOR

The Rhode Island Department of
Environmental Management
235 Promenade Street
Providence, Rhode Island 02908
401.222.6800

PREPARED BY

vhb

1 Cedar Street, Suite 400
Providence, Rhode Island 02903
401.272.8100

MAY 29, 2015

Appendix C
OFFICE OF WASTE MANAGEMENT – SITE REMEDIATION SECTION HAZARDOUS MATERIAL RELEASE NOTIFICATION FORM

THIS FORM IS NOT TO BE USED TO REPORT AN IMMINENT HAZARD

1. Notifier Information

Name: Lisa Primiano, RIDEM - Chief of Planning & Development
Address: 235 Promenade Street, Providence, RI 02908

Phone: 401.222.2776 Ext. 4307

Email: lisa.primiano@dem.ri.gov

Status: __Environmental Professional ___ Owner ___ Operator ___ Secured Creditor _X_ Voluntary

If Environmental Professional is selected, please supply the follow information for your client below:

Name:
Address:

Phone:

Email:

Status: ___ Owner ___ Operator ___ Secured Creditor __Voluntary

2. Property Information

Name of Site: Blackstone River Bikeway - Segment 1A (* See Note Below)
Site Address: Along the Seekonk River from East Transit Street to Pitman Street in Providence, RI
Plat/Lot Numbers: (portions of Plat 17, Lot 8; Plat 15, Lots 446, 456, and 66; and portion of paper street named Beach Street)

Approximate Acreage of Property: 0.50 acres (estimate only)

Latitude/Longitude:

Site Land Usage Type: ___ Residential _X_ Industrial/Commercial

Location of Release: See attached mapping and data summary table.

(Attach site sketch as necessary)

3. Release Information

Date of Discovery: 12/23/2014
Source: Unknown
Release Media: Soil

Hazardous Materials and Concentrations:

(Attach certificates of analysis as necessary)

PAHs: Benzo(a)anthracene = 3.5 ppm; Benzo(b)fluoranthene = 2.6 ppm; Benzo(k)fluoranthene = 2.4 ppm; Benzo(g,h,i)perylene = 1.6 ppm; Benzo(a)pyrene between 0.43 and 2.8 ppm; Chrysene between 0.44 and 3.2 ppm; Dibenzo(a,h)anthracene = 0.42 ppm; and Indeno(1,2,3-cd)pyrene = 1.5 ppm.
Metals: Arsenic between 9.8 and 21 ppm; and Lead between 180 and 510 ppm. Certificates of analysis are attached.

Extent of Contamination:
Refer to attached mapping.

Approximate acreage of Contaminated Area: 0.75 acres (estimate only)

* Note: Release Notification being provided only for lots referenced above for which representative soil sampling and analysis has revealed compounds of concern over applicable RIDEM Criteria. Proposed Bikeway will continue in an easterly direction towards Pitman Street and construction is proposed to be completed on additional properties (e.g., EastSide Marketplace Plat 15/Lot 487 and EPOCH/Koffler Realty Plat 15/Lot 35) with existing Environmental Land Usage Restrictions (ELURs) and Soil Management Plans (SMPs)in effect. The SIR for this project will include an evaluation of these properties and the RAWP will incorporate the existing property restrictions and compliance with the existing SMPs as applicable.

4. Resource Information

Site Land Usage:	X Industrial/Commercial	X Residential
Adjacent Land Usage:	X Industrial/Commercial	X Residential
Site Groundwater Class:	___ GA/GAA	X GB
Adjacent Groundwater Class: (if different than site groundwater classification within 500 feet)	___ GA/GAA	X GB

Nearest Surface Water or Wetland:

X Less Than 500 Feet ___ Greater Than 500 Feet

Potential for adverse impact Y Yes/No

5. Potentially Responsible Parties

Name: The City of Providence
Address: 25 Dorrance Street, Providence, RI 02903

Status: ___ Owner ___ Operator X Other:

Name: _____
Address:

Status: ___ Owner ___ Operator ___ Other:

6. Measures Taken or Proposed to be Taken in Response to Release

Remediation via capping or other means during bikeway development project. A soil management plan (SMP will be implemented to ensure compliance with applicable RIDEM Regulations.

Also, coordination and planning will occur between the responsible parties and/or owners of other RIDEI regulated sites located within the project area to comply with existing ELURs and SMPs.

Check all that apply: X Site Investigation __Short-Term/Emergency __EXPRESS __ Dig & Haul

7. Other Significant Remarks about Release (Will a background determination be made?)

No background determination is proposed. Only areas within the bikeway development areas of disturbanc are proposed to be assessed/remediated.

Signature:  Date 5/30/15

Title: Chief, RIDEM - Planning and Development

Attachment – Supporting Documentation for Hazardous Material Release Notification for - Blackstone River Bikeway Segment 1A

Soil Data Table
Blackstone River Bikeway - Segment 1A
Providence, RI
VHB Project No. 72017.01

Soil Sample Designation	RIDEM RDEC (mg/kg)	RIDEM I/CDEC (mg/kg)	GB Leachability	HA-1	HA-2	HA-3	HA-4	HA-5	HA-6	HA-7	Trip Blank
Sample Depth (ft.)				0.5-1.5'	0.5-1.5'	0.5-1.5'	0.5-1.5'	0.5-1.5'	0.5-1.5'	0.5-1.5'	-
Date Sampled				12/23/2014	12/23/2014	12/23/2014	12/23/2014	12/23/2014	12/23/2014	12/23/2014	-
RCRA 8 Metals (mg/kg)											
Arsenic	**7**	**7**	**NS**	**9.8**	ND <2.8	**5.2**	**5.5**	**4.7**	**12**	**21**	-
Barium	**5,500**	**10,000**	**NS**	**50**	**34**	**68**	**120**	**59**	**320**	**31**	-
Cadmium	**39**	**1,000**	**NS**	**0.46**	ND <0.28	**0.45**	**0.36**	ND <0.27	**1.5**	ND <0.27	-
Chromium	**390**	**10,000**	**NS**	**14**	**10**	**22**	**11**	**10**	**38**	**20**	-
Lead	**150**	**500**	**NS**	**130**	**63**	**180**	**500**	**110**	**510**	**22**	-
Mercury	**23**	**610**	**NS**	**0.19**	**0.15**	**0.5**	**0.44**	**0.29**	**2.7**	ND <0.093	-
Selenium	**390**	**10,000**	**NS**	ND <6.5	ND <5.16	ND <5.9	ND <5.6	ND <5.4	ND <5.7	ND <5.4	-
Silver	**200**	**10,000**	**NS**	**1.4**	ND <1.1	**1.7**	**1.3**	**1.4**	**3.9**	**1.5**	-
TCLP Metals (mg/L)											
Lead			**NS**	-	-	-	**0.53**	-	**3.8**	-	-
Semi-Volatile Organic Compounds (mg/kg)											
Acenaphthene	**43**	**10,000**	**NS**	ND <0.43	ND <0.38	-	ND <0.38	ND <0.36	-	ND <0.36	-
Acenaphthylene	**23**	**10,000**	**NS**	ND <0.43	ND <0.38	-	**0.42**	ND <0.36	-	ND <0.36	-
Anthracene	**35**	**10,000**	**NS**	ND <0.43	ND <0.38	-	**1.3**	ND <0.36	-	ND <0.36	-
Benzo(a)anthracene	**0.9**	**7.8**	**NS**	ND <0.43	ND <0.38	-	**3.5**	**0.78**	-	ND <0.36	-
Benzo(b)fluoranthene	**0.9**	**7.8**	**NS**	ND <0.43	**0.49**	-	**2.6**	**0.56**	-	ND <0.36	-
Benzo(k)fluoranthene	**0.9**	**78**	**NS**	ND <0.43	**0.44**	-	**2.4**	**0.66**	-	ND <0.36	-
Benzo(g,h,i)perylene	**0.8**	**10,000**	**NS**	ND <0.43	ND <0.38	-	**1.6**	**0.49**	-	ND <0.36	-
Benzo(a)pyrene	**0.4**	**0.8**	**NS**	ND <0.40	**0.43**	-	**2.8**	**0.78**	-	ND <0.36	-
Chrysene	**0.4**	**780**	**NS**	ND <0.40	**0.44**	-	**3.2**	**0.8**	-	ND <0.36	-
Dibenzo(a,h)anthracene	**0.4**	**0.8**	**NS**	ND <0.40	ND <0.38	-	**0.42**	ND <0.36	-	ND <0.36	-
Fluoranthene	**20**	**10,000**	**NS**	**0.71**	**0.65**	-	**7.5**	**1.6**	-	ND <0.36	-
Fluorene	**28**	**10,000**	**NS**	ND <0.43	ND <0.38	-	**0.38**	ND <0.36	-	ND <0.36	-
Indeno(1,2,3-cd)pyrene	**0.9**	**7.8**	**NS**	ND <0.43	ND <0.38	-	**1.5**	**0.46**	-	ND <0.36	-
2-Methylnaphthalene	**123**	**10,000**	**NS**	ND <0.43	ND <0.38	-	ND <0.38	ND <0.36	-	ND <0.36	-
Naphthalene	**54**	**10,000**	**NS**	ND <0.43	ND <0.38	-	ND <0.38	ND <0.36	-	ND <0.36	-
Phenanthrene	**40**	**10,000**	**NS**	ND <0.43	ND <0.38	-	**5.2**	**0.67**	-	ND <0.36	-
Pyrene	**13**	**10,000**	**NS**	**0.62**	**0.65**	-	**6.3**	**1.4**	-	ND <0.36	-
Total Petroleum Hydrocarbons (mg/kg)											
TPH	**500**	**2,500**	**NS**	**500**	-	**380**	-	**140**	-	-	-
Volatile Organic Compounds (mg/kg)											
Acetone	**7,800**	**10,000**	**NS**	ND <0.0509	-	ND <0.0475	-	-	-	ND <0.0418	ND <0.0500
Benzene	**2.5**	**200**	**4.3**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Bromodichloromethane	**10**	**92**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Bromoform	**81**	**720**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Bromomethane	**0.8**	**2900**	**NS**	ND <0.0102	-	ND <0.0095	-	-	-	ND <0.0084	ND <0.0100
Carbon Tetrachloride	**1.5**	**44**	**5.0**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Chlorobenzene	**210**	**10,000**	**100**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Dibromochloromethane	**7.6**	**68**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Chloroform	**1.2**	**940**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
1,2-Dibromo-3-Chloropropane	**0.5**	**4.1**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
1,2-Dichloropropane	**1.9**	**84**	**70**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Ethylbenzene	**71**	**10,000**	**62**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Isopropylbenzene	**27**	**10,000**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Methyl tert-Butyl Ether	**390**	**10,000**	**100**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Naphthalene	**54**	**10,000**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Styrene	**13**	**190**	**64**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Tetrachloroethene	**12**	**110**	**4.2**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Toluene	**190**	**10,000**	**54**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Vinyl Chloride	**0.02**	**3**	**NS**	ND <0.0102	-	ND <0.0095	-	-	-	ND <0.0084	ND <0.0100
o-Xylene	**110**	**10,000**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
m,p-Xylene	**110**	**10,000**	**NS**	ND <0.0102	-	ND <0.0095	-	-	-	ND <0.0084	ND <0.0100
Pesticides (mg/kg)											
Chlorodane	**0.5**	**4.4**	**NS**	-	-	-	ND <0.4	-	ND <0.4	-	-
Dieldrin	**0.04**	**0.4**	**NS**	-	-	-	ND <0.04	-	ND <0.04	-	-
Polychlorinated Biphenyls (mg/kg)											
Aroclor-1016	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-
Aroclor-1221	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-
Aroclor-1232	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-
Aroclor-1242	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-
Aroclor-1248	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-
Aroclor-1254	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-
Aroclor-1260	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-

Notes:

1. Units: mg/Kg (milligrams per kilogram) or mg/L (milligrams per liter) as noted.
2. RIDEM RDEC, I/CDEC and GB Groundwater Leachability as defined in Section 8.0 of the *Remediation Regulations.*
3. **Bold** indicates a concentration above the laboratory detection limits.
4. Lightly shaded indicates a concentration above RIDEM RDEC.
5. Dark shaded and underlined indicates a concentration above RIDEM I/CDEC.
6. *Italics* indicate a concentration above RIDEM GB Groundwater Leachability.
7. - Not Analyzed
8. NS - No Standard exists within the Remediation Regulations

R.I. ANALYTICAL
Specialists in Environmental Services

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Attn: Ms. Shelby Miller
10 Dorrance Street
Suite 400
Providence, RI 02903

Date Received: 12/23/2014
Date Reported: 1/6/2015
P.O. #:
Work Order #: 1412-28533

DESCRIPTION: PROJECT #72017.01 BRBW SEGMENT 1A

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory and a subcontracted laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate Of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.

Certification #: RI LAI0033, MA M-RI015, CT PH-0508, ME RI00015
NH 2537, NY 11726

If you have any questions regarding this work, or if we may be of further assistance, please contact us.

Approved by:

Data Reporting

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 001
SAMPLE DESCRIPTION: HA-2 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 06:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Semi-Volatile Organic Comp.						
Acenaphthene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Acenaphthylene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Anthracene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Benzidine	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Benzo(a)anthracene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Benzo(b)fluoranthene	0.49	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Benzo(k)fluoranthene	0.44	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Benzo(g,h,i)perylene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Benzo(a)pyrene	0.43	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Bis(2-chloroethyl)ether	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Bis(2-Chloroethoxy)methane	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Bis(2-Chloroisopropyl)Ether	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Bis(2-ethylhexyl)phthalate	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
4-Bromophenyl phenyl ether	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Butylbenzyl phthalate	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2-Chloronaphthalene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
4-Chlorophenyl phenyl ether	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Chrysene	0.44	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Dibenzo(a,h)anthracene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Di-n-butyl phthalate	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
1,2-Dichlorobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
1,3-Dichlorobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
1,4-Dichlorobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
3,3'-Dichlorobenzidine	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Diethyl phthalate	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Dimethyl phthalate	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,4-Dinitrotoluene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,6-Dinitrotoluene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Di-n-octyl phthalate	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
1,2-Diphenylhydrazine	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Fluoranthene	0.65	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Fluorene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Hexachlorobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Hexachlorobutadiene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Hexachlorocyclopentadiene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Hexachloroethane	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Indeno(1,2,3-cd)pyrene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Isophorone	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2-Methylnaphthalene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 001
SAMPLE DESCRIPTION: HA-2 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 06:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Naphthalene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Nitrobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
N-nitrosodimethylamine	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
N-nitrosodiphenylamine	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
N-nitrosodi-n-propylamine	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Phenanthrene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Pyrene	0.65	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
1,2,4-Trichlorobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
4-Chloro-3-methylphenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2-Chlorophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,4-Dichlorophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,4-Dimethylphenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2-Methyl-4,6-dinitrophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,4-Dinitrophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2-Nitrophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
4-Nitrophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Pentachlorophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Phenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,4,5-Trichlorophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,4,6-Trichlorophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
4-Chloroaniline	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Dibenzofuran	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2-Methyl Phenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
3 & 4-Methylphenols	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Aniline	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Acetophenone	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Azobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Surrogates			RANGE	SW-846 8270D	12/30/2014 15:21	KF
Phenol-d5	55		30-130%	SW-846 8270D	12/30/2014 15:21	KF
2-Fluorophenol	54		30-130%	SW-846 8270D	12/30/2014 15:21	KF
2,4,6-Tribromophenol	70		30-130%	SW-846 8270D	12/30/2014 15:21	KF
Nitrobenzene-d5	53		30-130%	SW-846 8270D	12/30/2014 15:21	KF
2-Fluorobiphenyl	54		30-130%	SW-846 8270D	12/30/2014 15:21	KF
P-Terphenyl-d14	59		30-130%	SW-846 8270D	12/30/2014 15:21	KF
Semi Extraction date				SW846 3546	12/29/2014 12:50	KS
Total Metals						
Arsenic	<2.8	2.8	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW
Barium	34	0.56	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW
Cadmium	<0.28	0.28	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW
Chromium	10	1.7	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 001
SAMPLE DESCRIPTION: HA-2 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 06:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Lead	63	2.2	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW
Mercury	0.15	0.11	mg/kg dry	SW-846 7471B	12/30/2014 14:48	JRW
Selenium	<5.6	5.6	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW
Silver	<1.1	1.1	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW
ICP Digestion				SW-846 3050B	12/29/2014 10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014 14:07	JRW
Moisture	12.7		%	SM2540 G.	12/24/2014 8:47	AK

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 002
SAMPLE DESCRIPTION: HA-1 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
TPH						
TPH GC/FID	500	390	mg/kg dry	SW846 8100M	12/25/2014 1:00	KD
Surrogate			RANGE	SW-846 8100M	12/25/2014 1:00	KD
2-Fluorobiphenyl	127		40-140%	SW-846 8100M	12/25/2014 1:00	KD
Moisture	23.3		%	SM2540 G.	12/24/2014 8:47	AK
PAH						
Naphthalene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Acenaphthylene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Acenaphthene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Fluorene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Phenanthrene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Anthracene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Fluoranthene	0.71	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Pyrene	0.62	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Benzo(a)anthracene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Chrysene	<0.40	0.40	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Benzo(b)fluoranthene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Benzo(k)fluoranthene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Benzo(a)pyrene	<0.40	0.40	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Indeno(1,2,3-cd)pyrene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Dibenzo(a,h)anthracene	<0.40	0.40	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Benzo(g,h,i)perylene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
2-Methylnaphthalene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Moisture	23.3		%	SM2540 G.	12/24/2014 8:47	AK
Surrogates			RANGE	SW-846 8270D	12/30/2014 15:51	KF
Nitrobenzene-d5	44		30-130%	SW-846 8270D	12/30/2014 15:51	KF
2-Fluorobiphenyl	43		30-130%	SW-846 8270D	12/30/2014 15:51	KF
P-Terphenyl-d14	41		30-130%	SW-846 8270D	12/30/2014 15:51	KF
Semi Extraction date				SW846 3546	12/29/2014 12:50	KS
Total Metals						
Arsenic	9.8	3.2	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW
Barium	50	0.65	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW
Cadmium	0.46	0.32	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW
Chromium	14	2.0	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW
Lead	130	2.6	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW
Mercury	0.19	0.11	mg/kg dry	SW-846 7471B	12/30/2014 14:50	JRW
Selenium	<6.5	6.5	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW
Silver	1.4	1.3	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 002
SAMPLE DESCRIPTION: HA-1 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
ICP Digestion	49.75			SW-846 3050B	12/29/2014 10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014 14:07	JRW
Volatile Organic Compounds						
Acetone	<0.0509	0.0509	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Tertiary Amyl Methyl Ether	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Benzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Bromobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Bromochloromethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Bromodichloromethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Bromoform	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Bromomethane	<0.0102	0.0102	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Sec-butylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
n-Butylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
tert-Butylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Carbon Disulfide	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Carbon Tetrachloride	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Chlorobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Dibromochloromethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Chloroethane	<0.0102	0.0102	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Chloroform	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Chloromethane	<0.0102	0.0102	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
2-Chlorotoluene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
4-Chlorotoluene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2-Dibromo-3-Chloropropane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2-Dibromoethane(EDB)	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Dibromomethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,3-Dichlorobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2-Dichlorobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,4-Dichlorobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
n-Propylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Dichlorodifluoromethane	<0.0102	0.0102	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1-Dichloroethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2-Dichloroethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1-Dichloroethene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
cis-1,2-Dichloroethene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
trans-1,2-Dichloroethylene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2-Dichloropropane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,3-Dichloropropane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
2,2-Dichloropropane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1-Dichloropropene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 002
SAMPLE DESCRIPTION: HA-1 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
cis-1,3-Dichloropropene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
trans-1,3-Dichloropropylene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Diethyl ether	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Diisopropyl Ether (DIPE)	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,4-Dioxane	<0.102	0.102	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Ethyl Tertiary Butyl Ether	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Ethylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Hexachlorobutadiene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
2-Hexanone	<0.0509	0.0509	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Isopropylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
p-Isopropyltoluene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
2-Butanone(MEK)	<0.0509	0.0509	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
4-Methyl-2-pentanone(MIBK)	<0.0509	0.0509	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
MTBE	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Methylene Chloride	<0.0255	0.0255	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Naphthalene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1,2-Trichloroethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Styrene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1,1,2-Tetrachloroethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1,2,2-Tetrachloroethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Tetrachloroethene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Tetrahydrofuran	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Toluene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2,4-Trichlorobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2,3-Trichlorobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1,1-Trichloroethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Trichloroethene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Trichlorofluoromethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2,3-Trichloropropane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2,4-Trimethylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,3,5-Trimethylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Vinyl Chloride	<0.0102	0.0102	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
o-Xylene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
m,p-Xylene	<0.0102	0.0102	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Surrogates			RANGE	5035/8260C	12/24/2014 18:45	*ET
Dibromofluoromethane	116		70-130%	5035/8260C	12/24/2014 18:45	*ET
Toluene-d8	105		70-130%	5035/8260C	12/24/2014 18:45	*ET
4-Bromofluorobenzene	90		70-130%	5035/8260C	12/24/2014 18:45	*ET
1,2 Dichloroethane-d4	140		70-130%	5035/8260C	12/24/2014 18:45	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 003
SAMPLE DESCRIPTION: HA-3 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
TPH						
TPH GC/FID	380	350	mg/kg dry	SW846 8100M	12/25/2014 1:47	KD
Surrogate			RANGE	SW-846 8100M	12/25/2014 1:47	KD
2-Fluorobiphenyl	132		40-140%	SW-846 8100M	12/25/2014 1:47	KD
Moisture	15.1		%	SM2540 G.	12/24/2014 8:47	AK
Total Metals						
Arsenic	5.2	2.9	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
Barium	68	0.59	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
Cadmium	0.45	0.29	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
Chromium	22	1.8	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
Lead	180	2.4	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
Mercury	0.50	0.10	mg/kg dry	SW-846 7471B	12/30/2014 14:54	JRW
Selenium	<5.9	5.9	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
Silver	1.7	1.2	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
ICP Digestion	50.00			SW-846 3050B	12/29/2014 10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014 14:07	JRW
Volatile Organic Compounds						
Acetone	<0.0475	0.0475	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Tertiary Amyl Methyl Ether	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Benzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Bromobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Bromochloromethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Bromodichloromethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Bromoform	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Bromomethane	<0.0095	0.0095	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Sec-butylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
n-Butylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
tert-Butylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Carbon Disulfide	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Carbon Tetrachloride	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Chlorobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Dibromochloromethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Chloroethane	<0.0095	0.0095	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Chloroform	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Chloromethane	<0.0095	0.0095	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
2-Chlorotoluene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
4-Chlorotoluene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2-Dibromo-3-Chloropropane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 003
SAMPLE DESCRIPTION: HA-3 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
1,2-Dibromoethane(EDB)	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Dibromomethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,3-Dichlorobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2-Dichlorobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,4-Dichlorobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
n-Propylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Dichlorodifluoromethane	<0.0095	0.0095	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,1-Dichloroethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2-Dichloroethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,1-Dichloroethene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
cis-1,2-Dichloroethene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
trans-1,2-Dichloroethylene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2-Dichloropropane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,3-Dichloropropane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
2,2-Dichloropropane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,1-Dichloropropene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
cis-1,3-Dichloropropene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
trans-1,3-Dichloropropylene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Diethyl ether	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Diisopropyl Ether (DIPE)	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,4-Dioxane	<0.0950	0.0950	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Ethyl Tertiary Butyl Ether	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Ethylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Hexachlorobutadiene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
2-Hexanone	<0.0475	0.0475	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Isopropylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
p-Isopropyltoluene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
2-Butanone(MEK)	<0.0475	0.0475	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
4-Methyl-2-pentanone(MIBK)	<0.0475	0.0475	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
MTBE	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Methylene Chloride	<0.0237	0.0237	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Naphthalene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,1,2-Trichloroethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Styrene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,1,1,2-Tetrachloroethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,1,2,2-Tetrachloroethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Tetrachloroethene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Tetrahydrofuran	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Toluene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2,4-Trichlorobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2,3-Trichlorobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 003
SAMPLE DESCRIPTION: HA-3 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
1,1,1-Trichloroethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Trichloroethene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Trichlorofluoromethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2,3-Trichloropropane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2,4-Trimethylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,3,5-Trimethylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Vinyl Chloride	<0.0095	0.0095	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
o-Xylene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
m,p-Xylene	<0.0095	0.0095	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Surrogates			RANGE	5035/8260C	12/26/2014 13:43	*ET
Dibromofluoromethane	96		70-130%	5035/8260C	12/26/2014 13:43	*ET
Toluene-d8	105		70-130%	5035/8260C	12/26/2014 13:43	*ET
4-Bromofluorobenzene	86		70-130%	5035/8260C	12/26/2014 13:43	*ET
1,2 Dichloroethane-d4	111		70-130%	5035/8260C	12/26/2014 13:43	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 004
SAMPLE DESCRIPTION: HA-4 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED		ANALYST
Pesticides							
Aldrin	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Alpha-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Beta-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Delta-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Gamma-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Chlordane	<0.4	0.4	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
4-4'-DDD	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
4-4'-DDE	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
4-4'-DDT	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Dieldrin	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Endosulfan I	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Endosulfan II	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Endosulfan Sulfate	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Endrin	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Endrin Aldehyde	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Endrin Ketone	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Heptachlor	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Heptachlor epoxide	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Methoxychlor	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Toxaphene	<0.4	0.4	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Moisture	11.8		%	SM2540 G.	12/24/2014	8:47	AK
Surrogate			RANGE	SW-846 8081B	1/2/2015	14:05	JEB
Tetrachloro-m-xylene (TCMX)	70		30-150%	SW-846 8081B	1/2/2015	14:05	JEB
Decachlorobiphenyl	30		30-150%	SW-846 8081B	1/2/2015	14:05	JEB
Pest/PCB Extraction date	Extracted			SW846 3546	12/29/2014	11:55	KS
PAH							
Naphthalene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Acenaphthylene	0.42	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Acenaphthene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Fluorene	0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Phenanthrene	5.2	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Anthracene	1.3	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Fluoranthene	7.5	0.75	mg/kg dry	SW-846 8270D	12/31/2014	16:28	KF
Pyrene	6.3	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Benzo(a)anthracene	3.5	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Chrysene	3.2	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Benzo(b)fluoranthene	2.6	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Benzo(k)fluoranthene	2.4	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 004
SAMPLE DESCRIPTION: HA-4 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Benzo(a)pyrene	2.8	0.38	mg/kg dry	SW-846 8270D	12/30/2014 16:23	KF
Indeno(1,2,3-cd)pyrene	1.5	0.38	mg/kg dry	SW-846 8270D	12/30/2014 16:23	KF
Dibenzo(a,h)anthracene	0.42	0.38	mg/kg dry	SW-846 8270D	12/30/2014 16:23	KF
Benzo(g,h,i)perylene	1.6	0.38	mg/kg dry	SW-846 8270D	12/30/2014 16:23	KF
2-Methylnaphthalene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 16:23	KF
Moisture	11.8		%	SM2540 G.	12/24/2014 8:47	AK
Surrogates			RANGE	SW-846 8270D	12/30/2014 16:23	KF
Nitrobenzene-d5	36		30-130%	SW-846 8270D	12/30/2014 16:23	KF
2-Fluorobiphenyl	37		30-130%	SW-846 8270D	12/30/2014 16:23	KF
P-Terphenyl-d14	38		30-130%	SW-846 8270D	12/30/2014 16:23	KF
Semi Extraction date				SW846 3546	12/29/2014 12:50	KS
Total Metals						
Arsenic	5.5	2.8	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
Barium	120	0.56	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
Cadmium	0.36	0.28	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
Chromium	11	1.7	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
Lead	500	2.2	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
Mercury	0.44	0.098	mg/kg dry	SW-846 7471B	12/30/2014 14:56	JRW
Selenium	<5.6	5.6	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
Silver	1.3	1.1	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
ICP Digestion	49.50			SW-846 3050B	12/29/2014 10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014 14:07	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 005
SAMPLE DESCRIPTION: HA-7 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Semi-Volatile Organic Comp.						
Acenaphthene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Acenaphthylene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Anthracene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Benzidine	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Benzo(a)anthracene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Benzo(b)fluoranthene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Benzo(k)fluoranthene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Benzo(g,h,i)perylene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Benzo(a)pyrene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Bis(2-chloroethyl)ether	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Bis(2-Chloroethoxy)methane	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Bis(2-Chloroisopropyl)Ether	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Bis(2-ethylhexyl)phthalate	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
4-Bromophenyl phenyl ether	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Butylbenzyl phthalate	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2-Chloronaphthalene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
4-Chlorophenyl phenyl ether	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Chrysene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Dibenzo(a,h)anthracene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Di-n-butyl phthalate	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
1,2-Dichlorobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
1,3-Dichlorobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
1,4-Dichlorobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
3,3'-Dichlorobenzidine	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Diethyl phthalate	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Dimethyl phthalate	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,4-Dinitrotoluene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,6-Dinitrotoluene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Di-n-octyl phthalate	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
1,2-Diphenylhydrazine	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Fluoranthene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Fluorene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Hexachlorobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Hexachlorobutadiene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Hexachlorocyclopentadiene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Hexachloroethane	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Indeno(1,2,3-cd)pyrene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Isophorone	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2-Methylnaphthalene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 005
SAMPLE DESCRIPTION: HA-7 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Naphthalene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Nitrobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
N-nitrosodimethylamine	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
N-nitrosodiphenylamine	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
N-nitrosodi-n-propylamine	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Phenanthrene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Pyrene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
1,2,4-Trichlorobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
4-Chloro-3-methylphenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2-Chlorophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,4-Dichlorophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,4-Dimethylphenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2-Methyl-4,6-dinitrophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,4-Dinitrophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2-Nitrophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
4-Nitrophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Pentachlorophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Phenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,4,5-Trichlorophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,4,6-Trichlorophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
4-Chloroaniline	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Dibenzofuran	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2-Methyl Phenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
3 & 4-Methylphenols	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Aniline	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Acetophenone	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Azobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Surrogates			RANGE	SW-846 8270D	12/30/2014 16:54	KF
Phenol-d5	79		30-130%	SW-846 8270D	12/30/2014 16:54	KF
2-Fluorophenol	79		30-130%	SW-846 8270D	12/30/2014 16:54	KF
2,4,6-Tribromophenol	103		30-130%	SW-846 8270D	12/30/2014 16:54	KF
Nitrobenzene-d5	79		30-130%	SW-846 8270D	12/30/2014 16:54	KF
2-Fluorobiphenyl	79		30-130%	SW-846 8270D	12/30/2014 16:54	KF
P-Terphenyl-d14	91		30-130%	SW-846 8270D	12/30/2014 16:54	KF
Semi Extraction date				SW846 3546	12/29/2014 12:50	KS
Total Metals						
Arsenic	21	2.7	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW
Barium	31	0.54	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW
Cadmium	<0.27	0.27	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW
Chromium	20	1.6	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 005
SAMPLE DESCRIPTION: HA-7 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Lead	22	2.1	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW
Mercury	<0.093	0.093	mg/kg dry	SW-846 7471B	12/30/2014 14:57	JRW
Selenium	<5.4	5.4	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW
Silver	1.5	1.1	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW
ICP Digestion	49.75			SW-846 3050B	12/29/2014 10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014 14:07	JRW
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Aroclor-1254	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Surrogate			RANGE	SW-846 8082A	12/30/2014 12:42	KD
Tetrachloro-m-xylene (TCMX)	60		30-150%	SW-846 8082A	12/30/2014 12:42	KD
Decachlorobiphenyl	71		30-150%	SW-846 8082A	12/30/2014 12:42	KD
Extraction date				SW846 3546	12/29/2014 11:55	KS
Moisture	7.0		%	SM2540 G.	12/24/2014 8:47	AK
Volatile Organic Compounds						
Acetone	<0.0418	0.0418	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Tertiary Amyl Methyl Ether	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Benzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Bromobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Bromochloromethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Bromodichloromethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Bromoform	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Bromomethane	<0.0084	0.0084	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Sec-butylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
n-Butylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
tert-Butylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Carbon Disulfide	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Carbon Tetrachloride	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Chlorobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Dibromochloromethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Chloroethane	<0.0084	0.0084	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Chloroform	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Chloromethane	<0.0084	0.0084	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
2-Chlorotoluene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 005
SAMPLE DESCRIPTION: HA-7 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
4-Chlorotoluene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2-Dibromo-3-Chloropropane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2-Dibromoethane(EDB)	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Dibromomethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,3-Dichlorobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2-Dichlorobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,4-Dichlorobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
n-Propylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Dichlorodifluoromethane	<0.0084	0.0084	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1-Dichloroethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2-Dichloroethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1-Dichloroethene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
cis-1,2-Dichloroethene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
trans-1,2-Dichloroethylene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2-Dichloropropane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,3-Dichloropropane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
2,2-Dichloropropane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1-Dichloropropene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
cis-1,3-Dichloropropene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
trans-1,3-Dichloropropylene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Diethyl ether	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Diisopropyl Ether (DIPE)	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,4-Dioxane	<0.0837	0.0837	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Ethyl Tertiary Butyl Ether	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Ethylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Hexachlorobutadiene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
2-Hexanone	<0.0418	0.0418	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Isopropylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
p-Isopropyltoluene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
2-Butanone(MEK)	<0.0418	0.0418	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
4-Methyl-2-pentanone(MIBK)	<0.0418	0.0418	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
MTBE	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Methylene Chloride	<0.0209	0.0209	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Naphthalene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1,2-Trichloroethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Styrene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1,1,2-Tetrachloroethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1,2,2-Tetrachloroethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Tetrachloroethene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Tetrahydrofuran	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Toluene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 005
SAMPLE DESCRIPTION: HA-7 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
1,2,4-Trichlorobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2,3-Trichlorobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1,1-Trichloroethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Trichloroethene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Trichlorofluoromethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2,3-Trichloropropane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2,4-Trimethylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,3,5-Trimethylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Vinyl Chloride	<0.0084	0.0084	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
o-Xylene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
m,p-Xylene	<0.0084	0.0084	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Surrogates			RANGE	5035/8260C	12/26/2014 14:40	*ET
Dibromofluoromethane	100		70-130%	5035/8260C	12/26/2014 14:40	*ET
Toluene-d8	102		70-130%	5035/8260C	12/26/2014 14:40	*ET
4-Bromofluorobenzene	92		70-130%	5035/8260C	12/26/2014 14:40	*ET
1,2 Dichloroethane-d4	117		70-130%	5035/8260C	12/26/2014 14:40	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 006
SAMPLE DESCRIPTION: HA-6 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 08:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED		ANALYST
Pesticides							
Aldrin	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Alpha-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Beta-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Delta-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Gamma-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Chlordane	<0.4	0.4	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
4-4'-DDD	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
4-4'-DDE	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
4-4'-DDT	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Dieldrin	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Endosulfan I	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Endosulfan II	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Endosulfan Sulfate	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Endrin	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Endrin Aldehyde	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Endrin Ketone	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Heptachlor	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Heptachlor epoxide	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Methoxychlor	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Toxaphene	<0.4	0.4	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Moisture	12.1		%	SM2540 G.	12/24/2014	8:33	AK
Surrogate			RANGE	SW-846 8081B	1/2/2015	14:42	JEB
Tetrachloro-m-xylene (TCMX)	60		30-150%	SW-846 8081B	1/2/2015	14:42	JEB
Decachlorobiphenyl	30		30-150%	SW-846 8081B	1/2/2015	14:42	JEB
Pest/PCB Extraction date	Extracted			SW846 3546	12/29/2014	11:55	KS
Total Metals							
Arsenic	12	2.8	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
Barium	320	0.57	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
Cadmium	1.5	0.28	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
Chromium	38	1.7	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
Lead	510	2.3	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
Mercury	2.7	1.1	mg/kg dry	SW-846 7471B	12/30/2014	15:11	JRW
Selenium	<5.7	5.7	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
Silver	3.9	1.1	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
ICP Digestion	49.75			SW-846 3050B	12/29/2014	10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014	14:07	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 007
SAMPLE DESCRIPTION: HA-5 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 08:08

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
TPH						
TPH GC/FID	140	130	mg/kg dry	SW846 8100M	12/25/2014 3:20	KD
Surrogate			RANGE	SW-846 8100M	12/25/2014 3:20	KD
2-Fluorobiphenyl	103		40-140%	SW-846 8100M	12/25/2014 3:20	KD
Moisture	8.8		%	SM2540 G.	12/24/2014 8:33	AK
PAH						
Naphthalene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Acenaphthylene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Acenaphthene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Fluorene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Phenanthrene	0.67	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Anthracene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Fluoranthene	1.6	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Pyrene	1.4	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Benzo(a)anthracene	0.78	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Chrysene	0.80	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Benzo(b)fluoranthene	0.56	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Benzo(k)fluoranthene	0.66	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Benzo(a)pyrene	0.78	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Indeno(1,2,3-cd)pyrene	0.46	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Dibenzo(a,h)anthracene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Benzo(g,h,i)perylene	0.49	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
2-Methylnaphthalene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Moisture	8.8		%	SM2540 G.	12/24/2014 8:33	AK
Surrogates			RANGE	SW-846 8270D	12/30/2014 17:25	KF
Nitrobenzene-d5	62		30-130%	SW-846 8270D	12/30/2014 17:25	KF
2-Fluorobiphenyl	62		30-130%	SW-846 8270D	12/30/2014 17:25	KF
P-Terphenyl-d14	68		30-130%	SW-846 8270D	12/30/2014 17:25	KF
Semi Extraction date				SW846 3546	12/29/2014 12:50	KS
Total Metals						
Arsenic	4.7	2.7	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW
Barium	59	0.54	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW
Cadmium	<0.27	0.27	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW
Chromium	10	1.6	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW
Lead	110	2.2	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW
Mercury	0.29	0.098	mg/kg dry	SW-846 7471B	12/30/2014 15:00	JRW
Selenium	<5.4	5.4	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW
Silver	1.4	1.1	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 007
SAMPLE DESCRIPTION: HA-5 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 08:08

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
ICP Digestion	49.26			SW-846 3050B	12/29/2014 10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014 14:07	JRW

Low Level 5035 analyzed by ESS Laboratory.

CERTIFICATE OF ANALYSIS

Data Reporting
RI Analytical Laboratories, Inc.
41 Illinois Avenue
Warwick, RI 02888

RE: RIAL Sampling (1412-28533)
ESS Laboratory Work Order Number: 1412500

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

REVIEWED
By ESS Laboratory at 11:33 am, Dec 31, 2014

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 NELAC Standards, A2LA 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: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

SAMPLE RECEIPT

The following samples were received on December 23, 2014 for the analyses specified on the enclosed Chain of Custody Record.

Low Level VOA vials were frozen by ESS Laboratory on December 23, 2014 at 17:35.

Lab Number	Sample Name	Matrix	Analysis
1412500-01	1412-28533-002	Soil	8260B Low
1412500-02	1412-28533-003	Soil	8260B Low
1412500-03	1412-28533-005	Soil	8260B Low
1412500-04	1412-28533-008	Soil	8260B Low

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

PROJECT NARRATIVE

5035/8260B Volatile Organic Compounds / Low Level

1412500-01	**Surrogate recovery(ies) above upper control limit (S+).**
	1,2-Dichloroethane-d4 (140% @ 70-130%)
CXL0357-CCV1	**Continuing Calibration recovery is above upper control limit (C+).**
	1,4-Dioxane (178% @ 70-130%)
CXL0372-CCV1	**Continuing Calibration recovery is above upper control limit (C+).**
	1,4-Dioxane (191% @ 70-130%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

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
8015D - 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 and Graphite Furnace Digestion
3020A - Aqueous 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

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-002
Date Sampled: 12/23/14 07:00
Percent Solids: 77
Initial Volume: 6.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,1,1-Trichloroethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,1,2,2-Tetrachloroethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,1,2-Trichloroethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,1-Dichloroethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,1-Dichloroethene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,1-Dichloropropene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2,3-Trichlorobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2,3-Trichloropropane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2,4-Trichlorobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2,4-Trimethylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2-Dibromo-3-Chloropropane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2-Dibromoethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2-Dichlorobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2-Dichloroethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2-Dichloropropane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,3,5-Trimethylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,3-Dichlorobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,3-Dichloropropane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,4-Dichlorobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,4-Dioxane	ND (0.102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1-Chlorohexane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
2,2-Dichloropropane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
2-Butanone	ND (0.0509)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
2-Chlorotoluene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
2-Hexanone	ND (0.0509)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
4-Chlorotoluene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
4-Isopropyltoluene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
4-Methyl-2-Pentanone	ND (0.0509)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Acetone	ND (0.0509)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Benzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-002
Date Sampled: 12/23/14 07:00
Percent Solids: 77
Initial Volume: 6.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Bromochloromethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Bromodichloromethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Bromoform	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Bromomethane	ND (0.0102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Carbon Disulfide	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Carbon Tetrachloride	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Chlorobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Chloroethane	ND (0.0102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Chloroform	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Chloromethane	ND (0.0102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
cis-1,2-Dichloroethene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
cis-1,3-Dichloropropene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Dibromochloromethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Dibromomethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Dichlorodifluoromethane	ND (0.0102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Diethyl Ether	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Di-isopropyl ether	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Ethyl tertiary-butyl ether	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Ethylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Hexachlorobutadiene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Isopropylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Methyl tert-Butyl Ether	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Methylene Chloride	ND (0.0255)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Naphthalene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
n-Butylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
n-Propylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
sec-Butylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Styrene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
tert-Butylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Tertiary-amyl methyl ether	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-002
Date Sampled: 12/23/14 07:00
Percent Solids: 77
Initial Volume: 6.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrachloroethene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Tetrahydrofuran	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Toluene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
trans-1,2-Dichloroethene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
trans-1,3-Dichloropropene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Trichloroethene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Trichlorofluoromethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Vinyl Acetate	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Vinyl Chloride	ND (0.0102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Xylene O	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Xylene P,M	ND (0.0102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Xylenes (Total)	ND (0.0102)		8260B Low		1	12/24/14 18:45		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*140 %*	*S+*	*70-130*
Surrogate: 4-Bromofluorobenzene	*90 %*		*70-130*
Surrogate: Dibromofluoromethane	*116 %*		*70-130*
Surrogate: Toluene-d8	*105 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-003
Date Sampled: 12/23/14 07:15
Percent Solids: 85
Initial Volume: 6.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,1,1-Trichloroethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,1,2,2-Tetrachloroethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,1,2-Trichloroethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,1-Dichloroethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,1-Dichloroethene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,1-Dichloropropene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2,3-Trichlorobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2,3-Trichloropropane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2,4-Trichlorobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2,4-Trimethylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2-Dibromo-3-Chloropropane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2-Dibromoethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2-Dichlorobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2-Dichloroethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2-Dichloropropane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,3,5-Trimethylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,3-Dichlorobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,3-Dichloropropane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,4-Dichlorobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,4-Dioxane	ND (0.0950)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1-Chlorohexane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
2,2-Dichloropropane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
2-Butanone	ND (0.0475)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
2-Chlorotoluene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
2-Hexanone	ND (0.0475)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
4-Chlorotoluene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
4-Isopropyltoluene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
4-Methyl-2-Pentanone	ND (0.0475)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Acetone	ND (0.0475)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Benzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-003
Date Sampled: 12/23/14 07:15
Percent Solids: 85
Initial Volume: 6.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Bromochloromethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Bromodichloromethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Bromoform	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Bromomethane	ND (0.0095)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Carbon Disulfide	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Carbon Tetrachloride	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Chlorobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Chloroethane	ND (0.0095)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Chloroform	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Chloromethane	ND (0.0095)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
cis-1,2-Dichloroethene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
cis-1,3-Dichloropropene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Dibromochloromethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Dibromomethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Dichlorodifluoromethane	ND (0.0095)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Diethyl Ether	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Di-isopropyl ether	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Ethyl tertiary-butyl ether	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Ethylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Hexachlorobutadiene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Isopropylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Methyl tert-Butyl Ether	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Methylene Chloride	ND (0.0237)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Naphthalene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
n-Butylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
n-Propylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
sec-Butylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Styrene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
tert-Butylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Tertiary-amyl methyl ether	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-003
Date Sampled: 12/23/14 07:15
Percent Solids: 85
Initial Volume: 6.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrachloroethene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Tetrahydrofuran	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Toluene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
trans-1,2-Dichloroethene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
trans-1,3-Dichloropropene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Trichloroethene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Trichlorofluoromethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Vinyl Acetate	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Vinyl Chloride	ND (0.0095)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Xylene O	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Xylene P,M	ND (0.0095)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Xylenes (Total)	ND (0.0095)		8260B Low		1	12/26/14 13:43		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*111 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*86 %*		*70-130*
Surrogate: Dibromofluoromethane	*96 %*		*70-130*
Surrogate: Toluene-d8	*105 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-005
Date Sampled: 12/23/14 07:50
Percent Solids: 83
Initial Volume: 7.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,1,1-Trichloroethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,1,2,2-Tetrachloroethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,1,2-Trichloroethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,1-Dichloroethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,1-Dichloroethene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,1-Dichloropropene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2,3-Trichlorobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2,3-Trichloropropane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2,4-Trichlorobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2,4-Trimethylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2-Dibromo-3-Chloropropane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2-Dibromoethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2-Dichlorobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2-Dichloroethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2-Dichloropropane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,3,5-Trimethylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,3-Dichlorobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,3-Dichloropropane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,4-Dichlorobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,4-Dioxane	ND (0.0837)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1-Chlorohexane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
2,2-Dichloropropane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
2-Butanone	ND (0.0418)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
2-Chlorotoluene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
2-Hexanone	ND (0.0418)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
4-Chlorotoluene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
4-Isopropyltoluene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
4-Methyl-2-Pentanone	ND (0.0418)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Acetone	ND (0.0418)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Benzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-005
Date Sampled: 12/23/14 07:50
Percent Solids: 83
Initial Volume: 7.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Bromochloromethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Bromodichloromethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Bromoform	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Bromomethane	ND (0.0084)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Carbon Disulfide	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Carbon Tetrachloride	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Chlorobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Chloroethane	ND (0.0084)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Chloroform	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Chloromethane	ND (0.0084)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
cis-1,2-Dichloroethene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
cis-1,3-Dichloropropene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Dibromochloromethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Dibromomethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Dichlorodifluoromethane	ND (0.0084)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Diethyl Ether	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Di-isopropyl ether	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Ethyl tertiary-butyl ether	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Ethylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Hexachlorobutadiene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Isopropylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Methyl tert-Butyl Ether	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Methylene Chloride	ND (0.0209)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Naphthalene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
n-Butylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
n-Propylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
sec-Butylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Styrene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
tert-Butylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Tertiary-amyl methyl ether	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-005
Date Sampled: 12/23/14 07:50
Percent Solids: 83
Initial Volume: 7.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrachloroethene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Tetrahydrofuran	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Toluene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
trans-1,2-Dichloroethene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
trans-1,3-Dichloropropene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Trichloroethene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Trichlorofluoromethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Vinyl Acetate	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Vinyl Chloride	ND (0.0084)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Xylene O	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Xylene P,M	ND (0.0084)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Xylenes (Total)	ND (0.0084)		8260B Low		1	12/26/14 14:40		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*117 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*92 %*		*70-130*
Surrogate: Dibromofluoromethane	*100 %*		*70-130*
Surrogate: Toluene-d8	*102 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-008
Date Sampled: 12/23/14 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-04
Sample Matrix: Soil
Units: mg/kg
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,1,1-Trichloroethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,1,2,2-Tetrachloroethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,1,2-Trichloroethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,1-Dichloroethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,1-Dichloroethene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,1-Dichloropropene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2,3-Trichlorobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2,3-Trichloropropane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2,4-Trichlorobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2,4-Trimethylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2-Dibromoethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2-Dichlorobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2-Dichloroethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2-Dichloropropane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,3,5-Trimethylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,3-Dichlorobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,3-Dichloropropane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,4-Dichlorobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,4-Dioxane	ND (0.100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1-Chlorohexane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
2,2-Dichloropropane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
2-Butanone	ND (0.0500)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
2-Chlorotoluene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
2-Hexanone	ND (0.0500)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
4-Chlorotoluene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
4-Isopropyltoluene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
4-Methyl-2-Pentanone	ND (0.0500)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Acetone	ND (0.0500)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Benzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-008
Date Sampled: 12/23/14 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-04
Sample Matrix: Soil
Units: mg/kg
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Bromochloromethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Bromodichloromethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Bromoform	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Bromomethane	ND (0.0100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Carbon Disulfide	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Carbon Tetrachloride	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Chlorobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Chloroethane	ND (0.0100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Chloroform	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Chloromethane	ND (0.0100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
cis-1,2-Dichloroethene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
cis-1,3-Dichloropropene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Dibromochloromethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Dibromomethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Dichlorodifluoromethane	ND (0.0100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Diethyl Ether	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Di-isopropyl ether	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Ethyl tertiary-butyl ether	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Ethylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Hexachlorobutadiene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Isopropylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Methyl tert-Butyl Ether	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Methylene Chloride	ND (0.0250)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Naphthalene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
n-Butylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
n-Propylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
sec-Butylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Styrene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
tert-Butylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Tertiary-amyl methyl ether	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-008
Date Sampled: 12/23/14 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-04
Sample Matrix: Soil
Units: mg/kg
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrachloroethene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Tetrahydrofuran	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Toluene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
trans-1,2-Dichloroethene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
trans-1,3-Dichloropropene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Trichloroethene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Trichlorofluoromethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Vinyl Acetate	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Vinyl Chloride	ND (0.0100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Xylene O	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Xylene P,M	ND (0.0100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*108 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*95 %*		*70-130*
Surrogate: Dibromofluoromethane	*102 %*		*70-130*
Surrogate: Toluene-d8	*100 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42430 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane	ND	0.100	mg/kg wet							
1-Chlorohexane	ND	0.0050	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0500	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							
2-Hexanone	ND	0.0500	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0500	mg/kg wet							
Acetone	ND	0.0500	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							
Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42430 - 5035										
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Dibromochloromethane	ND	0.0050	mg/kg wet							
Dibromomethane	ND	0.0050	mg/kg wet							
Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0250	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							
Vinyl Acetate	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Xylenes (Total)	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0544*		mg/kg wet	*0.05000*		*109*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0486*		mg/kg wet	*0.05000*		*97*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0509*		mg/kg wet	*0.05000*		*102*	*70-130*			
Surrogate: Toluene-d8	*0.0507*		mg/kg wet	*0.05000*		*101*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0422	0.0050	mg/kg wet	0.05000		84	70-130			
1,1,1-Trichloroethane	0.0414	0.0050	mg/kg wet	0.05000		83	70-130			
1,1,2,2-Tetrachloroethane	0.0391	0.0050	mg/kg wet	0.05000		78	70-130			
1,1,2-Trichloroethane	0.0396	0.0050	mg/kg wet	0.05000		79	70-130			
1,1-Dichloroethane	0.0386	0.0050	mg/kg wet	0.05000		77	70-130			
1,1-Dichloroethene	0.0406	0.0050	mg/kg wet	0.05000		81	70-130			
1,1-Dichloropropene	0.0402	0.0050	mg/kg wet	0.05000		80	70-130			
1,2,3-Trichlorobenzene	0.0444	0.0050	mg/kg wet	0.05000		89	70-130			

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42430 - 5035										
1,2,3-Trichloropropane	0.0412	0.0050	mg/kg wet	0.05000		82	70-130			
1,2,4-Trichlorobenzene	0.0443	0.0050	mg/kg wet	0.05000		89	70-130			
1,2,4-Trimethylbenzene	0.0423	0.0050	mg/kg wet	0.05000		85	70-130			
1,2-Dibromo-3-Chloropropane	0.0399	0.0050	mg/kg wet	0.05000		80	70-130			
1,2-Dibromoethane	0.0410	0.0050	mg/kg wet	0.05000		82	70-130			
1,2-Dichlorobenzene	0.0409	0.0050	mg/kg wet	0.05000		82	70-130			
1,2-Dichloroethane	0.0377	0.0050	mg/kg wet	0.05000		75	70-130			
1,2-Dichloropropane	0.0392	0.0050	mg/kg wet	0.05000		78	70-130			
1,3,5-Trimethylbenzene	0.0440	0.0050	mg/kg wet	0.05000		88	70-130			
1,3-Dichlorobenzene	0.0406	0.0050	mg/kg wet	0.05000		81	70-130			
1,3-Dichloropropane	0.0408	0.0050	mg/kg wet	0.05000		82	70-130			
1,4-Dichlorobenzene	0.0456	0.0050	mg/kg wet	0.05000		91	70-130			
1,4-Dioxane	0.900	0.100	mg/kg wet	1.000		90	70-130			
1-Chlorohexane	0.0430	0.0050	mg/kg wet	0.05000		86	70-130			
2,2-Dichloropropane	0.0423	0.0050	mg/kg wet	0.05000		85	70-130			
2-Butanone	0.195	0.0500	mg/kg wet	0.2500		78	70-130			
2-Chlorotoluene	0.0406	0.0050	mg/kg wet	0.05000		81	70-130			
2-Hexanone	0.210	0.0500	mg/kg wet	0.2500		84	70-130			
4-Chlorotoluene	0.0414	0.0050	mg/kg wet	0.05000		83	70-130			
4-Isopropyltoluene	0.0423	0.0050	mg/kg wet	0.05000		85	70-130			
4-Methyl-2-Pentanone	0.208	0.0500	mg/kg wet	0.2500		83	70-130			
Acetone	0.208	0.0500	mg/kg wet	0.2500		83	70-130			
Benzene	0.0406	0.0050	mg/kg wet	0.05000		81	70-130			
Bromobenzene	0.0427	0.0050	mg/kg wet	0.05000		85	70-130			
Bromochloromethane	0.0415	0.0050	mg/kg wet	0.05000		83	70-130			
Bromodichloromethane	0.0417	0.0050	mg/kg wet	0.05000		83	70-130			
Bromoform	0.0443	0.0050	mg/kg wet	0.05000		89	70-130			
Bromomethane	0.0392	0.0100	mg/kg wet	0.05000		78	70-130			
Carbon Disulfide	0.0421	0.0050	mg/kg wet	0.05000		84	70-130			
Carbon Tetrachloride	0.0424	0.0050	mg/kg wet	0.05000		85	70-130			
Chlorobenzene	0.0397	0.0050	mg/kg wet	0.05000		79	70-130			
Chloroethane	0.0400	0.0100	mg/kg wet	0.05000		80	70-130			
Chloroform	0.0399	0.0050	mg/kg wet	0.05000		80	70-130			
Chloromethane	0.0390	0.0100	mg/kg wet	0.05000		78	70-130			
cis-1,2-Dichloroethene	0.0411	0.0050	mg/kg wet	0.05000		82	70-130			
cis-1,3-Dichloropropene	0.0424	0.0050	mg/kg wet	0.05000		85	70-130			
Dibromochloromethane	0.0445	0.0050	mg/kg wet	0.05000		89	70-130			
Dibromomethane	0.0400	0.0050	mg/kg wet	0.05000		80	70-130			
Dichlorodifluoromethane	0.0357	0.0100	mg/kg wet	0.05000		71	70-130			
Diethyl Ether	0.0400	0.0050	mg/kg wet	0.05000		80	70-130			
Di-isopropyl ether	0.0394	0.0050	mg/kg wet	0.05000		79	70-130			
Ethyl tertiary-butyl ether	0.0408	0.0050	mg/kg wet	0.05000		82	70-130			
Ethylbenzene	0.0419	0.0050	mg/kg wet	0.05000		84	70-130			
Hexachlorobutadiene	0.0430	0.0050	mg/kg wet	0.05000		86	70-130			

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch CL42430 - 5035										
Isopropylbenzene	0.0418	0.0050	mg/kg wet	0.05000		84	70-130			
Methyl tert-Butyl Ether	0.0423	0.0050	mg/kg wet	0.05000		85	70-130			
Methylene Chloride	0.0465	0.0250	mg/kg wet	0.05000		93	70-130			
Naphthalene	0.0422	0.0050	mg/kg wet	0.05000		84	70-130			
n-Butylbenzene	0.0431	0.0050	mg/kg wet	0.05000		86	70-130			
n-Propylbenzene	0.0410	0.0050	mg/kg wet	0.05000		82	70-130			
sec-Butylbenzene	0.0413	0.0050	mg/kg wet	0.05000		83	70-130			
Styrene	0.0426	0.0050	mg/kg wet	0.05000		85	70-130			
tert-Butylbenzene	0.0423	0.0050	mg/kg wet	0.05000		85	70-130			
Tertiary-amyl methyl ether	0.0420	0.0050	mg/kg wet	0.05000		84	70-130			
Tetrachloroethene	0.0413	0.0050	mg/kg wet	0.05000		83	70-130			
Tetrahydrofuran	0.0392	0.0050	mg/kg wet	0.05000		78	70-130			
Toluene	0.0411	0.0050	mg/kg wet	0.05000		82	70-130			
trans-1,2-Dichloroethene	0.0408	0.0050	mg/kg wet	0.05000		82	70-130			
trans-1,3-Dichloropropene	0.0405	0.0050	mg/kg wet	0.05000		81	70-130			
Trichloroethene	0.0400	0.0050	mg/kg wet	0.05000		80	70-130			
Trichlorofluoromethane	0.0362	0.0050	mg/kg wet	0.05000		72	70-130			
Vinyl Acetate	0.0432	0.0050	mg/kg wet	0.05000		86	70-130			
Vinyl Chloride	0.0407	0.0100	mg/kg wet	0.05000		81	70-130			
Xylene O	0.0400	0.0050	mg/kg wet	0.05000		80	70-130			
Xylene P,M	0.0824	0.0100	mg/kg wet	0.1000		82	70-130			
Xylenes (Total)	0.122	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0456*		mg/kg wet	*0.05000*		*91*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0472*		mg/kg wet	*0.05000*		*94*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0475*		mg/kg wet	*0.05000*		*95*	*70-130*			
Surrogate: Toluene-d8	*0.0483*		mg/kg wet	*0.05000*		*97*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0441	0.0050	mg/kg wet	0.05000		88	70-130	4	25	
1,1,1-Trichloroethane	0.0449	0.0050	mg/kg wet	0.05000		90	70-130	8	25	
1,1,2,2-Tetrachloroethane	0.0423	0.0050	mg/kg wet	0.05000		85	70-130	8	25	
1,1,2-Trichloroethane	0.0429	0.0050	mg/kg wet	0.05000		86	70-130	8	25	
1,1-Dichloroethane	0.0425	0.0050	mg/kg wet	0.05000		85	70-130	9	25	
1,1-Dichloroethene	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	9	25	
1,1-Dichloropropene	0.0441	0.0050	mg/kg wet	0.05000		88	70-130	9	25	
1,2,3-Trichlorobenzene	0.0456	0.0050	mg/kg wet	0.05000		91	70-130	3	25	
1,2,3-Trichloropropane	0.0445	0.0050	mg/kg wet	0.05000		89	70-130	8	25	
1,2,4-Trichlorobenzene	0.0455	0.0050	mg/kg wet	0.05000		91	70-130	3	25	
1,2,4-Trimethylbenzene	0.0453	0.0050	mg/kg wet	0.05000		91	70-130	7	25	
1,2-Dibromo-3-Chloropropane	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	11	25	
1,2-Dibromoethane	0.0432	0.0050	mg/kg wet	0.05000		86	70-130	5	25	
1,2-Dichlorobenzene	0.0427	0.0050	mg/kg wet	0.05000		85	70-130	4	25	
1,2-Dichloroethane	0.0418	0.0050	mg/kg wet	0.05000		84	70-130	10	25	
1,2-Dichloropropane	0.0432	0.0050	mg/kg wet	0.05000		86	70-130	10	25	
1,3,5-Trimethylbenzene	0.0469	0.0050	mg/kg wet	0.05000		94	70-130	7	25	

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch CL42430 - 5035										
1,3-Dichlorobenzene	0.0436	0.0050	mg/kg wet	0.05000		87	70-130	7	25	
1,3-Dichloropropane	0.0435	0.0050	mg/kg wet	0.05000		87	70-130	6	25	
1,4-Dichlorobenzene	0.0465	0.0050	mg/kg wet	0.05000		93	70-130	2	25	
1,4-Dioxane	0.982	0.100	mg/kg wet	1.000		98	70-130	9	20	
1-Chlorohexane	0.0457	0.0050	mg/kg wet	0.05000		91	70-130	6	25	
2,2-Dichloropropane	0.0461	0.0050	mg/kg wet	0.05000		92	70-130	9	25	
2-Butanone	0.216	0.0500	mg/kg wet	0.2500		87	70-130	10	25	
2-Chlorotoluene	0.0435	0.0050	mg/kg wet	0.05000		87	70-130	7	25	
2-Hexanone	0.227	0.0500	mg/kg wet	0.2500		91	70-130	8	25	
4-Chlorotoluene	0.0445	0.0050	mg/kg wet	0.05000		89	70-130	7	25	
4-Isopropyltoluene	0.0446	0.0050	mg/kg wet	0.05000		89	70-130	5	25	
4-Methyl-2-Pentanone	0.225	0.0500	mg/kg wet	0.2500		90	70-130	8	25	
Acetone	0.233	0.0500	mg/kg wet	0.2500		93	70-130	11	25	
Benzene	0.0444	0.0050	mg/kg wet	0.05000		89	70-130	9	25	
Bromobenzene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	6	25	
Bromochloromethane	0.0447	0.0050	mg/kg wet	0.05000		89	70-130	7	25	
Bromodichloromethane	0.0456	0.0050	mg/kg wet	0.05000		91	70-130	9	25	
Bromoform	0.0463	0.0050	mg/kg wet	0.05000		93	70-130	4	25	
Bromomethane	0.0463	0.0100	mg/kg wet	0.05000		93	70-130	17	25	
Carbon Disulfide	0.0462	0.0050	mg/kg wet	0.05000		92	70-130	9	25	
Carbon Tetrachloride	0.0457	0.0050	mg/kg wet	0.05000		91	70-130	8	25	
Chlorobenzene	0.0414	0.0050	mg/kg wet	0.05000		83	70-130	4	25	
Chloroethane	0.0449	0.0100	mg/kg wet	0.05000		90	70-130	12	25	
Chloroform	0.0436	0.0050	mg/kg wet	0.05000		87	70-130	9	25	
Chloromethane	0.0437	0.0100	mg/kg wet	0.05000		87	70-130	11	25	
cis-1,2-Dichloroethene	0.0446	0.0050	mg/kg wet	0.05000		89	70-130	8	25	
cis-1,3-Dichloropropene	0.0460	0.0050	mg/kg wet	0.05000		92	70-130	8	25	
Dibromochloromethane	0.0468	0.0050	mg/kg wet	0.05000		94	70-130	5	25	
Dibromomethane	0.0436	0.0050	mg/kg wet	0.05000		87	70-130	9	25	
Dichlorodifluoromethane	0.0387	0.0100	mg/kg wet	0.05000		77	70-130	8	25	
Diethyl Ether	0.0439	0.0050	mg/kg wet	0.05000		88	70-130	9	25	
Di-isopropyl ether	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	12	25	
Ethyl tertiary-butyl ether	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	10	25	
Ethylbenzene	0.0441	0.0050	mg/kg wet	0.05000		88	70-130	5	25	
Hexachlorobutadiene	0.0442	0.0050	mg/kg wet	0.05000		88	70-130	3	25	
Isopropylbenzene	0.0449	0.0050	mg/kg wet	0.05000		90	70-130	7	25	
Methyl tert-Butyl Ether	0.0460	0.0050	mg/kg wet	0.05000		92	70-130	9	25	
Methylene Chloride	0.0492	0.0250	mg/kg wet	0.05000		98	70-130	6	25	
Naphthalene	0.0434	0.0050	mg/kg wet	0.05000		87	70-130	3	25	
n-Butylbenzene	0.0462	0.0050	mg/kg wet	0.05000		92	70-130	7	25	
n-Propylbenzene	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	8	25	
sec-Butylbenzene	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	7	25	
Styrene	0.0448	0.0050	mg/kg wet	0.05000		90	70-130	5	25	
tert-Butylbenzene	0.0448	0.0050	mg/kg wet	0.05000		90	70-130	6	25	

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42430 - 5035										
Tertiary-amyl methyl ether	0.0462	0.0050	mg/kg wet	0.05000		92	70-130	10	25	
Tetrachloroethene	0.0422	0.0050	mg/kg wet	0.05000		84	70-130	2	25	
Tetrahydrofuran	0.0417	0.0050	mg/kg wet	0.05000		83	70-130	6	25	
Toluene	0.0445	0.0050	mg/kg wet	0.05000		89	70-130	8	25	
trans-1,2-Dichloroethene	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	8	25	
trans-1,3-Dichloropropene	0.0447	0.0050	mg/kg wet	0.05000		89	70-130	10	25	
Trichloroethene	0.0435	0.0050	mg/kg wet	0.05000		87	70-130	9	25	
Trichlorofluoromethane	0.0390	0.0050	mg/kg wet	0.05000		78	70-130	7	25	
Vinyl Acetate	0.0488	0.0050	mg/kg wet	0.05000		98	70-130	12	25	
Vinyl Chloride	0.0456	0.0100	mg/kg wet	0.05000		91	70-130	11	25	
Xylene O	0.0419	0.0050	mg/kg wet	0.05000		84	70-130	5	25	
Xylene P,M	0.0862	0.0100	mg/kg wet	0.1000		86	70-130	4	25	
Xylenes (Total)	0.128	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0488*		mg/kg wet	*0.05000*		*98*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0480*		mg/kg wet	*0.05000*		*96*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0497*		mg/kg wet	*0.05000*		*99*	*70-130*			
Surrogate: Toluene-d8	*0.0484*		mg/kg wet	*0.05000*		*97*	*70-130*			
Batch CL42626 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane	ND	0.100	mg/kg wet							
1-Chlorohexane	ND	0.0050	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0500	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42626 - 5035										
2-Hexanone	ND	0.0500	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0500	mg/kg wet							
Acetone	ND	0.0500	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							
Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Dibromochloromethane	ND	0.0050	mg/kg wet							
Dibromomethane	ND	0.0050	mg/kg wet							
Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0250	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42626 - 5035										
Vinyl Acetate	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Xylenes (Total)	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0550*		mg/kg wet	*0.05000*		*110*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0479*		mg/kg wet	*0.05000*		*96*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0482*		mg/kg wet	*0.05000*		*96*	*70-130*			
Surrogate: Toluene-d8	*0.0510*		mg/kg wet	*0.05000*		*102*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0445	0.0050	mg/kg wet	0.05000		89	70-130			
1,1,1-Trichloroethane	0.0499	0.0050	mg/kg wet	0.05000		100	70-130			
1,1,2,2-Tetrachloroethane	0.0434	0.0050	mg/kg wet	0.05000		87	70-130			
1,1,2-Trichloroethane	0.0458	0.0050	mg/kg wet	0.05000		92	70-130			
1,1-Dichloroethane	0.0456	0.0050	mg/kg wet	0.05000		91	70-130			
1,1-Dichloroethene	0.0439	0.0050	mg/kg wet	0.05000		88	70-130			
1,1-Dichloropropene	0.0470	0.0050	mg/kg wet	0.05000		94	70-130			
1,2,3-Trichlorobenzene	0.0476	0.0050	mg/kg wet	0.05000		95	70-130			
1,2,3-Trichloropropane	0.0465	0.0050	mg/kg wet	0.05000		93	70-130			
1,2,4-Trichlorobenzene	0.0474	0.0050	mg/kg wet	0.05000		95	70-130			
1,2,4-Trimethylbenzene	0.0468	0.0050	mg/kg wet	0.05000		94	70-130			
1,2-Dibromo-3-Chloropropane	0.0475	0.0050	mg/kg wet	0.05000		95	70-130			
1,2-Dibromoethane	0.0428	0.0050	mg/kg wet	0.05000		86	70-130			
1,2-Dichlorobenzene	0.0446	0.0050	mg/kg wet	0.05000		89	70-130			
1,2-Dichloroethane	0.0482	0.0050	mg/kg wet	0.05000		96	70-130			
1,2-Dichloropropane	0.0455	0.0050	mg/kg wet	0.05000		91	70-130			
1,3,5-Trimethylbenzene	0.0484	0.0050	mg/kg wet	0.05000		97	70-130			
1,3-Dichlorobenzene	0.0441	0.0050	mg/kg wet	0.05000		88	70-130			
1,3-Dichloropropane	0.0436	0.0050	mg/kg wet	0.05000		87	70-130			
1,4-Dichlorobenzene	0.0490	0.0050	mg/kg wet	0.05000		98	70-130			
1,4-Dioxane	1.06	0.100	mg/kg wet	1.000		106	70-130			
1-Chlorohexane	0.0443	0.0050	mg/kg wet	0.05000		89	70-130			
2,2-Dichloropropane	0.0512	0.0050	mg/kg wet	0.05000		102	70-130			
2-Butanone	0.234	0.0500	mg/kg wet	0.2500		94	70-130			
2-Chlorotoluene	0.0451	0.0050	mg/kg wet	0.05000		90	70-130			
2-Hexanone	0.238	0.0500	mg/kg wet	0.2500		95	70-130			
4-Chlorotoluene	0.0459	0.0050	mg/kg wet	0.05000		92	70-130			
4-Isopropyltoluene	0.0464	0.0050	mg/kg wet	0.05000		93	70-130			
4-Methyl-2-Pentanone	0.252	0.0500	mg/kg wet	0.2500		101	70-130			
Acetone	0.252	0.0500	mg/kg wet	0.2500		101	70-130			
Benzene	0.0466	0.0050	mg/kg wet	0.05000		93	70-130			
Bromobenzene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130			
Bromochloromethane	0.0446	0.0050	mg/kg wet	0.05000		89	70-130			
Bromodichloromethane	0.0500	0.0050	mg/kg wet	0.05000		100	70-130			

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42626 - 5035										
Bromoform	0.0469	0.0050	mg/kg wet	0.05000		94	70-130			
Bromomethane	0.0505	0.0100	mg/kg wet	0.05000		101	70-130			
Carbon Disulfide	0.0480	0.0050	mg/kg wet	0.05000		96	70-130			
Carbon Tetrachloride	0.0508	0.0050	mg/kg wet	0.05000		102	70-130			
Chlorobenzene	0.0409	0.0050	mg/kg wet	0.05000		82	70-130			
Chloroethane	0.0456	0.0100	mg/kg wet	0.05000		91	70-130			
Chloroform	0.0473	0.0050	mg/kg wet	0.05000		95	70-130			
Chloromethane	0.0480	0.0100	mg/kg wet	0.05000		96	70-130			
cis-1,2-Dichloroethene	0.0462	0.0050	mg/kg wet	0.05000		92	70-130			
cis-1,3-Dichloropropene	0.0497	0.0050	mg/kg wet	0.05000		99	70-130			
Dibromochloromethane	0.0470	0.0050	mg/kg wet	0.05000		94	70-130			
Dibromomethane	0.0465	0.0050	mg/kg wet	0.05000		93	70-130			
Dichlorodifluoromethane	0.0470	0.0100	mg/kg wet	0.05000		94	70-130			
Diethyl Ether	0.0467	0.0050	mg/kg wet	0.05000		93	70-130			
Di-isopropyl ether	0.0468	0.0050	mg/kg wet	0.05000		94	70-130			
Ethyl tertiary-butyl ether	0.0483	0.0050	mg/kg wet	0.05000		97	70-130			
Ethylbenzene	0.0446	0.0050	mg/kg wet	0.05000		89	70-130			
Hexachlorobutadiene	0.0461	0.0050	mg/kg wet	0.05000		92	70-130			
Isopropylbenzene	0.0454	0.0050	mg/kg wet	0.05000		91	70-130			
Methyl tert-Butyl Ether	0.0493	0.0050	mg/kg wet	0.05000		99	70-130			
Methylene Chloride	0.0478	0.0250	mg/kg wet	0.05000		96	70-130			
Naphthalene	0.0449	0.0050	mg/kg wet	0.05000		90	70-130			
n-Butylbenzene	0.0486	0.0050	mg/kg wet	0.05000		97	70-130			
n-Propylbenzene	0.0454	0.0050	mg/kg wet	0.05000		91	70-130			
sec-Butylbenzene	0.0456	0.0050	mg/kg wet	0.05000		91	70-130			
Styrene	0.0451	0.0050	mg/kg wet	0.05000		90	70-130			
tert-Butylbenzene	0.0459	0.0050	mg/kg wet	0.05000		92	70-130			
Tertiary-amyl methyl ether	0.0491	0.0050	mg/kg wet	0.05000		98	70-130			
Tetrachloroethene	0.0420	0.0050	mg/kg wet	0.05000		84	70-130			
Tetrahydrofuran	0.0456	0.0050	mg/kg wet	0.05000		91	70-130			
Toluene	0.0475	0.0050	mg/kg wet	0.05000		95	70-130			
trans-1,2-Dichloroethene	0.0444	0.0050	mg/kg wet	0.05000		89	70-130			
trans-1,3-Dichloropropene	0.0491	0.0050	mg/kg wet	0.05000		98	70-130			
Trichloroethene	0.0461	0.0050	mg/kg wet	0.05000		92	70-130			
Trichlorofluoromethane	0.0440	0.0050	mg/kg wet	0.05000		88	70-130			
Vinyl Acetate	0.0508	0.0050	mg/kg wet	0.05000		102	70-130			
Vinyl Chloride	0.0508	0.0100	mg/kg wet	0.05000		102	70-130			
Xylene O	0.0427	0.0050	mg/kg wet	0.05000		85	70-130			
Xylene P,M	0.0866	0.0100	mg/kg wet	0.1000		87	70-130			
Xylenes (Total)	0.129	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0530*		mg/kg wet	*0.05000*		*106*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0496*		mg/kg wet	*0.05000*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0495*		mg/kg wet	*0.05000*		*99*	*70-130*			
Surrogate: Toluene-d8	*0.0496*		mg/kg wet	*0.05000*		*99*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

5035/8260B Volatile Organic Compounds / Low Level

Batch CL42626 - 5035

LCS Dup

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
1,1,1,2-Tetrachloroethane	0.0447	0.0050	mg/kg wet	0.05000		89	70-130	0.4	25	
1,1,1-Trichloroethane	0.0490	0.0050	mg/kg wet	0.05000		98	70-130	2	25	
1,1,2,2-Tetrachloroethane	0.0441	0.0050	mg/kg wet	0.05000		88	70-130	2	25	
1,1,2-Trichloroethane	0.0467	0.0050	mg/kg wet	0.05000		93	70-130	2	25	
1,1-Dichloroethane	0.0456	0.0050	mg/kg wet	0.05000		91	70-130	0.1	25	
1,1-Dichloroethene	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	0.8	25	
1,1-Dichloropropene	0.0470	0.0050	mg/kg wet	0.05000		94	70-130	0.1	25	
1,2,3-Trichlorobenzene	0.0473	0.0050	mg/kg wet	0.05000		95	70-130	0.6	25	
1,2,3-Trichloropropane	0.0473	0.0050	mg/kg wet	0.05000		95	70-130	2	25	
1,2,4-Trichlorobenzene	0.0465	0.0050	mg/kg wet	0.05000		93	70-130	2	25	
1,2,4-Trimethylbenzene	0.0461	0.0050	mg/kg wet	0.05000		92	70-130	1	25	
1,2-Dibromo-3-Chloropropane	0.0493	0.0050	mg/kg wet	0.05000		99	70-130	4	25	
1,2-Dibromoethane	0.0438	0.0050	mg/kg wet	0.05000		88	70-130	2	25	
1,2-Dichlorobenzene	0.0436	0.0050	mg/kg wet	0.05000		87	70-130	2	25	
1,2-Dichloroethane	0.0482	0.0050	mg/kg wet	0.05000		96	70-130	0.08	25	
1,2-Dichloropropane	0.0456	0.0050	mg/kg wet	0.05000		91	70-130	0.3	25	
1,3,5-Trimethylbenzene	0.0477	0.0050	mg/kg wet	0.05000		95	70-130	1	25	
1,3-Dichlorobenzene	0.0442	0.0050	mg/kg wet	0.05000		88	70-130	0.2	25	
1,3-Dichloropropane	0.0447	0.0050	mg/kg wet	0.05000		89	70-130	3	25	
1,4-Dichlorobenzene	0.0481	0.0050	mg/kg wet	0.05000		96	70-130	2	25	
1,4-Dioxane	1.04	0.100	mg/kg wet	1.000		104	70-130	1	20	
1-Chlorohexane	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	2	25	
2,2-Dichloropropane	0.0501	0.0050	mg/kg wet	0.05000		100	70-130	2	25	
2-Butanone	0.246	0.0500	mg/kg wet	0.2500		98	70-130	5	25	
2-Chlorotoluene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	0.04	25	
2-Hexanone	0.252	0.0500	mg/kg wet	0.2500		101	70-130	6	25	
4-Chlorotoluene	0.0455	0.0050	mg/kg wet	0.05000		91	70-130	0.9	25	
4-Isopropyltoluene	0.0456	0.0050	mg/kg wet	0.05000		91	70-130	2	25	
4-Methyl-2-Pentanone	0.259	0.0500	mg/kg wet	0.2500		104	70-130	3	25	
Acetone	0.277	0.0500	mg/kg wet	0.2500		111	70-130	9	25	
Benzene	0.0465	0.0050	mg/kg wet	0.05000		93	70-130	0.3	25	
Bromobenzene	0.0444	0.0050	mg/kg wet	0.05000		89	70-130	2	25	
Bromochloromethane	0.0446	0.0050	mg/kg wet	0.05000		89	70-130	0.09	25	
Bromodichloromethane	0.0512	0.0050	mg/kg wet	0.05000		102	70-130	2	25	
Bromoform	0.0476	0.0050	mg/kg wet	0.05000		95	70-130	1	25	
Bromomethane	0.0499	0.0100	mg/kg wet	0.05000		100	70-130	1	25	
Carbon Disulfide	0.0481	0.0050	mg/kg wet	0.05000		96	70-130	0.2	25	
Carbon Tetrachloride	0.0498	0.0050	mg/kg wet	0.05000		100	70-130	2	25	
Chlorobenzene	0.0414	0.0050	mg/kg wet	0.05000		83	70-130	1	25	
Chloroethane	0.0467	0.0100	mg/kg wet	0.05000		93	70-130	2	25	
Chloroform	0.0469	0.0050	mg/kg wet	0.05000		94	70-130	0.7	25	
Chloromethane	0.0478	0.0100	mg/kg wet	0.05000		96	70-130	0.3	25	
cis-1,2-Dichloroethene	0.0453	0.0050	mg/kg wet	0.05000		91	70-130	2	25	

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42626 - 5035										
cis-1,3-Dichloropropene	0.0494	0.0050	mg/kg wet	0.05000		99	70-130	0.6	25	
Dibromochloromethane	0.0473	0.0050	mg/kg wet	0.05000		95	70-130	0.8	25	
Dibromomethane	0.0458	0.0050	mg/kg wet	0.05000		92	70-130	2	25	
Dichlorodifluoromethane	0.0456	0.0100	mg/kg wet	0.05000		91	70-130	3	25	
Diethyl Ether	0.0476	0.0050	mg/kg wet	0.05000		95	70-130	2	25	
Di-isopropyl ether	0.0471	0.0050	mg/kg wet	0.05000		94	70-130	0.6	25	
Ethyl tertiary-butyl ether	0.0490	0.0050	mg/kg wet	0.05000		98	70-130	1	25	
Ethylbenzene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	1	25	
Hexachlorobutadiene	0.0456	0.0050	mg/kg wet	0.05000		91	70-130	1	25	
Isopropylbenzene	0.0450	0.0050	mg/kg wet	0.05000		90	70-130	0.8	25	
Methyl tert-Butyl Ether	0.0495	0.0050	mg/kg wet	0.05000		99	70-130	0.3	25	
Methylene Chloride	0.0475	0.0250	mg/kg wet	0.05000		95	70-130	0.6	25	
Naphthalene	0.0453	0.0050	mg/kg wet	0.05000		91	70-130	0.9	25	
n-Butylbenzene	0.0482	0.0050	mg/kg wet	0.05000		96	70-130	0.9	25	
n-Propylbenzene	0.0453	0.0050	mg/kg wet	0.05000		91	70-130	0.3	25	
sec-Butylbenzene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	0.9	25	
Styrene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	0.2	25	
tert-Butylbenzene	0.0454	0.0050	mg/kg wet	0.05000		91	70-130	1	25	
Tertiary-amyl methyl ether	0.0496	0.0050	mg/kg wet	0.05000		99	70-130	1	25	
Tetrachloroethene	0.0419	0.0050	mg/kg wet	0.05000		84	70-130	0.2	25	
Tetrahydrofuran	0.0491	0.0050	mg/kg wet	0.05000		98	70-130	7	25	
Toluene	0.0471	0.0050	mg/kg wet	0.05000		94	70-130	0.9	25	
trans-1,2-Dichloroethene	0.0446	0.0050	mg/kg wet	0.05000		89	70-130	0.4	25	
trans-1,3-Dichloropropene	0.0492	0.0050	mg/kg wet	0.05000		98	70-130	0.2	25	
Trichloroethene	0.0451	0.0050	mg/kg wet	0.05000		90	70-130	2	25	
Trichlorofluoromethane	0.0428	0.0050	mg/kg wet	0.05000		86	70-130	3	25	
Vinyl Acetate	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	3	25	
Vinyl Chloride	0.0492	0.0100	mg/kg wet	0.05000		98	70-130	3	25	
Xylene O	0.0429	0.0050	mg/kg wet	0.05000		86	70-130	0.4	25	
Xylene P,M	0.0869	0.0100	mg/kg wet	0.1000		87	70-130	0.3	25	
Xylenes (Total)	0.130	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0528*		mg/kg wet	*0.05000*		*106*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0494*		mg/kg wet	*0.05000*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0485*		mg/kg wet	*0.05000*		*97*	*70-130*			
Surrogate: Toluene-d8	*0.0494*		mg/kg wet	*0.05000*		*99*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Notes and Definitions

U	Analyte included in the analysis, but not detected
S+	Surrogate recovery(ies) above upper control limit (S+).
C+	Continuing Calibration recovery is above upper control limit (C+).
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: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP)
A2LA Accredited: Testing Cert# 2864.01
http://www.a2la.org/scopepdf/2864-01.pdf

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

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI0002
http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/documents/AllLabs.xls

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

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.depweb.state.pa.us/portal/server.pt/community/labs/13780/laboratory_accreditation_program/590095

CHEMISTRY

A2LA Accredited: Testing Cert # 2864.01
Lead in Paint, Phthalates, Lead in Children's Metals Products (Including Jewelry)
http://www.A2LA.org/dirsearchnew/newsearch.cfm

CPSC ID# 1141
Lead Paint, Lead in Children's Metals Jewelry
http://www.cpsc.gov/cgi-bin/labapplist.aspx

CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

41 Illinois Avenue
Warwick, RI 02888
Tel: 800-937-2580
Fax: 401-738-1970

131 Coolidge St, Bldg. 2
Hudson, MA 01749
Tel: 888-228-3334
Fax: 978-568-0078

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type [T]	Preservation Code [P]	Matrix Code [M]	VOCs	RCRA 8 Metals	PCBs	Pesticides	PAHs	SVOCs	TPH
12/23/14	0650	HA-2 (0.5-1.5')	G	1G	NP	S		X				X	
12/23/14	0700	HA-1 (0.5-1.5')	G	3V/1G	M/NP	S	X	X			X		X
12/23/14	0715	HA-3 (0.5-1.5')	G	3V/1G	M/NP	S	X	X					X
12/23/14	0725	HA-4 (0.5-1.5')	G	1G	NP	S		X		X	X		
12/23/14	0750	HA-7 (0.5-1.5')	G	3V/2G	M/NP	S	X	X	X			X	
12/23/14	0800	HA-6 (0.5-1.5')	G	1G	NP	S		X		X			
12/23/14	0808	HA-5 (0.5-1.5')	G	1G	NP	S		X			X		X
		Trip Blank					X				X (8W)		X (8W)

Client Information

Company Name: Vanasse Hangen Brustlin, Inc.
Address: 10 Dorrance Street, Suite 400
City / State / Zip: Providence, RI 02903
Telephone: 272-8100 Fax: 273-9694
Contact Person: Shelby Miller

Project Information

Project Name: BRBW Segment 1A
P.O. Number: Project Number: 72017.01
Report To: Shelby Miller/Peter Crivas Phone: 272-8100 Fax: 273-9694
Sampled by: Shelby Miller
Quote No: Email address: samiller@vhb.com/pgrivers@vhb.com

Relinquished By	Date	Time	Received By	Date	Time
Shelby A Miller	12/23/14	1200	Carl Lacunic	12/23/14	1200

Turn Around Time

- [X] Normal — [X] EMAIL Report
- [ ] 5 Business days.
- [ ] Rush _____ (business days)

Project Comments

Circle if applicable: GW-1, GW-2, GW-3, S-1, S-2, S-3 MCP Data Enhancement QC Package? Yes No

RIDEM RDEC

28

Lab Use Only

- [ ] Sample Pick Up Only
- [ ] RIAL sampled; attach field hours
- [X] Shipped on ice

Workorder No: 1412-28533

Container Types: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile

Preservation Codes: NP=None, N=HNO_3, H=HCl, S=H_2SO_4, SH=NaOH, SB=$NaHSO_4$, M=MeOH, T=$Na_2S_2O_3$, Z=ZnOAc, I=Ice

Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, Sl=Sludge, A=Air, B=Bulk/Solid, O=_____

R.I. ANALYTICAL
Specialists in Environmental Services

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Attn: Ms. Shelby Miller
10 Dorrance Street
Suite 400
Providence, RI 02903

Date Received: 1/12/15
Date Reported: 1/14/15
P.O. #:
Work Order #: 1501-00662

DESCRIPTION: PROJECT# 72017.01 BRBW SEGMENT 1A

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate Of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.

Certification #: RI LAI0033, MA M-RI015, CT PH-0508, ME-RI00015
NH-2537, NY 11726

This Certificate represents all data associated with the referenced work order and is paginated for completeness. The complete Certificate includes one attachment; the original Chain of Custody.

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:

Data Reporting
enc: Chain of Custody

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.

Date Received: 1/12/15

Work Order #: 1501-00662

PROJECT# 72017.01 BRBW SEGMENT 1A

Sample # 001
SAMPLE DESCRIPTION: HA-4 (1412-28533-004)
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED		ANALYST
TCLP Metals							
Lead	0.53	0.50	mg/l	SW-846 6010C	1/14/15	10:51	JRW
ICP Digestion				EPA 200.7	1/13/15	23:05	OMC
TCLP Extraction	Extracted			SW-846 1311	1/12/15	18:30	JPB

Sample # 002
SAMPLE DESCRIPTION: HA-6 (1412-28533-006)
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 08:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED		ANALYST
TCLP Metals							
Lead	3.8	0.50	mg/l	SW-846 6010C	1/14/15	10:56	JRW
ICP Digestion				EPA 200.7	1/13/15	23:05	OMC
TCLP Extraction	Extracted			SW-846 1311	1/12/15	18:30	JPB

QA/QC Report

Client: Vanasse Hangen Brustlin, Inc.
WO #: 1501-00662
Date: 1/14/2015

-Method Blanks Results-

Parameter	Units	Results	Date Analyzed
TCLP Metals			
TCLP Lead	mg/l	<0.50	1/14/2015

-Laboratory Control Standard-

Parameter	Units	Spike Conc.	Detected Conc.	% Rec.	Date Analyzed
TCLP Metals					
TCLP Lead	mg/l	1.00	1.02	102	1/14/2015
TCLP Lead	mg/l	1.00	0.999	100	1/14/2015

R.I. ANALYTICAL
Specialists in Environmental Services

CHAIN OF CUSTODY RECORD

41 Illinois Avenue
Warwick, RI 02888-3007
800-937-2580 • Fax: 401-738-1970

131 Coolidge St., Suite 105
Hudson, MA 01749-1331
800-937-2580 • Fax: 978-568-0078

Date Collected	Time Collected	Field Sample Identification	Grab or Composite (06-21-10)	# of Containers & Type [C]	Preservation Code [P]	Matrix Code [M]	
12/23/14	0725	HA-4 (1412-28533-004)	G	1G	UP	S	✓ TCLP
↓	0800	HA-Lo (1412-28533-006)	G	1G	NP	S	✓

Client Information

Company Name: Camasse Hangen Brustlin, Inc.
Address: 10 Dorrance Street
City / State / Zip: Suite 400 Prov. RI 02903
Telephone: 401 272-8100 Fax:
Contact Person: Shelby Miller

Project Information

Project Name: BRBW Segment 1A
P.O. Number: Project Number: 72017.01
Report To: Phone: Fax
Sampled By:
Quote No:
Email report to these addresses:

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
Per attached email from Shelby Miller	1/2/15	1445	Christen Mello	1/2/15	1445

Turn Around Time

- [ ] Normal
- [x] EMAIL Report
- [x] 5 Business days. Possible surcharge
- [ ] Rush – Date Due: ___/___/___

Project Comments

Circle if applicable: GW-1, GW-2, GW-3, S-1, S-2, S-3 MCP Data Enhancement QC Package? Yes No

relog WO# 1412-28533-004 & -006

Temp. Upon Receipt °C

Lab Use Only

- [ ] Sample Pick-Up Only
- [ ] RIAL sampled; attach field hours
- [ ] Shipped on ice

Workorder No: 1501 - 662

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SB=$NaHSO_4$, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc
Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____

Blackstone River Bikeway – Segment 1A – Vol. 2 of 2

Portions of Plat 17, Lot 8; Plat 15, Lots 446, 456, and 66; Portion of Paper Street Named Beach Street in Providence, RI

PREPARED FOR

The Rhode Island Department of
Environmental Management
235 Promenade Street
Providence, Rhode Island 02908
401.222.6800

PREPARED BY

vhb

1 Cedar Street, Suite 400
Providence, Rhode Island 02903
401.272.8100

MAY 29, 2015

Memorandum

To: Scott D'Amelio, PE, Project Manager

From: Shelby Miller, Environmental Scientist
Peter Grivers, PE, LSP, Project Manager

Date: February 3, 2015
Project #: 72017.01
Re: Preliminary Site Investigation (PSI)
Blackstone River Bikeway Segment 1A
Providence, Rhode Island

1.0 Introduction

Vanasse Hangen Brustlin Inc. (VHB) conducted a Preliminary Site Investigation (PSI) for an approximately 0.70 mile portion of the proposed Blackstone River Bikeway (BRBW) Segment 1A located along the Seekonk River in Providence, Rhode Island. The PSI was conducted in support of the proposed bikeway extension and in accordance with the Agreement between VHB and the Rhode Island Department of Environmental Management (RIDEM) dated May 31, 2012 and revised on January 9, 2013.

VHB understands that the BRBW Segment 1A design includes the following design elements:

- An approximate 0.70 mile section of bikeway;
- An approximately 100 foot-long bridge behind the garage on Plat Map 17, Lot 416;
- Cutting and filling various areas along the proposed route to achieve the desired final grade.

This environmental evaluation included a visual inspection of the Site, a limited subsurface investigation, and a review of select municipal records, historical resources, published land use information, and federal and state environmental databases and files in order to identify and provide a general characterization of parcels abutting the proposed BRBW Segment 1A. This review is being conducted to help evaluate the likelihood of encountering impacted environmental media during construction of the new section of bikeway.

There are buildings situated on several of the lots that make up or directly abut Segment 1A. Based on the age of the buildings and general observations it is possible that regulated or hazardous building materials (e.g. asbestos, lead-based paint) are associated with at least some of the structures. A comprehensive survey of asbestos and lead-paint containing materials was not conducted by VHB as part of this assessment, nor was an inspection of the interior of any buildings situated on or adjacent to the parcels. However, these structures are not proposed to be altered, demolished, or otherwise physically affected by the proposed project.

2.0 Site and Vicinity Description

The Site is considered the strip of land that will be used to construct the bikeway; however, on parcels where contamination is known or suspected to be present, the entire parcel was evaluated as part of this PSI. The Site is located along an approximate 0.70 mile stretch of the Seekonk River, beginning on Gano Street at the approximate terminus of Exit 3 for Route 195 West in Providence, Rhode Island and ending on East River Street just beyond the roundabout with Waterman Street in Providence, Rhode Island. The Site is identified by the City of Providence Tax Assessor's Department as including portions of the following Plats/Lots: Plat 14, Lots 316 and 328; Plat 15, Lots 6, 8, 10, 35, 60, 66, 321, 340, 446, 451, 456, 457, 467, 469, 480, 483, and 487; and Plat 17, Lots 8, 50, 416, and 611. Adjacent land usage includes industrial properties, commercial establishments, parks, and undeveloped land.

10 Dorrance Street
Suite 400
Providence, RI 02903
P 401.272.8100

Memorandum

Public water and sewer utilities are provided by Providence Water and the Providence Department of Public Works via underground pipelines. The proposed bike path runs along and/or crosses several Narragansett Bay Commission (NBC) sewer easements. Electricity is distributed via pole-mounted conductors and natural gas is available to abutting properties.

3.0 Environmental Setting

According to the Bedrock Geological Map of Rhode Island (Hermes et al., 1994), the majority of the bedrock underlying the Site is classified as the Narragansett Bay Group – Rhode Island Formation. In this area of Rhode Island, the Narragansett Bay Group consists of gray to black, fine to coarse-grained quartz arenite, litharenite, shale, and conglomerate, with minor beds of anthracite and meta-anthracite.

The groundwater at the Site is classified by RIDEM as GB. Groundwater resources classified as GB are those water resources that may or may not be suitable for public or private drinking water uses without treatment due to known or presumed degradation.

Based upon surface topography, inferred groundwater flow direction is to the east, southeast, and south towards the Seekonk River depending on the location of the Site relative to the Seekonk River.

According to the RIDEM Wellhead Protection Map, the Site is not located within a wellhead protection area. The closest non-community wellhead protection area is located approximately 5.25 miles to the southwest of the Site. The closest community wellhead protection area is located approximately 5.15 miles to the north of the Site.

According to the RIDEM Environmental Resource Map accessed November 5, 2014 and Site reconnaissance, the nearest surface water body is the Seekonk River. According to the RIDEM Water Quality Regulations, the Seekonk River is classified as an SB1 {a} water body. Class SB1 {a} waters are designated for primary and secondary contact recreational activities and fish and wildlife habitat. They shall be suitable for aquacultural uses, navigation, and industrial cooling. These waters shall have good aesthetic value. Primary contact recreational activities may be impacted due to pathogens from approved wastewater discharges. These water will likely be impacted be combined sewer overflows in accordance with approved CSO Facilities Plans and in compliance with rule 19.E.1 of these regulations and the Rhode Island CSO policy. Therefore, primary contact recreational activities; shellfishing uses; and fish and wildlife habitat will likely be restricted.

According to the RIDEM Environmental Resource Map accessed November 5, 2014, the majority of the Site lies within an Environmental Justice Area as defined by the RIDEM. Therefore, those portions of the Site are subject to the notification requirements applicable to Environmental Justice areas prior to investigation and remediation as set forth in the RIDEM Remediation Regulations.

According to the United State Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey, the soils at the Site consist of Udorthents-Urban land complex. Udorthents-Urban land complex consists of approximately 70 percent Udorthents and similar soils, 20 percent Urban land, and 10 percent minor components.

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The parent material of this soil consists of human transported material. The slope for Udorthents-Urban land complex is generally from 0 to 15 percent.

4.0 Current and Historic Land Use

Land use information resources reviewed as part of this environmental evaluation include:

- Aerial photographs dated 1939, 1951, 1962, 1972, 1976, 1981, 1988, 1992, 1997, 2002, 2003-2004, 2008, and 2011 viewed using the RIDEM Topo Map & Aerial Photo Viewer Interactive GIS Map and the Rhode Island Geographic Information System database.
- Historic topographic maps from the University of New Hampshire Dimond Library Documents Department & Data Center dated 1894, 1939, and 1947.
- Sanborn Fire Insurance Maps dated 1889, 1900, 1921, 1951, 1956, and 1982 provided by Environmental Data Resources, Inc. (EDR).
- Historic City Directories for Gano Street dated 1938, 1943, 1950, 1957, 1963, 1968, 1973, 1978, 1983, 1992, 1995, 1999, 2003, 2008, and 2013 provided by Environmental Data Resources, Inc. (EDR).

Copies of the Sanborn Fire Insurance Maps are provided in **Appendix A.** Copies of the Historic City Directories are provided in **Appendix B**.

Based on historical aerial photographs and Sanborn Fire Insurance Maps, the Site appears to have been reclaimed by filling in portions of the Seekonk River from the early 1950s to the mid-1960s. Railroad tracks were constructed, bisecting the proposed bike path area, between 1894 and 1939. The railroad tracks ceased operation around 1976, when the railroad bridge observed in historical aerial photographs was left in open position. Warehouses and industrial activity have been occurring along the start of the proposed bike path on Gano Street and along Pitman Street since at least 1939.

4.1 Aerial Photographs

1939 Historical Aerial Photograph

Site: Portions of the Site, to the north and south of the now abandoned railroad tracks (that crossed Crook Point Bascule Bridge), appear to be part of the Seekonk River. The location of present day Exit 3 off of Interstate 195 west is not depicted in the historical aerial photograph. Residential homes appear to be located near the beginning of the proposed bike path along Gano Street. The remainder of the Site appears to be undeveloped until the bike path turns to join Pitman Street. A large commercial or industrial building is located in the approximate location of where the bike path will turn onto Pitman Street. Several large commercial or industrial buildings appear to be located in the area of the present day rotary near Waterman Avenue.

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Surrounding Area: The area surrounding the Site at the approximate terminus of Segment 1A appears to be developed for commercial or industrial use. The remaining land use of surrounding areas appear to be mainly residential.

1951 Historical Aerial Photograph

Site: The majority of the Site appears to be unchanged from the 1939 historical aerial photograph. The large commercial/industrial building located along Pitman Street appears to have either several large trailers or several large horizontally oriented storage tanks located on the east side of the building.

Surrounding Area: The surrounding areas appear to be unchanged from the 1939 historical aerial photograph.

1962 Historical Aerial Photograph

Site: The area of the Site that was observed to be part of the Seekonk River in the 1939 and 1951 historical aerial photographs appears to have been filled in. A baseball field and a soccer field are visible in the approximate location of present day Gano Park. There are no noticeable changes in the northern portion of the Site along Pitman Street.

Surrounding Area: The surrounding areas appear to be unchanged from the 1951 historical aerial photograph.

1972 Historical Aerial Photograph

Site: The majority of the Site appears to be unchanged from the previous historical aerial photographs. Present day Exit 3 from Interstate 195 west has been constructed and is visible in its approximate present day location.

Surrounding Area: The surrounding areas appear to be mainly unchanged from the previous historical aerial photographs. The area just to the north/northwest of the Site, near present day Eastside Marketplace, appears to be in the process of development. No buildings are visible in the photograph, but it appears that lots are being prepped for building or other work. A large bridge has been constructed over the Seekonk River north of Waterman Street.

1976 Historical Aerial Photograph

Site: The majority of the Site appears to be unchanged from the previous historical aerial photographs.

Surrounding Area: The surrounding areas appear to be mainly unchanged from the previous historical aerial photographs.

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1981 Historical Aerial Photograph

Site: The majority of the Site appears to be unchanged from the 1972 historical aerial photograph. An additional baseball field has been constructed to the east of the baseball field observed in the 1962 historical aerial photograph.

Surrounding Area: The majority of the surrounding areas appear to be unchanged from the 1972 historical aerial photograph. The area that appeared to be under development in the 1972 historical aerial photograph now depicts a building present (approximate location of present day Eastside Marketplace). The bridge located along Waterman Street crossing the Seekonk River has been removed.

1988 Historical Aerial Photograph

Site: The majority of the Site appears to be unchanged from the 1981 historical aerial photograph. A roundabout is visible in the approximate location of the present day roundabout at the end of Waterman Street. A building has been constructed to the east of the roundabout along the bank of the Seekonk River.

Surrounding Area: The majority of the surrounding areas appear to be unchanged from the 1981 historical aerial photograph.

1992 Historical Aerial Photograph

Site: The majority of the Site appears to be unchanged from the 1988 historical aerial photograph.

Surrounding Area: The majority of the surrounding areas appear to be unchanged from the 1988 historical aerial photograph.

1997 Historical Aerial Photograph

Site: The majority of the Site appears to be unchanged from the 1988 historical aerial photograph.

Surrounding Area: The majority of the surrounding areas appear to be unchanged from the 1988 historical aerial photograph. A parking area was built to the west of the soccer field near the southern portion of the Site.

2002 Historical Aerial Photograph

Site: The majority of the Site south of the former railroad tracks appears to be unchanged from the 1997 historical aerial photograph. North of the former railroad tracks, the building located in the approximate location of present day Eastside Marketplace has had what appears to be a detention pond constructed to the south of it, adjacent to the proposed bike path. The area to the east of the building has been developed into what appears to be a large commercial building or a large multi-family residential complex. A detention pond appears to have been constructed to the east of this new building, adjacent to or partially in the area of the

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proposed bike path. Several small buildings appear to have been constructed along the area where the bike path is proposed to turn to join Pitman Street.

Surrounding Area: The majority of the surrounding areas appear to be unchanged from the 1997 historical aerial photograph. The building located in the approximate location of present day Eastside Marketplace appears to have been expanded and the area surrounding it has been redesigned for parking, etc.

2003-2004 Historical Aerial Photograph

Site: No significant changes to the Site were observed from the 2002 historical aerial photograph.

Surrounding Area: No significant changes to the surrounding areas were observed from the 2002 historical aerial photograph.

2008 Historical Aerial Photograph

Site: No Significant changes to the Site were observed from the 2003-2004 historical aerial photograph.

Surrounding Area: The area to the west of the building that was expanded in 2002 has been redeveloped. Some parking has been removed and three buildings have been built in that area. The buildings appear to be large residential apartment buildings and commercial buildings. The remainder of the surrounding areas appear to be unchanged from the 2003-2004 historical aerial photograph.

2011 Historical Aerial Photograph

Site: No significant changes to the Site were observed from the 2008 historical aerial photograph.

Surrounding Area: The development to the west of the present day Eastside Marketplace appears to be complete. In addition to the three buildings observed in 2008, several parking areas have been added. The remainder of the surrounding appear to be unchanged from the 2008 historical aerial photograph.

4.2 Historical Topographic Maps

1894 Historical Topographic Maps

Site: The railroad tracks and the Crook Point Bascule Bridge that cross the Seekonk River are not depicted on the 1893 historical topographic map. The Site appears to be mainly flat and undeveloped in the area north of the railroad tracks. The Site appears to slope downward towards the Seekonk River in the approximate area of the present day tracks and railroad bridge. The area south of the railroad tracks also appears mainly undeveloped and flat. Two buildings were observed along Gano Street in the approximate location of the beginning of the bike path.

Surrounding Area: The area surrounding the Site appears to be largely undeveloped. Several small buildings, likely residential homes, are observed scattered throughout the surrounding areas.

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1939 Historical Topographic Maps

Site: The railroad tracks and railroad bridge can be observed on the 1939 historical topographic map. The area surrounding the tracks appears to have been filled in to accommodate the railroad bridge. Two small inlets can be observed to the north and south of the tracks as a result of the filling work. The map appears to show a downward slope towards the Seekonk River across the entire Site. No buildings were observed at the Site.

Surrounding Area: The areas immediately surrounding the Site appear to be relatively flat with minimal sloping towards the Seekonk River. The Washington Bridge is observed to the South of the Site. There are no buildings depicted in the areas surrounding the Site.

1947 Historical Topographic Maps

The 1947 historical topographic map was a reprint of the 1939 historical topographic map with additional features shown. No additional features were observed specifically for the Site or immediately surrounding areas.

4.3 Sanborn Fire Insurance Maps

1889 Sanborn Map

Site: The Site is not depicted on the 1889 Sanborn Fire Insurance Map.

Surrounding Area: The area surrounding the Site appears to be mostly developed with residential properties, including several buildings labeled as tenements.

1900 Sanborn Map

Site: The majority of the Site is not depicted on the 1900 Sanborn Fire Insurance Map.

Surrounding Area: The area surrounding the beginning of the bike path along Gano Street is occupied by several commercial and industrial buildings including a door and blind factory and a plating mill. The remaining area surrounding the Site appears to be mostly developed with residential properties, including several buildings labeled as tenements.

1921 Sanborn Map

Site: Portions of the Site are not depicted on the 1921 Sanborn Fire Insurance Map. The Seekonk River appears to cover the majority of the Site.

Surrounding Area: The area surrounding the beginning of the bike path along Gano Street is occupied by a commercial endeavor. The area to the south of the proposed bike path in this area is labeled on the 1921 Sanborn Fire Insurance Map as 'Piles of Oyster Shells.' Other commercial buildings were observed within close proximity to the Site including bottling works, motor shop, jewelry shop, Colored Worsted Mills, and American

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Emery. The remaining area surrounding the Site appears to be mostly developed with residential properties, including several buildings labeled as tenements.

1951 Sanborn Map

Site: Portions of the Site are not depicted on the 1921 Sanborn Fire Insurance Map.

Surrounding Area: The beginning of the bike path along Gano Street appears the same as it did in the 1921 Sanborn Fire Insurance Map. Other commercial buildings were observed within close proximity to the Site including auto repair, laundry, bottling, sausage factory, numerous coal sheds, Colored Worsted Mills, and American Emery. The remaining area surrounding the Site appears to be mostly developed with residential properties, including several buildings labeled as tenements.

1956 Sanborn Map

Site: Portions of the Site are not depicted on the 1956 Sanborn Fire Insurance Map. Portions of the Seekonk River appear to have been filled in, more closely matching present day shorelines than the 1951 Sanborn Fire Insurance Map. A small building labeled 'lab' is located in the general vicinity of the bike path. It appears to be associated with the nearby Brown University Nuclear Research Lab.

Surrounding Area: The area surrounding the Site at the beginning of the bike path along Gano Street appears to be a mainly vacant lot with one small building labeled as a workshop. Other commercial buildings were observed within close proximity to the Site including an auto repair facility, a laundry facility, a bottling facility, a sausage factory, a woodworking shop, an upholstery shop, a Brown University Nuclear Research Lab, a Salvation Army building, and American Emery. Beyond the commercial buildings, the surrounding areas appear to be mainly residential.

1982 Sanborn Map

Site: The Site appears to be unchanged from the 1956 Sanborn Fire Insurance Map.

Surrounding Area: The area surrounding the Site appears largely unchanged from the 1956 Sanborn Map with the exception that only a few of the commercial buildings are stilled labelled: a work shop, an auto repair facility, a contractor shop, the Brown University Nuclear Research Lab, the Salvation Army, and American Grind. Beyond the commercial buildings to the west, the surrounding area appears to be mainly residential. Beyond the commercial building to the north, the surrounding area appears to be a mixed use of residential, light commercial, etc.

4.4 Historical City Directories

EDR provided a City Directory summary in their report prepared as part of this PSI. According to the summary in the EDR Report, the area near the beginning of the bike path along Gano Street was occupied by a variety

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of commercial tenants (e.g. American Oyster Co., White Cross Laundry, United Barrel Co., Joe's Auto Repairing, etc.) between 1938 and 2013 with addresses ranging from 85 to 105 Gano Street. No occupants of particular note were identified. A complete list of these businesses can be found in **Appendix B**.

5.0 Environmental Regulatory Review

Environmental Data Resources (EDR) Inc., of Milford, Connecticut published a report dated October 27, 2014 summarizing available and reasonably ascertainable information from standard environmental record sources. VHB reviewed the EDR Report which included the following databases/radii:

- National Priorities List (NPL); 0.125 mile – A database operated by the USEPA as an inventory of hazardous materials disposal sites that have been reported to the Federal government and been determined to be a priority for a Federally overseen cleanup.
- Resource Conservation and Recovery Information System (RCRIS) Transportation, Storage Disposal Facility (TSD); 0.125 mile – A database operated by the USEPA as an inventory of hazardous water treatment, storage, and disposal facilities.
- RCRIS Generators (GN); 0.125 mile – A database operated by the USEPA as an inventory of hazardous waste generators who store hazardous waste on their properties for periods not to exceed 90 days.
- RCRIS Corrective Action Sites (COR); 0.125 mile – A database operated by the USEPA as an inventory of hazardous waste treatment, storage and disposal facilities requiring a Federal oversight.
- RCRIS No Longer Regulated (NLR); 0.125 mile – A database operated by the USEPA as an inventory of former hazardous waste generators.
- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) Sites; 0.125 mile – A database operated by the USEPA as an inventory of potential hazardous materials sites that have been reported to the Federal government.
- Emergency Response Notification System (ERNS); 0.125 mile – A database operated by the USEPA as an inventory of hazardous materials or petroleum spills.
- Facility Index System (FINDS); 0.125 mile – A database operated by the USEPA as an inventory of environmental permitted facilities (air, water, hazardous materials).
- State Hazardous Waste Sites (SHWS); 0.125 mile – A database operated by the Rhode Island Department of Environmental Management of properties regulated by the Rhode Island Remediation Regulations (hazardous materials and petroleum sites).
- Underground Storage Tanks (UST); 0.125 mile – A database of underground storage tank facilities.
- Leaking Underground Storage Tanks (LUST); 0.125 mile – A database of leaking underground storage tank facilities.

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- Solid Waste Landfills (SWL); 0.125 mile – A database of active and closed solid waste landfills.

A summary of the database search information and maps indicating the locations of specific properties are provided in **Appendix C**. The subject Site was identified in the EDR database search as an RI Spills 90 Site and a State Hazardous Waste Site. In general the EDR database search identified the following properties within the ASTM specified radii:

Table 1: EDR Database Search

Database	Project Search Radius	Site-Specific	Number of Non-Site Locations within Search Radius
NPL Sites	0.125 mile	No	0
CERCLIS Sites	0.125 mile	No	0
CERCLIS NFRAP Sites	0.125 mile	No	0
RCRA Generators	0.125 mile	No	3
State Hazardous Waste Sites	0.125 mile	Yes	0
State Spills – 1990	0.125 mile	Yes	0
SWL Facilities	0.125 mile	No	0
Registered USTs	0.125 mile	No	5
LUSTs	0.125 mile	No	1
Brownfields	0.125 mile	No	0

6.0 RIDEM File Review

Based on the findings of the database review, VHB determined that a review of selected files at the RIDEM was appropriate, including LUST facilities and active SHWS properties. Selected files were reviewed on November 13, 2014 at the RIDEM Office of Technical & Customer Assistance and the Office of Waste Management. The Site was identified in the database search as an RI Spills 90 Site and a State Hazardous Waste Site. A summary of file review information for the Site is provided in the following table and select, relevant records are provided in **Appendix D**.

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Table 2: State and Federal Records for Site

Site Name	Database	ID – File Number	Status
Gano & Power Providence, RI	RI Spills 90	S112447937	• No file was available for this site.
East Transit Boat Ramp East Transit Street Providence, RI	SHWS	ETBR-HWM	• Property currently listed as Active. • 2014 Letter from the RIDEM for the Closeout of Brownfields Remedial Assistance Subgrant Award • 2010 Letter from the RIDEM granting Brownfields Subgrant Agreement for Remedial Assistance for the East Transit Street Boat Ramp project • 2009 Remedial Approval Letter approving the draft ELUR, SMP, and RAWP • 2008 Site Investigation Report - Lead detected above the RIDEM RDEC in five shallow soil samples - Site soils were comprised of fill material: concrete, metal, rubber, brick, marine shells, and household waste products - PAHs detected above the RIDEM RDEC in several borings • 2007 Letter of Responsibility to the City of Providence Parks Department • 2007 Release Notification Form - Lead in historic fill material
Essex River Ventures (Richmond Square) 1 Richmond Square Providence, RI	SHWS		• 2011 Letter of Non-Compliance for failure to comply with the 2006 Remedial Approval Letter • 2006 Remedial Approval Letter approving remedial actions at the site • 2006 Remedial Action Work Plan - Limit need for excavation of impacted soils - Maximize the reuse of soils on-Site

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Site Name	Database	ID – File Number	Status
			- Reduce potential for human contact with soils - Establish procedures/protocols for soils management - Implementation of an Environmental Land Use Restriction • 2006 Site Investigation Report – Addendum No. 2 - Three samples exceeded RIDEM RDEC for PAHs and two samples exceeded RIDEM I/CDEC for PAHs - Two samples exceeded RIDEM RDEC and I/CDEC for arsenic - One of the samples exceeded RIDEM RDEC for lead • 2005 Site Investigation Report – Addendum - TPH at a concentration above RIDEM criteria in one soil sample - PAHs detected in three soil samples, below RIDEM criteria - Arsenic and lead found in several samples above RIDEM criteria • 2005 Letter of Responsibility • 2005 Notification of Release for RIDEM criteria exceedances of TPH, PAHs and lead in site soils • 2004 Site Investigation Report - TPH detected above RIDEM RDEC in one sample - Benzo(a)anthracene, chrysene and benzo(a)pyrene detected above RIDEM RDEC - Lead detected above the RIDEM RDEC in one sample - VOCs, TPH, metals and PAHs detected in several groundwater samples, but below RIDEM GB Objectives • 2004 Geophysical Survey to Locate USTs - No USTs were detected - Two areas of disturbed soil were detected at the site

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Site Name	Database	ID – File Number	Status
Koffler Realty Riverview Place EPOCH Senior Living Center 1 Butler Avenue Providence, RI	SHWS	HOFF-HWM	• 2014 ELUR Evaluation Report by GZA: site in compliance • 2013 letter to the RIDEM about the installation of a CSO Interceptor along the Seekonk River adjacent to the property occupied by the EPOCH Senior Living Center • 2003 Letter of Compliance acknowledging receipt of final documentation concerning the historical release at the site • 2001 ELUR • 2000 Remedial Action Summary Report - To prevent excavation of fill, Deep Dynamic Compaction (DDC) took place during construction of the EPOCH Living Center - Four hazardous materials and petroleum investigations were completed as part of the development - To control exposure to underlying impacted soils, a geosynthetic filter fabric material was installed below 10 to 12 inches of topsoil and grass cover • 1997 Site Investigation Report - Brown University's Nuclear Physics Department conducted particle acceleration experiments at the site - In 1981, private consultant was brought in to "scrub down" the site to "rid" site structures of residual contamination associated with the experiments conducted at the site - A greenhouse occupied the site - The site was created by the gradual filling of a former coastal area - The following contaminants were found to be in exceedance of RIDEM standards at the site: arsenic, lead, benzo(a)anthracene, benzo(a)pyrene, benzo(a)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene • 1997 Subsurface Investigation

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Site Name	Database	ID – File Number	Status
			- Drums encountered at the site - Soils near drums reported levels of pesticides and herbicides - Lead and arsenic exceeded RIDEM reporting requirements
Adler's Hardware Store Parcel (Eastside Market) 131-133 Pitman Street (1 Wayland Avenue) Providence, RI	SHWS	ADLE-HWM	• 2012 ELUR Compliance Inspection Report • 2008 Letter of Compliance • 2008 Executed Environmental Land Usage Restriction • 2007 Remedial Approval Letter • 2006 Letter of Responsibility - TPH and PAHs exceeding RIDEM RDEC - Arsenic and benzo(a)pyrene exceeding RIDEM I/CDEC • 1998 letter from RIDEM: presence of arsenic likely background to the site, no further investigation or remediation • 1997 Results of Surficial Soil Sampling Environmental Site Assessment - Arsenic detected in every sample, exceeding RIDEM criteria in all but one sample • 1997 Notification of Release - Arsenic detected above the RIDEM I/CDEC during the Phase I/II • 1997 Phase I and II Environmental Site Assessment - Stained soil and several areas exhibiting a petroleum odor were encountered during the subsurface investigation - TPH was not detected above RIDEM standards in any of the soil samples - Arsenic detected in every sample, but only one sample was above RIDEM criteria

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VHB reviewed relevant files at the RIDEM for those properties within the ASTM search radii which due to their regulatory status (i.e. active or inactive), distance and direction, may have potential to impact the subject property. The information reviewed by VHB is summarized in **Table 3** below.

Table 3: State and Federal Records for Relevant Nearby Properties

Site Name	Database	ID – File Number	Distance and Direction	Gradient (topography)	Status
The Salvation Army 201 Pitman Street Providence, RI	UST	UST-2197	~50 feet west	Crossgradient	• 1999 No Further Action Letter from the RIDEM • 1999 UST Closure Assessment Report - Removal of one 3,000-gallon diesel fuel UST and associated piping - No holes observed in the tank - Surrounding soils did not exhibit signs of a release • Closure Certificate dated August 19, 1999
Narragansett Bay Commission Interceptor	SHWS	NBCI-HWM	~150 feet west/northwest	Upgradient	• 1996 NBC replaced a sewer pipe through an area where soil exhibited elevated levels of TPH and SVOCs • 700 cubic yards of excavated material considered potentially contaminated were disposed of at the Bucklin Point Wastewater Treatment Facility sludge landfill in 2005
Frank N. Gustafson & Sons, Inc. 251 Pitman Street	UST	UST-1612			• 1986 Certificate of Closure - Closure of a 1,000-gallon gasoline UST

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Site Name	Database	ID – File Number	Distance and Direction	Gradient (topography)	Status
Providence, RI					- No saturated soil was observed - Presume leak at fill or in piping
M & S Motors, Inc. 103 Gano Street Providence, RI	LUST	28239-LS			• Inactive • RIDEM Memo: A UST facility file for this site cannot be found and there is no indication that a UST facility number was ever assigned to the site • RIDEM Memo: A LUST file for LS-28239 cannot be found. LS-28239 was logged as a LUST site with "(abandoned tank)" noted in February 2004. No documents at all can be found for this site
Portuguese Sporting Club 92 Gano Street Providence, RI	UST	UST-18053			• Closure Certificate dated October 21, 1996 • One 500-gallon No. 2 fuel oil UST removed from the site • Pinhole appeared in tank bottom during cleaning process • No odors detected • 440-gallons oil/water mixture pumped from tank

7.0 Municipal File Review

VHB visited the Providence City Hall on December 3, 2014, to obtain information regarding Site history and use; zoning; and OHM use, storage, release, and/or disposal practices that may have occurred at the Site. Information obtained during the review is summarized below.

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The Site is located within a General Commercial District (C2) and Main Street Commercial Overlay District (MSCOD) at the beginning of the proposed path along Gano Street. As the proposed path continues towards Gano Park, an Open Space (OS) district will be encountered. After passing through the Open Space district at Gano Park, the bike path will continue into a Commercial/Residential Waterfront District (W1) and remain in that district until the termination of Segment 1A.

The Providence Tax Assessor's Office was unable to print property cards or chain-of-title cards at the time of the office visit due to technical problems. VHB reviewed the available property cards and chain of title cards for the following Plats/Lots: Plat 14, Lots 316 and 328; Plat 15, Lots 6, 8, 10, 35, 60, 66, 321, 340, 446, 451, 456, 457, 467, 469, 480, 483, and 487; and Plat 17, Lots 8, 50, 416, and 611. Many of these lots had been split or dropped onto other lots listed over the course of their history. VHB made notes of the property owners for each lot. In general, the property owners were individuals or corporations, most of which were not of concern. Narragansett Electric Company was listed as the owner of one of the lots. Narragansett Bay Oyster, Co. owned several of the lots located near the beginning of the proposed bike path throughout the lot ownership history. Several of the lots near the central and northern portions of the proposed bike path were listed with owners including Providence Terminal and/or N.Y.N.H. & H.R.R.Co. These lots were likely associated with the now abandoned railroad tracks.

The Providence Department of Inspections and Standards did not have any information regarding OHM use, storage, release, and/or disposal practices that may have occurred at the Site.

The Providence Fire Department has not responded to a request for information as of the date of this memorandum.

Copies of the property field cards and other pertinent files are included in **Appendix E**.

8.0 Visual Site Inspection Observations

VHB performed a visual Site inspection of the Site on November 11, 2014. The inspection was conducted to identify land uses and overt evidence of oil and hazardous material storage or release.

VHB began the Site inspection in the southern portion of the Site along Gano Street in Providence, Rhode Island and ended at the terminus of the proposed bike path along River Road north of Richmond Square in Providence, Rhode Island. Photographs taken at the time of the Site reconnaissance are attached as **Appendix F**.

The proposed bike path begins at Gano Street north of the Interstate 195 west Exit 3 off-ramp. Along Gano Street, VHB observed a set of traffic lights and an electrical box associated with the lights. Heading east from Gano Street, the area of the proposed path is a grassy area between the off-ramp and a fenced in property. Some solid waste debris, including litter, asphalt chunks, and a wooden beam, was observed in this area. The vegetation in this area was mainly grass with some shrubbery. The vegetation did not show any signs of staining.

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The proposed bike path then turns north and crosses behind a garage-style building. A small bridge will be constructed to complete this portion of the proposed path. To the north of the proposed bridge, VHB observed several concrete structures and metal debris on a property that is enclosed by fencing. Therefore, VHB was unable to closely inspect the objects and the surrounding soils and vegetation for signs of stress or release of hazardous materials. The proposed bike path would then continue north along the banks of the Seekonk River to Gano Park.

The proposed bike path crosses through the new parking lot associated with the Gano Street Boat Ramp. As the path continues north, it crosses through a portion of the existing Gano Street Dog Park. This area appeared to be in good condition. VHB did not observe any signs of stressed vegetation or stained soil within the dog park. North of the dog park, the proposed bike path travels along the top of a berm that runs along the Seekonk River. VHB observed what appeared to be two monitoring wells in the berm. The well covers were not opened or gauged at the time of the inspection. The berm was vegetated with grass and did not exhibit signs of stress or stained soils. To the west of the berm, VHB observed a large athletic field. The field was fairly worn, especially in the center, presumably due to use.

Just north of the berm, VHB observed an informational sign about the history of the Gano Park area which indicated the area had been filled with rubble from previous housing located in the area. The sign appeared to be relatively new, and the area surrounding it appeared to be in good condition. To the northwest of the sign, VHB observed a baseball field. The field appeared to be in good condition.

As the proposed bike path continues north beyond the informational sign, it continues to parallel the Seekonk River. This area appears to have been used as a walking path as there were areas of grass worn down to bare soil presumably due to foot traffic. In this area, VHB observed several Narragansett Bay Commission Sewer manhole covers. One of the covers appeared to be relatively new (little staining and rusting, etc.) and the other cover appeared to be fairly old (heavy rust, letters barely discernable, etc.).

The proposed bike path continues north and crosses over the railroad tracks associated with the abandoned railroad bridge. In the area near the railroad abutments, signs of human occupancy were apparent due to a presence of organized litter, strategically placed ground cloths, etc. VHB did not encounter any other persons at the times of this Site inspection. The area just south of the railroad tracks is slightly sloped and will require only minor filling according to current design plans. The area just north of the railroad tracks is fairly steep and uneven and will require more filling. VHB did not observe as much debris or signs of human occupancy on the northern side of the tracks.

In the area behind Eastside Marketplace, VHB observed a stormwater detention area enclosed by fencing. The proposed bike path appears to run adjacent to the detention area. In the area of the proposed bike path, VHB observed several Narragansett Bay Commission Sewer manhole covers. Again, two of the covers appeared to be relatively new, while two of the covers appeared to be older. The detention area appeared to be in good condition with no signs of stressed vegetation or stained soil. The area between the proposed bike path and the Seekonk River was heavily vegetated with low lying, thick shrubbery and brush. VHB was unable to thoroughly inspect this area due

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to the dense vegetation. From a distance, the area did not appear to be stressed or exhibit stained soils. Litter, such as food packaging, beverage containers, rope, etc., was observed within the vegetation.

The proposed bike path will continue in a northeastern direction, past the end of Butler Avenue towards the EPOCH Senior Living Center. A stormwater catch basin and several monitoring wells were observed near the end of Butler Avenue. To the east of Butler Avenue, VHB observed a small brick building. This building appears to be a pump house, but there were no labels or signs anywhere to confirm the buildings purpose or any contents within. Just beyond the small building, VHB observed several stone structures, square in shape. The purpose or origin of these structures could not be determined; however, they do not appear to be negatively impacting the environment.

The proposed bike path continues northeast behind the EPOCH Senior Living Center. VHB did not contact EPOCH about accessing the property for this Site inspection, therefore all observations were made from adjacent properties. According to the plans, the bike path will travel more closely along the shores of the Seekonk River in this area. Due to the dense vegetation previously described, VHB was unable to thoroughly inspect this area. In the northeast corner of the EPOCH parking lot, VHB observed an electrical transformer, a generator, and an air conditioning unit. The transformer appeared to be in good condition, was protected by bollards, was located on a concrete pad, and did not show any signs of leaks. There were several stickers observed on the transformer, however, none of the stickers indicate the presence or lack of PCBs.

The generator appeared to be a diesel powered generator with a storage tank as part of the unit. VHB observed five drums in the area immediately around the generator. All five drums appeared to be approximately 55-gallons in capacity. Two of the drums were plastic and three were metal. The two plastic drums appeared to be in good condition. The three metal drums appeared to be in fair to poor condition. Four of the drums did not have any visible labeling. One of the metal drums was label 'Newport Biodiesel.' VHB did not touch or attempt to move the drums to determine whether they were full or empty. The bottom of the generator, where the storage tank is likely situated, appeared to be rusting. Some staining was observed in the area surrounding the generator.

The air conditioning unit appeared to be fairly standard for a multi-person residential building. There were no additional containers in the area immediately around the unit. VHB did not observe any signs of stressed vegetation or stained soil in the vicinity of the unit.

Just to the east of the parking lot, VHB observed a fenced detention area. The proposed bike path travels northeast adjacent to the detention area. The vegetation within the fencing did not show any evidence of stress. VHB did not observe any signs indicative of a release of hazardous materials. To the east of the detention area, the proposed bike path turns north and joins Pitman Street. VHB was unable to inspect the area where the bike path is proposed to turn due to ongoing construction and associated restrictive fencing. VHB did not observe any signage indicating the type of construction occurring. VHB observed what appeared to be a large dewatering tank within the construction area. VHB returned to Butler Avenue and walked up to Pitman Street in an attempt to view the construction area from a different perspective.

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Pitman Street was being paved at the time of this Site inspection. VHB observed various manholes, stormwater catch basins and other structures within the road way. The location where the bike path is proposed to join Pitman Street was fenced off due to construction. Again, VHB did not observe any signs indicating what type of construction was occurring. VHB continued to follow Pitman Street to the east along the proposed bike path layout, and then to the north towards Waterman Avenue and beyond the roundabout at Richmond Square. Two electrical transformers were observed on the north side of Waterman Avenue at the roundabout. Due to the paving in progress, VHB was unable to closely inspect the transformers. From a distance, the transformers appeared to be in poor physical condition, with signs of rusting apparent. The proposed bike path terminates just north of the roundabout on East River Street.

9.0 Limited Soil Investigation Summary

On December 23, 2014, a VHB representative completed eight shallow soil borings at various locations within Segment 1A via hand-augering using a 2-inch diameter stainless steel hand auger. Samples were collected from the southern portion of the Site. No samples were collected from properties north of the abandoned railroad tracks, which are privately owned, since information regarding the presence of contaminants is already known (refer to Section 6) and are subject to an Environmental Land Usage Restriction (ELUR) and Soil Management Plan (SMP) based upon environmental work previously completed by others. Based on the plans provided to VHB prior to soil sampling, depth of soil work for this project is fairly shallow. VHB collected the soil samples from approximately 0.5-1.5 feet below the ground surface within each auger hole. VHB screened each sampling using a MultiRAE PID unit. VHB containerized each sample within the appropriate clean, glass sample container provided by the laboratory. Samples were submitted on ice under Chain of Custody to an RI-certified laboratory for analyses including Volatile Organic Compounds (VOCs), RCRA-8 Metals, Polychlorinated Biphenyls (PCBs), Pesticides, Polycyclic Aromatic Hydrocarbons (PAHs), Semi-Volatile Organic Compounds (SVOCs), and Total Petroleum Hydrocarbons (TPH). The location of the soil sample collection locations and their corresponding laboratory identification are shown on the attached figures.

During soil sampling, VHB made note of soil type. The majority of the soil collected appeared to mainly consist of a topsoil material, rich in nutrients and plant growth. HA-1, which was advanced along the side of the I-195 west Exit 3 ramp, contained a lot of small roots. HA-3, which was advanced within the fence of the Gano Dog Park, contained a lot of roots and woody material. The wood appeared to be fresh, as it appeared to be damp and did not exhibit signs of age. HA-6, which was advanced to the east of the baseball field at Gano Park, contained a lot of glass fragments, including some pieces that were at least 2 inches in length and several pieces that were at least 0.5 inches thick. HA-7, which was advanced along the southern side of the abandoned railroad tracks, was much sandier than the other borings.

VHB received the results of the soil analysis from the RI-certified laboratory on January 6, 2015. A tabular summary of the laboratory data and copies of the lab reports with soil analysis results can be found in **Appendix G**. Arsenic was detected above the RIDEM Residential (RDEC) and Industrial/Commercial Direct Exposure Criteria (I/CDEC) in three of the seven borings: HA-1, HA-6 and HA-7. Lead was detected above the RIDEM RDEC in two borings (HA-3 & HA-4) and above the RIDEM I/CDEC in one boring (HA-6). A variety of PAHs were detected in HA-4, most of which were

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above the RIDEM RDEC. Benzo(a)pyrene was detected above the RIDEM I/CDEC in HA-4. Benzo(a)pyrene and chrysene were also detected in HA-2 and HA-5 above the RIDEM RDEC. TPH was detected in all three samples submitted, however all detections were under RIDEM standards. No VOCs were detected in any of the three samples for which the analysis was run. No pesticides were detected in either of the two samples for which the analysis was run. PCBs were not detected in the soil sample for which the analysis was run.

Due to the high concentrations of lead detected in HA-4 and HA-6, VHB instructed the laboratory to run a Toxicity Characteristic Leaching Procedure (TCLP) analysis on both samples to determine the mobility of the lead in the soil. This analysis can help to determine is the soils need to be classified as hazardous materials. Both samples detected levels of leachable lead below the EPA regulated level of 5 mg/l. HA-4 reported detectable levels of lead at 0.53 mg/l. HA-6 reported detectable levels of lead at 3.8 mg/l.

10.0 Conclusions

Documented releases of oil and/or hazardous materials at the following properties may have impacted the Site:

- East Transit Boat Ramp
- Essex River Ventures (Richmond Square)
- Koffler Realty Riverview Place EPOCH Senior Living Center

Based on the industrial history of the Site and surrounding areas, evidence of filling of the Site, documented releases of oil and/or hazardous materials on Site or nearby properties and soil samples collected by VHB on December 23, 2014, it is possible that the soil and/or groundwater at the Site may be impacted in various locations.

It is confirmed from previous environmental activities that soil is contaminated with lead and PAHs on Lots 8, 368, and 611 on Plat 17 and Lots 6, 8, 10, 35, 60, 321, 451, 467, and 487 on Plat 15 associated with historical filling of the area in the 1950s. It is also confirmed that soil is contaminated with arsenic in Lots 6, 8, 10, 35, 60, 321, 451, 467, and 487 on Plat 15 and contaminated with total petroleum hydrocarbons in Lots 6, 8, 10, 60, 321, 451, 467, and 487 on Plat 15. Small exceedances of various semi-volatile organic compounds were detected in various lots as well. VHB's soil sampling concluded that Lot 328 on Plat 14 and Lots 611 & 8 on Plat 17 are also contaminated with lead and PAHs. Lots 66 and 456 on Plat 15 are contaminated with arsenic. Lot 456 is also contaminated with lead. Lot 446 on Plat 15 is contaminated with various PAHs.

Prior to VHB's subsurface investigation, all known areas of contamination have been or were in the processing of being remediated. Based on the information that the entire northern half of the project area (north of the abandoned railroad tracks) was historically contaminated and that various contaminants were found in every soil boring advanced by VHB in December 2014, there is enough evidence to suggest that the majority of the proposed bike path could be contaminated due to the historic filling of the area.

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The elevated arsenic, lead, and PAH compounds identified within Segment 1A of the proposed BRBW represent a reportable release to the environment. RIDEM should be notified and compliance with the applicable provisions of the RIDEM Remediation Regulations will be necessary. In general, compliance with the Remediation Regulations will include submittal of a release notification form, a Public Notice and public meeting prior to completion of a Site Investigation, preparation of a Site Investigation Summary Report with a recommended remedial approach, performing a Public Notice relative to the findings of the investigation and proposed remediation, submittal of a Remedial Action Work Plan (RAWP), environmental oversight during remedy implementation, and submittal of a Remedial Action Closure Report (RACR) documenting RAWP compliance. Much of the information gathered during this PSI can be used in generating the Site Investigation Report. We recommend meeting with RIDEM regarding the findings in an effort to streamline the reporting and remediation process to be implemented.

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Figures

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FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI			6	26

BEGIN PROJECT
STA. 9+85.00
R.I. CONTRACT NO. XXXX-XX-XXX
F.A.P. NO. XXX-XXXX (XXX)

HA-1 HA-2 HA-3 HA-4 HA-5

GANO STREET
8' WIDE
CRMC JURISDICTION LIMIT
MEET EXISTING SIDEWALK
N/F H.V. COLLINS 17/416
N/F CITY OF PROVIDENCE 17/368
17/372
17/373
N/F BEACH STREET XX/X
N/F CITY OF PROVIDENCE 17/8
N/F FREEMONT STREET XX/X
N/F CITY OF PROVIDENCE 14/328
N/F CITY OF PROVIDENCE 14/316
CITY OF PROVIDENCE SEWER EASEMENT
NARRAGANSETT BAY COMMISSION SEWER EASEMENT
N/F WAYLAND AVE XX/X
N/F CITY OF PROVIDENCE 15/446
NARRAGANSETT BAY COMMISSION EASEMENT
HARBORLINE ABANDONED R.I.G.L. CHAPTER 46-5 SECTION 46-5-1.2(E)
N/F H.V. COLLINS COMPANY 17/611
38 LF-12" R.I. PIPE
20 LF-12" D.I. PIPE
APPROXIMATE SLOPE LIMITS
BIKEWAY SEGMENT 1A
100 YEAR FLOOD ZONE
PROPOSED ROGER WILLIAMS MONUMENT SITE (BY OTHERS)
SEEKONK RIVER
MATCHLINE TO GENERAL PLAN NO. 2

SCALE IN FEET
40 0 40 80

PVI STA = 10+07.96
PVI ELEV = 11.73
A.D. = -4.34%
K = 2.31

LOW PT ELEV = 9.00
LOW PT STA = 10+91.33
PVI STA = 10+60.00
PVI ELEV = 8.83
A.D. = 6.08%
K: 12.34

LOW PT ELEV = 9.24
LOW PT STA = 12+61.60
PVI STA = 12+90.00
PVI ELEV = 9.08
A.D. = 4.12%
K: 18.20

HIGH PT STA: 13+90.00
HIGH PT ELEV: 11.93
PVI STA = 13+65.00
PVI ELEV = 11.79
A.D. = -3.08%
K = 16.21

LOW PT ELEV = 12.35
LOW PT STA = 16+04.13
PVI STA = 16+45.00
PVI ELEV = 12.12
A.D. = 5.48%
K: 18.26

HIGH PT STA: 18+78.13
HIGH PT ELEV: 21.78
PVI STA = 18+50.00
PVI ELEV = 22.32
A.D. = -6.37%
K = 15.70

HIGH PT STA: 19+50.00
HIGH PT ELEV: 20.93
PVI STA = 19+75.00
PVI ELEV = 20.58
A.D. = -3.61%
K = 13.86

LOW PT STA = 20+80.68
PVI STA = 20+50.00
PVI ELEV = 16.83
A.D. = 5.50%
K: 13.64

10.00' VC
PVC STA. 10+02.96
ELEV.=11.79
PVT STA. 10+12.96
ELEV.=11.45
HIGH PT STA: 10+02.96
HIGH PT ELEV: 11.79

75.00' VC
PVC STA. 10+22.50
ELEV.=10.92
PVT STA. 10+97.50
ELEV.=9.02

75.00' VC
PVC STA. 12+52.50
ELEV.=9.27
PVT STA. 13+27.50
ELEV.=10.89

50.00' VC
PVC STA. 13+40.00
ELEV.=10.89
PVT STA. 13+90.00
ELEV.=11.93

100.00' VC
PVC STA. 15+95.00
ELEV.=12.37
PVT STA. 16+95.00
ELEV.=14.61

100.00' VC
PVC STA. 18+00.00
ELEV.=19.83
PVT STA. 19+00.00
ELEV.=21.62

50.00' VC
PVC STA. 19+50.00
ELEV.=20.93
PVT STA. 20+00.00
ELEV.=19.33

75.00' VC
PVC STA. 20+12.50
ELEV.=18.70
PVT STA. 20+87.50
ELEV.=17.02

STA = 10+00.00
PVI ELEV = 11.83
-1.24%
-5.58%
PROPOSED BIKEWAY GRADE
0.50%
-0.50%
PROPOSED DRAIN PIPE INV=XX.XX
PROPOSED BIKEWAY UTILIZING BOAT RAMP WALKWAY
EXISTING DRAIN PIPE INV=7.8
1.62%
0.54%
PVI STA = 12+00.00
PVI ELEV = 9.53
PVI STA = 13+90.00
PVI ELEV = 11.93
PVI STA = 14+10.00
PVI ELEV = 12.04
PVI STA = 15+13.22
PVI ELEV = 12.78
EXISTING FENCE
-0.50%
4.98%
EXISTING GROUND
-1.39%
-5.00%
0.50%
PROPOSED DRAIN PIPE INV=XX.XX
PVI STA = 22+00.00
PVI ELEV = 17.58
MATCHLINE TO PROFILE NO. 2

11.8 9.8 9.6 8.5 7.8 8.9 9.3 10.6 13.9 12.7 12.3 12.59 12.0 12.35 11.8 12.92 13.3 14.86 18.2 17.34 21.0 19.83 21.4 21.52 21.3 21.62 19.9 20.93 16.6 19.33 15.6 17.34 16.1 17.08 17.4 17.33

9+75 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00

HORIZONTAL
40 0 40 80
8 0 8 16
VERTICAL
SCALE IN FEET

REVISIONS NO.	DATE	BY

VHB VANASSE HANGEN BRUSTLIN, INC.
TRANSPORTATION LAND DEVELOPMENT ENVIRONMENTAL SERVICES
PROVIDENCE, RHODE ISLAND

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BLACKSTONE RIVER BIKEWAY
SEGMENT 1A

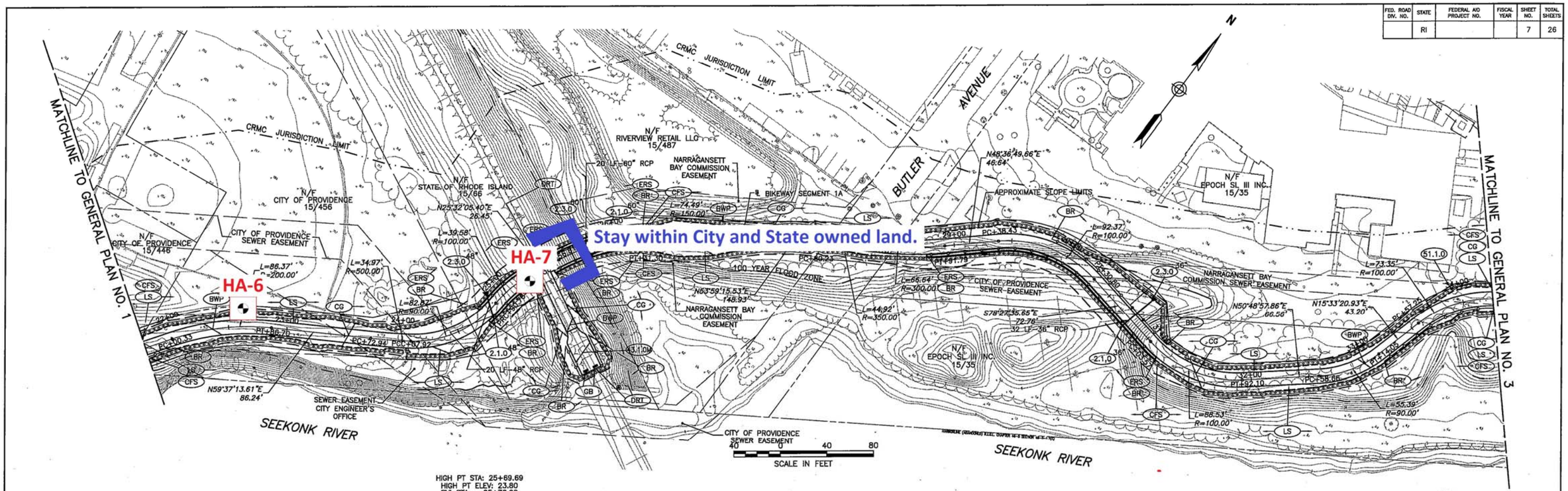
PROVIDENCE, RHODE ISLAND

GENERAL PLAN & PROFILE NO. 1

CHECKED BY _____ DATE _____ SCALE _____

XXXXX_V1_006_GENERAL001

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI			7	26



REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BLACKSTONE RIVER BIKEWAY
SEGMENT 1A

PROVIDENCE, RHODE ISLAND

GENERAL PLAN &
PROFILE NO. 2

CHECKED BY _____ DATE _____ SCALE _____

VHB VANASSE HANGEN BRUSTLIN, INC.
TRANSPORTATION LAND DEVELOPMENT ENVIRONMENTAL SERVICES
PROVIDENCE, RHODE ISLAND

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Memorandum

Appendix A: Sanborn Fire Insurance Maps

10 Dorrance Street
Suite 400
Providence, RI 02903
P 401.272.8100

Blackstone River Bikeway Segment 1A
Gano Street
Providence, RI 02906

Inquiry Number: 4117038.3
October 29, 2014

Certified Sanborn® Map Report

6 Armstrong Road, 4th Floor
Shelton, Connecticut 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

10/29/14

Site Name:
Blackstone River Bikeway
Gano Street
Providence, RI 02906

Client Name:
Vanasse, Hangen, Brustlin Inc.
10 Dorrance St
Providence, RI 02903

EDR Inquiry # 4117038.3

Contact: Shelby Miller

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Certified Sanborn Results:

Site Name: Blackstone River Bikeway Segment 1A
Address: Gano Street
City, State, Zip: Providence, RI 02906
Cross Street:
P.O. # 72017.01
Project: Blackstone Bikeway Segment 1A
Certification # EC5D-4437-B6EA

Maps Provided:

1982
1956
1951
1921
1900

Sanborn® Library search results
Certification # EC5D-4437-B6EA

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

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Sanborn Sheet Thumbnails

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1982 Source Sheets

Volume 2, Sheet 26

Volume 2, Sheet 31

1956 Source Sheets

Volume 2, Sheet 26

Volume 2, Sheet 31

1951 Source Sheets

Volume 2, Sheet 31

Volume 2, Sheet 26

1921 Source Sheets

Volume 2, Sheet 26

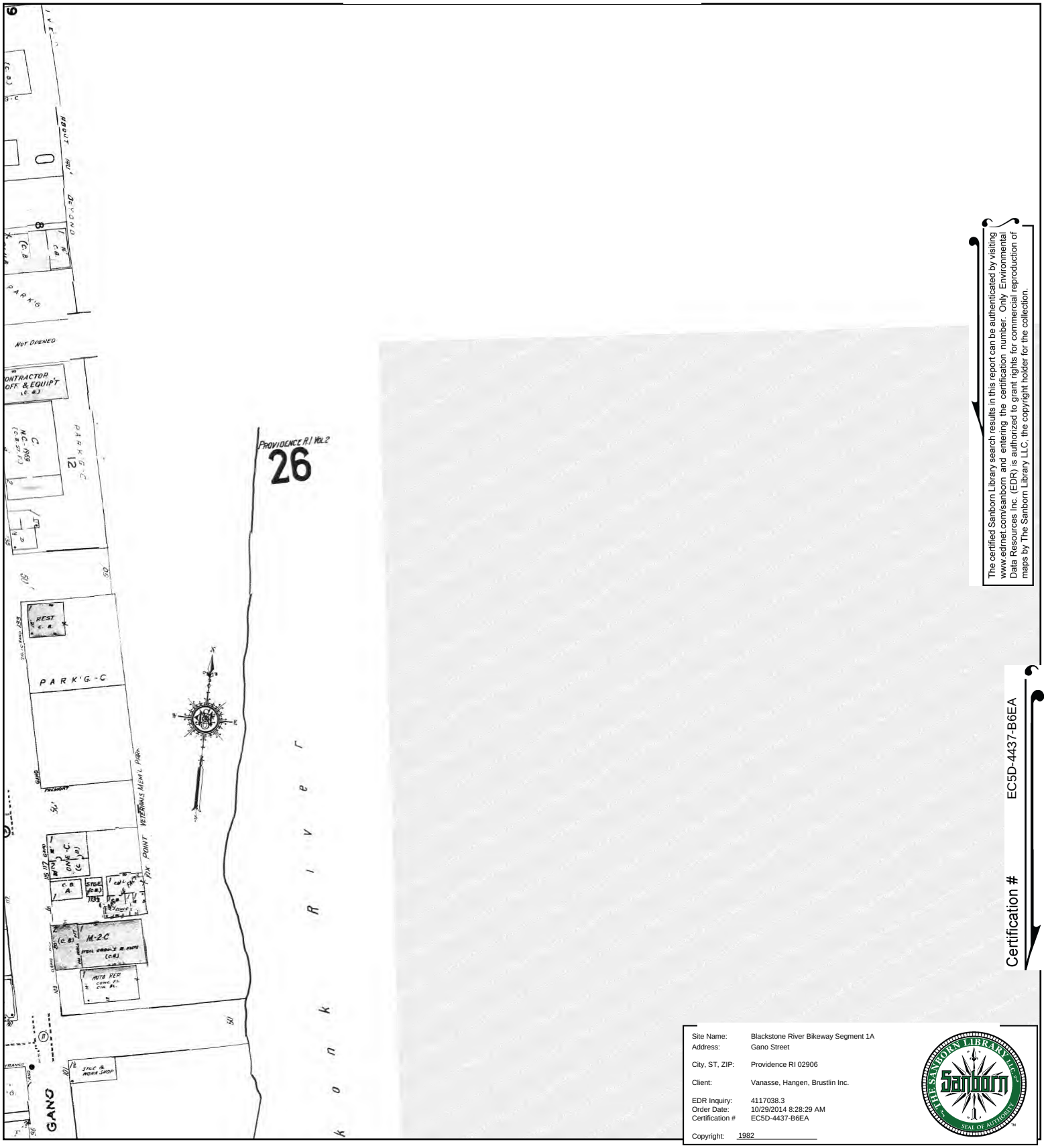
Volume 2, Sheet 31

1900 Source Sheets

Volume 2, Sheet 121

Volume 2, Sheet 128

1982 Certified Sanborn Map



Certification # EC5D-4437-B6EA

Site Name:	Blackstone River Bikeway Segment 1A
Address:	Gano Street
City, ST, ZIP:	Providence RI 02906
Client:	Vanasse, Hangen, Brustlin Inc.
EDR Inquiry:	4117038.3
Order Date:	10/29/2014 8:28:29 AM
Certification #	EC5D-4437-B6EA
Copyright:	1982

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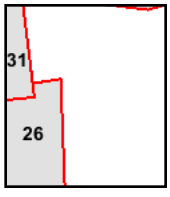
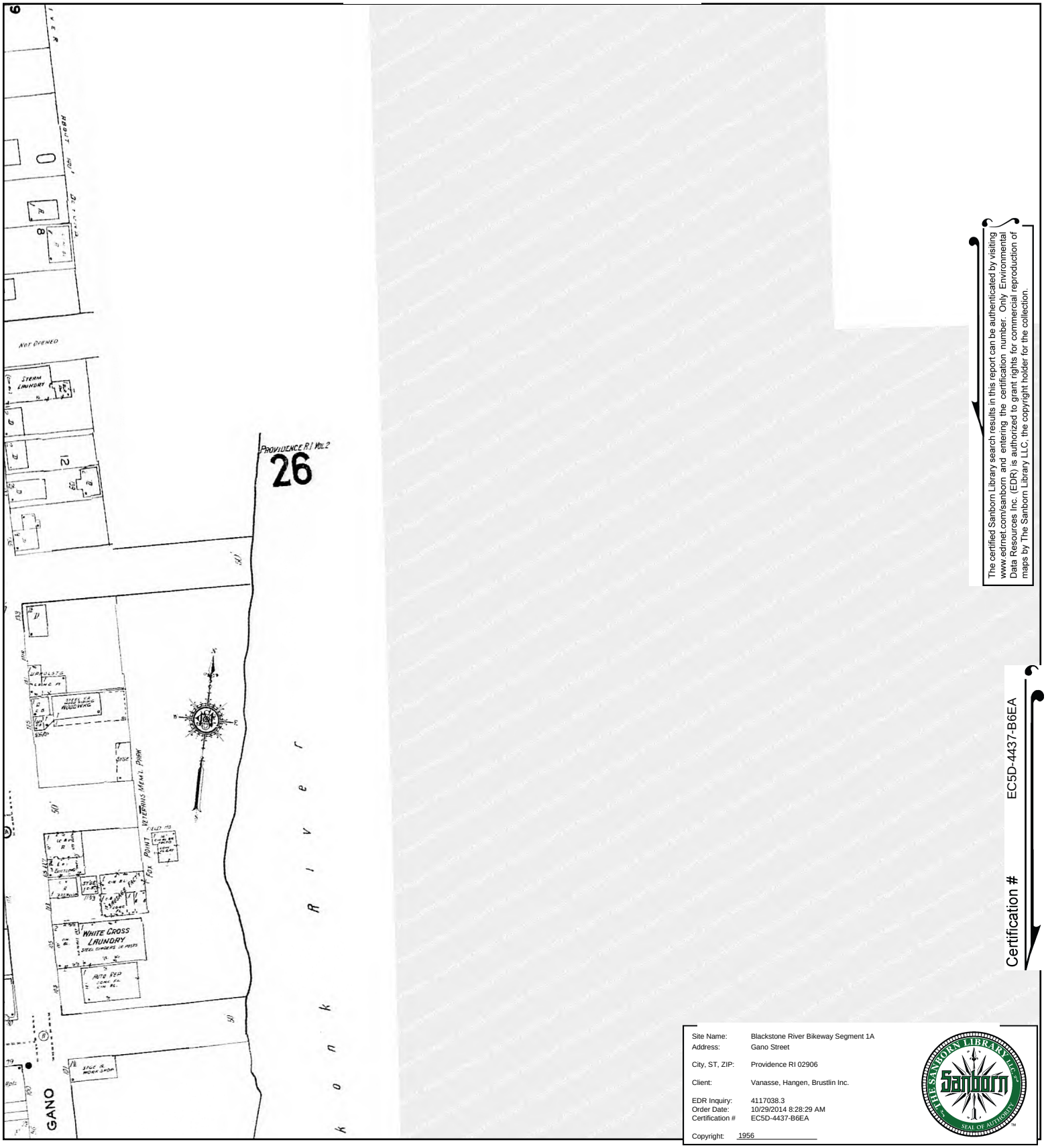


Volume 2, Sheet 26
Volume 2, Sheet 31

N

1956 Certified Sanborn Map



Certification # EC5D-4437-B6EA

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Address:	Gano Street
City, ST, ZIP:	Providence RI 02906
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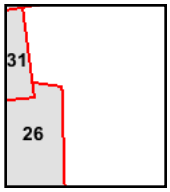

Volume 2, Sheet 26
Volume 2, Sheet 31

0 Feet 165 330 660

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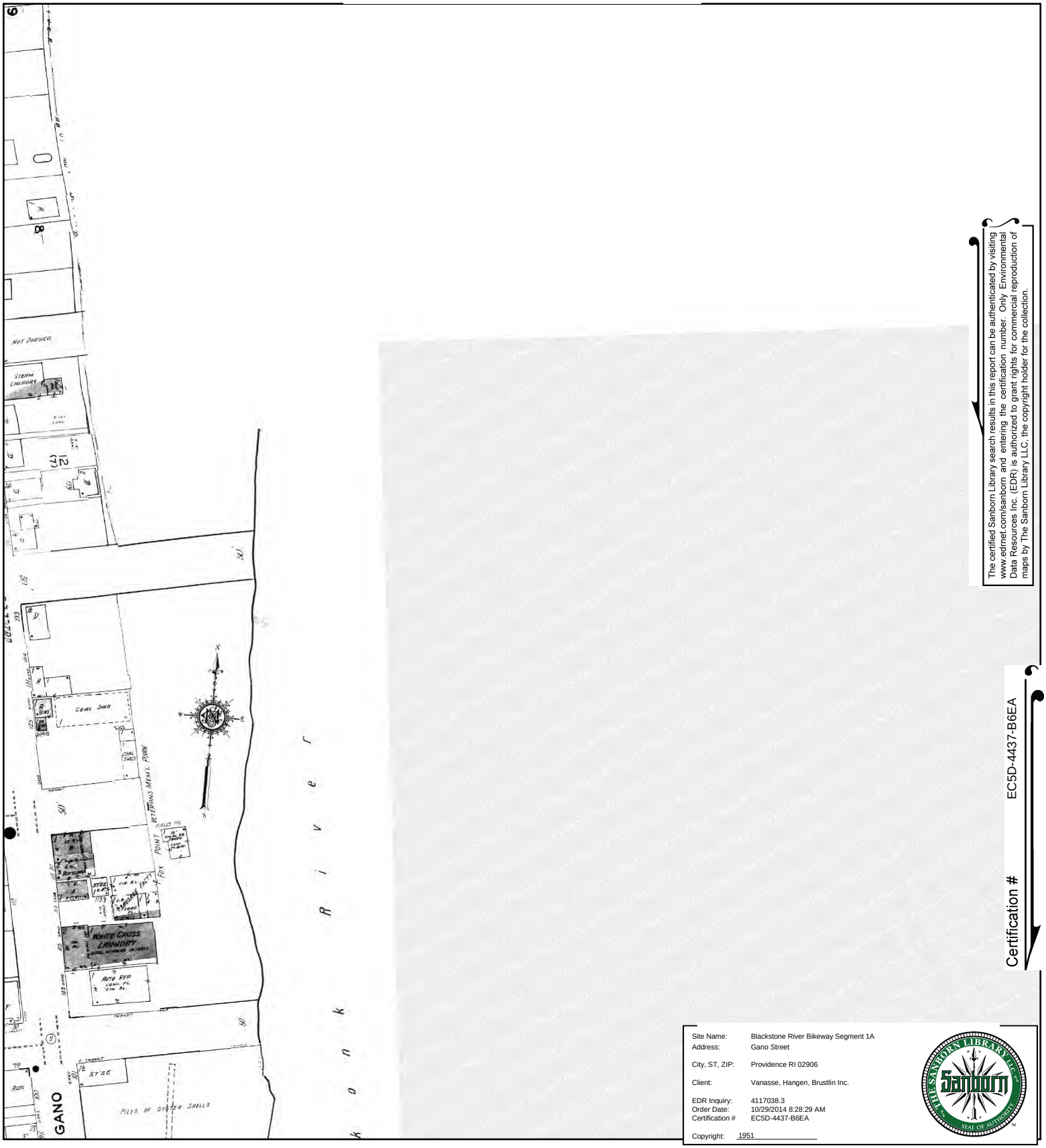
1951 Certified Sanborn Map



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Site Name:	Blackstone River Bikeway Segment 1A
Address:	Gano Street
City, ST, ZIP:	Providence RI 02906
Client:	Vanasse, Hangen, Brustlin Inc.
EDR Inquiry:	4117038.3
Order Date:	10/29/2014 8:28:29 AM
Certification #	EC5D-4437-B6EA
Copyright:	1951

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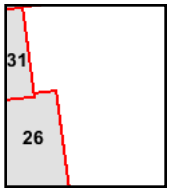

Volume 2, Sheet 31
Volume 2, Sheet 26

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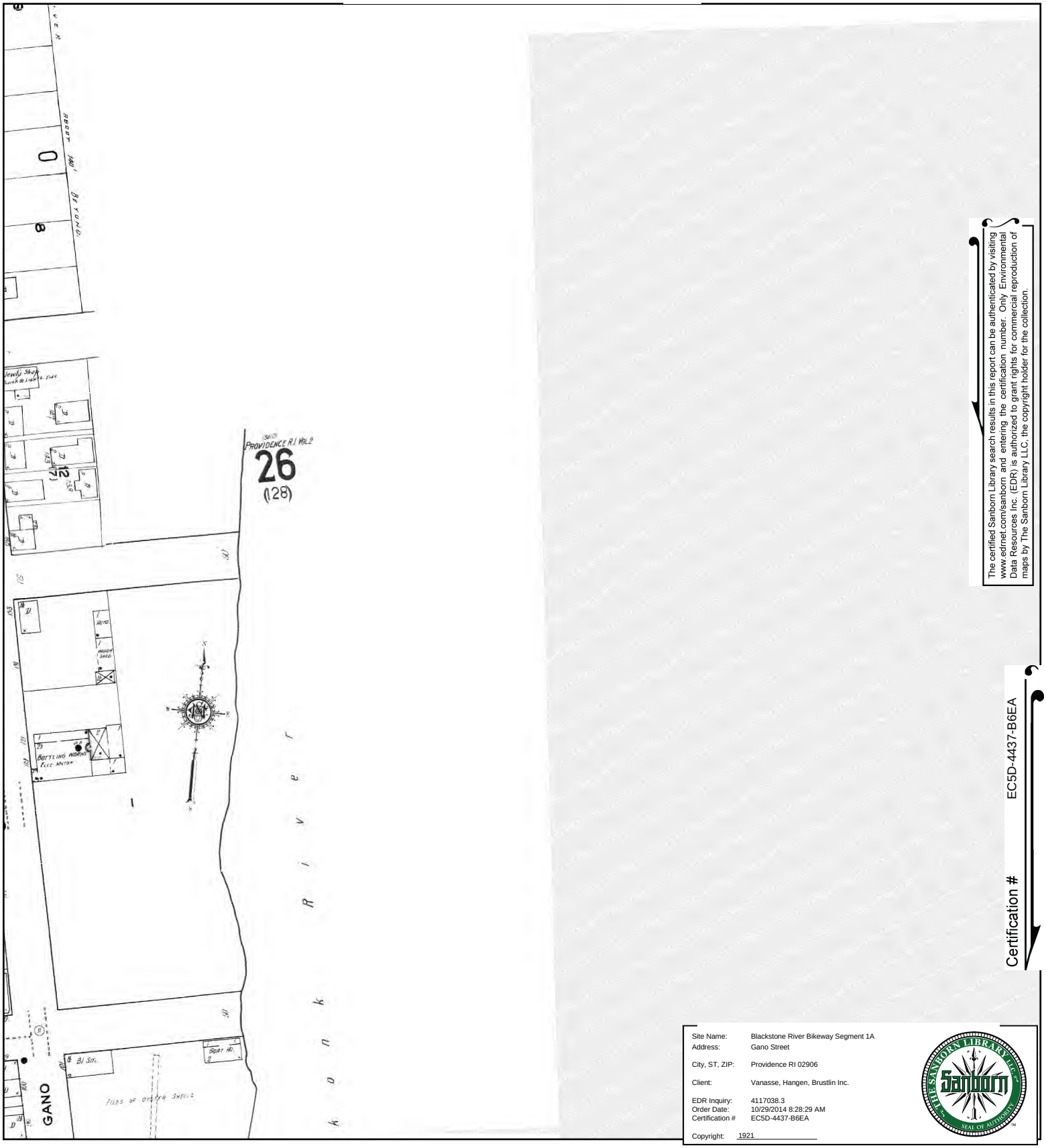
1921 Certified Sanborn Map



Certification # EC5D-4437-B6EA

Site Name:	Blackstone River Bikeway Segment 1A
Address:	Gano Street
City, ST, ZIP:	Providence RI 02906
Client:	Vanasse, Hangen, Brustlin Inc.
EDR Inquiry:	4117038.3
Order Date:	10/29/2014 8:28:29 AM
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Copyright:	1921

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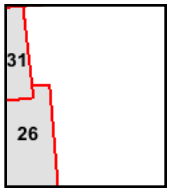
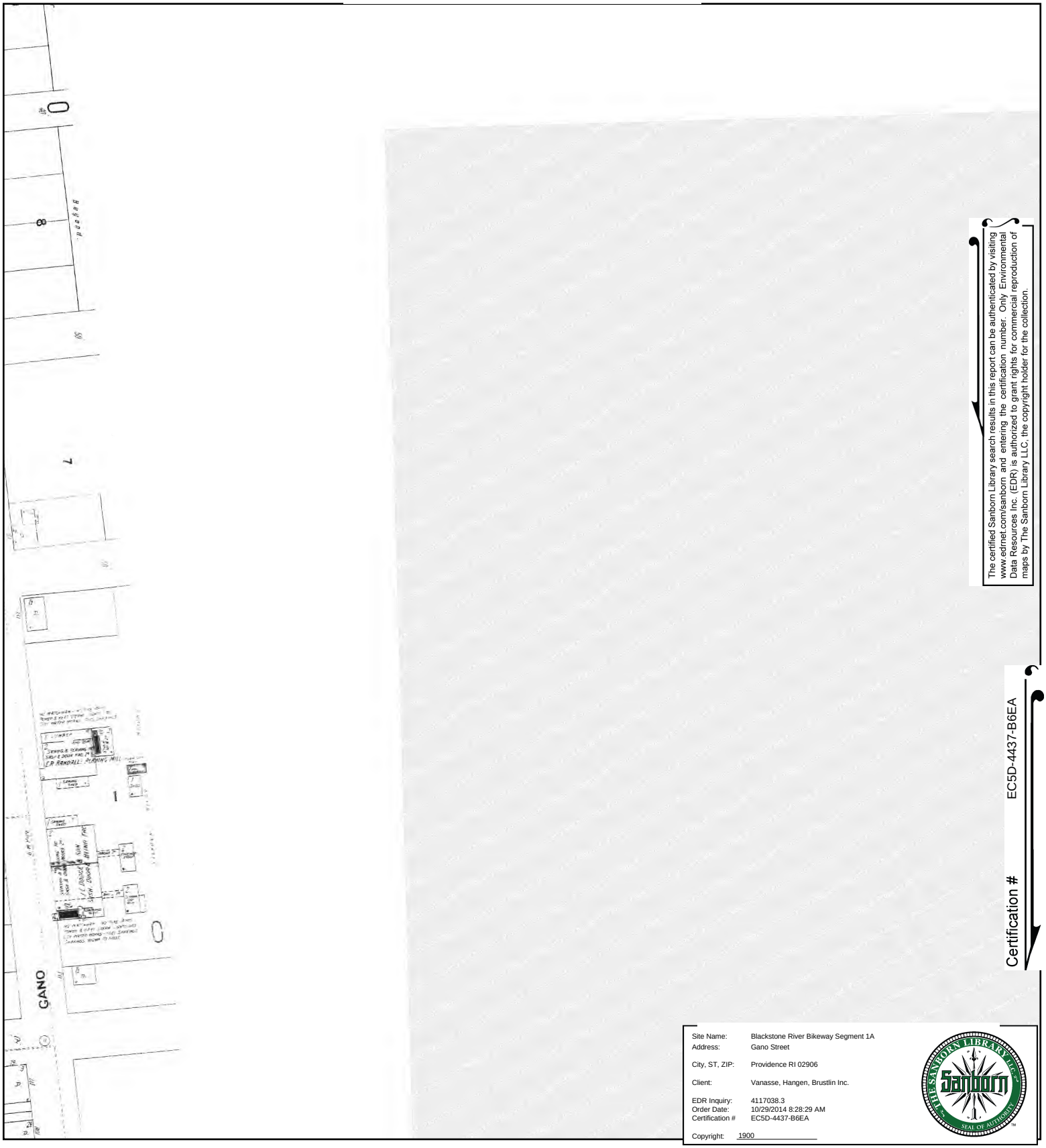


Volume 2, Sheet 26
Volume 2, Sheet 31

0 Feet 165 330 660

N

1900 Certified Sanborn Map



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Certification # EC5D-4437-B6EA

Site Name:	Blackstone River Bikeway Segment 1A
Address:	Gano Street
City, ST, ZIP:	Providence RI 02906
Client:	Vanasse, Hangen, Brustlin Inc.
EDR Inquiry:	4117038.3
Order Date:	10/29/2014 8:28:29 AM
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Copyright:	1900

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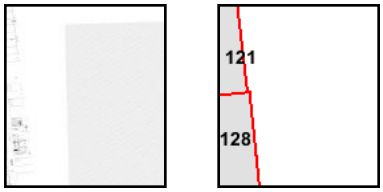

Volume 2, Sheet 121
Volume 2, Sheet 128

0 Feet 165 330 660

N

Blackstone River Bikeway Segment 1A
Gano Street
Providence, RI 02906

Inquiry Number: 4117038.3
October 29, 2014

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Site Name:
Blackstone River Bikeway
Gano Street
Providence, RI 02906

Client Name:
Vanasse, Hangen, Brustlin Inc.
10 Dorrance St
Providence, RI 02903

EDR Inquiry # 4117038.3

Contact: Shelby Miller

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Certified Sanborn Results:

Site Name: Blackstone River Bikeway Segment 1A
Address: Gano Street
City, State, Zip: Providence, RI 02906
Cross Street:
P.O. # 72017.01
Project: Blackstone Bikeway Segment 1A
Certification # EC5D-4437-B6EA

Maps Provided:

1982
1956
1951
1921
1900

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Certification # EC5D-4437-B6EA

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Sanborn Sheet Thumbnails

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1982 Source Sheets

Volume 2, Sheet 33

Volume 2, Sheet 34

1956 Source Sheets

Volume 2, Sheet 33

Volume 2, Sheet 34

1951 Source Sheets

Volume 2, Sheet 33

Volume 2, Sheet 34

1921 Source Sheets

Volume 2, Sheet 33

Volume 2, Sheet 34

1900 Source Sheets

Volume 2, Sheet 114

1982 Certified Sanborn Map

Certification # EC5D-4437-B6EA

Site Name:	Blackstone River Bikeway Segment 1A
Address:	Gano Street
City, ST, ZIP:	Providence RI 02906
Client:	Vanasse, Hangen, Brustlin Inc.
EDR Inquiry:	4117038.3
Order Date:	10/29/2014 8:28:29 AM
Certification #	EC5D-4437-B6EA
Copyright:	1982

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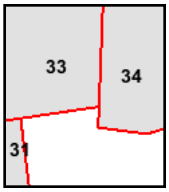

Volume 2, Sheet 33
Volume 2, Sheet 34

0 Feet 165 330 660

N

1956 Certified Sanborn Map

Certification # EC5D-4437-B6EA

Site Name: Blackstone River Bikeway Segment 1A
Address: Gano Street
City, ST, ZIP: Providence RI 02906
Client: Vanasse, Hangen, Brustlin Inc.
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Order Date: 10/29/2014 8:28:29 AM
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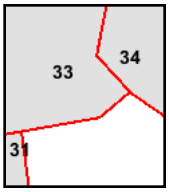
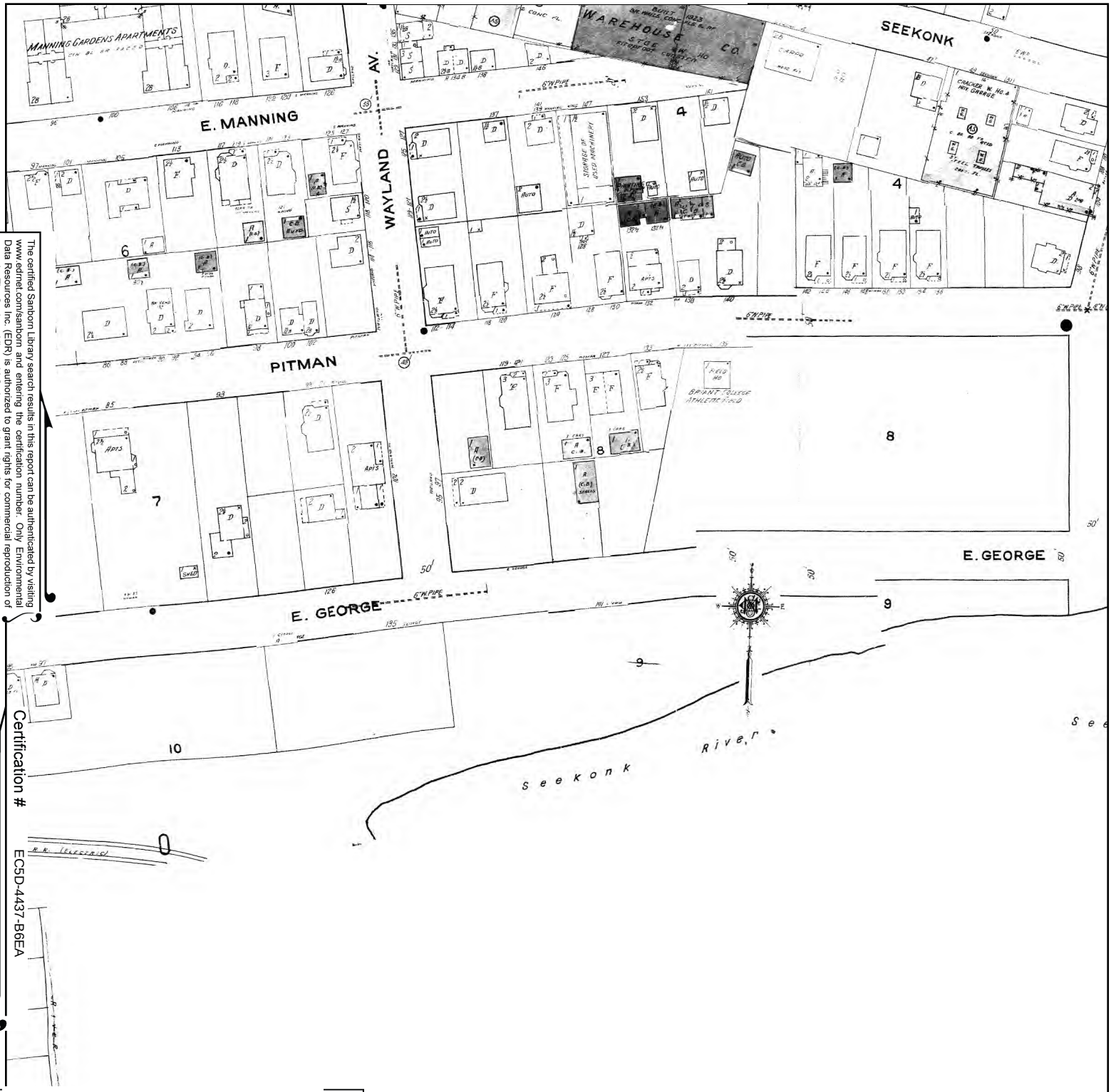


Volume 2, Sheet 33
Volume 2, Sheet 34

0 Feet 165 330 660

N

1951 Certified Sanborn Map



Certification # EC5D-4437-B6EA

Site Name: Blackstone River Bikeway Segment 1A
Address: Gano Street
City, ST, ZIP: Providence RI 02906
Client: Vanasse, Hangen, Brustlin Inc.
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Order Date: 10/29/2014 8:28:29 AM
Certification # EC5D-4437-B6EA
Copyright: 1951

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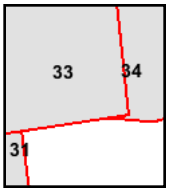

Volume 2, Sheet 33
Volume 2, Sheet 34

0 Feet 165 330 660

N

1921 Certified Sanborn Map

Certification # EC5D-4437-B6EA

Site Name: Blackstone River Bikeway Segment 1A
Address: Gano Street
City, ST, ZIP: Providence RI 02906
Client: Vanasse, Hangen, Brustlin Inc.
EDR Inquiry: 4117038.3
Order Date: 10/29/2014 8:28:29 AM
Certification # EC5D-4437-B6EA
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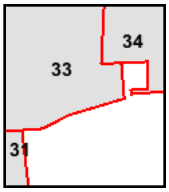

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Volume 2, Sheet 34

0 Feet 165 330 660

N

1900 Certified Sanborn Map

Certification # EC5D-4437-B6EA

Site Name: Blackstone River Bikeway Segment 1A
Address: Gano Street
City, ST, ZIP: Providence RI 02906
Client: Vanasse, Hangen, Brustlin Inc.
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Order Date: 10/29/2014 8:28:29 AM
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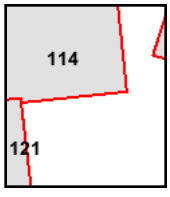

Volume 2, Sheet 114

0 Feet 165 330 660

N

Blackstone River Bikeway Segment 1A
Gano Street
Providence, RI 02906

Inquiry Number: 4117038.3
October 29, 2014

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10/29/14

Site Name:
Blackstone River Bikeway
Gano Street
Providence, RI 02906

Client Name:
Vanasse, Hangen, Brustlin Inc.
10 Dorrance St
Providence, RI 02903

EDR Inquiry # 4117038.3

Contact: Shelby Miller

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Site Name: Blackstone River Bikeway Segment 1A
Address: Gano Street
City, State, Zip: Providence, RI 02906
Cross Street:
P.O. # 72017.01
Project: Blackstone Bikeway Segment 1A
Certification # EC5D-4437-B6EA

Maps Provided:

1982
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Sanborn® Library search results
Certification # EC5D-4437-B6EA

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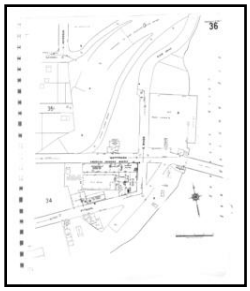
Volume 2, Sheet 34



Volume 2, Sheet 36

1956 Source Sheets

Volume 2, Sheet 34

Volume 2, Sheet 36

1951 Source Sheets

Volume 2, Sheet 34

Volume 2, Sheet 36

1921 Source Sheets

Volume 2, Sheet 34

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1900 Source Sheets

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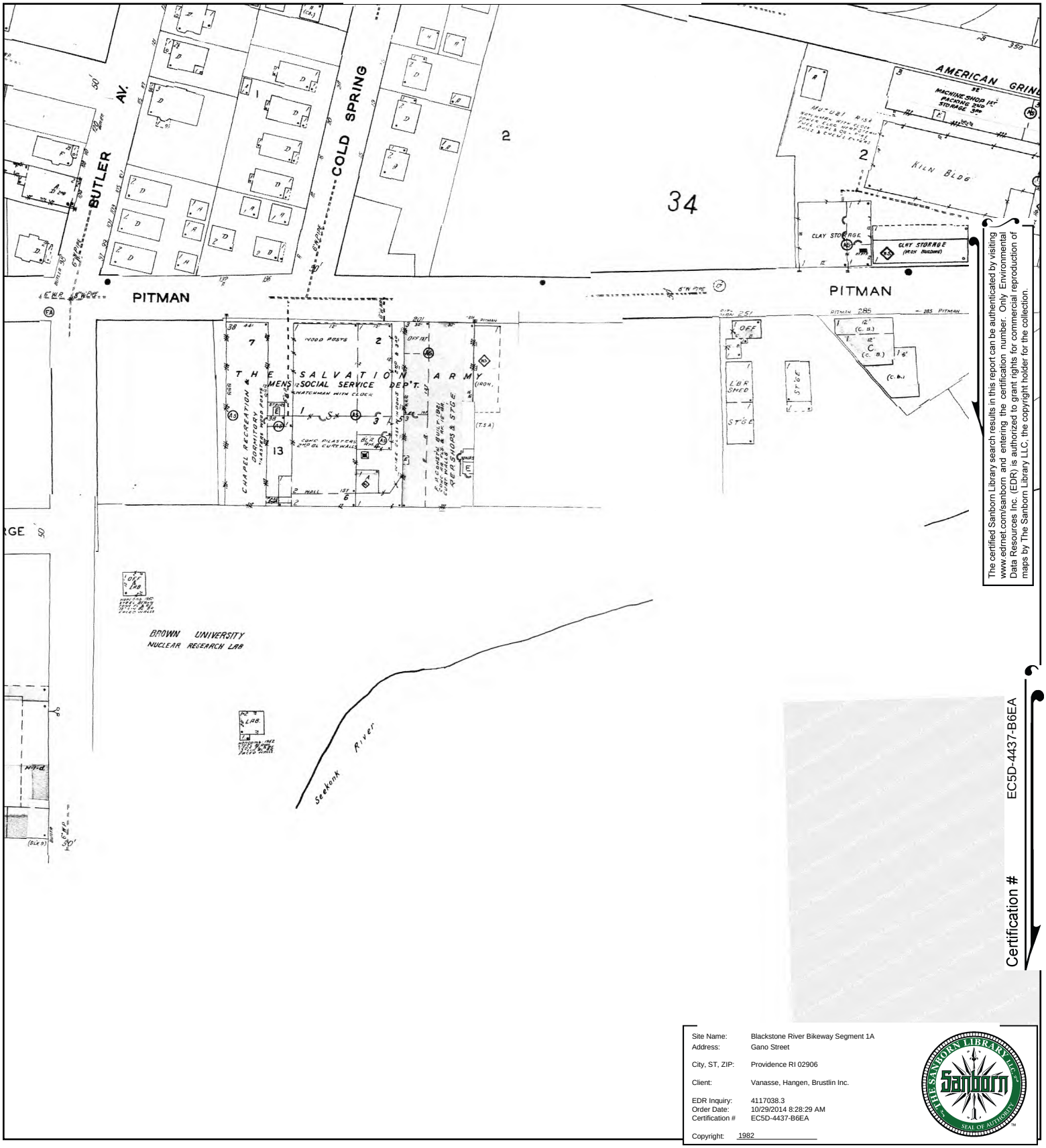
1982 Certified Sanborn Map



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Site Name:	Blackstone River Bikeway Segment 1A
Address:	Gano Street
City, ST, ZIP:	Providence RI 02906
Client:	Vanasse, Hangen, Brustlin Inc.
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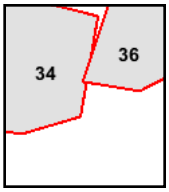

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Volume 2, Sheet 36

0 Feet 165 330 660

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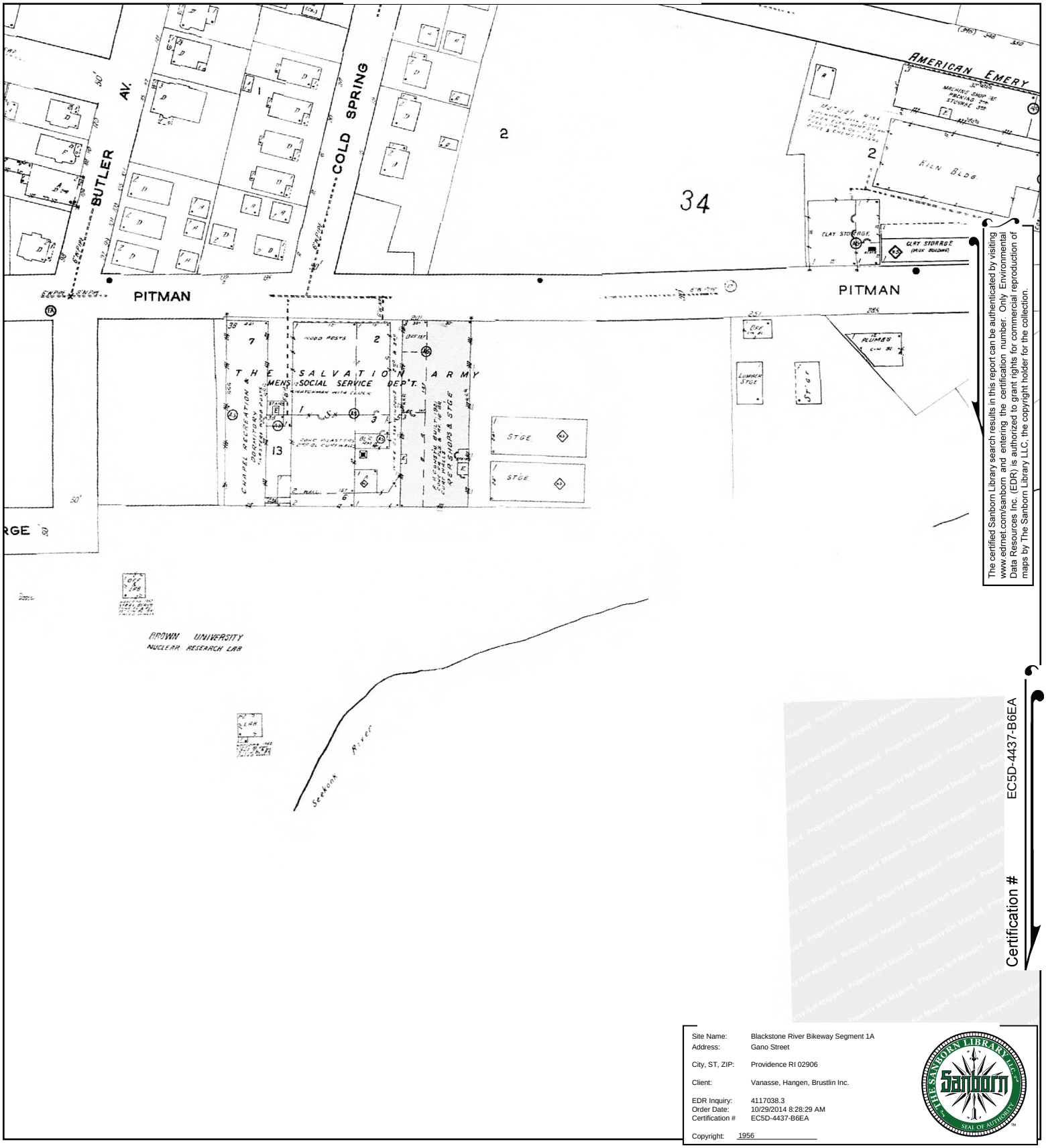
1956 Certified Sanborn Map



Certification # EC5D-4437-B6EA

Site Name:	Blackstone River Bikeway Segment 1A
Address:	Gano Street
City, ST, ZIP:	Providence RI 02906
Client:	Vanasse, Hangen, Brustlin Inc.
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Order Date:	10/29/2014 8:28:29 AM
Certification #	EC5D-4437-B6EA
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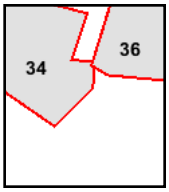
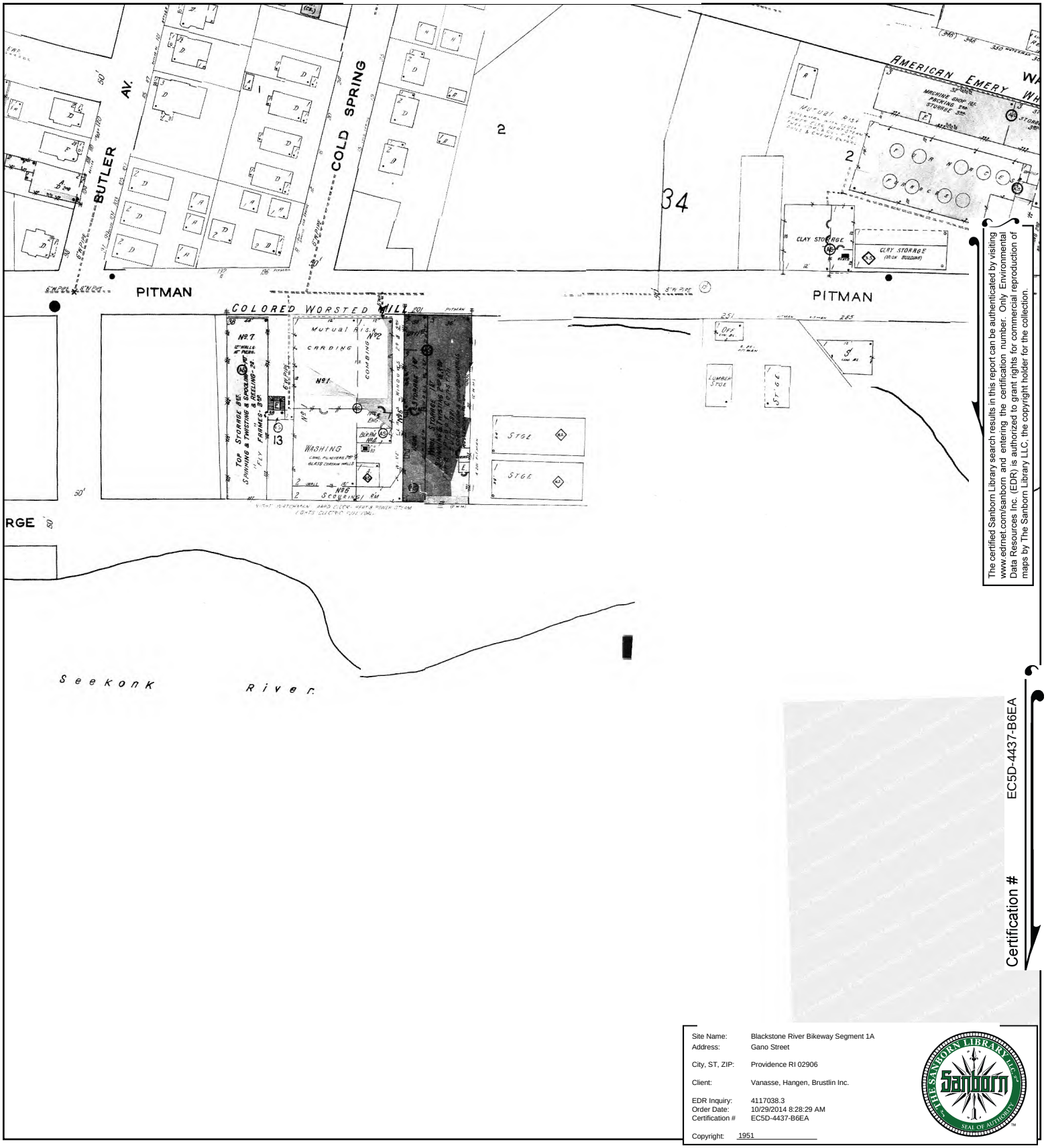


Volume 2, Sheet 34
Volume 2, Sheet 36

0 Feet 165 330 660

N

1951 Certified Sanborn Map



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Site Name:	Blackstone River Bikeway Segment 1A
Address:	Gano Street
City, ST, ZIP:	Providence RI 02906
Client:	Vanasse, Hangen, Brustlin Inc.
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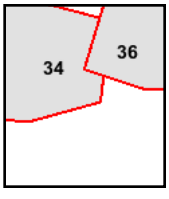
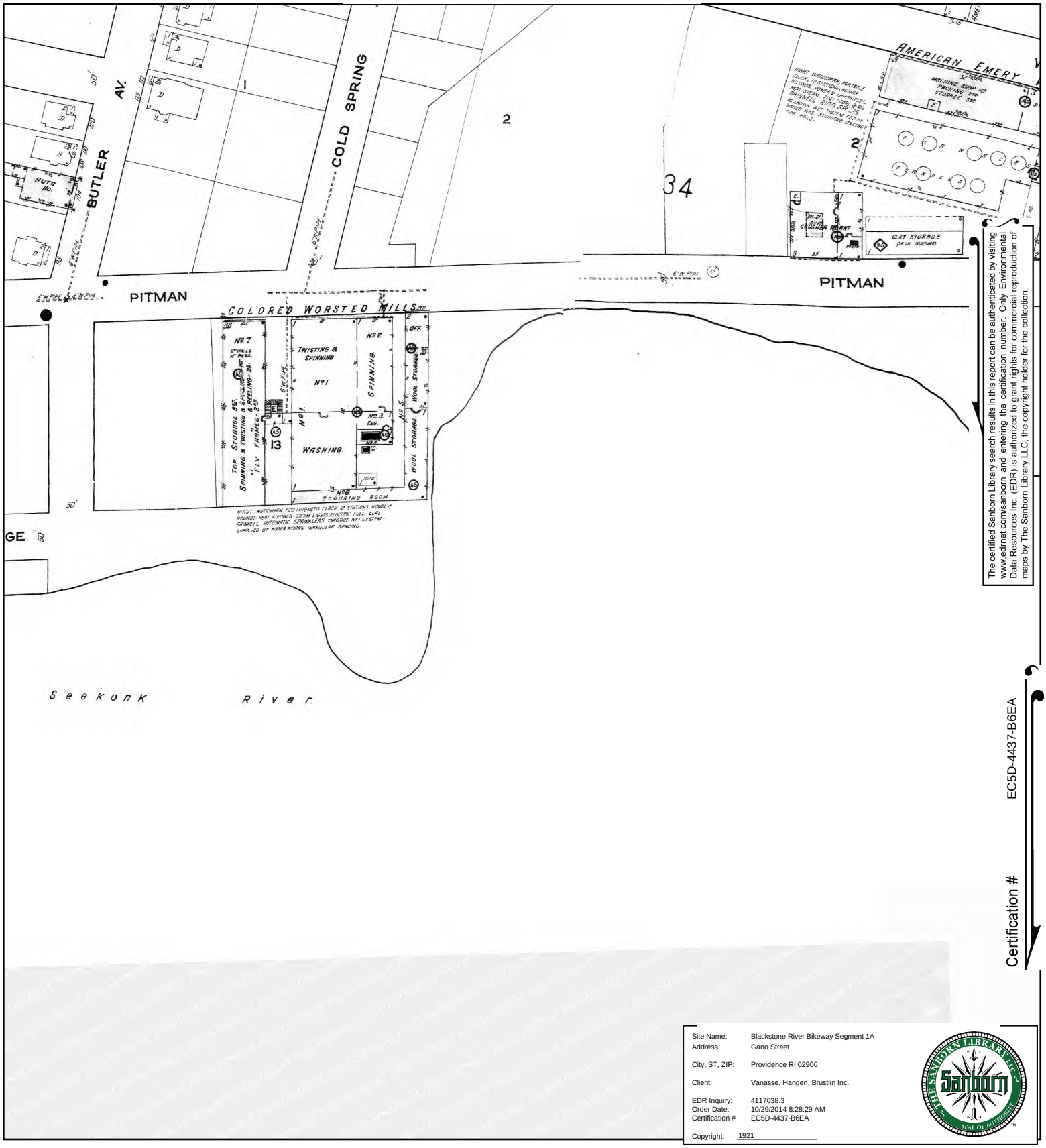


Volume 2, Sheet 34
Volume 2, Sheet 36

0 Feet 165 330 660

N

1921 Certified Sanborn Map



Certification # EC5D-4437-B6EA

Site Name:	Blackstone River Bikeway Segment 1A
Address:	Gano Street
City, ST, ZIP:	Providence RI 02906
Client:	Vanasse, Hangen, Brustlin Inc.
EDR Inquiry:	4117038.3
Order Date:	10/29/2014 8:28:29 AM
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Copyright:	1921

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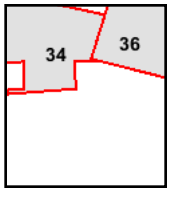
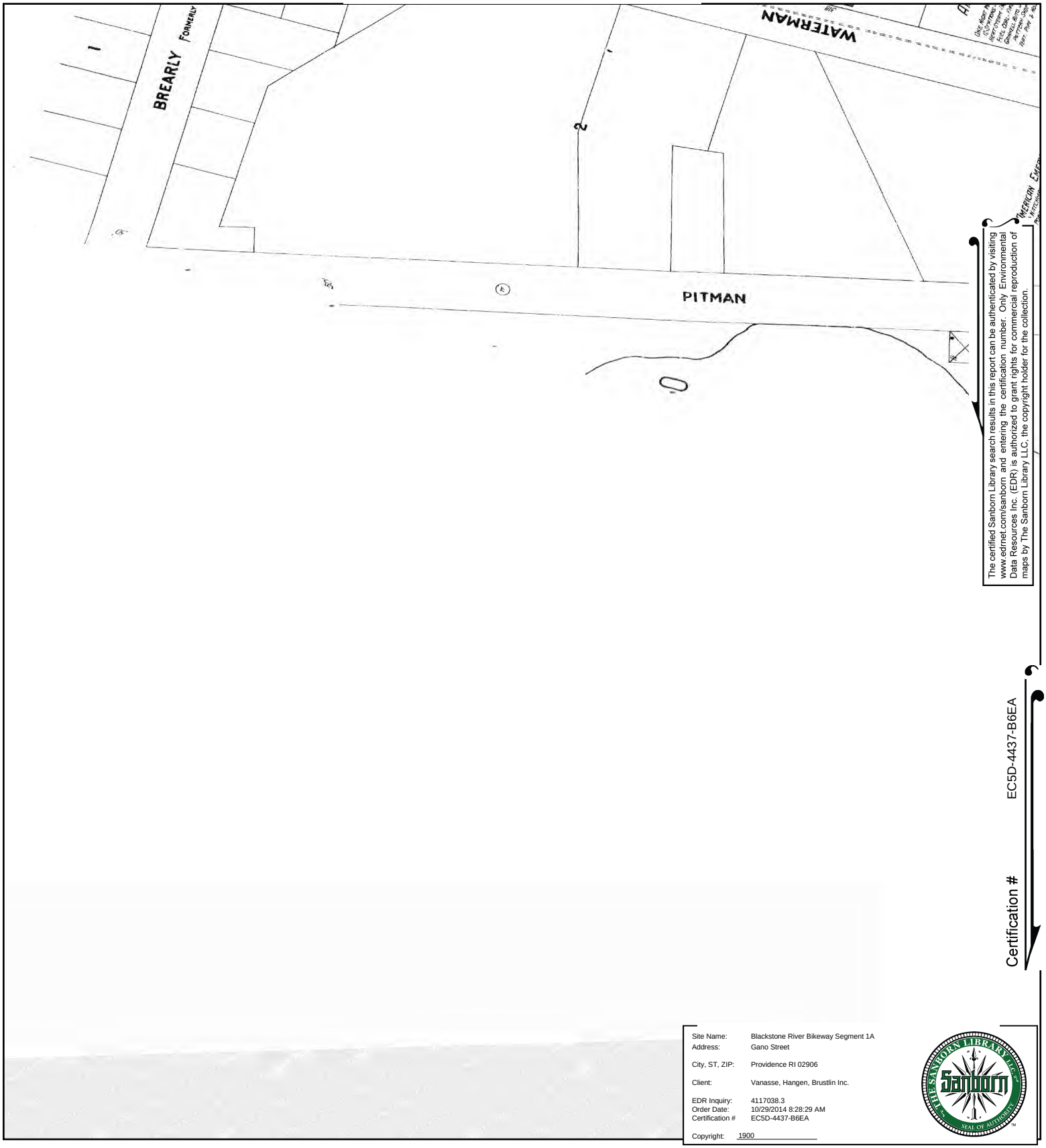


Volume 2, Sheet 34
Volume 2, Sheet 36

0 Feet 165 330 660

N

1900 Certified Sanborn Map



Certification # EC5D-4437-B6EA

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Address:	Gano Street
City, ST, ZIP:	Providence RI 02906
Client:	Vanasse, Hangen, Brustlin Inc.
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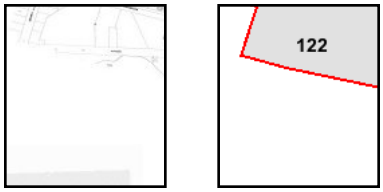

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0 Feet 165 330 660

N

Blackstone River Bikeway Segment 1A
Gano Street
Providence, RI 02906

Inquiry Number: 4117038.3
October 29, 2014

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10/29/14

Site Name:
Blackstone River Bikeway
Gano Street
Providence, RI 02906

Client Name:
Vanasse, Hangen, Brustlin Inc.
10 Dorrance St
Providence, RI 02903

EDR Inquiry # 4117038.3

Contact: Shelby Miller

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Certified Sanborn Results:

Site Name: Blackstone River Bikeway Segment 1A
Address: Gano Street
City, State, Zip: Providence, RI 02906
Cross Street:
P.O. # 72017.01
Project: Blackstone Bikeway Segment 1A
Certification # EC5D-4437-B6EA

Maps Provided:

1982
1956
1951
1921
1900
1889

Sanborn® Library search results
Certification # EC5D-4437-B6EA

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Sanborn Sheet Thumbnails

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1982 Source Sheets


Volume 2, Sheet 25


Volume 2, Sheet 26

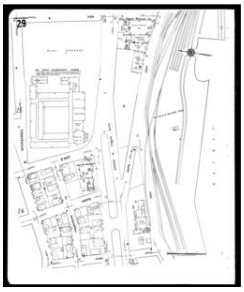

Volume 2, Sheet 29


Volume 2, Sheet 30

1956 Source Sheets


Volume 2, Sheet 25


Volume 2, Sheet 26


Volume 2, Sheet 29

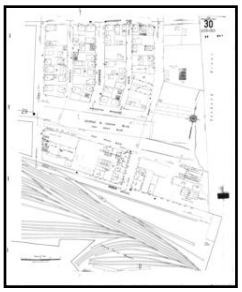

Volume 2, Sheet 30

1951 Source Sheets


Volume 2, Sheet 25


Volume 2, Sheet 26


Volume 2, Sheet 29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1921 Source Sheets


Volume 2, Sheet 25


Volume 2, Sheet 26


Volume 2, Sheet 29

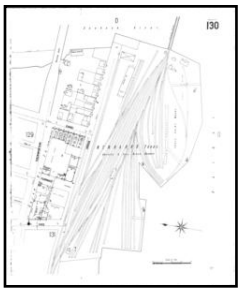

Volume 2, Sheet 30

1900 Source Sheets

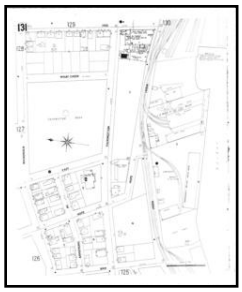
Volume 2, Sheet 127

Volume 2, Sheet 128

Volume 2, Sheet 129



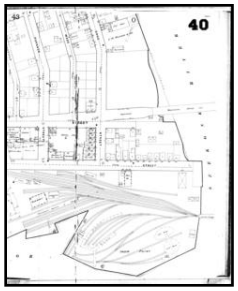
Volume 2, Sheet 130



Volume 2, Sheet 131

1889 Source Sheets

Volume 2, Sheet 40



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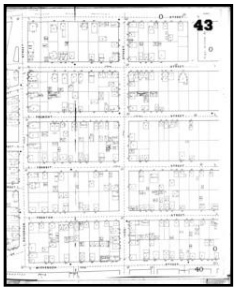
Volume 2, Sheet 43



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1982 Certified Sanborn Map

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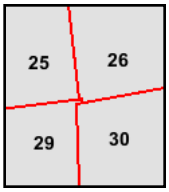
Certification # EC5D-4437-B6EA

Site Name:	Blackstone River Bikeway Segment 1A
Address:	Gano Street
City, ST, ZIP:	Providence RI 02906
Client:	Vanasse, Hangen, Brustlin Inc.
EDR Inquiry:	4117038.3
Order Date:	10/29/2014 8:28:29 AM
Certification #	EC5D-4437-B6EA
Copyright:	1982

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.



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Volume 2, Sheet 29
Volume 2, Sheet 30

0 Feet 165 330 660

N

1956 Certified Sanborn Map

Certification # EC5D-4437-B6EA

Site Name:	Blackstone River Bikeway Segment 1A
Address:	Gano Street
City, ST, ZIP:	Providence RI 02906
Client:	Vanasse, Hangen, Brustlin Inc.
EDR Inquiry:	4117038.3
Order Date:	10/29/2014 8:28:29 AM
Certification #	EC5D-4437-B6EA
Copyright:	1956

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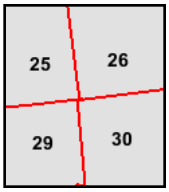

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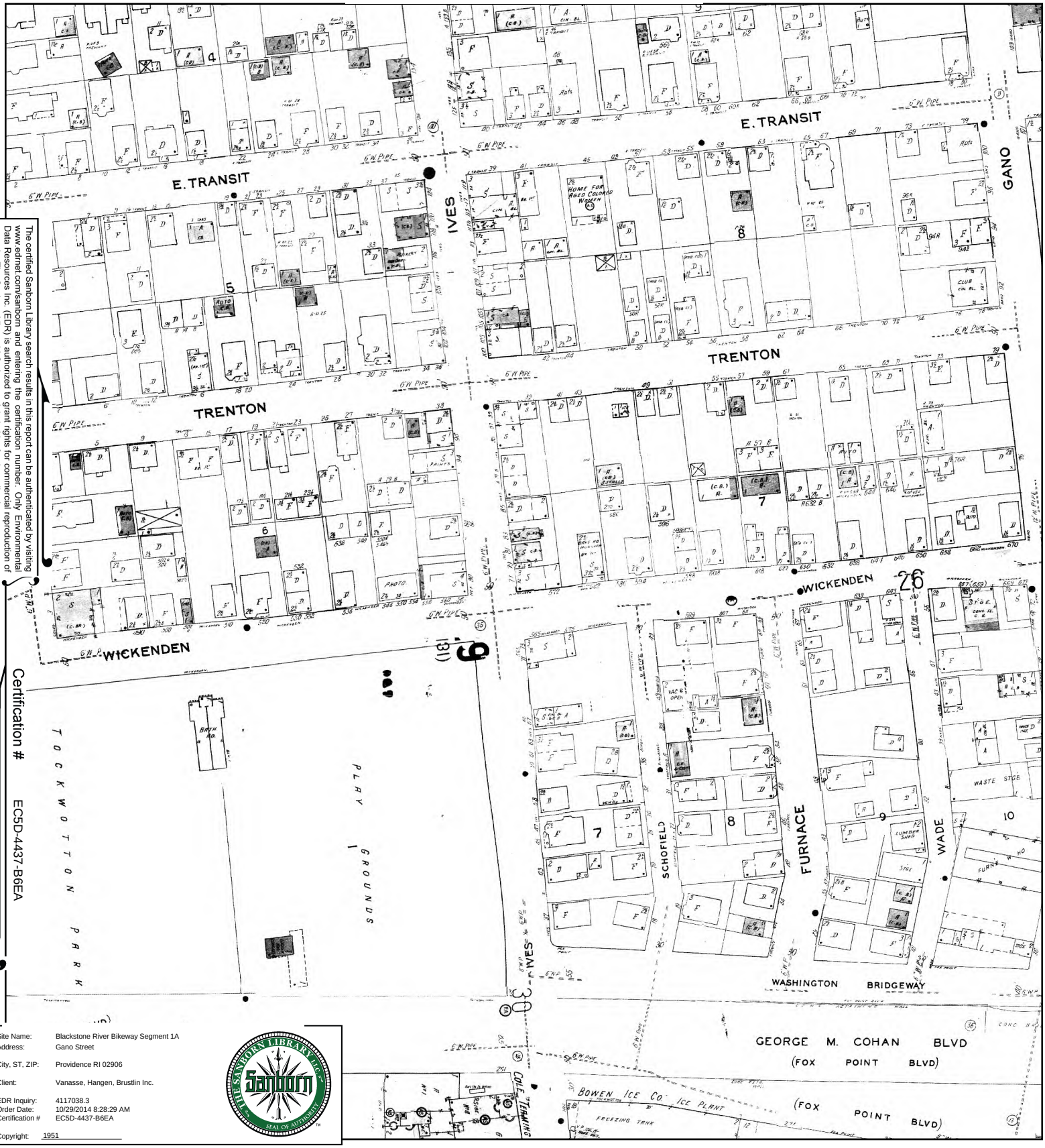
Volume 2, Sheet 30

0 Feet 165 330 660

N

1951 Certified Sanborn Map



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Certification # EC5D-4437-B6EA

Site Name:	Blackstone River Bikeway Segment 1A
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Client:	Vanasse, Hangen, Brustlin Inc.
EDR Inquiry:	4117038.3
Order Date:	10/29/2014 8:28:29 AM
Certification #	EC5D-4437-B6EA
Copyright:	1951

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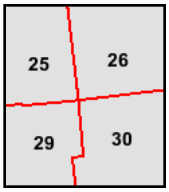

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Volume 2, Sheet 30

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N

1921 Certified Sanborn Map

Certification # EC5D-4437-B6EA

Site Name:	Blackstone River Bikeway Segment 1A
Address:	Gano Street
City, ST, ZIP:	Providence RI 02906
Client:	Vanasse, Hangen, Brustlin Inc.
EDR Inquiry:	4117038.3
Order Date:	10/29/2014 8:28:29 AM
Certification #	EC5D-4437-B6EA
Copyright:	1921

This Certified Sanborn Map combines the following sheets.
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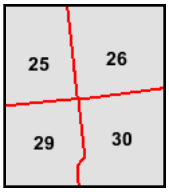

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Volume 2, Sheet 29
Volume 2, Sheet 30

0 Feet 165 330 660

N

1900 Certified Sanborn Map

Certification # EC5D-4437-B6EA

Site Name: Blackstone River Bikeway Segment 1A
Address: Gano Street
City, ST, ZIP: Providence RI 02906
Client: Vanasse, Hangen, Brustlin Inc.

EDR Inquiry: 4117038.3
Order Date: 10/29/2014 8:28:29 AM
Certification # EC5D-4437-B6EA

Copyright: 1900

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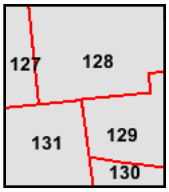

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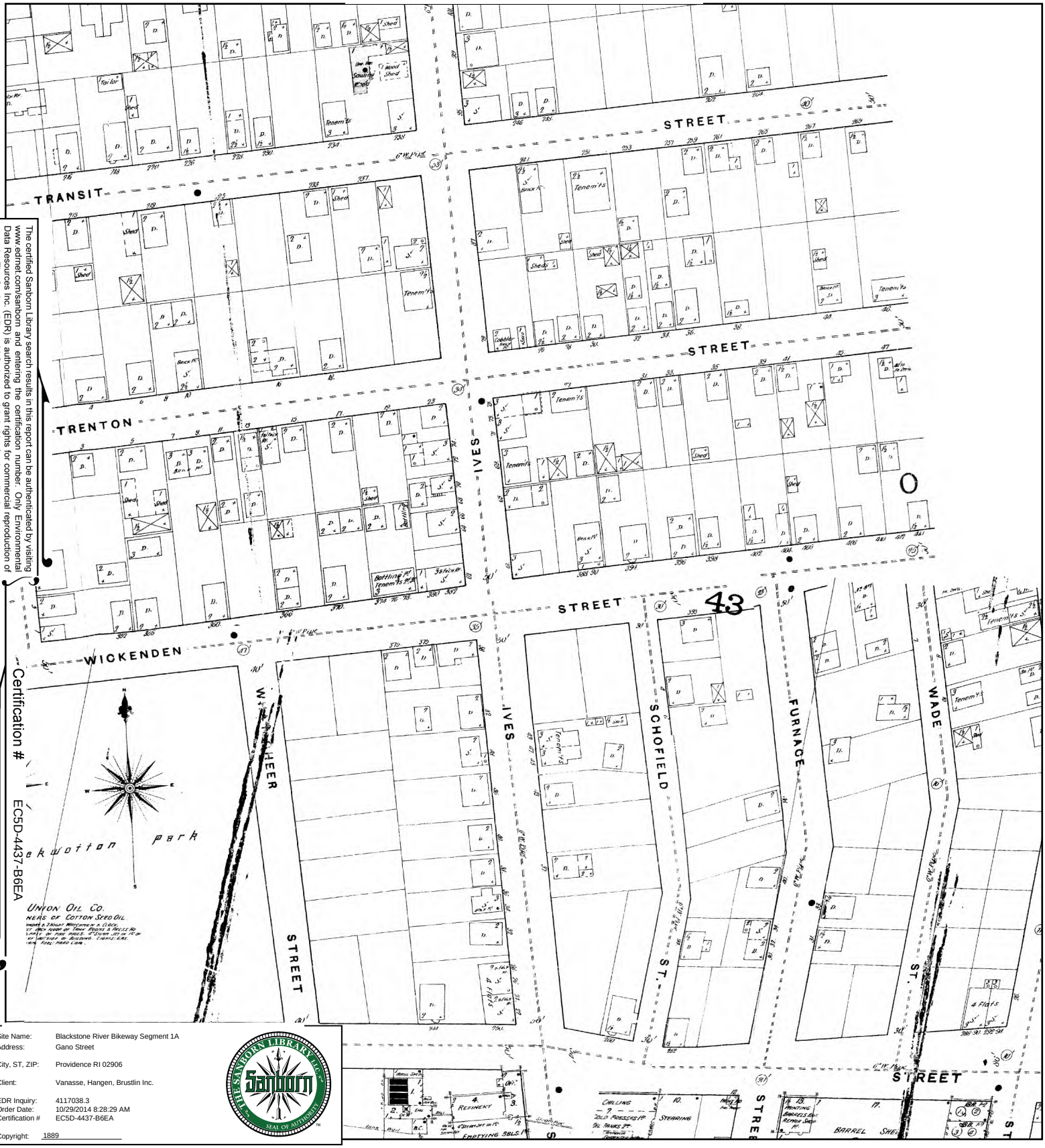
Volume 2, Sheet 129
Volume 2, Sheet 130
Volume 2, Sheet 131

0 Feet 165 330 660

N

1889 Certified Sanborn Map



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Certification # EC5D-4437-B6EA

Site Name:	Blackstone River Bikeway Segment 1A
Address:	Gano Street
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Client:	Vanasse, Hangen, Brustlin Inc.
EDR Inquiry:	4117038.3
Order Date:	10/29/2014 8:28:29 AM
Certification #	EC5D-4437-B6EA
Copyright:	1889

This Certified Sanborn Map combines the following sheets.
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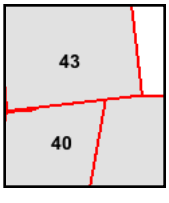

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Volume 2, Sheet 43

0 Feet 165 330 660

N

Memorandum

Appendix B: Historical City Directories

10 Dorrance Street
Suite 400
Providence, RI 02903
P 401.272.8100

Blackstone River Bikeway Segment 1A
Gano Street
Providence, RI 02906

Inquiry Number: 4117038.5
October 28, 2014

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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SECTION

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2013	☑	☐	Cole Information Services
2008	☑	☐	Cole Information Services
2003	☑	☐	Cole Information Services
1999	☑	☐	Cole Information Services
1995	☑	☐	Cole Information Services
1992	☑	☐	Cole Information Services
1988	☑	☐	Polk's City Directory
1983	☑	☐	Polk's City Directory
1978	☑	☐	Polk's City Directory
1973	☑	☐	Polk's City Directory
1968	☑	☐	Polk's City Directory
1963	☑	☐	Polk's City Directory
1957	☑	☐	Polk's City Directory
1950	☑	☐	Polk's City Directory
1943	☑	☐	Polk's City Directory
1938	☑	☐	Polk's City Directory

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FINDINGS

TARGET PROPERTY STREET

Gano Street
Providence, RI 02906

Year	*CD Image*	*Source*
GANO ST		
2013	pg A1	Cole Information Services
2008	pg A4	Cole Information Services
2003	pg A8	Cole Information Services
1999	pg A11	Cole Information Services
1995	pg A14	Cole Information Services
1992	pg A17	Cole Information Services
1988	pg A20	Polk's City Directory
1983	pg A21	Polk's City Directory
1978	pg A22	Polk's City Directory
1978	pg A23	Polk's City Directory
1973	pg A24	Polk's City Directory
1973	pg A25	Polk's City Directory
1968	pg A26	Polk's City Directory
1963	pg A27	Polk's City Directory
1963	pg A28	Polk's City Directory
1957	pg A29	Polk's City Directory
1950	pg A30	Polk's City Directory
1943	pg A31	Polk's City Directory
1938	pg A32	Polk's City Directory
1938	pg A33	Polk's City Directory

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	Cole Information Services

GANO ST 2013

7	GRACE ACCETTA
45	JAY CASHMAN
76	J REGO
	JR RAMOS
	Z OSBORN
78	JOAO CAVALHANA
92	PORTUGUESE SPORTING CLUB
96	ALIREZA ASIALI
	DILEK NORMOYLE
	NICK DAGNILLO
	PEDRO AREVALO
98	ARLENE BARROS
99	COLLINS H V CO
101	COLLINS BUILDING CO
103	M & S MOTORS INC
105	AMERICAN RD CROSS RHODE ISLAND CHAPT
112	BRUCE MURRAY
	THOMAS KELLY
113	CENTRAL MEAT MARKET
118	ONEILL JAMES L
	PILATES RL
130	FLOWER SHOW MANAGEMENT
	MARY LOUISE
	MEGAN MAHONEY
133	JACOB THE LOCKSMITH
	JOHNSTON DONUTS
135	A NEW LEAF
141	INTERNATIONAL UNION OF OPERATING
	INTERNATIONAL UNION OF OPERATING ENG
149	GANO MART
	XCLUSIVE CUTS
157	HOLY ROSARY BAND SOCIETY
158	AMY DELSANTO
	ELLEN MILLS
160	PAULO VIERIA
162	ARIA STEWART
	FRANCO RINALDI
	JOHN CUCCO
164	HUMBERTO CARVALHO
165	KAREZZ HAIR SALON
166	LISA CARVALHO
167	PERIODONTICS INC
	SILK PHYSICAL THERAPY CENTER
168	ROBERT CLARK
170	COURTNEY VIALL
	GENEVIEVE CROSS
174	ALMERINDA ROIAS
178	JOHN CAMPBELL
	MURDOCKTHOMPSON CENTER FOR TEACHERS
180	BRYAN TURNER

Target Street	Cross Street	Source
✓	-	Cole Information Services

GANO ST 2013 (Cont'd)

182	BRODY MARK MD
	HAHT COMMERCE
	MAIKO DOUGLAS
194	JOHN TOMAR
	MITCHELL MACHADO
205	PATRICK BACHANT
206	APPAREL DESIGN STUDIO
	HARKINS WEALTH MANAGEMENT
	OCCUPANT UNKNOWN
222	MARYBETH ON THE EAST SIDE
223	DOROTHY FIBIGER
	EILEEN KOSJGARIAN
224	OCCUPANT UNKNOWN
226	ATA KARAKCI
	MIGUEL BRAVO
	RYAN TELLER
	TC HENDERSON
	ZACHARY PIAZZA
228	STEVEN SUBOTNICK
229	JAN BOICHEL
	NOREEN ABRAR
	NOREEN SHAFFI
231	OCCUPANT UNKNOWN
233	ALYSSA BUECHNER
	TOBIAS STAPLETON
234	LIZ BLITZ
235	BRANDT STARCK
237	ROMAN BRODSKIY
238	JEFF ALVANAS
	KATHERINE CAPPIELLO
	LISA WHITE
	MARIA ISLAS
239	MANUEL FORTES
241	BRANDT STARCK
	VICTORIA VEH
243	IAN STEBINGER
244	GOLDSTEIN ASSOCIATES
245	ASHISH GARG
	DARLENE SEVERINO
	ELLIOT WASSER
	OI PANG
	REVA REBEIRO
	WILLIAM DAREZZO
246	LAURA MLYNIEC
	SARAH MORRELL
	WAYNE PARK
250	BOMES FAMILY LP
257	DANIEL KNIGHT
	GOLFO TZILOS
	JOSEPH LESLIE

Target Street	Cross Street	Source
✓	-	Cole Information Services

GANO ST 2013 (Cont'd)

257	JUDY MEISSNER
	LESLIE GRINNER
	MIGDALIA RODRIGUEZ
	RICHARD CUBBERLEY
	RON DALGLIESH
262	JACQUELINE LEE
	JUSTIN KERESTES
	TIMOTHY NUGENT
265	EASTSIDE VETERINARY CLINIC
	RUTH LO
266	BRENDAN RILEY
267	ELENA MUNRO
	INNA LEYKIN
	KATHRYN MCBRIDE
	SERABIAN BEVERLY
270	SETTIPANE & ASSOCIATES
272	OCCUPANT UNKNOWN
275	JONATHAN BOWERING
	VALERY DANILACK
276	BCX ENERGY
277	DAVID ROCKROHR

Target Street	Cross Street	Source
✓	-	Cole Information Services

GANO ST 2008

5	GREGORY ACCETTA
7	GRACE ACCETTA
45	JAY CASHMAN
76	CYNTHIA SOUTHER
	L DASILVA
	P PENTA
	R DECASTRO
	SUSAN STGERMAIN
78	CARVALHANA VIEIRA
	JOAO CAVALHANA
92	PORTUGUESE SPORTING CLUB
96	DEBORAH RUGGIERO
	DILEK NORMOYLE
	HANS VANLANCKER
	JEFFREY SHAINLINE
	NICK DAGNILLO
	RICHARD RADEBACH
	TRISHA BRASSARD
99	HV COLLINS CO
103	M & S AUTO REPAIRING
	M & S MOTORS INC
105	RI RED CROSS
112	BRUCE MURRAY
	DOUGLAS SWEET
	JEFFREY GRYBOWSKI
	JENNY LINDBERG
	LINDA QUINN
	PATRICIA ADAMS
113	CENTRAL MEAT MARKET
118	LAW OFFICES OF JOSEPH DESTEFANO
	ONEIL JAMES L
130	ACCUPUNCTURE OFFICE OF DR SARA RYAN
	MARY LOUISE
	MAURY RYAN
	RHODE ISLAND FLOWER & GARDEN SHOW
	RHODE ISLAND SPRING FLOWER & GARDEN
	RYAN MAURY LAW ASSOCIATES
	RYAN SARA DR OF ACUPUNCTURE
	STEPHANIE SWEENEY
135	A NEW LEAF FLORIST
141	HEALTH & WELFARE
	INTERNATIONAL UNION OF OPG ENGINEERS
	LOCAL 57 APPRENTICESHIP & SKIL
149	ALICE VIOLA PROPERTIES
	GANO MART
	VIOLA CONSTRUCTION CO
157	HOLY ROSARY BAND SOCIETY INC
158	ELLEN MILLS
	WINTHROP WILSON
160	JONATHAN NEUNER

Target Street	Cross Street	Source
✓	-	Cole Information Services

GANO ST 2008 (Cont'd)

162	RYAN LINDSAY
	T PATTISON
164	HUMBERTO CARVALHO
165	JOOST DELAAT
	JOSEPH DAREZZO
	KAREZZ HAIR SALON
	LEIGH BRODIE
166	EDWARD CARVALHO
167	PERIODONTICS INC
	SILK PHYSICAL THERAPY CENTER
168	ROBERT CLARK
174	ANN HOWE
178	JOHN CAMPBELL
	MURDOCK THOMPSON CENTER FOR TEACHERS
	PETER THOMPSON
180	DWM ASSOCIATES
	MICHEAL RYAN
	TARA LOVITT
	TOM ENRIGHT
194	ELIZABETH TAILLIE
	MITCHELL MACHADO
206	APPAREL DESIGN STUDIO INC
	MANCINI MARKETING
	PLANNING SOLUTIONS LLC
223	P TROTTER
224	OCCUPANT UNKNOWN
226	BENJAMIN FRAZER
	PAUL KLUMPE
	S DAWSON
	TC HENDERSON
228	STEVEN SUBOTNICK
229	CRISTIAN DIANCONU
	DAN MCARDLE
	H MULLA
	MEGAN NELSON
	NOREEN ABRAR
231	PRISCILLA MERRIAN
233	ERIC STPIERRE
234	LIZ BLITZ
	LUIZ PRAZERES
235	DONALD ALBA
237	ROMAN BRODSKIY
238	J ALVANAS
	JODI LUCENA
	KARI MCDONALD
	LIZ HARBISON
	ROBERT SALEMME
239	MANUEL FORTES
241	JAMES FEELEY
	REVA REBEIRO

Target Street	Cross Street	Source
✓	-	Cole Information Services

GANO ST 2008 (Cont'd)

241 VICTORIA VEH
243 E COSGROVE
244 ES GOLDSTEIN & ASSOCS
NPT WELLINGTON LLC
WELLINGTON BUSINESS SERVICES INC
245 ELLIOT WASSER
JOHN AGOSTINE
WILLIAM DAREZZO
246 LAURA MLYNIEC
LAWRENCE LOPES
NETTA NEVERS
PACHAE WASHINGTON
SARAH MORRELL
TANIA NEVERS
TERESA CELADA
250 BOMES REALTY INC
257 ANA PEDERSEN
DANIEL KNIGHT
ELIZABETH PAUPST
JOSEPH LESLIE
KIM POLSON
MEAGAN JARVIS
RICHARD CUBBERLEY
SARAH ALMONTE
SARAH WAIZENEGGER
262 EVA SERBER
JUSTIN KERESTES
MILAGROS NORES
TIMOTHY NUGENT
264 HANNAH STINSON
J BAUTISTA
MICHELLE NUEBEL
265 EAST SIDE VETERINARY CLINIC
T HADJIS
266 EDDIE CARLSON
J BEAULIEU
L OLIVER
MAYA TARR
OOKIE MA
RENEE CIANELLI
267 SERABIAN BEVERLY
270 SETTIPANE & ASSOCIATES
272 CHARLES KROLL
275 A ASARO
AMY DIAZ-INFANTE
D SANATMARIA
E TUCKER
L SCHERMERHORN
SEAN MCQUADE
276 CK ENVIRONMENTAL INC

Target Street	Cross Street	Source
✓	-	Cole Information Services

GANO ST 2008 (Cont'd)

277	ADAM DAY
	J BARRON
	J ZOX
	JEFFREY MANNING
	KARINA MASCORRO
	LEAH SCHWEID
	Y SUI
280	J ROGERS
	MARK PIERPONT
	OCCUPANT UNKNOWN

Target Street	Cross Street	Source
✓	-	Cole Information Services

GANO ST 2003

76	HILARY JONES
	L DASILVA
	P PENTA
82	ENGINES BY BENZ INC
	OCCUPANT UNKNOWN
92	JULIO BARROS
	PORTUGUESE SPORTING CLUB
96	C OHAIRE
	ERIC NIELSEN
	JOHN CHAMBERS
	JULIA DOBSON
	MARC CLARKIN
	NICOLE MIELE
	TRISHA BRASSARD
98	BRIAN PEREIRA
101	COLLINS BUILDING CO
103	M & S MOTORS INC
105	AMERICAN RED CROSS
	JOB CONNECTION LTD
	OCCUPANT UNKNOWN
	RED CROSS
112	DOUGLAS SWEET
	LINDA QUINN
	OCCUPANT UNKNOWN
113	ANTONIO CABRAL
	CENTRAL MEAT MARKET
	UNITED PACKING INC
118	JAMES L ONEILL
	OCCUPANT UNKNOWN
130	MAURY A RYAN ASSOC LTD
	XOX MANAGEMENT INC
133	OCCUPANT UNKNOWN
135	A NEW LEAF
141	INTERNATONAL UNION OF OPRTNG
157	HOLY ROSARY BAND SOCIETY INC
160	FENGYAN LI
	MARY MILLER
	NANCY HOWARD
162	PAULO VIEIRA
164	HUMBERTO CARVALHO
165	JOOST BELAAT
	KAREZZ HAIR SALON
	LEIGH BRODIE
166	H LOPES
	M POTENZA
	SANDRA VIDAL
167	PERIODONTICS INC
	SCOTT M FERTIK
	SILK PHYSICAL THERAPY CTR
170	K HICKEY

GANO ST 2003 (Cont'd)

178	LEO BYCKOVAS
	M TYBURSKI
	MURDOCK THMPSN CTR FOR TCHR
	PETER THOMPSON
180	ETHAN ANDERSON
	SARA BERETZ
182	FRADIN GOLDSTEIN PSY D
	HAHT COMMERCE
	KATHLEEN NEWMAN
	ROSALINE GRANOFF
	UNDERWRITERS INSPECTION CO
194	CALEB WALDORF
	PAUL CARDIN
205	JANNETTE REY
206	GALLET ASSOCS
	JASCO MNGMNT CNSLTNG GROUP LLC
	LINSCO PRIVATE LEDGER
	OCCUPANT UNKNOWN
	PLANNING SOLUTIONS LLC
222	NATALINA EARLS
223	AMBARISH GHOSH
224	OCCUPANT UNKNOWN
226	HYERAN KANG
	JOSEPH PISTONE
	JUSTIN MITCHELL
	KYUNG YOUN
228	STEVEN SUBOTNICK
229	ANDREI SMUK
	CALIN DIACONU
	YU TAO
231	SYLVAIN CLOUTIER
234	DEBBIE SAVILLE
237	ROMAN BRODSKIY
238	BRISTOL BRASS & COPPER
	JODI LUCENA
	JOHN MEEK
	KATHERINE RUSSO
	KEITH FARRELLY
	PATRICIA MCDONALD
	ROBERT SALEMME
	SHARON MULLALEY
239	GWENDOLYN FORTES
241	OCCUPANT UNKNOWN
243	MARY COSGROVE
244	GOLDSTEIN ES ASSOCS
	OCCUPANT UNKNOWN
	ROBERT AMENDOLARA
245	GWENDOLYN BRUNO
	JOHN AGOSTINE
	PING ZHANG

GANO ST 2003 (Cont'd)

245	TRAVIS WILLIAMS
	WILLIAM DAREZZO
246	JEONGWU LEE
	KHALIL JASIM
	PETER COSTAKOS
	RICHARD WILLIAMS
	STEPHANE RONDENAY
250	EDWARD & LILLIAN BOMES
257	BAOHE CHANG
	BIANCHI SARTORE
	C DEITZ
	E PAUPST
	JAMES COLE
	JENNIFER SURABIAN
	JEREMY KARGER
	MIAO CHEN
	RICHARD CUBBERLEY
	SALLY OSWALD
	SARAH ALMONTE
	SHANNON WERNER
	VERA HUR
262	PAUL GRELLONG
	SANDY FLORIAN
	SANGHO KIM
	SCOTT RIDDELL
	TIMOTHY NUGENT
264	E ONG
	LEE FEARNSIDE
265	CANAAN BLEAKNEY
	EAST SIDE VETERINARY CLINIC
266	J BEAULIEU
	L OLIVER
267	BEVERLY SERABIAN
	C SAMA
	LILLIAN HOWARD
	MATTHEW PURSELL
270	JOSEPH M SETTIPANE
272	GREGORY TRAGHELLA
275	S DICELL
	TARA FORREST
276	EARL F PASBACH
277	ADAM DAY
	GRETCHEN KAY
	J BARRON
	SHANNON CONVERY
280	J ROGERS
	MARK PIERPONT

Target Street	Cross Street	Source
✓	-	Cole Information Services

GANO ST 1999

33	ESSEX HOUSE THE
76	ANDREW IZYUMOFF
	KEEGAN COLDSTONE
	L DASILVA
78	JOAO CAVALHANA
82	BENSE WILLIAM D GARAGE
92	PORTUGUESE SPORTING CLUB
96	EDWIN BENTO
	G PARRA
	JOHN CHAMBERS
	KARL ASPELUND
	KEN MINKOVE
	M BERARDINELLI
	R HAGUE
	TRICIA WRIGHT
99	COLLINS H V COMPANY CONTRS
101	COLLINS BUILDING COMPANY
103	M & S MOTORS INCORPORATED
105	AMERICAN RED CROSS RHODE ISLAND CHAPTER
	RED CROSS
112	LINDA QUINN
113	CENTRAL MEAT MARKET
118	PROVIDENCE WASHINGTON INS COMPANY
	WARBURTON INSURANCE INCORPORATED
133	CLUB ENIGMA
	POLO CLUB
135	A NEW LEAF
141	HOTEL & RESTAURANT EMPLOYEES & BARTENDERS UNION LOCAL 217 A
	INTERNATIONAL UN OF OPG ENGINEERS LCL NO 57
	INTERNATIONAL UNION OF OPERATING ENGINEERS LOCAL NO 57
149	VIOLA CONSTRUCTION COMPANY
157	COLUMBUS CLUB
	KNIGHTS OF COLUMBUS FATIMA COUNCIL
158	K ROLDAN
160	GUSTAVO ROCHA
	R TANTISIRA
163	OCCUPANT UNKNOWN
164	OCCUPANT UNKNOWN
165	AUGUST OLSON
	BETTY KEARNEY
	KAREZZ HAIR SALON
	KIM MCDONALD
166	JOSE MARTINS
	NANCI ENGELHARDT
	T LIU
167	BUSINESS LENDERS INCORPORATED
	CARTER DONNA DANCE STUDIO
	DANIELS DONNA PSYCHOTHERAPIST
	FERTIK SCOTT M DENT
	NORTHEAST MORTGAGE LLC

Target Street	Cross Street	Source
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GANO ST 1999 (Cont'd)

167	PERIODONTICS INCORPORATED
	SILK PHYSICAL THERAPY CENTER
168	SUSAN FLETCHER
170	S SCHWARTZ
174	L CABRAL
178	M FEINSTEIN
	MURDOCK THOMPSON CENTER FOR TEACHERS
180	PETER ROGINA
194	OCCUPANT UNKNOWN
206	LINSCO PRIVATE LEDGER
222	HIRSCH STEVEN J
224	JESSICA LIPTON
226	A COHEN
	A HARTZ
	CHARLIE GONZALES
	DERRICK HAMILTON
	KATE GROSSMAN
	MARTIN SCHNEIDER
	MICHAEL GIRARD
	S AGNIEL
	SUSAN SABATINO
	TUULI PESONEN
228	A KRAVITZ
	STEVEN SUBOTNICK
229	J FRONEK
231	CHYI MIAO
233	JOSEPH CANNON
234	DEBORAH SAVILLE
	SHERRY SANTOS
235	D ALBA
237	ROMAN BRODSKIY
238	ANTHONY DEMARCO
	DONNA LEFEBVRE
	GYDA JEMERY
	JANE WANG
	LISA BILEAU
	P MCDONALD
	W STRUCK
239	MANUEL FORTES
241	V VEH
243	E COSGROVE
244	AMENDOLARA ROBERT INCORPORATED INT DESIGNING
	GOLDSTEIN ES ASSOCIATES
245	B KOLB
	JAMES FEELEY
	M BARRY
246	B PHILPOT
	CLARA SANUDO
	PAULA MONTANER
	PETER COSTAKOS

GANO ST 1999 (Cont'd)

246	ROBERTO LUDOVICO
	SARAH MORRELL
	SCOTT CARPENTER
256	CHRISSY WOLPERT
257	B AMES
	B SEIGLE
	BRIAN BOCHELMAN
	ELIZ STRICKLAND
	J BOND
	JULIE RYAN
	K BECK
	LISA PARK
	R PHILLIPS
	R SINHA
	RICHARD CUBBERLEY
	SHAN TSAI
262	S MUKA
	STEPHON ALEXANDER
	TIMOTHY NUGENT
	V CHATZI
265	EASTSIDE VETERINARY CLINIC
	LAHAYE JOCELYN MD
266	SU IH
267	C SAMA
	DANIEL SHARVIT
	MATTHEW PURSELL
	SERABIAN BEVERLY PSYCHOLOGIST
270	ALEC THIBODEAU
	DEBORA DORMODY
	SETTIPANE & ASSOCIATES GUY J LAWYER
	SETTIPANE JOSEPH M ESQ
272	GREGORY TRAGHELLA
	JOHN PALMBORG
275	B STEARNS
	FARRAH VENEZIANO
	J KOENIG
	JASON CORMIER
276	PASBACH EARL F LAWYER
277	JIM KARATASSOS
	M URTON
	NERMIN KURA
	S BRUSH

Target Street	Cross Street	Source
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GANO ST 1995

76	GUAN, YINGSENG
	ZHANG, DONGYUE
78	CAVALHANA, JOAO V
82	BENSE WM D, GARAGE
92	BARROS, J
	PORTUGUESE SPORTING CLUB
96	ACOSTA, ROGER
	BENTO, EDWIN D
	BERNARD, SHEILA
	CHAMBERS, JOHN E
	FERA, KRISTEN
	GIBBS, CHARLES J
	PAGE, MEGAN
	RIEGELSBERGER, BARNEY
	SPRAGUE, BOB
98	BARROS, J L
99	COLLINS H V CO, CONTRS
101	COLLINS BUILDING CO
103	M & S MOTORS INC
112	WONG, YONGZHONG
113	CENTRAL MEAT MARKET
	UNITED PACKING INC
118	WARBURTON INSURANCE INC
133	ESSEX HOUSE THE, RESTRNT
135	A NEW LEAF
	NEW LEAF
139	ENGINEER'S FIELD
141	INTERNATIONAL UNION OF OPERATING ENGINEERS LOCAL NO 57
149	VIOLA CONSTR CO
157	COLUMBUS CLUB
	KNIGHTS OF COLUMBUS FATIMA COUNCIL
158	MACGREGOR, KYLE
160	ROCHA, GUSTAVO & ELIZABETH
164	CARVALHO, HUMBERTO
166	CARVALHO, JOHN
167	DECESARE, DANIEL P, DENT
	FERTIK, SCOTT M, DENT
	GOLDBERG, DAVID A, DENT
	PERIODONTICS INC
	SILK PHYSICAL THERAPY CENTER
168	PESTANA, JOS F
170	JESDALE, BILL M
174	CABRAL, JOHN S
178	ANTONOV, PAUL
	FEINSTEIN, MITCHELL
180	LOMBA, ABLE
	UNDERWRITERS INSPECTION CO INC
194	FARIAS, JOHN
	FARIAS, RICHARD
205	MODAFFERI, J A

GANO ST 1995 (Cont'd)

206	LIBUTTI, ALBERT C, INVSTMNTS
	LIBUTTI, GREGG A, INVSTMNTS
	LINSCO/PRIVATE LEDGER
	NURSING ASSOCIATES
	OCEAN STATE SUPPORT SERVICES INC
222	HIRSCH, STEVEN J
223	SPRATT, J R
226	COHEN, A L
	GUALDI, ROSSANA
	HENDIN, ABRAHAM G
	HRITZ, TERRY
	LANG, M
	SOBANI, SULEMAN
	SPEVACK, J
	VATH, PETER A
	YONAN, JONATHAN
228	KRAVITZ, A
	SUBOTNICK, STEVEN
	SUBTONIK, STEVEN
229	CHEN, QUIONG-YU
231	BANASZAK-HOLL, JANE & MARK
233	SHAW, J
234	DYCK, E
	POEY, V
237	LYONS, M P
238	COHEN, DAVID N
	DEMARCO, ANTHONY
	FRANKEL, GLENN
	LAVIGNE, ANN
	MCDONALD, P
	TESTONI, JANET
	ZELLER, MARK S
239	FORTES, MANUEL
241	VEH, V
243	COSGROVE, E F
244	AMENDOLARA ROBERT INC, INT DESGNG
	OLIVELLI ASSOCIATES
245	ARREDONDO, ROBERTO
	BARRY, M
	CORRADO, DENISE
	FEELEY, JAS R, JR
	MAGAVI, SANJAY
246	BEN-NACHUM, RAN
	BRODEUR, MARK B
	MORRELL, S
	SHEFI, AVI
	SOTTILE, PAUL D
	TOMBERLIN, ROGER
	TOMBERLIN, ROGER-FAX NUMBER
	UY, K

GANO ST 1995 (Cont'd)

250	BOMES EDW ASSOCIATES
	GOLDBERG, EDMOND
	TEHRANI, N
257	BERNSTEIN, TONY
	CUBBERLEY, RICHARD S
	FAJARDO, A
	GANON-ROWLEY, THOS & JOLYNE
	GATELY, THOS E
	JAMES, KEVIN
	JOHNSON, C
	JORDAN, N
	KRAPIVKA, ALFRED
	LEACH, SONIA
	LI, CHAOQUIN
	SHENOY, VIJAY
	YOUSSEFI, A
262	ADAMS, JOS S
	CHATZI, VASILIKI
	FARBER, B
	MONTEIRO, FRANK
	NUGENT, TIMOTHY J
264	LAGARRIGUE, LILLIAN
	REHKOPF, KATHARINE
265	KEILCH, PATK
	LA HAYE, JOCELYN, MD
	MUELLER, MARGARET
266	CAMPBELL, CHRISTIAN
	DOUTHAT, THOS
267	SAMA, C
	SCHWINGEN, M
	SERABIAN, BEVERLY, PSYCHOLGST
270	D'ALESSANDRO JULES J
	SETTIPANE & ASSOCIATES GUY J, LWYR
	SETTIPANE, JOSEPH, ATTY
272	CLEARY CATHLEEN A, PSYCHOTHRPST
	LEMOI, WARREN, JR
275	CASSELL, ROBIN L
	HOYLE, LAWRENCE G
	STEINBERG, WENDY C
276	AZARIAN, ANAHID
	OLYMPUS GROUP RESIDENTIAL RENTAL DIVISION
277	HENDERSON, K
	LEO, EDMUN
	ROBINSON, JOHN A
	TAVES, NATHAN E

Target Street	Cross Street	Source
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GANO ST 1992

60	BRASCO LAMP & SHADE CO
76	CHEN, QUIONG-YU
	TAN, FANGCHI
82	BENSE WM D, GARAGE
92	BARROS, J
	PORTUGUESE SPORTING CLUB
96	BENTO, EDWIN D
	CHAMBERS, JOHN E
	D'AMICO, JOHN J
	FERA, KRISTEN
98	BARROS, A
	BARROS-SHERROD, L D
99	COLLINS H V CO, CONTRS
103	M & S AUTO SALES INC
105	JOB CONNECTION LTD
	RELIEF RESOURCES INC
112	GIRAMMA, TRISHA
	HONIG, CARY
	SOARES, SANDRA
113	HENRIQUES J & SON
	UNITED PACKING INC
118	WARBURTON INSURANCE INC
130	BEAUCHAINE, DENISE
	ROGERS, CHAS R
135	A NEW LEAF
141	INTERNATIONAL UNION OF OPERATING ENGINEERS LOCAL NO 57
149	VIOLA CONSTR CO
157	COLUMBUS CLUB
	KNIGHTS OF COLUMBUS FATIMA COUNCIL
158	BERRY, SETH A
160	KELLOGG, RUSSELL
164	CARVALHO, HUMBERTO
165	ROOP, SCOTT
166	CARVALHO, JOHN
167	DECESARE, DANL P, DENT
	FERTIK, SCOTT M, DENT
	HUMBER FINANCIAL SERVICES
	HUMBER PROPERTIES
	HUMBER PROPERTIES-FAX LINE
	JAZZ EXPRESS
	PROPERTY CLEARING HOUSE THE
	SEGAL & DECESARE, DENTS
	SEGAL, PAUL L, DENT
	SILK PHYSICAL THERAPY CENTER
168	RAGA, CAMALA
174	CABRAL, JOHN S
178	ANTONOV, PAUL
	FEINSTEIN, MITCHELL
180	LOMBA, R M
	UNDERWRITERS INSPECTION CO INC

Target Street	Cross Street	Source
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GANO ST 1992 (Cont'd)

194	FARIAS, JOHN
	FARIAS, RICHARD
205	CAT CLINIC THE
	CLARK, JOHN
	JEWEL, A
	LAFLECHE, M A
	NATHAN, R L
206	LIBUTTI, ALBERT C, INVSTMNTS
	LIBUTTI, GREGG A, INVSTMNTS
	LINSCO/PRIVATE LEDGER
222	HIRSCH, STEVEN J
223	MILES, JAS P
	PAQUIN, LEO
224	CHANG, TRIANE
	CHATTOPADHYAY, ARPITA
226	CARROLL, T
	COHEN, A L
	GEIS, CARL W
	GREENBERG, BARRY
	KRAMER, ROBT A
	LANG, KURT
	PARTS, CATHERINE M
	RAGOZZINO, LOUIS
	SHAFA, ABDOL MOHAMED
	WAGNER, C
	YONAN, JONATHAN
229	JIANG, GUANGSHAN
231	ISHIHARA, TERUYA
233	HOFFNER, WM
234	SOUSA, ANTHONY
237	LYONS, M P
238	COHEN, DAVID N
	MCDONALD, P
	RUBEL, DARYL
	SCHEFFEL, ROBT
	STERN, GORDON
241	VEH, V
243	COSGROVE, E F
244	AMENDOLARA ROBERT INC, INT DESGNG
245	BARRY, M
	CORRADO, DENISE
	FEELEY, JAS R, JR
	MCPHERSON, CLIFTON
246	BAKSHI, SUDHA
	BRODEUR, MARK B
	DENNO, D
	KAZIM, ALI
	KHABOUT, JACQUES F
	MORRELL, S
	TAYLOR, G

GANO ST 1992 (Cont'd)

250	BOMES EDW ASSOCIATES
	LETO, ROBT
	LOPINSKI, GREGORY P
257	CUBBERLEY, RICHARD S
	FIELD, CHRIS
	HOANG, DZUNG
	LEE, JOOWAN
	LEWIS, C
	MAFOR, JOHN I
	WALKER, JOHN H
	YUN, YONGSEUNG
262	CUESTA, RUBEN
	FEIGON, S
	GONZALEZ, VINCENT
	LYNCH, T
	MALONEY, JILL
	MONTEIRO, FRANK
264	LARSON, EARL
	LEE, M
	WILLIAMS, J
265	COFIELD, EM
	GARBUTT, BRYAN
	KATINOS, NICK
	LA HAYE, JOCELYN, MD
266	HJALTESTED, KARL
	PARDUS, LINDA
	VECRIS, GEO
267	CORA, MARIE T
	SAMA, C
	SERABIAN, BEVERLY, PSYCHOLGST
270	FEINER, N FRANK, PSYCHTRST
	YOUNG, LAURA
275	DYER, R A
	FARRELL, E M
276	CARTER, ARTHUR P
	DARBY, JOHN J, DENT
	SCHWARTZ, ABRAHAM
277	BOYLAN, K
	GEISER, JOS D
	IRONSIDE, ALFRED D
	LIM, YOWPIN

Target Street	Cross Street	Source
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GANO ST 1988

13 Desjarlais Dennis J 353-1996

161

GANO ST –FROM 238 INDIA TO 415 ANGELL

ZIP CODE 02903
INDIA ST INTERSECTS
GEORGE M COHAN BLVD INTER
SECTS
WASHINGTON BRIDGEWAY ENDS
FOX POINT BLVD INTERSECTS
RT 195W ENTRANCE
WICKENDEN ST ENDS
18 75 Vacant
76★Zhao Ying H 274-3561
78 Cavalhana John V ◎ 521-7934
79 Vacant

160

TRENTON INTERSECTS
92 Portuguese Sporting Club 521-7852
94 Vacant
96 Vacant
98 Barros Arlene J
Barros Julio N 331-3549
★Santos John
Sherrod Linda D
99 Collins H V Co bldg contrs 421-4079
101 Vacant
EAST TRANSIT ST INTERSECTS
103 M & S Auto Repairing Service Inc
17 831-2323
105 Vacant
107 Vacant
112 Murray Bruce
Rear★Noriega Linda
Rear★Munger J A 351-0247
113 Henriques J & Sons meats whol 751-6935
115 United Packing Co meat
FREMONT ST INTERSECTS
118 Warburton Insurance 272-6800
130★Rogers Charles plmb 751-3954
133 Club 133 751-3212
Blake's restr
WILLIAMS ST INTERSECTS

156

135 New Beginnings meta phys bookstore
751-9755
ROGER WILLIAMS SQ
141 White John A memorial bldg
International Union Operating Engs
(IUOE) Local 57 org-labor 421-6678
16 International Union Of Opr Eng Local 57
health & welfare fund 274-3877
Labor Education Center 421-7298
149 Viola Construction Co 831-4890
POWER INTERSECTS
157 Knights Of Columbus Our Lady Of Fatima
Council 831-9367

Target Street	Cross Street	Source
✓	-	Polk's City Directory

GANO ST 1983

RT 195W ENTRANCE
60 Vacant
WICKENDEN ST ENDS
ZIP CODE 02906
75 Santos Antonio
No Return
76 Mateus Joao 273-5627
Amorin Joaquin B 273-8232
78★Cavalhara Joao V © 521-7934
79 Vacant

160

TRENTON INTERSECTS
92 Portuguese Sporting Club 521-7852
94★Young Leslie
Ratchford Joann 272-0143
96★Schultz Ellen
Rebeiro A
★Thacker Susan
★Madore S E
★Tucker John R IV 751-5691
Tillinghast Bartholomew
98 Barros Arlene
Barros Julio N 331-3549
99 Collins H V Co bldg contrs 421-4079
101 Vacant
EAST TRANSIT ST INTERSECTS
103 M & S Auto Repairing Service Inc 831-2323
105 Smith Maurice C Co Inc rubber stamps-seals-nameplates 421-1064
107 Smith (Overflow)
112 Vacant
Rear Vacant
113 Henriques J & Sons meats whol 751-6935
115 United Packing Co meat
FREMONT ST INTERSECTS
118 Hurd Electronics 421-9698
Video Advantage video tapes sls & rentals 861-0062
130 Under Constn
133 Club 133 751-3212
WILLIAMS ST INTERSECTS

156

WILLIAMS INTERSECTS
135 Skate Away USa skates ret 27-3211
Vacant
137 Vacant
ROGER WILLIAMS SQ
141 White John A memorial bldg
International Union Operating Engs (IUOE) Local 57 org-labor 421-6678
International Union Of Opr Eng Local 57 health & welfare fund 331-9191
Labor Education Center 421-7298
149 Viola Construction Co 831-4890
POWER INTERSECTS
157 Knights Of Columbus Our Lady Of Fatima Council 831-9367
158 Mills Ellen © 751-9645
Vacant
159 Our Lady Of Fatima Council 4331 (Overflow)
160 Hynes Eliz V © 421-1224
162 Vacant
163 Camara Francis M
164 Carvalho Umberto © 751-2197
Carvalho John
165 Camara Manuel
Camara John 521-3649
stilhao Joaquim 861-5615

Target Street	Cross Street	Source
✓	-	Polk's City Directory

GANO ST 1978

207★Thompson Marie

161

GANO ST —FROM 238 INDIA TO 415 ANGELL

ZIP CODE 02903
INDIA ST INTERSECTS
GEORGE M COHAN BLVD INTER
SECTS
WASHINGTON BRIDGEWAY ENDS
FOX POINT BLVD INTERSECTS
RT 195W ENTRANCE
60 Vacant
WICKENDEN ST ENDS
ZIP CODE 02906
75 Vacant
Dinetz Block
76★Carvalho Joaquim
Ponte David M
78 Pereira Manuel S ◎ 521-2229
79 Vacant

160

TRENTON INTERSECTS
92 Portuguese Sporting Club 621-5964
94 Baltazar Antero S
Fernandes Jose ◎ 272-5749
96 Santos Edwin M Jr 331-5882
118 Cruz Arth R 861-9286
TO Angelo Jose D 831-3324
Fernandes Antonio 274-2146
Soares Joao
Pena Richd O 831-4220
98 Barnett John E 274-4786
Barros Julio
99 Collins H V Co bldg contrs 421-4079
EAST TRANSIT ST INTERSECTS
103 M & S Auto Repairing Service Inc
831-2323
105 Mandell & Sokolove Associates consulting
eng 831-2012
Safety Services Inc safety eng 831-2012
107 Mandell & Sokolove Associates (Overflow)
112 Vacant
Furtado Jose E 351-4863
Rear Tavares Michl A 272-8549
Rear★Pereira Maria
Rear Cunha Maria S Mrs
113 Henriques J & Sons meats 751-6935
117 115 Blue Ribbon Beef Co Inc 831-8883
B-E E Jewelry
Delcam Mfg jwlry findings 751-0158
118 Ives Social Club 421-1462
FREMONT ST INTERSECTS

Target Street	Cross Street	Source
✓	-	Polk's City Directory

GANO ST 1978

125 O'Connor John F Co plmb & htg 751-2300
O'Connor & Associates real est 751-2300
O'Connor Rentals apts 521-5537
130 Bemis Elsie Mrs
133 Club 133 751-3212

156

WILLIAMS INTERSECTS
135 Campbell John R ◎ 274-3437
ROGER WILLIAMS SQ
141 White John A memorial bldg
International Union Operating Engs (IUOE) Local 57 421-6678
International Union Of Opr Eng Local 57 health & welfare fund 331-9191
Labor Education Center 421-7298
16 International Union Of Operating Engineers (i u o e)
149 Viola Construction Co 831-4890
POWER INTERSECTS
157 Knights Of Columbus Our Lady Of Fatima Council 831-9367
158 Marshall Arth ◎ 751-7683
159 Our Lady Of Fatima Council 4331 (Overflow)
160 Fletcher Mary E Mrs ◎ 421-1224
162 Hynes Eliz V ◎ 421-1298
Vacant
163 Camara Francis M 274-8222
164 Carvalho Umberto 274-1418
165 Camara Jose
Camara Joao C
166 Pestana Manuel 274-6820
Carvalho Miguel 274-1418
PRESTON ENDS
167 Professional Bldg 274-2600
Segal Paul L & Danl P De Cesare Inc 274-2600
Pirie Geo W phys
168 Boga Dagoberto M 274-1975
170★Camara Jose
174 Cabral Tillie Mrs ◎ 861-5212
178 Topper Dennis
Reis Mary Mrs ◎
180★Goddin Faye 421-1295
★Lutz Janet 861-7917
Pennington Jane R 331-5879
180a Psychological Associates 331-2297
182 Quattrocchi & Quattrocchi Law Office 272-4545
Nyatt Foods food brokers 272-4545
AMY ENDS

Target Street	Cross Street	Source
✓	-	Polk's City Directory

GANO ST 1973

FOX POINT BLVD INTERSECTS
60 Vacant
7 WICKENDEN ST ENDS
ZIP CODE 02906
75 Aetna Bridge Co bridge constn 861-1525
76★Almeida Joseph
78 Pereira Manuel S ◎ 521-2229
79 Aetna Bridge Co (Overflow)

160

TRENTON INTERSECTS
92 Portuguese Sporting Club 621-5964
94 Vacant
Silva Domingo 351-7166
96 Lamontagne Ernest 861-9286
Cruz Arth R 861-9286
Fernandes Jose 272-5749
Vacant
Cabral Maria F
Vacant
98 Gonsalves John E
Barros Julio 421-3136
99 Collins H V Co bldg contrs 421-4079
100 Gomes Benj 861-0604
Pereira Joao S
Gomes Ralph
EAST TRANSIT ST INTERSECTS
103 Joe's Auto Repairing Service 831-2323
105 Mandell Leonard C Associates consulting eng 831-2012
112 Dias Mariano Jr ◎
Gonsalves Marrona 272-9235
Rear Amaral Manuel 861-6399
Rear Vacant
Rear Pacheco Joseph
113 Henriques J & Sons meats 751-6935
115 Blue Ribbon Beef Co Inc 831-8883

Target Street	Cross Street	Source
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GANO ST 1973

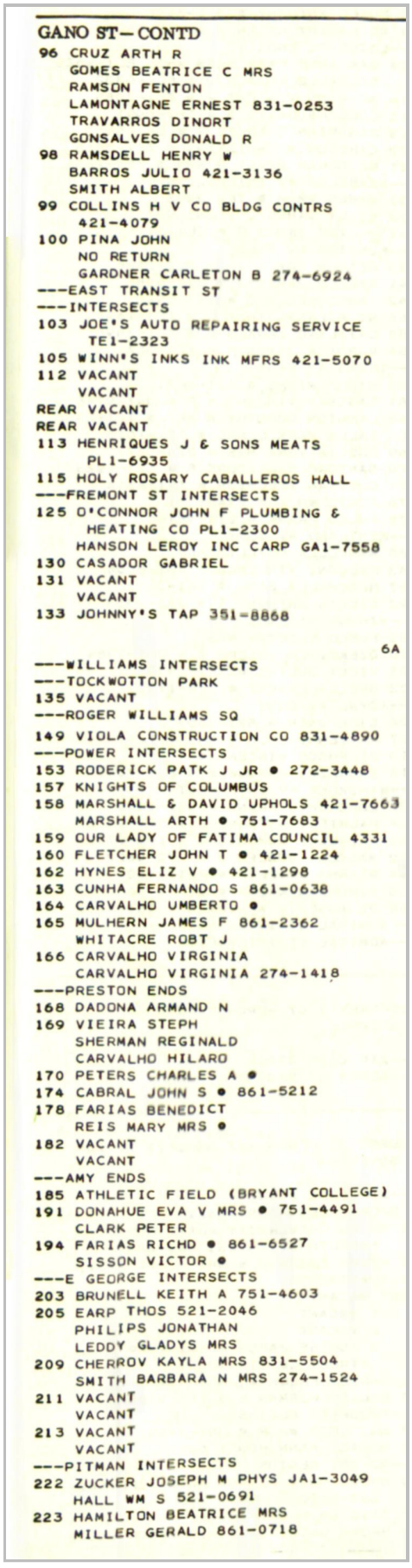
GANO ST—Contd
118 Fox Point Ball Park Club House
FREMONT ST INTERSECTS
125 O'Connor John F Co plmb & htg 751-2300
O'Connor & Associates real est 751-2300
130 Bemis Elsie Mrs 751-6557
133 No Return

156

WILLIAMS INTERSECTS
135★Campbell John R int designer 274-3437
ROGER WILLIAMS SQ
141 White John A memorial bldg
International Union Operating Engs (IUOE) Local 57 421-6678
International Union Of Opr Eng Local 57 health & welfare fund 331-9191
149 Viola Construction Co 831-4890
POWER INTERSECTS
153 Roderick Patk J Jr 272-3448
157 Knights Of Columbus Our Lady Of Fatima Council 831-9367
158 Marshall & David uphols 421-7663
Marshall Arth ◎ 751-7683
159 Our Lady Of Fatima Council 4331 (Overflow)
160 Fletcher Mary E Mrs ◎ 421-1224
162 Hynes Eliz V 421-1298
163 Camara Francis M 272-1913
164 No Return
165 Vacant
Pacheco Manuel
166 No Return
Caravalho Maria Mrs 274-1418
PRESTON ENDS
168 Cabral Manuel 751-1880
169 Franco
★Costa Manuel 272-1042
★Moniz Odilpino M 421-0705
170 Amorin Carlos 421-6215
Vacant
174 Cabral Tillie Mrs ◎ 861-5212
178 Farias Benedict
Reis Mary Mrs ◎
180★Furtado Richd A 272-2922

Target Street	Cross Street	Source
✓	-	Polk's City Directory

GANO ST 1968



GANO ST—CONTD
96 CRUZ ARTH R
GOMES BEATRICE C MRS
RAMSON FENTON
LAMONTAGNE ERNEST 831-0253
TRAVARROS DINORT
GONSALVES DONALD R
98 RAMSDELL HENRY W
BARROS JULIO 421-3136
SMITH ALBERT
99 COLLINS H V CO BLDG CONTRS
421-4079
100 PINA JOHN
NO RETURN
GARDNER CARLETON B 274-6924
---EAST TRANSIT ST
---INTERSECTS
103 JOE'S AUTO REPAIRING SERVICE
TE1-2323
105 WINN'S INKS INK MFRS 421-5070
112 VACANT
VACANT
REAR VACANT
REAR VACANT
113 HENRIQUES J & SONS MEATS
PL1-6935
115 HOLY ROSARY CABALLEROS HALL
---FREMONT ST INTERSECTS
125 O'CONNOR JOHN F PLUMBING &
HEATING CO PL1-2300
HANSON LEROY INC CARP GA1-7558
130 CASADOR GABRIEL
131 VACANT
VACANT
133 JOHNNY'S TAP 351-8868

6A

---WILLIAMS INTERSECTS
---TOCKWOTTON PARK
135 VACANT
---ROGER WILLIAMS SQ
149 VIOLA CONSTRUCTION CO 831-4890
---POWER INTERSECTS
153 RODERICK PATK J JR • 272-3448
157 KNIGHTS OF COLUMBUS
158 MARSHALL & DAVID UPHOLS 421-7663
MARSHALL ARTH • 751-7683
159 OUR LADY OF FATIMA COUNCIL 4331
160 FLETCHER JOHN T • 421-1224
162 HYNES ELIZ V • 421-1298
163 CUNHA FERNANDO S 861-0638
164 CARVALHO UMBERTO •
165 MULHERN JAMES F 861-2362
WHITACRE ROBT J
166 CARVALHO VIRGINIA
CARVALHO VIRGINIA 274-1418
---PRESTON ENDS
168 DADONA ARMAND N
169 VIEIRA STEPH
SHERMAN REGINALD
CARVALHO HILARO
170 PETERS CHARLES A •
174 CABRAL JOHN S • 861-5212
178 FARIAS BENEDICT
REIS MARY MRS •
182 VACANT
VACANT
---AMY ENDS
185 ATHLETIC FIELD (BRYANT COLLEGE)
191 DONAHUE EVA V MRS • 751-4491
CLARK PETER
194 FARIAS RICHD • 861-6527
SISSON VICTOR •
---E GEORGE INTERSECTS
203 BRUNELL KEITH A 751-4603
205 EARP THOS 521-2046
PHILIPS JONATHAN
LEDDY GLADYS MRS
209 CHERROV KAYLA MRS 831-5504
SMITH BARBARA N MRS 274-1524
211 VACANT
VACANT
213 VACANT
VACANT
---PITMAN INTERSECTS
222 ZUCKER JOSEPH M PHYS JA1-3049
HALL WM S 521-0691
223 HAMILTON BEATRICE MRS
MILLER GERALD 861-0718

Target Street	Cross Street	Source
✓	-	Polk's City Directory

GANO ST 1963

60 Vacant
Wickenden ends
75 Edru Pearls mfg jwlrs 421-2518
76 Watts Mattie Mrs 521-4695
78 Fernandes Manuel © 521-4594
Trenton ends
85 United Barrel C 421-7359
92 Portuguese Sporting Club 621-5964
94 Vacant
96 Ribeiro Frank 521-4989
DeMatos Agostinho P 521-4835
Chapman Francis
98 Cole Ronald W
Barros Julio 421-0491
99 Collins H V Co bldg contrs 421-4079
100 Lopes Ethel Mrs
Andrade Valentino
Silva Domingoes

7

East Transit intersects
103 Joe's Auto Repairing Serv 831-9193
105 Fox Point Marine Supply 331-3799
112 Peixoto Jose
rear Victoria Antone C 331-4217
Tobicas Gilda Mrs
Furtado Louis P
113 Henriques J & Son meats 751-6935
115 Vacant
Fremont intersects
125 Hanson Leroy Inc carps 421-7558
O'Connor John F Plmb & Htg Co
751-2300
130 Spetrini Danl J 863-2969
131 Vacant
133 Johnny's Tap 621-0161
Williams intersects
Tockwotton Park
135 Walker Carl R 751-1376
Tekkell Wilbert D
Roger Williams Square
149 Sullivan & Small Lndry Inc 421-9312

6-A

Power intersects

Target Street	Cross Street	Source
✓	-	Polk's City Directory

GANO ST 1963

GANO–Contd

153 Roderick Patk J ◎
158 Marshall & David uphols 421-7663
Marshall Arth ◎ 751-7683
159 Vacant
160 Vacant
162 Hynes Eliz V ◎ 421-1298
Fletcher John T 421-1224
163 Cunha Fernando S 861-0638
164 Silva Ermelindo ◎ 751-4364
165 Mulhern Jas F 861-2362
Tessier Wm R 751-8301
166 Curran Jas J

Preston ends

168 Costa Jos M 861-6671
169 Machado Jos N jr 861-6928
170 Peters Chas A ◎
174 Carberry Margt A ◎ 421-9042
178 Reis Mary Mrs ◎
Farias Benedict
182 Vincent John
Cruz Arth R

Amy ends

191 Donahue Eva V ◎ 751-4491
194 Healey Edw F ◎ 421-5389

East George intersects

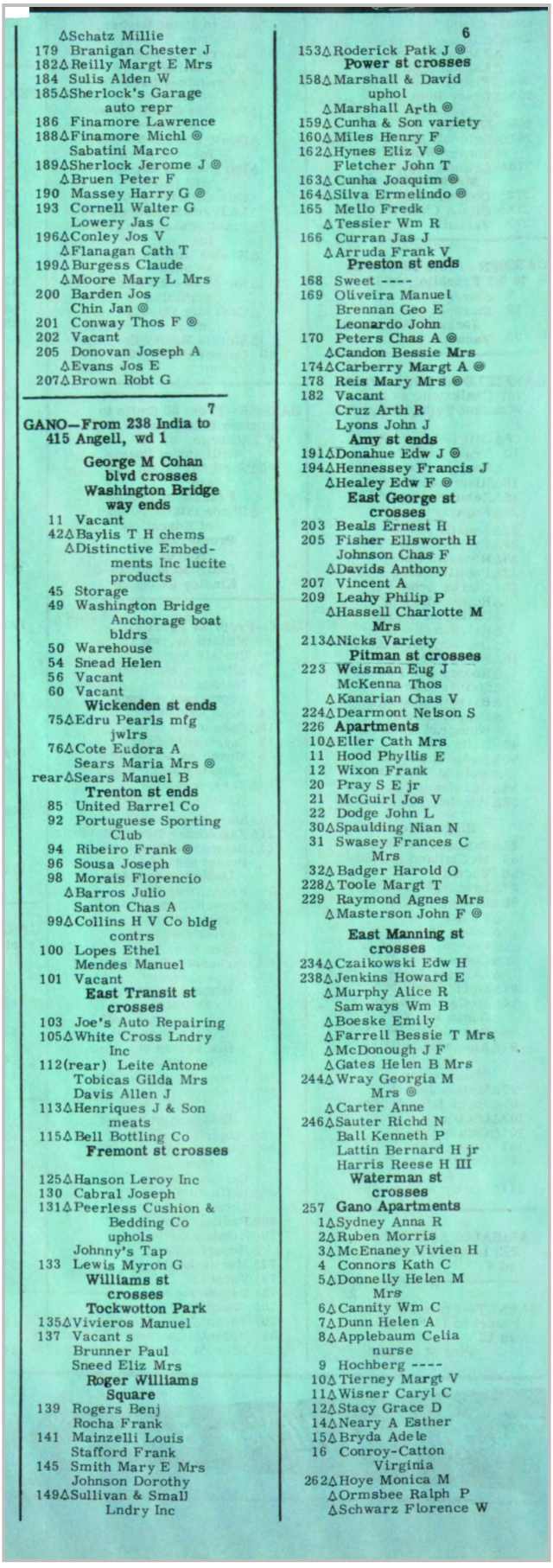
203 Pickles Geo
205 Leddy Gladys Mrs
Gillis Peter P 751-4251
Royal Geo A 421-9259
207 Piette Gerard E
209 No Return
211 Vacant
213 East Side Window Cln Co 621-8776
Kay's Variety

Pitman intersects

222 Zucker Jos M phys 521-3049
Farnes M Patricia 831-1679
223 Kesten Lydia Mrs 861-5051
Ebin Robt F 421-1281
Pyle James L 331-9044
Gilbert John K 521-9698

Target Street	Cross Street	Source
✓	-	Polk's City Directory

GANO ST 1957



ΔSchatz Millie
179 Branigan Chester J
182ΔReilly Margt E Mrs
184 Sulis Alden W
185ΔSherlock's Garage auto repr
186 Finamore Lawrence
188ΔFinamore Michl ◎
Sabatini Marco
189ΔSherlock Jerome J ◎
ΔBruen Peter F
190 Massey Harry G ◎
193 Cornell Walter G
Lowery Jas C
196ΔConley Jos V
ΔFlanagan Cath T
199ΔBurgess Claude
ΔMoore Mary L Mrs
200 Barden Jos
Chin Jan ◎
201 Conway Thos F ◎
202 Vacant
205 Donovan Joseph A
ΔEvans Jos E
207ΔBrown Robt G

7

GANO—From 238 India to 415 Angell, wd 1

George M Cohan blvd crosses
Washington Bridge way ends

11 Vacant
42ΔBaylis T H chems
ΔDistinctive Embedments Inc lucite products
45 Storage
49 Washington Bridge Anchorage boat bldrs
50 Warehouse
54 Snead Helen
56 Vacant
60 Vacant

Wickenden st ends

75ΔEdru Pearls mfg jwlrs
76ΔCote Eudora A
Sears Maria Mrs ◎
rearΔSears Manuel B

Trenton st ends

85 United Barrel Co
92 Portuguese Sporting Club
94 Ribeiro Frank ◎
96 Sousa Joseph
98 Morais Florencio
ΔBarros Julio
Santon Chas A
99ΔCollins H V Co bldg contrs
100 Lopes Ethel
Mendes Manuel
101 Vacant

East Transit st crosses

103 Joe's Auto Repairing
105ΔWhite Cross Lndry Inc
112(rear) Leite Antone
Tobicas Gilda Mrs
Davis Allen J
113ΔHenriques J & Son meats
115ΔBell Bottling Co

Fremont st crosses

125ΔHanson Leroy Inc
130 Cabral Joseph
131ΔPeerless Cushion & Bedding Co uphols
Johnny's Tap
133 Lewis Myron G

Williams st crosses
Tockwotton Park

135ΔVivieros Manuel
137 Vacant s
Brunner Paul
Sneed Eliz Mrs

Roger Williams Square

139 Rogers Benj
Rocha Frank
141 Mainzelli Louis
Stafford Frank
145 Smith Mary E Mrs
Johnson Dorothy
149ΔSullivan & Small Lndry Inc

6

153ΔRoderick Patk J ◎

Power st crosses

158ΔMarshall & David uphol
ΔMarshall Arth ◎
159ΔCunha & Son variety
160ΔMiles Henry F
162ΔHynes Eliz V ◎
Fletcher John T
163ΔCunha Joaquim ◎
164ΔSilva Ermelindo ◎
165 Mello Fredk
ΔTessier Wm R
166 Curran Jas J
ΔArruda Frank V

Preston st ends

168 Sweet ----
169 Oliveira Manuel
Brennan Geo E
Leonardo John
170 Peters Chas A ◎
ΔCandon Bessie Mrs
174ΔCarberry Margt A ◎
178 Reis Mary Mrs ◎
182 Vacant
Cruz Arth R
Lyons John J

Amy st ends

191ΔDonahue Edw J ◎
194ΔHennessey Francis J
ΔHealey Edw F ◎

East George st crosses

203 Beals Ernest H
205 Fisher Ellsworth H
Johnson Chas F
ΔDavids Anthony
207 Vincent A
209 Leahy Philip P
ΔHassell Charlotte M Mrs
213ΔNicks Variety

Pitman st crosses

223 Weisman Eug J
McKenna Thos
ΔKanarian Chas V
224ΔDearmont Nelson S
226 **Apartments**
10ΔEller Cath Mrs
11 Hood Phyllis E
12 Wixon Frank
20 Pray S E jr
21 McGuirl Jos V
22 Dodge John L
30ΔSpaulding Nian N
31 Swasey Frances C Mrs
32ΔBadger Harold O
228ΔToole Margt T
229 Raymond Agnes Mrs
ΔMasterson John F ◎

East Manning st crosses

234ΔCzaikowski Edw H
238ΔJenkins Howard E
ΔMurphy Alice R
Samways Wm B
ΔBoeske Emily
ΔFarrell Bessie T Mrs
ΔMcDonough J F
ΔGates Helen B Mrs
244ΔWray Georgia M Mrs ◎
ΔCarter Anne
246ΔSauter Richd N
Ball Kenneth P
Lattin Bernard H jr
Harris Reese H III

Waterman st crosses

257 **Gano Apartments**
1ΔSydney Anna R
2ΔRuben Morris
3ΔMcEnaney Vivien H
4 Connors Kath C
5ΔDonnelly Helen M Mrs
6ΔCannity Wm C
7ΔDunn Helen A
8ΔApplebaum Celia nurse
9 Hochberg ----
10ΔTierney Margt V
11ΔWisner Caryl C
12ΔStacy Grace D
14ΔNeary A Esther
15ΔBryda Adele
16 Conroy-Catton Virginia
262ΔHoye Monica M
ΔOrmsbee Ralph P
ΔSchwarz Florence W

Target Street	Cross Street	Source
✓	-	Polk's City Directory

GANO ST 1950

190 Massey Harry G ◎
193 △Ruhl M Alf
△Jacques Olive F Mrs
196 △Flanagan Cath T
△Sherlock Jerome J
199 Kennedy John R ◎
△Buchanan Jas
200 △McNiff Bernard J
Chin Jan ◎
201 Creegan Peter A ◎
202 △Belair Paul J
205 △Schonhardt Oscar ◎
207 △Robidoue Saml F

7

GANO from 238 India to 415 Angell wd 1

17 Vacant
Fox Point blvd crosses
George M Cohan blvd crosses
Washington Bridge Way ends
42 △Home Appliance Co Inc
45 Vacant
49 Washington Bridge Anchorage boat bldrs
50 Vacant
54 Coehlo John J
56 Snead Cushing
Burrels Albert
60 Vacant
Wickenden st ends
75 △Edru Pearl Co mfg jwlrs
76 Sears Maria Mrs ◎
△Cote Eudora A
rear △Sears Manuel B
Trenton st ends
79 Maguire Bros Inc
85 △O'Connell Joseph C Co wool combers
94 Ribeiro Frank ◎
△Emmett Jos
96 Corriera Mary
Perry Mary Mrs
Arruda Jos
Fernandes Juliana Mrs
Ormondi Juliana C
Silvia Anthony
98 Barros Julio
Moniz Manuel
Santon Chas A
100 Richardson Ralph
Monteiro Salvatore
△Saunders Jas A
101 Vacant
East Transit st crosses
103 Joe's Auto Repairing
105 △White Cross Laundry Inc
112 Fontes Mary
Lewis Myron G
rear Perry Jos
Ferreira Marion
Silva Manuel
113 △Henriques J & Son meats
115 △Bell Bottling Co
Fremont st crosses
125 △Lincoln Coal Co
129 △Ferreira John auto repr
130 Paton Geo I
131 △Rice's Garage
133 Viera Clara
Amado Andrew
Williams st crosses
Tockwotton park
135 △Vivieros Manuel
137 Vacant store
Amaral Frank
Manzelli Louis
DeSilva Theresa Mrs
△Roderick Margt Mrs
139 Rocha Frank
Romes Wm
Roger Williams Square
141 Peters Henrique ◎
Stafford Frank
145 △Gomes Zumeda Mrs
rear Vacant
149 △Sullivan & Small lndry
Power st crosses

6

153 Silva Quirino D ◎
158 △Marshall & David uphol
△Marshall Arth ◎
159 △Cunha & Son variety
160 △Miles Henry F
162 △Hynes Eliz V ◎
Fletcher John T
163 △Cunha Joaquim ◎
164 △Silva Ermelindo ◎
165 △Cronin Edwin F
Felicio David
166 Silva Clarence
Curran Jas J
Preston st ends
168 △Maher Danl J
169 △Harrington John J ◎
Morrissey Alex J
170 Peters Bento A ◎
△Candon Bessie Mrs
174 △Carberry Margt A ◎
178 Reis Mary Mrs ◎
182 △Shanley Wm F liquors
Dutra Filomena Mrs
Rosa Barney
Mouro Manuel
Amy st ends
191 △Donohue Edw ◎
Plazzo Henry
193 Vacant
194 Sullivan Wm R
△Healey Edw F ◎
East George st crosses
203 Vacant
207 △Brayton Edw E
209 △O'Connor Patk D ◎
△Hassell Charlotte M Mrs
211 Vacant
213 △Weiner's Grocery Store
Pitman st crosses
223 Humphrey Chas E
△Huston Geo H
△Lindley Sarah A Mrs
224 △Daly Helen G nurse
226 △Dolan Cath M Mrs ◎
Godfrey Chas E
Boyd A L
Cooper Ralph
Foster F W
Norton Roger A
△Pool Stedman C
Watson Raleigh H
△Toal Harold T
228 △Toole Margt T ◎
229 △Masterson John F ◎
△Hallan T Jas
East Manning st crosses
234 Cramer R E
238 △Allen Lee E
Rice Wm
Gates Helen Mrs
Murphy Alice R
△Rooks Carolyn B Mrs
Hodgson Minnie Mrs
△Medary Bess H
241 △Peerless Cushion & Bedding Co bedding and upholstering
244 △Wray Georgia M Mrs ◎
246 △Anderson Clinton M
△Boss Benj S
Rooney Everett T
△Kaufman Anna
△Sheridan Philip F
Miller Saml Mrs
Waterman st crosses
257 **Gano Apartments**
apt *1* Sydney Anna R
2 Loshakoff Michl H
3 Noren Alice J
4 Connors Kath C
5 Donnelly H M Mrs
6 △Brady Grayce N
7 △Dunn Helen A
8 Applebaum Celia nurse
9 Wolfe Ethel
10 △McMahon Loye A
11 △Bliss Albert G
12 Siegel Clara
14 Neary Esther
15 △Bryda Adele
16 Fabyan Barbara K Mrs
262 △Otis Frederic A jr
Carter Francis C
Hoye Monica M
△Spear Annie E Mrs
△Fooks Virginia
264 △Fisher Ruth W
265 △Neary Beatrice L ◎
266 △Hull Wm H ◎
267 △Driscoll Leo T ◎
270 △Grimes Jos A ◎
Medway st crosses
272 △Coleman Bridget R Mrs ◎
273 △Raymond Cora B Mrs ◎
276 △Jollie Harold W ◎
277 △Muncy Wm M Dr ◎

15

GARDEN from 18 Greene to 83 Franklin wd 12

8 Vacant
10 Storage
Jackson st crosses

EXCAVATING ANTON

Target Street	Cross Street	Source
✓	-	Polk's City Directory

GANO ST 1943

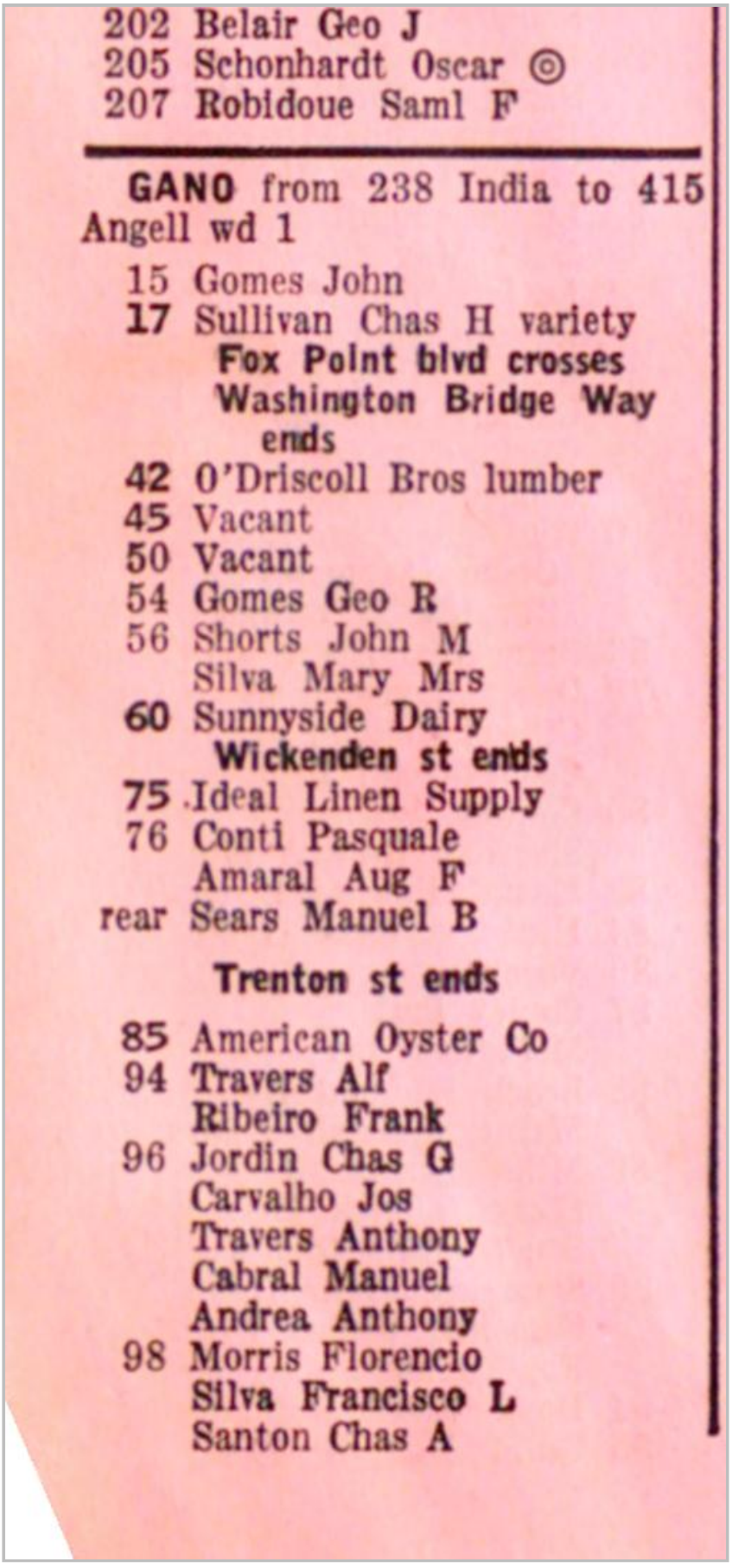
200 McNiff Bernard J
Chin Jan ◎
201 O'Donnell Chas H
202 Belair Geo J
205 Schonhardt Oscar ◎
207 Robidoue Saml F

GANO from 238 India to 415 Angell wd 1

11 Same as 240 India
15 Gomes John
Miranda Joaquim
17 Sullivan Chas H variety
Fox Point blvd crosses Washington Bridge Way ends
42 O'Driscoll Bros lumber
45 Vacant
50 Vacant
54 Coelho Anthony
56 Snead Cushing
Monteiro Domingo
60 Sunnyside Dairy
Wickenden st ends
75 Ideal Linen Supply
76 Conti Pasquale
Amaral Aug F
rear Sears Manuel B
Trenton st ends
85 American Oyster Co ◎
94 Travers Alf
Ribeiro Frank ◎
96 Monia John
Carvalho Jos
Travers Anthony
Cabral Manuel
Dourado John G
Arruda Jos
98 Morris Florencio
Silva Francisco L
Santon Chas A
100 Santos Chas A
Pina Louis
Saunders Jas A
101 Conquest Nelson blksmth
East Transit st crosses
105 White Cross Laundry Inc
112 Sabourin Oscar
Rogers Chas
rear Perry John
Giampietro Jas
Lewis Mack
113 Vacant
115 Bell Bottling Co
118 Same as 84 Fremont
Fremont st crosses
125 Lincoln Coal Co
129 Vacant
130 Silva Manuel F
131 Ferreira's Garage
133 Vacant
Williams st crosses Tockwotton park
135 Healey Alice A ◎
137 Vacant store
DeSilva Theresa Mrs
139 Rocha Frank
Roger Williams Square
141 Peters Henrique ◎
Stafford Frank
143 Vacant
145 Manning Chas T
Gomes Zumeda Mrs
rear Romes Frank
Price Ruth Mrs
Gray Luella Mrs
149 Sullivan & Small Indry
Power st crosses
153 Silva Quirino D ◎
158 Farrell Richd S
Dutra Jos L mason
159 Vacant
160 Miles Henry F
162 Hynes Eliz V ◎
Fletcher John T
163 Cronin Wm H
164 Silva Ermelindo ◎
165 Cronin J Louise
Cronin Edwd F
166 Silva Clarence
Curran Jas J
Preston st ends
168 Maher Danl J
169 Harrington John J ◎
Morrissey Alex J
170 Peters Bento A ◎
Candon Bessie Mrs
174 Carberry Margt A ◎
178 Reis Antonio ◎
182 Lyons John J jr liquors
Fonseca Ayres
Rosa Barney
Mouro Manuel
Souza Manuel
Amy st ends
191 Duffy Bridget A ◎
Wilcox Chas L
193 Duffy Bridget A variety
194 Sullivan Margt M Mrs
Healey Edwd F ◎
East George st crosses
200 Vacant
202 Simas Amaneio
Benevides Anthony
Linhares Jos P
203 Gouveia Gabriella Mrs
206 Mello Eliz M Mrs
Stevens Jos
Gouveia Andreza Mrs
207 Martel Roy E
209 O'Connor Patk D ◎
Rose Bernardo
211 McDonald Geo W pntr
213 Wiener Israel gro
Pitman st crosses
223 Keefe Alice J
Lindley Frank S
224 Daly Mary A Mrs
Daly Helen G nurse
226 Dolan Catherine M Mrs ◎
O'Keefe Wm F
228 Toole John J ◎
229 Barry David M
Lynd Claire
East Manning st crosses
234 Mahoney Margt L D Mrs ◎
238 Allen Lee E
Young Kenneth M
Murphy Alice R
Rooks Carolyn B Mrs
Turner John Mrs
Medary Bess H
Tompkins Grace E Mrs
241 Peerless Cushion & Bedding Co bedding and upholstering
244 Wray Sidney W ◎
246 Clarke Eleanor S
Weeks Alice L
Chamberlain Ruth A
Moffitt Helen
Sugarman David L
Inge Hazen M
Evers E Chas
Waterman st crosses
257 Gano Apartments
apt 1 Page Emma L Mrs
" 2 Corrow Kay
" 3 Beedle Verna D
" 4 Dussault Carmen P
" 5 Taylor Irene
" 6 Broad Stephen A
" 7 Dunn Helen A
" 8 Zeller Leatha G
" 9 Kelley Mary F
" 10 McMahon Loye A
" 11 Bliss Albert
" 12 Callahan Danl J
" 14 Jacobs Earle E
" 15 Bryda Adele
" 16 McAuliffe Maurice F
262 Carpenter Ida M
Fisher Ruth W
Fancher Anna B
Fooks Virginia
Phillips Margery M

Target Street	Cross Street	Source
✓	-	Polk's City Directory

GANO ST 1938



202 Belair Geo J
205 Schonhardt Oscar ◎
207 Robidoue Saml F

GANO from 238 India to 415
Angell wd 1

15 Gomes John
17 Sullivan Chas H variety
Fox Point blvd crosses
Washington Bridge Way
ends
42 O'Driscoll Bros lumber
45 Vacant
50 Vacant
54 Gomes Geo R
56 Shorts John M
Silva Mary Mrs
60 Sunnyside Dairy
Wickenden st ends
75 Ideal Linen Supply
76 Conti Pasquale
Amaral Aug F
rear Sears Manuel B

Trenton st ends

85 American Oyster Co
94 Travers Alf
Ribeiro Frank
96 Jordin Chas G
Carvalho Jos
Travers Anthony
Cabral Manuel
Andrea Anthony
98 Morris Florencio
Silva Francisco L
Santon Chas A

Target Street	Cross Street	Source
✓	-	Polk's City Directory

GANO ST 1938

PROVI

100 Gardner Manuel C
Saunders Jas A'
101 Conquest Nelson blksmth
East Transit st crosses
105 White Cross Laundry
112 Souza Antone
Jessu John
rear Carvalho Alf
Figueiredo Mario
Fonseca Ayres
113 Henriques Joseph sausage mfr
115 Bell Bottling Co
Fremont st crosses
119 Moosehead Beverages Inc
125 Lincoln Coal Co
129 Vacant
130 Santagata Lillian Mrs
131 Vacant
133 Tabele John
Tavares Arthur
Sullivan Dennis
Williams st ends
Tockwotton park
135 Healey Alice A ◎
137 Gonsalves Anthony B
Benson Fredk
DeSilva Theresa Mrs
139 Mendes Francisco
Rocha Frank
Roger Williams Square
141 Pires Henrique ◎
143 Vacant
145 Manning Chas T
Ferreira Jos
rear Rodrigues Jos
Correia Jos
Simas Jos B
149 Sullivan & Small Indry
Power st crosses
153 Silva Quirino ◎
158 Farrell Richd S
Dutra Jos L mason
159 Mahoney's Battery Service
Mahoney Thos F
160 Connolly Mary Mrs
162 Hynes Eliz V ◎
Fletcher John
163 Cronin Wm H
164 Menese Anthony
Curran Jas J
Silva Ermelindo ◎
Preston st crosses
165 Cronin James F trucking h ◎
Cronin Edwin T
168 O'Connor John J
169 Harrington John J ◎
Morrissey Alex J
170 Peters Bento A ◎
Candon Bessie Mrs
173 Vacant
174 Carberry Thos ◎
178 Reis Antonio ◎
Santos Abel G violin tchr
182 Lyons Bar liquors
Boss Earl D
Lopes Frank
Gaspar August
Rose Benj
Amy st ends
191 Duffy Bridget A ◎
193 Duffy Bridget A variety
194 Sullivan Margt M Mrs
Healey Edwd F ◎
East George st crosses
200 Vacant
202 Semish Jos
DiPanni Louise Mrs
Mello Maria Mrs
15 Linnares Jos
203 Hendricks Jos R
Mello Eliz
206 Costa Jos
Barros Angelo
Faria John
207 Lynch John
209 O'Connor Patk D ◎
211 Vacant
213 Wiener's Meat Market
Pitman st crosses
223 Collins Wm E
224 Daly Mary A Mrs ◎
Daly Helen G nurse
226 Dolan Catherine M Mrs ◎
228 Toole John J jr
229 Fillo Stephen F
Budlong Louis A
East Manning st crosses
234 Mahoney Margt L D Mrs ◎
238 Vacant
241 Peerless Cushion & Bedding Co bedding and upholstering
244 Wray Sidney W ◎
246 Goldenberg Benj B
Garvey Anne C
Dodge Ethel C
Potter Susan E
Brown Beatrice
Waterman st crosses

Memorandum

Appendix C: Environmental Data Resources, Inc. Report

10 Dorrance Street
Suite 400
Providence, RI 02903
P 401.272.8100

Blackstone River Bikeway Segment 1A
Gano Street
Providence, RI 02906

Inquiry Number: 4117038.2s
October 27, 2014

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

GANO STREET
PROVIDENCE, RI 02906

COORDINATES

Latitude (North):	41.8232000 - 41° 49' 23.52''
Longitude (West):	71.3879000 - 71° 23' 16.44''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	301681.4
UTM Y (Meters):	4632690.0
Elevation:	5 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	41071-G4 PROVIDENCE, RI
Most Recent Revision:	1987
East Map:	41071-G3 EAST PROVIDENCE, RI MA
Most Recent Revision:	1987

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20120721
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 7 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
GANO & POWER GANO & POWER PROVIDENCE, RI 02906	RI SPILLS 90	N/A

EXECUTIVE SUMMARY

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

CERCLIS ---------- Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY ---------- Federal Facility Site Information listing

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls
LUCIS ---------- Land Use Control Information System

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

RI SWF/LF ---------- Solid Waste Management Facilities
RI LCP ---------- Landfill Closure Program Sites in RI

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

INDIAN UST ---------- Underground Storage Tanks on Indian Land

FEMA UST ---- Underground Storage Tank Listing

State and tribal voluntary cleanup sites

INDIAN VCP ---- Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

RI BROWNFIELDS ---- Brownfields Site List

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

ODI ---- Open Dump Inventory
DEBRIS REGION 9 ---- Torres Martinez Reservation Illegal Dump Site Locations
INDIAN ODI ---- Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ---- Clandestine Drug Labs
RI CDL ---- Clandestine Drug Lab Information Listing
US HIST CDL ---- National Clandestine Laboratory Register

Local Land Records

LIENS 2 ---- CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ---- Hazardous Materials Information Reporting System

Other Ascertainable Records

DOT OPS ---- Incident and Accident Data
DOD ---- Department of Defense Sites
FUDS ---- Formerly Used Defense Sites
CONSENT ---- Superfund (CERCLA) Consent Decrees
ROD ---- Records Of Decision
UMTRA ---- Uranium Mill Tailings Sites
US MINES ---- Mines Master Index File
TRIS ---- Toxic Chemical Release Inventory System
FTTS ---- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS ---- FIFRA/TSCA Tracking System Administrative Case Listing
SSTS ---- Section 7 Tracking Systems
ICIS ---- Integrated Compliance Information System
PADS ---- PCB Activity Database System
MLTS ---- Material Licensing Tracking System
RADINFO ---- Radiation Information Database
RAATS ---- RCRA Administrative Action Tracking System
RMP ---- Risk Management Plans
RI DRYCLEANERS ---- Drycleaner Facility Listing
RI LEAD ---- Lead Inspections Database

INDIAN RESERV Indian Reservations
SCRD DRYCLEANERS State Coalition for Remediation of Drycleaners Listing
RI Financial Assurance Financial Assurance Information
US FIN ASSUR Financial Assurance Information
COAL ASH DOE Steam-Electric Plant Operation Data
PCB TRANSFORMER PCB Transformer Registration Database
COAL ASH EPA Coal Combustion Residues Surface Impoundments List
PRP Potentially Responsible Parties
EPA WATCH LIST EPA WATCH LIST
LEAD SMELTERS Lead Smelter Sites

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RI RGA HWS Recovered Government Archive State Hazardous Waste Facilities List
RI RGA LF Recovered Government Archive Solid Waste Facilities List
RI RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA CORRACTS facilities list

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 06/10/2014 has revealed that there is 1 CORRACTS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MORTON INT'L INC. (WHITAKER CO	***PO BOX 16069***	***NE 1/2 - 1 (0.918 mi.)***	***W115***	***206***

EXECUTIVE SUMMARY

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 06/10/2014 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RITE AID #10251	***135 PITMAN STREET***	***N 1/8 - 1/4 (0.142 mi.)***	***F31***	***61***

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 06/10/2014 has revealed that there are 8 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ENGINES BY BENZ INC	***82 GANO ST***	***SSW 0 - 1/8 (0.014 mi.)***	***A6***	***9***
M & S MOTORS INC	***103 GANO ST***	***SW 0 - 1/8 (0.027 mi.)***	***A8***	***11***
SLATER CENTER FOR BIOMEDICAL T	***4 RICHMOND SQ STE 500***	***NE 0 - 1/8 (0.085 mi.)***	***C20***	***34***
PERIODONTICS INC	***167 GANO ST***	***NW 1/8 - 1/4 (0.135 mi.)***	***25***	***50***
BROWN UNIVERSITY	***271 TOCKWOTTON ST***	***SSW 1/8 - 1/4 (0.159 mi.)***	***G33***	***67***
RHEUMATOLOGY ASSOC	***49 SEEKONK ST***	***N 1/8 - 1/4 (0.197 mi.)***	***43***	***77***
PEREL & BILDER DRS INC	***116 WAYLAND AVE***	***N 1/8 - 1/4 (0.197 mi.)***	***I44***	***79***
EAST GREENWICH PHOTO	34 GOVERNOR ST 1ST FL	WSW 1/8 - 1/4 (0.211 mi.)	51	83

State- and tribal - equivalent CERCLIS

RI SHWS: This list includes sites that have been investigated under the Federal CERCLIS program (SFA sites) as well as sites that have notified under the state program or have been investigated for hazardous substances (HWM sites).

A review of the RI SHWS list, as provided by EDR, and dated 04/15/2014 has revealed that there are 67 RI SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
EAST TRANSIT STREET BOAT RAMP Facility Status: Active	EAST TRANSIT STREET	0 - 1/8 (0.000 mi.)	A3	8
ADLER'S HARDWARE STORE PARCEL Facility Status: Inactive	***131-133 PITMAN STREET (***	***N 1/8 - 1/4 (0.132 mi.)***	***E24***	***49***
NATIONAL GRID - TRANSMISSION L Facility Status: Active	TOCKWOTTON & INDIA STRE	SSW 1/8 - 1/4 (0.161 mi.)	G34	70
DAYS HOTEL Facility Status: Inactive	220 INDIA STREET	SSW 1/8 - 1/4 (0.199 mi.)	G47	82

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TOLL BROTHERS RESIDENTIAL DEVE Facility Status: Active	***EAST GEORGE ST. & GANO***	***NW 1/8 - 1/4 (0.201 mi.)***	***48***	***82***
PROVIDENCE & WORCESTER RAILROA Facility Status: Active	WATERMAN & MASSASOIT AV	ENE 1/4 - 1/2 (0.286 mi.)	L58	92
KRAUS CHEMICAL CO Facility Status: Active	***156 VALLEY ST***	***ESE 1/4 - 1/2 (0.321 mi.)***	***M61***	***93***
TOCKWOTTON HOME Facility Status: Active	***99 MAURAN AVENUE***	***SSE 1/4 - 1/2 (0.324 mi.)***	***63***	***96***
FOX FERTILIZER Facility Status: Active	***62-78 VALLEY STREET***	***SE 1/4 - 1/2 (0.330 mi.)***	***64***	***97***
FORTUNE METAL OF RHODE ISLAND Facility Status: Active	***105 VALLEY ST***	***SE 1/4 - 1/2 (0.339 mi.)***	***M65***	***98***
UNOCAL CHEMICALS DIVISION, UNO Facility Status: Active	***1 PIER RD***	***S 1/4 - 1/2 (0.339 mi.)***	***66***	***98***
NATIONAL GRID-EAST PROVIDENCE Facility Status: Active	51 FIRST STREET	SSE 1/4 - 1/2 (0.383 mi.)	71	103
SOUTH QUAY DREDGING PROJECT Facility Status: Inactive	WILKES BARRE PIER	S 1/4 - 1/2 (0.429 mi.)	N73	107
WILKES BARRE PIPELINE Facility Status: Active	WILKES BARRE PIER TO DE	S 1/4 - 1/2 (0.429 mi.)	N74	108
SYMONDS PROPERTY Facility Status: Inactive	61 COOKE STREET	WNW 1/4 - 1/2 (0.449 mi.)	75	108
RI DOT - HENDERSON BRIDGE Facility Status: Active Facility Status: Inactive	***MASSASOIT AVE @ HENDERS***	***ENE 1/4 - 1/2 (0.481 mi.)***	***P79***	***111***
COHEN CLEANERS & DYERS Facility Status: Active	99 MASSASOIT AVENUE	ENE 1/4 - 1/2 (0.485 mi.)	P80	112
ROUTE 195 DOT PROJECT 18 Facility Status: Active	PLAT 18 LOT 149- 68 TRA	WSW 1/2 - 1 (0.516 mi.)	82	112
BROWN UNIVERSITY WATSON INSTIT Facility Status: Active	THAYER STREET & CHARLES	W 1/2 - 1 (0.565 mi.)	83	112
ROUTE 195 DOT PROJECT 89 Facility Status: Active	PLAT 18 LOT 344 -101 IN	SW 1/2 - 1 (0.575 mi.)	Q84	113
ROUTE 195 DOT PROJECT 19 Facility Status: Active	PLAT 18 LOT 331- 32 IND	SW 1/2 - 1 (0.575 mi.)	Q85	113
ROUTE 195 DOT PROJECT 90 Facility Status: Active	PLAT 18 LOT 119 -36 IND	SW 1/2 - 1 (0.575 mi.)	Q86	113
ROUTE 195 DOT PROJECT 23 Facility Status: Active	PLAT 18 LOT 339-110 IND	SW 1/2 - 1 (0.575 mi.)	Q87	113
ROUTE 195 DOT PROJECT 86 (SEE Facility Status: Active	604 SOUTH MAIN STREET	SW 1/2 - 1 (0.606 mi.)	88	114
BROWN UNIVERSITY Facility Status: Active	THAYER AND GEORGE STREE	WNW 1/2 - 1 (0.617 mi.)	89	114
WHEELER SCHOOL DEVELOPMENT Facility Status: Active	224 ANGELL STREET	WNW 1/2 - 1 (0.643 mi.)	90	114
MAURANIA CORPORATION Facility Status: Active	***1 INDIA STREET***	***SW 1/2 - 1 (0.649 mi.)***	***91***	***114***

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NIGHTINGALE STEEL (FORMER) Facility Status: Active	1 - 9 DUNELLEN ROAD	ENE 1/2 - 1 (0.686 mi.)	92	115
GETTY PETROLEUM CORPORATION TE Facility Status: Active	DEXTER ROAD AND MASSASO	ENE 1/2 - 1 (0.693 mi.)	R93	115
SEEKONK CORPORATION Facility Status: Active	***2 DEXTER ROAD***	***ENE 1/2 - 1 (0.695 mi.)***	***R94***	***115***
400 SOUTH MAIN STREET, LLC Facility Status: Inactive	400 SOUTH MAIN STREET	WSW 1/2 - 1 (0.720 mi.)	S95	116
NATIONAL GRID - VAULT #2602 Facility Status: Inactive	JAMES STREET & SOUTH MA	WSW 1/2 - 1 (0.722 mi.)	S96	116
BROWN UNIVERSITY VAULTNO.# 9 Facility Status: Inactive	89 WATERMAN STREET	WNW 1/2 - 1 (0.742 mi.)	97	116
FUJIFILM ELECTRONIC MATERIALS Facility Status: Active	***200/210 MASSASOIT AVE***	***ENE 1/2 - 1 (0.752 mi.)***	***98***	***117***
BROWN UNIVERSITY FACILITIES MA Facility Status: Active	295 LLOYD AVENUE	NNW 1/2 - 1 (0.752 mi.)	99	161
SHELL STA/EAST SIDE SERVICE CE Facility Status: Inactive	***152 - 170 ANGELL ST***	***WNW 1/2 - 1 (0.763 mi.)***	***T100***	***162***
NATIONAL GRID - MANHOLE #2257 Facility Status: Inactive	THAYER STREET & MEETING	WNW 1/2 - 1 (0.768 mi.)	101	164
BROWN UNIVERSITY AQUATIC & FIT Facility Status: Active	235 HOPE STREET	NW 1/2 - 1 (0.773 mi.)	102	165
MIND BRAIN BEHAVIOR BUILDING (Facility Status: Active	127, 129, 135 ANGELL ST	WNW 1/2 - 1 (0.785 mi.)	T103	165
OLD FOX LAWN CARE Facility Status: Active	***111 DEXTER RD***	***NE 1/2 - 1 (0.797 mi.)***	***U104***	***165***
COASTAL OIL TERMINAL Facility Status: Active	***100 DEXTER ROAD***	***NE 1/2 - 1 (0.809 mi.)***	***U105***	***167***
BROWN UNIVERSITY -PETER GREEN Facility Status: Inactive	***118 ANGELL STREET***	***WNW 1/2 - 1 (0.817 mi.)***	***106***	***168***
ROUTE 195 DOT PROJECT 73 (SEE Facility Status: Active	***PLAT 22 LOT 354- 40 POI***	***WSW 1/2 - 1 (0.817 mi.)***	***V107***	***168***
MANCHESTER STREET Facility Status: Monitoring Facility Status: Inactive	***40 POINT STREET***	***WSW 1/2 - 1 (0.824 mi.)***	***V108***	***169***
DOMINION ENERGY MANCHESTER STR ***SOUTH MAIN STREET (PLANET STRE*** Facility Status: Inactive	***40 POINT STREET*** ***200-204 SOUTH MAIN STRE***	***WSW 1/2 - 1 (0.824 mi.)*** ***W 1/2 - 1 (0.837 mi.)***	***V109*** ***110***	***170*** ***196***
HULME TRANSPORTATION (A.K.A. T Facility Status: Active	***51 DEXTER ROAD***	***NE 1/2 - 1 (0.876 mi.)***	***W111***	***197***
JET LINE Facility Status: Inactive	***7 DEXTER ROAD***	***NE 1/2 - 1 (0.907 mi.)***	***W112***	***197***
ASPEN AEROGELS Facility Status: Active	***3 DEXTER RD***	***NE 1/2 - 1 (0.907 mi.)***	***W113***	***204***
DAVOL INCORPORATED Facility Status: Inactive	POINT AND EDDY STREET	WSW 1/2 - 1 (0.914 mi.)	X114	206
MORTON INT'L INC. (WHITAKER CO Facility Status: Inactive	***PO BOX 16069***	***NE 1/2 - 1 (0.918 mi.)***	***W115***	***206***

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NATIONAL GRID - POINT STREET S Facility Status: Inactive	***80 POINT STREET***	***WSW 1/2 - 1 (0.920 mi.)***	***X116***	***215***
ROUTE 195 DOT PROJECT 49 Facility Status: Active	PLAT 22 LOT 165 - 126 G	WSW 1/2 - 1 (0.930 mi.)	Y117	215
ROUTE 195 DOT PROJECT 50 Facility Status: Active	PLAT 22 LOT 166 - 128 G	WSW 1/2 - 1 (0.930 mi.)	Y118	215
DYNAMO HOUSE - HERITAGE (REF: Facility Status: Active	***360 EDDY STREET***	***WSW 1/2 - 1 (0.931 mi.)***	***119***	***216***
EAST PROVIDENCE DPW (FORMER) Facility Status: Active	***20 BENTLEY STREET***	***SE 1/2 - 1 (0.932 mi.)***	***120***	***217***
ROUTE 195 DOT PROJECT 9 Facility Status: Active	PLAT 18 LOT 36 - 670 SO	W 1/2 - 1 (0.935 mi.)	Z121	217
ROUTE 195 DOT PROJECT 8 Facility Status: Active	PLAT 18 LOT 34 - 675 SO	W 1/2 - 1 (0.935 mi.)	Z122	218
DOWNING CORPORATION Facility Status: Active	***200 DYER ST***	***W 1/2 - 1 (0.956 mi.)***	***AA123***	***218***
NATIONAL GRID - DYER STREET Facility Status: Inactive Facility Status: Active	144 DYER STREET	W 1/2 - 1 (0.962 mi.)	AA125	219
STAR ENAMELING CO INC Facility Status: Inactive	***371 RICHMOND ST***	***WSW 1/2 - 1 (0.962 mi.)***	***126***	***219***
ROUTE 195 DOT PROJECT 13 (SEE Facility Status: Active	PLAT 18 LOT 89- 614 SOU	W 1/2 - 1 (0.964 mi.)	AB127	222
ROUTE 195 DOT PROJECT 12 Facility Status: Active	PLAT 18 LOT 87 - 628 SO	W 1/2 - 1 (0.964 mi.)	AB128	222
LYNCH WJ PAINT & VARNISH Facility Status: Inactive	110 KING PHILIP ROAD	ENE 1/2 - 1 (0.970 mi.)	129	222
ROUTE 195 DOT PROJECT 30 Facility Status: Active	PLAT 20 LOT 205 -198 DY	W 1/2 - 1 (0.971 mi.)	Z130	222
THE NARRAGANSETT ELECTRIC COMP Facility Status: Active	***2 ALLENS AVE***	***WSW 1/2 - 1 (0.972 mi.)***	***131***	***223***

Lower Elevation	Address	Direction / Distance	Map ID	Page
GENTRY INC Facility Status: Active	***1 WATERMAN AVE***	***ENE 1/8 - 1/4 (0.193 mi.)***	***J40***	***72***

State and tribal leaking storage tank lists

RI LUST: The LUST Case List is a summary of UST Facilities in RI with leaking USTs, which includes information on the date of release discovery and the status of the LUST Case (active, soil removal only, or inactive).

A review of the RI LUST list, as provided by EDR, and dated 07/31/2014 has revealed that there are 13

RI LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
M & S MOTORS INC	***103 GANO ST***	***SW 0 - 1/8 (0.027 mi.)***	***A8***	***11***
Facility Status: Inactive; Investigation/Remed. Complete,No Further Action Required				
ROSEWOOD HEALTH CARE	140 PITMAN STREET	N 1/8 - 1/4 (0.139 mi.)	F29	60
Facility Status: Inactive; Investigation/Remed. Complete,No Further Action Required				
GUILD DRILLING CO INC	***100 WATER ST***	***SE 1/4 - 1/2 (0.282 mi.)***	***57***	***91***
Facility Status: Soil Removal Only; No Further Action Required				
WAYLAND SQUARE REALTY	218 WATERMAN STREET	NNW 1/4 - 1/2 (0.295 mi.)	60	93
Facility Status: Inactive; Investigation/Remed. Complete,No Further Action Required				
DULGARIAN (MYOPIC BOOKS)	5 -9 SOUTH ANGELL	N 1/4 - 1/2 (0.322 mi.)	62	96
Facility Status: Inactive; Investigation/Remed. Complete,No Further Action Required				
395 ANGEL ASSOCIATES	***395 ANGEL ST***	***NNW 1/4 - 1/2 (0.361 mi.)***	***67***	***99***
Facility Status: Soil Removal Only; No Further Action Required				
WATERMAN ASSOCIATES	***186 WATERMAN ST***	***NNW 1/4 - 1/2 (0.364 mi.)***	***68***	***99***
Facility Status: Soil Removal Only; No Further Action Required				
453 ANGELL STREET LLC	453 ANGELL STREET	N 1/4 - 1/2 (0.379 mi.)	69	100
Facility Status: Soil Removal Only; No Further Action Required				
DEXTER SERVICE CENTER	***80 WATERMAN AVE***	***E 1/4 - 1/2 (0.382 mi.)***	***70***	***100***
Facility Status: Soil Removal Only; No Further Action Required				
GILMORE'S FLOWER	76 TAUNTON AVENUE	ESE 1/4 - 1/2 (0.458 mi.)	O76	108
Facility Status: Inactive; Investigation/Remed. Complete,No Further Action Required				
EXXON CO USA #35409	***69 TAUNTON AVE***	***ESE 1/4 - 1/2 (0.461 mi.)***	***O77***	***108***
Facility Status: Inactive; Investigation/Remed. Complete,No Further Action Required				
BROOK STREET FIRE STATION	***223 BROOK ST***	***W 1/4 - 1/2 (0.463 mi.)***	***78***	***110***
Facility Status: Active; Investigation/Remed. Required				
BROOK ST. CITGO	250 BROOK STREET	W 1/4 - 1/2 (0.492 mi.)	81	112
Facility Status: Soil Removal Only; No Further Action Required				

State and tribal registered storage tank lists

RI UST: The UST Master List is a summary of registered UST Facilities in RI, which includes information on abandoned, in use, permanently closed and temporarily closed USTs.

A review of the RI UST list, as provided by EDR, and dated 07/31/2014 has revealed that there are 19 RI UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PORTUGUESE SPORTING CLUB	92 GANO ST	0 - 1/8 (0.000 mi.)	A4	8
FRANK N. GUSTAFSON & SONS, INC	251 PITMAN ST	NE 0 - 1/8 (0.024 mi.)	B7	11
SALVATION ARMY	201 PITMAN ST	NE 0 - 1/8 (0.052 mi.)	B15	25
LOCAL #57 UNION HALL	141 GANO ST	W 0 - 1/8 (0.090 mi.)	21	48
FOX POINT BOYS & GIRLS CLUB	90 IVES ST	SW 0 - 1/8 (0.114 mi.)	D22	49
FOX POINT MANOR	575 WICKENDEN ST	SW 1/8 - 1/4 (0.127 mi.)	D23	49
ROSEWOOD MANOR	140 PITTMAN ST	N 1/8 - 1/4 (0.139 mi.)	F28	60
MEDWAY ASSOCIATES	217 MEDWAY ST	NNE 1/8 - 1/4 (0.161 mi.)	H35	70
BETHANY HOME OF RHODE ISLAND	111 SOUTH ANGELL ST	NNE 1/8 - 1/4 (0.174 mi.)	36	71
MEDWAY MANOR	164 BUTLER AVE	NNE 1/8 - 1/4 (0.177 mi.)	H37	71
STORES OPERATIONS	285 GEORGE M. COHEN BLV	SSW 1/8 - 1/4 (0.181 mi.)	G38	71

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
111 WAYLAND AVENUE	111 WAYLAND AVE	N 1/8 - 1/4 (0.188 mi.)	I39	72
AMBASSADOR APARTMENTS	***77 PITMAN ST***	***NNW 1/8 - 1/4 (0.198 mi.)***	***45***	***81***
BROWN UNIVERSITY - MARSTON BOA	258 INDIA ST	SSW 1/8 - 1/4 (0.203 mi.)	G49	83
SEPE PROPERTIES, LLC	120 WAYLAND AVE	N 1/8 - 1/4 (0.203 mi.)	I50	83
WAYLAND BAKERY	138 WAYLAND AVE	N 1/8 - 1/4 (0.235 mi.)	K53	85
LERNER PROCTOR TRUST		N 1/8 - 1/4 (0.239 mi.)	K54	85
VARTAN GREGORIAN SCHOOL (FORME	455 WICKENDEN ST	WSW 1/8 - 1/4 (0.241 mi.)	55	86

Lower Elevation	Address	Direction / Distance	Map ID	Page
RED BRIDGE PROPERTY	1 WATERMAN AVE	ENE 1/8 - 1/4 (0.193 mi.)	J41	76

RI AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the Department of Environmental Management's Master List of AST Facilities & Their Associated Tanks.

A review of the RI AST list, as provided by EDR, and dated 06/04/2014 has revealed that there is 1 RI AST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SPRINT	1 RICHMOND SQUARE	NE 0 - 1/8 (0.043 mi.)	C14	24

State and tribal institutional control / engineering control registries

RI AUL: This list was developed by RIDEM for use as a general reference and are not meant to be legally authoritative source for the location of hazardous materials, nor for the status, condition or permissible use of a site.

A review of the RI AUL list, as provided by EDR, and dated 04/15/2014 has revealed that there are 6 RI AUL sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ADLER'S HARDWARE STORE PARCEL	***131-133 PITMAN STREET (***	***N 1/8 - 1/4 (0.132 mi.)***	***E24***	***49***
TOLL BROTHERS RESIDENTIAL DEVE	***EAST GEORGE ST. & GANO***	***NW 1/8 - 1/4 (0.201 mi.)***	***48***	***82***
PROVIDENCE & WORCESTER RAILROA	WATERMAN & MASSASOIT AV	ENE 1/4 - 1/2 (0.286 mi.)	L59	93
TOCKWOTTON HOME	***99 MAURAN AVENUE***	***SSE 1/4 - 1/2 (0.324 mi.)***	***63***	***96***
FOX FERTILIZER	***62-78 VALLEY STREET***	***SE 1/4 - 1/2 (0.330 mi.)***	***64***	***97***
RI DOT - HENDERSON BRIDGE	***MASSASOIT AVE @ HENDERS***	***ENE 1/4 - 1/2 (0.481 mi.)***	***P79***	***111***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: The EPA's listing of Brownfields properties from the Cleanups in My Community program, which provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

A review of the US BROWNFIELDS list, as provided by EDR, and dated 09/22/2014 has revealed that there

are 2 US BROWNFIELDS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BOLD POINT PARK/TOCKWOTTON HOM	PIER ROAD	SW 1/4 - 1/2 (0.270 mi.)	56	86
BOLD POINT PARK-LOT 3	PIER ROAD	SSW 1/4 - 1/2 (0.404 mi.)	72	103

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 06/10/2014 has revealed that there are 6 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CODDBARRETT ASSOCIATES INC	***105 GANO ST***	***SW 0 - 1/8 (0.034 mi.)***	***A10***	***15***
IRONICS INC	***1 RICHMOND SQ***	***NE 0 - 1/8 (0.043 mi.)***	***C13***	***23***
CELL BASED DELIVERY INC	***4 RICHMOND SQ 5TH FLOOR***	***NE 0 - 1/8 (0.085 mi.)***	***C17***	***29***
SENTION INC.	***4 RICHMOND SQUARE 4TH F***	***NE 0 - 1/8 (0.085 mi.)***	***C18***	***31***
KENT CLEANERS	***9 WAYLAND SQ***	***N 1/8 - 1/4 (0.135 mi.)***	***E26***	***52***

Lower Elevation	Address	Direction / Distance	Map ID	Page
GENTRY INC	***1 WATERMAN AVE***	***ENE 1/8 - 1/4 (0.193 mi.)***	***J40***	***72***

RI MANIFEST: Hazardous waste manifest information

A review of the RI MANIFEST list, as provided by EDR, and dated 12/31/2013 has revealed that there are 11 RI MANIFEST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ENGINES BY BENZ INC	***82 GANO ST***	***SSW 0 - 1/8 (0.014 mi.)***	***A6***	***9***
M & S MOTORS INC	***103 GANO ST***	***SW 0 - 1/8 (0.027 mi.)***	***A8***	***11***
CELL BASED DELIVERY INC	***4 RICHMOND SQ 5TH FLOOR***	***NE 0 - 1/8 (0.085 mi.)***	***C17***	***29***
SLATER CENTER FOR BIOMEDICAL T	***4 RICHMOND SQ STE 500***	***NE 0 - 1/8 (0.085 mi.)***	***C20***	***34***
PERIODONTICS INC	***167 GANO ST***	***NW 1/8 - 1/4 (0.135 mi.)***	***25***	***50***
KENT CLEANERS	***9 WAYLAND SQ***	***N 1/8 - 1/4 (0.135 mi.)***	***E26***	***52***
RITE AID #10251	***135 PITMAN STREET***	***N 1/8 - 1/4 (0.142 mi.)***	***F31***	***61***
BROWN UNIVERSITY	***271 TOCKWOTTON ST***	***SSW 1/8 - 1/4 (0.159 mi.)***	***G33***	***67***
RHEUMATOLOGY ASSOC	***49 SEEKONK ST***	***N 1/8 - 1/4 (0.197 mi.)***	***43***	***77***
PEREL & BILDER DRS INC	***116 WAYLAND AVE***	***N 1/8 - 1/4 (0.197 mi.)***	***I44***	***79***

Lower Elevation	Address	Direction / Distance	Map ID	Page
GENTRY INC	***1 WATERMAN AVE***	***ENE 1/8 - 1/4 (0.193 mi.)***	***J40***	***72***

NJ MANIFEST: Hazardous waste manifest information.

A review of the NJ MANIFEST list, as provided by EDR, and dated 12/31/2013 has revealed that there are 4 NJ MANIFEST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SENTION	ONE RICHMOND SQUARE	NE 0 - 1/8 (0.043 mi.)	C11	17
SLATER CENTER FOR BIOMEDICAL	4 RICHMOND SQ SUITE 500	NE 0 - 1/8 (0.085 mi.)	C16	25
SLATER CENTER FOR BIOMEDICAL	4 RICHMOND SQUARE	NE 0 - 1/8 (0.085 mi.)	C19	33
SLATER CENTER FOR BIOMEDICAL T	***4 RICHMOND SQ STE 500***	***NE 0 - 1/8 (0.085 mi.)***	***C20***	***34***

NY MANIFEST: Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

A review of the NY MANIFEST list, as provided by EDR, and dated 12/31/2013 has revealed that there are 4 NY MANIFEST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RHODE ISLAND DEPT OF TRANSPORT	33 GANO STREET	0 - 1/8 (0.000 mi.)	A2	7
BROWN UNIVERSITY FACILITY SUPP	***271 TOCKWOTTON ST***	***SSW 1/8 - 1/4 (0.159 mi.)***	***G32***	***64***
STANDISH JOHNSON	220 INDIA STREET	SSW 1/8 - 1/4 (0.199 mi.)	G46	81

Lower Elevation	Address	Direction / Distance	Map ID	Page
GENTRY INC	***1 WATERMAN AVE***	***ENE 1/8 - 1/4 (0.193 mi.)***	***J40***	***72***

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

A review of the EDR MGP list, as provided by EDR, has revealed that there is 1 EDR MGP site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PROVIDENCE GAS CO	GLOBE STREET	WSW 1/2 - 1 (0.958 mi.)	Y124	219

EXECUTIVE SUMMARY

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there are 4 EDR US Hist Auto Stat sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	82 GANO ST	SSW 0 - 1/8 (0.014 mi.)	A5	8
Not reported	103 GANO ST	SW 0 - 1/8 (0.027 mi.)	A9	15
Not reported	380 VALLEY ST	E 1/8 - 1/4 (0.228 mi.)	52	85
Lower Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
Not reported	1 WATERMAN AVE	ENE 1/8 - 1/4 (0.193 mi.)	J42	76

EDR US Hist Cleaners: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Cleaners list, as provided by EDR, has revealed that there are 3 EDR US Hist Cleaners sites within approximately 0.25 miles of the target property.

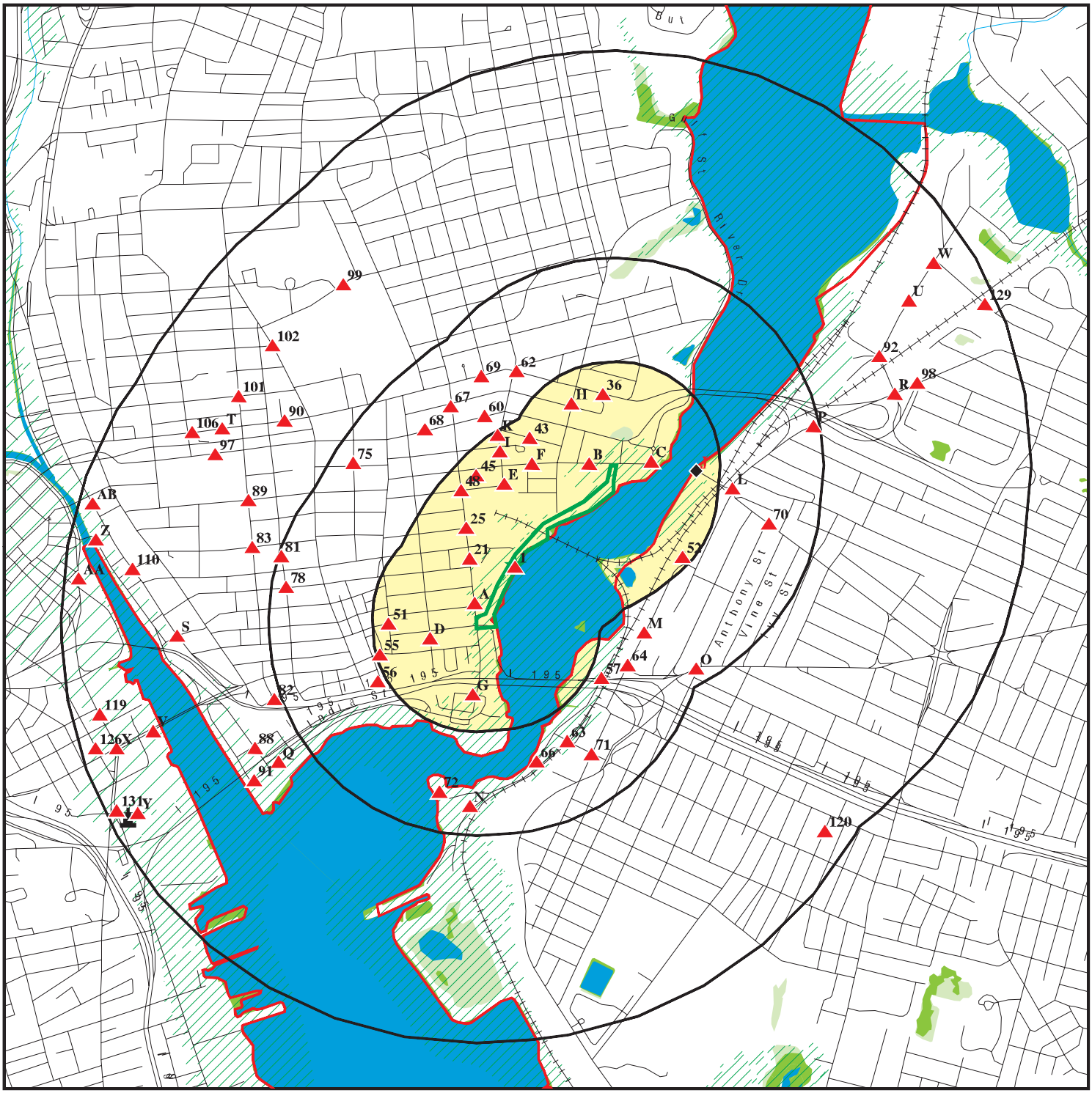
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	1 RICHMOND SQ	NE 0 - 1/8 (0.043 mi.)	C12	22
Not reported	143 PITMAN ST	N 1/8 - 1/4 (0.138 mi.)	F27	60
Not reported	139 PITMAN ST	N 1/8 - 1/4 (0.140 mi.)	F30	61

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 20 records.

Site Name	Database(s)
FIELD'S POINT CITY DUMP	RI SHWS, RI LCP
INGE CO INC	RCRA NonGen / NLR, RI SHWS, RI AUL
HARBORSIDE PARK - PARCEL 5A/5B	RI SHWS, RI AUL
PROVIDENCE PLACE	RI SHWS, RI AUL
BELVOIR PROPERTIES	RI SHWS
ROUTE 195 DOT (GENERAL)	RI SHWS
ROUTE 195 DOT PROJECT CONTRACT -14	RI SHWS
ROUTE 195 DOT PROJECT CONTRACT - 1	RI SHWS
ROUTE 195 DOT PROJECT CONTRACT -10	RI SHWS
MAGNOLIA STREET BRIDGE REMOVAL (RT	RI SHWS
RIDOT	RI SHWS, RI NPDES
ROUTE 195 DOT PROJECT CONTRACT - 6	RI SHWS
PROVIDENCE PUBLIC WORKS	RI SHWS
UNION PLAZA HOTEL	RI SHWS
BUTTON HOLE GOLF COURSE	RI SHWS, RI BROWNFIELDS
I195 REDEVELOPMENT DISTRICT	RI SHWS
RIDOT ROW SMITHFIELD AVENUE (ROUTE	RI SHWS
KOPPERS CO. PROVIDENCE PLANT	CERC-NFRAP
SHELL STATION	RI LUST
EAST TRANSIT STREET BOAT RAMP	US BROWNFIELDS

OVERVIEW MAP - 4117038.2S



0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- County Boundary
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Blackstone River Bikeway Segment 1A	CLIENT:	Vanasse, Hangen, Brustlin Inc.
ADDRESS:	Gano Street Providence RI 02906	CONTACT:	Shelby Miller
LAT/LONG:	41.8232 / 71.3879	INQUIRY #:	4117038.2s
		DATE:	October 27, 2014 4:49 pm

DETAIL MAP - 4117038.2S

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- County Boundary
- Oil & Gas pipelines from USGS
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Blackstone River Bikeway Segment 1A	CLIENT:	Vanasse, Hangen, Brustlin Inc.
ADDRESS:	Gano Street Providence RI 02906	CONTACT:	Shelby Miller
LAT/LONG:	41.8232 / 71.3879	INQUIRY #:	4117038.2s
		DATE:	October 27, 2014 4:52 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	1	NR	1
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	1	NR	NR	NR	1
RCRA-SQG	0.250		3	5	NR	NR	NR	8
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
RI SHWS	1.000		1	5	12	49	NR	67
State and tribal landfill and/or solid waste disposal site lists								
RI SWF/LF	0.500		0	0	0	NR	NR	0
RI LCP	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
RI LUST	0.500		1	1	11	NR	NR	13
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
RI UST	0.250		5	14	NR	NR	NR	19

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
RI AST	0.250		1	0	NR	NR	NR	1
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
RI AUL	0.500		0	2	4	NR	NR	6
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
RI BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	2	NR	NR	2
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	TP		NR	NR	NR	NR	NR	0
RI CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
RI SPILLS	TP		NR	NR	NR	NR	NR	0
RI SPILLS 90	TP	1	NR	NR	NR	NR	NR	1
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		4	2	NR	NR	NR	6
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RI MANIFEST	0.250		4	7	NR	NR	NR	11
NJ MANIFEST	0.250		4	0	NR	NR	NR	4
NY MANIFEST	0.250		1	3	NR	NR	NR	4
RI DRYCLEANERS	0.250		0	0	NR	NR	NR	0
RI NPDES	TP		NR	NR	NR	NR	NR	0
RI AIRS	TP		NR	NR	NR	NR	NR	0
RI LEAD	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
RI Financial Assurance	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	1	NR	1
EDR US Hist Auto Stat	0.250		2	2	NR	NR	NR	4
EDR US Hist Cleaners	0.250		1	2	NR	NR	NR	3
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RI RGA HWS	TP		NR	NR	NR	NR	NR	0
RI RGA LF	TP		NR	NR	NR	NR	NR	0
RI RGA LUST	TP		NR	NR	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
Target Property
Actual: 5 ft.

GANO & POWER — **RI SPILLS 90** — **S112447937**
GANO & POWER — **N/A**
PROVIDENCE, RI 02906

Spills:

Status:	Not reported
Contact Name:	J BALL
Contact Phone:	Not reported
Site ID:	95-291
Secondary ID:	Not reported
Cross Street:	Not reported
County:	PROVIDENCE
Longitude:	-71390098
Latitude:	41823860
Elevation:	25

A2
< 1/8
1 ft.
Relative: Higher
Actual: 12 ft.

RHODE ISLAND DEPT OF TRANSPORTATION — **NY MANIFEST** — **S112211610**
33 GANO STREET — **N/A**
PROVIDENCE, RI 02901

Site 1 of 8 in cluster A

NY MANIFEST:

EPA ID:	RIP000034659
Country:	USA

Mailing Info:

Name:	RHODE ISLAND DEPT OF TRANSPORTATION
Contact:	ROBERT FERRARA
Address:	24 PAWTUCKET AVE
City/State/Zip:	EAST PROVIDENCE, RI 02914
Country:	USA
Phone:	Not reported

Manifest:

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	MAD980670004
Trans2 State ID:	Not reported
Generator Ship Date:	09/25/2012
Trans1 Recv Date:	09/25/2012
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	09/26/2012
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RIP000034659
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049836679
Waste Code:	Not reported
Quantity:	3992.0
Units:	K - Kilograms (2.2 pounds)
Number of Containers:	1.0
Container Type:	CM - Metal boxes, cases, roll-offs
Handling Method:	L Landfill.
Specific Gravity:	1.0
Year:	2012
Manifest Tracking Num:	001553724GBF
Import Ind:	N

RHODE ISLAND DEPT OF TRANSPORTATION (Continued) **S112211610**

Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H132

A3 **EAST TRANSIT STREET BOAT RAMP** **RI SHWS** **S108437566**
EAST TRANSIT STREET **N/A**
< 1/8 **PROVIDENCE, RI**
1 ft.

Site 2 of 8 in cluster A

Relative: Higher

Actual: 8 ft.

SHWS:

Project Code:	ETBR-HWM
Siterem Site Number:	SR-28-0412
Facility Status:	**Active**
Project Code Desc:	ETBR-HWM
Project Date:	03/01/2007

A4 **PORTUGUESE SPORTING CLUB** **RI UST** **U003207878**
92 GANO ST **N/A**
< 1/8 **PROVIDENCE, RI**
0.000 mi.
2 ft. **Site 3 of 8 in cluster A**

Relative: Higher

Actual: 11 ft.

UST:

Facility ID:	UST-18053
Facility Class:	Other
Tank ID:	1
Tank Status:	**Permanently Closed**
Tank Capacity:	500
Tank Substance:	Heating Oil No.2
Date Installed:	04/25/2001

A5 **EDR US Hist Auto Stat** **1015646839**
SSW **82 GANO ST** **N/A**
< 1/8 **PROVIDENCE, RI 02906**
0.014 mi.
76 ft. **Site 4 of 8 in cluster A**

Relative: Higher

Actual: 11 ft.

EDR Historical Auto Stations:

Name:	ENGINES BY BENZ INC
Year:	2001
Address:	82 GANO ST
Name:	ENGINES BY BENZ INC
Year:	2002
Address:	82 GANO ST

(Continued) **1015646839**

Name: ENGINES BY BENZ INC
Year: 2003
Address: 82 GANO ST

Name: ENGINES BY BENZ INC
Year: 2004
Address: 82 GANO ST

A6 **ENGINES BY BENZ INC** **RCRA-SQG** **1000256607**
SSW **82 GANO ST** **FINDS** **RID982747909**
< 1/8 **PROVIDENCE, RI 02906** **RI MANIFEST**
0.014 mi.
76 ft. **Site 5 of 8 in cluster A**

Relative:
Higher

Actual:
11 ft.

RCRA-SQG:
Date form received by agency: 12/17/1988
Facility name: ENGINES BY BENZ INC
Facility address: 82 GANO ST
PROVIDENCE, RI 02906
EPA ID: RID982747909
Mailing address: GANO ST
PROVIDENCE, RI 02906
Contact: LAURIE BENSE
Contact address: 82 GANO ST
PROVIDENCE, RI 02906
Contact country: US
Contact telephone: (508) 336-9481
Contact email: Not reported
EPA Region: 01
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: WILLIAM BENSE
Owner/operator address: OWNERSTREET
OWNERCITY, RI 99999
Owner/operator country: Not reported
Owner/operator telephone: (401) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/0001
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No

ENGINES BY BENZ INC (Continued) **1000256607**

Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

FINDS:

Registry ID: 110004917270

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RI MANIFEST:
GEN Cert Date: 2/15/1994
Transporter Receipt Date: Not reported
Number Of Containers: 0
Container Type: Not reported
Waste Code1: D001
Waste Code2: Not reported
Waste Code3: Not reported
Comment: Not reported
Fee Exempt Code: Not reported
TSDF Name: CHEM PAK CORP
TSDF ID: RID084802842
TSDF Date: Not reported
Transporter 2 Name: Not reported
Transporter 2 ID: Not reported
Manifest Docket Number: RIG0044858
Waste Description: PETROLEUM NAPHTHA
Quantity: 14
WT/Vol Units: G
Item Number: 1
Transporter Name: CYCLE SOLVE CORP
Transporter EPA ID: RID982194987
GEN Cert Date: 2/15/1994
Transporter Recpt Date: Not reported
Transporter 2 Recpt Date: Not reported

ENGINES BY BENZ INC (Continued) **1000256607**

TSDF Recpt Date: Not reported
EPA ID: RID982747909
Transporter 2 ID: Not reported

B7 **FRANK N. GUSTAFSON & SONS, INC.** **RI UST** **U001211961**
NE **251 PITMAN ST** **N/A**
< 1/8 **PROVIDENCE, RI**
0.024 mi.
127 ft. **Site 1 of 2 in cluster B**

Relative:
Higher

Actual:
15 ft.

UST:
Facility ID: UST-1612
Facility Class: Commercials

Tank ID: 1
Tank Status: Permanently Closed
Tank Capacity: 1000
Tank Substance: Gasoline
Date Installed: 06/01/1954

A8 **M & S MOTORS INC** **RCRA-SQG** **1000130353**
SW **103 GANO ST** **FINDS** **RID045369022**
< 1/8 **PROVIDENCE, RI 02906** **RI LUST**
0.027 mi. **RI MANIFEST**
144 ft. **Site 6 of 8 in cluster A**

Relative:
Higher

Actual:
14 ft.

RCRA-SQG:
Date form received by agency: 11/17/2004
Facility name: M & S MOTORS INC
Facility address: 103 GANO ST
PROVIDENCE, RI 02906
EPA ID: RID045369022
Mailing address: GANO ST
PROVIDENCE, RI 02906
Contact: EDGAR R SAMAYOA
Contact address: GANO ST
PROVIDENCE, RI 02906
Contact country: US
Contact telephone: (401) 831-2323
Contact email: Not reported
EPA Region: 01
Land type: Other land type
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: EDGAR SALEMA
Owner/operator address: GANO ST
PROVIDENCE, RI 02908
Owner/operator country: US
Owner/operator telephone: (401) 831-2323

M & S MOTORS INC (Continued) **1000130353**

Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 03/01/1996
Owner/Op end date: Not reported

Owner/operator name: JOSE RAPOSO
Owner/operator address: OWNERSTREET
OWNERCITY, RI 99999
Owner/operator country: Not reported
Owner/operator telephone: (401) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/0001
Owner/Op end date: Not reported

Owner/operator name: MANUEL SALEMA
Owner/operator address: GANO ST
PROVIDENCE, RI 02908
Owner/operator country: US
Owner/operator telephone: (401) 831-2323
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 04/15/1975
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 09/05/1989
Site name: M & S AUTO REPAIR & SALES
Classification: Not a generator, verified

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

M & S MOTORS INC (Continued) **1000130353**

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: R010
Waste name: WASTE OIL

Facility Has Received Notices of Violations:
Regulation violated: FR - 5.08, 262.11
Area of violation: Generators - General
Date violation determined: 05/20/2004
Date achieved compliance: 11/17/2004
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 07/30/2004
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 08/27/2012
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 11/17/2004
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 05/20/2004
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 11/17/2004

M & S MOTORS INC (Continued) **1000130353**

Evaluation lead agency: State

FINDS:

Registry ID: 110004906923

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

LUST:
Project Number: 28239-LS
Project Date: 02/01/2004
Facility Id: Not reported
Facility Status: Inactive; Investigation/Remed. Complete,No Further Action Required

RI MANIFEST:
GEN Cert Date: 8/17/1990
Transporter Receipt Date: Not reported
Number Of Containers: 0
Container Type: Not reported
Waste Code1: R010
Waste Code2: Not reported
Waste Code3: Not reported
Comment: Not reported
Fee Exempt Code: Not reported
TSDF Name: TWM
TSDF ID: NHD980521843
TSDF Date: Not reported
Transporter 2 Name: Not reported
Transporter 2 ID: Not reported
Manifest Docket Number: MAC221055
Waste Description: OILS
Quantity: 275
WT/Vol Units: G
Item Number: 1
Transporter Name: WESTERN
Transporter EPA ID: RID980906580
GEN Cert Date: 8/17/1990
Transporter Recpt Date: Not reported
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: Not reported
EPA ID: RID045369022
Transporter 2 ID: Not reported

A9
SW
< 1/8
0.027 mi.
144 ft.

EDR US Hist Auto Stat **1015133049**
N/A

103 GANO ST
PROVIDENCE, RI 02906

Site 7 of 8 in cluster A

Relative:
Higher

Actual:
14 ft.

EDR Historical Auto Stations:

Name:	M & S MOTORS INC
Year:	2007
Address:	103 GANO ST
Name:	M & S AUTO REPAIRING
Year:	2008
Address:	103 GANO ST
Name:	M & S MOTORS INC
Year:	2009
Address:	103 GANO ST
Name:	M & S MOTORS
Year:	2010
Address:	103 GANO ST
Name:	M & S MOTORS INC
Year:	2011
Address:	103 GANO ST
Name:	M & S MOTORS INC
Year:	2012
Address:	103 GANO ST

A10
SW
< 1/8
0.034 mi.
177 ft.

CODDBARRETT ASSOCIATES INC **RCRA NonGen / NLR** **1000875524**
105 GANO ST **FINDS** **RID987486875**
PROVIDENCE, RI 02906

Site 8 of 8 in cluster A

Relative:
Higher

Actual:
14 ft.

RCRA NonGen / NLR:

Date form received by agency:	07/30/1993
Facility name:	CODDBARRETT ASSOCIATES INC
Facility address:	105 GANO ST PROVIDENCE, RI 02906
EPA ID:	RID987486875
Mailing address:	GANO ST PROVIDENCE, RI 02906
Contact:	NINA BERTELLI
Contact address:	105 GANO ST PROVIDENCE, RI 02906
Contact country:	US
Contact telephone:	(401) 273-9898
Contact email:	Not reported
EPA Region:	01
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	KEN DULGARIEN
Owner/operator address:	PO BOX 2301 PROVIDENCE, RI 02906

CODDBARRETT ASSOCIATES INC (Continued) **1000875524**

Owner/operator country: Not reported
Owner/operator telephone: (401) 421-0021
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D011
Waste name: SILVER

Violation Status: No violations found

FINDS:

Registry ID: 110004929258

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

C11
NE
< 1/8
0.043 mi.
229 ft.

SENTION
ONE RICHMOND SQUARE
PROVIDENCE, RI 02906

Site 1 of 9 in cluster C

NJ MANIFEST | **S107610226** | **N/A**

Relative:
Higher

Actual:
13 ft.

NJ MANIFEST:

EPA Id:	RIP000021705
Mail Address:	ONE RICHMOND SQUARE
Mail City/State/Zip:	PROVIDENCE 02906
Facility Phone:	4012727177
Emergency Phone:	Not reported
Contact:	PAULA BAINS
Comments:	Not reported
SIC Code:	Not reported
County:	00
Municipal:	00
Previous EPA Id:	Not reported
Gen Flag:	X
Trans Flag:	Not reported
TSDF Flag:	Not reported
Name Change:	Not reported
Date Change:	Not reported

Manifest:

Manifest Number:	NJA5107174
EPA ID:	RIP000021705
Date Shipped:	06/24/2004
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	06/24/2004
Date Trans2 Transported Waste:	07/01/2004
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	07/02/2004
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported

SENTION (Continued) **S107610226**

Manifest Discrepancy Type:	Not reported
Data Entry Number:	08170421
Was Load Rejected:	PROVIDENCE 02906
Reason Load Was Rejected:	Not reported
Manifest Number:	NJA5238708
EPA ID:	RIP000021705
Date Shipped:	03/18/2005
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	03/18/2005
Date Trans2 Transported Waste:	03/24/2005
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	03/25/2005
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	04150535
Was Load Rejected:	PROVIDENCE 02906
Reason Load Was Rejected:	Not reported
Manifest Number:	NJA5238707
EPA ID:	RIP000021705
Date Shipped:	03/18/2005
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported

SENTION (Continued) **S107610226**

Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	03/18/2005
Date Trans2 Transported Waste:	03/24/2005
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	03/25/2005
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	05240521
Was Load Rejected:	PROVIDENCE 02906
Reason Load Was Rejected:	Not reported

Manifest Number:	NJA5107064
EPA ID:	RIP000021705
Date Shipped:	06/24/2004
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	06/24/2004
Date Trans2 Transported Waste:	06/28/2004
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	06/29/2004
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported

SENTION (Continued) **S107610226**

Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	08050425
Was Load Rejected:	PROVIDENCE 02906
Reason Load Was Rejected:	Not reported

Manifest Number:	NJA5280571
EPA ID:	RIP000021705
Date Shipped:	01/05/2006
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	01/05/2006
Date Trans2 Transported Waste:	01/11/2006
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	01/13/2006
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	03130621
Was Load Rejected:	PROVIDENCE 02906
Reason Load Was Rejected:	Not reported

Manifest Number:	NJA5202879
EPA ID:	RIP000021705
Date Shipped:	10/14/2004
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164

SENTION (Continued) **S107610226**

Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	10/14/2004
Date Trans2 Transported Waste:	10/22/2004
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	10/22/2004
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	12170421
Was Load Rejected:	PROVIDENCE 02906
Reason Load Was Rejected:	Not reported

Manifest Number:	NJA5238905
EPA ID:	RIP000021705
Date Shipped:	04/19/2005
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	04/19/2005
Date Trans2 Transported Waste:	04/22/2005
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported

SENTION (Continued) **S107610226**

Date TSDF Received Waste:	04/22/2005
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	06140522
Was Load Rejected:	PROVIDENCE 02906
Reason Load Was Rejected:	Not reported

C12 **EDR US Hist Cleaners** **1014965647**
NE **1 RICHMOND SQ** **N/A**
< 1/8 **PROVIDENCE, RI 02906**
0.043 mi.
229 ft. **Site 2 of 9 in cluster C**

Relative:
Higher

Actual:
13 ft.

EDR Historical Cleaners:

Name:	DRY CLEANING EXPRESS
Year:	1999
Address:	1 RICHMOND SQ
Name:	DRY CLEANING EXPRESS
Year:	2000
Address:	1 RICHMOND SQ
Name:	DRY CLEANING EXPRESS
Year:	2001
Address:	1 RICHMOND SQ
Name:	DRY CLEANING EXPRESS
Year:	2002
Address:	1 RICHMOND SQ
Name:	DRY CLEANING EXPRESS
Year:	2004
Address:	1 RICHMOND SQ
Name:	DRY CLEANING EXPRESS
Year:	2011
Address:	1 RICHMOND SQ

C13 **IRONICS INC** **RCRA NonGen / NLR** **1000706161**
NE **1 RICHMOND SQ** **FINDS** **RID981067077**
< 1/8 **CRANSTON, RI 02920**
0.043 mi.
229 ft. **Site 3 of 9 in cluster C**

Relative:
Higher

Actual:
13 ft.

RCRA NonGen / NLR:

Date form received by agency:	07/08/1985
Facility name:	IRONICS INC
Facility address:	1 RICHMOND SQ CRANSTON, RI 02920
EPA ID:	RID981067077
Mailing address:	RICHMOND SQ PROVIDENCE, RI 02920
Contact:	CONRAD HAMEL
Contact address:	1 RICHMOND SQ PROVIDENCE, RI 02889
Contact country:	US
Contact telephone:	(401) 521-7410
Contact email:	Not reported
EPA Region:	01
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	Not reported
Owner/operator address:	OWNERSTREET OWNERCITY, RI 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(401) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Universal Waste Summary:

Waste type:	Batteries
Accumulated waste on-site:	No
Generated waste on-site:	Not reported
Waste type:	Lamps

IRONICS INC (Continued) **1000706161**

Accumulated waste on-site: No
Generated waste on-site: Not reported

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: Not reported

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: Not reported

Violation Status: No violations found

FINDS:

Registry ID: 110007825899

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

C14 **SPRINT** **RI AST** **A100389164**
NE **1 RICHMOND SQUARE** **N/A**
< 1/8 **PROVIDENCE, RI**
0.043 mi.
229 ft. **Site 4 of 9 in cluster C**

Relative:
Higher

Actual:
13 ft.

AST:
Facility Classification: Not reported
Mailing Address: PO 7994, Shawnee Mission, KS
Contact Person: James Lucci
Facility Telephone: Not reported
Latitude\\Longitude: Not reported

Tank id: 1
Tank Status: E-In Use
Number of Gallons: 4000 gal
Product Stored: diesel
Date of Installation: 04/01/2001
Tank Construction: steel
Secondary Containment: yes
Last inspection Date: Not reported

B15 **SALVATION ARMY** **RI UST** **U001212362**
NE **201 PITMAN ST** **N/A**
< 1/8 **PROVIDENCE, RI**
0.052 mi.
274 ft. **Site 2 of 2 in cluster B**

Relative:
Higher

Actual:
18 ft.

UST:
Facility ID: UST-2197
Facility Class: Other

Tank ID: 1
Tank Status: Permanently Closed
Tank Capacity: 3000
Tank Substance: Diesel
Date Installed: 04/25/2001

C16 **SLATER CENTER FOR BIOMEDICAL** **NJ MANIFEST** **S107910315**
NE **4 RICHMOND SQ SUITE 500** **N/A**
< 1/8 **PROVIDENCE, RI 02906**
0.085 mi.
449 ft. **Site 5 of 9 in cluster C**

Relative:
Higher

Actual:
11 ft.

NJ MANIFEST:

EPA Id:	RIP000025843
Mail Address:	4 RICHMOND SQ SUITE 500
Mail City/State/Zip:	PROVIDENCE 02906
Facility Phone:	4018619770
Emergency Phone:	8005355053
Contact:	Not reported
Comments:	Not reported
SIC Code:	Not reported
County:	00
Municipal:	00
Previous EPA Id:	Not reported
Gen Flag:	X
Trans Flag:	Not reported
TSDF Flag:	Not reported
Name Change:	Not reported
Date Change:	Not reported

Manifest:

Manifest Number:	NJA5260070
EPA ID:	RIP000025843
Date Shipped:	08/18/2005
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	08/18/2005
Date Trans2 Transported Waste:	08/25/2005
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported

SLATER CENTER FOR BIOMEDICAL (Continued) **S107910315**

Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	08/29/2005
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	09300525
Was Load Rejected:	PROVIDENCE 02906
Reason Load Was Rejected:	Not reported

Manifest Number:	NJA5260071
EPA ID:	RIP000025843
Date Shipped:	08/18/2005
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	08/18/2005
Date Trans2 Transported Waste:	09/02/2005
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	09/05/2005
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported

SLATER CENTER FOR BIOMEDICAL (Continued) **S107910315**

Data Entry Number:	11090521
Was Load Rejected:	PROVIDENCE 02906
Reason Load Was Rejected:	Not reported
Manifest Number:	000071762VES
EPA ID:	RIP000025843
Date Shipped:	02/08/2007
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	02/08/2007
Date Trans2 Transported Waste:	02/13/2007
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	02/14/2007
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PROVIDENCE 02906
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2007 New Jersey Manifest Data
Waste Code:	F002
Hand Code:	H06
Quantity:	80 P

Manifest Number:	000071763VES
EPA ID:	RIP000025843
Date Shipped:	02/08/2007
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported

SLATER CENTER FOR BIOMEDICAL (Continued) **S107910315**

Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	02/08/2007
Date Trans2 Transported Waste:	02/15/2007
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	02/15/2007
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PROVIDENCE 02906
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2007 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H14
Quantity:	10 P

Manifest Year:	2007 New Jersey Manifest Data
Waste Code:	D002
Hand Code:	H14
Quantity:	240 P

Manifest Year:	2007 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H14
Quantity:	60 P

Manifest Year:	2007 New Jersey Manifest Data
Waste Code:	D002
Hand Code:	H14
Quantity:	10 P

Manifest Year:	2007 New Jersey Manifest Data
Waste Code:	U080
Hand Code:	H14
Quantity:	60 P

SLATER CENTER FOR BIOMEDICAL (Continued) **S107910315**

Manifest Year:	2007 New Jersey Manifest Data
Waste Code:	F003
Hand Code:	H14
Quantity:	60 P
Manifest Year:	2007 New Jersey Manifest Data
Waste Code:	F003
Hand Code:	H14
Quantity:	180 P

C17 **CELL BASED DELIVERY INC** **RCRA NonGen / NLR** **1004779433**
NE **4 RICHMOND SQ 5TH FLOOR** **FINDS** **RID987475415**
< 1/8 **PROVIDENCE, RI 02906** **RI MANIFEST**
0.085 mi.
449 ft. **Site 6 of 9 in cluster C**

Relative:
Higher

Actual:
11 ft.

RCRA NonGen / NLR:

Date form received by agency:	07/31/2007
Facility name:	CELL BASED DELIVERY INC
Facility address:	4 RICHMOND SQ 5TH FLOOR PROVIDENCE, RI 02906
EPA ID:	RID987475415
Mailing address:	RICHMOND SQ 5TH FLOOR PROVIDENCE, RI 02906
Contact:	HERMAN VANDENBURG
Contact address:	4 RICHMOND SQ 5TH FLOOR PROVIDENCE, RI 02906
Contact country:	US
Contact telephone:	(401) 454-3540
Contact email:	Not reported
EPA Region:	01
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	OPERNAME
Owner/operator address:	OPERSTREET RI OPERZ
Owner/operator country:	Not reported
Owner/operator telephone:	(401) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	HAROLD SCHEIN
Owner/operator address:	1 RICHMOND SQ PROVIDENCE, RI 02906
Owner/operator country:	Not reported
Owner/operator telephone:	(401) 521-3000
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

CELL BASED DELIVERY INC (Continued) **1004779433**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 11/01/1999
Site name: CELL BASED DELIVERY INC
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

FINDS:

Registry ID: 110004926625

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

CELL BASED DELIVERY INC (Continued) **1004779433**

RI MANIFEST:
- GEN Cert Date: 4/7/1997
- Transporter Receipt Date: Not reported
- Number Of Containers: 0
- Container Type: Not reported
- Waste Code1: D001
- Waste Code2: Not reported
- Waste Code3: Not reported
- Comment: Not reported
- Fee Exempt Code: Not reported
- TSDF Name: CLEAN HARBORS OF CHICAGO
- TSDF ID: ILD000608471
- TSDF Date: Not reported
- Transporter 2 Name: Not reported
- Transporter 2 ID: Not reported
- Manifest Docket Number: IL7365156
- Waste Description: PECHLORIC ACID
- Quantity: 1
- WT/Vol Units: P
- Item Number: 3
- Transporter Name: CLEAN HARBORS
- Transporter EPA ID: MAD039322250
- GEN Cert Date: 4/7/1997
- Transporter Recpt Date: Not reported
- Transporter 2 Recpt Date: Not reported
- TSDF Recpt Date: Not reported
- EPA ID: RID987475415
- Transporter 2 ID: Not reported

C18 **SENTION INC.** **RCRA NonGen / NLR** **1004779575**
NE **4 RICHMOND SQUARE 4TH FL** **FINDS** **RIR000500694**
< 1/8 **PROVIDENCE, RI 02906**
0.085 mi.
449 ft. **Site 7 of 9 in cluster C**

Relative:
Higher

Actual:
11 ft.

RCRA NonGen / NLR:
- Date form received by agency: 07/31/2007
- Facility name: SENTION INC.
- Facility address: 4 RICHMOND SQUARE 4TH FL
  PROVIDENCE, RI 02906
- EPA ID: RIR000500694
- Mailing address: RICHMOND SQUARE 4TH FL
  PROVIDENCE, RI 02906
- Contact: PAULA LALIBERTE
- Contact address: 4 RICHMOND SQUARE 4TH FL
  PROVIDENCE, RI 02906
- Contact country: US
- Contact telephone: (401) 272-7177
- Contact email: Not reported
- EPA Region: 01
- Classification: Non-Generator
- Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
- Owner/operator name: MELVIN EPSTEIN
- Owner/operator address: 4 RICHMOND SQUARE

SENTION INC. (Continued) **1004779575**

PROVIDENCE, RI 02906
Owner/operator country: Not reported
Owner/operator telephone: (401) 272-7177
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 12/27/2001
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 12/27/2001
Site name: SENTION INC.
Classification: Small Quantity Generator

Date form received by agency: 01/17/2001
Site name: SENTION INC.
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Violation Status: No violations found

FINDS:

SENTION INC. (Continued) **1004779575**

Registry ID: 110004936464

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

C19 **SLATER CENTER FOR BIOMEDICAL** **NJ MANIFEST** **S107910319**
NE **4 RICHMOND SQUARE** **N/A**
< 1/8 **PROVIDENCE, RI 02906**
0.085 mi.
449 ft. **Site 8 of 9 in cluster C**

Relative:
Higher

Actual:
11 ft.

NJ MANIFEST:

EPA Id:	RIP000258431
Mail Address:	4 RICHMOND SQUARE
Mail City/State/Zip:	PROVIDENCE 02906
Facility Phone:	4018619770
Emergency Phone:	Not reported
Contact:	PAULETTE FERLAND
Comments:	Not reported
SIC Code:	Not reported
County:	00
Municipal:	00
Previous EPA Id:	Not reported
Gen Flag:	X
Trans Flag:	Not reported
TSDF Flag:	Not reported
Name Change:	Not reported
Date Change:	Not reported

Manifest:

Manifest Number:	NJA5200359
EPA ID:	RIP000258431
Date Shipped:	01/20/2005
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	01/20/2005
Date Trans2 Transported Waste:	01/28/2005
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported

SLATER CENTER FOR BIOMEDICAL (Continued) **S107910319**

Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	02/01/2005
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	03160535
Was Load Rejected:	PROVIDENCE 02906
Reason Load Was Rejected:	Not reported

C20 **SLATER CENTER FOR BIOMEDICAL TECHNOLOGY** **RCRA-SQG** **1007990790**
NE **4 RICHMOND SQ STE 500** **RI MANIFEST** **RIR000505289**
< 1/8 **PROVIDENCE, RI 02906** **NJ MANIFEST**
0.085 mi.
449 ft. **Site 9 of 9 in cluster C**

Relative:
Higher

Actual:
11 ft.

RCRA-SQG:

Date form received by agency:	08/03/2007
Facility name:	SLATER CENTER FOR BIOMEDICAL TECHNOLOGY
Site name:	SLATER TECHNOLOGY FUND
Facility address:	4 RICHMOND SQ STE 500 PROVIDENCE, RI 02906
EPA ID:	RIR000505289
Mailing address:	RICHMOND SQ STE 500 PROVIDENCE, RI 02906
Contact:	PAULETTE FERLAND
Contact address:	RICHMOND SQ STE 500 PROVIDENCE, 02906
Contact country:	Not reported
Contact telephone:	(401) 861-9770
Contact email:	Not reported
EPA Region:	01
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	SLATER CENTER FOR BIOMEDICAL TECHNOLOGY
Owner/operator address:	RICHMOND SQUARE, STE 500 PROVIDENCE, RI 02906
Owner/operator country:	US
Owner/operator telephone:	(401) 861-9770
Legal status:	Private
Owner/Operator Type:	Operator

SLATER CENTER FOR BIOMEDICAL TECHNOLOGY (Continued) **1007990790**

Owner/Op start date: 01/01/2005
Owner/Op end date: Not reported

Owner/operator name: ESSEX RICHMOND LLC
Owner/operator address: RICHMOND SQUARE
PROVIDENCE, RI 02906
Owner/operator country: US
Owner/operator telephone: (401) 861-9770
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/2005
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 02/17/2005
Site name: SLATER CENTER FOR BIOMEDICAL TECHNOLOGY
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: F001
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING:

SLATER CENTER FOR BIOMEDICAL TECHNOLOGY (Continued) **1007990790**

TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: F001
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE

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SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

RI MANIFEST:
GEN Cert Date: 10/8/2009
Transporter Receipt Date: 10/8/2009
Number Of Containers: 1
Container Type: DF
Waste Code1: F003
Waste Code2: D001
Waste Code3: U154
Comment: Not reported
Fee Exempt Code: Not reported
TSDF Name: VEOLIA ES TECHNICAL SOLUTIONS
TSDF ID: NJD980536593
TSDF Date: 10/19/2009
Transporter 2 Name: 10/16/2009
Transporter 2 ID: NJD054126164
Manifest Docket Number: 000203299VES
Waste Description: UN1993, WASTE FLAMMABLE LIQUIDS, n.o.s., 3, II
Quantity: 10
WT/Vol Units: P
Item Number: 2
Transporter Name: VEOLIA ES TECHNICAL SOLUTIONS
Transporter EPA ID: NJD080631369
GEN Cert Date: 10/8/2009
Transporter Recpt Date: 10/8/2009
Transporter 2 Recpt Date: 10/16/2009
TSDF Recpt Date: 10/19/2009
EPA ID: RIR000505289
Transporter 2 ID: NJD054126164

SLATER CENTER FOR BIOMEDICAL TECHNOLOGY (Continued) **1007990790**

NJ MANIFEST:

EPA Id:	RIR000505289
Mail Address:	RICHMOND SQ STE 500
Mail City/State/Zip:	PROVIDENCE, RI 02906
Facility Phone:	Not reported
Emergency Phone:	Not reported
Contact:	PAULETTE FERLAND
Comments:	Not reported
SIC Code:	Not reported
County:	RI007
Municipal:	Not reported
Previous EPA Id:	Not reported
Gen Flag:	Not reported
Trans Flag:	Not reported
TSDF Flag:	Not reported
Name Change:	Not reported
Date Change:	Not reported

Manifest:

Manifest Number:	000203299VES
EPA ID:	RIR000505289
Date Shipped:	10/08/2009
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	10/08/2009
Date Trans2 Transported Waste:	10/16/2009
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	10/19/2009
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PROVIDENCE, RI 02906

SLATER CENTER FOR BIOMEDICAL TECHNOLOGY (Continued) **1007990790**

Reason Load Was Rejected: Not reported

Waste:

Manifest Year: 2009 New Jersey Manifest Data
Waste Code: F003
Hand Code: H141
Quantity: 10 P

Manifest Year: 2009 New Jersey Manifest Data
Waste Code: D004
Hand Code: H141
Quantity: 60 P

Manifest Year: 2009 New Jersey Manifest Data
Waste Code: D001
Hand Code: H141
Quantity: 10 P

Manifest Year: 2009 New Jersey Manifest Data
Waste Code: D002
Hand Code: H141
Quantity: 10 P

Manifest Year: 2009 New Jersey Manifest Data
Waste Code: D003
Hand Code: H141
Quantity: 10 P

Manifest Number: 000241146VES
EPA ID: RIR000505289
Date Shipped: 05/27/2009
TSDF EPA ID: NJD980536593
Transporter EPA ID: NJD080631369
Transporter 2 EPA ID: NJD054126164
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 10 EPA ID: Not reported
Date Trans1 Transported Waste: 05/27/2009
Date Trans2 Transported Waste: 06/02/2009
Date Trans3 Transported Waste: Not reported
Date Trans4 Transported Waste: Not reported
Date Trans5 Transported Waste: Not reported
Date Trans6 Transported Waste: Not reported
Date Trans7 Transported Waste: Not reported
Date Trans8 Transported Waste: Not reported
Date Trans9 Transported Waste: Not reported
Date Trans10 Transported Waste: Not reported
Date TSDF Received Waste: 06/03/2009
TSDF EPA Facility Name: Not reported
QTY Units: Not reported
Transporter SEQ ID: Not reported
Transporter-1 Date: Not reported
Waste SEQ ID: Not reported

SLATER CENTER FOR BIOMEDICAL TECHNOLOGY (Continued) **1007990790**

Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PROVIDENCE, RI 02906
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2009 New Jersey Manifest Data
Waste Code:	D002
Hand Code:	H141
Quantity:	5 P

Manifest Year:	2009 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H141
Quantity:	90 P

Manifest Number:	000269483VES
EPA ID:	RIR000505289
Date Shipped:	11/29/2007
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	11/29/2007
Date Trans2 Transported Waste:	12/04/2007
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	12/05/2007
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported

SLATER CENTER FOR BIOMEDICAL TECHNOLOGY (Continued) **1007990790**

Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PROVIDENCE, RI 02906
Reason Load Was Rejected:	Not reported
Manifest Number:	000269213VES
EPA ID:	RIR000505289
Date Shipped:	12/07/2007
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	12/07/2007
Date Trans2 Transported Waste:	12/31/2007
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	01/02/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PROVIDENCE, RI 02906
Reason Load Was Rejected:	Not reported
Manifest Number:	000244792VES
EPA ID:	RIR000505289
Date Shipped:	04/08/2008
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported

SLATER CENTER FOR BIOMEDICAL TECHNOLOGY (Continued) **1007990790**

Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	04/08/2008
Date Trans2 Transported Waste:	04/18/2008
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	04/21/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PROVIDENCE, RI 02906
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2008 New Jersey Manifest Data
Waste Code:	F001
Hand Code:	H141
Quantity:	10 P

Manifest Year:	2008 New Jersey Manifest Data
Waste Code:	F003
Hand Code:	H141
Quantity:	60 P

Manifest Number:	000239454VES
EPA ID:	RIR000505289
Date Shipped:	07/24/2008
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	07/24/2008
Date Trans2 Transported Waste:	07/31/2008
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported

SLATER CENTER FOR BIOMEDICAL TECHNOLOGY (Continued) **1007990790**

Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	08/01/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PROVIDENCE, RI 02906
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2008 New Jersey Manifest Data
Waste Code:	D003
Hand Code:	H141
Quantity:	10 P

Manifest Year:	2008 New Jersey Manifest Data
Waste Code:	F001
Hand Code:	H141
Quantity:	60 P

Manifest Year:	2008 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H141
Quantity:	60 P

Manifest Number:	000241203VES
EPA ID:	RIR000505289
Date Shipped:	05/20/2008
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	05/20/2008
Date Trans2 Transported Waste:	06/03/2008
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported

SLATER CENTER FOR BIOMEDICAL TECHNOLOGY (Continued) **1007990790**

Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	06/03/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PROVIDENCE, RI 02906
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2008 New Jersey Manifest Data
Waste Code:	D002
Hand Code:	H141
Quantity:	30 P

Manifest Year:	2008 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H141
Quantity:	30 P

Manifest Number:	000269214VES
EPA ID:	RIR000505289
Date Shipped:	12/27/2007
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	12/27/2007
Date Trans2 Transported Waste:	12/28/2007
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	12/31/2007
TSDF EPA Facility Name:	Not reported

SLATER CENTER FOR BIOMEDICAL TECHNOLOGY (Continued) **1007990790**

QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PROVIDENCE, RI 02906
Reason Load Was Rejected:	Not reported

Manifest Number:	000239238VES
EPA ID:	RIR000505289
Date Shipped:	03/06/2008
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	03/06/2008
Date Trans2 Transported Waste:	03/10/2008
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	03/11/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PROVIDENCE, RI 02906
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2008 New Jersey Manifest Data
Waste Code:	F002

SLATER CENTER FOR BIOMEDICAL TECHNOLOGY (Continued) **1007990790**

Hand Code: H061
Quantity: 480 P

Manifest Number: 000199834VES
EPA ID: RIR000505289
Date Shipped: 02/07/2008
TSDF EPA ID: NJD002454544
Transporter EPA ID: NJD080631369
Transporter 2 EPA ID: NJD054126164
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 10 EPA ID: Not reported
Date Trans1 Transported Waste: 02/07/2008
Date Trans2 Transported Waste: 02/12/2008
Date Trans3 Transported Waste: Not reported
Date Trans4 Transported Waste: Not reported
Date Trans5 Transported Waste: Not reported
Date Trans6 Transported Waste: Not reported
Date Trans7 Transported Waste: Not reported
Date Trans8 Transported Waste: Not reported
Date Trans9 Transported Waste: Not reported
Date Trans10 Transported Waste: Not reported
Date TSDF Received Waste: 02/13/2008
TSDF EPA Facility Name: Not reported
QTY Units: Not reported
Transporter SEQ ID: Not reported
Transporter-1 Date: Not reported
Waste SEQ ID: Not reported
Waste Type Code 2: Not reported
Waste Type Code 3: Not reported
Waste Type Code 4: Not reported
Waste Type Code 5: Not reported
Waste Type Code 6: Not reported
Date Accepted: Not reported
Manifest Discrepancy Type: Not reported
Data Entry Number: Not reported
Was Load Rejected: PROVIDENCE, RI 02906
Reason Load Was Rejected: Not reported

Waste:
Manifest Year: 2008 New Jersey Manifest Data
Waste Code: F002
Hand Code: H061
Quantity: 240 P

Manifest Number: 000241561VES
EPA ID: RIR000505289
Date Shipped: 10/23/2008
TSDF EPA ID: NJD980536593
Transporter EPA ID: NJD080631369
Transporter 2 EPA ID: NJD054126164
Transporter 3 EPA ID: Not reported

SLATER CENTER FOR BIOMEDICAL TECHNOLOGY (Continued) **1007990790**

Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	10/23/2008
Date Trans2 Transported Waste:	10/28/2008
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	10/28/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PROVIDENCE, RI 02906
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2008 New Jersey Manifest Data
Waste Code:	F003
Hand Code:	H141
Quantity:	240 P

Manifest Year:	2008 New Jersey Manifest Data
Waste Code:	D002
Hand Code:	H141
Quantity:	10 P

Manifest Number:	000244790VES
EPA ID:	RIR000505289
Date Shipped:	04/08/2008
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported

SLATER CENTER FOR BIOMEDICAL TECHNOLOGY (Continued) **1007990790**

Date Trans1 Transported Waste:	04/08/2008
Date Trans2 Transported Waste:	04/10/2008
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	04/11/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	PROVIDENCE, RI 02906
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2008 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	240 P

Manifest Year:	2008 New Jersey Manifest Data
Waste Code:	F002
Hand Code:	H061
Quantity:	80 P

21
West
< 1/8
0.090 mi.
474 ft.

Relative:
Higher

Actual:
22 ft.

LOCAL #57 UNION HALL **RI UST** **U003975866**
141 GANO ST **N/A**
PROVIDENCE, RI

UST:

Facility ID:	UST-3940
Facility Class:	Other
Tank ID:	1
Tank Status:	**Permanently Closed**
Tank Capacity:	2000
Tank Substance:	Heating Oil No.2
Date Installed:	Not reported

D22
SW
< 1/8
0.114 mi.
604 ft.

FOX POINT BOYS & GIRLS CLUB
90 IVES ST
PROVIDENCE, RI

Site 1 of 2 in cluster D

RI UST **U001212003**
N/A

Relative:
Higher

Actual:
39 ft.

UST:
Facility ID: UST-1671
Facility Class: Commercials

Tank ID: 1
Tank Status: Permanently Closed
Tank Capacity: 500
Tank Substance: Gasoline
Date Installed: 04/25/2001

D23
SW
1/8-1/4
0.127 mi.
669 ft.

FOX POINT MANOR
575 WICKENDEN ST
PROVIDENCE, RI

Site 2 of 2 in cluster D

RI UST **U001213290**
N/A

Relative:
Higher

Actual:
35 ft.

UST:
Facility ID: UST-3320
Facility Class: Commercials

Tank ID: 1
Tank Status: Permanently Closed
Tank Capacity: 10000
Tank Substance: Heating Oil No.2
Date Installed: 04/01/1982

E24
North
1/8-1/4
0.132 mi.
699 ft.

ADLER'S HARDWARE STORE PARCEL (EASTSIDE MARKET)
131-133 PITMAN STREET (1 WAYLAND AVENUE)
PROVIDENCE, RI

Site 1 of 2 in cluster E

RI SHWS **S107673503**
RI AUL **N/A**

Relative:
Higher

Actual:
43 ft.

SHWS:
Project Code: ADLE-HWM
Siterem Site Number: SR-28-0026
Facility Status: Inactive
Project Code Desc: ADLE-HWM
Project Date: 01/26/2006

AUL:
ELUR Date: 08/05/2008
Count Of Town: 1
Facility Size (Acres): 3.299
Project Code: ADLE-HWM
SA Date: Not reported
Plat: 15
Lot: 591
Siterem Site Number: SR-28-0026

25
NW
1/8-1/4
0.135 mi.
712 ft.

PERIODONTICS INC
167 GANO ST
PROVIDENCE, RI 02905

RCRA-SQG
FINDS
RI MANIFEST

EDR ID Number: **1000147236**
EPA ID Number: **RID987471570**

Relative:
Higher

Actual:
38 ft.

RCRA-SQG:

Date form received by agency:	06/08/2010
Facility name:	PERIODONTICS INC
Facility address:	167 GANO ST PROVIDENCE, RI 02905
EPA ID:	RID987471570
Mailing address:	GANO ST PROVIDENCE, RI 02914
Contact:	ELAINE B SMITH
Contact address:	GANO ST PROVIDENCE, RI 02914
Contact country:	US
Contact telephone:	(401) 274-2600
Contact email:	Not reported
EPA Region:	01
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	DRS SEGAL & DECESARE
Owner/operator address:	OWNERSTREET OWNERCITY, RI OWNER
Owner/operator country:	Not reported
Owner/operator telephone:	(401) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	PERIODONTICS INC
Owner/operator address:	GANO ST PROVIDENCE, RI 02906
Owner/operator country:	US
Owner/operator telephone:	(401) 274-2600
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	04/01/2008
Owner/Op end date:	Not reported

Owner/operator name:	DRS. SCOT FERTIK & JOHN BRODERICK
Owner/operator address:	GANO ST PROVIDENCE, RI 02906
Owner/operator country:	US
Owner/operator telephone:	(401) 274-2600
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1994
Owner/Op end date:	Not reported

PERIODONTICS INC (Continued) **1000147236**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Universal Waste Summary:
Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: Not reported

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: Not reported

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: Not reported

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: Not reported

Historical Generators:
Date form received by agency: 04/02/2008
Site name: PERIODONTICS INC
Classification: Small Quantity Generator

Date form received by agency: 04/12/1990
Site name: SEGAL & DECASARE DRS INC
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: D011
Waste name: SILVER

Waste code: D000
Waste name: Not Defined

Waste code: D011
Waste name: SILVER

Violation Status: No violations found

PERIODONTICS INC (Continued) **1000147236**

FINDS:

Registry ID: 110007827414

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RI MANIFEST:

GEN Cert Date:	7/8/1997
Transporter Receipt Date:	Not reported
Number Of Containers:	0
Container Type:	Not reported
Waste Code1:	D011
Waste Code2:	Not reported
Waste Code3:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	FREEDMAN JOSEPH CO INC
TSDF ID:	MAD981206774
TSDF Date:	Not reported
Transporter 2 Name:	Not reported
Transporter 2 ID:	Not reported
Manifest Docket Number:	MAJ188972
Waste Description:	SILVER
Quantity:	5
WT/Vol Units:	G
Item Number:	1
Transporter Name:	STERICYCLE INC
Transporter EPA ID:	CTD983872698
GEN Cert Date:	7/8/1997
Transporter Recpt Date:	Not reported
Transporter 2 Recpt Date:	Not reported
TSDF Recpt Date:	Not reported
EPA ID:	RID987471570
Transporter 2 ID:	Not reported

E26 **KENT CLEANERS** **RCRA NonGen / NLR** **1000391337**
North **9 WAYLAND SQ** **FINDS** **RID982747560**
1/8-1/4 **PROVIDENCE, RI 02906** **RI MANIFEST**
0.135 mi. **US AIRS**
713 ft. **Site 2 of 2 in cluster E**

Relative:
Higher

Actual:
45 ft.

RCRA NonGen / NLR:

Date form received by agency:	03/07/2000
Facility name:	KENT CLEANERS
Facility address:	9 WAYLAND SQ PROVIDENCE, RI 02906
EPA ID:	RID982747560
Mailing address:	WAYLAND SQ PROVIDENCE, RI 02886

KENT CLEANERS (Continued) **1000391337**

Contact:	PETER LASH
Contact address:	9 WAYLAND SQ PROVIDENCE, RI 02886
Contact country:	US
Contact telephone:	(401) 831-9641
Contact email:	Not reported
EPA Region:	01
Land type:	Other land type
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	GERALD GOLDSTEIN
Owner/operator address:	OWNERSTREET OWNERCITY, RI 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(401) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/0001
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Universal Waste Summary:

Waste type:	Batteries
Accumulated waste on-site:	No
Generated waste on-site:	Not reported
Waste type:	Lamps
Accumulated waste on-site:	No
Generated waste on-site:	Not reported
Waste type:	Pesticides
Accumulated waste on-site:	No
Generated waste on-site:	Not reported
Waste type:	Thermostats
Accumulated waste on-site:	No
Generated waste on-site:	Not reported

KENT CLEANERS (Continued) **1000391337**

Historical Generators:
Date form received by agency: 11/11/1988
Site name: KENT CLEANERS
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 01/04/1989
Date achieved compliance: 04/17/1989
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 01/23/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 500
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 01/04/1989
Date achieved compliance: 04/17/1989
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/07/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported

KENT CLEANERS (Continued) **1000391337**

Area of violation: Formal Enforcement Agreement or Order
Date violation determined: 01/04/1989
Date achieved compliance: 04/17/1989
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 01/23/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 500
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 01/04/1989
Date achieved compliance: 02/21/1989
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 01/23/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 500
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 03/18/1999
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Formal Enforcement Agreement or Order
Date achieved compliance: 04/17/1989
Evaluation lead agency: State

Evaluation date: 03/18/1999
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 04/17/1989
Evaluation lead agency: State

Evaluation date: 02/21/1989
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 01/04/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 04/17/1989
Evaluation lead agency: State

Evaluation date: 01/04/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 02/21/1989
Evaluation lead agency: State

KENT CLEANERS (Continued) **1000391337**

Evaluation date: 01/04/1989
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Formal Enforcement Agreement or Order
Date achieved compliance: 04/17/1989
Evaluation lead agency: State

FINDS:

Registry ID: 110001663272

Environmental Interest/Information System

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RI MANIFEST:
GEN Cert Date: 11/3/1989
Transporter Receipt Date: Not reported
Number Of Containers: 0
Container Type: Not reported
Waste Code1: F001
Waste Code2: Not reported
Waste Code3: Not reported
Comment: Not reported
Fee Exempt Code: Not reported
TSDF Name: CHEM PAK
TSDF ID: RID084802842
TSDF Date: Not reported
Transporter 2 Name: Not reported
Transporter 2 ID: Not reported
Manifest Docket Number: RIA0014963
Waste Description: PCE
Quantity: 8
WT/Vol Units: P
Item Number: 1
Transporter Name: CYCLE SOLVE CORPORATION
Transporter EPA ID: RID982194987
GEN Cert Date: 11/3/1989
Transporter Recpt Date: Not reported
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: Not reported

KENT CLEANERS (Continued) **1000391337**

EPA ID: RID982747560
Transporter 2 ID: Not reported

AIRS (AFS):

Airs Minor Details:
EPA plant ID: 110001663272
Plant name: KENT CLEANER
Plant address: 9 WAYLAND SQ
PROVIDENCE, RI 00000
County: PROVIDENCE
Region code: 01
Dunn & Bradst #: Not reported
Air quality cntrl region: 120
Sic code: 7216
Sic code desc: DRYCLEANING PLANTS, EXCEPT RUG
North Am. industrial classf: Not reported
NAIC code description: Not reported
Default compliance status: IN COMPLIANCE - INSPECTION
Default classification: POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Govt facility: ALL OTHER FACILITIES NOT OWNED OR OPERATED BY A FEDERAL, STATE, OR LOCAL GOVERNMENT
Current HPV: Not reported

Historical Compliance Minor Sources:
State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1101
Air prog code hist file: MACT (SECTION 63 NESHAPS)

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1102
Air prog code hist file: MACT (SECTION 63 NESHAPS)

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1104
Air prog code hist file: MACT (SECTION 63 NESHAPS)

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1202
Air prog code hist file: MACT (SECTION 63 NESHAPS)

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1203
Air prog code hist file: MACT (SECTION 63 NESHAPS)

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1301
Air prog code hist file: MACT (SECTION 63 NESHAPS)

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1303
Air prog code hist file: MACT (SECTION 63 NESHAPS)

State compliance status: IN COMPLIANCE - INSPECTION

KENT CLEANERS (Continued) **1000391337**

Hist compliance date: 1004
Air prog code hist file: MACT (SECTION 63 NESHAPS)

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1103
Air prog code hist file: MACT (SECTION 63 NESHAPS)

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1201
Air prog code hist file: MACT (SECTION 63 NESHAPS)

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1204
Air prog code hist file: MACT (SECTION 63 NESHAPS)

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1302
Air prog code hist file: MACT (SECTION 63 NESHAPS)

Compliance & Violation Data by Minor Sources:
Air program code: MACT (SECTION 63 NESHAPS)
Plant air program pollutant: Not reported
Default pollutant classification: POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Def. poll. compliance status: IN COMPLIANCE - INSPECTION
Def. attainment/non attnmnt: Not reported
Repeat violator date: Not reported
Turnover compliance: Not reported
EPA plant ID: 110001663272
Plant name: KENT CLEANERS
Plant address: 9 WAYLAND SQUARE
PROVIDENCE, RI 02906
County: PROVIDENCE
Region code: 01
Dunn & Bradst #: Not reported
Air quality cntrl region: 120
Sic code: 7216
Sic code desc: DRYCLEANING PLANTS, EXCEPT RUG
North Am. industrial classf: Not reported
NAIC code description: Not reported
Default compliance status: IN COMPLIANCE - INSPECTION
Default classification: POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Govt facility: ALL OTHER FACILITIES NOT OWNED OR OPERATED BY A FEDERAL, STATE, OR LOCAL GOVERNMENT
Current HPV: Not reported

Compliance and Enforcement Major Issues:
Air program: SIP SOURCE
National action type: Not reported
Date achieved: 00000
Penalty amount: Not reported

Historical Compliance Minor Sources:
State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1004
Air prog code hist file: SIP SOURCE

KENT CLEANERS (Continued) **1000391337**

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1101
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1103
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1201
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1202
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1204
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1302
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1303
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1102
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1104
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1203
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1301
Air prog code hist file: SIP SOURCE

Compliance & Violation Data by Minor Sources:
Air program code: SIP SOURCE
Plant air program pollutant: VOLATILE ORGANIC COMPOUNDS
Default pollutant classification: POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Def. poll. compliance status: IN COMPLIANCE - INSPECTION
Def. attainment/non attnmnt: Not reported
Repeat violator date: Not reported
Turnover compliance: Not reported

F27
North
1/8-1/4
0.138 mi.
727 ft.

EDR US Hist Cleaners **1014993376**
N/A

143 PITMAN ST
PROVIDENCE, RI 02906

Site 1 of 5 in cluster F

Relative:
Higher

Actual:
31 ft.

EDR Historical Cleaners:

Name:	COURTESY CLEANERS LLC
Year:	2002
Address:	143 PITMAN ST
Name:	COURTESY CLEANERS LLC
Year:	2003
Address:	143 PITMAN ST
Name:	COURTESY CLEANERS LLC
Year:	2004
Address:	143 PITMAN ST
Name:	COURTESY CLEANERS LLC
Year:	2005
Address:	143 PITMAN ST

F28
North
1/8-1/4
0.139 mi.
734 ft.

RI UST **U003207923**
N/A

ROSEWOOD MANOR
140 PITTMAN ST
PROVIDENCE, RI

Site 2 of 5 in cluster F

Relative:
Higher

Actual:
31 ft.

UST:

Facility ID:	UST-18177
Facility Class:	Commercials
Tank ID:	1
Tank Status:	**Permanently Closed**
Tank Capacity:	1500
Tank Substance:	Diesel
Date Installed:	03/01/1974

F29
North
1/8-1/4
0.139 mi.
734 ft.

RI LUST **S103485297**
N/A

ROSEWOOD HEALTH CARE
140 PITMAN STREET
PROVIDENCE, RI

Site 3 of 5 in cluster F

Relative:
Higher

Actual:
31 ft.

LUST:

Project Number:	28183-LS
Project Date:	12/16/1998
Facility Id:	18177
Facility Status:	**Inactive; Investigation/Remed. Complete,No Further Action Required**

F30
North
1/8-1/4
0.140 mi.
738 ft.

139 PITMAN ST
PROVIDENCE, RI 02906

Site 4 of 5 in cluster F

EDR US Hist Cleaners **1014990990**
N/A

Relative:
Higher

Actual:
32 ft.

EDR Historical Cleaners:

Name:	COURTESY CLEANERS LLC
Year:	2007
Address:	139 PITMAN ST
Name:	COURTESY CLEANERS LLC
Year:	2008
Address:	139 PITMAN ST
Name:	COURTESY CLEANERS
Year:	2011
Address:	139 PITMAN ST
Name:	COURTESY CLEANERS
Year:	2012
Address:	139 PITMAN ST

F31
North
1/8-1/4
0.142 mi.
749 ft.

RITE AID #10251
135 PITMAN STREET
PROVIDENCE, RI 02906

RCRA-LQG **1001225538**
FINDS **RIR000015677**
RI MANIFEST

Site 5 of 5 in cluster F

Relative:
Higher

Actual:
33 ft.

RCRA-LQG:

Date form received by agency:	09/17/2013
Facility name:	RITE AID # 10251
Facility address:	135 PITMAN ST PROVIDENCE, RI 02906
EPA ID:	RIR000015677
Mailing address:	HUNTER LANE CAMP HILL, PA 17011
Contact:	STEPHANIE A CAIATI
Contact address:	Not reported Not reported
Contact country:	US
Contact telephone:	(717) 730-8225
Contact email:	Not reported
EPA Region:	01
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

RITE AID #10251 (Continued) **1001225538**

Owner/operator name: MAXI DRUG SOUTH INC
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 09/05/2007
Owner/Op end date: Not reported

Owner/operator name: RITE AID CORP
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 09/05/2007
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/30/2013
Site name: RITE AID # 10251
Classification: Small Quantity Generator

Date form received by agency: 03/31/1998
Site name: BROOKS NO 363
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

RITE AID #10251 (Continued) **1001225538**

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D007
Waste name: CHROMIUM

Waste code: D009
Waste name: MERCURY

Waste code: D010
Waste name: SELENIUM

Waste code: D011
Waste name: SILVER

Waste code: D024
Waste name: M-CRESOL

Waste code: D026
Waste name: CRESOL

Waste code: P001
Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

Waste code: P075
Waste name: NICOTINE, & SALTS

Waste code: R006
Waste name: EXTREMELY HAZARDOUS WASTE

Waste code: R015
Waste name: R015

Violation Status: No violations found

FINDS:

Registry ID: 110004934242

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RI MANIFEST:
GEN Cert Date: 12/23/2004

RITE AID #10251 (Continued) **1001225538**

Transporter Receipt Date: 12/23/2004
Number Of Containers: Not reported
Container Type: Not reported
Waste Code1: D011R012
Waste Code2: Not reported
Waste Code3: Not reported
Comment: Not reported
Fee Exempt Code: Not reported
TSDF Name: Northland Environmental Inc.
TSDF ID: rid040098352
TSDF Date: 12/23/2004
Transporter 2 Name: Not reported
Transporter 2 ID: Not reported
Manifest Docket Number: RIS0102663
Waste Description: PHOTO FIXER
Quantity: 60
WT/Vol Units: G
Item Number: 47023
Transporter Name: 21ST CENTURY ENV MGT
Transporter EPA ID: RID980906986
GEN Cert Date: 12/23/2004
Transporter Recpt Date: 12/23/2004
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: 12/23/2004
EPA ID: RIR000015677
Transporter 2 ID: Not reported

G32 **BROWN UNIVERSITY FACILITY SUPPORT BLDG** **FINDS** **1008387785**
SSW **271 TOCKWOTTON ST** **NY MANIFEST** **N/A**
1/8-1/4 **PROVIDENCE, RI 02903**
0.159 mi.
840 ft. **Site 1 of 7 in cluster G**

Relative:
Higher

Actual:
13 ft.

FINDS:

Registry ID: 110022530821

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

NY MANIFEST:
EPA ID: RIR000505644
Country: USA

Mailing Info:
Name: BROWN UNIVERSITY
Contact: HENRY HUPPERT
Address: 164 ANGELL STREET P.O. BOX 1914
City/State/Zip: PROVIDENCE, RI 02912
Country: USA
Phone: 401-863-3850

BROWN UNIVERSITY FACILITY SUPPORT BLDG (Continued) **1008387785**

Manifest:

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	MAD985286988
Trans2 State ID:	Not reported
Generator Ship Date:	06/30/2009
Trans1 Recv Date:	06/30/2009
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	07/14/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RIR000505644
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD077444263
Waste Code:	Not reported
Quantity:	10.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	002867886FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	MAD985286988
Trans2 State ID:	Not reported
Generator Ship Date:	04/07/2009
Trans1 Recv Date:	04/07/2009
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	04/17/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RIR000505644
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD077444263
Waste Code:	Not reported
Quantity:	23.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DF - Fiberboard or plastic drums (glass)

BROWN UNIVERSITY FACILITY SUPPORT BLDG (Continued) **1008387785**

Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	005534077JJK
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	MAD985286988
Trans2 State ID:	Not reported
Generator Ship Date:	08/12/2010
Trans1 Recv Date:	08/12/2010
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	08/26/2010
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RIR000505644
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD077444263
Waste Code:	Not reported
Quantity:	5.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	003538933FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	MAD985286988
Trans2 State ID:	Not reported

BROWN UNIVERSITY FACILITY SUPPORT BLDG (Continued) **1008387785**

Generator Ship Date:	08/12/2010
Trans1 Recv Date:	08/12/2010
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	08/26/2010
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RIR000505644
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD077444263
Waste Code:	Not reported
Quantity:	61.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1.0
Year:	2010
Manifest Tracking Num:	003538933FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

G33 **BROWN UNIVERSITY** **RCRA-SQG** **1008375196**
SSW **271 TOCKWOTTON ST** **RI MANIFEST** **RIR000505644**
1/8-1/4 **PROVIDENCE, RI 02903**
0.159 mi.
840 ft. **Site 2 of 7 in cluster G**

Relative:
Higher

Actual:
13 ft.

RCRA-SQG:

Date form received by agency:	07/25/2005
Facility name:	BROWN UNIVERSITY
Facility address:	271 TOCKWOTTON ST PROVIDENCE, RI 02903
EPA ID:	RIR000505644
Mailing address:	ANGELL ST BOX 1914 PROVIDENCE, RI 02912
Contact:	HENRY HUPPERT
Contact address:	ANGELL ST BOX 1914 PROVIDENCE, RI 02912
Contact country:	Not reported
Contact telephone:	(401) 863-3850
Contact email:	Not reported
EPA Region:	01
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

BROWN UNIVERSITY (Continued) **1008375196**

Owner/Operator Summary:

Owner/operator name:	BROWN UNIVERSITY
Owner/operator address:	ANGELL ST BOX 1914 PROVIDENCE, RI 02903
Owner/operator country:	US
Owner/operator telephone:	(401) 863-3850
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	07/19/2005
Owner/Op end date:	Not reported

Owner/operator name:	BROWN UNIVERSITY
Owner/operator address:	ANGELL ST BOX 1914 PROVIDENCE, RI 02903
Owner/operator country:	US
Owner/operator telephone:	(401) 863-3850
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	07/19/2005
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code:	D002
Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

BROWN UNIVERSITY (Continued) **1008375196**

Waste code: D003
Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

Waste code: D004
Waste name: ARSENIC

Waste code: D005
Waste name: BARIUM

Waste code: D006
Waste name: CADMIUM

Waste code: D007
Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: D009
Waste name: MERCURY

Waste code: D010
Waste name: SELENIUM

Waste code: D011
Waste name: SILVER

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: R001
Waste name: TOXIC WASTE

Waste code: R005
Waste name: RI SPECIAL WASTE

Waste code: R010
Waste name: WASTE OIL

Violation Status: No violations found

RI MANIFEST:
GEN Cert Date: 8/31/2005
Transporter Receipt Date: 8/26/2005
Number Of Containers: 0

BROWN UNIVERSITY (Continued) **1008375196**

Container Type:	DF
Waste Code1:	R005
Waste Code2:	Not reported
Waste Code3:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	Pollution Control Industrie
TSDF ID:	IND000646943
TSDF Date:	9/13/2005
Transporter 2 Name:	Not reported
Transporter 2 ID:	Not reported
Manifest Docket Number:	RIH0034923
Waste Description:	Non-RCRA, non-DOT
Quantity:	250
WT/Vol Units:	P
Item Number:	001
Transporter Name:	Triumvirate Environmental, Inc.
Transporter EPA ID:	MAD985286988
GEN Cert Date:	8/31/2005
Transporter Recpt Date:	8/26/2005
Transporter 2 Recpt Date:	Not reported
TSDF Recpt Date:	9/13/2005
EPA ID:	RIR000505644
Transporter 2 ID:	Not reported

G34 **NATIONAL GRID - TRANSMISSION LINE RELOCATION** **RI SHWS** **S106953698**
SSW **TOCKWOTTON & INDIA STREET** **N/A**
1/8-1/4 **PROVIDENCE, RI**
0.161 mi.
850 ft. **Site 3 of 7 in cluster G**

Relative:
Higher

Actual:
12 ft.

SHWS:

Project Code:	NETL-HWM
Siterem Site Number:	SR-28-0937
Facility Status:	**Active**
Project Code Desc:	NETL-HWM
Project Date:	02/01/2005

H35 **MEDWAY ASSOCIATES** **RI UST** **U003529321**
NNE **217 MEDWAY ST** **N/A**
1/8-1/4 **PROVIDENCE, RI**
0.161 mi.
851 ft. **Site 1 of 2 in cluster H**

Relative:
Higher

Actual:
58 ft.

UST:

Facility ID:	UST-18451
Facility Class:	Other
Tank ID:	1
Tank Status:	**Permanently Closed**
Tank Capacity:	1000
Tank Substance:	Heating Oil No.2
Date Installed:	04/25/2001

36
NNE
1/8-1/4
0.174 mi.
917 ft.

BETHANY HOME OF RHODE ISLAND
111 SOUTH ANGELL ST
PROVIDENCE, RI

RI UST **U001210880**
N/A

Relative:
Higher

Actual:
60 ft.

UST:
Facility ID: UST-25
Facility Class: Commercials

Tank ID: 1
Tank Status: Permanently Closed
Tank Capacity: 5000
Tank Substance: Heating Oil No.2
Date Installed: 12/01/1967

Tank ID: 2
Tank Status: In Use
Tank Capacity: 5000
Tank Substance: Heating Oil No.2
Date Installed: 08/01/1988

H37
NNE
1/8-1/4
0.177 mi.
935 ft.

MEDWAY MANOR
164 BUTLER AVE
PROVIDENCE, RI

Site 2 of 2 in cluster H

RI UST **U004192135**
N/A

Relative:
Higher

Actual:
59 ft.

UST:
Facility ID: UST-4504
Facility Class: Multiple Residence

Tank ID: 1
Tank Status: Permanently Closed
Tank Capacity: 1000
Tank Substance: Heating Oil No.2
Date Installed: Not reported

Tank ID: 2
Tank Status: Permanently Closed
Tank Capacity: 1000
Tank Substance: Heating Oil No.2
Date Installed: Not reported

G38
SSW
1/8-1/4
0.181 mi.
956 ft.

STORES OPERATIONS
285 GEORGE M. COHEN BLVD
PROVIDENCE, RI

Site 4 of 7 in cluster G

RI UST **U003529411**
N/A

Relative:
Higher

Actual:
10 ft.

UST:
Facility ID: UST-18546
Facility Class: Education Private

Tank ID: 1
Tank Status: Permanently Closed

STORES OPERATIONS (Continued) **U003529411**

Tank Capacity: 275
Tank Substance: Heating Oil No.2
Date Installed: 04/25/2001

I39 **111 WAYLAND AVENUE** **RI UST** **U003759545**
North **111 WAYLAND AVE** **N/A**
1/8-1/4 **PROVIDENCE, RI**
0.188 mi.
990 ft. **Site 1 of 3 in cluster I**

Relative:
Higher

Actual:
52 ft.

UST:
Facility ID: UST-18834
Facility Class: Commercials

Tank ID: 1
Tank Status: Permanently Closed
Tank Capacity: 1000
Tank Substance: Unknown
Date Installed: 04/25/2001

J40 **GENTRY INC** **RCRA NonGen / NLR** **1000420470**
ENE **1 WATERMAN AVE** **FINDS** **RID001187376**
1/8-1/4 **EAST PROVIDENCE, RI 02914** **RI SHWS**
0.193 mi. **NY MANIFEST**
1020 ft. **Site 1 of 3 in cluster J** **RI MANIFEST**

Relative:
Lower

Actual:
4 ft.

RCRA NonGen / NLR:
Date form received by agency: 03/01/2000
Facility name: GENTRY INC
Facility address: 1 WATERMAN AVE
EAST PROVIDENCE, RI 02914
EPA ID: RID001187376
Mailing address: WATERMAN AVE
EAST PROVIDENCE, RI 02914
Contact: NATHAN-P GORDON
Contact address: 1 WATERMAN AVE
EAST PROVIDENCE, RI 02914
Contact country: US
Contact telephone: (401) 438-6754
Contact email: Not reported
EPA Region: 01
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: Not reported
Owner/operator address: OWNERSTREET
OWNERCITY, RI 99999
Owner/operator country: Not reported
Owner/operator telephone: (401) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/0001
Owner/Op end date: Not reported

GENTRY INC (Continued) **1000420470**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 10/26/1984
Site name: GENTRY INC
Classification: Small Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110004902605

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

SHWS:
Project Code: ALGO-DOT
Siterem Site Number: SR-10-0040
Facility Status: **Active**
Project Code Desc: ALGO-DOT
Project Date: 01/01/2010

Project Code: RBPR-HWM
Siterem Site Number: SR-10-1215
Facility Status: **Active**
Project Code Desc: RBPR-HWM
Project Date: 12/01/1994

NY MANIFEST:
EPA ID: RID001187376
Country: USA

Mailing Info:
Name: GENTRY INCORPORATED

GENTRY INC (Continued) **1000420470**

Contact: GENTRY INCORPORATED
Address: WATERMAN AVENUE
City/State/Zip: EAST PROVIDENCE, RI 02914
Country: USA
Phone: 401-438-6754

Manifest:

Document ID: NYA3449463
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC
Trans1 State ID: RI12810
Trans2 State ID: Not reported
Generator Ship Date: 08/08/1986
Trans1 Recv Date: 08/08/1986
Trans2 Recv Date: / /
TSD Site Recv Date: 08/08/1986
Part A Recv Date: 09/08/1986
Part B Recv Date: 08/15/1986
Generator EPA ID: RID001187376
Trans1 EPA ID: RID000769711
Trans2 EPA ID: Not reported
TSDF ID: NYD080469935
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 00150
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001
Container Type: TT - Cargo tank, tank trucks
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 100
Year: 1986

Document ID: NYA6479964
Manifest Status: Completed copy
Trans1 State ID: RI58675
Trans2 State ID: Not reported
Generator Ship Date: 04/09/1987
Trans1 Recv Date: 04/09/1987
Trans2 Recv Date: / /
TSD Site Recv Date: 04/10/1987
Part A Recv Date: 04/14/1987
Part B Recv Date: 04/21/1987
Generator EPA ID: RID001187376
Trans1 EPA ID: RID000769711
Trans2 EPA ID: Not reported
TSDF ID: NYD080469935
Waste Code: D001 - NON-LISTED IGNITABLE WASTES
Quantity: 00165
Units: G - Gallons (liquids only)* (8.3 pounds)
Number of Containers: 001
Container Type: TT - Cargo tank, tank trucks
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 100
Year: 1987

Document ID: NYB2100186

GENTRY INC (Continued) **1000420470**

Manifest Status:	Completed copy
Trans1 State ID:	MA566360
Trans2 State ID:	35606MD
Generator Ship Date:	10/24/1990
Trans1 Recv Date:	10/24/1990
Trans2 Recv Date:	10/24/1990
TSD Site Recv Date:	10/25/1990
Part A Recv Date:	11/06/1990
Part B Recv Date:	11/07/1990
Generator EPA ID:	RID001187376
Trans1 EPA ID:	MAD019371079
Trans2 EPA ID:	MAD019371079
TSDF ID:	NYD043815703
Waste Code:	F003 - UNKNOWN
Quantity:	00110
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	1990

RI MANIFEST:

GEN Cert Date:	1/2/1991
Transporter Receipt Date:	Not reported
Number Of Containers:	0
Container Type:	Not reported
Waste Code1:	F001
Waste Code2:	Not reported
Waste Code3:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	GEN CHEM
TSDF ID:	MAD019371079
TSDF Date:	Not reported
Transporter 2 Name:	Not reported
Transporter 2 ID:	Not reported
Manifest Docket Number:	MAC895468
Waste Description:	111
Quantity:	55
WT/Vol Units:	G
Item Number:	1
Transporter Name:	GEN CHEM
Transporter EPA ID:	MAD019371079
GEN Cert Date:	1/2/1991
Transporter Recpt Date:	Not reported
Transporter 2 Recpt Date:	Not reported
TSDF Recpt Date:	Not reported
EPA ID:	RID001187376
Transporter 2 ID:	Not reported

J41 **RED BRIDGE PROPERTY** **RI UST** **U002040362**
ENE **1 WATERMAN AVE** **N/A**
1/8-1/4 **EAST PROVIDENCE, RI**
0.193 mi.
1020 ft. **Site 2 of 3 in cluster J**

Relative:
Lower

Actual:
4 ft.

UST:
Facility ID: UST-16775
Facility Class: Other

Tank ID: 1
Tank Status: Permanently Closed
Tank Capacity: 1000
Tank Substance: Heating Oil No.2
Date Installed: 04/25/2001

J42 **EDR US Hist Auto Stat** **1015116090**
ENE **1 WATERMAN AVE** **N/A**
1/8-1/4 **EAST PROVIDENCE, RI 02914**
0.193 mi.
1020 ft. **Site 3 of 3 in cluster J**

Relative:
Lower

Actual:
4 ft.

EDR Historical Auto Stations:

Name: SUNRISE AUTO CENTER
Year: 1999
Address: 1 WATERMAN AVE

Name: SUNRISE AUTO CENTER
Year: 2000
Address: 1 WATERMAN AVE

Name: SUNRISE AUTO CTR
Year: 2001
Address: 1 WATERMAN AVE

Name: SUNRISE AUTO CTR
Year: 2002
Address: 1 WATERMAN AVE

Name: SUNRISE AUTO CTR
Year: 2003
Address: 1 WATERMAN AVE

Name: SUNRISE AUTO CTR
Year: 2004
Address: 1 WATERMAN AVE

Name: SUNRISE AUTO CENTER
Year: 2005
Address: 1 WATERMAN AVE

Name: SUNRISE AUTO CENTER
Year: 2006
Address: 1 WATERMAN AVE

Name: SUNRISE AUTO CENTER
Year: 2007
Address: 1 WATERMAN AVE

43 North 1/8-1/4 0.197 mi. 1038 ft.

RHEUMATOLOGY ASSOC
49 SEEKONK ST
PROVIDENCE, RI 02906

RCRA-SQG
FINDS
RI MANIFEST

EDR ID Number: 1000425706
EPA ID Number: RID987469558

Relative: Higher

Actual: 43 ft.

RCRA-SQG:

Date form received by agency:	12/15/1989
Facility name:	RHEUMATOLOGY ASSOC
Facility address:	49 SEEKONK ST PROVIDENCE, RI 02906
EPA ID:	RID987469558
Mailing address:	SEEKONK ST PROVIDENCE, RI 02906
Contact:	SANDRA KRAEMER
Contact address:	49 SEEKONK ST PROVIDENCE, RI 02906
Contact country:	US
Contact telephone:	(401) 351-2280
Contact email:	Not reported
EPA Region:	01
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	RHEUMATOLOGY ASSOC
Owner/operator address:	OWNERSTREET OWNERCITY, RI 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(401) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/0001
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D000

RHEUMATOLOGY ASSOC (Continued) **1000425706**

Waste name: Not Defined

Waste code: D011
Waste name: SILVER

Violation Status: No violations found

FINDS:

Registry ID: 110004922718

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RI MANIFEST:

GEN Cert Date:	1/7/1992
Transporter Receipt Date:	Not reported
Number Of Containers:	0
Container Type:	Not reported
Waste Code1:	D011
Waste Code2:	Not reported
Waste Code3:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	B&D
TSDF ID:	RID982766941
TSDF Date:	Not reported
Transporter 2 Name:	Not reported
Transporter 2 ID:	Not reported
Manifest Docket Number:	MAF323959
Waste Description:	PHOT MAT
Quantity:	3
WT/Vol Units:	P
Item Number:	1
Transporter Name:	B&D
Transporter EPA ID:	RID982766941
GEN Cert Date:	1/7/1992
Transporter Recpt Date:	Not reported
Transporter 2 Recpt Date:	Not reported
TSDF Recpt Date:	Not reported
EPA ID:	RID987469558
Transporter 2 ID:	Not reported

I44 **PEREL & BILDER DRS INC** **RCRA-SQG** **1000203627**
North **116 WAYLAND AVE** **FINDS** **RID982748634**
1/8-1/4 **PROVIDENCE, RI 02906** **RI MANIFEST**
0.197 mi.
1042 ft. **Site 2 of 3 in cluster I**

Relative:
Higher

Actual:
54 ft.

RCRA-SQG:

Date form received by agency:	03/27/2000
Facility name:	PEREL & BILDER DRS INC
Facility address:	116 WAYLAND AVE PROVIDENCE, RI 02906
EPA ID:	RID982748634
Mailing address:	WAYLAND AVE PROVIDENCE, RI 02906
Contact:	DEBRA BENJAMIN
Contact address:	116 WAYLAND AVE PROVIDENCE, RI 02906
Contact country:	US
Contact telephone:	(401) 861-1343
Contact email:	Not reported
EPA Region:	01
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	MORTON AND JANE PEREL
Owner/operator address:	365 GRANDVIEW ROAD EAST GREENWICH, RI 02818
Owner/operator country:	Not reported
Owner/operator telephone:	(401) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/0001
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	12/19/1988

PEREL & BILDER DRS INC (Continued) **1000203627**

Site name: PEREL & BILDER DRS INC
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: D011
Waste name: SILVER

Violation Status: No violations found

FINDS:

Registry ID: 110004917715

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RI MANIFEST:
GEN Cert Date: 1/27/1994
Transporter Receipt Date: Not reported
Number Of Containers: 0
Container Type: Not reported
Waste Code1: D011
Waste Code2: Not reported
Waste Code3: Not reported
Comment: Not reported
Fee Exempt Code: Not reported
TSDF Name: FREEDMAN JOSEPH CO INC
TSDF ID: MAD981206774
TSDF Date: Not reported
Transporter 2 Name: Not reported
Transporter 2 ID: Not reported
Manifest Docket Number: MAG162454
Waste Description: HW LIQ NOS
Quantity: 5
WT/Vol Units: G
Item Number: 1
Transporter Name: MED WASTE MANAGEMENT
Transporter EPA ID: MAD985278316
GEN Cert Date: 1/27/1994
Transporter Recpt Date: Not reported
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: Not reported
EPA ID: RID982748634
Transporter 2 ID: Not reported

45
NNW
1/8-1/4
0.198 mi.
1047 ft.

AMBASSADOR APARTMENTS
77 PITMAN ST
PROVIDENCE, RI 02906

FINDS **1007130651**
RI UST **N/A**

Relative: Higher

Actual: 56 ft.

FINDS:

Registry ID: 110015774090

Environmental Interest/Information System
ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

UST:
Facility ID: UST-19219
Facility Class: Commercials

Tank ID: 1
Tank Status: Permanently Closed
Tank Capacity: 2000
Tank Substance: Heating Oil No.2
Date Installed: Not reported

G46
SSW
1/8-1/4
0.199 mi.
1053 ft.

STANDISH JOHNSON
220 INDIA STREET
PROVIDENCE, RI 02903

Site 5 of 7 in cluster G

NY MANIFEST **1009246839**
N/A

Relative: Higher

Actual: 11 ft.

NY MANIFEST:
EPA ID: RIP000001395
Country: USA

Mailing Info:
Name: STANDISH JOHNSON
Contact: STANDISH JOHNSON
Address: 220 INDIA STREET
City/State/Zip: PROVIDENCE, RI 02903
Country: USA
Phone: 401-751-3170

Manifest:

Document ID: NYA3502034
Manifest Status: Completed after the designated time period for a TSDF to get a copy to the DEC

STANDISH JOHNSON (Continued) **1009246839**

Trans1 State ID:	RI12810
Trans2 State ID:	Not reported
Generator Ship Date:	05/12/1986
Trans1 Recv Date:	05/12/1986
Trans2 Recv Date:	/ /
TSD Site Recv Date:	05/13/1986
Part A Recv Date:	06/17/1986
Part B Recv Date:	05/20/1986
Generator EPA ID:	RIP000001395
Trans1 EPA ID:	RID000769711
Trans2 EPA ID:	Not reported
TSDF ID:	NYD080469935
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Quantity:	00110
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Year:	1986

G47 **DAYS HOTEL** **RI SHWS** **S103247331**
SSW **220 INDIA STREET** **N/A**
1/8-1/4 **PROVIDENCE, RI**
0.199 mi.
1053 ft. **Site 6 of 7 in cluster G**

Relative:
Higher

Actual:
11 ft.

SHWS:

Project Code:	DAYS-HWM
Siterem Site Number:	SR-28-0360
Facility Status:	**Inactive**
Project Code Desc:	DAYS-HWM
Project Date:	09/28/1988

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48 **TOLL BROTHERS RESIDENTIAL DEVELOPMENT (EASTSIDE COMMONS COND** **RI SHWS** **S108962999**
NW **EAST GEORGE ST. & GANO ST.** **RI AUL** **N/A**
1/8-1/4 **PROVIDENCE, RI**
0.201 mi.
1059 ft.

Relative:
Higher

Actual:
56 ft.

SHWS:

Project Code:	TBRD-HWM
Siterem Site Number:	SR-28-1548
Facility Status:	**Active**
Project Code Desc:	TBRD-HWM
Project Date:	02/26/2002

AUL:

ELUR Date:	09/24/2003
Count Of Town:	1
Facility Size (Acres):	2.600
Project Code:	TBRD-HWM
SA Date:	09/02/2003
Plat:	14
Lot:	589
Siterem Site Number:	SR-28-1548

G49
SSW
1/8-1/4
0.203 mi.
1070 ft.

BROWN UNIVERSITY - MARSTON BOATHOUSE
258 INDIA ST
PROVIDENCE, RI

Site 7 of 7 in cluster G

RI UST **U001211947**
N/A

Relative:
Higher

Actual:
10 ft.

UST:
Facility ID: UST-1591
Facility Class: Education Private

Tank ID: 1
Tank Status: Permanently Closed
Tank Capacity: 275
Tank Substance: Gasoline
Date Installed: 03/01/1965

Tank ID: 2
Tank Status: Permanently Closed
Tank Capacity: 4000
Tank Substance: Heating Oil No.2
Date Installed: 04/25/2001

Tank ID: 3
Tank Status: Permanently Closed
Tank Capacity: 2500
Tank Substance: Heating Oil No.2
Date Installed: 04/25/2001

I50
North
1/8-1/4
0.203 mi.
1074 ft.

SEPE PROPERTIES, LLC
120 WAYLAND AVE
PROVIDENCE, RI

Site 3 of 3 in cluster I

RI UST **U004016711**
N/A

Relative:
Higher

Actual:
55 ft.

UST:
Facility ID: UST-4024
Facility Class: Commercials

Tank ID: 1
Tank Status: Permanently Closed
Tank Capacity: 1000
Tank Substance: Heating Oil No.2
Date Installed: Not reported

51
WSW
1/8-1/4
0.211 mi.
1116 ft.

EAST GREENWICH PHOTO
34 GOVERNOR ST 1ST FL
PROVIDENCE, RI 02906

RCRA-SQG **1010331835**
RIR000506519

Relative:
Higher

Actual:
62 ft.

RCRA-SQG:
Date form received by agency: 07/03/2006
Facility name: EAST GREENWICH PHOTO
Facility address: 34 GOVERNOR ST 1ST FL
PROVIDENCE, RI 02906
EPA ID: RIR000506519

EAST GREENWICH PHOTO (Continued) **1010331835**

Mailing address: MAIN STREET
EAST GREENWICH, RI 02818
Contact: MAX DITTLEMAN
Contact address: MAIN STREET
EAST GREENWICH, RI 02818
Contact country: US
Contact telephone: (401) 884-0220
Contact email: Not reported
EPA Region: 01
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: KEN JONES
Owner/operator address: MAIN STREET
EAST GREENWICH, RI 02818
Owner/operator country: US
Owner/operator telephone: (401) 884-0220
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 05/01/2006
Owner/Op end date: Not reported

Owner/operator name: ELIZABETH BAPTISTA
Owner/operator address: GOVERNOR ST 1ST FL
PROVIDENCE, RI 02906
Owner/operator country: US
Owner/operator telephone: (401) 884-0220
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 05/01/2006
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:

Waste code: D011

EAST GREENWICH PHOTO (Continued) **1010331835**

Waste name: SILVER

Violation Status: No violations found

52
East
1/8-1/4
0.228 mi.
1204 ft.

380 VALLEY ST
EAST PROVIDENCE, RI 02914

EDR US Hist Auto Stat **1015458235**
N/A

Relative:
Higher

Actual:
35 ft.

EDR Historical Auto Stations:
Name: STATE TOWING SVC INC
Year: 2010
Address: 380 VALLEY ST

K53
North
1/8-1/4
0.235 mi.
1242 ft.

WAYLAND BAKERY
138 WAYLAND AVE
PROVIDENCE, RI

Site 1 of 2 in cluster K

RI UST **U004154971**
N/A

Relative:
Higher

Actual:
58 ft.

UST:
Facility ID: UST-4396
Facility Class: Commercials

Tank ID: 1
Tank Status: Permanently Closed
Tank Capacity: 1000
Tank Substance: Heating Oil No.2
Date Installed: Not reported

K54
North
1/8-1/4
0.239 mi.
1264 ft.

LERNER PROCTOR TRUST

PROVIDENCE, RI

Site 2 of 2 in cluster K

RI UST **U001214115**
N/A

Relative:
Higher

Actual:
58 ft.

UST:
Facility ID: UST-16270
Facility Class: Commercials

Tank ID: 1
Tank Status: Permanently Closed
Tank Capacity: 1000
Tank Substance: Heating Oil No.2
Date Installed: 04/25/2001

55
WSW
1/8-1/4
0.241 mi.
1272 ft.

VARTAN GREGORIAN SCHOOL (FORMER FOX POINT SCHOOL) — **RI UST** — **U001213889**
455 WICKENDEN ST — **N/A**
PROVIDENCE, RI

Relative:
Higher

Actual:
60 ft.

UST:
Facility ID: UST-15762
Facility Class: Education - Town

Tank ID: 1
Tank Status: Permanently Closed
Tank Capacity: 2000
Tank Substance: Heating Oil No.2
Date Installed: 04/25/2001

Tank ID: 2
Tank Status: Permanently Closed
Tank Capacity: 10000
Tank Substance: Heating Oil No.2
Date Installed: 04/25/2001

Tank ID: 3
Tank Status: Permanently Closed
Tank Capacity: 1000
Tank Substance: Heating Oil No.2
Date Installed: Not reported

56
SW
1/4-1/2
0.270 mi.
1423 ft.

BOLD POINT PARK/TOCKWOTTON HOME-LOT 1 — **US BROWNFIELDS** — **1012297108**
PIER ROAD — **N/A**
EAST PROVIDENCE, RI 02914

Relative:
Higher

Actual:
49 ft.

US BROWNFIELDS:

Recipient name:	Rhode Island D.E.M.
Grant type:	Section 128(a) State/Tribal
Property name:	BOLD POINT PARK/TOCKWOTTON HOME-LOT 1
Property #:	Assessor's Plat 16, Block 22, Lot 1
Parcel size:	1.7
Property Description:	Not reported
Latitude:	41.8155776
Longitude:	-71.3889670
HCM label:	Interpolation-Satellite
Map scale:	Not reported
Point of reference:	Center of a Facility or Station
Datum:	World Geodetic System of 1984
ACRES property ID:	106002
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	6336
Assessment funding source:	US EPA - State & Tribal Section 128(a) Funding
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported

BOLD POINT PARK/TOCKWOTTON HOME-LOT 1 (Continued) **1012297108**

Redevelopment start date:	Not reported
Assessment funding entity:	EPA
Cleanup funding entity:	Not reported
Grant type:	H
Accomplishment type:	Phase I Environmental Assessment
Accomplishment count:	1
Cooperative agreement #:	97189801
Ownership entity:	Private
Current owner:	Tockwotton Home
Did owner change:	N
Cleanup required:	Yes
Video available:	No
Photo available:	Yes
Institutional controls required:	Y
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Y
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	No
State/tribal program date:	13-FEB-04
State/tribal program ID:	TOCK-HWM
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	Not reported
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Y
Groundwater cleaned:	Not reported
Lead contaminant found:	Not reported
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	Not reported
Other contaminants found:	Not reported
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	Not reported
PCBs found:	Not reported
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
VOCs found:	Not reported
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	0

BOLD POINT PARK/TOCKWOTTON HOME-LOT 1 (Continued) **1012297108**

Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	1.7
Future use greenspace acreage:	1.7
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	N
Arsenic cleaned up:	Not reported
Cadmium cleaned up:	Not reported
Chromium cleaned up:	Not reported
Copper cleaned up:	Not reported
Iron cleaned up:	Not reported
mercury cleaned up:	Not reported
nickel cleaned up:	Not reported
No clean up:	Not reported
Pesticides cleaned up:	Not reported
Selenium cleaned up:	Not reported
SVOCs cleaned up:	Not reported
Unknown clean up:	Not reported
Arsenic contaminant found:	Not reported
Cadmium contaminant found:	Not reported
Chromium contaminant found:	Not reported
Copper contaminant found:	Not reported
Iron contaminant found:	Not reported
Mercury contaminant found:	Not reported
Nickel contaminant found:	Not reported
No contaminant found:	Not reported
Pesticides contaminant found:	Not reported
Selenium contaminant found:	Not reported
SVOCs contaminant found:	Not reported
Unknown contaminant found:	Not reported
Future Use: Multistory	Not reported
Media affected Bluiding Material:	Not reported
Media affected indoor air:	Not reported
Building material media cleaned up:	Not reported
Indoor air media cleaned up:	Not reported
Unknown media cleaned up:	Not reported
Past Use: Multistory	Not reported

Recipient name:	Rhode Island DEM
Grant type:	Section 128(a) State/Tribal
Property name:	BOLD POINT PARK/TOCKWOTTON HOME-LOT 1
Property #:	Assessor’s Plat 16, Block 22, Lot 1
Parcel size:	1.7
Property Description:	Not reported
Latitude:	41.8155776
Longitude:	-71.3889670
HCM label:	Interpolation-Satellite
Map scale:	Not reported
Point of reference:	Center of a Facility or Station
Datum:	World Geodetic System of 1984
ACRES property ID:	106002
Start date:	Not reported
Completed date:	Not reported

BOLD POINT PARK/TOCKWOTTON HOME-LOT 1 (Continued) **1012297108**

Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	289
Assessment funding source:	US EPA - State & Tribal Section 128(a) Funding
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported
Redevelopment start date:	Not reported
Assessment funding entity:	USEPA
Cleanup funding entity:	Not reported
Grant type:	H
Accomplishment type:	Phase II Environmental Assessment
Accomplishment count:	0
Cooperative agreement #:	96115701
Ownership entity:	Private
Current owner:	Tockwotton Home
Did owner change:	N
Cleanup required:	Yes
Video available:	No
Photo available:	Yes
Institutional controls required:	Y
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Y
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	No
State/tribal program date:	13-FEB-04
State/tribal program ID:	TOCK-HWM
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	Not reported
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Y
Groundwater cleaned:	Not reported
Lead contaminant found:	Not reported
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Y
Other metals cleaned:	Not reported
Other contaminants found:	Not reported
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	Not reported
PCBs found:	Not reported
PCBs cleaned up:	Not reported
Petro products found:	Y
Petro products cleaned:	Not reported
Sediments found:	Not reported

BOLD POINT PARK/TOCKWOTTON HOME-LOT 1 (Continued) **1012297108**

Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
VOCs found:	Not reported
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	1.7
Future use greenspace acreage:	1.7
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	N
Arsenic cleaned up:	Not reported
Cadmium cleaned up:	Not reported
Chromium cleaned up:	Not reported
Copper cleaned up:	Not reported
Iron cleaned up:	Not reported
mercury cleaned up:	Not reported
nickel cleaned up:	Not reported
No clean up:	Not reported
Pesticides cleaned up:	Not reported
Selenium cleaned up:	Not reported
SVOCs cleaned up:	Not reported
Unknown clean up:	Not reported
Arsenic contaminant found:	Not reported
Cadmium contaminant found:	Not reported
Chromium contaminant found:	Not reported
Copper contaminant found:	Not reported
Iron contaminant found:	Not reported
Mercury contaminant found:	Not reported
Nickel contaminant found:	Not reported
No contaminant found:	Not reported
Pesticides contaminant found:	Not reported
Selenium contaminant found:	Not reported
SVOCs contaminant found:	Not reported
Unknown contaminant found:	Not reported
Future Use: Multistory	Not reported
Media affected Bluiding Material:	Not reported
Media affected indoor air:	Not reported
Building material media cleaned up:	Not reported
Indoor air media cleaned up:	Not reported
Unknown media cleaned up:	Not reported
Past Use: Multistory	Not reported

57 SE 1/4-1/2 0.282 mi. 1488 ft.

GUILD DRILLING CO INC
100 WATER ST
EAST PROVIDENCE, RI 02914

RCRA-SQG
RI LUST
RI MANIFEST

EDR ID Number: 1000278210
EPA ID Number: RID080819899

Relative: Higher

Actual: 9 ft.

RCRA-SQG:

Date form received by agency:	10/04/1988
Facility name:	GUILD DRILLING CO INC
Facility address:	100 WATER ST EAST PROVIDENCE, RI 02914
EPA ID:	RID080819899
Mailing address:	WATER ST EAST PROVIDENCE, RI 02914
Contact:	STEPHAN RIOUX
Contact address:	100 WATER ST EAST PROVIDENCE, RI 02914
Contact country:	US
Contact telephone:	(401) 434-0750
Contact email:	Not reported
EPA Region:	01
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	AGR PROPERTIES INC
Owner/operator address:	OWNERSTREET OWNERCITY, RI 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(401) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

Waste code:	D001

GUILD DRILLING CO INC (Continued) **1000278210**

Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

LUST:
Project Number: 1011-LS
Project Date: 08/28/1990
Facility Id: 3277
Facility Status: Soil Removal Only; No Further Action Required

RI MANIFEST:
GEN Cert Date: 12/23/1996
Transporter Receipt Date: Not reported
Number Of Containers: 0
Container Type: Not reported
Waste Code1: CR05
Waste Code2: Not reported
Waste Code3: Not reported
Comment: Not reported
Fee Exempt Code: Not reported
TSDF Name: UNITED OIL RECOVERY INC
TSDF ID: CTD021816889
TSDF Date: Not reported
Transporter 2 Name: Not reported
Transporter 2 ID: Not reported
Manifest Docket Number: CTF0609172
Waste Description: STATE REG WASTE
Quantity: 55
WT/Vol Units: G
Item Number: 1
Transporter Name: UNITED OIL RECOVERY INC
Transporter EPA ID: CTD021816889
GEN Cert Date: 12/23/1996
Transporter Recpt Date: Not reported
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: Not reported
EPA ID: RID080819899
Transporter 2 ID: Not reported

L58 **PROVIDENCE & WORCESTER RAILROAD** **RI SHWS S106664137**
ENE **WATERMAN & MASSASOIT AVE** **N/A**
1/4-1/2 **EAST PROVIDENCE, RI**
0.286 mi.
1508 ft. **Site 1 of 2 in cluster L**

Relative:
Higher

Actual:
35 ft.

SHWS:
Project Code: PWRC-HWM
Siterem Site Number: SR-10-1144
Facility Status: **Active**
Project Code Desc: PWRC-HWM
Project Date: 09/15/1993

L59
ENE
1/4-1/2
0.286 mi.
1508 ft.

PROVIDENCE & WORCESTER RAILROAD
WATERMAN & MASSASOIT AVE
EAST PROVIDENCE, RI

Site 2 of 2 in cluster L

Relative:
Higher

Actual:
35 ft.

RI AUL **S107459433**
N/A

AUL:
ELUR Date: 09/05/1997
Count Of Town: 1
Facility Size (Acres): 5.650
Project Code: PWRC-HWM
SA Date: Not reported
Plat: MAP 105, BLOCK 1
Lot: PARCEL 2
Siterem Site Number: SR-10-1144

60
NNW
1/4-1/2
0.295 mi.
1559 ft.

WAYLAND SQUARE REALTY
218 WATERMAN STREET
PROVIDENCE, RI

Relative:
Higher

Actual:
69 ft.

RI LUST **S105857139**
N/A

LUST:
Project Number: 28229-ST
Project Date: 03/31/2003
Facility Id: 19133
Facility Status: Inactive; Investigation/Remed. Complete,No Further Action Required

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M61
ESE
1/4-1/2
0.321 mi.
1695 ft.

KRAUS CHEMICAL CO
156 VALLEY ST
EAST PROVIDENCE, RI 02914

Site 1 of 2 in cluster M

Relative:
Higher

Actual:
22 ft.

RCRA NonGen / NLR **1000427411**
FINDS **RID018547232**
RI SHWS
RI MANIFEST

RCRA NonGen / NLR:
Date form received by agency: 01/27/1981
Facility name: KRAUS CHEMICAL CO
Facility address: 156 VALLEY ST
EAST PROVIDENCE, RI 02914
EPA ID: RID018547232
Mailing address: PO BOX 14213 156 VALLEY ST
EAST PROVIDENCE, RI 02914
Contact: GARY KRAUS
Contact address: PO BOX 14213 156 VALLEY ST
EAST PROVIDENCE, RI 02914
Contact country: US
Contact telephone: (401) 434-4960
Contact email: Not reported
EPA Region: 01
Land type: Private
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: MARTIN KRAUS & BERNARD KRAUS
Owner/operator address: 156 VALLEY ST
EAST PROVIDENCE, RI 02914
Owner/operator country: Not reported

KRAUS CHEMICAL CO (Continued) **1000427411**

Owner/operator telephone: (401) 434-4960
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D000
Waste name: Not Defined

Waste code: F001
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 07/22/1985
Date achieved compliance: 02/18/1999
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 07/22/1985
Date achieved compliance: 02/18/1999

KRAUS CHEMICAL CO (Continued) **1000427411**

Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 07/26/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 02/18/1999
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 02/18/1999
Evaluation lead agency: State

Evaluation date: 03/03/1987
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 07/22/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 02/18/1999
Evaluation lead agency: State

FINDS:

Registry ID: 110004905666

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

SHWS:
Project Code: KRA-HWM
Siterem Site Number: SR-10-1304
Facility Status: **Active**
Project Code Desc: KRA-HWM
Project Date: Not reported

Project Code: KRA-DOT
Siterem Site Number: SR-10-1304
Facility Status: **Active**
Project Code Desc: KRA-DOT
Project Date: Not reported

RI MANIFEST:

KRAUS CHEMICAL CO (Continued) **1000427411**

GEN Cert Date: 3/9/1989
Transporter Receipt Date: Not reported
Number Of Containers: 0
Container Type: Not reported
Waste Code1: F002
Waste Code2: Not reported
Waste Code3: Not reported
Comment: Not reported
Fee Exempt Code: Not reported
TSDF Name: NE SOL
TSDF ID: MAD000604447
TSDF Date: Not reported
Transporter 2 Name: Not reported
Transporter 2 ID: Not reported
Manifest Docket Number: RIA0018594
Waste Description: 111/PERC/TCE
Quantity: 495
WT/Vol Units: G
Item Number: 1
Transporter Name: NE SOLV
Transporter EPA ID: MAD000604447
GEN Cert Date: 3/9/1989
Transporter Recpt Date: Not reported
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: Not reported
EPA ID: RID018547232
Transporter 2 ID: Not reported

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62 **DULGARIAN (MYOPIC BOOKS)** **RI LUST** **S103933993**
North **5 -9 SOUTH ANGELL** **N/A**
1/4-1/2 **PROVIDENCE, RI**
0.322 mi.
1700 ft.

Relative:
Higher

Actual:
68 ft.

LUST:
Project Number: 28186-ST
Project Date: 02/11/1999
Facility Id: 18578
Facility Status: Inactive; Investigation/Remed. Complete,No Further Action Required

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63 **TOCKWOTTON HOME** **RI SHWS** **S105061766**
SSE **99 MAURAN AVENUE** **RI SPILLS** **N/A**
1/4-1/2 **EAST PROVIDENCE, RI** **RI AUL**
0.324 mi.
1713 ft.

Relative:
Higher

Actual:
12 ft.

SHWS:
Project Code: TOCK-HWM
Siterem Site Number: SR-10-1546
Facility Status: Active
Project Code Desc: TOCK-HWM
Project Date: 02/13/2004

SPILLS:
Report Number: Not reported

TOCKWOTTON HOME (Continued) **S105061766**

Report Date: Not reported
Material Spilled: Not reported
Inspector: Not reported
Source: Not reported
Complaint Number: 14671
Complaint Date: 09/19/2000
Inspect ID: 11106
Inspection Date: 09/19/2000
Founded: Y
Amount Spilled: 2000
Units Spilled: LBS
Nature Of Spill: Not reported
Nature Of Spill 2: Not reported

AUL:
ELUR Date: 01/13/2014
Count Of Town: 1
Facility Size (Acres): Not reported
Project Code: TOCK-HWM
SA Date: Not reported
Plat: Map 16 Blocks 21, 22
Lot: 7, 1
Siterem Site Number: SR-10-1546

64
SE
1/4-1/2
0.330 mi.
1740 ft.

FOX FERTILIZER **RI SHWS** **S103349934**
62-78 VALLEY STREET **RI AUL** **N/A**
EAST PROVIDENCE, RI

Relative:
Higher

Actual:
17 ft.

SHWS:
Project Code: FOX-HWM
Siterem Site Number: SR-10-0498
Facility Status: **Active**
Project Code Desc: FOX-HWM
Project Date: 08/14/1998

AUL:
ELUR Date: 10/20/1999
Count Of Town: 1
Facility Size (Acres): 1.100
Project Code: FOX-HWM
SA Date: 09/23/1999
Plat: 16
Lot: 3
Siterem Site Number: SR-10-0498

M65
SE
1/4-1/2
0.339 mi.
1790 ft.

FORTUNE METAL OF RHODE ISLAND INC.
105 VALLEY ST
EAST PROVIDENCE, RI 02914

RI SHWS S107732855
RI AIRS N/A

Site 2 of 2 in cluster M

Relative:
Higher

Actual:
24 ft.

SHWS:

Project Code:	CITY-DOT
Siterem Site Number:	SR-10-0260 A
Facility Status:	**Active**
Project Code Desc:	CITY-DOT
Project Date:	01/22/2010

AIRS:

Facility ID:	AIR1913
SIC Code:	5093
AIRS Code:	Not reported
Ploverid:	Not reported
Date Received:	Not reported
Invent Year:	2002
Source Classification:	30901201
Total Volatile Organic Compound Emiisions (lbs):	0
Total Haz Air Pollutants Emitted Defined by EPA (lbs):	138
Oxides of Nitrogen Emitted (lbs):	0
Carbon Monoxide Emitted (lbs):	0
Total Particulate Matter Emitted (lbs):	2448
Total Oxides of sulfur Emitted (lbs):	0
Mailing Name:	Not reported
Mailing Addr1:	Not reported
Mailing Addr2:	Not reported
Mailing City/State/Zip:	Not reported
Num of Employees:	Not reported
Telephone Number:	Not reported

66
South
1/4-1/2
0.339 mi.
1792 ft.

UNOCAL CHEMICALS DIVISION, UNOCAL CORP.
1 PIER RD
EAST PROVIDENCE, RI

RI SHWS U001212079
RI UST N/A

Relative:
Higher

Actual:
9 ft.

SHWS:

Project Code:	UNO-HWM
Siterem Site Number:	SR-10-1607
Facility Status:	**Active**
Project Code Desc:	UNO-HWM
Project Date:	Not reported

UST:

Facility ID:	UST-1785
Facility Class:	Industrial
Tank ID:	1
Tank Status:	**Permanently Closed**
Tank Capacity:	1000
Tank Substance:	Hazardous Substance
Date Installed:	02/01/1974

67
NNW
1/4-1/2
0.361 mi.
1905 ft.

395 ANGEL ASSOCIATES
395 ANGEL ST
PROVIDENCE, RI

RI LUST **U002040369**
RI UST **N/A**

Relative:
Higher

Actual:
75 ft.

LUST:
Project Number: 2890-ST
Project Date: 07/22/1994
Facility Id: 16794
Facility Status: Soil Removal Only; No Further Action Required

UST:
Facility ID: UST-16794
Facility Class: Commercials

Tank ID: 1
Tank Status: Permanently Closed
Tank Capacity: 6000
Tank Substance: Heating Oil No.2
Date Installed: 04/25/2001

Tank ID: 2
Tank Status: Permanently Closed
Tank Capacity: 500
Tank Substance: Heating Oil No.2
Date Installed: 04/25/2001

68
NNW
1/4-1/2
0.364 mi.
1923 ft.

WATERMAN ASSOCIATES
186 WATERMAN ST
PROVIDENCE, RI

RI LUST **U003665249**
RI UST **N/A**

Relative:
Higher

Actual:
81 ft.

LUST:
Project Number: 28201-ST
Project Date: 08/05/1999
Facility Id: 18670
Facility Status: Soil Removal Only; No Further Action Required

UST:
Facility ID: UST-18670
Facility Class: Commercials

Tank ID: 1
Tank Status: Permanently Closed
Tank Capacity: 1000
Tank Substance: Heating Oil No.2
Date Installed: 04/25/2001

69
North
1/4-1/2
0.379 mi.
2003 ft.

453 ANGELL STREET LLC
453 ANGELL STREET
PROVIDENCE, RI

RI LUST **S111311366**
N/A

Relative:
Higher

Actual:
72 ft.

LUST:
Project Number: 28291-ST
Project Date: 10/11/2011
Facility Id: 4465
Facility Status: Soil Removal Only; No Further Action Required

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70
East
1/4-1/2
0.382 mi.
2018 ft.

DEXTER SERVICE CENTER
80 WATERMAN AVE
EAST PROVIDENCE, RI 02914

RCRA-SQG **1000400546**
FINDS **RID144925781**
RI LUST
RI UST
RI MANIFEST

Relative:
Higher

Actual:
62 ft.

RCRA-SQG:
Date form received by agency: 10/16/1986
Facility name: DEXTER SERVICE CENTER
Facility address: 80 WATERMAN AVE
EAST PROVIDENCE, RI 02914
EPA ID: RID144925781
Mailing address: WATERMAN AVE
EAST PROVIDENCE, RI 02914
Contact: DANIEL COREN
Contact address: 80 WATERMAN AVE
EAST PROVIDENCE, RI 02914
Contact country: US
Contact telephone: (401) 438-3900
Contact email: Not reported
EPA Region: 01
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: DEXGER ENTERPRIZES
Owner/operator address: OWNERSTREET
OWNERCITY, RI 99999
Owner/operator country: Not reported
Owner/operator telephone: (401) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No

DEXTER SERVICE CENTER (Continued) **1000400546**

Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D000
Waste name: Not Defined

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

FINDS:

Registry ID: 110004911070

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

LUST:
Project Number: 1067-LS
Project Date: 03/16/1999
Facility Id: 888
Facility Status: Soil Removal Only; No Further Action Required

UST:
Facility ID: UST-888
Facility Class: Gasoline Station

Tank ID: 1
Tank Status: Permanently Closed
Tank Capacity: 3000
Tank Substance: Diesel
Date Installed: 04/01/1975

Tank ID: 2
Tank Status: Permanently Closed

DEXTER SERVICE CENTER (Continued) **1000400546**

Tank Capacity: 3000
Tank Substance: Gasoline
Date Installed: 04/01/1975

Tank ID: 3
Tank Status: Permanently Closed
Tank Capacity: 3000
Tank Substance: Gasoline
Date Installed: 04/01/1975

Tank ID: 4
Tank Status: Permanently Closed
Tank Capacity: 6000
Tank Substance: Gasoline
Date Installed: 04/01/1982

Tank ID: 5
Tank Status: Permanently Closed
Tank Capacity: 500
Tank Substance: Waste Oil
Date Installed: 04/01/1965

Tank ID: 6
Tank Status: Permanently Closed
Tank Capacity: 500
Tank Substance: Heating Oil No.2
Date Installed: 04/01/1965

RI MANIFEST:
GEN Cert Date: 6/12/1990
Transporter Receipt Date: Not reported
Number Of Containers: 0
Container Type: Not reported
Waste Code1: D001
Waste Code2: Not reported
Waste Code3: Not reported
Comment: Not reported
Fee Exempt Code: Not reported
TSDF Name: SK
TSDF ID: MAD000846006
TSDF Date: Not reported
Transporter 2 Name: Not reported
Transporter 2 ID: Not reported
Manifest Docket Number: MAF086818
Waste Description: PET NAP
Quantity: 45
WT/Vol Units: P
Item Number: 1
Transporter Name: SK
Transporter EPA ID: ILD000805911
GEN Cert Date: 6/12/1990
Transporter Recpt Date: Not reported
Transporter 2 Recpt Date: Not reported

DEXTER SERVICE CENTER (Continued) **1000400546**

TSDF Recpt Date: Not reported
EPA ID: RID144925781
Transporter 2 ID: Not reported

71
SSE
1/4-1/2
0.383 mi.
2024 ft.

NATIONAL GRID-EAST PROVIDENCE NATURAL GAS REGULATOR STATION **RI SHWS** **S112057132**
51 FIRST STREET **N/A**
EAST PROVIDENCE, RI

Relative:
Higher

Actual:
24 ft.

SHWS:
Project Code: NEGR-HWM
Siterem Site Number: SR-10-0879
Facility Status: **Active**
Project Code Desc: NEGR-HWM
Project Date: 07/17/2012

72
SSW
1/4-1/2
0.404 mi.
2132 ft.

BOLD POINT PARK-LOT 3 **US BROWNFIELDS** **1012296931**
PIER ROAD **N/A**
EAST PROVIDENCE, RI 02914

Relative:
Higher

Actual:
6 ft.

US BROWNFIELDS:
Recipient name: Rhode Island D.E.M.
Grant type: Section 128(a) State/Tribal
Property name: BOLD POINT PARK-LOT 3
Property #: Plat 6, Block 1, Lot 3
Parcel size: 3.8
Property Description: Not reported
Latitude: 41.8153377
Longitude: -71.3914239
HCM label: Interpolation-Satellite
Map scale: Not reported
Point of reference: Center of a Facility or Station
Datum: World Geodetic System of 1984
ACRES property ID: 106061
Start date: Not reported
Completed date: Not reported
Acres cleaned up: Not reported
Cleanup funding: Not reported
Cleanup funding source: Not reported
Assessment funding: 6336
Assessment funding source: US EPA - State & Tribal Section 128(a) Funding
Redevelopment funding: Not reported
Redev. funding source: Not reported
Redev. funding entity name: Not reported
Redevelopment start date: Not reported
Assessment funding entity: EPA
Cleanup funding entity: Not reported
Grant type: H
Accomplishment type: Phase I Environmental Assessment
Accomplishment count: 1
Cooperative agreement #: 97189801
Ownership entity: Government

BOLD POINT PARK-LOT 3 (Continued) **1012296931**

Current owner:	City of East Providence
Did owner change:	N
Cleanup required:	Unknown
Video available:	No
Photo available:	Yes
Institutional controls required:	U
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	Not reported
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Y
Groundwater cleaned:	Not reported
Lead contaminant found:	Not reported
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Not reported
Other metals cleaned:	Not reported
Other contaminants found:	Not reported
Other contams found description:	Not reported
PAHs found:	Not reported
PAHs cleaned up:	Not reported
PCBs found:	Not reported
PCBs cleaned up:	Not reported
Petro products found:	Not reported
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
VOCs found:	Y
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	0
Past use greenspace acreage:	3.8
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	3.8
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported

BOLD POINT PARK-LOT 3 (Continued) **1012296931**

Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	N
Arsenic cleaned up:	Not reported
Cadmium cleaned up:	Not reported
Chromium cleaned up:	Not reported
Copper cleaned up:	Not reported
Iron cleaned up:	Not reported
mercury cleaned up:	Not reported
nickel cleaned up:	Not reported
No clean up:	Not reported
Pesticides cleaned up:	Not reported
Selenium cleaned up:	Not reported
SVOCs cleaned up:	Not reported
Unknown clean up:	Not reported
Arsenic contaminant found:	Not reported
Cadmium contaminant found:	Not reported
Chromium contaminant found:	Not reported
Copper contaminant found:	Not reported
Iron contaminant found:	Not reported
Mercury contaminant found:	Not reported
Nickel contaminant found:	Not reported
No contaminant found:	Not reported
Pesticides contaminant found:	Not reported
Selenium contaminant found:	Not reported
SVOCs contaminant found:	Not reported
Unknown contaminant found:	Not reported
Future Use: Multistory	Not reported
Media affected Bluiding Material:	Not reported
Media affected indoor air:	Not reported
Building material media cleaned up:	Not reported
Indoor air media cleaned up:	Not reported
Unknown media cleaned up:	Not reported
Past Use: Multistory	Not reported

Recipient name:	Rhode Island DEM
Grant type:	Section 128(a) State/Tribal
Property name:	BOLD POINT PARK-LOT 3
Property #:	Plat 6, Block 1, Lot 3
Parcel size:	3.8
Property Description:	Not reported
Latitude:	41.8153377
Longitude:	-71.3914239
HCM label:	Interpolation-Satellite
Map scale:	Not reported
Point of reference:	Center of a Facility or Station
Datum:	World Geodetic System of 1984
ACRES property ID:	106061
Start date:	Not reported
Completed date:	Not reported
Acres cleaned up:	Not reported
Cleanup funding:	Not reported
Cleanup funding source:	Not reported
Assessment funding:	289
Assessment funding source:	US EPA - State & Tribal Section 128(a) Funding
Redevelopment funding:	Not reported
Redev. funding source:	Not reported
Redev. funding entity name:	Not reported

BOLD POINT PARK-LOT 3 (Continued) **1012296931**

Redevelopment start date:	Not reported
Assessment funding entity:	USEPA
Cleanup funding entity:	Not reported
Grant type:	H
Accomplishment type:	Phase II Environmental Assessment
Accomplishment count:	0
Cooperative agreement #:	96115701
Ownership entity:	Government
Current owner:	City of East Providence
Did owner change:	N
Cleanup required:	Unknown
Video available:	No
Photo available:	Yes
Institutional controls required:	U
IC Category proprietary controls:	Not reported
IC cat. info. devices:	Not reported
IC cat. gov. controls:	Not reported
IC cat. enforcement permit tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	Not reported
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Y
Groundwater cleaned:	Not reported
Lead contaminant found:	Not reported
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Not reported
Other metals cleaned:	Not reported
Other contaminants found:	Not reported
Other contams found description:	Not reported
PAHs found:	Not reported
PAHs cleaned up:	Not reported
PCBs found:	Not reported
PCBs cleaned up:	Not reported
Petro products found:	Not reported
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
VOCs found:	Y
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported

BOLD POINT PARK-LOT 3 (Continued) **1012296931**

Past use greenspace acreage:	3.8
Past use residential acreage:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	3.8
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	N
Arsenic cleaned up:	Not reported
Cadmium cleaned up:	Not reported
Chromium cleaned up:	Not reported
Copper cleaned up:	Not reported
Iron cleaned up:	Not reported
mercury cleaned up:	Not reported
nickel cleaned up:	Not reported
No clean up:	Not reported
Pesticides cleaned up:	Not reported
Selenium cleaned up:	Not reported
SVOCs cleaned up:	Not reported
Unknown clean up:	Not reported
Arsenic contaminant found:	Not reported
Cadmium contaminant found:	Not reported
Chromium contaminant found:	Not reported
Copper contaminant found:	Not reported
Iron contaminant found:	Not reported
Mercury contaminant found:	Not reported
Nickel contaminant found:	Not reported
No contaminant found:	Not reported
Pesticides contaminant found:	Not reported
Selenium contaminant found:	Not reported
SVOCs contaminant found:	Not reported
Unknown contaminant found:	Not reported
Future Use: Multistory	Not reported
Media affected Bluiding Material:	Not reported
Media affected indoor air:	Not reported
Building material media cleaned up:	Not reported
Indoor air media cleaned up:	Not reported
Unknown media cleaned up:	Not reported
Past Use: Multistory	Not reported

N73 **SOUTH QUAY DREDGING PROJECT** **RI SHWS** **S103247014**
South **WILKES BARRE PIER** **N/A**
1/4-1/2 **EAST PROVIDENCE, RI**
0.429 mi.
2263 ft. **Site 1 of 2 in cluster N**

Relative:
Higher

Actual:
9 ft.

SHWS:

Project Code:	SQDP-HWM
Siterem Site Number:	SR-10-1455
Facility Status:	**Inactive**
Project Code Desc:	SQDP-HWM
Project Date:	02/17/1995

N74
South
1/4-1/2
0.429 mi.
2263 ft.

WILKES BARRE PIPELINE
WILKES BARRE PIER TO DEXTER RD
EAST PROVIDENCE, RI

Site 2 of 2 in cluster N

Relative:
Higher

Actual:
9 ft.

RI SHWS **S104783016**
N/A

SHWS:

Project Code:	WBPL-HWM
Siterem Site Number:	SR-10-1681
Facility Status:	**Active**
Project Code Desc:	WBPL-HWM
Project Date:	11/01/1993

75
WNW
1/4-1/2
0.449 mi.
2369 ft.

SYMONDS PROPERTY
61 COOKE STREET
PROVIDENCE, RI

Relative:
Higher

Actual:
113 ft.

RI SHWS **S106114065**
N/A

SHWS:

Project Code:	SYMP-HWM
Siterem Site Number:	SR-28-1504
Facility Status:	**Inactive**
Project Code Desc:	SYMP-HWM
Project Date:	12/22/2003

O76
ESE
1/4-1/2
0.458 mi.
2418 ft.

GILMORE'S FLOWER
76 TAUNTON AVENUE
EAST PROVIDENCE, RI

Site 1 of 2 in cluster O

Relative:
Higher

Actual:
71 ft.

RI LUST **S113909457**
N/A

LUST:

Project Number:	10106-ST
Project Date:	04/16/2013
Facility Id:	2543
Facility Status:	**Inactive; Investigation/Remed. Complete,No Further Action Required**

O77
ESE
1/4-1/2
0.461 mi.
2433 ft.

EXXON CO USA #35409
69 TAUNTON AVE
EAST PROVIDENCE, RI 02914

Site 2 of 2 in cluster O

Relative:
Higher

Actual:
71 ft.

RCRA-SQG **1000445342**
FINDS **RID987473303**
RI LUST
RI MANIFEST

RCRA-SQG:

Date form received by agency:	07/10/1990
Facility name:	EXXON CO USA #35409
Facility address:	69 TAUNTON AVE EAST PROVIDENCE, RI 02914
EPA ID:	RID987473303
Mailing address:	PO BOX 4552 RM 1227 HOUSTON, TX 772104552
Contact:	CAROLYN JONES
Contact address:	PO BOX 4552 RM 1227 HOUSTON, TX 772104552
Contact country:	US
Contact telephone:	(713) 656-9075

EXXON CO USA #35409 (Continued) **1000445342**

Contact email: Not reported
EPA Region: 01
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: EXXONMOBIL CORP
Owner/operator address: 3225 GALLOWS RD
FAIRFAX, VA 22037
Owner/operator country: Not reported
Owner/operator telephone: (713) 656-9075
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/0001
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D018
Waste name: BENZENE

Violation Status: No violations found

FINDS:

Registry ID: 110004925494

EXXON CO USA #35409 (Continued) **1000445342**

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

LUST:
Project Number: 1047-LS
Project Date: 05/22/1995
Facility Id: 1266
Facility Status: Inactive; Investigation/Remed. Complete,No Further Action Required

RI MANIFEST:
GEN Cert Date: 11/26/1996
Transporter Receipt Date: Not reported
Number Of Containers: 0
Container Type: Not reported
Waste Code1: MA99
Waste Code2: Not reported
Waste Code3: Not reported
Comment: Not reported
Fee Exempt Code: Not reported
TSDF Name: CLEAN HARBORS OF BRAINTREE INC
TSDF ID: MAD053452637
TSDF Date: Not reported
Transporter 2 Name: Not reported
Transporter 2 ID: Not reported
Manifest Docket Number: MAJ577427
Waste Description: SOIL/BTEX
Quantity: 400
WT/Vol Units: P
Item Number: 1
Transporter Name: Not reported
Transporter EPA ID: MAD039322250
GEN Cert Date: 11/26/1996
Transporter Recpt Date: Not reported
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: Not reported
EPA ID: RID987473303
Transporter 2 ID: Not reported

78
West
1/4-1/2
0.463 mi.
2447 ft.

BROOK STREET FIRE STATION **RI LUST** **U001213244**
223 BROOK ST **RI UST** **N/A**
PROVIDENCE, RI

Relative:
Higher

Actual:
60 ft.

LUST:
Project Number: 28216-LS
Project Date: 11/27/2000
Facility Id: 3267
Facility Status: Active; Investigation/Remed. Required

BROOK STREET FIRE STATION (Continued) **U001213244**

UST:
Facility ID: UST-3267
Facility Class: City/Town Government

Tank ID: 1
Tank Status: In Use
Tank Capacity: 1000
Tank Substance: Heating Oil No.2
Date Installed: 04/25/2001

Tank ID: 2
Tank Status: Permanently Closed
Tank Capacity: 550
Tank Substance: Diesel
Date Installed: 04/25/2001

P79 **RI DOT - HENDERSON BRIDGE** **RI SHWS S103246998**
ENE **MASSASOIT AVE @ HENDERSON BRIDGE** **RI AUL N/A**
1/4-1/2 **EAST PROVIDENCE, RI**
0.481 mi.
2539 ft. **Site 1 of 2 in cluster P**

Relative:
Higher

Actual:
26 ft.

SHWS:
Project Code: KOPP-DOT
Siterem Site Number: SR-10-1303
Facility Status: Active
Project Code Desc: KOPP-DOT
Project Date: 01/19/2006

Project Code: KCOP-SFA
Siterem Site Number: SR-10-1303
Facility Status: Inactive
Project Code Desc: KCOP-SFA
Project Date: 01/01/1983

Project Code: DOTM-HWM
Siterem Site Number: SR-10-1319 A
Facility Status: Inactive
Project Code Desc: DOTM-HWM
Project Date: 09/15/1993

AUL:
ELUR Date: 05/24/2001
Count Of Town: 1
Facility Size (Acres): Not reported
Project Code: DOTM-HWM
SA Date: Not reported
Plat: Not reported
Lot: Not reported
Siterem Site Number: SR-10-1319 A

P80
ENE
1/4-1/2
0.485 mi.
2560 ft.

COHEN CLEANERS & DYERS
99 MASSASOIT AVENUE
EAST PROVIDENCE, RI

Site 2 of 2 in cluster P

RI SHWS **S105537054**
N/A

Relative:
Higher

Actual:
23 ft.

SHWS:
Project Code: COCD-HWM
Siterem Site Number: SR-10-0271
Facility Status: Active
Project Code Desc: COCD-HWM
Project Date: 06/26/2002

81
West
1/4-1/2
0.492 mi.
2600 ft.

BROOK ST. CITGO
250 BROOK STREET
PROVIDENCE, RI

RI LUST **S101360524**
N/A

Relative:
Higher

Actual:
72 ft.

LUST:
Project Number: 2856-LS
Project Date: 07/29/1993
Facility Id: 3198
Facility Status: Soil Removal Only; No Further Action Required

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82
WSW
1/2-1
0.516 mi.
2723 ft.

ROUTE 195 DOT PROJECT 18
PLAT 18 LOT 149- 68 TRAVERSE STREET
PROVIDENCE, RI

RI SHWS **S109172365**
N/A

Relative:
Higher

Actual:
24 ft.

SHWS:
Project Code: DT18-DOT
Siterem Site Number: SR-28-1343
Facility Status: Active
Project Code Desc: DT18-DOT
Project Date: 06/27/2000

83
West
1/2-1
0.565 mi.
2985 ft.

BROWN UNIVERSITY WATSON INSTITUTE
THAYER STREET & CHARLESFIELD STREET
PROVIDENCE, RI

RI SHWS **S106664237**
N/A

Relative:
Higher

Actual:
82 ft.

SHWS:
Project Code: BUWI-HWM
Siterem Site Number: SR-28-0183
Facility Status: Active
Project Code Desc: BUWI-HWM
Project Date: 02/08/2000

Q84
SW
1/2-1
0.575 mi.
3036 ft.

ROUTE 195 DOT PROJECT 89
PLAT 18 LOT 344 -101 INDIA STREET
PROVIDENCE, RI

RI SHWS **S109172354**
N/A

Site 1 of 4 in cluster Q

Relative:
Higher

Actual:
14 ft.

SHWS:
Project Code: DT89-DOT
Siterem Site Number: SR-28-1371
Facility Status: **Active**
Project Code Desc: DT89-DOT
Project Date: 03/04/2003

Q85
SW
1/2-1
0.575 mi.
3036 ft.

ROUTE 195 DOT PROJECT 19
PLAT 18 LOT 331- 32 INDIA STREET
PROVIDENCE, RI

RI SHWS **S109172364**
N/A

Site 2 of 4 in cluster Q

Relative:
Higher

Actual:
14 ft.

SHWS:
Project Code: DT19-DOT
Siterem Site Number: SR-28-1344
Facility Status: **Active**
Project Code Desc: DT19-DOT
Project Date: 06/27/2000

Q86
SW
1/2-1
0.575 mi.
3036 ft.

ROUTE 195 DOT PROJECT 90
PLAT 18 LOT 119 -36 INDIA STREET
PROVIDENCE, RI

RI SHWS **S108963010**
N/A

Site 3 of 4 in cluster Q

Relative:
Higher

Actual:
14 ft.

SHWS:
Project Code: DT90-DOT
Siterem Site Number: SR-28-1372
Facility Status: **Active**
Project Code Desc: DT90-DOT
Project Date: 03/04/2003

Q87
SW
1/2-1
0.575 mi.
3036 ft.

ROUTE 195 DOT PROJECT 23
PLAT 18 LOT 339-110 INDIA STREET-
PROVIDENCE, RI

RI SHWS **S109172363**
N/A

Site 4 of 4 in cluster Q

Relative:
Higher

Actual:
14 ft.

SHWS:
Project Code: DT23-DOT
Siterem Site Number: SR-28-1345
Facility Status: **Active**
Project Code Desc: DT23-DOT
Project Date: 06/27/2000

88
SW
1/2-1
0.606 mi.
3201 ft.

ROUTE 195 DOT PROJECT 86 (SEE 12)
604 SOUTH MAIN STREET
PROVIDENCE, RI

RI SHWS **S105537094**
N/A

Relative:
Higher

Actual:
15 ft.

SHWS:
Project Code: DT86-DOT
Siterem Site Number: SR-28-1368
Facility Status: **Active**
Project Code Desc: DT86-DOT
Project Date: 06/03/2002

89
WNW
1/2-1
0.617 mi.
3259 ft.

BROWN UNIVERSITY
THAYER AND GEORGE STREET
PROVIDENCE, RI

RI SHWS **S103247323**
N/A

Relative:
Higher

Actual:
89 ft.

SHWS:
Project Code: BRUN-HWM
Siterem Site Number: SR-28-0177
Facility Status: **Active**
Project Code Desc: BRUN-HWM
Project Date: 09/06/1996

90
WNW
1/2-1
0.643 mi.
3397 ft.

WHEELER SCHOOL DEVELOPMENT
224 ANGELL STREET
PROVIDENCE, RI

RI SHWS **S113712136**
N/A

Relative:
Higher

Actual:
113 ft.

SHWS:
Project Code: WSD-HWM
Siterem Site Number: SR-28-1669
Facility Status: **Active**
Project Code Desc: WSD-HWM
Project Date: 04/24/2013

91
SW
1/2-1
0.649 mi.
3425 ft.

MAURANIA CORPORATION
1 INDIA STREET
PROVIDENCE, RI

RI SHWS **S105061955**
RI SPILLS **N/A**

Relative:
Higher

Actual:
8 ft.

SHWS:
Project Code: MAUC-HWM
Siterem Site Number: SR-28-0793
Facility Status: **Active**
Project Code Desc: MAUC-HWM
Project Date: 07/15/2009

SPILLS:
Report Number: Not reported
Report Date: Not reported
Material Spilled: Not reported

MAURANIA CORPORATION (Continued) **S105061955**

Inspector: Not reported
Source: Not reported
Complaint Number: 14356
Complaint Date: 09/04/2000
Inspect ID: 10938
Inspection Date: 09/04/2000
Founded: Y
Amount Spilled: 50
Units Spilled: Gallons
Nature Of Spill: Not reported
Nature Of Spill 2: Not reported

92
ENE
1/2-1
0.686 mi.
3622 ft.

NIGHTINGALE STEEL (FORMER) **RI SHWS** **S104550562**
1 - 9 DUNELLEN ROAD **N/A**
EAST PROVIDENCE, RI

Relative:
Higher

Actual:
24 ft.

SHWS:
Project Code: NIGH-HWM
Siterem Site Number: SR-10-0531 B
Facility Status: **Active**
Project Code Desc: NIGH-HWM
Project Date: 05/01/2000

R93
ENE
1/2-1
0.693 mi.
3659 ft.

GETTY PETROLEUM CORPORATION TERMINAL **RI SHWS** **S106664135**
DEXTER ROAD AND MASSASOIT AVENUE **N/A**
EAST PROVIDENCE, RI

Site 1 of 2 in cluster R

Relative:
Higher

Actual:
34 ft.

SHWS:
Project Code: GPCT-HWM
Siterem Site Number: SR-10-0532
Facility Status: **Active**
Project Code Desc: GPCT-HWM
Project Date: 11/27/2000

R94
ENE
1/2-1
0.695 mi.
3669 ft.

SEEKONK CORPORATION **RI SHWS** **S103247013**
2 DEXTER ROAD **RI AUL** **N/A**
EAST PROVIDENCE, RI

Site 2 of 2 in cluster R

Relative:
Higher

Actual:
34 ft.

SHWS:
Project Code: SEEK-HWM
Siterem Site Number: SR-10-1417
Facility Status: **Active**
Project Code Desc: SEEK-HWM
Project Date: 05/01/1994

AUL:
ELUR Date: 05/18/2006
Count Of Town: 1

SEEKONK CORPORATION (Continued) **S103247013**

Facility Size (Acres): 8
Project Code: SEEK-HWM
SA Date: Not reported
Plat: 204
Lot: 8 10 12 13
Siterem Site Number: SR-10-1417

S95
WSW
1/2-1
0.720 mi.
3801 ft.

400 SOUTH MAIN STREET, LLC **RI SHWS** **S106859356**
400 SOUTH MAIN STREET **N/A**
PROVIDENCE, RI

Site 1 of 2 in cluster S

Relative:
Higher

Actual:
15 ft.

SHWS:
Project Code: SOUM-HWM
Siterem Site Number: SR-28-0004
Facility Status: **Inactive**
Project Code Desc: SOUM-HWM
Project Date: 03/29/2005

S96
WSW
1/2-1
0.722 mi.
3811 ft.

NATIONAL GRID - VAULT #2602 **RI SHWS** **S106664249**
JAMES STREET & SOUTH MAIN STREET **N/A**
PROVIDENCE, RI

Site 2 of 2 in cluster S

Relative:
Higher

Actual:
15 ft.

SHWS:
Project Code: NARV-HWM
Siterem Site Number: SR-28-0948
Facility Status: **Inactive**
Project Code Desc: NARV-HWM
Project Date: 04/10/2003

97
WNW
1/2-1
0.742 mi.
3917 ft.

BROWN UNIVERSITY VAULTNO.# 9 **RI SHWS** **S108437565**
89 WATERMAN STREET **N/A**
PROVIDENCE, RI

Relative:
Higher

Actual:
113 ft.

SHWS:
Project Code: BUV9-HWM
Siterem Site Number: SR-28-0178
Facility Status: **Inactive**
Project Code Desc: BUV9-HWM
Project Date: 01/04/2007

98
ENE
1/2-1
0.752 mi.
3970 ft.

Relative:
Higher

Actual:
32 ft.

FUJIFILM ELECTRONIC MATERIALS USA INC
200/210 MASSASOIT AVE
EAST PROVIDENCE, RI 02914

RCRA NonGen / NLR
RI SHWS
RI UST
RI MANIFEST
NY MANIFEST
NJ MANIFEST
RI AIRS
US AIRS

1000305226
RID075728030

RCRA NonGen / NLR:

Date form received by agency:	11/07/2013
Facility name:	FUJIFILM ELECTRONIC MATERIALS USA INC
Facility address:	200/210 MASSASOIT AVE EAST PROVIDENCE, RI 02914
EPA ID:	RID075728030
Mailing address:	CIRCUIT DRIVE NORTH KINGSTOWN, RI 02852
Contact:	DANIEL S JOHNSTON
Contact address:	CIRCUIT DRIVE NORTH KINGSTOWN, RI 02852
Contact country:	US
Contact telephone:	(401) 522-9323
Contact email:	DAN_JOHNSTON@FUJIFILM-FFEM.COM
EPA Region:	01
Land type:	Private
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	FUJIFILM ELECTRONIC MATERIALS USA, INC.
Owner/operator address:	CIRCUIT DRIVE NORTH KINGSTOWN, RI 02852
Owner/operator country:	Not reported
Owner/operator telephone:	(401) 522-9488
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	12/01/2004
Owner/Op end date:	Not reported

Owner/operator name:	FUJIFILM ELECTRONIC MATERIALS USA, INC.
Owner/operator address:	CIRCUIT DRIVE NORTH KINGSTOWN, RI 02852
Owner/operator country:	Not reported
Owner/operator telephone:	(401) 522-9488
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	12/01/2004
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:

Date form received by agency: 03/19/2013
Site name: FUJIFILM ELECTRONIC MATERIALS USA INC
Classification: Large Quantity Generator

Date form received by agency: 04/13/2012
Site name: FUJIFILM ELECTRONIC MATERIALS USA INC
Classification: Large Quantity Generator

Date form received by agency: 03/01/2010
Site name: FUJIFILM ELECTRONIC MATERIALS USA INC
Classification: Large Quantity Generator

Date form received by agency: 01/11/2008
Site name: FUJI FILM ELECTRONIC MATERIALS USA INC.
Classification: Large Quantity Generator

Date form received by agency: 02/28/2006
Site name: FUJIFILM ELECTRONIC MATERIALS USA INC.
Classification: Large Quantity Generator

Date form received by agency: 02/25/2005
Site name: FUJIFILM ELECTRONIC MATERIALS USA INC.
Classification: Large Quantity Generator

Date form received by agency: 01/14/2005
Site name: FUJIFILM ELECTROCIC MATERIALS USA INC.
Classification: Large Quantity Generator

Date form received by agency: 02/20/2004
Site name: ARCH SPECIALTY CHEMICALS, INC.
Classification: Large Quantity Generator

Date form received by agency: 02/14/2002
Site name: ARCH SPECIALTY CHEMICALS
Classification: Large Quantity Generator

Date form received by agency: 02/28/2000
Site name: ARCH SPECIALTY CHEMICALS
Classification: Large Quantity Generator

Date form received by agency: 03/02/1999
Site name: ARCH SPECIALTY CHEMICALS INC
Classification: Large Quantity Generator

Date form received by agency: 02/26/1998
Site name: 0LIN MICROELECTRONIC MATERIALS
Classification: Large Quantity Generator

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Date form received by agency: 02/21/1996
Site name: OLIN MICROELECTRONIC MATERIALS
Classification: Large Quantity Generator

Date form received by agency: 02/22/1994
Site name: OCG MICROELECTRONIC MATERIALS INC
Classification: Large Quantity Generator

Date form received by agency: 02/19/1992
Site name: OCG MICROELECTRONIC MATERIALS
Classification: Large Quantity Generator

Date form received by agency: 03/01/1990
Site name: OLIN HUNT SPECIALTY PROD INC
Classification: Large Quantity Generator

Hazardous Waste Summary:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D011
Waste name: SILVER

Waste code: D019
Waste name: CARBON TETRACHLORIDE

Waste code: D021
Waste name: CHLOROBENZENE

Waste code: D022
Waste name: CHLOROFORM

Waste code: D026
Waste name: CRESOL

Waste code: D038
Waste name: PYRIDINE

Waste code: D039
Waste name: TETRACHLOROETHYLENE

Waste code: F001

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F004
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: CRESOLS AND CRESYLIC ACID, AND NITROBENZENE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: R003
Waste name: FLAMMABLE WASTE

Biennial Reports:

Last Biennial Reporting Year: 2013

Annual Waste Handled:
Waste code: D001

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs): 43288

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Amount (Lbs): 6465

Waste code: D011
Waste name: SILVER
Amount (Lbs): 1174

Waste code: D019
Waste name: CARBON TETRACHLORIDE
Amount (Lbs): 1476

Waste code: D021
Waste name: CHLOROBENZENE
Amount (Lbs): 3601

Waste code: D022
Waste name: CHLOROFORM
Amount (Lbs): 3601

Waste code: D026
Waste name: CRESOL
Amount (Lbs): 44625

Waste code: D038
Waste name: PYRIDINE
Amount (Lbs): 3299

Waste code: D039
Waste name: TETRACHLOROETHYLENE
Amount (Lbs): 1476

Waste code: F001
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 302

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 15140

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 42802

Waste code: F004
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: CRESOLS AND CRESYLIC ACID, AND NITROBENZENE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 1174

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Amount (Lbs): 1476

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - Pre-transport
Date violation determined: 05/03/2011
Date achieved compliance: 06/27/2013
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 06/21/2013
Enf. disposition status: Returned
Enf. disp. status date: 06/27/2013
Enforcement lead agency: EPA
Proposed penalty amount: Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 05/03/2011
Date achieved compliance: 06/27/2013
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 06/21/2013
Enf. disposition status: Returned
Enf. disp. status date: 06/27/2013
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - Pre-transport
Date violation determined: 06/20/2008
Date achieved compliance: 06/20/2008
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/21/2008
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD IS-Container Use and Management
Date violation determined: 06/20/2008
Date achieved compliance: 06/20/2008
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/21/2008
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: FR - 5.04A5, 262.34
Area of violation: Generators - Pre-transport
Date violation determined: 11/21/2005
Date achieved compliance: 02/27/2006
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 01/31/2006
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Paid penalty amount: Not reported

Regulation violated: FR - 5.02, 262.34
Area of violation: Generators - Pre-transport
Date violation determined: 12/11/2002
Date achieved compliance: 02/05/2003
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 02/04/2003
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: SR - 5.04C
Area of violation: Generators - Pre-transport
Date violation determined: 12/11/2002
Date achieved compliance: 02/05/2003
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 02/04/2003
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 10/24/2013
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 05/03/2011
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 06/27/2013
Evaluation lead agency: EPA

Evaluation date: 05/03/2011
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 06/27/2013
Evaluation lead agency: EPA

Evaluation date: 06/20/2008
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 06/20/2008
Evaluation lead agency: State

Evaluation date: 06/20/2008
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Area of violation: TSD IS-Container Use and Management
Date achieved compliance: 06/20/2008
Evaluation lead agency: State

Evaluation date: 02/27/2006
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 11/21/2005
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 02/27/2006
Evaluation lead agency: State

Evaluation date: 02/05/2003
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 12/11/2002
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Pre-transport
Date achieved compliance: 02/05/2003
Evaluation lead agency: State

Evaluation date: 06/04/1999
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 09/29/1995
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 08/30/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

SHWS:
Project Code: OCGM-HWM
Siterem Site Number: SR-10-1034
Facility Status: **Active**
Project Code Desc: OCGM-HWM
Project Date: 02/01/1995

UST:
Facility ID: UST-495
Facility Class: Commercials

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Tank ID: 1
Tank Status: Permanently Closed
Tank Capacity: 6000
Tank Substance: Hazardous Substance
Date Installed: 04/01/1984

Tank ID: 2
Tank Status: Permanently Closed
Tank Capacity: 6000
Tank Substance: Hazardous Substance
Date Installed: 04/01/1984

Tank ID: 3
Tank Status: Permanently Closed
Tank Capacity: 6000
Tank Substance: Hazardous Substance
Date Installed: 04/01/1984

Tank ID: 4
Tank Status: In Use
Tank Capacity: 10000
Tank Substance: Heating Oil No.2
Date Installed: 04/01/1973

RI MANIFEST:
GEN Cert Date: 7/30/1998
Transporter Receipt Date: Not reported
Number Of Containers: 0
Container Type: Not reported
Waste Code1: F001
Waste Code2: F002
Waste Code3: F003
Comment: Not reported
Fee Exempt Code: Not reported
TSDF Name: CWM RESOURCE MANAGEMENT INC
TSDF ID: GAD096629282
TSDF Date: Not reported
Transporter 2 Name: Not reported
Transporter 2 ID: Not reported
Manifest Docket Number: RIC0032568
Waste Description: CHL METH
Quantity: 508
WT/Vol Units: P
Item Number: 2
Transporter Name: HAZMAT ENV GROUP INC
Transporter EPA ID: NYD980769947
GEN Cert Date: 7/30/1998
Transporter Recpt Date: Not reported
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: Not reported
EPA ID: RID075728030
Transporter 2 ID: Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

NY MANIFEST:
EPA ID: RID075728030
Country: USA

Mailing Info:
Name: OCG MICROELECTRONIC MATERIALS INC
Contact: W. ROSENHOLIN
Address: MASSASOIT AVENUE
City/State/Zip: EAST PROVIDENCE, RI 02906
Country: USA
Phone: 401-438-7805

Manifest:

Document ID: Not reported
Manifest Status: Not reported
Trans1 State ID: OHD042311209
Trans2 State ID: Not reported
Generator Ship Date: 10/02/2009
Trans1 Recv Date: 10/02/2009
Trans2 Recv Date: Not reported
TSD Site Recv Date: 10/05/2009
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: RID075728030
Trans1 EPA ID: Not reported
Trans2 EPA ID: Not reported
TSDF ID: NYD049253719
Waste Code: Not reported
Quantity: 871.0
Units: P - Pounds
Number of Containers: 2.0
Container Type: DM - Metal drums, barrels
Handling Method: R Material recovery of more than 75 percent of the total material.
Specific Gravity: 1.0
Year: 2009
Manifest Tracking Num: 002909856FLE
Import Ind: N
Export Ind: N
Discr Quantity Ind: N
Discr Type Ind: N
Discr Residue Ind: N
Discr Partial Reject Ind: N
Discr Full Reject Ind: N
Manifest Ref Num: Not reported
Alt Fac RCRA Id: Not reported
Alt Fac Sign Date: Not reported
Mgmt Method Type Code: H141

Document ID: Not reported
Manifest Status: Not reported
Trans1 State ID: OHD042311209
Trans2 State ID: Not reported
Generator Ship Date: 11/25/2009
Trans1 Recv Date: 11/25/2009
Trans2 Recv Date: Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

TSD Site Recv Date:	11/30/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RID075728030
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049253719
Waste Code:	Not reported
Quantity:	154.0
Units:	P - Pounds
Number of Containers:	2.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	003054729FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	OHD042311209
Trans2 State ID:	Not reported
Generator Ship Date:	04/23/2009
Trans1 Recv Date:	04/23/2009
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	04/24/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RID075728030
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049253719
Waste Code:	Not reported
Quantity:	666.0
Units:	P - Pounds
Number of Containers:	9.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	002562891FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	OHD042311209
Trans2 State ID:	Not reported
Generator Ship Date:	06/25/2009
Trans1 Recv Date:	06/25/2009
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	06/26/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RID075728030
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049253719
Waste Code:	Not reported
Quantity:	811.0
Units:	P - Pounds
Number of Containers:	2.0
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	002618326FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	OHD042311209
Trans2 State ID:	Not reported
Generator Ship Date:	06/25/2009
Trans1 Recv Date:	06/25/2009
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	06/26/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RID075728030
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

TSDF ID:	NYD049253719
Waste Code:	Not reported
Quantity:	480.0
Units:	P - Pounds
Number of Containers:	5.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	002618326FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	OHD042311209
Trans2 State ID:	Not reported
Generator Ship Date:	08/20/2009
Trans1 Recv Date:	08/20/2009
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	08/21/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RID075728030
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049253719
Waste Code:	Not reported
Quantity:	1029.0
Units:	P - Pounds
Number of Containers:	2.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	002989198FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	OHD042311209
Trans2 State ID:	Not reported
Generator Ship Date:	06/25/2009
Trans1 Recv Date:	06/25/2009
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	06/26/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RID075728030
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049253719
Waste Code:	Not reported
Quantity:	884.0
Units:	P - Pounds
Number of Containers:	2.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	002618326FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	OHD042311209
Trans2 State ID:	Not reported
Generator Ship Date:	02/02/2009
Trans1 Recv Date:	02/02/2009
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	02/03/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RID075728030
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049253719
Waste Code:	Not reported
Quantity:	834.0
Units:	P - Pounds
Number of Containers:	2.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Year:	2009
Manifest Tracking Num:	002661262FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	OHD042311209
Trans2 State ID:	Not reported
Generator Ship Date:	02/02/2009
Trans1 Recv Date:	02/02/2009
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	02/03/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RID075728030
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049253719
Waste Code:	Not reported
Quantity:	577.0
Units:	P - Pounds
Number of Containers:	8.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	002661262FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	OHD042311209
Trans2 State ID:	Not reported
Generator Ship Date:	10/02/2009
Trans1 Recv Date:	10/02/2009

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Trans2 Recv Date:	Not reported
TSD Site Recv Date:	10/05/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RID075728030
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049253719
Waste Code:	Not reported
Quantity:	964.0
Units:	P - Pounds
Number of Containers:	2.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	002909856FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	OHD042311209
Trans2 State ID:	Not reported
Generator Ship Date:	04/23/2009
Trans1 Recv Date:	04/23/2009
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	04/24/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RID075728030
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049253719
Waste Code:	Not reported
Quantity:	940.0
Units:	P - Pounds
Number of Containers:	2.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	002562891FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	OHD042311209
Trans2 State ID:	Not reported
Generator Ship Date:	11/25/2009
Trans1 Recv Date:	11/25/2009
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	11/30/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RID075728030
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049253719
Waste Code:	Not reported
Quantity:	1312.0
Units:	P - Pounds
Number of Containers:	3.0
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	003054729FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	OHD042311209
Trans2 State ID:	Not reported
Generator Ship Date:	02/02/2009
Trans1 Recv Date:	02/02/2009
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	02/03/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RID075728030
Trans1 EPA ID:	Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Trans2 EPA ID:	Not reported
TSDF ID:	NYD049253719
Waste Code:	Not reported
Quantity:	848.0
Units:	P - Pounds
Number of Containers:	2.0
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	002661262FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	OHD042311209
Trans2 State ID:	Not reported
Generator Ship Date:	02/02/2009
Trans1 Recv Date:	02/02/2009
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	02/03/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RID075728030
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049253719
Waste Code:	Not reported
Quantity:	100.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	002661262FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Mgmt Method Type Code: H141

Document ID: Not reported
Manifest Status: Not reported
Trans1 State ID: OHD042311209
Trans2 State ID: Not reported
Generator Ship Date: 11/25/2009
Trans1 Recv Date: 11/25/2009
Trans2 Recv Date: Not reported
TSD Site Recv Date: 11/30/2009
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: RID075728030
Trans1 EPA ID: Not reported
Trans2 EPA ID: Not reported
TSDF ID: NYD049253719
Waste Code: Not reported
Quantity: 991.0
Units: P - Pounds
Number of Containers: 2.0
Container Type: DF - Fiberboard or plastic drums (glass)
Handling Method: B Incineration, heat recovery, burning.
Specific Gravity: 1.0
Year: 2009
Manifest Tracking Num: 003054729FLE
Import Ind: N
Export Ind: N
Discr Quantity Ind: N
Discr Type Ind: N
Discr Residue Ind: N
Discr Partial Reject Ind: N
Discr Full Reject Ind: N
Manifest Ref Num: Not reported
Alt Fac RCRA Id: Not reported
Alt Fac Sign Date: Not reported
Mgmt Method Type Code: H141

Document ID: Not reported
Manifest Status: Not reported
Trans1 State ID: OHD042311209
Trans2 State ID: Not reported
Generator Ship Date: 04/23/2009
Trans1 Recv Date: 04/23/2009
Trans2 Recv Date: Not reported
TSD Site Recv Date: 04/24/2009
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: RID075728030
Trans1 EPA ID: Not reported
Trans2 EPA ID: Not reported
TSDF ID: NYD049253719
Waste Code: Not reported
Quantity: 866.0
Units: P - Pounds
Number of Containers: 2.0

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	002562891FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	OHD042311209
Trans2 State ID:	Not reported
Generator Ship Date:	10/02/2009
Trans1 Recv Date:	10/02/2009
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	10/05/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RID075728030
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049253719
Waste Code:	Not reported
Quantity:	439.0
Units:	P - Pounds
Number of Containers:	5.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	002909856FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	OHD042311209

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Trans2 State ID:	Not reported
Generator Ship Date:	08/20/2009
Trans1 Recv Date:	08/20/2009
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	08/21/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RID075728030
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049253719
Waste Code:	Not reported
Quantity:	442.0
Units:	P - Pounds
Number of Containers:	5.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	002989198FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	OHD042311209
Trans2 State ID:	Not reported
Generator Ship Date:	11/25/2009
Trans1 Recv Date:	11/25/2009
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	11/30/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RID075728030
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049253719
Waste Code:	Not reported
Quantity:	1226.0
Units:	P - Pounds
Number of Containers:	11.0
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	003054729FLE
Import Ind:	N

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

Document ID:	Not reported
Manifest Status:	Not reported
Trans1 State ID:	OHD042311209
Trans2 State ID:	Not reported
Generator Ship Date:	08/20/2009
Trans1 Recv Date:	08/20/2009
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	08/21/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	RID075728030
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049253719
Waste Code:	Not reported
Quantity:	4293.0
Units:	P - Pounds
Number of Containers:	10.0
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	1.0
Year:	2009
Manifest Tracking Num:	002989198FLE
Import Ind:	N
Export Ind:	N
Discr Quantity Ind:	N
Discr Type Ind:	N
Discr Residue Ind:	N
Discr Partial Reject Ind:	N
Discr Full Reject Ind:	N
Manifest Ref Num:	Not reported
Alt Fac RCRA Id:	Not reported
Alt Fac Sign Date:	Not reported
Mgmt Method Type Code:	H141

NJ MANIFEST:

EPA Id:	RID075728030
Mail Address:	Not reported
Mail City/State/Zip:	Not reported
Facility Phone:	Not reported
Emergency Phone:	Not reported
Contact:	Not reported
Comments:	Not reported
SIC Code:	Not reported
County:	00

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Municipal:	00
Previous EPA Id:	Not reported
Gen Flag:	Not reported
Trans Flag:	Not reported
TSDF Flag:	X
Name Change:	Not reported
Date Change:	Not reported

Manifest:

Manifest Number:	NJA5020270
EPA ID:	RID075728030
Date Shipped:	11/15/2004
TSDF EPA ID:	NJD002385730
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	11/15/2004
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	12/08/2004
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	01070521
Was Load Rejected:	No
Reason Load Was Rejected:	Not reported

Manifest Number:	003576304FLE
EPA ID:	RID075728030
Date Shipped:	07/01/2010
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	OHD042311209
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	07/01/2010
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	07/09/2010
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	No
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2010 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	4022 P

Manifest Year:	2010 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	342 P

Manifest Year:	2010 New Jersey Manifest Data
Waste Code:	D002
Hand Code:	H061
Quantity:	282 P

Manifest Year:	2010 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	163 P

Manifest Number:	002562889FLE
EPA ID:	RID075728030
Date Shipped:	04/23/2009
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	OHD042311209

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	04/23/2009
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	05/01/2009
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	No
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2009 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	970 P
Manifest Year:	2009 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	318 P
Manifest Year:	2009 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	864 P
Manifest Year:	2009 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	1175 P
Manifest Number:	002735416JJK

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

EPA ID:	RID075728030
Date Shipped:	08/09/2007
TSDF EPA ID:	NJD002385730
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	08/09/2007
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	08/22/2007
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	No
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2007 New Jersey Manifest Data
Waste Code:	D002
Hand Code:	H12
Quantity:	1968 P

Manifest Year:	2007 New Jersey Manifest Data
Waste Code:	D002
Hand Code:	H12
Quantity:	3325 P

Manifest Number:	004991252FLE
EPA ID:	RID075728030
Date Shipped:	9/22/2011
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	OHR000162800
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
Generator EPA Facility Name:	PHILIP A HUNT CHEMICAL CORP
Transporter-1 EPA Facility Name:	NEXEO SOLUTIONS
Transporter-2 EPA Facility Name:	FREEHOLD CARTAGE INC
TSDF EPA Facility Name:	VEOLIA ES TECHNICAL SOLUTIONS LLC
QTY Units:	Pounds
Transporter SEQ ID:	1.00
Transporter-1 Date:	9/22/2011
Waste SEQ ID:	1.00
Waste Type Code 2:	D011
Waste Type Code 3:	D019
Waste Type Code 4:	D021
Waste Type Code 5:	D022
Waste Type Code 6:	Not reported
Date Accepted:	9/27/2011
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	Not reported
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2011 New Jersey Manifest Data
Waste Code:	D002
Hand Code:	H061
Quantity:	68.00 Pounds
Manifest Year:	2011 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	6,539.00 Pounds
Manifest Year:	2011 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	200.00 Pounds
Manifest Year:	2011 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	113.00 Pounds

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Manifest Number:	005109777FLE
EPA ID:	RID075728030
Date Shipped:	12/5/2011
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	OHR000162800
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
Generator EPA Facility Name:	PHILIP A HUNT CHEMICAL CORP
Transporter-1 EPA Facility Name:	NEXEO SOLUTIONS
Transporter-2 EPA Facility Name:	FREEHOLD CARTAGE INC
TSDF EPA Facility Name:	VEOLIA ES TECHNICAL SOLUTIONS LLC
QTY Units:	Pounds
Transporter SEQ ID:	1.00
Transporter-1 Date:	12/5/2011
Waste SEQ ID:	1.00
Waste Type Code 2:	D011
Waste Type Code 3:	D019
Waste Type Code 4:	D021
Waste Type Code 5:	D022
Waste Type Code 6:	D026
Date Accepted:	12/12/2011
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	Not reported
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2011 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	231.00 Pounds
Manifest Year:	2011 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	10,873.00 Pounds
Manifest Year:	2011 New Jersey Manifest Data
Waste Code:	D002
Hand Code:	H061
Quantity:	691.00 Pounds

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Manifest Number:	NJA5019891
EPA ID:	RID075728030
Date Shipped:	08/26/2004
TSDF EPA ID:	NJD002385730
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	08/26/2004
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	09/09/2004
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	10190422
Was Load Rejected:	No
Reason Load Was Rejected:	Not reported

Manifest Number:	004516806FLE
EPA ID:	RID075728030
Date Shipped:	4/20/2011
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	OHR000162800
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
Generator EPA Facility Name:	PHILIP A HUNT CHEMICAL CORP
Transporter-1 EPA Facility Name:	NEXEO SOLUTIONS
Transporter-2 EPA Facility Name:	FREEHOLD CARTAGE INC
TSDF EPA Facility Name:	VEOLIA ES TECHNICAL SOLUTIONS LLC
QTY Units:	Pounds
Transporter SEQ ID:	1.00
Transporter-1 Date:	4/20/2011
Waste SEQ ID:	1.00
Waste Type Code 2:	D011
Waste Type Code 3:	D019
Waste Type Code 4:	D021
Waste Type Code 5:	D022
Waste Type Code 6:	D026
Date Accepted:	4/26/2011
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	Not reported
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2011 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	235.00 Pounds

Manifest Year:	2011 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	4,792.00 Pounds

Manifest Year:	2011 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	429.00 Pounds

Manifest Number:	002989199FLE
EPA ID:	RID075728030
Date Shipped:	08/20/2009
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	OHD042311209
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	08/20/2009
Date Trans2 Transported Waste:	Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	08/25/2009
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	No
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2009 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	3887 P

Manifest Year:	2009 New Jersey Manifest Data
Waste Code:	D002
Hand Code:	H061
Quantity:	498 P

Manifest Year:	2009 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	3033 P

Manifest Year:	2009 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	764 P

Manifest Number:	004523462FLE
EPA ID:	RID075728030
Date Shipped:	6/2/2011
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	OHR000162800
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
Generator EPA Facility Name:	PHILIP A HUNT CHEMICAL CORP
Transporter-1 EPA Facility Name:	NEXEO SOLUTIONS
Transporter-2 EPA Facility Name:	FREEHOLD CARTAGE INC
TSDF EPA Facility Name:	VEOLIA ES TECHNICAL SOLUTIONS LLC
QTY Units:	Pounds
Transporter SEQ ID:	1.00
Transporter-1 Date:	6/2/2011
Waste SEQ ID:	1.00
Waste Type Code 2:	D026
Waste Type Code 3:	F003
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	6/7/2011
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	Not reported
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2011 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	1,388.00 Pounds

Manifest Number:	003176352FLE
EPA ID:	RID075728030
Date Shipped:	09/08/2010
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	OHD042311209
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	09/08/2010
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	09/14/2010
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	No
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2010 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	1706 P

Manifest Year:	2010 New Jersey Manifest Data
Waste Code:	D002
Hand Code:	H061
Quantity:	263 P

Manifest Year:	2010 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	4365 P

Manifest Year:	2010 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	233 P

Manifest Number:	004991252FLE
EPA ID:	RID075728030
Date Shipped:	9/22/2011
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	OHR000162800
Transporter 2 EPA ID:	NJD054126164
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
Generator EPA Facility Name:	PHILIP A HUNT CHEMICAL CORP
Transporter-1 EPA Facility Name:	NEXEO SOLUTIONS
Transporter-2 EPA Facility Name:	FREEHOLD CARTAGE INC
TSDF EPA Facility Name:	VEOLIA ES TECHNICAL SOLUTIONS LLC
QTY Units:	Pounds
Transporter SEQ ID:	1.00
Transporter-1 Date:	9/22/2011
Waste SEQ ID:	4.00
Waste Type Code 2:	D026
Waste Type Code 3:	F003
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	9/27/2011
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	Not reported
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	2011 New Jersey Manifest Data
Waste Code:	D002
Hand Code:	H061
Quantity:	68.00 Pounds
Manifest Year:	2011 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	6,539.00 Pounds
Manifest Year:	2011 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	200.00 Pounds
Manifest Year:	2011 New Jersey Manifest Data
Waste Code:	D001
Hand Code:	H061
Quantity:	113.00 Pounds

Manifest Number:	NJA5044770
EPA ID:	RID075728030
Date Shipped:	01/16/2004
TSDF EPA ID:	NJD002385730
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	01/16/2004
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	01/21/2004
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	03050421
Was Load Rejected:	No
Reason Load Was Rejected:	Not reported

Manifest Number:	NJA5019904
EPA ID:	RID075728030
Date Shipped:	08/13/2004
TSDF EPA ID:	NJD002385730
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	08/13/2004
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	08/17/2004
TSDF EPA Facility Name:	Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	09140421
Was Load Rejected:	No
Reason Load Was Rejected:	Not reported
Manifest Number:	NJA5239455
EPA ID:	RID075728030
Date Shipped:	06/19/2006
TSDF EPA ID:	NJD002385730
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	06/19/2006
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	07/27/2006
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	08300625
Was Load Rejected:	No
Reason Load Was Rejected:	Not reported
Manifest Number:	NJA5215739
EPA ID:	RID075728030

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Date Shipped:	02/11/2005
TSDF EPA ID:	NJD002385730
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	02/11/2005
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	03/04/2005
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	04290521
Was Load Rejected:	No
Reason Load Was Rejected:	Not reported

Manifest Number:	NJA5239686
EPA ID:	RID075728030
Date Shipped:	08/04/2005
TSDF EPA ID:	NJD002385730
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	08/04/2005
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	08/23/2005
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	09130521
Was Load Rejected:	No
Reason Load Was Rejected:	Not reported

Manifest Number:	003029313FLE
EPA ID:	RID075728030
Date Shipped:	05/06/2010
TSDF EPA ID:	NJD002454544
Transporter EPA ID:	OHD042311209
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	05/06/2010
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	05/13/2010
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Data Entry Number: Not reported
Was Load Rejected: No
Reason Load Was Rejected: Not reported

Waste:
Manifest Year: 2010 New Jersey Manifest Data
Waste Code: D002
Hand Code: H061
Quantity: 493 P

Manifest Number: 002909857FLE
EPA ID: RID075728030
Date Shipped: 10/02/2009
TSDF EPA ID: NJD002454544
Transporter EPA ID: OHD042311209
Transporter 2 EPA ID: Not reported
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 10 EPA ID: Not reported
Date Trans1 Transported Waste: 10/02/2009
Date Trans2 Transported Waste: Not reported
Date Trans3 Transported Waste: Not reported
Date Trans4 Transported Waste: Not reported
Date Trans5 Transported Waste: Not reported
Date Trans6 Transported Waste: Not reported
Date Trans7 Transported Waste: Not reported
Date Trans8 Transported Waste: Not reported
Date Trans9 Transported Waste: Not reported
Date Trans10 Transported Waste: Not reported
Date TSDF Received Waste: 10/06/2009
TSDF EPA Facility Name: Not reported
QTY Units: Not reported
Transporter SEQ ID: Not reported
Transporter-1 Date: Not reported
Waste SEQ ID: Not reported
Waste Type Code 2: Not reported
Waste Type Code 3: Not reported
Waste Type Code 4: Not reported
Waste Type Code 5: Not reported
Waste Type Code 6: Not reported
Date Accepted: Not reported
Manifest Discrepancy Type: Not reported
Data Entry Number: Not reported
Was Load Rejected: No
Reason Load Was Rejected: Not reported

Waste:
Manifest Year: 2009 New Jersey Manifest Data
Waste Code: D002
Hand Code: H061
Quantity: 251 P

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Manifest Number:	003711318JJK
EPA ID:	RID075728030
Date Shipped:	10/24/2007
TSDF EPA ID:	NJD002385730
Transporter EPA ID:	NJD054126164
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	10/24/2007
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	11/02/2007
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	No
Reason Load Was Rejected:	Not reported

AIRS:

Facility ID:	AIR3063
SIC Code:	2899
AIRS Code:	Not reported
Ploverid:	930
Date Received:	01/01/1990
Invent Year:	2010
Source Classification:	Not reported
Total Volatile Organic Compound Emiisions (lbs):	Not reported
Total Haz Air Pollutants Emitted Defined by EPA (lbs):	Not reported
Oxides of Nitrogen Emitted (lbs):	Not reported
Carbon Monoxide Emitted (lbs):	Not reported
Total Particulate Matter Emitted (lbs):	Not reported
Total Oxides of sulfur Emitted (lbs):	Not reported
Mailing Name:	DANIEL COLE
Mailing Addr1:	80 CIRCUIT DRIVE

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Mailing Addr2:	Not reported
Mailing City/State/Zip:	NORTH KINGSTOWN, RI 02852
Num of Employees:	14
Telephone Number:	Not reported
Facility ID:	AIR3063
SIC Code:	2899
AIRS Code:	Not reported
Ploverid:	Not reported
Date Received:	Not reported
Invent Year:	Not reported
Source Classification:	Not reported
Total Volatile Organic Compound Emiisions (lbs):	Not reported
Total Haz Air Pollutants Emitted Defined by EPA (lbs):	Not reported
Oxides of Nitrogen Emitted (lbs):	Not reported
Carbon Monoxide Emitted (lbs):	Not reported
Total Particulate Matter Emitted (lbs):	Not reported
Total Oxides of sulfur Emitted (lbs):	Not reported
Mailing Name:	ROERT MURPHY
Mailing Addr1:	200 MASSASOIT AVE
Mailing Addr2:	null
Mailing City/State/Zip:	EAST PROVIDENCE, RI 02914
Num of Employees:	80
Telephone Number:	401-432-2733
Facility ID:	AIR3063
SIC Code:	2899
AIRS Code:	Not reported
Ploverid:	Not reported
Date Received:	Not reported
Invent Year:	2002
Source Classification:	30180001
Total Volatile Organic Compound Emiisions (lbs):	1341
Total Haz Air Pollutants Emitted Defined by EPA (lbs):	114
Oxides of Nitrogen Emitted (lbs):	0
Carbon Monoxide Emitted (lbs):	0
Total Particulate Matter Emitted (lbs):	0
Total Oxides of sulfur Emitted (lbs):	0
Mailing Name:	Not reported
Mailing Addr1:	Not reported
Mailing Addr2:	Not reported
Mailing City/State/Zip:	Not reported
Num of Employees:	Not reported
Telephone Number:	Not reported
Facility ID:	AIR3063
SIC Code:	2899
AIRS Code:	Not reported
Ploverid:	Not reported
Date Received:	Not reported
Invent Year:	2002
Source Classification:	10200602
Total Volatile Organic Compound Emiisions (lbs):	93
Total Haz Air Pollutants Emitted Defined by EPA (lbs):	0
Oxides of Nitrogen Emitted (lbs):	1692
Carbon Monoxide Emitted (lbs):	1421
Total Particulate Matter Emitted (lbs):	257

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Total Oxides of sulfur Emitted (lbs):	10
Mailing Name:	Not reported
Mailing Addr1:	Not reported
Mailing Addr2:	Not reported
Mailing City/State/Zip:	Not reported
Num of Employees:	Not reported
Telephone Number:	Not reported
Facility ID:	AIR3063
SIC Code:	2899
AIRS Code:	Not reported
Ploverid:	Not reported
Date Received:	Not reported
Invent Year:	2002
Source Classification:	10200502
Total Volatile Organic Compound Emiisions (lbs):	13
Total Haz Air Pollutants Emitted Defined by EPA (lbs):	0
Oxides of Nitrogen Emitted (lbs):	1275
Carbon Monoxide Emitted (lbs):	319
Total Particulate Matter Emitted (lbs):	580
Total Oxides of sulfur Emitted (lbs):	4591
Mailing Name:	Not reported
Mailing Addr1:	Not reported
Mailing Addr2:	Not reported
Mailing City/State/Zip:	Not reported
Num of Employees:	Not reported
Telephone Number:	Not reported
Facility ID:	AIR3063
SIC Code:	2899
AIRS Code:	Not reported
Ploverid:	930
Date Received:	01/01/1990
Invent Year:	2009
Source Classification:	Not reported
Total Volatile Organic Compound Emiisions (lbs):	Not reported
Total Haz Air Pollutants Emitted Defined by EPA (lbs):	Not reported
Oxides of Nitrogen Emitted (lbs):	Not reported
Carbon Monoxide Emitted (lbs):	Not reported
Total Particulate Matter Emitted (lbs):	Not reported
Total Oxides of sulfur Emitted (lbs):	Not reported
Mailing Name:	CHARLES GUILMETTE
Mailing Addr1:	80 CIRCUIT DRIVE
Mailing Addr2:	Not reported
Mailing City/State/Zip:	NORTH KINGSTOWN, RI 02852
Num of Employees:	37
Telephone Number:	4014323504
Facility ID:	AIR3063
SIC Code:	2899
AIRS Code:	Not reported
Ploverid:	930
Date Received:	01/01/1990
Invent Year:	2012
Source Classification:	Not reported
Total Volatile Organic Compound Emiisions (lbs):	Not reported
Total Haz Air Pollutants Emitted Defined by EPA (lbs):	Not reported

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

Oxides of Nitrogen Emitted (lbs):	Not reported
Carbon Monoxide Emitted (lbs):	Not reported
Total Particulate Matter Emitted (lbs):	Not reported
Total Oxides of sulfur Emitted (lbs):	Not reported
Mailing Name:	NORMAN BISHOP
Mailing Addr1:	80 CIRCUIT DRIVE
Mailing Addr2:	Not reported
Mailing City/State/Zip:	NORTH KINGSTOWN, RI 02852
Num of Employees:	25
Telephone Number:	401-522-9482

AIRS (AFS):

Airs Minor Details:

EPA plant ID:	110000313143
Plant name:	ARCH SPECIALTY CHEMICALS INC.
Plant address:	210 MASSASOIT AVENUE EAST PROVIDENCE, RI
County:	PROVIDENCE
Region code:	01
Dunn & Bradst #:	Not reported
Air quality cntrl region:	120
Sic code:	9999
Sic code desc:	NONCLASSIFIABLE ESTABLISHMENTS
North Am. industrial classf:	325998
NAIC code description:	All Other Miscellaneous Chemical Product and Preparation Manufacturing
Default compliance status:	IN COMPLIANCE - INSPECTION
Default classification:	POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Govt facility:	ALL OTHER FACILITIES NOT OWNED OR OPERATED BY A FEDERAL, STATE, OR LOCAL GOVERNMENT
Current HPV:	Not reported

Compliance and Enforcement Major Issues:

Air program:	SIP SOURCE
National action type:	Not reported
Date achieved:	00000
Penalty amount:	Not reported

Historical Compliance Minor Sources:

State compliance status:	IN COMPLIANCE - INSPECTION
Hist compliance date:	1004
Air prog code hist file:	SIP SOURCE
State compliance status:	IN COMPLIANCE - INSPECTION
Hist compliance date:	1101
Air prog code hist file:	SIP SOURCE
State compliance status:	IN COMPLIANCE - INSPECTION
Hist compliance date:	1102
Air prog code hist file:	SIP SOURCE
State compliance status:	IN COMPLIANCE - INSPECTION
Hist compliance date:	1103
Air prog code hist file:	SIP SOURCE

FUJIFILM ELECTRONIC MATERIALS USA INC (Continued) **1000305226**

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1104
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1201
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1202
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1203
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1204
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1301
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1302
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1303
Air prog code hist file: SIP SOURCE

Compliance & Violation Data by Minor Sources:
Air program code: SIP SOURCE
Plant air program pollutant: VOLATILE ORGANIC COMPOUNDS
Default pollutant classification: POTENTIAL UNCONTROLLED EMISSIONS < 100 TONS/YEAR
Def. poll. compliance status: IN COMPLIANCE - INSPECTION
Def. attainment/non attnmnt: Not reported
Repeat violator date: Not reported
Turnover compliance: Not reported

99
NNW
1/2-1
0.752 mi.
3973 ft.

Relative:
Higher

Actual:
121 ft.

BROWN UNIVERSITY FACILITIES MANAGEMENT **RI SHWS** **S105857068**
295 LLOYD AVENUE **N/A**
PROVIDENCE, RI

SHWS:
Project Code: BUFM-HWM
Siterem Site Number: SR-28-0173
Facility Status: **Active**
Project Code Desc: BUFM-HWM
Project Date: 03/21/2003

T100 **SHELL STA/EAST SIDE SERVICE CENTER INC** **RCRA-SQG** **1000393839**
WNW **152 - 170 ANGELL ST** **FINDS** **RID075684415**
1/2-1 **PROVIDENCE, RI 02906** **RI SHWS**
0.763 mi. **RI LUST**
4029 ft. **Site 1 of 2 in cluster T** **RI MANIFEST**
RI AUL

Relative:
Higher

Actual:
122 ft.

RCRA-SQG:

Date form received by agency:	02/25/2004
Facility name:	SHELL STA/EAST SIDE SERVICE CENTER INC
Facility address:	152 - 170 ANGELL ST PROVIDENCE, RI 02906
EPA ID:	RID075684415
Mailing address:	ANGELL ST PROVIDENCE, RI 02906
Contact:	MARIO COLETTA
Contact address:	ANGELL ST PROVIDENCE, RI 02906
Contact country:	US
Contact telephone:	(401) 751-3090
Contact email:	Not reported
EPA Region:	01
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	MARIO COLETTA
Owner/operator address:	OWNERSTREET OWNERCITY, RI 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(401) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/0001
Owner/Op end date:	Not reported

Owner/operator name:	MARIO COLETTA
Owner/operator address:	OWNERSTREET OWNERCITY, RI 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(401) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No

SHELL STA/EAST SIDE SERVICE CENTER INC (Continued) **1000393839**

Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 03/09/1987
Site name: EAST SIDE SERVICE CENTER INC
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

FINDS:

Registry ID: 110004923325

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

SHWS:
Project Code: BUSH-HWM
Siterem Site Number: SR-28-0182
Facility Status: **Inactive**
Project Code Desc: BUSH-HWM
Project Date: 01/13/2006

SHELL STA/EAST SIDE SERVICE CENTER INC (Continued) **1000393839**

LUST:
Project Number: 28262-LS
Project Date: 01/25/2006
Facility Id: 910
Facility Status: Active; Investigation/Remed. Required

RI MANIFEST:
GEN Cert Date: 5/12/1994
Transporter Receipt Date: Not reported
Number Of Containers: 0
Container Type: Not reported
Waste Code1: D001
Waste Code2: Not reported
Waste Code3: Not reported
Comment: Not reported
Fee Exempt Code: Not reported
TSDF Name: CHEM PAK CORP
TSDF ID: RID084802842
TSDF Date: Not reported
Transporter 2 Name: Not reported
Transporter 2 ID: Not reported
Manifest Docket Number: RIG0051830
Waste Description: PETROLEUM NAPHTHA
Quantity: 8
WT/Vol Units: G
Item Number: 1
Transporter Name: CYCLE SOLVE CORP
Transporter EPA ID: RID982194987
GEN Cert Date: 5/12/1994
Transporter Recpt Date: Not reported
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: Not reported
EPA ID: RID075684415
Transporter 2 ID: Not reported

AUL:
ELUR Date: 08/26/2013
Count Of Town: 1
Facility Size (Acres): 0.400
Project Code: BUSH-HWM
SA Date: Not reported
Plat: 10
Lot: 654
Siterem Site Number: SR-28-0182

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101 WNW 1/2-1 0.768 mi. 4057 ft.

NATIONAL GRID - MANHOLE #2257
THAYER STREET & MEETING STREET
PROVIDENCE, RI

RI SHWS **S110043327**
N/A

Relative: Higher

Actual: 122 ft.

SHWS:
Project Code: MANH-HWM
Siterem Site Number: SR-28-0907
Facility Status: Inactive

NATIONAL GRID - MANHOLE #2257 (Continued) **S110043327**

Project Code Desc: MANH-HWM
Project Date: 06/12/2003

102
NW
1/2-1
0.773 mi.
4079 ft.

BROWN UNIVERSITY AQUATIC & FITNESS CENTER **RI SHWS** **S110711814**
235 HOPE STREET **N/A**
PROVIDENCE, RI

Relative: Higher

Actual: 144 ft.

SHWS:
Project Code: BUFA-HWM
Siterem Site Number: SR-28-1330
Facility Status: Active
Project Code Desc: BUFA-HWM
Project Date: 04/01/2010

T103
WNW
1/2-1
0.785 mi.
4144 ft.

MIND BRAIN BEHAVIOR BUILDING (BROWN UNIVERSITY) **RI SHWS** **S109172370**
127, 129, 135 ANGELL STREET **N/A**
PROVIDENCE, RI

Site 2 of 2 in cluster T

Relative: Higher

Actual: 124 ft.

SHWS:
Project Code: MBBB-HWM
Siterem Site Number: SR-28-0174
Facility Status: Active
Project Code Desc: MBBB-HWM
Project Date: 04/01/2008

U104
NE
1/2-1
0.797 mi.
4207 ft.

OLD FOX LAWN CARE **RCRA NonGen / NLR** **1000114463**
111 DEXTER RD **FINDS** **RID981895618**
EAST PROVIDENCE, RI 02914 **RI SHWS**
RI MANIFEST

Site 1 of 2 in cluster U

Relative: Higher

Actual: 23 ft.

RCRA NonGen / NLR:
Date form received by agency: 02/24/2000
Facility name: OLD FOX LAWN CARE
Facility address: 111 DEXTER RD
EAST PROVIDENCE, RI 02914
EPA ID: RID981895618
Mailing address: DEXTER RD
EAST PROVIDENCE, RI 02914
Contact: STEVEN CRISCIONE
Contact address: 111 DEXTER RD
EAST PROVIDENCE, RI 02914
Contact country: US
Contact telephone: (401) 438-6883
Contact email: Not reported
EPA Region: 01
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

OLD FOX LAWN CARE (Continued) **1000114463**

Owner/operator name: NETX INC.
Owner/operator address: OWNERSTREET
OWNERCITY, RI 99999
Owner/operator country: Not reported
Owner/operator telephone: (401) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/0001
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 10/16/1986
Site name: OLD FOX LAWN CARE
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

FINDS:

Registry ID: 110004915174

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

OLD FOX LAWN CARE (Continued) **1000114463**

SHWS:
Project Code: NEWB2-HWM
Siterem Site Number: SR-10-0991 B
Facility Status: **Active**
Project Code Desc: NEWB2-HWM
Project Date: 10/25/2013

RI MANIFEST:
GEN Cert Date: 2/14/1989
Transporter Receipt Date: Not reported
Number Of Containers: 0
Container Type: Not reported
Waste Code1: R003
Waste Code2: Not reported
Waste Code3: Not reported
Comment: Not reported
Fee Exempt Code: Not reported
TSDF Name: NIC
TSDF ID: RID006807911
TSDF Date: Not reported
Transporter 2 Name: Not reported
Transporter 2 ID: Not reported
Manifest Docket Number: RIB0003710
Waste Description: FUEL/WATER
Quantity: 500
WT/Vol Units: G
Item Number: 1
Transporter Name: M&W
Transporter EPA ID: RID093214260
GEN Cert Date: 2/14/1989
Transporter Recpt Date: Not reported
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: Not reported
EPA ID: RID981895618
Transporter 2 ID: Not reported

U105 **COASTAL OIL TERMINAL** **RI SHWS S104308513**
NE **100 DEXTER ROAD** **RI LUST N/A**
1/2-1 **EAST PROVIDENCE, RI** **RI SPILLS**
0.809 mi.
4274 ft. **Site 2 of 2 in cluster U**

Relative:
Higher

Actual:
22 ft.

SHWS:
Project Code: COTM-HWM
Siterem Site Number: SR-10-0269
Facility Status: **Active**
Project Code Desc: COTM-HWM
Project Date: 08/01/1994

LUST:
Project Number: 1017-LS
Project Date: 12/30/1991
Facility Id: 2200
Facility Status: **Soil Removal Only; No Further Action Required**

COASTAL OIL TERMINAL (Continued) **S104308513**

SPILLS:
- Report Number: 94-401
- Report Date: 19-08-1994
- Material Spilled: DIESEL OIL
- Inspector: JOHN P. LEO
- Source: Not reported
- Complaint Number: Not reported
- Complaint Date: Not reported
- Inspect ID: Not reported
- Inspection Date: Not reported
- Founded: Not reported
- Amount Spilled: 5000
- Units Spilled: GALLONS
- Nature Of Spill: Not reported
- Nature Of Spill 2: Not reported

106
WNW
1/2-1
0.817 mi.
4315 ft.

Relative:
Higher

Actual:
135 ft.

BROWN UNIVERSITY -PETER GREEN HOUSE **RI SHWS** **S107673505**
118 ANGELL STREET **RI AUL** **N/A**
PROVIDENCE, RI

SHWS:
- Project Code: BUPG-HWM
- Siterem Site Number: SR-28-0180
- **Facility Status: Inactive**
- Project Code Desc: BUPG-HWM
- Project Date: 01/24/2006

AUL:
- ELUR Date: 10/21/2010
- Count Of Town: 1
- Facility Size (Acres): 0.25
- Project Code: BUPG-HWM
- SA Date: Not reported
- Plat: 10
- Lot: 263
- Siterem Site Number: SR-28-0180

V107
WSW
1/2-1
0.817 mi.
4315 ft.

Relative:
Higher

Actual:
6 ft.

ROUTE 195 DOT PROJECT 73 (SEE CLOSURE REPORTS FOR CONTRACTS **RI SHWS** **S108963017**
PLAT 22 LOT 354- 40 POINT STREET **RI AUL** **N/A**
PROVIDENCE, RI

Site 1 of 3 in cluster V

SHWS:
- Project Code: DT73-DOT
- Siterem Site Number: SR-28-1360
- **Facility Status: Active**
- Project Code Desc: DT73-DOT
- Project Date: 06/27/2000

AUL:
- ELUR Date: 08/28/1998
- Count Of Town: 1

ROUTE 195 DOT PROJECT 73 (SEE CLOSURE REPORTS FOR CONTRACTS (Continued) **S108963017**

Facility Size (Acres): Not reported
Project Code: DT73-DOT
SA Date: 12/28/2000
Plat: Not reported
Lot: Not reported
Siterem Site Number: SR-28-1360

V108 **MANCHESTER STREET** **TSCA** **1005930329**
WSW **40 POINT STREET** **RI SHWS** **N/A**
1/2-1 **PROVIDENCE, RI 02903** **RI AUL**
0.824 mi. **RI NPDES**
4352 ft. **Site 2 of 3 in cluster V**

Relative: Higher

Click this hyperlink while viewing on your computer to access additional TSCA detail in the EDR Site Report.

Actual: 6 ft.

SHWS:
Project Code: MRP-HWM
Siterem Site Number: SR-28-0903
Facility Status: **Monitoring**
Project Code Desc: MRP-HWM
Project Date: Not reported

Project Code: NE40-HWM
Siterem Site Number: SR-28-0885
Facility Status: **Inactive**
Project Code Desc: NE40-HWM
Project Date: 07/18/1997

AUL:
ELUR Date: 08/28/1998
Count Of Town: 1
Facility Size (Acres): Not reported
Project Code: MRP-HWM
SA Date: Not reported
Plat: 22
Lot: 354 (formerly Lot 351)
Siterem Site Number: SR-28-0903

ELUR Date: 12/05/2005
Count Of Town: 1
Facility Size (Acres): 1
Project Code: NE40-HWM
SA Date: Not reported
Plat: Not reported
Lot: Not reported
Siterem Site Number: SR-28-0885

NPDES:
NPID: RIR50O003
Mailing Address: 40 POINT STREET
Mailing City,St,Zip: PROVIDENCE, RI 02903
Expires: 08/14/2018
Receiving Water: Providence River
DMR Cognizant Official: WILLIAM J. FREDDO, DIR.
DMR Cognizant Official Phone: 401-457-9242
Permit Status Desc: Effective

MANCHESTER STREET (Continued) **1005930329**

Version Number: 0
Perm Identifying/Descriptive Info.Sta: Rate Code:
Total Actual Average Flow (MGD): Not reported
Total App. Design Flow (MGD): Not reported
Facility Type Indicator: NON-POTW
Primary Facility SIC Desc: Not reported

NPID: RI0000434
Mailing Address: 40 POINT STREET
Mailing City,St,Zip: PROVIDENCE, RI 02903
Expires: 10/19/1996
Receiving Water: PROVIDENCE RIVER
DMR Cognizant Official: ROBERT W. SAUER, DIRECTOR
DMR Cognizant Official Phone: 401-457-9100
Permit Status Desc: Admin Continued
Version Number: 0
Perm Identifying/Descriptive Info.Sta: Rate Code:
Total Actual Average Flow (MGD): 259.19999999999999
Total App. Design Flow (MGD): Not reported
Facility Type Indicator: NON-POTW
Primary Facility SIC Desc: Electric Services

V109 **DOMINION ENERGY MANCHESTER STREET STATION** **RCRA NonGen / NLR** **1000352953**
WSW **40 POINT STREET** **FINDS** **RID001193655**
1/2-1 **PROVIDENCE, RI 02903** **RI SHWS**
0.824 mi. **RI UST**
4352 ft. **Site 3 of 3 in cluster V** **RI MANIFEST**
NY MANIFEST
Relative: **US AIRS**
Higher

Actual: RCRA NonGen / NLR:
6 ft. Date form received by agency: 11/10/2010
Facility name: NATIONAL GRID MANCHESTER STREET STATION
Facility address: 40A POINT ST
PROVIDENCE, RI 02903
EPA ID: RID001193655
Mailing address: PO BOX 6607
PROVIDENCE, RI 02940
Contact: KENNETH SMALL
Contact address: PO BOX 1438
PROVIDENCE, RI 02903
Contact country: US
Contact telephone: (401) 781-0100
Contact email: Not reported
EPA Region: 01
Land type: Private
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: THE NARRAGANSETT ELECTRIC COMPANY
Owner/operator address: 80 MELROSE STREET
OPERCITY, RI 99999
Owner/operator country: Not reported
Owner/operator telephone: (401) 781-0100
Legal status: Private
Owner/Operator Type: Operator

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NARRAGANSETT ELECTRIC NEW ENGLAND POWER
Owner/operator address: PO BOX 6607
PROVIDENCE, RI 02940
Owner/operator country: Not reported
Owner/operator telephone: 4553610
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: THE NARRAGANSETT ELECTRIC COMPANY
Owner/operator address: 280 MELROSE STREET
PROVIDENCE, RI
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: THE NARRAGANSETT ELECTRIC COMPANY
Owner/operator address: 280 MELROSE STREET
PROVIDENCE, RI
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 02/20/1992
Site name: NARRAGANSETT ELECTRIC COMPANY
Classification: Large Quantity Generator

Date form received by agency: 03/01/1990

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Site name: NARR ELEC
Classification: Large Quantity Generator

Date form received by agency: 08/18/1980
Site name: NARRAGANSETT ELEC NEW ENGLAND POWER
Classification: Not a generator, verified

Date form received by agency: 08/18/1980
Site name: NARRAGANSETT ELEC NEW ENGLAND POWER
Classification: Not a generator, verified

Hazardous Waste Summary:
Waste code: U151
Waste name: MERCURY

Waste code: U151
Waste name: MERCURY

Waste code: D000
Waste name: Not Defined

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: F001
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: U151
Waste name: MERCURY

Waste code: R007
Waste name: PCB WASTE

Waste code: R010
Waste name: WASTE OIL

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 04/18/1985
Date achieved compliance: 05/28/1985
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Enforcement action date: 04/18/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 09/25/1984
Date achieved compliance: 05/28/1985
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 09/25/1984
Date achieved compliance: 05/28/1985
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 10/25/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 02/08/1999
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 05/28/1985
Evaluation lead agency: State

Evaluation date: 05/28/1985
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/18/1985
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 05/28/1985
Evaluation lead agency: State

Evaluation date: 09/25/1984
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Area of violation: Generators - General
Date achieved compliance: 05/28/1985
Evaluation lead agency: State

FINDS:

Registry ID: 110000312796

Environmental Interest/Information System

CAMDBS (Clean Air Markets Division Business System) is a national information system that supports the implementation of market-based air pollution control programs administered by the Clean Air Markets Division, within the Office of Air and Radiation. These programs include the Acid Rain Program, established by Title IV of the Clean Air Act Amendments of 1990, and regional programs designed reduce the transport of ozone. These emissions trading programs allows regulated facilities (primarily electric utilities) to adopt the most cost-effective strategies to reduce emissions at their units. Units that reduce their emissions below the number of allowances they hold -- each allowance is equivalent to one ton of sulfur dioxide or nitrogen oxides -- may trade allowances with other units in their system, sell them to other utilities on the open market or through EPA auctions, or bank them to cover emissions in future years. CAMDBS functions include registering responsible officials, establishing allowance accounts, reporting hourly emissions data, and transferring allowances between accounts.

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

FRP

US EPA TRIS (Toxics Release Inventory System) contains information from facilities on the amounts of over 300 listed toxic chemicals that these facilities release directly to air, water, land, or that are transported off-site.

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport,

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

US Emissions & Generation Resource Database (EGRID) contains data on emissions and resource mix for virtually every power plant and company that generates electricity in the United States.

HAZARDOUS WASTE BIENNIAL REPORTER

ELECTRIC GENERATOR

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

US EPA RACT/BACT/LAER Clearinghouse (RBLC) database contains case-specific information on the "Best Available" air pollution technologies that have been required to reduce the emission of air pollutants from stationary sources (e.g., power plants, steel mills, chemical plants, etc.). RACT, or Reasonably Available Control Technology, is required on existing sources in areas that are not meeting national ambient air quality standards. BACT, or Best Available Control Technology, is required on major new or modified sources in clean areas. LAER, or Lowest Achievable Emission Rate, is required on major new or modified sources in non-attainment areas.

GREENHOUSE GAS REPORTER

SHWS:
Project Code: NEFS-HWM
Siterem Site Number: SR-28-0902
Facility Status: **Inactive**
Project Code Desc: NEFS-HWM
Project Date: 10/21/1994

UST:
Facility ID: UST-164
Facility Class: Commercials

Tank ID: 1
Tank Status: **Permanently Closed**
Tank Capacity: 9999999
Tank Substance: Diesel

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Date Installed: 03/01/1950

Tank ID: 2
Tank Status: Permanently Closed
Tank Capacity: 9999999
Tank Substance: Gasoline
Date Installed: 02/01/1985

Tank ID: 3
Tank Status: Permanently Closed
Tank Capacity: 1000
Tank Substance: Heating Oil No.2
Date Installed: 03/01/1940

RI MANIFEST:
GEN Cert Date: 9/3/1994
Transporter Receipt Date: Not reported
Number Of Containers: 0
Container Type: Not reported
Waste Code1: MA01
Waste Code2: Not reported
Waste Code3: Not reported
Comment: Not reported
Fee Exempt Code: Not reported
TSDF Name: MURPHYS WASTE OIL SERVICE
TSDF ID: MAD066588005
TSDF Date: Not reported
Transporter 2 Name: Not reported
Transporter 2 ID: Not reported
Manifest Docket Number: MAH384738
Waste Description: OIL
Quantity: 330
WT/Vol Units: G
Item Number: 1
Transporter Name: CLEAN HARBORS ENVIRONMENTAL SE
Transporter EPA ID: MAD039322250
GEN Cert Date: 9/3/1994
Transporter Recpt Date: Not reported
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: Not reported
EPA ID: RID001193655
Transporter 2 ID: Not reported

NY MANIFEST:
EPA ID: RID001193655
Country: USA

Mailing Info:
Name: NARRAGANSETT ELECTRIC CO/NEW ENG POWER
Contact: CHRISTOPHER P O CONNELL
Address: PO BOX 6607
City/State/Zip: PROVIDENCE, RI 02940
Country: USA
Phone: 401-455-3610

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Manifest:

Document ID:	NYB6727869
Manifest Status:	Completed copy
Trans1 State ID:	RI3228
Trans2 State ID:	Not reported
Generator Ship Date:	04/25/1996
Trans1 Recv Date:	04/25/1996
Trans2 Recv Date:	/ /
TSD Site Recv Date:	04/26/1996
Part A Recv Date:	05/09/1996
Part B Recv Date:	05/06/1996
Generator EPA ID:	RID001193655
Trans1 EPA ID:	RID982192627
Trans2 EPA ID:	Not reported
TSDF ID:	NYD049836679
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	00400
Units:	P - Pounds
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	100
Waste Code:	D008 - LEAD 5.0 MG/L TCLP
Quantity:	00150
Units:	P - Pounds
Number of Containers:	002
Container Type:	CF - Fiber or plastic boxes, cartons
Handling Method:	L Landfill.
Specific Gravity:	100
Year:	1996

AIRS (AFS):

Compliance and Violation Data Major Sources:

EPA plant ID:	110000312796
Plant name:	DOMINION ENERGY MANCHESTER ST. INC.
Plant address:	40 POINT STREET PROVIDENCE, RI 02904
County:	PROVIDENCE
Region code:	01
Dunn & Bradst #:	Not reported
Air quality cntrl region:	120
Sic code:	4911
Sic code desc:	ELECTRIC SERVICES
North Am. industrial classf:	221112
NAIC code description:	Fossil Fuel Electric Power Generation
Default compliance status:	IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Default classification:	ACTUAL OR POTENTIAL EMISSIONS ARE ABOVE THE APPLICABLE MAJOR SOURCE THRESHOLDS
Govt facility:	ALL OTHER FACILITIES NOT OWNED OR OPERATED BY A FEDERAL, STATE, OR LOCAL GOVERNMENT
Current HPV:	Not reported

Compliance and Enforcement Major Issues:

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Air program: SIP SOURCE
National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST
Date achieved: 000829
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: MULTI MEDIA INSPECTION - LEVEL 2 OR GREATER
Date achieved: 000830
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST
Date achieved: 000831
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST
Date achieved: 000906
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: MULTI MEDIA INSPECTION - LEVEL 2 OR GREATER
Date achieved: 010910
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST
Date achieved: 011112
Penalty amount: 000000000

Air program: TITLE V PERMITS
National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST
Date achieved: 011112
Penalty amount: Not reported

Air program: NSPS
National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST
Date achieved: 011112
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST
Date achieved: 011112
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST
Date achieved: 020913
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 020913
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: STATE CONDUCTED PCE/ ON-SITE

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Date achieved: 021031
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 021031
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: TITLE V COMPLIANCE CERT DUE/RECEIVED BY
Date achieved: 030214
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 030225
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: COMPLIANCE CERTIFICATION EPA REVIEW
Date achieved: 030305
Penalty amount: Not reported

Air program: ACID PRECIPITATION
National action type: STATE CONDUCTED FCE / ON-SITE
Date achieved: 030911
Penalty amount: Not reported

Air program: ACID PRECIPITATION
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 030911
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED FCE / ON-SITE
Date achieved: 030911
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 030911
Penalty amount: Not reported

Air program: PSD
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 030911
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 040303
Penalty amount: Not reported

Air program: NSPS
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 040916
Penalty amount: Not reported

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 040916
Penalty amount: Not reported

Air program: PSD
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 040916
Penalty amount: Not reported

Air program: ACID PRECIPITATION
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 040916
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: TITLE V COMPLIANCE CERT DUE/RECEIVED BY
Date achieved: 050215
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 050218
Penalty amount: Not reported

Air program: NSPS
National action type: EPA CONDUCTED PCE/ OFF-SITE
Date achieved: 050727
Penalty amount: Not reported

Air program: ACID PRECIPITATION
National action type: STATE CONDUCTED FCE / ON-SITE
Date achieved: 050919
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED FCE / ON-SITE
Date achieved: 050919
Penalty amount: Not reported

Air program: ACID PRECIPITATION
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 050922
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 050922
Penalty amount: Not reported

Air program: NSPS
National action type: EPA CONDUCTED PCE/ OFF-SITE
Date achieved: 060105
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: TITLE V ANN COMPL CERT DUE/RCV BY PERMIT AUTHORITY

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Date achieved: 060221
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 060221
Penalty amount: Not reported

Air program: NSPS
National action type: EPA CONDUCTED PCE/ OFF-SITE
Date achieved: 060222
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: TITLE V COMPLIANCE CERT DUE/RECEIVED BY
Date achieved: 060506
Penalty amount: Not reported

Air program: NSPS
National action type: EPA CONDUCTED PCE/ OFF-SITE
Date achieved: 060815
Penalty amount: Not reported

Air program: ACID PRECIPITATION
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 060921
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 060921
Penalty amount: Not reported

Air program: ACID PRECIPITATION
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 061027
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 061027
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: TITLE V ANN COMPL CERT DUE/RCV BY PERMIT AUTHORITY
Date achieved: 070406
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 070406
Penalty amount: Not reported

Air program: NSPS
National action type: EPA CONDUCTED PCE/ OFF-SITE
Date achieved: 070816
Penalty amount: Not reported

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 070913
Penalty amount: Not reported

Air program: NSPS
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 070913
Penalty amount: Not reported

Air program: NSR
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 070913
Penalty amount: Not reported

Air program: PSD
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 070913
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 070913
Penalty amount: Not reported

Air program: ACID PRECIPITATION
National action type: STATE CONDUCTED PCE/ ON-SITE
Date achieved: 070913
Penalty amount: Not reported

Air program: NSPS
National action type: EPA CONDUCTED PCE/ OFF-SITE
Date achieved: 080103
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: TITLE V ANN COMPL CERT DUE/RCV BY PERMIT AUTHORITY
Date achieved: 080118
Penalty amount: Not reported

Air program: NSPS
National action type: EPA CONDUCTED PCE/ OFF-SITE
Date achieved: 080131
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 080314
Penalty amount: Not reported

Air program: PSD
National action type: STATE CONDUCTED FCE / ON-SITE
Date achieved: 080320
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED FCE / ON-SITE

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Date achieved: 080320
Penalty amount: Not reported

Air program: ACID PRECIPITATION
National action type: STATE CONDUCTED FCE / ON-SITE
Date achieved: 080320
Penalty amount: Not reported

Air program: NSPS
National action type: STATE CONDUCTED FCE / ON-SITE
Date achieved: 080320
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: STATE CONDUCTED FCE / ON-SITE
Date achieved: 080320
Penalty amount: Not reported

Air program: NSR
National action type: STATE CONDUCTED FCE / ON-SITE
Date achieved: 080320
Penalty amount: Not reported

Air program: NSPS
National action type: EPA CONDUCTED PCE/ OFF-SITE
Date achieved: 080505
Penalty amount: Not reported

Air program: NSPS
National action type: EPA CONDUCTED PCE/ OFF-SITE
Date achieved: 080821
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: TITLE V ANN COMPL CERT DUE/RCV BY PERMIT AUTHORITY
Date achieved: 090210
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: PCE/OFF-SITE
Date achieved: 090410
Penalty amount: Not reported

Air program: PSD
National action type: PCE/OFF-SITE
Date achieved: 090410
Penalty amount: Not reported

Air program: NSR
National action type: PCE/OFF-SITE
Date achieved: 090410
Penalty amount: Not reported

Air program: NSPS
National action type: PCE/OFF-SITE
Date achieved: 090410
Penalty amount: Not reported

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Air program: ACID PRECIPITATION
National action type: PCE/OFF-SITE
Date achieved: 090410
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 090410
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 090410
Penalty amount: Not reported

Air program: ACID PRECIPITATION
National action type: PCE/OFF-SITE
Date achieved: 090421
Penalty amount: Not reported

Air program: NSR
National action type: PCE/OFF-SITE
Date achieved: 090421
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 090421
Penalty amount: Not reported

Air program: PSD
National action type: PCE/OFF-SITE
Date achieved: 090421
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: PCE/OFF-SITE
Date achieved: 090421
Penalty amount: Not reported

Air program: NSPS
National action type: PCE/OFF-SITE
Date achieved: 090421
Penalty amount: Not reported

Air program: NSR
National action type: PCE/OFF-SITE
Date achieved: 090722
Penalty amount: Not reported

Air program: PSD
National action type: PCE/OFF-SITE
Date achieved: 090722
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: PCE/OFF-SITE

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Date achieved: 090722
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 090722
Penalty amount: Not reported

Air program: ACID PRECIPITATION
National action type: PCE/OFF-SITE
Date achieved: 090722
Penalty amount: Not reported

Air program: NSPS
National action type: PCE/OFF-SITE
Date achieved: 090722
Penalty amount: Not reported

Air program: ACID PRECIPITATION
National action type: PCE/OFF-SITE
Date achieved: 090910
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: PCE/OFF-SITE
Date achieved: 090910
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 090910
Penalty amount: Not reported

Air program: NSR
National action type: PCE/OFF-SITE
Date achieved: 090910
Penalty amount: Not reported

Air program: NSPS
National action type: PCE/OFF-SITE
Date achieved: 090910
Penalty amount: Not reported

Air program: PSD
National action type: PCE/OFF-SITE
Date achieved: 090910
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 091102
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 091119
Penalty amount: Not reported

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 091221
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 100205
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: TITLE V ANN COMPL CERT DUE/RCV BY PERMIT AUTHORITY
Date achieved: 100215
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 100408
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 100506
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED FCE / ON-SITE
Date achieved: 100527
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 100702
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 100804
Penalty amount: Not reported

Air program: NSPS
National action type: EPA CONDUCTED PCE/ OFF-SITE
Date achieved: 100823
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 100823
Penalty amount: Not reported

Air program: NSPS
National action type: EPA CONDUCTED PCE/ OFF-SITE
Date achieved: 100914
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Date achieved: 101103
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 101109
Penalty amount: Not reported

Air program: NSPS
National action type: EPA CONDUCTED PCE/ OFF-SITE
Date achieved: 101230
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 110124
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: TITLE V ANN COMPL CERT DUE/RCV BY PERMIT AUTHORITY
Date achieved: 110209
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 110310
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 110311
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 110504
Penalty amount: Not reported

Air program: NSPS
National action type: EPA CONDUCTED PCE/ OFF-SITE
Date achieved: 110720
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 110722
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 110824
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 111109
Penalty amount: Not reported

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 111128
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: TITLE V ANN COMPL CERT DUE/RCV BY PERMIT AUTHORITY
Date achieved: 120214
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 120314
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 120319
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: STATE CONDUCTED FCE / ON-SITE
Date achieved: 120319
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 120319
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 120509
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 120829
Penalty amount: Not reported

Air program: NSPS
National action type: EPA CONDUCTED PCE/ OFF-SITE
Date achieved: 121128
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: S/L REQ (O/O COND) STACK TEST/NOT OBSV BUT REVWD
Date achieved: 121205
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 130131
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: TITLE V ANN COMPL CERT DUE/RCV BY PERMIT AUTHORITY

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Date achieved: 130207
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 130311
Penalty amount: Not reported

Air program: NSPS
National action type: EPA CONDUCTED PCE/ OFF-SITE
Date achieved: 130412
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: NXXXXX
Date achieved: 130413
Penalty amount: Not reported

Air program: NSPS
National action type: EPA CONDUCTED PCE/ OFF-SITE
Date achieved: 130423
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 130426
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: COMPLIANCE CERTIFICATION STATE REVIEW
Date achieved: 130514
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 130514
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 130524
Penalty amount: Not reported

Air program: NSPS
National action type: EPA CONDUCTED PCE/ OFF-SITE
Date achieved: 130724
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 130806
Penalty amount: Not reported

Air program: TITLE V PERMITS
National action type: PCE/OFF-SITE
Date achieved: 130909
Penalty amount: Not reported

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Air program: TITLE V PERMITS
National action type: NXXXXX
Date achieved: 131015
Penalty amount: Not reported

Air program: SIP SOURCE
National action type: MULTI MEDIA INSPECTION - LEVEL 2 OR GREATER
Date achieved: 970902
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST
Date achieved: 970909
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: MULTI MEDIA INSPECTION - LEVEL 2 OR GREATER
Date achieved: 971212
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST
Date achieved: 980406
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST
Date achieved: 980911
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: MULTI MEDIA INSPECTION - LEVEL 2 OR GREATER
Date achieved: 980916
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST
Date achieved: 981016
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: MULTI MEDIA INSPECTION - LEVEL 2 OR GREATER
Date achieved: 990303
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST
Date achieved: 990916
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST
Date achieved: 990922
Penalty amount: 000000000

Air program: SIP SOURCE
National action type: OWNER/OPERATOR CONDUCTED SOURCE TEST

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Date achieved: 991021
Penalty amount: 000000000

Historical Compliance Minor Sources:
State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1004
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1004
Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1101
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1101
Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1102
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1102
Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1103
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1103
Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1104
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1104
Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1201
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1201
Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1202
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Hist compliance date: 1202
Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1203
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1203
Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1204
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1204
Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1301
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1301
Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1302
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1302
Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1303
Air prog code hist file: SIP SOURCE

State compliance status: IN COMPLIANCE - INSPECTION
Hist compliance date: 1303
Air prog code hist file: NSPS

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1004
Air prog code hist file: PSD

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1004
Air prog code hist file: NSR

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1004
Air prog code hist file: ACID PRECIPITATION

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1004

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1101
Air prog code hist file: PSD

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1101
Air prog code hist file: NSR

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1101
Air prog code hist file: ACID PRECIPITATION

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1101
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1102
Air prog code hist file: PSD

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1102
Air prog code hist file: NSR

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1102
Air prog code hist file: ACID PRECIPITATION

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1102
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1103
Air prog code hist file: PSD

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1103
Air prog code hist file: NSR

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1103
Air prog code hist file: ACID PRECIPITATION

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1103
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1104
Air prog code hist file: PSD

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1104
Air prog code hist file: NSR

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1104
Air prog code hist file: ACID PRECIPITATION

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1104
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1201
Air prog code hist file: PSD

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1201
Air prog code hist file: NSR

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1201
Air prog code hist file: ACID PRECIPITATION

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1201
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1202
Air prog code hist file: PSD

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1202
Air prog code hist file: NSR

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1202
Air prog code hist file: ACID PRECIPITATION

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1202
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1203
Air prog code hist file: PSD

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1203
Air prog code hist file: NSR

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1203
Air prog code hist file: ACID PRECIPITATION

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1203
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Hist compliance date: 1204
Air prog code hist file: PSD

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1204
Air prog code hist file: NSR

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1204
Air prog code hist file: ACID PRECIPITATION

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1204
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1301
Air prog code hist file: PSD

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1301
Air prog code hist file: NSR

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1301
Air prog code hist file: ACID PRECIPITATION

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1301
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1302
Air prog code hist file: PSD

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1302
Air prog code hist file: NSR

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1302
Air prog code hist file: ACID PRECIPITATION

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1302
Air prog code hist file: TITLE V PERMITS

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1303
Air prog code hist file: PSD

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1303
Air prog code hist file: NSR

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1303

DOMINION ENERGY MANCHESTER STREET STATION (Continued) **1000352953**

Air prog code hist file: ACID PRECIPITATION

State compliance status: IN COMPLIANCE WITH PROCEDURAL REQUIREMENTS
Hist compliance date: 1303
Air prog code hist file: TITLE V PERMITS

Permit Information:
Compliance plant ID: 00039
Permit number: RI-22-02
Permit category: V
Permit category desc: TITLE V PERMIT - PLANT SP

Permit Source:
Compliance plant ID: 00039
Plant name: DOMINION ENERGY MANCHESTER ST. INC.
Plant address: 40 POINT STREET
PROVIDENCE, RI 02904

Event Information:
Compliance permit ID: 00039
Permit number: RI-22-02
Event action type: IF
Event description: *PERMIT AUTHORITY ISSUES FINAL PERMIT
Event action #: 001
Event date: 20020626

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110 West 1/2-1 0.837 mi. 4417 ft. **SOUTH MAIN STREET (PLANET STREET)** **RI SHWS S111161146**
200-204 SOUTH MAIN STREET (PLANET STREET) **RI AUL N/A**
PROVIDENCE, RI

Relative: Higher

Actual: 11 ft.

SHWS:
Project Code: SMST-HWM
Siterem Site Number: SR-28-1454
Facility Status: Inactive
Project Code Desc: SMST-HWM
Project Date: 12/08/1999

AUL:
ELUR Date: 10/05/2000
Count Of Town: 1
Facility Size (Acres): 0.100
Project Code: SMST-HWM
SA Date: 08/22/2000
Plat: 16
Lot: 67
Siterem Site Number: SR-28-1454

W111
NE
1/2-1
0.876 mi.
4623 ft.

HULME TRANSPORTATION (A.K.A. TD MACK)
51 DEXTER ROAD
EAST PROVIDENCE, RI

Site 1 of 4 in cluster W

RI SHWS **S104304987**
RI SPILLS **N/A**

Relative:
Higher

Actual:
27 ft.

SHWS:

Project Code:	HUL-HWM
Siterem Site Number:	SR-10-0635
Facility Status:	**Active**
Project Code Desc:	HUL-HWM
Project Date:	Not reported

SPILLS:

Report Number:	97-056
Report Date:	05-12-1997
Material Spilled:	HCL
Inspector:	JOHN LEO /JIM
Source:	Not reported
Complaint Number:	Not reported
Complaint Date:	Not reported
Inspect ID:	Not reported
Inspection Date:	Not reported
Founded:	Not reported
Amount Spilled:	MORE THAN 100
Units Spilled:	GALLONS
Nature Of Spill:	Not reported
Nature Of Spill 2:	Not reported

W112
NE
1/2-1
0.907 mi.
4791 ft.

JET LINE
7 DEXTER ROAD
EAST PROVIDENCE, RI 02914

CERC-NFRAP **1000122256**
RCRA NonGen / NLR **RID000790790**
RI SHWS

Site 2 of 4 in cluster W

Relative:
Higher

Actual:
30 ft.

CERC-NFRAP:

Site ID:	0101214
Federal Facility:	Not a Federal Facility
NPL Status:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Site Contact Details:

Contact Sequence ID:	13326795.00000
Person ID:	13004278.00000

CERCLIS-NFRAP Site Alias Name(s):

Alias Name:	JET LINE
Alias Address:	Not reported
	PROVIDENCE, RI

CERCLIS-NFRAP Assessment History:

Action:	DISCOVERY
Date Started:	/ /
Date Completed:	08/01/82
Priority Level:	Not reported
Action:	PRELIMINARY ASSESSMENT
Date Started:	/ /

JET LINE (Continued) **1000122256**

Date Completed: 02/01/83
Priority Level: Low priority for further assessment

Action: SITE INSPECTION
Date Started: / /
Date Completed: 09/14/90
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information

Action: ARCHIVE SITE
Date Started: / /
Date Completed: 01/25/96
Priority Level: Not reported

RCRA NonGen / NLR:
Date form received by agency: 08/08/1980
Facility name: BLACK GOLD SERVICES INC
Facility address: 7 DEXTER RD
EAST PROVIDENCE, RI 02914
EPA ID: RID000790790
Mailing address: PO BOX 180
STOUGHTON, MA 02072
Contact: JAMES HICKMAN
Contact address: PO BOX 180
STOUGHTON, MA 02072
Contact country: US
Contact telephone: (617) 843-2829
Contact email: Not reported
EPA Region: 01
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: JET LINE SERVICES, INC.
Owner/operator address: 7 DEXTER ROAD
E. PROVIDENCE, RI 02914
Owner/operator country: Not reported
Owner/operator telephone: (401) 438-9092
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: BLACK GOLD SERVICES INC
Owner/operator address: PO BOX 180
OPERCITY, MA 99999
Owner/operator country: Not reported
Owner/operator telephone: (617) 843-2829
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No

JET LINE (Continued) **1000122256**

Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	08/08/1980
Site name:	BLACK GOLD SERVICES INC
Classification:	Not a generator, verified

Hazardous Waste Summary:

Waste code:	K049
Waste name:	SLOP OIL EMULSION SOLIDS FROM THE PETROLEUM REFINING INDUSTRY
Waste code:	K051
Waste name:	API SEPARATOR SLUDGE FROM THE PETROLEUM REFINING INDUSTRY
Waste code:	K052
Waste name:	TANK BOTTOMS (LEADED) FROM THE PETROLEUM REFINING INDUSTRY
Waste code:	D000
Waste name:	Not Defined
Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Waste code:	D002
Waste name:	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
Waste code:	D003
Waste name:	A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

JET LINE (Continued) **1000122256**

Waste code: F001
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F002
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F004
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: CRESOLS AND CRESYLIC ACID, AND NITROBENZENE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F006
Waste name: WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF

JET LINE (Continued) **1000122256**

ALUMINUM.

Waste code: F007
Waste name: SPENT CYANIDE PLATING BATH SOLUTIONS FROM ELECTROPLATING OPERATIONS

Waste code: F008
Waste name: PLATING BATH RESIDUES FROM THE BOTTOM OF PLATING BATHS FROM ELECTROPLATING OPERATIONS WHERE CYANIDES ARE USED IN THE PROCESS.

Waste code: F009
Waste name: SPENT STRIPPING AND CLEANING BATH SOLUTIONS FROM ELECTROPLATING OPERATIONS WHERE CYANIDES ARE USED IN THE PROCESS.

Waste code: F010
Waste name: QUENCHING BATH RESIDUES FROM OIL BATHS FROM METAL HEAT TREATING OPERATIONS WHERE CYANIDES ARE USED IN THE PROCESS.

Waste code: F011
Waste name: SPENT CYANIDE SOLUTIONS FROM SALT BATH POT CLEANING FROM METAL HEAT TREATING OPERATIONS.

Waste code: F012
Waste name: QUENCHING WASTE WATER TREATMENT SLUDGES FROM METAL HEAT TREATING OPERATIONS WHERE CYANIDES ARE USED IN THE PROCESS.

Waste code: F013
Waste name: Not Defined

Waste code: F014
Waste name: Not Defined

Waste code: F015
Waste name: Not Defined

Waste code: F016
Waste name: Not Defined

Waste code: K049
Waste name: SLOP OIL EMULSION SOLIDS FROM THE PETROLEUM REFINING INDUSTRY

Waste code: K051
Waste name: API SEPARATOR SLUDGE FROM THE PETROLEUM REFINING INDUSTRY

Waste code: K052
Waste name: TANK BOTTOMS (LEADED) FROM THE PETROLEUM REFINING INDUSTRY

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Formal Enforcement Agreement or Order
Date violation determined: 12/19/1985
Date achieved compliance: 02/08/1999
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported

JET LINE (Continued) **1000122256**

Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 09/19/1985
Date achieved compliance: 12/30/1985
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 10/23/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 6685
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 01/30/1985
Date achieved compliance: 02/06/1985
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 01/30/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 08/01/1984
Date achieved compliance: 02/05/1985
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 08/15/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 02/08/1999
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Formal Enforcement Agreement or Order
Date achieved compliance: 02/08/1999
Evaluation lead agency: State

Evaluation date: 12/30/1985
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Generators - General
Date achieved compliance: 12/30/1985

JET LINE (Continued) **1000122256**

Evaluation lead agency: State

Evaluation date: 12/19/1985
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Formal Enforcement Agreement or Order
Date achieved compliance: 02/08/1999
Evaluation lead agency: State

Evaluation date: 09/19/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 12/30/1985
Evaluation lead agency: State

Evaluation date: 02/05/1985
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Generators - General
Date achieved compliance: 02/05/1985
Evaluation lead agency: State

Evaluation date: 01/30/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 02/06/1985
Evaluation lead agency: State

Evaluation date: 01/30/1985
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Generators - General
Date achieved compliance: 02/06/1985
Evaluation lead agency: State

Evaluation date: 01/17/1985
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 08/01/1984
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 02/05/1985
Evaluation lead agency: State

SHWS:
Project Code: JET-SFA
Siterem Site Number: SR-10-0673
Facility Status: **Inactive**
Project Code Desc: JET-SFA
Project Date: 08/01/1982

W113 **ASPEN AEROGELS** **RI SHWS** **S109367863**
NE **3 DEXTER RD** **RI LUST** **N/A**
1/2-1 **EAST PROVIDENCE, RI 02914** **RI AUL**
0.907 mi. **RI AIRS**
4791 ft. **Site 3 of 4 in cluster W**

Relative:
Higher

Actual:
30 ft.

SHWS:
Project Code: HILA-HWM
Siterem Site Number: SR-10-0606
Facility Status: **Active**
Project Code Desc: HILA-HWM
Project Date: Not reported

LUST:
Project Number: 1083-ST
Project Date: 12/06/2000
Facility Id: 18865
Facility Status: **Soil Removal Only; No Further Action Required**

AUL:
ELUR Date: 01/28/2002
Count Of Town: 1
Facility Size (Acres): 17.57
Project Code: HILA-HWM
SA Date: 01/25/2000
Plat: Map 304, Block 1
Lot: Parcel 1
Siterem Site Number: SR-10-0606

AIRS:
Facility ID: AIR4031
SIC Code: Not reported
AIRS Code: Not reported
Ploverid: 8866
Date Received: 01/01/1990
Invent Year: 2010
Source Classification: Not reported
Total Volatile Organic Compound Emiisions (lbs): Not reported
Total Haz Air Pollutants Emitted Defined by EPA (lbs): Not reported
Oxides of Nitrogen Emitted (lbs): Not reported
Carbon Monoxide Emitted (lbs): Not reported
Total Particulate Matter Emitted (lbs): Not reported
Total Oxides of sulfur Emitted (lbs): Not reported
Mailing Name: GREG WATKA
Mailing Addr1: 3 DEXTER RD
Mailing Addr2: Not reported
Mailing City/State/Zip: EAST PROVEIDENCE, RI 02914
Num of Employees: 30
Telephone Number: 4014322612

Facility ID: AIR4031
SIC Code: Not reported
AIRS Code: Not reported
Ploverid: Not reported
Date Received: Not reported
Invent Year: Not reported
Source Classification: Not reported
Total Volatile Organic Compound Emiisions (lbs): Not reported

ASPEN AEROGELS (Continued) **S109367863**

Total Haz Air Pollutants Emitted Defined by EPA (lbs):	Not reported
Oxides of Nitrogen Emitted (lbs):	Not reported
Carbon Monoxide Emitted (lbs):	Not reported
Total Particulate Matter Emitted (lbs):	Not reported
Total Oxides of sulfur Emitted (lbs):	Not reported
Mailing Name:	GREG WATKA
Mailing Addr1:	3 DEXTER RD
Mailing Addr2:	null
Mailing City/State/Zip:	EAST PROVEIDENCE, RI 02914
Num of Employees:	30
Telephone Number:	401-432-2612

Facility ID:	AIR4031
SIC Code:	Not reported
AIRS Code:	Not reported
Ploverid:	8866
Date Received:	01/01/1990
Invent Year:	2009
Source Classification:	Not reported
Total Volatile Organic Compound Emiisions (lbs):	Not reported
Total Haz Air Pollutants Emitted Defined by EPA (lbs):	Not reported
Oxides of Nitrogen Emitted (lbs):	Not reported
Carbon Monoxide Emitted (lbs):	Not reported
Total Particulate Matter Emitted (lbs):	Not reported
Total Oxides of sulfur Emitted (lbs):	Not reported
Mailing Name:	GREG WATKA
Mailing Addr1:	3 DEXTER RD
Mailing Addr2:	Not reported
Mailing City/State/Zip:	EAST PROVEIDENCE, RI 02914
Num of Employees:	30
Telephone Number:	4014322612

Facility ID:	AIR4031
SIC Code:	Not reported
AIRS Code:	Not reported
Ploverid:	8866
Date Received:	01/01/1990
Invent Year:	2012
Source Classification:	Not reported
Total Volatile Organic Compound Emiisions (lbs):	Not reported
Total Haz Air Pollutants Emitted Defined by EPA (lbs):	Not reported
Oxides of Nitrogen Emitted (lbs):	Not reported
Carbon Monoxide Emitted (lbs):	Not reported
Total Particulate Matter Emitted (lbs):	Not reported
Total Oxides of sulfur Emitted (lbs):	Not reported
Mailing Name:	GERALD SIMPSON
Mailing Addr1:	3 DEXTER RD
Mailing Addr2:	Not reported
Mailing City/State/Zip:	EAST PROVEIDENCE, RI 02914
Num of Employees:	98
Telephone Number:	401-228-1646

X114
WSW
1/2-1
0.914 mi.
4824 ft.

DAVOL INCORPORATED
POINT AND EDDY STREET
PROVIDENCE, RI

Site 1 of 2 in cluster X

Relative:
Higher

Actual:
9 ft.

RI SHWS **S103247329**
N/A

SHWS:

Project Code:	DAVL-SFA
Siterem Site Number:	SR-28-0357
Facility Status:	**Inactive**
Project Code Desc:	DAVL-SFA
Project Date:	06/01/1981

W115
NE
1/2-1
0.918 mi.
4847 ft.

MORTON INT'L INC. (WHITAKER CORP.)
PO BOX 16069
EAST PROVIDENCE, RI

Site 4 of 4 in cluster W

Relative:
Higher

Actual:
29 ft.

CORRACTS **1000882783**
RCRA NonGen / NLR **RID093214641**
RI SHWS
RI MANIFEST
NY MANIFEST
RI AUL
2020 COR ACTION

CORRACTS:

EPA ID:	RID093214641
EPA Region:	01
Area Name:	ENTIRE FACILITY
Actual Date:	20090929
Action:	CA075LO - CA Prioritization, Facility or area was assigned a low corrective action priority
NAICS Code(s):	Not reported
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	RID093214641
EPA Region:	01
Area Name:	ENTIRE FACILITY
Actual Date:	20100930
Action:	CA725YE - Current Human Exposures Under Control, Yes, Current Human Exposures Under Control has been verified
NAICS Code(s):	Not reported
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	RID093214641
EPA Region:	01
Area Name:	ENTIRE FACILITY
Actual Date:	20100930
Action:	CA750YE - Migration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified
NAICS Code(s):	Not reported
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	RID093214641
EPA Region:	01
Area Name:	ENTIRE FACILITY
Actual Date:	20110930
Action:	CA400 - Date For Remedy Selection (CM Imposed)
NAICS Code(s):	Not reported

MORTON INT'L INC. (WHITAKER CORP.) (Continued) **1000882783**

Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: RID093214641
EPA Region: 01
Area Name: ENTIRE FACILITY
Actual Date: 20110930
Action: CA550NR
NAICS Code(s): Not reported
Original schedule date: Not reported
Schedule end date: Not reported

RCRA NonGen / NLR:
Date form received by agency: 03/01/1990
Facility name: MORTON INTERNATIONAL, INC
Site name: PROVIDENCE CHEMICALS
Facility address: PO BOX 16069
EAST PROVIDENCE, RI 02916
EPA ID: RID093214641
Contact: MATTHEW WAITE
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (401) 434-1770
Contact email: Not reported
EPA Region: 01
Land type: Private
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: CITIZENS TRUST CO OF PROVIDENCE
Owner/operator address: OWNERSTREET
OWNERCITY, RI 99999
Owner/operator country: Not reported
Owner/operator telephone: (401) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: WHITTAKER CORPORATION
Owner/operator address: 10880 WILSHIRE BOULEVARD
OPERCITY, CA 99999
Owner/operator country: Not reported
Owner/operator telephone: (213) 475-9411
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No

MORTON INT'L INC. (WHITAKER CORP.) (Continued) **1000882783**

Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency: 11/08/1989
Site name: MORTON INTERNATIONAL, INC
Classification: Not a generator, verified

Date form received by agency: 11/18/1980
Site name: MORTON INTERNATIONAL, INC
Classification: Not a generator, verified

Hazardous Waste Summary:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: K078
Waste name: K078

Waste code: P092

MORTON INT'L INC. (WHITAKER CORP.) (Continued) **1000882783**

Waste name: MERCURY, (ACETATO-O)PHENYL-

Waste code: U002
Waste name: ACETONE (I)

Waste code: U028
Waste name: 1,2-BENZENEDICARBOXYLIC ACID, BIS(2-ETHYLHEXYL) ESTER

Waste code: U107
Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIOCTYL ESTER

Waste code: U159
Waste name: 2-BUTANONE (I,T)

Waste code: U201
Waste name: 1,3-BENZENEDIOL

Waste code: U213
Waste name: FURAN, TETRAHYDRO-(I)

Waste code: U220
Waste name: BENZENE, METHYL-

Waste code: U223
Waste name: BENZENE, 1,3-DIISOCYANATOMETHYL- (R,T)

Waste code: U228
Waste name: ETHENE, TRICHLORO-

Waste code: U238
Waste name: CARBAMIC ACID, ETHYL ESTER

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED

MORTON INT'L INC. (WHITAKER CORP.) (Continued) **1000882783**

SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: K078
Waste name: K078

Waste code: P092
Waste name: MERCURY, (ACETATO-O)PHENYL-

Waste code: U002
Waste name: ACETONE (I)

Waste code: U028
Waste name: 1,2-BENZENEDICARBOXYLIC ACID, BIS(2-ETHYLHEXYL) ESTER

Waste code: U107
Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIOCTYL ESTER

Waste code: U159
Waste name: 2-BUTANONE (I,T)

Waste code: U201
Waste name: 1,3-BENZENEDIOL

Waste code: U213
Waste name: FURAN, TETRAHYDRO-(I)

Waste code: U220
Waste name: BENZENE, METHYL-

Waste code: U223
Waste name: BENZENE, 1,3-DIISOCYANATOMETHYL- (R,T)

Waste code: U228
Waste name: ETHENE, TRICHLORO-

Waste code: U238
Waste name: CARBAMIC ACID, ETHYL ESTER

Corrective Action Summary:
Event date: 09/29/2009
Event: CA Prioritization, Facility or area was assigned a low corrective action priority.

Event date: 09/30/2010
Event: Current Human Exposures under Control, Yes, Current Human Exposures

MORTON INT'L INC. (WHITAKER CORP.) (Continued) **1000882783**

Under Control has been verified. Based on a review of information contained in the EI determination, current human exposures are expected to be under control at the facility under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

Event date: 09/30/2010
Event: Igration of Contaminated Groundwater under Control, Yes, Migration of Contaminated Groundwater Under Control has been verified. Based on a review of information contained in the EI determination, it has been determined that migration of contaminated groundwater is under control at the facility. Specifically, this determination indicates that the migration of contaminated groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the existing area of contaminated groundwater. This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

Event date: 09/30/2011
Event: Date For Remedy Selection (CM Imposed)

Event date: 09/30/2011
Event: CA550NR

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 04/16/1985
Date achieved compliance: 05/16/1985
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/22/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 01/14/1985
Date achieved compliance: 09/23/1987
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 01/22/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 05/31/1984

MORTON INT'L INC. (WHITAKER CORP.) (Continued) **1000882783**

Date achieved compliance: 09/23/1987
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 05/31/1984
Date achieved compliance: 01/07/1985
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/31/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 02/18/1999
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 09/23/1987
Evaluation lead agency: State

Evaluation date: 04/29/1988
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA-Initiated Oversight/Observation/Training Actions

Evaluation date: 04/10/1986
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/16/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 05/16/1985
Evaluation lead agency: State

Evaluation date: 01/14/1985
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 09/23/1987
Evaluation lead agency: State

Evaluation date: 05/31/1984

MORTON INT'L INC. (WHITAKER CORP.) (Continued) **1000882783**

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 09/23/1987
Evaluation lead agency: State

Evaluation date: 05/31/1984
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 01/07/1985
Evaluation lead agency: State

Evaluation date: 05/31/1984
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 04/09/1984
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

SHWS:
Project Code: MORT-HWM
Siterem Site Number: SR-10-0842
Facility Status: **Inactive**
Project Code Desc: MORT-HWM
Project Date: 02/14/1997

RI MANIFEST:
GEN Cert Date: 7/11/1989
Transporter Receipt Date: Not reported
Number Of Containers: 0
Container Type: Not reported
Waste Code1: Not reported
Waste Code2: Not reported
Waste Code3: Not reported
Comment: Not reported
Fee Exempt Code: Not reported
TSDF Name: GSX
TSDF ID: TND000645770
TSDF Date: Not reported
Transporter 2 Name: Not reported
Transporter 2 ID: Not reported
Manifest Docket Number: RIB0007095
Waste Description: HW
Quantity: 16790
WT/Vol Units: P
Item Number: 1
Transporter Name: CHEM-FREIGHT
Transporter EPA ID: OHD986966190
GEN Cert Date: 7/11/1989
Transporter Recpt Date: Not reported
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: Not reported
EPA ID: RID093214641

MORTON INT'L INC. (WHITAKER CORP.) (Continued) **1000882783**

Transporter 2 ID: Not reported

NY MANIFEST:
EPA ID: RID093214641
Country: USA

Mailing Info:
Name: WHITTAKER CORPORATION
Contact: WHITTAKER CORPORATION
Address: P. O. BOX 16069
City/State/Zip: EAST PROVIDENCE, RI 02916
Country: USA
Phone: 401-434-1770

Manifest:

Document ID: NYA3789944
Manifest Status: Completed copy
Trans1 State ID: MA12353
Trans2 State ID: NY18099GD
Generator Ship Date: 05/06/1986
Trans1 Recv Date: 05/06/1986
Trans2 Recv Date: 05/07/1986
TSD Site Recv Date: 05/12/1986
Part A Recv Date: 05/14/1986
Part B Recv Date: 05/16/1986
Generator EPA ID: RID093214641
Trans1 EPA ID: MAD066978370
Trans2 EPA ID: NYD046877775
TSDF ID: NYD049253719
Waste Code: RI01 - AUTHORIZED WASTE TO TECHNIC INC
Quantity: 00190
Units: P - Pounds
Number of Containers: 001
Container Type: DM - Metal drums, barrels
Handling Method: L Landfill.
Specific Gravity: 100
Year: 1986

AUL:
ELUR Date: 01/23/2001
Count Of Town: 1
Facility Size (Acres): 4.700
Project Code: MORT-HWM
SA Date: 12/11/2000
Plat: 304
Lot: BLOCK 8,PARCEL 2
Siterem Site Number: SR-10-0842

2020 COR ACTION:
EPA ID: RID093214641
Region: 1
Action: Not reported

X116 **NATIONAL GRID - POINT STREET SUBSTATION** **RI SHWS** **S105617960**
WSW **80 POINT STREET** **RI AUL** **N/A**
1/2-1 **PROVIDENCE, RI**
0.920 mi.
4857 ft. **Site 2 of 2 in cluster X**

Relative:
Higher

Actual:
9 ft.

SHWS:
Project Code: POSS-HWM
Siterem Site Number: SR-28-0916
Facility Status: **Inactive**
Project Code Desc: POSS-HWM
Project Date: 03/28/2001

AUL:
ELUR Date: 12/05/2005
Count Of Town: 1
Facility Size (Acres): 0.75
Project Code: POSS-HWM
SA Date: Not reported
Plat: 21
Lot: 350
Siterem Site Number: SR-28-0916

Y117 **ROUTE 195 DOT PROJECT 49** **RI SHWS** **S108963018**
WSW **PLAT 22 LOT 165 - 126 GLOBE STREET** **N/A**
1/2-1 **PROVIDENCE, RI**
0.930 mi.
4909 ft. **Site 1 of 3 in cluster Y**

Relative:
Higher

Actual:
11 ft.

SHWS:
Project Code: DT49-DOT
Siterem Site Number: SR-28-1348
Facility Status: **Active**
Project Code Desc: DT49-DOT
Project Date: 06/27/2000

Y118 **ROUTE 195 DOT PROJECT 50** **RI SHWS** **S108963019**
WSW **PLAT 22 LOT 166 - 128 GLOBE STREET** **N/A**
1/2-1 **PROVIDENCE, RI**
0.930 mi.
4909 ft. **Site 2 of 3 in cluster Y**

Relative:
Higher

Actual:
11 ft.

SHWS:
Project Code: DT50-DOT
Siterem Site Number: SR-28-1349
Facility Status: **Active**
Project Code Desc: DT50-DOT
Project Date: 06/27/2000

119
WSW
1/2-1
0.931 mi.
4916 ft.

DYNAMO HOUSE - HERITAGE (REF: NAT'L GRID SOUTH ST.)
360 EDDY STREET
PROVIDENCE, RI

RI SHWS **S104306492**
RI SPILLS **N/A**
RI AUL

Relative:
Higher

Actual:
10 ft.

SHWS:

Project Code:	DYNA-HWM
Siterem Site Number:	SR-28-0929 B
Facility Status:	**Active**
Project Code Desc:	DYNA-HWM
Project Date:	12/04/2006

Project Code:	NESO-HWM
Siterem Site Number:	SR-28-0929 A
Facility Status:	**Active**
Project Code Desc:	NESO-HWM
Project Date:	03/28/1990

Project Code:	NESS-HWM
Siterem Site Number:	SR-28-0929 C
Facility Status:	**Active**
Project Code Desc:	NESS-HWM
Project Date:	03/28/1990

Project Code:	NESY-HWM
Siterem Site Number:	SR-28-0928
Facility Status:	**Active**
Project Code Desc:	NESY-HWM
Project Date:	07/07/2011

SPILLS:

Report Number:	3620
Report Date:	03/25/1989
Material Spilled:	Lube Oil, 250 Gals
Inspector:	Squires
Source:	Not reported
Complaint Number:	Not reported
Complaint Date:	Not reported
Inspect ID:	Not reported
Inspection Date:	Not reported
Founded:	Not reported
Amount Spilled:	Not reported
Units Spilled:	Not reported
Nature Of Spill:	Not reported
Nature Of Spill 2:	Not reported

AUL:

ELUR Date:	06/07/2007
Count Of Town:	1
Facility Size (Acres):	1.7
Project Code:	DYNA-HWM
SA Date:	05/10/2007
Plat:	21
Lot:	430
Siterem Site Number:	SR-28-0929 B

ELUR Date:	02/19/1999

DYNAMO HOUSE - HERITAGE (REF: NAT'L GRID SOUTH ST.) (Continued) **S104306492**

Count Of Town: 1
Facility Size (Acres): 10
Project Code: NESO-HWM
SA Date: Not reported
Plat: Not reported
Lot: Not reported
Siterem Site Number: SR-28-0929 A

ELUR Date: 02/19/1999
Count Of Town: 1
Facility Size (Acres): Not reported
Project Code: NESS-HWM
SA Date: Not reported
Plat: 21
Lot: 149, 78
Siterem Site Number: SR-28-0929 C

120
SE
1/2-1
0.932 mi.
4923 ft.

EAST PROVIDENCE DPW (FORMER) **RI SHWS** **S106250371**
20 BENTLEY STREET **RI LUST** **N/A**
EAST PROVIDENCE, RI

Relative:
Higher

Actual:
72 ft.

SHWS:
Project Code: EPPW-HWM
Siterem Site Number: SR-10-0408
Facility Status: **Active**
Project Code Desc: EPPW-HWM
Project Date: 09/08/2004

LUST:
Project Number: 1091-LS
Project Date: 01/08/2004
Facility Id: 15146
Facility Status: **Active; Investigation/Remed. Required**

Z121
West
1/2-1
0.935 mi.
4939 ft.

ROUTE 195 DOT PROJECT 9 **RI SHWS** **S108962993**
PLAT 18 LOT 36 - 670 SOUTH WATER STREET **N/A**
PROVIDENCE, RI

Site 1 of 3 in cluster Z

Relative:
Higher

Actual:
8 ft.

SHWS:
Project Code: DT9-DOT
Siterem Site Number: SR-28-1339
Facility Status: **Active**
Project Code Desc: DT9-DOT
Project Date: 06/27/2000

Z122 **ROUTE 195 DOT PROJECT 8** **RI SHWS** **S108963035**
West **PLAT 18 LOT 34 - 675 SOUTH WATER STREET** **N/A**
1/2-1 **PROVIDENCE, RI**
0.935 mi.
4939 ft. **Site 2 of 3 in cluster Z**

Relative:
Higher

Actual:
8 ft.

SHWS:
Project Code: DT8-DOT
Siterem Site Number: SR-28-1338
Facility Status: **Active**
Project Code Desc: DT8-DOT
Project Date: 06/27/2000

AA123 **DOWNING CORPORATION** **RI SHWS** **U002040370**
West **200 DYER ST** **RI LUST** **N/A**
1/2-1 **PROVIDENCE, RI** **RI UST**
0.956 mi.
5046 ft. **Site 1 of 2 in cluster AA**

Relative:
Higher

Actual:
7 ft.

SHWS:
Project Code: BROD-HWM
Siterem Site Number: SR-28-0386
Facility Status: **Active**
Project Code Desc: BROD-HWM
Project Date: 04/20/2011

Project Code: NBC9-DOT
Siterem Site Number: SR-28-0386
Facility Status: **Active**
Project Code Desc: NBC9-DOT
Project Date: 06/24/2003

LUST:
Project Number: 2887-LS
Project Date: 06/24/1994
Facility Id: 16795
Facility Status: **Inactive; Investigation/Remed. Complete,No Further Action Required**

UST:
Facility ID: UST-16795
Facility Class: Commercials

Tank ID: 1
Tank Status: **Permanently Closed**
Tank Capacity: 2000
Tank Substance: Heating Oil No.2
Date Installed: 04/25/2001

Y124
WSW
1/2-1
0.958 mi.
5060 ft.

PROVIDENCE GAS CO
GLOBE STREET
PROVIDENCE, RI 02903

Database(s): **EDR MGP**
EDR ID Number: **1008408945**
EPA ID Number: **N/A**

Site 3 of 3 in cluster Y

Relative:
Higher

Actual:
12 ft.

Manufactured Gas Plants:
No additional information available

AA125
West
1/2-1
0.962 mi.
5080 ft.

NATIONAL GRID - DYER STREET
144 DYER STREET
PROVIDENCE, RI

Database(s): **RI SHWS**
EDR ID Number: **S112205234**
EPA ID Number: **N/A**

Site 2 of 2 in cluster AA

Relative:
Higher

Actual:
6 ft.

SHWS:

Project Code:	NADS-HWM
Siterem Site Number:	SR-28-0877 A
Facility Status:	**Inactive**
Project Code Desc:	NADS-HWM
Project Date:	11/17/1995
Project Code:	NADS-DOT
Siterem Site Number:	SR-28-0877 B
Facility Status:	**Active**
Project Code Desc:	NADS-DOT
Project Date:	Not reported

126
WSW
1/2-1
0.962 mi.
5082 ft.

STAR ENAMELING CO INC
371 RICHMOND ST
PROVIDENCE, RI 02903

Database(s): **RCRA NonGen / NLR, FINDS, RI SHWS, RI MANIFEST, RI AUL**
EDR ID Number: **1000351170**
EPA ID Number: **RID987471190**

Relative:
Higher

Actual:
13 ft.

RCRA NonGen / NLR:

Date form received by agency:	07/31/2007
Facility name:	STAR ENAMELING CO INC
Facility address:	371 RICHMOND ST PROVIDENCE, RI 02903
EPA ID:	RID987471190
Mailing address:	RICHMOND ST PROVIDENCE, RI 02903
Contact:	GERARD MOOR
Contact address:	371 RICHMOND ST PROVIDENCE, RI 02903
Contact country:	US
Contact telephone:	(401) 421-5528
Contact email:	Not reported
EPA Region:	01
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	STAR ENAMELING CO INC
Owner/operator address:	OWNERSTREET OWNERCITY, RI 99999

STAR ENAMELING CO INC (Continued) **1000351170**

Owner/operator country: Not reported
Owner/operator telephone: (401) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 02/12/1990
Site name: STAR ENAMELING CO INC
Classification: Small Quantity Generator

Hazardous Waste Summary:
Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Violation Status: No violations found

FINDS:

Registry ID: 110004924002

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource

STAR ENAMELING CO INC (Continued) **1000351170**

Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

SHWS:
Project Code: STAR-HWM
Siterem Site Number: SR-28-1474
Facility Status: **Inactive**
Project Code Desc: STAR-HWM
Project Date: 08/27/2003

RI MANIFEST:
GEN Cert Date: 3/13/2003
Transporter Receipt Date: 3/13/2003
Number Of Containers: 0
Container Type: Not reported
Waste Code1: D008
Waste Code2: D010
Waste Code3: D011
Comment: Not reported
Fee Exempt Code: Not reported
TSDF Name: Not reported
TSDF ID: Not reported
TSDF Date: 3/13/2003
Transporter 2 Name: Not reported
Transporter 2 ID: Not reported
Manifest Docket Number: RIS0077485
Waste Description: Lead/silver
Quantity: 4
WT/Vol Units: Gal
Item Number: 2
Transporter Name: Lincoln Environmental, Inc.
Transporter EPA ID: RID982192627
GEN Cert Date: 3/13/2003
Transporter Recpt Date: 3/13/2003
Transporter 2 Recpt Date: Not reported
TSDF Recpt Date: 3/13/2003
EPA ID: RID987471190
Transporter 2 ID: Not reported

AUL:
ELUR Date: 04/11/2005
Count Of Town: 1
Facility Size (Acres): 8.999
Project Code: STAR-HWM
SA Date: Not reported
Plat: 21
Lot: 404
Siterem Site Number: SR-28-1474

AB127 **ROUTE 195 DOT PROJECT 13 (SEE 12)** **RI SHWS** **S109172366**
West **PLAT 18 LOT 89- 614 SOUTH MAIN STREE** **N/A**
1/2-1 **PROVIDENCE, RI**
0.964 mi.
5092 ft. **Site 1 of 2 in cluster AB**

Relative:
Higher

Actual:
9 ft.

SHWS:
Project Code: DT13-DOT
Siterem Site Number: SR-28-1342
Facility Status: **Active**
Project Code Desc: DT13-DOT
Project Date: 06/27/2000

AB128 **ROUTE 195 DOT PROJECT 12** **RI SHWS** **S108963011**
West **PLAT 18 LOT 87 - 628 SOUTH MAIN STREET** **N/A**
1/2-1 **PROVIDENCE, RI**
0.964 mi.
5092 ft. **Site 2 of 2 in cluster AB**

Relative:
Higher

Actual:
9 ft.

SHWS:
Project Code: DT12-DOT
Siterem Site Number: SR-28-1341
Facility Status: **Active**
Project Code Desc: DT12-DOT
Project Date: 06/27/2000

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129 **LYNCH WJ PAINT & VARNISH** **RI SHWS** **S106113923**
ENE **110 KING PHILIP ROAD** **N/A**
1/2-1 **EAST PROVIDENCE, RI**
0.970 mi.
5119 ft.

Relative:
Higher

Actual:
29 ft.

SHWS:
Project Code: LWJP-HWM
Siterem Site Number: SR-10-0767
Facility Status: **Inactive**
Project Code Desc: LWJP-HWM
Project Date: 09/19/1995

Project Code: LWJP-SFA
Siterem Site Number: SR-10-0767
Facility Status: **Inactive**
Project Code Desc: LWJP-SFA
Project Date: 03/01/1984

Z130 **ROUTE 195 DOT PROJECT 30** **RI SHWS** **S108963016**
West **PLAT 20 LOT 205 -198 DYER STREET** **N/A**
1/2-1 **PROVIDENCE, RI**
0.971 mi.
5128 ft. **Site 3 of 3 in cluster Z**

Relative:
Higher

Actual:
6 ft.

SHWS:
Project Code: DT30-DOT
Siterem Site Number: SR-28-1346
Facility Status: **Active**
Project Code Desc: DT30-DOT
Project Date: 06/27/2000

131
WSW
1/2-1
0.972 mi.
5130 ft.

THE NARRAGANSETT ELECTRIC COMPANY
2 ALLENS AVE
PROVIDENCE, RI 02905

RI SHWS **S109514886**
RI AUL **N/A**
RI AIRS

Relative:
Higher

Actual:
13 ft.

SHWS:

Project Code:	DEMI-HWM
Siterem Site Number:	SR-28-0381
Facility Status:	**Active**
Project Code Desc:	DEMI-HWM
Project Date:	10/15/2010

AUL:

ELUR Date:	03/15/2012
Count Of Town:	1
Facility Size (Acres):	0.200
Project Code:	DEMI-HWM
SA Date:	Not reported
Plat:	22
Lot:	359
Siterem Site Number:	SR-28-0381

AIRS:

Facility ID:	AIR4010
SIC Code:	Not reported
AIRS Code:	Not reported
Ploverid:	8069
Date Received:	01/01/1990
Invent Year:	2010
Source Classification:	Not reported
Total Volatile Organic Compound Emiisions (lbs):	Not reported
Total Haz Air Pollutants Emitted Defined by EPA (lbs):	Not reported
Oxides of Nitrogen Emitted (lbs):	Not reported
Carbon Monoxide Emitted (lbs):	Not reported
Total Particulate Matter Emitted (lbs):	Not reported
Total Oxides of sulfur Emitted (lbs):	Not reported
Mailing Name:	WILLIAM HOWARD
Mailing Addr1:	280 MELROSE STREET
Mailing Addr2:	Not reported
Mailing City/State/Zip:	PROVIDENCE, RI 02907
Num of Employees:	1
Telephone Number:	Not reported

Facility ID:	AIR4010
SIC Code:	Not reported
AIRS Code:	Not reported
Ploverid:	Not reported
Date Received:	Not reported
Invent Year:	Not reported
Source Classification:	Not reported
Total Volatile Organic Compound Emiisions (lbs):	Not reported
Total Haz Air Pollutants Emitted Defined by EPA (lbs):	Not reported
Oxides of Nitrogen Emitted (lbs):	Not reported
Carbon Monoxide Emitted (lbs):	Not reported
Total Particulate Matter Emitted (lbs):	Not reported
Total Oxides of sulfur Emitted (lbs):	Not reported
Mailing Name:	WILLIAM HOWARD

THE NARRAGANSETT ELECTRIC COMPANY (Continued) **S109514886**

Mailing Addr1:	477 DEXTER STREET
Mailing Addr2:	null
Mailing City/State/Zip:	PROVIDENCE, RI 02907
Num of Employees:	1
Telephone Number:	401-525-5818
Facility ID:	AIR4010
SIC Code:	Not reported
AIRS Code:	Not reported
Ploverid:	8069
Date Received:	01/01/1990
Invent Year:	2009
Source Classification:	Not reported
Total Volatile Organic Compound Emiisions (lbs):	Not reported
Total Haz Air Pollutants Emitted Defined by EPA (lbs):	Not reported
Oxides of Nitrogen Emitted (lbs):	Not reported
Carbon Monoxide Emitted (lbs):	Not reported
Total Particulate Matter Emitted (lbs):	Not reported
Total Oxides of sulfur Emitted (lbs):	Not reported
Mailing Name:	WILLIAM HOWARD
Mailing Addr1:	280 MELROSE STREET
Mailing Addr2:	Not reported
Mailing City/State/Zip:	PROVIDENCE, RI 02907
Num of Employees:	1
Telephone Number:	4015255818
Facility ID:	AIR4010
SIC Code:	Not reported
AIRS Code:	Not reported
Ploverid:	8069
Date Received:	01/01/1990
Invent Year:	2012
Source Classification:	Not reported
Total Volatile Organic Compound Emiisions (lbs):	Not reported
Total Haz Air Pollutants Emitted Defined by EPA (lbs):	Not reported
Oxides of Nitrogen Emitted (lbs):	Not reported
Carbon Monoxide Emitted (lbs):	Not reported
Total Particulate Matter Emitted (lbs):	Not reported
Total Oxides of sulfur Emitted (lbs):	Not reported
Mailing Name:	EZRA MCCARTHY
Mailing Addr1:	280 MELROSE STREET
Mailing Addr2:	Not reported
Mailing City/State/Zip:	PROVIDENCE, RI 02907
Num of Employees:	1
Telephone Number:	781-907-3645

Count: 20 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
EAST PROVIDENCE	1003862576	KOPPERS CO. PROVIDENCE PLANT	RTE 195 HWY INTERCHGE OFF MASS	02914	CERC-NFRAP
PROVIDENCE	S103247319	BELVOIR PROPERTIES	162 & 166 CLIFFORD STREET		RI SHWS
PROVIDENCE	S112205232	ROUTE 195 DOT (GENERAL)	ROUTE 195 AREA		RI SHWS
PROVIDENCE	S112205229	ROUTE 195 DOT PROJECT CONTRACT -14	ROUTE 195 AREA		RI SHWS
PROVIDENCE	S110043335	ROUTE 195 DOT PROJECT CONTRACT - 1	ROUTE 195 AREA		RI SHWS
PROVIDENCE	S108652167	ROUTE 195 DOT PROJECT CONTRACT -10	ROUTE 195 AREA		RI SHWS
PROVIDENCE	S110711822	MAGNOLIA STREET BRIDGE REMOVAL (RT	RTE 6/RTE 10 INTERCHANGE (MAGN		RI SHWS
PROVIDENCE	S110711831	RIDOT	INTERSTATE 95	02903	RI SHWS, RI NPDES
PROVIDENCE	S108652163	ROUTE 195 DOT PROJECT CONTRACT - 6	ROUTE 95 AREA		RI SHWS
PROVIDENCE	1012130920	EAST TRANSIT STREET BOAT RAMP	EASTERN END OF EAST TRANSIT ST	02906	US BROWNFIELDS
PROVIDENCE	S103247393	PROVIDENCE PUBLIC WORKS	ERNEST STREET		RI SHWS
PROVIDENCE	1000196051	INGE CO INC	FIELDS POINT DR	02905	RCRA NonGen / NLR, RI SHWS, RI AUL
PROVIDENCE	S103247414	UNION PLAZA HOTEL	FRANCIS STREET		RI SHWS
PROVIDENCE	S104180299	HARBORSIDE PARK - PARCEL 5A/5B	HARBORSIDE BLVD.		RI SHWS, RI AUL
PROVIDENCE	S103247338	FIELD'S POINT CITY DUMP	HARBORSIDE BOULEVARD		RI SHWS, RI LCP
PROVIDENCE	S103247392	PROVIDENCE PLACE	HAYES STREET		RI SHWS, RI AUL
PROVIDENCE	S104180292	BUTTON HOLE GOLF COURSE	KING PHILLIP ROAD		RI SHWS, RI BROWNFIELDS
PROVIDENCE	S112205227	I195 REDEVELOPMENT DISTRICT	OLD ROUTE 195		RI SHWS
PROVIDENCE	S112205231	RIDOT ROW SMITHFIELD AVENUE (ROUTE	SMITHFIELD AVENUE (ROUTE 126)		RI SHWS
PROVIDENCE	S108289575	SHELL STATION	UNION AVENUE/ROUTE 1		RI LUST

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 01/28/2014
Number of Days to Update: 78

Source: EPA
Telephone: N/A
Last EDR Contact: 10/08/2014
Next Scheduled EDR Contact: 01/19/2015
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 01/28/2014
Number of Days to Update: 78

Source: EPA
Telephone: N/A
Last EDR Contact: 10/08/2014
Next Scheduled EDR Contact: 01/19/2015
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 01/28/2014
Number of Days to Update: 78

Source: EPA
Telephone: N/A
Last EDR Contact: 10/08/2014
Next Scheduled EDR Contact: 01/19/2015
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 94

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 08/28/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 07/21/2014
Date Data Arrived at EDR: 10/07/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 10/07/2014
Next Scheduled EDR Contact: 01/19/2015
Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 94

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 08/28/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/10/2014
Date Data Arrived at EDR: 07/02/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 78

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 10/01/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/10/2014
Date Data Arrived at EDR: 07/02/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 10/01/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/10/2014
Date Data Arrived at EDR: 07/02/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 10/01/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/10/2014
Date Data Arrived at EDR: 07/02/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 10/01/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/10/2014
Date Data Arrived at EDR: 07/02/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 10/01/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 09/18/2014
Date Data Arrived at EDR: 09/19/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/08/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 09/18/2014
Date Data Arrived at EDR: 09/19/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/08/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 08/29/2014
Date Data Arrived at EDR: 10/09/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 11

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/14/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/30/2013
Date Data Arrived at EDR: 10/01/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 66

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/30/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: List of CERCLIS and State Sites in RI

This list includes sites that have been investigated under the Federal CERCLIS program (SFA sites) as well as sites that have notified under the state program or have been investigated for hazardous substances (HWM sites).

Date of Government Version: 04/15/2014
Date Data Arrived at EDR: 07/16/2014
Date Made Active in Reports: 08/11/2014
Number of Days to Update: 26

Source: Department of Environmental Management
Telephone: 401-222-3872
Last EDR Contact: 10/16/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Management Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 04/15/2014
Date Data Arrived at EDR: 04/18/2014
Date Made Active in Reports: 05/06/2014
Number of Days to Update: 18

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 10/16/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Quarterly

LCP: Landfill Closure Program Sites in RI

This inventory contains both formerly permitted landfills that are closed as well as dumps that were never licensed by the Department. This list does not include Superfund Sites and current or former Federal Facilities. This list includes lat/long data that has not been field verified.

Date of Government Version: 04/15/2014
Date Data Arrived at EDR: 07/16/2014
Date Made Active in Reports: 08/11/2014
Number of Days to Update: 26

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 10/15/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Varies

State and tribal leaking storage tank lists

LUST: LUST Case List

The LUST Case List is a summary of UST Facilities in RI with leaking USTs, which includes information on the date of release discovery and the status of the LUST Case (active, soil removal only, or inactive).

Date of Government Version: 07/31/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/14/2014
Number of Days to Update: 2

Source: Department of Environmental Management
Telephone: 401-222-3872
Last EDR Contact: 10/14/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 05/20/2014
Date Data Arrived at EDR: 06/10/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 73

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/13/2014
Date Data Arrived at EDR: 08/15/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 7

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 08/04/2014
Date Data Arrived at EDR: 08/05/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 17

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 03/01/2013
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 184

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 07/30/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 10

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/22/2014
Next Scheduled EDR Contact: 08/11/2014
Data Release Frequency: Semi-Annually

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 05/14/2014
Date Data Arrived at EDR: 05/15/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 61

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/20/2014
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 05/22/2014
Date Data Arrived at EDR: 08/22/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 27

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

State and tribal registered storage tank lists

UST: UST Master List
The UST Master List is a summary of registered UST Facilities in RI, which includes information on abandoned, in use, permanently closed and temporarily closed USTs.

Date of Government Version: 07/31/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/14/2014
Number of Days to Update: 2

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 10/14/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Quarterly

AST: Aboveground Storage Tanks
Registered Aboveground Storage Tanks.

Date of Government Version: 06/04/2014
Date Data Arrived at EDR: 06/05/2014
Date Made Active in Reports: 06/12/2014
Number of Days to Update: 7

Source: Department of Environmental Management
Telephone: 401-222-3872
Last EDR Contact: 08/15/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 01/27/2014
Number of Days to Update: 271

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 07/30/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 10

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/22/2014
Next Scheduled EDR Contact: 08/11/2014
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 08/04/2014
Date Data Arrived at EDR: 08/05/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 17

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 07/25/2014
Date Data Arrived at EDR: 07/28/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 25

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 08/20/2014
Date Data Arrived at EDR: 08/22/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 27

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/13/2014
Date Data Arrived at EDR: 08/15/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 7

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 05/20/2014
Date Data Arrived at EDR: 06/10/2014
Date Made Active in Reports: 08/15/2014
Number of Days to Update: 66

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 08/14/2014
Date Data Arrived at EDR: 08/15/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 7

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/10/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

AUL: Waste Management Sites with Environmental Land Use Restrictions

This list was developed by RIDEM for use as a general reference and are not meant to be legally authoritative source for the location of hazardous materials, nor for the status, condition or permissible use of a site.

Date of Government Version: 04/15/2014
Date Data Arrived at EDR: 05/14/2014
Date Made Active in Reports: 06/10/2014
Number of Days to Update: 27

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/15/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 05/30/2014
Date Data Arrived at EDR: 07/01/2014
Date Made Active in Reports: 08/15/2014
Number of Days to Update: 45

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 10/01/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Site List
Brownfields are real properties where the expansion, redevelopment or reuse may be complicated by the actual or potential presence of a hazardous substance, pollutant, or contaminat.

Date of Government Version: 04/15/2014
Date Data Arrived at EDR: 07/16/2014
Date Made Active in Reports: 08/11/2014
Number of Days to Update: 26

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 10/16/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Semi-Annually

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 09/22/2014
Date Data Arrived at EDR: 09/23/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/23/2014
Next Scheduled EDR Contact: 01/05/2015
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/24/2014
Next Scheduled EDR Contact: 02/09/2015
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52
Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 07/25/2014
Date Data Arrived at EDR: 09/09/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 41
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 09/03/2014
Next Scheduled EDR Contact: 12/15/2014
Data Release Frequency: Quarterly

CDL: Clandestine Drug Lab Information Listing
A listing of clandestine drug lab site locations.

Date of Government Version: 10/03/2006
Date Data Arrived at EDR: 12/04/2006
Date Made Active in Reports: 12/18/2006
Number of Days to Update: 14
Source: Dept of Environmental Management
Telephone: 401-274-4400
Last EDR Contact: 09/08/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 07/25/2014
Date Data Arrived at EDR: 09/09/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 41
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 09/03/2014
Next Scheduled EDR Contact: 12/15/2014
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37
Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/30/2014
Date Data Arrived at EDR: 07/01/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 79

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 10/01/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Annually

SPILLS: Oil & Hazardous Material Response Log/Spill Report
Spills reported to the Office of Emergency Response.

Date of Government Version: 11/15/2004
Date Data Arrived at EDR: 02/04/2005
Date Made Active in Reports: 03/24/2005
Number of Days to Update: 48

Source: Dept. of Environmental Management
Telephone: 401-222-3872
Last EDR Contact: 09/18/2014
Next Scheduled EDR Contact: 12/29/2014
Data Release Frequency: Varies

SPILLS 90: SPILLS90 data from FirstSearch
Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 01/04/2001
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/27/2013
Number of Days to Update: 55

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/10/2014
Date Data Arrived at EDR: 07/02/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 10/01/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 08/06/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Varies

DOD: Department of Defense Sites
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/15/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 06/06/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 8

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 09/10/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 01/24/2014
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 31

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 09/30/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/09/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 01/30/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 132

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/04/2014
Next Scheduled EDR Contact: 12/15/2014
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/31/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 44

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/29/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/26/2014
Next Scheduled EDR Contact: 01/05/2015
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/19/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/19/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77
Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 05/06/2014
Date Data Arrived at EDR: 05/16/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 32
Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 10/10/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/01/2013
Date Data Arrived at EDR: 07/17/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 107
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/15/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/22/2013
Date Data Arrived at EDR: 08/02/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 91
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/08/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/07/2014
Date Data Arrived at EDR: 10/08/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 12
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/08/2014
Next Scheduled EDR Contact: 01/19/2015
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 08/16/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: EPA
Telephone: (617) 918-1111
Last EDR Contact: 09/10/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 05/23/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 66

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/19/2013
Number of Days to Update: 52

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 08/29/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Biennially

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/15/2014
Date Made Active in Reports: 08/13/2014
Number of Days to Update: 29

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/26/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Annually

DRYCLEANERS: Drycleaner Facility Listing
A listing of drycleaner locations.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 04/02/2013
Number of Days to Update: 32

Source: Department of Environmental Management
Telephone: 401-222-2808
Last EDR Contact: 08/11/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Varies

NPDES: Permit and Facility Data
A listing of permitted wastewater facilities

Date of Government Version: 06/11/2014
Date Data Arrived at EDR: 06/13/2014
Date Made Active in Reports: 07/10/2014
Number of Days to Update: 27

Source: Department of Environmental Management
Telephone: 401-222-4700
Last EDR Contact: 10/23/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

AIRS: Air Emissions Listing
A listing of facilities with air emissions.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 04/02/2013
Number of Days to Update: 32

Source: Department of Environmental Management
Telephone: 401-222-2808
Last EDR Contact: 08/11/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Varies

LEAD: Lead Inspections Database
The listing includes Highest Risk Premises which are properties declared unsafe for habitation by children under age six (6), and Properties with Multiple Poisonings, which are properties that have been the source of multiple lead poisonings and are not currently lead safe.

Date of Government Version: 06/23/2014
Date Data Arrived at EDR: 06/25/2014
Date Made Active in Reports: 07/10/2014
Number of Days to Update: 15

Source: Department of Health, Environmental Lead Program
Telephone: 401-222-5960
Last EDR Contact: 09/24/2014
Next Scheduled EDR Contact: 01/05/2015
Data Release Frequency: Quarterly

LEAD CERT: Lead Safe Housing Registry
Properties with Active "Lead Free", "Lead Safe", "Acceptable Dust" and "Annual Re-inspection" certificates.

Date of Government Version: 06/11/2014
Date Data Arrived at EDR: 06/13/2014
Date Made Active in Reports: 07/11/2014
Number of Days to Update: 28

Source: Department of Health
Telephone: 401-222-7791
Last EDR Contact: 09/08/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/15/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing
The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 10/20/2014
Next Scheduled EDR Contact: 02/02/2015
Data Release Frequency: Varies

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 11/11/2011
Date Data Arrived at EDR: 05/18/2012
Date Made Active in Reports: 05/25/2012
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/15/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 06/04/2014
Date Data Arrived at EDR: 06/12/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 46

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 10/06/2014
Next Scheduled EDR Contact: 01/19/2015
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 09/30/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Quarterly

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/15/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: N/A

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/10/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

COAL ASH DOE: Sleam-Electric Plan Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 10/17/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Varies

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)
The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/23/2013
Date Data Arrived at EDR: 11/06/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 30
Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/29/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data
A listing of minor source facilities.

Date of Government Version: 10/23/2013
Date Data Arrived at EDR: 11/06/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 30
Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/29/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Annually

US FIN ASSUR: Financial Assurance Information
All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/04/2014
Date Data Arrived at EDR: 09/04/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 46
Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 08/14/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 08/15/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Quarterly

Financial Assurance: Financial Assurance Information

Financial assurance information for hazardous waste facilities.

Date of Government Version: 05/19/2014
Date Data Arrived at EDR: 05/20/2014
Date Made Active in Reports: 06/24/2014
Number of Days to Update: 35

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/15/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR US Hist Auto Stat: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Management in Rhode Island.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/17/2014
Number of Days to Update: 200

Source: Department of Environmental Management
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Management in Rhode Island.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: Department of Environmental Management
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Management in Rhode Island.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/08/2014
Number of Days to Update: 191

Source: Department of Environmental Management
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/19/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/19/2012
Date Made Active in Reports: 08/28/2012
Number of Days to Update: 40

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 10/10/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 08/01/2014
Date Data Arrived at EDR: 08/07/2014
Date Made Active in Reports: 10/17/2014
Number of Days to Update: 71

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Annually

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/21/2014
Date Made Active in Reports: 08/25/2014
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 10/20/2014
Next Scheduled EDR Contact: 02/02/2015
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data

Hazardous waste manifest information.

Date of Government Version: 03/27/2014
Date Data Arrived at EDR: 06/12/2014
Date Made Active in Reports: 07/17/2014
Number of Days to Update: 35

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 10/20/2014
Next Scheduled EDR Contact: 02/02/2015
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/20/2014
Date Made Active in Reports: 08/07/2014
Number of Days to Update: 48

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/15/2014
Next Scheduled EDR Contact: 12/29/2014
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Day Care Provider Listing
Source: Department of Children, Youth & Families
Telephone: 401-528-3624

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Classification Data
Source: Dept. of Administration/Statewide Planning
Telephone: 401-222-6483

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

BLACKSTONE RIVER BIKEWAY SEGMENT 1A
GANO STREET
PROVIDENCE, RI 02906

TARGET PROPERTY COORDINATES

Latitude (North):	41.8232 - 41° 49' 23.52''
Longitude (West):	71.3879 - 71° 23' 16.44''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	301681.4
UTM Y (Meters):	4632690.0
Elevation:	5 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	41071-G4 PROVIDENCE, RI
Most Recent Revision:	1987
East Map:	41071-G3 EAST PROVIDENCE, RI MA
Most Recent Revision:	1987

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

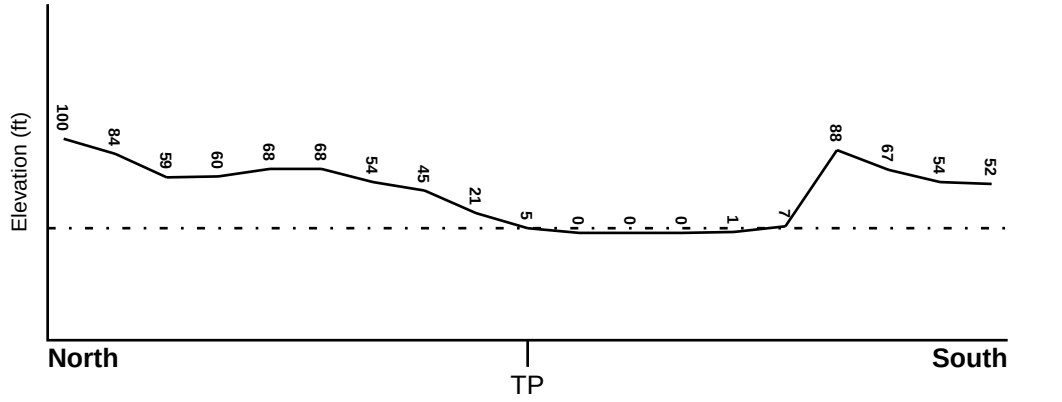
TOPOGRAPHIC INFORMATION

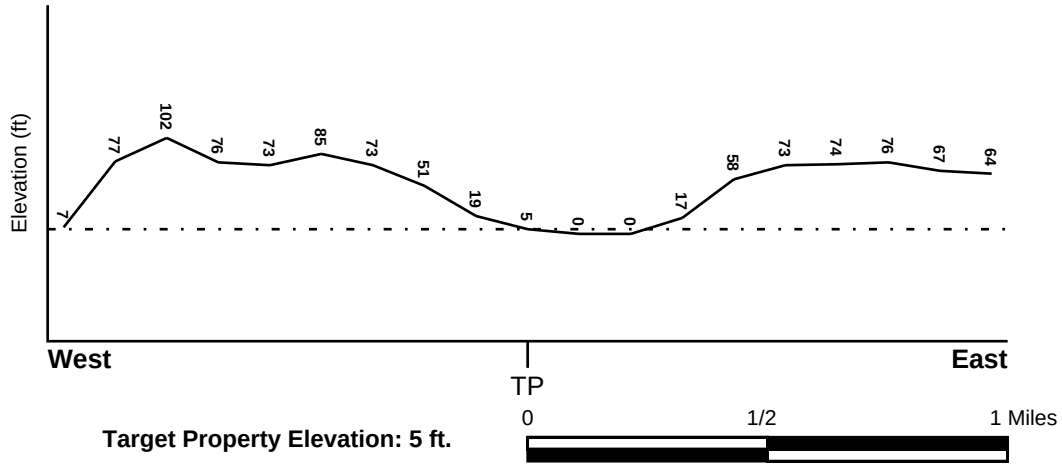
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 5 ft.

0 1/2 1 Miles

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
PROVIDENCE, RI	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 44007C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
PROVIDENCE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Paleozoic
System:	Pennsylvanian
Series:	Pennsylvanian
Code:	PP *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4117038.2s

SITE NAME:	Blackstone River Bikeway Segment 1A	CLIENT:	Vanasse, Hangen, Brustlin Inc.
ADDRESS:	Gano Street Providence RI 02906	CONTACT:	Shelby Miller
LAT/LONG:	41.8232 / 71.3879	INQUIRY #:	4117038.2s
		DATE:	October 27, 2014 4:54 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Udorthents

Soil Surface Texture:
Hydrologic Group: Not reported

Soil Drainage Class:
Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches		Not reported	Not reported	Max: 42.34 Min: 14.11	Max: 6 Min: 3.6
2	11 inches	25 inches		Not reported	Not reported	Max: 42.34 Min: 14.11	Max: 6 Min: 3.6
3	25 inches	59 inches		Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

Soil Map ID: 2

Soil Component Name: Water

Soil Surface Texture:
Hydrologic Group: Not reported

Soil Drainage Class:
Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

Soil Map ID: 3

Soil Component Name: Paxton

Soil Surface Texture:
Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches		Not reported	Not reported	Max: 14.11 Min: 4.23	Max: 6 Min: 4.5
2	5 inches	22 inches		Not reported	Not reported	Max: 14.11 Min: 4.23	Max: 6 Min: 4.5
3	22 inches	64 inches		Not reported	Not reported	Max: 1.41 Min: 0	Max: 6 Min: 4.5

Soil Map ID: 4

Soil Component Name: Urban land

Soil Surface Texture:
Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class:
Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches		Not reported	Not reported	Max: 0.01 Min: 0	Max: Min:

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS40001049555	0 - 1/8 Mile NE
2	USGS40001049554	1/8 - 1/4 Mile ENE
3	USGS40001049562	1/8 - 1/4 Mile NNE
4	USGS40001049539	1/4 - 1/2 Mile South
5	USGS40001049540	1/4 - 1/2 Mile SSW
A6	USGS40001049538	1/4 - 1/2 Mile SSE
A7	USGS40001049537	1/4 - 1/2 Mile SSE
B8	USGS40001049543	1/4 - 1/2 Mile SW
B9	USGS40001049542	1/4 - 1/2 Mile SW
10	USGS40001049568	1/4 - 1/2 Mile NNE
11	USGS40001049536	1/4 - 1/2 Mile SSE
12	USGS40001049530	1/4 - 1/2 Mile SSE
C13	USGS40001049535	1/4 - 1/2 Mile SE
14	USGS40001049573	1/4 - 1/2 Mile NE
C15	USGS40001049533	1/4 - 1/2 Mile SE
D16	USGS40001049528	1/4 - 1/2 Mile SE
D17	USGS40001049524	1/2 - 1 Mile SSE
E18	USGS40001049532	1/2 - 1 Mile SE
E19	USGS40001049529	1/2 - 1 Mile SE
F20	USGS40001049578	1/2 - 1 Mile NE
F21	USGS40001049576	1/2 - 1 Mile NE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
G22	USGS40001049572	1/2 - 1 Mile NE
23	USGS40001049544	1/2 - 1 Mile ESE
G24	USGS40001049567	1/2 - 1 Mile ENE
H25	USGS40001049526	1/2 - 1 Mile SE
H26	USGS40001049527	1/2 - 1 Mile SE
27	USGS40001049564	1/2 - 1 Mile ENE
I28	USGS40001049583	1/2 - 1 Mile NE
I29	USGS40001049581	1/2 - 1 Mile NE
J30	USGS40001049579	1/2 - 1 Mile NE
J31	USGS40001049577	1/2 - 1 Mile NE
K32	USGS40001049575	1/2 - 1 Mile ENE
K33	USGS40001049571	1/2 - 1 Mile ENE
35	USGS40001049549	1/2 - 1 Mile East
36	USGS40001049563	1/2 - 1 Mile ENE
37	USGS40001049580	1/2 - 1 Mile ENE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

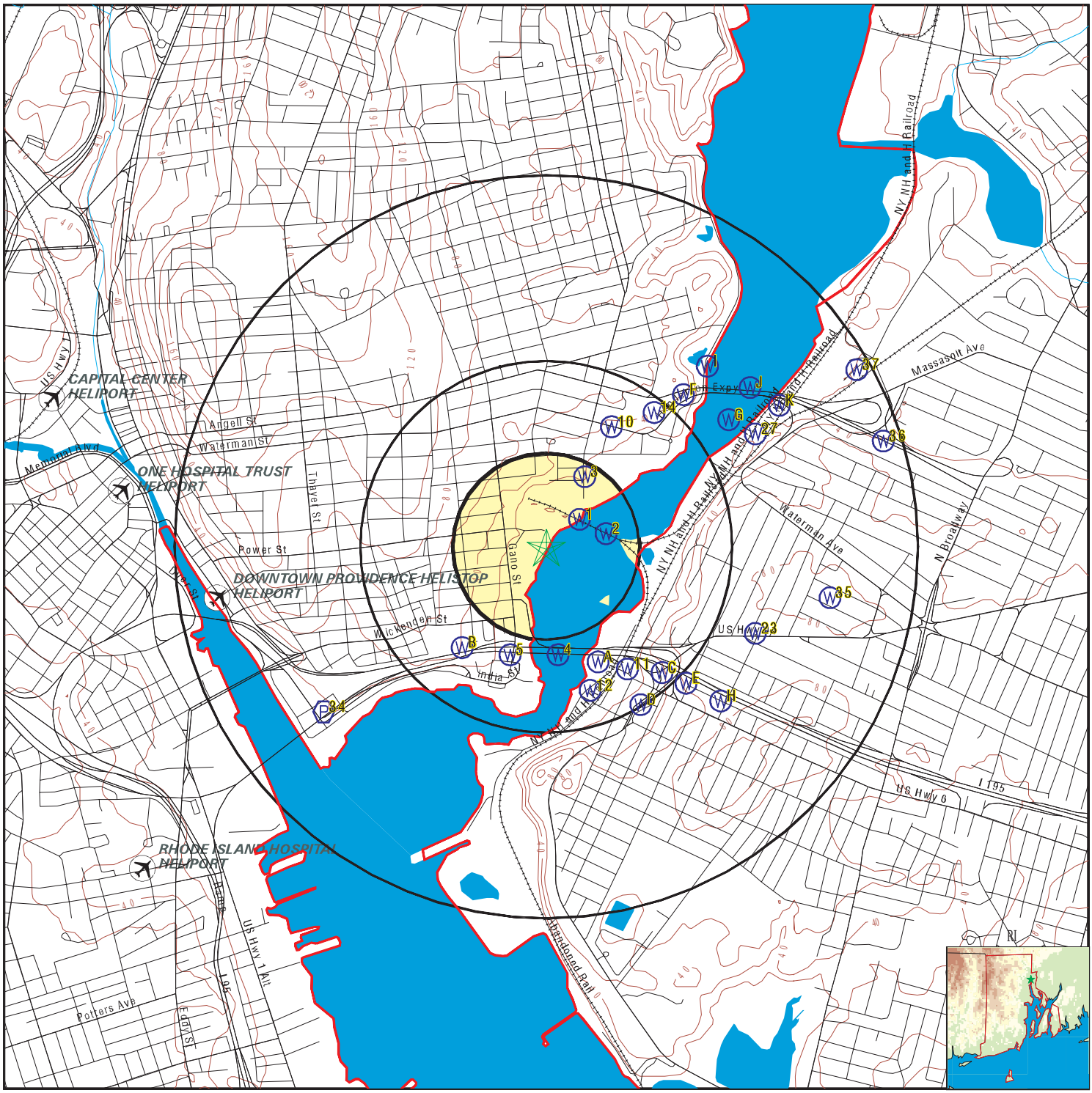
MAP ID	WELL ID	LOCATION FROM TP
34	RI2942515	1/2 - 1 Mile SW

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 4117038.2s



0 1/4 1/2 1 Miles

- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- EPA Designated Sole Src. Aq.

N

SITE NAME:	Blackstone River Bikeway Segment 1A	CLIENT:	Vanasse, Hangen, Brustlin Inc.
ADDRESS:	Gano Street Providence RI 02906	CONTACT:	Shelby Miller
LAT/LONG:	41.8232 / 71.3879	INQUIRY #:	4117038.2s
		DATE:	October 27, 2014 4:54 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
NE
0 - 1/8 Mile
Lower

FED USGS **USGS40001049555**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414927071231201		
Monloc name:	RI-PRB 1670		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.824267
Longitude:	-71.3861664	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	12.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1960	Welldepth:	109
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

2
ENE
1/8 - 1/4 Mile
Lower

FED USGS **USGS40001049554**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414925071230701		
Monloc name:	RI-PRB 1669		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8237114
Longitude:	-71.3847775	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	26.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	1960	Welldepth:	60
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

3
NNE **FED USGS** **USGS40001049562**
1/8 - 1/4 Mile
Higher

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414933071231101		
Monloc name:	RI-PRB 1679		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8259336
Longitude:	-71.3858887	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	19.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1960	Welldepth:	175
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1960-04-01	17.00	

4
South **FED USGS** **USGS40001049539**
1/4 - 1/2 Mile
Lower

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414908071231601		
Monloc name:	RI-PRB 1512		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8189893
Longitude:	-71.3872775	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	31.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1928	Welldepth:	126
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

5
SSW **FED USGS** **USGS40001049540**
1/4 - 1/2 Mile
Higher

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414908071232501		
Monloc name:	RI-PRB 1501		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8189892
Longitude:	-71.3897777	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	17.00
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1928	Welldepth:	132
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

A6
SSE **FED USGS** **USGS40001049538**
1/4 - 1/2 Mile
Higher

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414907071231001		
Monloc name:	RI-EPB 631		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8187115
Longitude:	-71.3856108	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	4.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1928	Welldepth:	146
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

A7
SSE **FED USGS** **USGS40001049537**
1/4 - 1/2 Mile
Higher

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414907071230701		
Monloc name:	RI-EPB 638		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8187115
Longitude:	-71.3847774	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	9.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1928	Welldepth:	113
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

B8
SW **FED USGS** **USGS40001049543**
1/4 - 1/2 Mile
Higher

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414909071233402		
Monloc name:	RI-PRW 153		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.819267
Longitude:	-71.3922778	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	35.00
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1924	Welldepth:	55
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1941-01-01	13.00	

B9
SW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40001049542**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414090071233401		
Monloc name:	RI-PRW 9		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.819267
Longitude:	-71.3922778	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	35.00
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1924	Welldepth:	55
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1941-01-01	13.00	

10
NNE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40001049568**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414940071230601		
Monloc name:	RI-PRB 1678		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8278781
Longitude:	-71.3844997	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	23.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1960	Welldepth:	121
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1960-04-01	18.00	

11
SSE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40001049536**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414906071230301		
Monloc name:	RI-EPB 698		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8184337
Longitude:	-71.3836663	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	19.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	1958	Welldepth:	109
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1958-01-01	28.00	

12
SSE **FED USGS** **USGS40001049530**
1/4 - 1/2 Mile
Higher

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414903071231001		
Monloc name:	RI-EPX 942		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8176004
Longitude:	-71.3856108	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	10.00
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1963	Welldepth:	116
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

C13
SE **FED USGS** **USGS40001049535**
1/4 - 1/2 Mile
Higher

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414906071225801		
Monloc name:	RI-EPB 703		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8184337
Longitude:	-71.3822773	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	32.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1958	Welldepth:	115
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1958-01-01	34.00	

14
NE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40001049573**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414942071225801		
Monloc name:	RI-PRW 1		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8284336
Longitude:	-71.3822774	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	40.00
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	500
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

C15
SE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40001049533**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414905071225501		
Monloc name:	RI-EPB 721		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.818156
Longitude:	-71.3814439	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	62.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1958	Welldepth:	103
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1958-01-01	54.00	

D16
SE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40001049528**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414902071225901		
Monloc name:	RI-EPB 729		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8173226
Longitude:	-71.3825551	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	30.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	1958	Welldepth:	100
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

D17
SSE **FED USGS** **USGS40001049524**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414900071230201		
Monloc name:	RI-EPB 696		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8167671
Longitude:	-71.3833884	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	20.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1958	Welldepth:	109
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1958-01-01	17.00	

E18
SE **FED USGS** **USGS40001049532**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414905071225201		
Monloc name:	RI-EPB 736		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.818156
Longitude:	-71.3806106	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	67.00
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1958	Welldepth:	66
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1958-01-01	41.00	

E19
SE
1/2 - 1 Mile
Higher

FED USGS **USGS40001049529**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414903071225201		
Monloc name:	RI-EPB 743		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8176004
Longitude:	-71.3806105	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	62.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1958	Welldepth:	69
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1958-01-01	31.00	

F20
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40001049578**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414945071225401		
Monloc name:	RI-PRB 1674		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.829267
Longitude:	-71.3811663	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	45.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1960	Welldepth:	187
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1960-04-01	5.00	

F21
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40001049576**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414944071225101		
Monloc name:	RI-PRB 1673		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8289892
Longitude:	-71.3803329	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	15.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	1960	Welldepth:	185
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

G22
NE **FED USGS** **USGS40001049572**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414942071224601		
Monloc name:	RI-PRB 1671		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8284337
Longitude:	-71.3789439	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	22.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1960	Welldepth:	114
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

23
ESE **FED USGS** **USGS40001049544**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414911071223901		
Monloc name:	RI-EPW 23		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8198226
Longitude:	-71.3769993	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	80.00
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	1931	Welldepth:	505
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

G24
ENE **FED USGS** **USGS40001049567**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414940071224201		
Monloc name:	RI-EPB 927		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8278781
Longitude:	-71.3778328	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	7.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1960	Welldepth:	108
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1960-04-01	10.00	

H25
SE **FED USGS** **USGS40001049526**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414901071224701		
Monloc name:	RI-EPR 745		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8170449
Longitude:	-71.3792216	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	65.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1958	Welldepth:	75
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1958-01-01	14.00	

H26
SE
1/2 - 1 Mile
Higher

FED USGS **USGS40001049527**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414902071224401		
Monloc name:	RI-EPB 747		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8173226
Longitude:	-71.3783882	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	68.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1958	Welldepth:	45
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1958-01-01	13.00	

27
ENE
1/2 - 1 Mile
Higher

FED USGS **USGS40001049564**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414939071223901		
Monloc name:	RI-EPB 928		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8276003
Longitude:	-71.3769994	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	19.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1960	Welldepth:	115
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1960-04-01	17.00	

I28
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40001049583**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414949071225001		
Monloc name:	RI-PRB 1677		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8303781
Longitude:	-71.3800551	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	6.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	1960	Welldepth:	175
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1960-04-01	4.00	

I29
NE
1/2 - 1 Mile
Lower

FED USGS **USGS40001049581**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414948071224601		
Monloc name:	RI-PRB 1676		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8301003
Longitude:	-71.3789439	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	9.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1960	Welldepth:	157
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

J30
NE
1/2 - 1 Mile
Lower

FED USGS **USGS40001049579**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414946071224201		
Monloc name:	RI-PRB 1675		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8295448
Longitude:	-71.3778328	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	20.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1960	Welldepth:	108
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

J31
NE
1/2 - 1 Mile
Lower

FED USGS **USGS40001049577**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414945071223801		
Monloc name:	RI-EPB 929		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.829267
Longitude:	-71.3767216	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	6.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1960	Welldepth:	112
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

K32
ENE
1/2 - 1 Mile
Higher

FED USGS **USGS40001049575**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414944071223601		
Monloc name:	RI-EPB 930		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8289892
Longitude:	-71.376166	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	6.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1960	Welldepth:	116
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1960-03-01	8.00	

K33
ENE
1/2 - 1 Mile
Higher

FED USGS **USGS40001049571**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414942071223301		
Monloc name:	RI-EPB 931		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8284337
Longitude:	-71.3753326	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	2.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1960	Welldepth:	99
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1960-04-01	2.00	

34
SW
1/2 - 1 Mile
Higher

FRDS PWS **RI2942515**

Location Information:

Name:	PARK SQUARE MEDICAL CENTER		
Pwstypcd:	NTNCWS	Primsrccd:	GW
Popserved:	36		
Add1:	63		
Add2:	EDDIE DOWLING HIGHWAY RT.146		
City:	NORTH SMITHFIELD	State:	RI
Zip:	02896	Phone:	401-769-1333
Cityserv:	Not Reported	Cntyserv:	Not Reported
Stateserv:	RI	Zipserv:	Not Reported

PWS ID: RI2942515
Date Initiated: 7901 Date Deactivated: Not Reported
PWS Name: PARK SQUARE MEDICAL CENTER
63
EDDIE DOWLING HIGHWAY RT.146
NORTH SMITHFIELD, RI 02896

Addressee / Facility: System Owner/Responsible Party
JOSEPH DALTI
63 EDDIE DOWLING HWY
NORTH SMITHFIELD, RI 02896

Facility Latitude:	42 00 10	Facility Longitude:	071 30 55
Facility Latitude:	41 49 00	Facility Longitude:	071 24 00
City Served:	Not Reported		
Treatment Class:	Untreated	Population:	00000036

Violations information not reported.

ENFORCEMENT INFORMATION:

System Name: PARK SQUARE MEDICAL CENTER
Violation Type: OCCT Study Recommendation
Contaminant: LEAD & COPPER RULE
Compliance Period: 1994-01-01 - 1994-06-30
Violation ID: 9410701
Enforcement Date: 1994-08-15 Enf. Action: State Formal NOV Issued

System Name: PARK SQUARE MEDICAL CENTER
Violation Type: OCCT Study Recommendation
Contaminant: LEAD & COPPER RULE
Compliance Period: 1994-01-01 - 2015-12-31
Violation ID: 9410701
Enforcement Date: 1994-08-15 Enf. Action: State Formal NOV Issued

System Name: PARK SQUARE MEDICAL CENTER
Violation Type: OCCT Study Recommendation
Contaminant: LEAD & COPPER RULE
Compliance Period: 1994-01-01 - 2015-12-31
Violation ID: 9410701
Enforcement Date: 1994-08-17 Enf. Action: State Tech Assistance Visit

System Name: PARK SQUARE MEDICAL CENTER
Violation Type: OCCT Study Recommendation
Contaminant: LEAD & COPPER RULE
Compliance Period: 1994-01-01 - 1994-06-30
Violation ID: 9410701
Enforcement Date: 1994-08-17 Enf. Action: State Tech Assistance Visit

ENFORCEMENT INFORMATION:

System Name:	PARK SQUARE MEDICAL CENTER		
Violation Type:	OCCT Study Recommendation		
Contaminant:	LEAD & COPPER RULE		
Compliance Period:	1994-01-01 - 1994-06-30		
Violation ID:	9410701		
Enforcement Date:	1994-08-24	Enf. Action:	State Compliance Achieved
System Name:	PARK SQUARE MEDICAL CENTER		
Violation Type:	OCCT Study Recommendation		
Contaminant:	LEAD & COPPER RULE		
Compliance Period:	1994-01-01 - 2015-12-31		
Violation ID:	9410701		
Enforcement Date:	1994-08-24	Enf. Action:	State Compliance Achieved
System Name:	PARK SQUARE MEDICAL CENTER		
Violation Type:	MCL, Monthly (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	1995-01-01 - 1995-03-31		
Violation ID:	9510790		
Enforcement Date:	1995-01-23	Enf. Action:	State Violation/Reminder Notice
System Name:	PARK SQUARE MEDICAL CENTER		
Violation Type:	MCL, Monthly (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	1995-01-01 - 1995-03-31		
Violation ID:	9510790		
Enforcement Date:	1995-01-23	Enf. Action:	State Public Notif Requested
System Name:	PARK SQUARE MEDICAL CENTER		
Violation Type:	MCL, Monthly (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	1995-01-01 - 1995-03-31		
Violation ID:	9510790		
Enforcement Date:	1995-01-23	Enf. Action:	State Formal NOV Issued
System Name:	PARK SQUARE MEDICAL CENTER		
Violation Type:	MCL, Monthly (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	1995-01-01 - 1995-03-31		
Violation ID:	9510790		
Enforcement Date:	1995-02-15	Enf. Action:	State Public Notif Received
System Name:	PARK SQUARE MEDICAL CENTER		
Violation Type:	MCL, Monthly (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	1995-01-01 - 1995-03-31		
Violation ID:	9510790		
Enforcement Date:	1995-02-15	Enf. Action:	State Compliance Achieved

---

35
East
1/2 - 1 Mile
Higher

FED USGS **USGS40001049549**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414916071222501		
Monloc name:	RI-EPW 165		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8212115
Longitude:	-71.3731102	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	85.00
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1943	Welldepth:	240
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

36
ENE **FED USGS** **USGS40001049563**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414938071221501		
Monloc name:	RI-EPB 932		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8273226
Longitude:	-71.3703324	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	45.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	1960	Welldepth:	52
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1960-04-01	13.00	

37
ENE
1/2 - 1 Mile
Higher

FED USGS **USGS40001049580**

Org. Identifier:	USGS-MA		
Formal name:	USGS Massachusetts Water Science Center		
Monloc Identifier:	USGS-414948071222001		
Monloc name:	RI-PRX 1412		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	01090004	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	41.8301003
Longitude:	-71.3717214	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	70.00
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	75
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: RI Radon

Radon Test Results

Zipcode	Num Tests	# < 4 pCi/L	4 to 20	# > 20 pCi/L	Maximum
02906	1153	1037	110	6	52.1

Federal EPA Radon Zone for PROVIDENCE County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 02906

Number of sites tested: 12

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	2.133 pCi/L	92%	8%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Classification Data
Source: Dept. of Administration/Statewide Planning
Telephone: 401-222-6483

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Community and Non-Community Wells
Source: Department of Environmental Management
Telephone: 401-277-2234
Includes Community, Non-Transient Non-Community and Transient Non-Community.

EPA-Approved Sole Source Aquifers in Rhode Island
Source: EPA
Sole source aquifers are defined as an aquifer designated as the sole or principal source of drinking water for a given aquifer service area; that is, an aquifer which is needed to supply 50% or more of the drinking water for the area and for which there are no reasonable alternative sources should the aquifer become contaminated.

OTHER STATE DATABASE INFORMATION

RADON

State Database: RI Radon
Source: Department of Health
Telephone: 401-222-2438
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

Memorandum

Appendix D: RIDEM File Review Documentation

10 Dorrance Street
Suite 400
Providence, RI 02903
P 401.272.8100

GZA
GeoEnvironmental, Inc.

Engineers and Scientists

Principals:
John P. Hartley,
District Office Manager
Michael A. Powers, P.E., L.S.P.
David R. Carchedi, Ph.D., P.E.
John J. Spirito, P.E., L.S.P.
Philip P. Virgadamo, P.E., L.S.P.

October 22, 1997
File No. 31834.5-C

Mr. Gregory S. Fine, P.E.
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02903

Re: ***Notification of Release***
Eastside Market Place Property
Providence, Rhode Island

Dear Mr. Fine:

On behalf of our client, the Koffler Group, this letter serves as a Notification of Release pursuant to Rule 5.01 of the Remediation Regulations.

As described in the attached **Phase I and II Environmental Assessment** report, the notification is associated with an exceedance of the Method I (Table 1) Industrial/ Commercial Direct Exposure Criteria for one compound, arsenic. I believe that the information presented in the attached report adequately addresses the requirements of Rule 5.02 (Contents of Notification) and is sufficient to provide an understanding of site conditions.

I will call during the week of October 26, 1997 to arrange a meeting to discuss the findings of the investigation and the most appropriate course of action for the property. If you have any questions or require further information, please do not hesitate to call me at 421-4140.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

John P. Hartley
Associate Principal

JPH:pam

cc: A. Schucht (Koffler)
D. Esposito (A,P&S)

G:\JOBS\ESA\31834-5.RMC\LETTER1

APPENDIX A

APPENDIX B

APPENDIX C

FIGURES

PHASE I AND II
ENVIRONMENTAL SITE ASSESSMENT
EASTSIDE MARKETPLACE PROPERTY
PROVIDENCE, RHODE ISLAND

PREPARED FOR:
Koffler Realty Associate Limited Partnership
Providence, Rhode Island

PREPARED BY:
GZA GeoEnvironmental, Inc.
Providence, Rhode Island

October 1997
File No. 31834.5

GZA
GeoEnvironmental, Inc.

Engineers and Scientists

Principals:
John P. Hartley,
District Office Manager
Michael A. Powers, P.E., L.S.P.
David R. Carchedi, Ph.D., P.E.
John J. Spirito, P.E., L.S.P.
Philip P. Virgadamo, P.E., L.S.P.

October 10, 1997
File No. 31834.5

Mr. Arthur Schucht
Koffler Realty Associate Limited Partnership
135 Pitman Street
Providence, Rhode Island 02904

Re: Phase II Environmental Site Assessment
Eastside Marketplace Property
Providence, Rhode Island

Dear Mr. Schucht:

GZA GeoEnvironmental, Inc. (GZA) is pleased to provide the attached Phase I and II Environmental Site Assessment Report for the Eastside Market Place property. The assessment was completed in general accordance with the guidelines described in ASTM Standard Practice E1527-97 for Phase I assessments and included a subsurface soil and groundwater exploration conducted in accordance with generally accepted engineering practices.

This report is based on our review of available historical and environmental records, a review of visual observations of the surface of the subject and adjoining properties, interviews with available persons having knowledge of the property and data generated from test borings and groundwater monitoring wells placed at the Site. Section 11.00 of the report, our Findings and Conclusions, is considered an Executive Summary, and should be reviewed in conjunction with the entire report.

We hope this satisfies your present needs. If you need any additional information, please contact Mike Clark at (401) 421-4140.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

R. Michael Clark
Project Manager

Abe Doherty
Project Geologist

John P. Hartley
Associate Principal
District Office Manager

g:\jobs\31834-5.mc\corr

APPENDIX A

APPENDIX B

APPENDIX C

FIGURES

TABLE OF CONTENTS

APPENDIX A

APPENDIX B

APPENDIX C

FIGURES

TABLE OF CONTENTS (cont.'d)

APPENDIX A

APPENDIX B

APPENDIX C

FIGURES

TABLE OF CONTENTS (cont.'d)

APPENDIX A

APPENDIX B

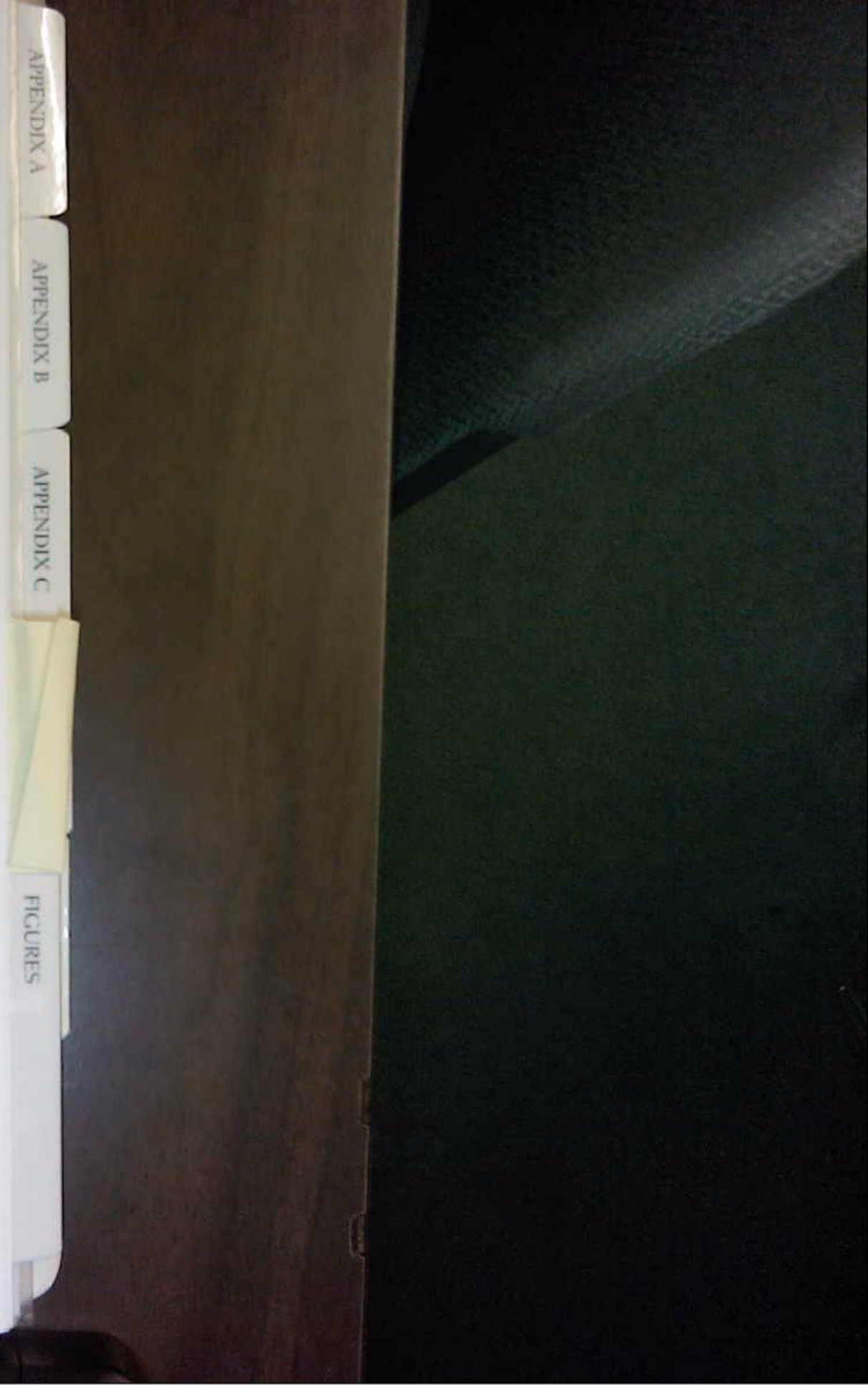
APPENDIX C

FIGURES

TABLE OF CONTENTS (cont.'d)

FIGURES

APPENDICES



1.00 INTRODUCTION

1.10 PROJECT AUTHORIZATION

This report presents the results of a Phase I and II Environmental Site Assessment conducted by GZA GeoEnvironmental, Inc. (GZA) for the Koffler Realty Associate Limited Partnership of the Eastside Marketplace property located in Providence, Rhode Island.

1.20 PROJECT OBJECTIVES

The objective of this Environmental Site Assessment was to render an opinion as to whether surficial or historical evidence indicated the presence of recognized environmental conditions which could result in the presence of hazardous materials in the soil or groundwater at the Site, as defined by the American Society for Testing and Materials (ASTM) Standard Practice E1527-94 for Phase I Environmental Site Assessments.

1.30 SCOPE OF SERVICES

GZA's environmental assessment was completed in general accordance with the GZA's proposal for services. GZA's scope of services consisted of the following activities:

- Review of federal and state regulatory agency databases for the Site and a selected radius around the Site.
- Review of the Site history.
- A review of adjoining properties to identify the potential use of hazardous materials.
- An interview with the Key Site manager regarding the current and past Site usage and facility operations.
- A Site reconnaissance to make surficial observations for evidence of recognized environmental conditions.
- A subsurface investigation consisting of the completion of soil borings, the installation of monitoring wells, and soil and groundwater sampling and analysis.
- Preparation of this report of our findings.

This report presents GZA's field observations, results, and opinions. This report is subject to modification if GZA or any other party develops subsequent information. This assessment did not include an evaluation of lead hazards, radon or asbestos containing building materials at the Site. This report has been prepared in accordance with the limitations presented in Section 12.00 and Appendix A.

2.00 BACKGROUND SITE INFORMATION

The following information was obtained during GZA's Site reconnaissance, from interviews with individuals knowledgeable about the Site, and a review of available local municipal records. Photographs depicting Site conditions at the time of GZA's assessment are presented in Appendix B. Additional information on Site use and area observations and activity at the Site is contained in Sections 6.00.

2.10 SITE LOCATION

The Site is an approximately 12-acre parcel of mostly undeveloped land located south of Pitman Street in the "East Side" section of Providence. For reference, a *Site Locus* is attached as Figure 1.

The Site includes the following addresses:

- East George Street - Nos.103, 135-173(odd), 139, 126, 136, 144;
- Wayland Avenue – Nos. 68, 91, 93, 95, 97 99, 100, 102; and
- Gano Street – Nos.181-189 (odd).

2.20 SITE DESCRIPTION

The Site is an irregular shaped parcel covering 12.09 acres and, with the exception of the Eastside Marketplace, is undeveloped. Remains of two slab-on-grade concrete foundations are present in the western-most portion of the Site. Eastern portions of the Site include a parking lot for the adjoining Eastside Marketplace (supermarket), and an open approximately 51,000-square-foot grass-covered area located on the north side of the store. An Exploration Location Plan depicting key Site features is presented as Figure 2.

2.30 CURRENT SITE USE

As noted, the Site is the location of the Eastside Marketplace parking and undeveloped land that is not actively utilized.

2.40 ADJOINING PROPERTIES USE

The Site is adjoined to the east by Butler Avenue, beyond which is undeveloped land that is the future location of an assisted living complex. Pitman Street forms the Site's northern border and railroad tracks border the Site to the south. Approximately 40 feet of the Site fronts the Seekonk River. Adjoining the western portion of the Site are several small offices and apartment buildings located at the intersection East George Street and Wayland Avenue, and a vacant field.

2.50 AREA USE

The area of the Site is characterized as thickly settled and urban in nature, consisting of a mixture of residential and commercial properties.

2.60 SITE UTILITIES

Utilities serving the Site and surrounding area include overhead electric, natural gas, public water and municipal sewers. Public water is supplied by the Providence Water Supply and originates at the Scituate Reservoir, located approximately 10 miles west of the Site.

3.00 ENVIRONMENTAL SETTING

The following subsection provides information regarding the general physiographic and hydrologic conditions in the area of the Site.

3.10 REGIONAL PHYSIOGRAPHY

The topography of the Site is relatively level, with a general slope to the south. As described below, the topography of much of the Site resulted from filling of former shoreline areas of the Seekonk River. Ground surface elevations rise in the northwest and northerly portions of the property. The easterly portion is generally level as a result of cutting and grading for development the existing supermarket and associated parking lot. A deep drainage ditch runs along the southerly property line and discharges to the Seekonk River.

A review of mapping provided by VHB shows the maximum elevation at the site to be about 55 feet above mean sea level (MSL) in it's northwesterly corner. Based on review of the US Geological Survey (USGS) topographic map of the area (Providence, Rhode Island Quadrangle, dated 1957, photorevised 1970 and 1975), regional topography slopes

downward in a general southeasterly direction and leveling off in the vicinity of the river bank. There are no surface water bodies located on the subject Site. The nearest water body is the tidally influenced Seekonk River, located immediately to the southeast.

Based on our review of the above-referenced USGS map and Site observations, GZA anticipates that the groundwater flow direction at the Site is southerly, towards the Seekonk River. Subsequent references made to upgradient and downgradient positions made to the Site are based on this inferred direction of groundwater flow. It should be noted that localized flow direction in the area of the Site may vary as a result of underground utilities or heterogeneous subsurface conditions.

4.00 HISTORICAL USE INFORMATION

The Site history was developed from available records and interviews with officials at the Providence Tax Assessor's Office, Providence Inspection and Standards Department, the Providence Water Supply Board, and the Providence Department of Public Works, Engineering Division. Aerial photographs, historic fire insurance atlases, and city directories were also reviewed for information on land use and development at and in the vicinity of the Site.

4.10 SITE HISTORY SUMMARY

The Site has been developed since at least 1900. The principal Site occupants have been residences, athletic fields associated with Bryant College and Brown University, and a supermarket. Filling of shoreline areas of the Seekonk River in the 1950's created the southern portions of the Site. The current owners of the Site are Koffler Realty Associates Limited Partnership and Lydwin Young Associates (Lot 15/460, the East Side Marketplace).

4.20 TAX ASSESSOR'S OFFICE

According to the information from the Providence Tax Assessor's Office, the Site is identified as Plat 14, Lots 101, 153, and 163, and Plat 15, Lots 33, 413, 415, 420, 421 and 460. A list of site owners based on the Tax Assessor's records is present in Appendix C.

4.30 ZONING AND BUILDING DEPARTMENT

Mr. Richard Vespia of the Providence Inspection and Standards Office informed GZA that the Site is zoned "W-1" for waterfront commercial and residential use. From his search for building permits for all of the Site addresses, he provided GZA with the following permit applications.

ADDRESS	DATE	PERMIT USE
135-173 Pitman Street East Side Marketplace	1989 to 1995 (six permits)	erecting foundations and additional to the supermarket
101-111 East George Street	1962	erecting a building to be used as a field house and bakery
101-111 East George Street	1963	erecting a new foundation
144 East George Street (Lot 19/415)	1967	renovations of an office
102 Wayland Avenue (Lot 14/101	1928	private garage
102 Wayland Avenue	1939 and 1941	interior renovations

4.40 PUBLIC WORKS DEPARTMENT RECORDS

According to Bill Spillane of the Providence Department of Public Works Engineering Division, municipal sewer services were provided to the building currently occupied by the Eastside Marketplace in June of 1963.

4.50 PROVIDENCE WATER SUPPLY BOARD RECORDS

Water for the Site and surrounding vicinity is provided by the Providence Water Supply Board, and originates at the Scituate Reservoir system. Public water has been available in the area since before 1900.

4.60 CITY DIRECTORIES REVIEW

City Directories from 1937 to 1996 were reviewed at the RI Historical Society for the Site address and surrounding properties. Depending on the year published, these directories provide a tool for locating individuals and businesses in a particular urban or suburban area, by a business index, a list of resident names and addresses, or a street index. With each address, a particular directory lists the name of the resident, or if a business operated from the address, the name and type of business.

The City Directories predominantly list individuals as occupying the site and adjoining properties. The non-residential listings for the site addresses are summarized below.

ADDRESS	DATE	USE
141 Pitman Street	1955 until before 1965	Bryant College Athletic field
185 Gano Street	1970 until before 1980	Bryant College Athletic Field
185 Gano Street	before 1996	Brown University Athletic Field
167 Pitman Street	1965 until before 1980	First National Stores
165 Pitman Street	1996	East Side Marketplace and Triad Resources Inc.
101 East George Street	1980	Head Start
100 Wayland Avenue	1985	An importer-exporter
95 Wayland Avenue	1985	A photographer

The non-residential uses of adjoining properties are summarized on the following table.

ADDRESS	DATE	USE
201 Pitman Street	1937 until before 1960	Colored Worsted Mill
201 Pitman Street	After 1960	Salvation Army
193 Gano Street	1934 until before 1945	Variety store
120 Wayland Avenue	1937	Variety store
210 Pitman Street	1945 until before 1996	"Park"
1 Butler Avenue	1960 until before 1985	Brown Nuclear Research Lab
112 Pitman Street	1960	"Cesspool and sewer center"
11 Wayland Avenue	1965 until before 1996	Office building
114 Pitman Street	1985 until before 1996	Nursing home
114 Wayland Avenue	1985 until before 1996	Dental lab and office
99 Wayland Avenue	1996	Office building

4.70 SANBORN MAP REVIEW

Fire Insurance Maps prepared by Sanborn Mapping and Geographic Services were obtained from EDR Sanborn, Inc., of Southport, Connecticut. The maps frequently provide information pertaining to historical property usage. Sanborn Maps dated 1900, 1921, 1951, 1956, and 1982 were provided.

4.71 Site

The maps depict the following Site usage during the corresponding time periods.

Map Date	Features/Comments
1900	Map covers northern portion of Site only. Six residential buildings shown.
1921	Additional residential buildings and a "flax" (delivery service) shown. Seekonk River covering southern portion of property.
1951	Eastern portion of Site shown as Bryant College athletic fields. Residences and small warehouse shown.
1956	Same as above (1951)
1982	Eastside Marketplace building (constructed in 1963) shown.

4.72 Surrounding Vicinity

The 1900 map shows the area north and east of the Site as being residential with a few flats, green houses and a school. The 1921 map shows a building labeled as "Fess Rotary Oil Burner, Inc." located approximately 150 feet north of the Site on East Manning Street. A large garage and 10,000-gallon and 1,000-gallon underground storage tanks is shown approximately 30-feet north of the Site. An auto repair shop and several private garages are shown approximately 150-250 feet north of the Site. A large building, which is labeled as being the Colored Worsted Mills, is shown at 201 Pitman Street, south of Pitman Street and east of Butler

Avenue. This building is labeled s being used for the washing, scouring, spinning, twisting, spooling and storage of wool. The NYNH & WRR (electric) trucks are shown adjacent to the southwest portion of the site. The 1951 map shows that the building previously labeled as the Fess Rotary Oil Burner, Inc. is labeled as being used for the storage of used machinery. The large garage north of the Site and the USTs are no longer depicted. At the same location, on Seekonk Street, a large building is labeled as being the Warehouse Company, built in 1923. The Colored Worsted Mill is shown as having a large addition and two new buildings labeled as being used for storage to the east of the main building. Approximately 120 feet north of the Site is a large building labeled as being used as a warehouse and private garage. The 1956 map shows the same general residential land use. Several office buildings have been added to the north of the Site. The map shows that the area east of the Site has been filled and is developed with two small buildings labeled as the Brown University Nuclear Research Lab. The Colored Worsted Mill buildings are labeled as being the Salvation Army.

The 1982 map still depicts the nuclear research laboratory buildings and the Salvation Army buildings on adjacent properties to the east of the Site. The NYNH & WRR tracks are still shown to the southeast of the Site. Residences and office buildings generally occupy the buildings to the north and west of the Site. On an adjacent property, north of Pitman Street, the Wayland Health Center is shown as being built in 1974,. The Warehouse Company on Seekonk Street, the auto repair shop and the used machinery storage building are no longer shown to the north of the Site.

4.80 AERIAL PHOTOGRAPHS

Aerial photographs for the years 1965, 1970, 1975, 1981, 1988 and 1992 were available for review. Given the scale of these photographs (1" = 400') relative to the size of the Site, features of direct environmental concern (drum storage, tanks, etc.) cannot be distinguished. Review of these photographs did not provide evidence of features/conditions of environmental concern. They did, however, provide information on land development in the area.

4.81 Site

The 1965 and 1975 photographs shows the grocery store and parking lot in the southeastern portion of the Site. An approximately 200-foot-wide undeveloped strip of land is evident to the west of the parking lot. A baseball field and associated small building are shown in the middle to western portions of the Site. Two buildings, which are depicted on the Sanborne Map labels as a "house" and "warehouse," are visible south of Pitman Street and east of Wayland Avenue.

On the 1975 photograph, the field house building on Pitman Street is no longer evident. On the 1981 and 1988 photographs, the baseball field area appears to be overgrown. The small buildings associated with the field house are no longer evident on the 1981 photograph.

The building designated as a "flat" on the Sanborne Maps (lot 15/407 at 133 Pitman Street) is no longer visible on the 1981 photograph. The house on Gano Street and the field house west of the former baseball field , and the warehouse are no longer visible on the 1992 photograph.

4.82 Surrounding Vicinity

The surrounding vicinity to the north and west of the site is a highly developed primarily residential region. The 1965 photograph shows railroad tracks, athletic fields and residences south of the site. The two small buildings, which the Sanborne Maps labeled as being the Brown University Nuclear Research laboratory, are visible on an adjacent property to the southeast. The buildings, which the Sanborne maps labeled as being the Salvation Army, are visible on an adjacent property to the northeast of the site. The 1970 photograph shows several large parking lots north of the site. The Nuclear Research Laboratory buildings appear to be reduced to their foundations on the 1988 photograph and are no longer visible on the 1992 photograph. The area where the buildings used to exist appears to be cleared but he surrounding vicinity appears overgrown.

4.90 POLK MAP

GZA reviewed a 1952 map of the City of Providence published by R.L. Polk and Company. This map showed the bank of the Seekonk River approximately 100 feet south of East George Street and approximately 200 feet east of Gano Street. are shown by a dashed line and the streets are redrawn on top of the river, extending to the current river bank line. Markings on the map showing the approximate current boundaries of the Seekonk River indicate that the area was filled close to the time when the map was published (1952).

5.00 PREVIOUS ENVIRONMENTAL SITE ASSESSMENTS

GZA was not provided with any previous environmental site assessments of the property.

6.00 SITE RECONNAISSANCE

The purpose of GZA's Site reconnaissance was to make surficial observations for evidence of recognized environmental conditions that could result in the presence of hazardous materials in the environment. GZA Project Manager Michael Clark visited the Site on July 29, 1997 and was unaccompanied during the walkover. Observations were documented

and pertinent features or areas of environmental concern were photographed and are referenced in the text. Selected photographs are included in Appendix B, and Figure 2 depicts pertinent Site features. A summary of each area assessed is presented below.

6.10 EXTERIOR OBSERVATIONS

The Site is unimproved land with the exception of portions associated with the Eastside Marketplace (i.e., store, parking lot and grass-covered area). The unimproved portions of the Site consist of an open field occupying the southwesterly portion and the thickly vegetated remainder. Two slab-on-grade concrete foundations of the former Bryant College athletic buildings are present in the westerly portion of the site.

Several areas were encountered where homeless people had set up shelters, including an abandoned trailer parked in the westerly portion of the Site, and a make-shift tent set-up on the lower existing foundation. Consequently, neither of these areas was directly accessed. Observations made during the walkover of potential environmental conditions are presented in the sections below.

6.10.1 Underground Storage Tanks (USTs)

No surficial evidence of USTs (i.e., fill ports, vent pipes, pavement repairs, etc.) was observed during the site reconnaissance. Ceramic and vinyl tile was observed on the floor of the larger foundation, located near East George Street. No evidence of underground storage tanks was observed, however, the thick vegetative growth limited our observations.

As a homeless person has set up residence on the smaller athletic building foundation, this area was not directly accessed.

6.10.2 Aboveground Storage Tanks (ASTs)

No ASTs were observed on the Site.

6.10.3 Hazardous Substances or Petroleum Products Use

No storage, use, or surficial evidence of disposal of chemicals, hazardous substances, or petroleum products was observed on the Site.

6.10.4 Staining

No surficial staining was observed.

6.10.5 Electrical Transformers/Equipment

No electrical transformers were observed on the Site.

6.10.6 Drywells and Sumps

No surficial evidence of exterior drywells or sumps was observed during GZA's Site reconnaissance.

6.10.7 Pits, Ponds, and Lagoons

No surficial evidence of pits, ponds, or lagoons was observed during GZA's Site reconnaissance. A stormwater drainage ditch, which discharges to the Seekonk River, runs along the southerly property line and.

6.10.8 Water Supply Wells

No surficial evidence of water supply wells was observed during GZA's Site reconnaissance. As described in Section 2.60 above, the area is served with municipal water.

6.10.9 Solid Waste

Abandoned and burnt automobiles were observed in the southerly portion of the Site, behind the supermarket building. Litter and household debris was also observed at various locations throughout the Site. No evidence suggesting formal solid waste landfilling disposal practices was observed on the Site.

6.10.10 Process Wastewater

No surficial evidence of on-Site process wastewater disposal was observed.

6.10.11 Septic System

No surficial evidence of an on-Site septic system was observed on the Site.

6.10.12 Stressed Vegetation

Vegetation in general appeared healthy and did not exhibit signs of a stressed environment.

6.10.13 Soil/Water Sampling

A subsurface exploration including advancing test borings, the installation of monitoring wells, and soil and groundwater analysis was performed as part of this study. The findings of this program are discussed in Section 9.

6.10.14 Oil/Water Separators

No evidence of oil/water separators was observed on the Site.

6.10.15 Surface Water Runoff

No stormwater catch basins were observed on the Site. Rainfall runoff on the paved parking area follows Site topography and sheet flows in a southerly direction. Rainfall in the undeveloped portion likely percolates naturally into the substrata at low points located on-Site. A deep drainage ditch runs along the southerly property line and discharges to the Seekonk River.

6.20 VICINITY RECONNAISSANCE

As part of GZA's environmental due diligence, a reconnaissance of the properties adjoining the Site, as well as the vicinity within a ¼-mile radius of the Site, was conducted from public properties. The result of GZA's vicinity reconnaissance is presented below.

6.20.1 Hazardous Materials At Adjoining Properties

Adjoining properties consist of commercial and residential development and are identified in Section 2.40. No manufacturing facilities were observed in the immediate area. As described in Section 7.20.1 below, the Salvation Army facility maintains underground tanks for diesel and gasoline storage. Petroleum products may be used to heat the buildings that adjoin the Site.

7.00 REGULATORY DATABASE REVIEW

The following section is based on public information obtained from various federal, state, and local agencies that maintain environmental regulatory databases. These databases provide information about the regulatory status of a property and incidents involving use, storage, spilling or transportation of oil or hazardous materials. Information was gathered by GZA personnel and by a professional data search service, New England DataMap Technology Corporation (NEDT). A discussion of the reviewed information is presented in the following sections and a copy of the NEDT report is presented as Appendix D.

7.10 FEDERAL AGENCY DATABASES

Five federal databases were provided in the NEDT report and were reviewed by GZA. These databases and the search distances are as follows:

Database	Last Update	Radius Searched
National Priorities List (NPL) The NPL, or Superfund Sites list, is the USEPA's database of confirmed uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund program.	3-17-97	1 mile
Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) The CERCLIS database is a compilation by the USEPA of the sites which the USEPA has investigated or is currently investigating for a release or threatened release of hazardous substances. Sites for which no further actions planned (NFRAP sites) are listed separately.	3-17-97	0.5 mile
Resource Conservation and Recovery Act (RCRA) Database (Large, Small, and Very Small Generators) The USEPA's RCRA Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Generators database is a compilation by USEPA of reporting facilities that generate hazardous waste.	3-17-97	0.25 mile
Resource Conservation and Recovery Act Database (RCRA) (Treatment/Storage/Disposal Facilities and Transporters) The RCRA TSDF database is a compilation by USEPA of reporting facilities that store, transport, treat or dispose of hazardous waste.	3-17-97	1 mile
Emergency Response Notification System (ERNS) The ERNS database is used to collect information on reported releases of oil and hazardous substances. The database contains information from spill reports made to federal authorities including the USEPA, the US Coast Guard, the National Response Center, and the US Department of Transportation.	4-2-97	0.25 mile

7.10.1 National Priorities List and CERCLIS List

No NPL sites were identified within a one-mile radius of the subject property. One CERCLIS site, the Koppers Co.-Providence Plant was identified. As it is located 0.62 miles southeast of the Site in East Providence (across the Seekonk River), it is not expected to pose the potential to impact soil and/or groundwater conditions at the Site.

7.10.2 RCRA List

No TSD facilities were identified at or within one mile of the Site.

Fifteen RCRA small quantity generators (SQG) were identified within a ¼-mile radius of the site. Neither the Site nor the adjoining properties were identified as being RCRA generators. Because of it's proximity to the subject Site, a file review was requested for Segal and Decasare Drs. Inc., located at 167 Gano Street approximately 300 feet to the southwest. RIDEM personnel indicated that RCRA files did not exist for this facility.

None of the 15 RCRA sites identified are listed on the RCRA Administrative Action Tracking System (RAATS). RAATS contains records of enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the USEPA.

7.10.3 Emergency Response Notification System (ERNS)

No incidents on the site or adjoining properties were listed in the ERNS database.

7.20 STATE AGENCY DATABASE REVIEW

GZA reviewed lists and files available from the RIDEM and state database information provided by NEDT.

Database	Last Update	Radius Searched
State Spills List RIDEM's list of Oil and Chemical Spills produced by the Office of Technical and Customer Assistance.	9-23-96	1.00 mile
State Leaking UST list RIDEM's database listing of Leaking USTs, maintained by the Office of Waste Management	4-8-97	0.5 mile
State Registered UST list RIDEM's database listing of the Underground Storage Tanks Facility Master List	3-6-97	0.25 mile

As described in the following Sections, GZA reviewed information from three offices within the RIDEM.

7.20.1 RIDEM Office of Waste Management

This office maintains information pertaining to Registered Underground Storage Tanks (USTs), Leaking Underground Storage Tanks (LUSTs), and "RI State Projects."

RI State Projects

The "RI State Projects List" dated April 9, 1997, did not identify the Site. Three state sites were located within the target radius:

- Brown University, located at the corner of Thayer and George Streets;
- Days Hotel, located at 220 India Street; and
- Narragansett Bay Commission (NBC) Interceptor.

The Brown University and Days Hotel sites are not located upgradient of the subject Site, and thus are not anticipated to have impacted soil or groundwater. The NBC Interceptor site is located approximately 1/10-mile to the southwest and cross-gradient of the subject Site. A May 22, 1996 RIDEM Division of Site Remediation file document indicates that the NBC replaced a sewerline through an area which contained elevated levels of total petroleum hydrocarbon (TPH) and semi-volatile organic compounds (SVOCs) in soil. The contaminated soil was left in-place, capped with pavement and the excess soils were disposed of off-site.

UST Facilities List

The Site was not included on RIDEM's list of "Registered Underground Storage Tanks." Five UST facilities were identified within one-quarter mile of the Site. Of these, only the Salvation Army is located on an adjoining property.

The following table provides the names and addresses of the UST facilities, as well as their current status and anticipated hydraulic direction relative to the study site. Refer to the NEDT report in Appendix D for additional information on other UST facilities in the area.

UST Facility Name and Address	Location & Anticipated Hydraulic Direction	No. of USTs	Capacity (gallons)	Description	Status/Date Installed or Removed
100 Medway Properties 100 Medway St.	0.24 miles NW -not directly upgradient	1	2,000	No. 2 fuel oil	In use Installed 5/65
Carol Barnes 179-188 Wayland Ave.	0.22 NE-not directly upgradient	1	1,000	No. 2 fuel oil	Removed, unknown date
Lerner Proctor Trust 144 Wayland Ave.	0.14 NE-not directly upgradient	1	1,000	No. 2 fuel oil	Removed, unknown date
Waterman Realty 211 Waterman St.	0.17 NW-potentially upgardient	2	500 2,000	No. 2 fuel oil No. 2 fuel oil	Removed, unknown date Removed, unknown date

The UST file for the Salvation Army reviewed at RIDEM's Office of Waste Management contained registration certificates from 1987 until December of 1995 for the two tanks. The file also contained two precision tests that were performed in 1989 and 1992; both indicated that the tanks passed the tests. The RIDEM did not have any records of more recent tests. The registration application indicates that the 3,000-gallon UST originally stored gasoline, but was used to store diesel after approximately 1992. The 10,000-gallon tank is recorded as having stored kerosene and No. 4 fuel oil. Monitoring wells were installed at the site in 1989, but no analytical testing results were located in the RIDEM file.

LUST Facilities

The Site is not identified by RIDEM as a LUST facility.

One LUST site, "395 Angel Street Associates," was identified within 1/2-half mile radius of the Site. This LUST facility is located 0.28 miles northwest and upgradient of the subject Site. File information indicates that in September of 1994, 6,000-gallon and 500-gallon No. 2 fuel oil USTs were removed from the property. The 500-gallon UST had several holes that caused a release to the soil. Approximately 113 tons of contaminated soil was excavated and disposed of at an off-site facility. Some impacted soils were reportedly allowed to remain at the site due to the close proximity of on-site building. Based on the site restrictions, a **Closure Assessment** performed by GZA recommended no further action. An internal RIDEM memo recommended that a Closure Certificate be issued.

7.20.2 RIDEM Office of Technical and Customer Assistance

This office maintains Environmental Response files and Oil Spill and Hazardous Materials Logs. The NEDT report identified the following spills within the target radius of ¼-mile from the subject Site:

- June 29, 1995 - "several yards" of oil-contaminated soil was reported at the corner of Gano and Power Streets; and
- Unspecified date in 1995 - a 2 pint container of "HTH" caused a fire at the nearby Salvation Army property.

RIDEM's Oil Spill Log revealed two additional spills within a ¼-mile radius of the subject Site:

- Unspecified date in 1991 - approximately 100 gallons of No. 4 heating oil was released at 125 Governor Street, located 0.2 mile to the west and potentially upgradient of the Site; and
- Unspecified date in December 1992 - less than 25 gallons of gasoline and diesel were released at the corner of Gano and Pitman Streets during a car accident.

Based on the location and/or character of these releases, GZA does not anticipate that they have impacted soil and/or groundwater at the subject Site.

7.20.3 RIDEM Office of Water Resources

GZA reviewed the Wellhead Protection Area overlay map for the USGS topographic map of the Providence, RI Quadrangle. No community water supply wells were identified within a ½-mile radius of the subject site.

The Groundwater Classification overlay indicates that groundwater at and in the area of the Site has been assigned the resource classification "GB." This use designation is assigned to areas in which the groundwater resources are believed to be unsuitable for public or private drinking water use without treatment, due to known or presumed degradation.

GZA also reviewed the Underground Injection Control (UIC) list to identify UIC facilities. No UIC sites were identified within a ½-mile radius of the Site.

7.20.4 State Solid Waste/Landfill Facilities

The State Solid Waste Facilities/Landfill List includes solid waste disposal and landfill activities. No solid waste facilities or landfills were identified within a ½-mile radius of the Site in the NEDT report.

7.30 LOCAL REGULATORY AGENCIES

GZA contacted the Providence Fire Department, Department of Public Works and the NBC for information regarding possible recognized environmental conditions at the Site,.

7.30.1 Providence Fire Prevention Department (PFPD)

The file for the Eastside Marketplace (identified as 165 Pitman Street) was reviewed at the PFPD. This file did not contain any applications for the storage of "dangerous chemicals." The file contained a December 20, 1995 mechanical permit to install four, 100-gallon propane gas tanks for temporary use to operate construction heaters. The file contained a 1996 Certificate of Use and Occupancy for 155-165 Pitman Street for the renovated supermarket, and several fire code violations which were listed following an August 27, 1988 fire at the supermarket. The PFPD representative, Lieutenant Calise, was not aware of any USTs or other environmental concerns at the site.

7.30.2 Department of Public Works

According to Bill Spillane of the Engineering Division of the Providence Department of Public Works, the building currently occupied by the East Side Marketplace was connected to the city sewer system in June of 1963. The Department of Public Works blueprint of the original supermarket building shows two stormdrain pipes extending from the building toward East George Street.

7.30.3 Narragansett Bay Commission

According to David Zanfagan, an engineer at the Narragansett Bay Commission, the East Side Marketplace has a food preparation discharge permit. Mr. Zanfagan stated that the building has four grease traps installed in sinks in the food preparation rooms. The discharge is tested only for total oil and grease. A Notice of Violation was issued on July 1, 1996 following a high level of oil and grease detected during a June 4, 1996 sampling event. Subsequent samples collected weekly after the Notice of Violation was issued were in compliance with the permitted levels.

8.00 INTERVIEWS

GZA obtained files from the following offices and/or interviewed the following individuals as part of this evaluation. The information provided by each is discussed and referenced in the text.

- Clerk, Providence Tax Assessor's Office
- Edward Civito, Providence Inspection and Standards Office
- Steven Zisiades, Providence Department of Public Works, Engineering Division
- Anthony Estrella, Providence Fire Department
- Clerk, Providence Water Supply Board
- Clerk, Narragansett Bay Commission
- Thomas Angelone, RIDEM Office of Water Resources
- Paul Guglielmino, RIDEM Office of Waste Management, LUST Section
- Robert Nero, RIDEM Office of Compliance and Inspection
- Angela Schulman (File Review Coordinator), RIDEM Office of Waste Management, RCRA Section
- Nancy Stanton, RIDEM Office of Waste Management, UST Section
- Lola Wright, RIDEM Office of Technical and Customer Assistance

9.00 SUBSURFACE INVESTIGATION

To evaluate subsurface conditions at the Site, and in concert with our geotechnical evaluation of the property, GZA completed a field investigation program involving the drilling of 19 test borings and installing three monitoring wells; measuring groundwater elevations; and collecting and analyzing soil and groundwater samples. Logs of the subsurface exploration are attached as Appendix E. Figure 2, *Exploration Location Plan* shows the locations of the borings/wells.

9.10 TEST BORINGS AND MONITORING WELL INSTALLATIONS

Between June 25, and July 11, 1997, GZA Drilling Co., Inc. of Brockton, Massachusetts completed 19 test borings to depths of 14.5 to 85 feet below the ground surface and installed groundwater monitoring wells in three of the borings. The locations of the borings are shown on Figure 2.

Drilling was performed by hollow stem augering and/or driving casing using a truck-mounted drill rig. Soil samples were collected at 5-foot intervals from each borehole during drilling using a split spoon sampler, in general accordance with ASTM Method D1586 Standard Penetration Test. Upon recovery, soil samples were placed in clean 8-ounce glass jars, stored in an ice-packed cooler, and transported to GZA's Providence office. Selected samples were submitted to GZA's Environmental Chemistry Laboratory (ECL) in Newton, Massachusetts using standard chain-of-custody procedures.

The groundwater monitoring wells consisted of 10-foot sections of 2-inch diameter, 0.010-inch slotted (10 slot), Schedule 40 PVC wellscreen set to span the observed water table. The four wells were constructed with solid riser pipe extending to the ground surface. The well sections were connected without the use of glues or solvents. The annular space surrounding the wellscreens was backfilled with a filter pack of clean silica sand, and a bentonite seal was placed above this. Locking stand pipes and curb boxes for the wells were cement-grouted in place at the ground surface. Refer to the boring logs in Appendix E for well-specific construction details.

9.20 SUBSURFACE SOIL CONDITIONS

The following description of Site subsurface conditions has been developed from the explorations conducted at the Site by GZA. The description is somewhat generalized; for detailed information, refer to the boring logs contained in Appendix E.

Soils encountered during drilling were found to consist of 15 to 35 feet of miscellaneous fill, (comprised of sand, ash, wood, brick, stone, rubble, and metal debris) overlying an organic silt (ranging in thickness from 0 to 20 feet), preliminary representing the original river bed. Stratified silt and sand deposits were found to underlay the organic silt layer.

A slight petroleum-type odor was observed in soil samples collected from below the groundwater table in GZ-10 and GZ-12 at depths of 30 and 20 feet respectively. A slight creosote-type odor was observed in the 5 to 7 foot sample collected from GZ-16. No apparent (visual or olfactory) evidence of environmental impact from oil or hazardous materials was observed in the remaining samples collected.

9.30 SOIL SAMPLING AND ANALYSIS

Split spoon samples were obtained by Standard Penetration Tests at 5-foot intervals during the drilling operations. The on-site geologists classified soil samples. A portion of each soil sample was collected in a clean glass jar, stored in an ice-packed cooler and transported to GZA's Providence office. Selected samples were then submitted to GZA's Environmental Chemistry Laboratory (ECL) for analyses.

9.30.1 Soil Sample VOC Screening

The sample jar headspace of the soil samples were screened in the field for total volatile organic compounds (VOCs) using a ThermoEnvironmental Model 580B photoionization detector (PID) equipped with a 10.2 electron volt lamp. The PID measures relative levels of VOCs referenced to a benzene-in-air standard. Although PID screening cannot be directly used to quantify VOC concentrations or identify individual compounds, the results can serve as a relative indicator of the levels of total VOCs in each sample. Positive PID readings recorded in the field are summarized in the table below.

SOIL SAMPLE PID RESULTS		
Boring/Sample ID	Depth (ft)	PID Reading (ppmv)
GZ-3/S-1	0-2	9
GZ-5/S-7	30-32	4
GZ-12/S-5	20-22	56
GZ-12/S-6	25-27	9
GZ-13/S-1	0-2	23
GZ-13/S-2	5-7	23

Non-detectable VOC levels were reported in the remaining samples. Based on field observations and PID readings, samples from GZ-12 and GZ-13 were submitted to GZA's ECL for analyses. Results are discussed below in Section 9.30.2

9.30.2 Discrete Soil Samples

The soil sample collected from boring GZ-10 at a depth of 30 to 32 feet below grade exhibited a slight petroleum-type odor. Soil samples collected from GZ-12 at a depth of 20 to 22 feet and GZ-13 at 5 to 7 feet below grade exhibited dark staining and elevated PID readings. Consequently, these samples were submitted to GZA's ECL for total petroleum hydrocarbons (TPH) analysis (EPA Method 8100).

As presented in the laboratory report presented in Appendix F, TPH concentrations were reported as non-detectable (i.e., <10 ug/g) in all three of the samples.

9.30.3 Shallow Soil Samples

Shallow soil samples (collected at a depth of 0 to 2 feet) from five borings (GZ-9, GZ-12. GZ-17, GZ-18 and GZ-19) were submitted for laboratory analysis. The samples were selected to provide an understanding of shallow soil conditions across the Site, from which a direct exposure evaluation could be completed. Samples were submitted to GZA's ECL and analyzed for total RCRA 8 metals. A copy of the laboratory report is presented in Appendix F. Those results are summarized in the table below.

Metal	GZ-9	GZ-12	GZ-17	GZ-18	GZ-19	RIDEM Method 1 Criteria
Silver	<2.09	2.49	<2.15	<2.18	<2.10	10,000
Arsenic	3.39	**9.52**	2.90	1.09	2.62	**3.8**
Barium	26.8	399	34.4	25.1	59.6	10,000
Cadmium	<0.314	<0.0339	<0.322	<0.327	<0.315	1,000
Chromium	11.9	19.3	13.3	7.52	14.5	10,000
Mercury	0.0343	0.107	0.138	0.0588	0.244	610
Lead	30.9	112	104	83.1	136	500
Selenium	<10.5	<11.3	<10.7	<10.9	<10.5	10,000

Note:

1. Units are reported as mg/Kg or ppm.
2. RIDEM Rules and Regulations for the Investigation of Remediation of Hazardous Material Releases, August 1996.

The data indicates that arsenic concentrations at one of the five locations (GZ-12) exceeded the RIDEM Method 1 Industrial/Commercial Soil Direct Exposure Criteria. As shown on Figure 2, GZ-12 is located in the currently undeveloped portion of the Site, just west of the supermarket parking lot (see Figure 2).

9.40 GROUNDWATER SAMPLING AND ANALYSIS

On July 29,1997, GZA personnel sampled one existing and three newly installed monitoring wells at the study Site. The groundwater samples were obtained using 5-foot stainless steel bailers equipped with a Teflon ballcheck valve. Three times the initial standing volume of the groundwater in the well was evacuated to remove stagnant water, and the well was allowed to recharge. Groundwater samples were analyzed for the following target compound groups:

- VOCs by EPA Method 8260;
- TPH by EPA Method 8100;
- Polyaromatic Hydrocarbons (PAHs by EPA Method 8270); and
- Total RCRA 8 Metals (samples collected using low-flow methodology).

The samples for VOC analysis were placed in hydrochloric acid preserved 40-ml vials with Teflon septa; the TPH and PAH samples were placed in 500 ml amber jars preserved with sulfuric acid; and the metals samples were placed in 250 ml plastic containers preserved with nitric acid. Samples were kept cool during transportation to GZA's Environmental ECL. Analytical results are discussed in Section 9.50 below.

9.50 RESULTS OF GROUNDWATER SAMPLING AND ANALYSIS

9.50.1 VOCs

No VOCs were detected in any of the samples at concentrations above the analyte-specific quantification limits.

9.50.2 TPHs & PAHs

No TPH or PAH concentrations were detected in the groundwater samples at concentrations above the quantification limits.

9.50.3 RCRA 8 Metals

The laboratory results of the metals testing are summarized in the table below.

Metal	GZ-9	GZ-11	GZ-12A	W-1
Silver	<0.007	<0.007	<0.007	<0.007
Arsenic	<0.005	0.024	0.024	<0.005
Barium	0.118	0.589	0.146	<0.003
Cadmium	<0.003	<0.003	<0.003	<0.003
Chromium	0.01	0.023	<0.007	<0.007
Mercury	<0.0002	<0.0002	<0.0002	<0.0002
Lead	0.169	0.264	0.003	<0.003
Selenium	<0.005	<0.005	<0.005	<0.005

Note: 1. Units are reported as mg/L or ppm.
2. "<" indicate less than analyte-specific quantification limits.

Note that the RIDEM has not established groundwater quality objectives for these analytes for "GB" classified areas. Comparison of the data with the more stringent "GA" criteria (established for drinking water resources) indicates that of the 8 target metals, only the lead concentrations were exceeded at two locations. Notwithstanding, as the Site is located in a GB designated groundwater resource area which is provided with municipal drinking water services, these concentrations are viewed as low and not of environmental significance.

10.00 FINDINGS AND CONCLUSIONS

A Phase I & II Environmental Site Assessment has been conducted at Eastside Marketplace, property located in Providence, Rhode Island. The study included a Site reconnaissance, a subsurface investigation, a review of historical maps, a review of selected local, state and federal regulatory records, and interviews with persons and agencies familiar with the Site.

The findings below are based on the work conducted as part of this assessment:

- The Site is approximately 12-acres in size and currently consists of the Eastside Marketplace (and associated paved parking and access areas), an open, approximately 51,000-square-foot grass covered area, and a vacant undeveloped area. The existing supermarket building was constructed in 1963. The Site is located in an area of Providence characterized as urban/residential and is serviced by public drinking water and municipal sewers. The Site is zoned W-1 (Waterfront Commercial and Residential Use).

- Progressive filling of waterfront areas of the Seekonk River created the Site in the 1950's. Since then, the Site has been used for residential and commercial buildings, and structures and playing fields associated with Bryant College and Brown University. Remains of two slab-on-grade concrete foundations (former athletic buildings) are present in the western-most portion of the property.

- The Site was not identified in any of the Federal or State regulatory inventories reviewed. Several properties located within the targeted radii of the Site are included in the databases reviewed. However, based on our interpretation of the direction of groundwater flow, the distance/location of these properties from the Site, and/or the nature of the reported releases, none of the properties are expected to have impacted soil/or and groundwater conditions at the subject property.

- No evidence of an existing recognizable environmental condition was observed during a walkover of the Site. Vinyl floor tile was observed on the northern foundation floor. The age of the building suggests the material may contain asbestos. If the material is to be disturbed or disposed of, it should be evaluated for the presence of asbestos and properly handled in accordance with current regulations.

- As part of our geotechnical study of the Site, 19 test borings were advanced throughout the Site. Three of the borings were completed as monitoring wells. In addition, monitoring wells placed by others are present in the parking lot of the Eastside Marketplace. The subsurface investigation included VOC screening of soil samples and laboratory testing of soil samples for metals and TPH. Additionally, groundwater samples collected from wells installed as part of the present investigation and from an existing well were collected for metals, TPH, PAH and VOC analysis.

- Three subsurface soil samples which provided elevated VOC readings and/or indications of contamination (i.e., slight fuel odor or dark staining) were analyzed for total petroleum hydrocarbons. None provided TPH concentrations above method detection limits.

- Surficial soil samples (collected at a depth of 0 to 2 feet) from five borings were selected for RCRA metals analysis. Of the eight target analytes, only arsenic in one sample exceeded the RIDEM Method 1 Industrial/Commercial Direct Exposure Criteria. This occurrence constitutes a "release" under the RIDEM Remediation Regulations, requiring formal notification. We suspect that the occurrence of arsenic at the Site is associated with urban fill used for the Site's creation nearly 50 years ago.

- Groundwater samples from the newly installed wells and one existing well were analyzed for VOCs, TPH, PAHs and RCRA 8 metals. None of the VOC, TPH, or PAH target analytes within this testing regime were detected above method detection limits. The metals arsenic, barium, chromium and lead were detected above method detection limits. As the Site is located in a GB designated groundwater resource area which is provided with municipal drinking water services, these concentrations are viewed as low and not of environmental significance.

On the basis of the observations made and information reviewed during the course of this site assessment, it is GZA's opinion that there is no evidence of soil or groundwater contamination with VOCs or TPH at the site that exceed applicable RIDEM soil and groundwater criteria. Arsenic concentrations in one surficial soil sample did exceed RIDEM criteria and is subject to notification.

Following notification, it is GZA's opinion that it is appropriate to demonstrate, through the collection and testing of additional soil samples (20 samples minimum), that the arsenic concentrations reflect "background" conditions of the area.

11.00 LIMITATIONS

GZA's environmental due diligence was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area, and GZA observed the degree of care and skill generally exercised by other consultants under similar circumstances and conditions. GZA's findings and conclusions must be considered not as scientific certainties, but rather as our professional opinion concerning the significance of the limited data gathered during the course of the environmental site assessment. No other warranty, express or implied, is made. Specifically, GZA does not and cannot represent that the Site contains no hazardous material, oil or other latent condition beyond that observed by GZA during its site assessment. This report is also subject to the specific limitations contained in Appendix A.

It should be noted that when an assessment is completed without subsurface explorations and chemical screening of soil and groundwater beneath the site, no data can be generated regarding latent subsurface conditions which may be the result of on-site or off-site sources.

This study and report have been prepared on behalf of and for the exclusive use of Koffler Realty Associates Limited Partnership, solely for use in an environmental assessment of the Site. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party in whole or in part, without the prior written consent of GZA. However, GZA acknowledges and agrees that the Report may be conveyed to the associated firm with the proximate financing of the facility by our Client

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FIGURES

FROM USGS PROVIDENCE, RI QUADRANGLE MAP
(CONTOUR ELEVATIONS ARE IN METERS ABOVE NGVD, AT 3 METER INTERVALS)

APPROXIMATE SCALE IN FEET

0' 1000' 2000' 4000'

GZA

RIVERVIEW PLACE

PROVIDENCE, RHODE ISLAND

LOCUS PLAN

SEPTEMBER 1997

FIGURE NO. 1

File No. 31834.2

APPENDIX A

APPENDIX B

APPENDIX C

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APPENDIX A

LIMITATIONS

SITE ASSESSMENT LIMITATIONS

1. The observations described in this report were made under the conditions stated therein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by Client. The work described in this report was carried out in accordance with the attached Terms & Conditions of Engagement.

2. In preparing this report, GZA GeoEnvironmental, Inc. (GZA) has relied on certain information provided by state and local officials and other parties referenced therein, and on information contained in the files of state and/or local agencies available to GZA at the time of the site assessment. Although there may have been some degree of overlap in the information provided by these various sources, GZA did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this site assessment.

3. In the event that bank counsel or title examiner for Client obtains information on environmental or hazardous waste issues at the site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

4. Observations were made of the site and of structures on the site as indicated within the report. Where access to portions of the site or to structures on the site was unavailable or limited, GZA renders no opinion as to the presence of hazardous material or oil, or to the presence of indirect evidence relating to hazardous material or oil, in that portion of the site or structure. In addition, GZA renders no opinion as to the presence of hazardous material or oil, or to the presence of indirect evidence relating to hazardous material or oil, where direct observation of the interior walls, floor, or ceiling of a structure on a site was obstructed by objects or coverings on or over these surfaces.

5. Unless otherwise specified in the report, GZA did not perform testing or analyses to determine the presence or concentration of asbestos or polychlorinated biphenyls (PCB's) at the site or in the environment at the site.

6. The purpose of this report was to assess the physical characteristics of the subject site with respect to the presence in the environment of hazardous material or oil. No specific attempt was made to check on the compliance of present or past owners or operators of the site with federal, state, or local laws and regulations, environmental or otherwise.

7. The conclusions and recommendations contained in this report are based in part upon the data obtained from a limited number of soil and/or groundwater samples obtained from widely spaced subsurface explorations. The nature and extent of variations between these explorations may not become evident until further exploration. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

8. Water level readings have been made in the test pits, borings, and/or observation wells at the times and under the conditions stated on the test pit or boring logs. However, it must be noted that fluctuations in the level of groundwater may occur due to variations in rainfall and other factors different from those prevailing at the time measurements were made.

9. Except as noted within the text of the report, no quantitative laboratory testing was performed as part of the site assessment. Where such analyses have been conducted by an outside laboratory, GZA has relied upon the data provided, and has not conducted an independent evaluation of the reliability of these data.

10. The conclusions and recommendations contained in this report are based in part upon various types of chemical data and are contingent upon their validity. These data have been reviewed and interpretations made in the report. As indicated within the report, some of these data are preliminary "screening" level data, and should be confirmed with quantitative analyses if more specific information is necessary. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, these data should be reviewed by GZA and the conclusions and recommendations presented herein modified accordingly.

11. Chemical analyses have been performed for specific parameters during the course of this site assessment, as described in the text. However, it should be noted that additional chemical constituents not searched for during the current study may be present in soil and/or groundwater at the site.

12. It is recommended that GZA be retained to provide further engineering services during construction and/or implementation of any remedial measures recommended in this report. This is to allow GZA to observe compliance with the concepts and recommendations contained herein, and to allow the development of design changes in the event that subsurface conditions differ from those anticipated.

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APPENDIX B

SITE PHOTOGRAPHS

File No. 31834.5

Riverview Place
Providence, Rhode Island

Photographs 1 & 2: Broken Vinyl Floor Tiles Observed on Foundation Located Near East George Street

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Riverview Place
Providence, Rhode Island

Photograph 3: Empty 55-Gallon Drum Observed On-Site

Photograph 4: Abandoned Car Observed During Site Reconnaissance

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APPENDIX D

APPENDIX E

APPENDIX F

APPENDIX C

LIST OF SITE OWNERS

According to the information from the Providence Tax Assessor's Office, the Site is identified as Plat 88, Lot 129 on the Providence Tax Assessor's map and is 526,689-square feet. Plat 14, Lots 101, 153, and 163 and Plat 15, Lots 33, 407, 413, 415, 420, 421 and 460.

Plat 14/Lot101	
Property Owner	Date of Purchase
Providence Institution for Savings	November 1, 1888
Various Individuals	February 1, 1901 - January 1938
Home Owner's Loan Corporation	January 1938
Harriet Cotton	January 1939
Home Owner's Loan Corporation	December 1940
Various Individuals	March 1941 - June 15, 1944
Shelby Realty Corporation	June 15, 1944
Various Individuals	November, 1944 - November 1951
Fae Marrs Realty Company	November 1955 - March 11, 1980
Koffler Realty Associates Limited Partnership	July 22, 1988

This lot is located at 102 Wayland Avenue at the southwest corner of the intersection of East George Street and Wayland Avenue. The field card for this indicates that a rooming house was present at the Site until it was demolished in March 1989.

Plat 14/Lot 153	
Property Owner	Date of Purchase
Various Individuals	December 1993 - November 1962
Custom Builders, Inc.	November 24, 1964
Earle Cohen and Renee Cohen	December 29, 1986
Koffler Realty Associates Limited Partnership	July 22, 1988

This lot is located at 126 East George Street on the northern side of East George Street.

Plat 14/Lot 163	
Property Owner	Date of Purchase
Various Individuals	February 1, 1983 - 1928
Balchin Construction Company	April 1928
Various Individuals	October 1933 - December 1962
Bryant College of Business Administration	December 1962
Brown University	October 7, 1969
Richard Bornstein	January 8, 1982
The Koffler Corporation	December 22, 1983
Koffer Realty Associates Limited Partnership	December 26, 1986

This lot is located at 101-135 East George Street on the southern side of East George Street, west of Wayland Avenue. The field card for this let states that a one-story building, which had previously been used for storage, was demolished on December 19, 1988.

Plat 15/Lot 33	
Property Owner	Date of Purchase
Moses B. Jenkins Estate	November 22, 1860
Moses B. Jenkins Est. R.I. H.T.Co., Tr.	June 1, 1896
R.I. H. Tr. Co., Tr. Moses B. Jenkins Estate	July 1, 1903
Various Individuals	June 1, 1920 - November 1931
Socateau Corporation	November 1931
Socateau Corporation	October 1935
Freeman Parkway Corporation	April 1941
Claire Proctor, wf Maurice E.	June 1943
Bryant College, Inc.	March 1949
Bryant College of Business Administration	January 1950
Ernest Young	December 1970
City of Providence	June 5, 1970
Ernest Young	December 1970
Lydwin Young Associates	September 1982
Koffler Realty Associates	January 1988

This lot is located at 135-173 Pitman Street on the southside of Pitman Street, west of Butler Avenue. A note on the field and states that the building (East Side Marketplace) is on Lot 15/460. Part of East George Street was dropped into the lot in December 1977.

Plat 15/Lot 407	
Property Owner	Date of Purchase
Various Individuals	March 1902 - March 1966
Custom Builders, Inc.	March 16, 1966
Earle Cohen and Renee Cohen	December 29, 1986
Koffler Realty Associates Limited Partnership	July 22, 1988

This site is located at 131-133 Pitman . The field card indicated that this lot is vacant.

Plat 15/Lot 413	
Property Owner	Date of Purchase
West Providence Land Company	March 1902
Various Individuals	November 1902 - June 1964
Custom Builders	June 1964
Earle Cohen and Renee Cohen	December 1986
Koffler Realty Associates Limited Partnership	July 1988

This lot is located at the northeastern corner of the intersection of East George Street and Wayland Avenue. The field card indicated that this lot is vacant.

Plat 15/Lot 415	
Property Owner	Date of Purchase
Merchant Savings Bank	March 1902
Various Individuals	July 1905 - June 1964
Custom Builders	June 1964
Earle Cohen ad Renee Cohen	December 1986
Koffler Realty Associates Limited Partnership	July 1988

This lot is located at 95-97 Wayland Avenue. A three car garage located at this lot was demolished in November 1988.

Plat 15/Lot 420	
Property Owner	Date of Purchase
Various Individuals	March 1902 - April 1928
Balchin Construction Company	April 1928
Various Individuals	October 1933 -December 1962
Bryant College of Business Administration	December 1962
Brown University	October 1969
Richard Bornstein	January 1982
Koffler Corporation	December 1982
Koffler Realty Associates Limited Partnership	December 1986

This lot is located at 139 East George Street to the southeast of the southern end of Wayland Avenue. The field card indicated that this lot is vacant.

Plat 15/Lot 421	
Property Owner	Date of Purchase
Narragansett Bay Oyster Company	March 1902
Providence Terminal Company	July 1906
NYNH & HRR Company	June 1908
Dropped	June 1908
Frank Hynes and Mabel Hynes	June 1943
Custom Builders, Inc.	June 1964
Earle Cohen and Renee Cohen	December 1986
Koffler Realty Associates Limited Partnership	July 1988

This lot is located at 95-97 Wayland Avenue. The field card indicates that a six bedroom house on the street was demolished in December 1988.

Plat 15/Lot 460	
Property Owner	Date of Purchase
Ernest Young	December 1959
Lyndwin Young Associates	September 1982

This lot is located at 155-165 Pitman Street and 80 Butler Avenue. This lot has the East Side Marketplace building within its boundaries. The lot was increased in size when part of East George Street dropped into it in December 1977.

APPENDIX D

NEDT REPORT

APPENDIX F

APPENDIX E

BORING LOGS

ENVIRONMENTAL INC.	PROJECT	REPORT OF BORING NO. GZ-3
ADWAY, PROVIDENCE, RHODE ISLAND	RIVERVIEW PLACE	SHEET 1 OF 3
	PROVIDENCE, RHODE ISLAND	FILE NO. 31634.2
CH/GEOHYDROLOGICAL CONSULTANTS		CHKD BY DRC

O.	GZA DRILLING, INC.	BORING LOCATION	SEE EXPLORATION LOCATION PLAN
	FRANK GARDELLA	GROUND SURFACE ELEV.	DATUM
	ASBJORN GUETAFSON	DATE START 6-26-97	DATE END 6-26-97

UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF
SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 IN.
UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb.
FALLING 24 IN.
IZE: OTHER 3 3/4" HSA

GROUNDWATER READINGS				
DATE	TIME	WATER	CASING	STABILIZATION TIME
6-26-97	0700	18'	OUT	1.5 MIN.

CASING BLOWS	SAMPLE NO	PEN./REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
	S-1	24/10	0.3-2.3	18-18	Medium dense, to dense, dark brown/grey, fine to medium		0.3' ASPHALT
				14-10	SAND and Gravel, trace Silt (FILL)		
	S-2	24/11	4-6	3-5	Dry, loose, grey, fine SAND, some- Silt, changing to brown,		FILL
				4-4	fine to medium SAND, trace Gravel, trace Silt at bottom of		
					sample. Wet.		
			7				
	S-3	24/18	9-11	3-1	Top 9": Dry, very dense, brown, fine to medium SAND, trace		
				2-2	Gravel, Silt		
					Bott 9": Dry, very dense, grey SILT, little fine Sand (Ash?),		
					trace Wood fragments.		
	S-4	24/24	14-16	2-1	Wet, very loose, grey SILT, little fine Sand	1	
				2-2			
				-			
	S-5	24/9	19-21	2-1	Wet, loose, brown/white/grey, fine to medium SAND, trace		
				4-3	Gravel, Silt, Brick, Wood		
PUSH	S-6	24/4	23-25	7-9	BRICK	3	
PUSH				12-6		3	
PUSH							
PUSH							
PUSH							
PUSH	S-7	24/7	28-30	5-3	One 1-inch piece of GRAVEL		
PUSH				2-3			
PUSH							
PUSH							
PUSH							

GRANULAR SOILS OWN-FT DENSITY	COHESIVE SOILS BLOWS/FT DENSITY	
VERY LOOSE	<2	VERY SOFT
LOOSE	3-4	SOFT
MEDIUM DENSE	4-8	M. STIFF
DENSE	9-15	STIFF
VERY DENSE	15-30	V. STIFF
	>30	HARD

REMARKS:
1. Encountered groundwater at 14 feet.
2. Advanced hollow stem augers to 23 feet. Pulled H.S.A. and installed 4-inch ID casing.
3. Used hydraulic push on drill rig to advance ID casing from 23' to 28'.

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

BORING NO. GZ-3

GEOENVIRONMENTAL INC.
ROADWAY, PROVIDENCE, RHODE ISLAND

TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT	
RIVERVIEW PLACE	
PROVIDENCE, RHODE ISLAND	

REPORT OF BORING NO.	GZ-3
SHEET	2 OF 3
FILE NO.	31834.2
CHKD BY	DRC

CASING BLOWS	SAMPLE NO	SAMPLE PEN./REC	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION / BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
PUSH						4	34' FILL
PUSH	S-8	24/14	33-35	11-3	Top 2": Grey/black, fine to medium SAND and Gravel, little		
PUSH				3-4	Wood, Brick, Glass, Porcleln		
PUSH					Bott 12": Medium, dark grey, organic SILT, trace Wood fibers		
PUSH							
PUSH	S-9	24/24	38-40	5-3	Medium, dark grey, Organic SILT		
				2-2			
						5	ORGANIC SILT
	S-10	24/0	43-45	2-2	No recovery		
				2-3			
							48.5'
	S-11	24/22	48-50	3-1	Top 2": Dark grey, Organic SILT, trace Wood fibers		
				7-9	Bott 20": Medium dense, brown, fine to medium SAND, trace		
					Silt		
	S-12	24/6	53-55	10-9	Medium dense, greyish brown, fine to medium SAND, trace		GRAVELLY SAND
				16-12	fine Gravel, trace Silt		
	S-13	24/17	58-60	22-29	Very dense, orange/brown, medium to fine SAND, little Gravel,		
				42-54	trace Silt changing to medium SAND, some Gravel, little+ Silt		
					at tip of spoon	6	61'
							SILT
	S-14	24/7	63-65	15-15	Dense, grey SILT, trace fine angular Gravel		
				22-21			
							68'
	S-15	24/12	68-70	24-22	Top 2": Grey, fine to coarse GRAVEL, fine to medium Sand,		GRAVELLY SAND
				22-30	little Silt		
					Bott 10": Dense, grey SILT, trace fine Gravel		

GRANULAR SOILS BLOWS/FT DENSITY		COHESIVE SOILS BLOWS/FT DENSITY	
VERY LOOSE	<2	VERY SOFT	
LOOSE	3-4	SOFT	
MEDIUM DENSE	4-8	M. STIFF	
DENSE	9-15	STIFF	
VERY DENSE	15-30	V. STIFF	
	>30	HARD	

REMARKS:
4. Driller noted that there was no material present inside the casing between 28 and 33 feet.
5. Used open hole method to advance boring from 28 to 73 feet.
6. Driller noted change in color of washwater.

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-3

APPENDIX F

GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND

TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT	REPORT OF BORING NO.	GZ-3
RIVERVIEW PLACE	SHEET	3 OF 3
PROVIDENCE, RHODE ISLAND	FILE NO.	31834.2
	CHKD BY	DRC

TH	CASING BLOWS	SAMPLE NO	SAMPLE PEN./REC	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
							7	
		S-16	24/12	73-75	20-18	Top 6": Grey, fine to coarse GRAVEL, some medium to		
					21-45	coarse Sand, trace- Silt		GRAVELLY SAND
						Bott 6": Dense to very dense, grey, fine SAND, little Silt		SILTY SAND
						End of Exploration at 75'		

GRANULAR SOILS BLOWS/FT DENSITY		COHESIVE SOILS BLOWS/FT DENSITY	
VERY LOOSE	<2	VERY SOFT	
LOOSE	2-4	SOFT	
MEDIUM DENSE	4-8	M. STIFF	
DENSE	8-15	STIFF	
VERY DENSE	15-30	V. STIFF	
	>30	HARD	

REMARKS:
7. Driller noted change in drilling resistance.

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-3

APPENDIX F

GEOENVIRONMENTAL INC.
ROADWAY, PROVIDENCE, RHODE ISLAND

TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-4
SHEET 1 OF 3
FILE NO. 31834.2
CHKD BY DRC

G CO. GZA DRILLING, INC.
MAN FRANK GARDELLA
NG. ASBJORN GUSTAFSON

BORING LOCATION SEE EXPLORATION LOCATION PLAN
GROUND SURFACE ELEV. DATUM
DATE START 6-26-97 DATE END 6-26-97

ER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF
PLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 IN

G: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb
ER FALLING 24 IN.

G SIZE: OTHER 3 3/4" HSA

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME

H	CASING BLOWS	SAMPLE NO	PEN./REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION / BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
		S-1	24/11	0.3-2.3	4-3	Medium dense, light brown, fine to medium SAND, little fine		0.3' ASPHALT
					15-10	to coarse Gravel, trace Silt changing to dark grey SILT (Ash?)		
		S-2	24/8	4-6	4-3	Very loose to loose, grey/brown, fine SAND, some- Silt, little		
					1-1	Gravel, (Ash?)		
				1'				
		S-3	24/14	8-10	3-1	Very loose, dark grey, fine SAND, some- Silt (Ash?)		
					1-3			FILL
		S-4	24/6	13-15	1-2	Very loose to loose, grey, fine SAND, some- Silt (Ash?)		
					2-7			
		S-5	24/20	18-20	8-3	Loose, grey, fine SAND, some- Silt, trace fine Gravel		
					3-6			
		S-6	24/11	23-25	13-10	Top 3": Grey, fine to coarse SAND, little fine Gravel, tarce Silt		
					6-2	Bott 8": Loose, grey fine SAND, some- Silt, trace fine Gravel		
		S-7	24/0	28-30	WOR-7	No recovery		
					6-6			

GRANULAR SOILS BLOWS/FT	DENSITY	COHESIVE SOILS BLOWS/FT	DENSITY
	VERY LOOSE	<2	VERY SOFT
	LOOSE	2-4	SOFT
	MEDIUM DENSE	4-8	M. STIFF
	DENSE	8-15	STIFF
	VERY DENSE	15-30	V. STIFF
		>30	HARD

REMARKS:
1. Used hollow stem augers to advance borehole from 0 to 4 feet. Pulled H.S.A. and installed 3-inch NW-casing. Spun NW-casing from 4 to 33 feet. Used open hole method from 33 to 58 feet. Advanced NW-casing to 63 feet.

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-4

APPENDIX F

GEOENVIRONMENTAL INC. ROADWAY, PROVIDENCE, RHODE ISLAND ECH/GEOHYDROLOGICAL CONSULTANTS	PROJECT RIVERVIEW PLACE PROVIDENCE, RHODE ISLAND	REPORT OF BORING NO. GZ-4 SHEET 2 OF 3 FILE NO. 31834.2 CHKD BY DRC

CASING BLOWS	SAMPLE NO	SAMPLE PEN./REC	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
							33' FILL
	S-8	24/8	33-35	2-2	Soft to medium, grey, Organic SILT, trace- Wood, Fibers		
				2-3			
	S-9	24/24	38-40	1-2	Medium, grey, Organic SILT, trace- Wood and Wood Fibers		ORGANIC SILT
				3-3			
	S-10	24/24	43-45	2-3	Medium, grey, Organic SILT, little Clay?		
				4-5			
	S-11	24/11	48-50	7-7	Top 2": Grey, Organic SILT		49'
				8-13	Bott 9": Medium dense, grey, fine SAND, trace Silt		
	S-12	24/8	53-55	10-12	Medium dense, brown, fine to medium SAND, trace fine Gravel,		
				13-19	trace Silt		FINE SAND
	S-13	24/13	58-60	30-30	Very dense, grey/light brown, mottled fine SAND, little fine		
				24-22	Gravel, little Silt		
	S-14	24-13	63-65	12-18	Dense, grey, fine SAND, some Silt		
				21-17			
	S-15	24/16	68-70	17-24	Very dense, grey, fine SAND, little Silt, one 1-inch lens with SILT,		
				46-100	little fine Sand in middle of sample		

GRANULAR SOILS BLOWS/FT DENSITY		COHESIVE SOILS BLOWS/FT DENSITY	
VERY LOOSE	<2	VERY SOFT
LOOSE	2-4	SOFT
MEDIUM DENSE	4-8	M. STIFF
DENSE	8-15	STIFF
VERY DENSE	15-30	V. STIFF
	>30	HARD

REMARKS:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-4

APPENDIX F

GEOENVIRONMENTAL INC.
ROADWAY, PROVIDENCE, RHODE ISLAND

TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT	REPORT OF BORING NO.	GZ-4
RIVERVIEW PLACE	SHEET	3 OF 3
PROVIDENCE, RHODE ISLAND	FILE NO.	31834.2
	CHKD BY	DRC

H	CASING BLOWS	SAMPLE NO	SAMPLE PEN./REC	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
		S-16	24/24	73-75	14-18	Dense, grey, fine SAND, little Silt		FINE SAND
					22-30			
		S-17	24/24	78-80	16-32	Very dense, grey fine SAND, little Silt, one 1-inch len of SILT		
					50-93	at bottom of sample		
		S-18	24/24	83-85	28-46	Very dense, grey/brown, fine SAND, little+ Silt, including in		
					47-60	several lenses throughout sample		
						End of Exploration at 85'		

GRANULAR SOILS BLOWS/FT	DENSITY	COHESIVE SOILS BLOWS/FT	DENSITY
	VERY LOOSE	<2	VERY SOFT
	LOOSE	2-4	SOFT
	MEDIUM DENSE	4-8	M. STIFF
	DENSE	8-15	STIFF
	VERY DENSE	15-30	V. STIFF
		>30	HARD

REMARKS:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-4

APPENDIX F

GEOENVIRONMENTAL INC. ROADWAY, PROVIDENCE, RHODE ISLAND TECH/GEOHYDROLOGICAL CONSULTANTS	PROJECT RIVERVIEW PLACE PROVIDENCE, RHODE ISLAND	REPORT OF BORING NO. SHEET FILE NO. CHKD BY	GZ-5 1 OF 2 31834.2 DRC

G CO.	GZA DRILLING, INC.	BORING LOCATION	SEE EXPLORATION LOCATION PLAN		
MAN	BARRY WORDELL	GROUND SURFACE ELEV.		DATUM	
NG.	ASBJORN GUSTAFSON	DATE START	6-27-97	DATE END	6-30-97

ER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF PLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 IN.

G: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb ER FALLING 24 IN.

G SIZE: OTHER 2 3/4" HSA

GROUNDWATER READINGS				
DATE	TIME	WATER	CASING	STABILIZATION TIME
6-30-97	0730	19'	OUT	15 MIN.

H	CASING BLOWS	SAMPLE NO	PEN./REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
		S-1	24/16	0-2	2-5	Dry, medium dense, light brown, fine SAND, little- Silt, trace fine		
					16-17	Gravel		
		S-2	24/3	5-7	1-7	Dry, loose, brown, medium to coarse SAND and fine Gravel,		
					1-1	little Silt (Cinders?)		
		S-3	24/0	10-12	5-5	No Recovery	1	FILL
					3-4			
		S-4	24/6	15-17	2-3	Loose, brown, fine to coarse SAND, some Gravel, little		
					3-6	Cinders, trace Silt, Brick, Glass		
		S-5	24/6	20-22	5-5	Loose, brown, fine to coarse SAND, little Gravel, little Cinders,		
					5-7	trace Silt, Brick		
								24'
		S-6	24/8	25-27	7-8	Medium dense, light brown, fine to medium SAND, little- Gravel,		FINE SAND
					9-15	trace Silt		
		S-7	24/15	30-32	10-11	Medium dense, grey (with orange staining) fine SAND, some-		
					14-17	Silt		

GRANULAR SOILS BLOWS/FT DENSITY		COHESIVE SOILS BLOWS/FT DENSITY	
VERY LOOSE	<2	VERY SOFT	
LOOSE	2-4	SOFT	
MEDIUM DENSE	4-8	M. STIFF	
DENSE	8-15	STIFF	
VERY DENSE	15-30	V. STIFF	
	>30	HARD	

REMARKS:
1. Advanced hollow stem augers to 10 feet. Pulled H.S.A. and installed 3-inch NW-casing.

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-5

APPENDIX F

GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND

TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-5
SHEET 2 OF 2
FILE NO. 31834.2
CHKD BY DRC

H	CASING BLOWS	SAMPLE NO	SAMPLE PEN./REC	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
		S-8	24/12	25-27	7-9	Medium dense, light brown, fine SAND, trace fine Gravel,		
					16-17	trace Silt		
		S-9	24/2	40-42	13-14	medium dense, light brown, fine SAND, trace Silt		
					12-12			
								FINE TO MEDIUM
								SAND
		S-10	24/2	45-47	8-10	Medium dense, light brown, fine to coarse SAND, little fine		
					12-22	Gravel, trace Silt		
		S-11	24/9	50-52	10-12	Dense, light brown, fine to medium SAND, trace fine Gravel,		
					19-39	trace Silt		
		S-12	24/16	55-57	37-40	Very dense, brown, fine to medium SAND, little Silt, trace fine		
					46-60	Gravel		
						End of Exploration at 57'		

GRANULAR SOILS BLOWS/FT DENSITY		COHESIVE SOILS BLOWS/FT DENSITY	
VERY LOOSE	<2	VERY SOFT	
LOOSE	2-4	SOFT	
MEDIUM DENSE	4-8	M. STIFF	
DENSE	8-15	STIFF	
VERY DENSE	15-30	V. STIFF	
	>30	HARD	

REMARKS:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-5

APPENDIX F

GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND
TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-6
SHEET 1 OF 2
FILE NO. 31834.2
CHKD BY DRC

NG CO. GZA DRILLING, INC.
EMAN TIM VERNON
ENG. ASBJORN GUSTAFSON

BORING LOCATION SEE EXPLORATION LOCATION PLAN
GROUND SURFACE ELEV. DATUM
DATE START 6-30-97 DATE END 7-1-97

PLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF
SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 IN

NG: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb
MER FALLING 24 IN.

NG SIZE: OTHER 3 3/4" HSA

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME
7-1-97	1130	18'	OUT	15 MIN.

TH	CASING BLOWS	SAMPLE NO	PEN./REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
		S-1	24/12	0-2	8-11	Medium dense, light brown, fine SAND, little Silt, trace fine		
					15-19	Gravel, trace Roots		
		S-2	24/8	5-7	9-11	Medium dense, light brown, fine to medium SAND, little fine		
					5-7	Gravel, little Silt		
								FILL
		S-3	24/2	10-12	5-6	Loose, brown, fine to medium SAND, little Silt, trace fine	1	
					2-2	Gravel		
		S-4	24/4	15-17	3-4	Loose, brown, fine to coarse SAND, little fine Gravel, Cinders,		
					4-9	little Silt		18'
		S-5	24/6	20-22	11-10	Medium dense, light brown, fine to medium SAND, trace fine		
					11-20	Gravel, trace Silt		SILTY FINE TO MEDIUM SAND
		S-6	24/13	25-27	6-10	Medium dense, gray, fine SAND, little Silt, trace fine Gravel		
					10-13			
		S-7	24/7	30-32	21-14	Medium dense, brown, fine to medium SAND, little fine to		
					6-9	coarse Gravel, trace Silt		

GRANULAR SOILS BLOWS/FT DENSITY		COHESIVE SOILS BLOWS/FT DENSITY	
VERY LOOSE	<2	VERY SOFT	
LOOSE	2-4	SOFT	
MEDIUM DENSE	4-8	M. STIFF	
DENSE	8-15	STIFF	
VERY DENSE	15-30	V. STIFF	
	>30	HARD	

REMARKS:
1. Encountered groundwater at approximately 12 feet.
2. Advanced hollow stem augers to 10 feet. Pulled H.S.A. and installed 3-inch NW-casing.

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-6

APPENDIX F

GEOENVIRONMENTAL INC.
ROADWAY, PROVIDENCE, RHODE ISLAND

TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT	REPORT OF BORING NO.	GZ-6
RIVERVIEW PLACE	SHEET	2 OF 2
PROVIDENCE, RHODE ISLAND	FILE NO.	31834.2
	CHK'D BY	DRC

CASING BLOWS	SAMPLE NO	SAMPLE PEN./REC	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
	S-8	24/10	35-37	19-14	Medium dense, grey/brown, fine SAND, little Silt		
				15-16			
	S-9	24/15	40-42	16-15	Medium dense to dense, grey/brown, fine SAND, some- Silt		SILTY FINE TO MEDIUM SAND
				15-17			
	S-10	24/12	45-47	19-22	Dense, grey/brown, fine to medium SAND and Silt, trace fine		
				23-21	Gravel		
	S-11	24/0	50-52	10-12	No Recovery (medium dense)		
				10-18			
	S-12	24/6	55-57	9-8	Medium dense, grey/brown, fine to medium SAND, trace Silt,		
				15-17	grading to grey/brown SILT and fine Sand		58'
	S-13	24/16	60-62	60-73	Very dense, grey/brown, rounded to angular fine to coarse		GLACIAL TILL
				60-65	GRAVEL, some- Silt, little fine to coarse Sand		
					End of Exploration at 62'		

GRANULAR SOILS BLOWS/FT DENSITY	COHESIVE SOILS BLOWS/FT DENSITY	
VERY LOOSE	<2	VERY SOFT
LOOSE	2-4	SOFT
MEDIUM DENSE	4-8	M. STIFF
DENSE	8-15	STIFF
VERY DENSE	15-30	V. STIFF
	>30	HARD

REMARKS:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-6

APPENDIX F

A GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND

OTECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-8
SHEET 1 OF 2
FILE NO. 31634.2
CHKD BY DRC

ING CO. GZA DRILLING, INC.
EMAN BARRY WORDELL
ENG. ARBJORN GUSTAFSON

BORING LOCATION SEE EXPLORATION LOCATION PLAN
GROUND SURFACE ELEV. DATUM
DATE START 7-1-97 DATE END 7-2-97

PLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 IN

NG: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb MER FALLING 24 IN.

NG SIZE: OTHER 3 3/4" HSA

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME

TH	CASING BLOWS	SAMPLE NO	PEN./REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION / BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
		S-1	24/11	3-2.3	10-11	Medium dense, light to dark brown, fine to medium Sand, little		3" ASPHALT
					15-15	fine Gravel, trace+ Silt		
		S-2	24/14	5-7	2-2	Loose, brown ASH, Cinders, Brick and fine to medium Sand		FILL
					3-5			
		S-3	24/9	10-12	6-8	Medium dense, brown, fine to medium SAND, little Silt, fine		
					5-6	Gravel, trace Ash, Cinders		
		S-4	24/0	15-17	11-2	Loose, brown, fine SAND, some Silt, little fine Gravel, Brick		23'
					3-6			
		S-5	24/15	20-22	29-23	Dense, brown, fine SAND, trace+ Silt		
					26-27			
		S-6	24/1	25-27	30-42	Very dense, brown, fine to coarse GRAVEL, little fine to		SAND AND GRAVEL
					46-51	coarse Sand, trace Silt		
		S-7	24/1	30-32	28-58	Very dense, grey, fine to coarse SAND and Gravel, trace		
					80-82	Silt		

GRANULAR SOILS BLOWS/FT DENSITY		COHESIVE SOILS BLOWS/FT DENSITY	
VERY LOOSE	<2	VERY SOFT
LOOSE	2-4	SOFT
MEDIUM DENSE	4-8	M. STIFF
DENSE	8-15	STIFF
VERY DENSE	15-30	V. STIFF
	>30	HARD

REMARKS:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-8

APPENDIX F

GEOENVIRONMENTAL INC.
ROADWAY, PROVIDENCE, RHODE ISLAND
TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-7
SHEET 1 OF 1
FILE NO. 31834.2
CHKD BY DRC

G CO. GZA DRILLING, INC.
MAN BARRY WORDELL
NG. ASBJORN GUSTAFSON

BORING LOCATION SEE EXPLORATION LOCATION PLAN
GROUND SURFACE ELEV. ____ DATUM ____
DATE START 7-2-97 DATE END 7-2-97

ER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF PLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 IN
G: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb ER FALLING 24 IN
G SIZE OTHER 3 3/4" HSA

GROUNDWATER READINGS				
DATE	TIME	WATER	CASING	STABILIZATION TIME

CASING BLOWS	SAMPLE NO	SAMPLE PEN./REC	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION / BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
	S-1	24/16	0-2	10-20	Dense, light brown, fine to medium SAND, trace Silt		
				15-14			
	S-2	24/8	5-7	8-8	Medium dense, dark grey, fine SAND, little Silt, trace fine		
				7-9	Gravel, trace Cinders		
	S-3	24/10	10-12	6-5	Loose to medium, dense, grey ASH and CINDERS		
				5-7			FILL
	S-4	24/4	15-17	22-10	Medium dense, light brown, fine SAND, little Silt	1	
				7-9			
	S-5	24/9	20-22	29-17	Dense, brown, fine to medium SAND, trace fine Gravel, trace		
				14-13	Silt		SAND AND GRAVEL
29	S-6	24/15	25-27	20-20	Very dense, brown, fine to coarse SAND, some fine Gravel,	2	
36				62-47	little Silt		
72							
96							
147							
186					Refusal at 31'		

GRANULAR SOILS BLOWS/FT DENSITY		COHESIVE SOILS BLOWS/FT DENSITY	
VERY LOOSE	<2	VERY SOFT	
LOOSE	2-4	SOFT	
MEDIUM DENSE	4-8	M. STIFF	
DENSE	8-15	STIFF	
VERY DENSE	15-30	V. STIFF	
	>30	HARD	

REMARKS:
1. Encountered groundwater at approximately 15 feet.
2. Advanced split spoon attached to NW-rods with 300-lb hammer from 25 to 31 feet to observe relative density of sand and gravel deposit. Refusal at 31 feet.

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-7

APPENDIX F

GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND

TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT	REPORT OF BORING NO.	GZ-8
RIVERVIEW PLACE	SHEET	2 OF 2
PROVIDENCE, RHODE ISLAND	FILE NO.	31834.2
	CHKD BY	DRC

H	CASING BLOWS	SAMPLE NO	SAMPLE PEN./REC	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
								SAND AND GRAVEL
								35'
		S-8	24/12	35-37	12-11	Medium dense, dark grey, fine SAND, little Silt		FINE SAND
					14-17			
	24						1	
	31							
	50							
	62							44'
	80							SAND AND GRAVEL
	156							
	125							
	97							
	89							
	165							
						Refusal at 50'		

GRANULAR SOILS BLOWS/FT DENSITY		COHESIVE SOILS BLOWS/FT DENSITY	
VERY LOOSE	<2	VERY SOFT	
LOOSE	2-4	SOFT	
MEDIUM DENSE	4-8	M. STIFF	
DENSE	8-15	STIFF	
VERY DENSE	15-30	V. STIFF	
	>30	HARD	

REMARKS:
1. Advanced split spoon attached to NW-rods with 300-lb hammer from 40 to 50 feet. To observe the relative density of sand and gravel deposit. Refusal at 50 feet.

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-8

APPENDIX F

GEOENVIRONMENTAL INC.
ROADWAY, PROVIDENCE, RHODE ISLAND

TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT	RIVERVIEW PLACE
	PROVIDENCE, RHODE ISLAND
REPORT OF BORING NO.	GZ-9
SHEET	1 OF 2
FILE NO.	31634.2
CHKD BY	

G CO.	GZA DRILLING, INC.
MAN	BARRY WORDELL
NGINEER	ASBJORN GUSTAFSON
BORING LOCATION	SEE EXPLORATION LOCATION PLAN
GROUND SURFACE ELEV.	DATUM
DATE START	7-2-97
DATE END	7-3-97

ER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF
PLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 IN.

G: UNLESS OTHERWISE NOTED, CASING DRIVEN USING
LB HAMMER FALLING 24 IN.

G SIZE: OTHER 3 3/4" HSA

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME
7-11-97	1030	18'	OUT	8 DAYS

CASING BLOWS	SAMPLE NO	SAMPLE PEN/REC	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	R K
	S-1	24/18	0-2	2-2	Loose, light brown, fine to coarse SAND,		0-3' boring spoils		
				4-3	little fine Gravel, little Silt, trace roots				
	S-2	24/12	5-7	3-3	Loose, light brown, fine to coarse SAND,	FILL	3-6' bent. seal		
				4-3	and Gravel, little Silt		0-9' 2"PVC riser		
	S-3	24/6	10-12	7-5	Medium dense, brown, ASH & CINDERS,		6-24' filter sand		
				7-7	little fine to medium Sand, trace Brick				
	S-4	24/6	15-17	10-21	Dense, dark gray, fine SAND, little Silt, Ash &		9-24' 2"PVC screen		1
				14-10	Cinders, trace fine Gravel				
						20'			
	S-5	24/14	20-22	5-3	Loose to medium dense, brown, fine to				
				7-14	coarse SAND, trace fine Gravel, trace Silt				
7	S-6	24/6	25-27	15-14	Medium dense, brown, fine to medium SAND,	FINE TO MEDIUM SAND			2
31				11-15	little fine to coarse Gravel, trace Silt				
28									
34									
26									
19					Brown, fine to medium SAND, little fine to				3
21					coarse Gravel, trace Silt				
23									
49									
62									
94									

RKS:
1. Encountered groundwater at approximately 15 feet.
2. Advanced NW-Rods with 300 lb. hammer from 20 to 40 feet to observe relative density of sand and gravel deposit. Refusal at 40 feet.

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

BORING NO. GZ-9

APPENDIX F

GEOENVIRONMENTAL INC.
ROADWAY, PROVIDENCE, RHODE ISLAND

TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-9
SHEET 2 OF 2
FILE NO. 31834.2
CHKD BY

CASING BLOWS	SAMPLE NO	SAMPLE PEN/REC	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	R K
96						37' FINE TO MED. SAND			
129									
128					Gray SILT (completely to severely weathered	SILT			
132	S-7	—	39-40	—	rock)				
					REFUSAL AT 40 FEET	40'			3

KS:
3. Sample S-7 collected from material extracted from NW-Rods.

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

BORING NO GZ-9

APPENDIX F

GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND
TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT: RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-10
SHEET 1 OF 2
FILE NO. 31834.2
CHKD BY DRC

DRG CO. GZA DRILLING, INC.
MAN BARRY WORDELL
ENG. ASBJORN GUSTAFSON

BORING LOCATION SEE EXPLORATION LOCATION PLAN
GROUND SURFACE ELEV. ____ DATUM ____
DATE START 7-3-97 DATE END 7-3-97

ER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF
PLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 IN
G: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb
ER FALLING 24 IN.
G SIZE: OTHER 3 3/4" HSA

GROUNDWATER READINGS				
DATE	TIME	WATER	CASING	STABILIZATION TIME

H	CASING BLOWS	SAMPLE NO.	PEN./REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION / BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
		S-1	24/4	0-2	3-3	Loose, gray, fine SAND, little Silt, trace fine Gravel		
					4-5			
		S-2	24/10	5-7	4-5	Loose, gray-brown, ASH & CINDERS		
					4-5			
		S-3	24/8	10-12	4-2	Loose, gray-brown, ASH & CINDERS		
					3-5			
		S-4	24/10	15-17	6-8	Medium dense, brown, fine to medium SAND, little fine		FILL
					8-12	Gravel, little Silt		
		S-5	24/2	20-22	3-4	Loose, brown, fine to coarse SAND and Gravel, trace Silt		
					5-3			
		S-6	24/8	25-27	4-6	Loose, brown, fine to coarse SAND, some fine to coarse		
					3-2	Gravel, trace Silt, Cinders		
		S-7	24/7	30-32	10-13	Medium dense, gray-black, fine to coarse SAND and	3	
					5-7	Gravel, little Brick, little Cinders, trace Silt		

GRANULAR SOILS BLOWS/FT DENSITY		COHESIVE SOILS BLOWS/FT DENSITY	
VERY LOOSE	<2	VERY SOFT
LOOSE	2-4	SOFT
MEDIUM DENSE	4-8	M. STIFF
DENSE	8-15	STIFF
VERY DENSE	15-30	V. STIFF
	>30	HARD

REMARKS:

-1- Advanced NW-casing using hydraulic push on drill rig from 0 to 15 feet.
-2- Encountered groundwater at approximately 15' feet.
-3- Slight fuel odor in Sample S-7, but no reading on PID.

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-10

APPENDIX F

GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND

TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-10
SHEET 2 OF 2
FILE NO. 31834.2
CHKD BY ORC

CASING BLOWS	SAMPLE NO.	PEN./REC.	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
	S-8	24/1	35-37	34-29	Black, WOOD, trace Glass	4	FILL
				14-12			
							38'
	S-9	24/16	40-42	6-4	Stiff, dark gray, Organic SILT, trace fine Sand, trace Wood		
				5-10			ORGANIC SILT
	S-10	24/11	45-47	3-4	Stiff, dark gray, Organic SILT, trace fine Sand		
				6-6			
			3"				
8	S-11	24/17	50-52	6-4	Top 13": Medium to stiff, dark gray, organic SILT, little fine	5	51'
20				11-15	Sand, trace fine Gravel		
24					Top 4": Medium dense, gray, fine SAND, trace fine Gravel,		
27					trace Silt		
25							SAND AND GRAVEL
36							
30							
43							
44							
133/7"	S-12	—	59-59.6	—	Orange-brown, fine SAND, little(+) Silt, little fine Gravel	6	59.6
					REFUSAL AT 59.6 FEET		

GRANULAR SOILS BLOWS/FT DENSITY		COHESIVE SOILS BLOWS/FT DENSITY	
VERY LOOSE	<2	VERY SOFT	
LOOSE	2-4	SOFT	
MEDIUM DENSE	4-8	M. STIFF	
DENSE	8-15	STIFF	
VERY DENSE	15-30	V. STIFF	
	>30	HARD	

REMARKS:

-4- Fuel odor in sample S-8, but no reading on PID.
-5- Advanced NW-rods with 300 lb. hammer from 50 to 59.6 feet to observe relative density of sand and gravel deposit. Refusal at 59.6 feet.
-6- Sample S-12 collected from material extracted from NW-rods.

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

BORING NO. GZ-10

APPENDIX F

GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND

OTECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-11
SHEET 1 OF 2
FILE NO. 31834.2
CHKD BY DRC

ING CO. GZA DRILLING, INC.
EMAN TIM VERNON/CHRIS LENLING
ENGINEER ASBJORN GUSTAFSON

BORING LOCATION SEE EXPLORATION LOCATION PLAN
GROUND SURFACE ELEV. DATUM
DATE START 7-3-97 DATE END 7-9-97

PLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF
SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 IN

ING: UNLESS OTHERWISE NOTED, CASING DRIVEN USING
0 LB HAMMER FALLING 24 IN.

ING SIZE: OTHER 3 3/4" HSA

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME
7-11-97	1110	12.5'	OUT	4 DAYS

TH (FT)	CASING BLOWS	SAMPLE NO	PEN/REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	R K
		S-1	24/19	0-2	–	Grey SILT, little fine SAND, little fine Gravel		1-4' filter sand; 0-1' cement seal		
		S-2	24/6	5-7	52-34	Very dense, grey, fine to coarse GRAVEL,		4-5' Bent. seal		
					20-15	some fine Sand, little+ Silt				
							FILL	0-10' 2" PVC Riser		
		S-3	24/2	10-12	17-7	Medium dense, grey, fine SAND and fine				
					6-3	Gravel, little+ Silt				
		S-4	24/12	15-17	4-3	Loose, grey, fine SAND, some fine Gravel,		10-25' 2" PVC Screen		1
					2-3	little+ Silt	19'			
		S-5	24/20	20-22	11-5	Medium to stiff, dark grey, Organic SILT, trace	ORGANIC SILT			
					3-4	Roots, Wood Fibers				
PUSH		S-6	24/5	25-27	35-31	Medium to stiff, dark grey, Organic SILT, trace+		5-33' Filter Sand		2
PUSH					33-21	fine Sand, trace fine Gravel				
PUSH										
PUSH										
PUSH										
PUSH		S-7	24/20	29-31	2-2	Soft to medium, dark grey, Organic SILT, trace				
PUSH					2-2	fine Sand, trace- Wood				
PUSH										
PUSH										
PUSH		S-8	24/20	34-46	2-2	Medium, dark grey, Organic SILT, trace fine				
PUSH					3-3	Sand, trace- Wood				

MARKS:
countered groundwater at approximately 15 feet.
vanced hollow stem augers to 25 feet and then installed 3-inch NW-casing. Used hydraulic push on drill rig to advance NW-casing from 25 to 44 feet. Drove NW-casing
300 lb hammer from 44 to 64 feet.

ES: 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

BORING NO. GZ-11

4

APPENDIX F

BROADWAY, PROVIDENCE, RHODE ISLAND

OTECH/GEOHYDROLOGICAL CONSULTANTS

RIVER[illegible]CE
PROVIDENCE, RHODE ISLAND

REPORT OF BOR[illegible]

SHEET
FILE NO. 31834.2
CHKD BY DRC

N	CASING BLOWS	SAMPLE NO	SAMPLE PEN/REC	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	R K
	PUSH									
	PUSH									
	PUSH									
	PUSH	S-9	24/24	39-41	2-2	Medium, dark grey, organic SILT, trace fine				
	PUSH				3-6	Sand, trace- Wood	Organic SILT			
	PUSH									
	PUSH									
	PUSH									
		S-10	24/22	44-46	2-4	Medium to stiff, dark grey, orgnaic SILT, trace				
					4-2	fine Sand, trace- Wood				
							48'			
50	S-11	24/20	49-51	12-12		Medium dense, to dense, grey, fine SAND,				
48				18-19		trace Silt				
48										
52										
55										
33	S-12	24/16	54-56	10-13		Dense, grey, fine SAND, trace Silt				
45				18-27						
43							SAND			
49										
61										
300	S-13	24/1-	59-61	11-12		Medium dense, grey, fine SAND, trace Silt				3
110				13-20						
98										
84										
122						Very dense, grey, fine to coarse GRAVEL,				4
	S-14	12/	64-65	50-130		some fine to medium Sand, trace Silt				
						Refusal at 65'				

MARKS:
W-casing set for three days at 59 feet (July 4th weekend).
plit spoon refusal at 65 feet.

TES: 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

BORING NO. GZ-11

CA

APPENDIX F

A GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND

OTECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-12
SHEET 1 OF 3
FILE NO. 31634.2
CHKD BY DRC

ING CO. GZA DRILLING, INC.
EMAN TIM VERNON
ENG. ASBJORN GUSTAFSON

BORING LOCATION SEE EXPLORATION LOCATION PLAN
GROUND SURFACE ELEV. DATUM
DATE START 6-26-97 DATE END 6-30-97

PLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 IN

NG: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb MER FALLING 24 IN.

ING SIZE: OTHER 3 3/4" HSA

GROUNDWATER READINGS				
DATE	TIME	WATER	CASING	STABILIZATION TIME
6-30-97	0720	15'	CUT	15 MIN.

PTH	CASING BLOWS	SAMPLE NO	PEN./REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION / BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
		S-1	–	0-2	–	Auger cuttings: Grey, fine SAND, little Silt		FILL
		S-2	24/20	5-7	4-4	Loose, dark grey, fine SAND, some+ Silt		
					4-3			
		S-3	24/14	10-12	1-1	Very loose, dark grey, fine SAND, little+ Silt	1	
					1-1			
		S-4	24/7	15-17	12-7	Loose, dark grey, fine SAND, little+ Silt, trace Wood		
					1-1			
		S-5	24/17	20-22	3-3	Loose, dark grey, fine SAND, little+ Silt, trace Gravel, Wood,	2	24'
					2-1	Oil staining		
PUSH		S-6	24/23	25-27	3-3	Medium, dark grey, Organic SILT, trace fine Sand, Wood	3	ORGANIC SILT
PUSH					2-1			
PUSH								
PUSH								
PUSH		S-7	24/24	29-31	2-3	Medium, dark grey, Organic SILT, trace Wood		
PUSH					2-2			
PUSH								
PUSH								

GRANULAR SOILS BLOWS/FT	DENSITY	COHESIVE SOILS BLOWS/FT	DENSITY
	VERY LOOSE	<2	VERY SOFT
	LOOSE	2-4	SOFT
	MEDIUM DENSE	4-8	M. STIFF
	DENSE	8-15	STIFF
	VERY DENSE	15-30	V. STIFF
		>30	HARD

REMARKS:
1. Encountered groundwater at 11 feet.
2. Sample oil stained with fuel odor.
3. Advanced hollow stem augers to 25 feet. Pulled H.S.A. and installed 3-inch NW-casing. Used hydraulic push on drilling to advance NW-casing from 25 to 44 feet. Drove casing with 300 lb hammer from 44 to 69 feet.

ES: 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

A

BORING NO. GZ-12

APPENDIX F

GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND
OTECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-12
SHEET 2 OF 3
FILE NO. 31834.2
CHKD BY DRC

TH	CASING BLOWS	SAMPLE NO	SAMPLE PEN./REC	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
	PUSH							
	PUSH							
	PUSH	S-8	24/22	34-36	1-1	Soft, dark grey, Organic SILT, trace- Wood		
	PUSH				2-2			
	PUSH							ORGANIC SILT
	PUSH							
	PUSH							
	PUSH	S-9	24/22	39-41	3-3	Medium, dark grey, Organic SILT, trace- Wood		
	PUSH				2-2			
	PUSH							
	PUSH							
	PUSH							
	PUSH	S-10	24/24	44-46	1-2	Medium, dark grey, Organic SILT		
					3-4			
								48'
		S-11	24/9	49-51	5-7	Medium dense, grey, fine to medium SAND, trace Silt		
					9-13			
		S-12	24/3	54-56	5-7	Medium dense, grey, fine SAND, trace Silt		FINE SAND
					8-13			
		S-13	24/12	59-61	18-34	Top 10" (S-13): Very dense, grey, fine SAND, trace Silt		60'
		S-13A			40-30	Bott 12" (S-13A): Very dense, grey, fine to coarse GRAVEL,		GLACIAL TILL
						little+ fine to coarse Sand, little Silt		62'
								FINE TO COARSE SAND
		S-14	24/8	64-66	17-15	Very dense, brown, fine to coarse SAND, some+ fine to coarse		
					50-28	Gravel, trace Silt changing to grey SILT at tip of spoon		
								68'
								SILT AND CLAY
		S-15	24/20	69-71	12-12	Very stiff, grey SILT and CLAY		
					14-15			

GRANULAR SOILS BLOWS/FT	DENSITY
	VERY LOOSE
	LOOSE
	MEDIUM DENSE
	DENSE
	VERY DENSE

COHESIVE SOILS BLOWS/FT	DENSITY
<2	VERY SOFT
2-4	SOFT
4-8	M. STIFF
8-15	STIFF
15-30	V. STIFF
>30	HARD

REMARKS:

ES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-12

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APPENDIX F

GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND

TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT	REPORT OF BORING NO.	GZ-12
RIVERVIEW PLACE	SHEET	3 OF 3
PROVIDENCE, RHODE ISLAND	FILE NO.	31634.2
	CHKD BY	DRC

TH	CASING BLOWS	SAMPLE NO	SAMPLE PEN./REC	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
								SILT AND CLAY
		S-16	24/4	75-77	14-12	Very stiff, grey, CLAY and SILT, trace fine Sand in lenses		
					13-15			
						End of Exploration at 77'		

GRANULAR SOILS BLOWS/FT	DENSITY	COHESIVE SOILS BLOWS/FT	DENSITY
	VERY LOOSE	<2	VERY SOFT
	LOOSE	2-4	SOFT
	MEDIUM DENSE	4-8	M. STIFF
	DENSE	8-15	STIFF
	VERY DENSE	15-30	V. STIFF
		>30	HARD

REMARKS:

ES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

A

BORING NO. GZ-12

APPENDIX F

GEOENVIRONMENTAL INC.
ROADWAY, PROVIDENCE, RHODE ISLAND

TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT	REPORT OF BORING NO.	GZ-12A
RIVERVIEW PLACE	SHEET	1 OF 1
PROVIDENCE, RHODE ISLAND	FILE NO.	31824.2
	CHKD BY	DRC

G CO.	GZA DRILLING, INC	BORING LOCATION	SEE EXPLORATION LOCATION PLAN
MAN	TIM VERNON/CHRIS LENLING	GROUND SURFACE ELEV.	DATUM
NGINEER	ASBJORN GUSTAFSON	DATE START 7-11-97	DATE END 7-11-97

LER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF
PLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 IN

G: UNLESS OTHERWISE NOTED, CASING DRIVEN USING
LB HAMMER FALLING 24 IN.

ID SIZE: OTHER 3 3/4" HSA

GROUNDWATER READINGS				
DATE	TIME	WATER	CASING	STABILIZATION TIME
7-11-97	1345	13.5'	OUT	1 HOUR

H	CASING BLOWS/	SAMPLE NO	PEN/REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	STRATUM DESCRIPTION	EQUIPMENT INSTALLED	FIELD TESTING	R K
								Prot. Casing		
								0-1' cement seal		1
										2
								1-8' Comm. Fill		
								8-9' Bent Seal		
								9-10' 2" PVC Riser		
										1
								10-25' 2" PVC Screen		
								9-25' Filter Sand		
										2

ARKS:
oundwater monitoring well installed 3 feet southeast of Boring GZ-12.
samples collected. Refer to logs for Boring GZ-12 for stratum description.

E: 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES; TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED; FLUCTUATIONS OF GROUNDWATER TABLE MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

BORING NO. GZ-12A

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APPENDIX F

GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND
TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-13
SHEET 1 OF 2
FILE NO. 31634.2
CHKD BY DRC

NG CO. GZA DRILLING, INC.
EMAN TIM VERNON
ENG. ASBJORN GUSTAFSON

BORING LOCATION SEE EXPLORATION LOCATION PLAN
GROUND SURFACE ELEV. DATUM
DATE START 6-30-97 DATE END 7-1-97

PLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 IN

NG: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb MER FALLING 24 IN.

NG SIZE OTHER 3 3/4" HSA

GROUNDWATER READINGS				
DATE	TIME	WATER	CASING	STABILIZATION TIME
7-1-97	1000	15.5	OUT	15 MIN.

TH	CASING BLOWS	SAMPLE NO	PEN./REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
		S-1	–	0-2	–	Brownish/grey, fine SAND, little Silt, trace Roots		
		S-2	24/18	5-7	18-29	Dense, grey/brown, fine SAND, little fine to coarse Gravel,		FILL
					16-10	little+ Silt, trace Brick		
		S-3	24/18	10-12	5-2	Very loose, dark grey SILT, little+ fine Sand (Ash?)	1	
					1-1			
		S-4	24/24	15-17	1-3	Loose, dark grey SILT, little+ fine Sand, trace fine Gravel		
					4-4			
		S-5	24/24	20-22	1-2	Loose, dark grey SILT, little+ fine Sand, trace fine Gravel		
					4-4			
PUSH		S-6	24/10	25-27	8-1	Very loose, dark grey SILT, little+ fine Sand	2	
PUSH					2-4			
PUSH								28'
PUSH								ORGANIC SILT
PUSH		S-7	24/24	29-31	3-2	Medium dark grey, Organic SILT, trace- Wood		
PUSH					3-4			
PUSH								
PUSH								

GRANULAR SOILS BLOWS/FT	DENSITY	COHESIVE SOILS BLOWS/FT	DENSITY
	VERY LOOSE	<2	VERY SOFT
	LOOSE	2-4	SOFT
	MEDIUM DENSE	4-8	M. STIFF
	DENSE	8-15	STIFF
	VERY DENSE	15-30	V. STIFF
		>30	HARD

REMARKS:
1. Encountered groundwater at 10 feet.
2. Advanced hollow stem augers to 25 feet and then installed 3-inch NW-casing. Used hydraulic push on drill rig to advance NW-casing from 25 to 44 feet. Drove casing using 300 lb. hammer from 44 to 69 feet.

S:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-13

APPENDIX F

GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND
TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-13
SHEET 2 OF 2
FILE NO. 31634.2
CHKD BY DRC

TH	CASING BLOWS	SAMPLE NO	PEN./REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
	PUSH							
	PUSH							
	PUSH	S-8	24/19	34-36	1-2	Soft, dark grey, Organic SILT		ORGANIC SILT
	PUSH				1-1			
	PUSH							
	PUSH							
	PUSH							
	PUSH	S-9	24/24	39-41	1-2	Soft to medium, dark grey, Organic SILT, trace Wood		
	PUSH				2-4			
	PUSH							
	PUSH							
	PUSH							
		S-10	24/22	44-46	1-3	Medium to stiff, dark grey, Organic SILT, trace fine Sand, trace		
					5-4	Wood		
								49'
		S-11	24/12	49-51	8-12	Medium dense, grey, fine SAND, trace Silt		
					15-15			
		S-12	24/12	54-56	10-14	Dense, grey, fine SAND, trace Silt		FINE SAND
					17-20			
		S-13	24/14	59-61	61-32	Very dense, grey, fine SAND, trace Silt, one 3-inch lens of		
					44-47	angular, grey, fine to coarse Gravel, little fine Sand, trace Silt		
						in center of sample		
		S-14	24/16	64-66	24-28	Very dense, grey, fine SAND, trace Silt		
					40-55			
		S-15	24/15	69-71	32-23	Very dense, brown/grey, fine to medium SAND, trace Silt		
					40-45			
						End of Exploration at 71'		

GRANULAR SOILS BLOWS/FT	DENSITY
	VERY LOOSE
	LOOSE
	MEDIUM DENSE
	DENSE
	VERY DENSE

COHESIVE SOILS BLOWS/FT	DENSITY
<2	VERY SOFT
2-4	SOFT
4-8	M. STIFF
8-15	STIFF
15-30	V. STIFF
>30	HARD

REMARKS:

ES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-13

CA

APPENDIX F

GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND

TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-14
SHEET 1 OF 2
FILE NO. 31634.2
CHKD BY ORC

NG CO. GZA DRILLING, INC.
MAN TI M VERNON
ENG. ASBJORN GUSTAFSON

BORING LOCATION SEE EXPLORATION LOCATION PLAN
GROUND SURFACE ELEV. DATUM
DATE START 7-1-97 DATE END 7-3-97

LER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF
PLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 IN

NG: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb
MER FALLING 24 IN.

NG SIZE: OTHER -3 3/4" HSA

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME

TH	CASING BLOWS	SAMPLE NO	PEN./REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
		S-1	—	0-2	—	Augar cuttings: Light brown, fine to medium SAND, some fine to coarse Gravel, little(-) Silt, trace Roots		
		S-2	24/7	5-7	5-4	Loose, gray-brown, fine to medium SAND, little(+) fine to coarse Gravel, little(+) Silt		FILL
					3-3			
		S-3	24/8	10-12	5-4	Loose, dark gray SILT, little fine Sand		
					4-4			
		S-4	24/17	15-17	2-2	Very loose to loose, gray-brown, ASH & CINDERS		
					2-3			
		S-5	24/14	20-22	4-2	Very loose to loose, gray-brown, ASH & CINDERS		
					2-2			
PUSH		S-6	24/2	25-27	1-1	Very loose, brown, ASH & CINDERS	1	
PUSH					1-2			
PUSH								
PUSH								
PUSH		S-7	24/17	29-31	4-1	Very loose, brown, fine SAND, trace(+) Silt, trace fine Gravel		
PUSH					1-1			
PUSH								
PUSH								

GRANULAR SOILS BLOWS/FT	DENSITY	COHESIVE SOILS BLOWS/FT	DENSITY
	VERY LOOSE	<2	VERY SOFT
0	LOOSE	2-4	SOFT
30	MEDIUM DENSE	4-8	M. STIFF
50	DENSE	8-15	STIFF
0	VERY DENSE	15-30	V. STIFF
		>30	HARD

REMARKS:

-1- Encountered groundwater at approximately 25 feet.
-2- Advanced hollow stem augers to 25 feet and then installed 3-inch NW-casing. Used hydraulic push on drill rig to advance NW-casing from 25 to 39 feet. Drove casing using 300 lb. hammer from 39 to 64 feet.

TES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-14

GZA

APPENDIX F

GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND
TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-14
SHEET 2 OF 2
FILE NO. 31634.2
CHKD BY DRC

DEPTH	CASING BLOWS	SAMPLE NO	SAMPLE PEN./REC	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
	PUSH							
	PUSH							FILL
	PUSH	S-8	24/8	24-26	9-7	Medium dense, gray-black, ASH and CINDERS, some fine		
	PUSH				13-12	Sand, trace Silt		
	PUSH							
	PUSH							
	PUSH					Top 4": Gray-black, ASH & CINDERS, some fine Sand, trace		
		S-9	24/16	39-41	8-4	Silt		39.5'
					7-11	Bottom 14": Stiff, dark gray, Organic SILT, trace(+) fine Sand		
		T-1	24/0	43-45	PUSH	No recovery		
28						1 3/4" (I.D.) Shelby Tube		ORGANIC SILT
24								
22								
26								
22								
32		T-2	24/0	49-51	PUSH	No recovery		
36						1 3/4" (I.D.) Shelby Tube		
35								
33								
40								
35		S-10	24/0	54-56	5-9	No recovery		55'
40					15-17			
45		S-11	24/6	56-58	21-15	Dense, gray-light brown, fine to coarse SAND, little fine to		
50					26-38	coarse Gravel, trace Silt		
52								
52		S-12	24/18	59-61	30-35	Very dense, gray-brown, fine SAND, little fine Gravel, little		SAND AND GRAVEL
54					58-51	Silt		
58								
57								
60								
		S-13	24/16	64-66	11-51	Very dense, gray SILT, some angular fine to coarse Gravel,		
					94-100	little fine Sand		66'
						BOTTOM OF BORING AT 66 FEET		

GRANULAR SOILS BLOWS/FT	DENSITY	COHESIVE SOILS BLOWS/FT	DENSITY
	VERY LOOSE	<2	VERY SOFT
	LOOSE	2-4	SOFT
	MEDIUM DENSE	4-8	M. STIFF
	DENSE	8-15	STIFF
	VERY DENSE	15-30	V. STIFF
		>30	HARD

REMARKS:

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-14

APPENDIX F

GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND

TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT	RIVERVIEW PLACE
	PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-15
SHEET 1 OF 2
FILE NO. 31834.2
CHKD BY ORC

NG CO. GZA DRILLING, INC.
MAN CHRIS LENLING
ENG. ASSJORN GUSTAFSON

BORING LOCATION SEE EXPLORATION LOCATION PLAN
GROUND SURFACE ELEV. ____ DATUM ____
DATE START 7-7-97 DATE END 7-8-97

PLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 IN.

NG: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb MER FALLING 24 IN.

NG SIZE: OTHER 3 3/4" HSA

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME
7-8-97	0655	14.5'	29'	17'

TH	CASING BLOWS	SAMPLE NO	PEN./REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
	SPUN	S-1	24/12	0-2	3-10	Top 4": Brown, fine SAND, some(-) Silt, trace fine Gravel,	1	0.3' SOD
	SPUN				7-5	Sod, Grass, Roots		
	SPUN					Bottom 6": Medium dense, gray, fine, SAND, little(+) Silt,		
	SPUN					trace fine Gravel		
	SPUN	S-2	24/1	4-6	5-4	Loose, gray, fine to coarse GRAVEL, some fine Sand,		
	SPUN				2-4	little Silt		
	SPUN							
	SPUN			*				
	SPUN							
	SPUN	S-3	24/4	9-11	3-4	Loose, brown, fine SAND, little fine Gravel, little(-) Silt		
	SPUN				4-5			
	SPUN							FILL
	SPUN							
	SPUN							
	SPUN	S-4	24/3	14-16	5-4	Loose, brown, fine SAND, trace Silt, trace fine Gravel		
	SPUN				2-1			
	SPUN							
	SPUN							
	SPUN							
	SPUN	S-5	24/2	19-21	2-1/12"	Very loose, brown, fine SAND, little fine Gravel, trace(+) Silt		
	SPUN							
	SPUN							
	SPUN							
	SPUN							
	SPUN	S-6	24/0	24-26	17-7	No recovery		
	SPUN				4-5		2	
	SPUN							
	27							
	10							
	SPUN	S-7	24/3	29-31	12-6	Medium dense, gray, fine SAND, little(+) Silt, trace(-)	3	30'(+)
	SPUN				10-15	fine Gravel		SILTY SAND
	SPUN							32.5'
	SPUN							ORGANIC SILT

GRANULAR SOILS BLOWS/FT	DENSITY	COHESIVE SOILS BLOWS/FT	DENSITY
	VERY LOOSE	<2	VERY SOFT
	LOOSE	2-4	SOFT
	MEDIUM DENSE	4-8	M. STIFF
	DENSE	8-15	STIFF
	VERY DENSE	15-30	V. STIFF
		>30	HARD

REMARKS:

1. Spun 4-inch HW-casing from 0 to 27 feet. Telescoped 3-inch NW-casing inside HW-casing. Spun NW-casing from 29 to 44 feet.
2. Encountered obstruction at approximately 27 feet. Possible bricks based on wash water.

ES 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-15

CA

APPENDIX F

GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND
TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-15
SHEET 2 OF 2
FILE NO. 31834.2
CHKD BY DRC

TH	CASING BLOWS	SAMPLE NO	SAMPLE PEN./REC	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
	SPUN							32.5' SILTY SAND
	SPUN					Medium, gray, organic SILT, little fine Gravel, little fine Sand		
	SPUN	S-8	24/7	34-36	3-20			34.5' ORGANIC SILT
	SPUN				14-11			
	SPUN							FINE SAND
	SPUN							
	SPUN							
	SPUN	S-9	24/12	39-41	15-28	Very dense, gray, fine SAND, some(-) Silt	3	
	SPUN				28-37			
	SPUN							
	SPUN							
	SPUN							44'
		S-10	24/4	44-44.5	11-100/0"	Very dense, gray, SILT, little(+) fine Sand		44.5' SILT
						SPLIT SPOON AND ROLLERBIT REFUSAL AT 44.5 FEET		

GRANULAR SOILS BLOWS/FT	DENSITY	COHESIVE SOILS BLOWS/FT	DENSITY
4	VERY LOOSE	<2	VERY SOFT
10	LOOSE	2-4	SOFT
30	MEDIUM DENSE	4-8	M. STIFF
50	DENSE	8-15	STIFF
50	VERY DENSE	15-30	V. STIFF
		>30	HARD

REMARKS:

3. Iron staining visible in bottom half of sample.

TES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

ZA

BORING NO. GZ-15

APPENDIX F

GEOENVIRONMENTAL INC.
ROADWAY, PROVIDENCE, RHODE ISLAND

TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-16
SHEET 1 OF 2
FILE NO. 31834.2
CHKD BY DRC

G CO. GZA DRILLING, INC.
MAN TI M VERNON
NG. ASBJORN GUSTAFSON

BORING LOCATION SEE EXPLORATION LOCATION PLAN
GROUND SURFACE ELEV. DATUM
DATE START 7-9-97 DATE END 7-9-97

ER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF
PLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 IN.

G: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb
ER FALLING 24 IN.

G SIZE: OTHER 3 3/4" HSA

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME

K	CASING BLOWS/ft	SAMPLE NO.	PEN./REC.	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION / BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
		S-1	24/16	0-2	22-38	Very dense, light brown/grey, fine to coarse GRAVEL, some-		
					33-19	fine Sand, little Silt, trace Brick, Roots		
		S-2	24/4	5-7	8-17	Dense to very dense, brown, fine SAND, trace fine to coarse	1	
					100	Gravel, trace Silt, Wood		
							2	
		S-3	24/8	10-12	1-9	Medium dense, brown, fine SAND, little Wood, trace fine		FILL
					6-8	Gravel, trace Silt, trace Brick		
		S-4	24/8	15-17	14-7	Medium dense, brown/grey ASH and CINDERS, little Wood,		
					6-5	little fine Sand, Silt		
		S-5	24/0.5	20-22	9-4	Loose, brown, fine SAND, little Wood, trace Silt		
					3-5			
SPUN		S-6	24/9	25-27	7-7	Medium dense, grey ASH and CINDERS	3	
SPUN					5-6			
SPUN		S-7	24/4	29-31	11-4	Medium dense, brown ASH and CINDERS, trace fine Sand,	4	
SPUN					7-6	Glass		

GRANULAR SOILS BLOWS/FT	DENSITY	COHESIVE SOILS BLOWS/FT	DENSITY
	VERY LOOSE	<2	VERY SOFT
	LOOSE	2-4	SOFT
	MEDIUM DENSE	4-8	M. STIFF
	DENSE	8-15	STIFF
	VERY DENSE	15-30	V. STIFF
		>30	HARD

REMARKS:
1. One 1-inch piece of gravel in tip of spoon.
2. Observed slight smell of kreosote from bore hole when augering from 5 to 10 feet.
3. Advanced hollow stem augers to 25 feet and then installed 3-inch NW-casing . NW-casing spun from 25 to 39 feet.
4. Encountered groundwater at approximately 29 feet.

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-16

APPENDIX F

GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND

TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT	REPORT OF BORING NO.	GZ-16
RIVERVIEW PLACE	SHEET	2 OF 2
PROVIDENCE, RHODE ISLAND	FILE NO.	31634.2
	CHKD BY	ORC

H	CASING BLOWS	SAMPLE NO	SAMPLE PEN./REC	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
	SPUN							
	SPUN							
	SPUN	S-8	24/5	34-36	14-10	Medium dense, grey ASH and CINDERS, little fine Sand, trace		FILL
	SPUN				7-7	Silt		
	SPUN							
	SPUN							38'
	SPUN							
		S-9	24/10	39-41	4-1	Very loose, grey, fine SAND, some Silt, little Wood		SILTY SAND
					2-3			
		S-10	24/12	41-43	10-16	Dense, grey-olive grey SILT, little fine Sand		
					15-18			
						End of Exploration at 43'		

GRANULAR SOILS BLOWS/FT	DENSITY	COHESIVE SOILS BLOWS/FT	DENSITY
4	VERY LOOSE	<2	VERY SOFT
10	LOOSE	2-4	SOFT
30	MEDIUM DENSE	4-8	M. STIFF
50	DENSE	8-15	STIFF
0	VERY DENSE	15-30	V. STIFF
		>30	HARD

REMARKS:

TES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-16

ZA

APPENDIX F

GEOENVIRONMENTAL INC.
ROADWAY, PROVIDENCE, RHODE ISLAND

TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-17
SHEET 1 OF 1
FILE NO. 31834.2
CHKD BY DRC

G CO. GZA DRILLING, INC.
MAN TI M VERNON
NG. ASBJORN GUSTAFSON

BORING LOCATION SEE EXPLORATION LOCATION PLAN
GROUND SURFACE ELEV. ____ DATUM ____
DATE START 7-10-97 DATE END 7-10-97

LER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF PLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 IN

G: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb ER FALLING 24 IN.

G SIZE: OTHER 3 3/4" HSA

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME

TH	CASING BLOWS	SAMPLE NO	PEN./REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION / BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
		S-1	24/8	0-2	22-34	Very dense, light brown/gray, fine SAND, some- fine to coarse		
					19-15	Gravel, little Silt, trace Brick, Roots		
		S-2	24/11	5-7	6-5	Loose to medium, dense brown, fine SAND, trace fine to		
					5-4	coarse Gravel, trace Silt		
		S-3	24/8	10-12	5-4	Top 5": Loose, brown, fine SAND, trace fine Gravel, trace Silt		FILL
					3-4	Bott 3": Loose, grey ASH and CINDERS		
		S-4	24/10	15-17	2-4	Loose, grey/brown, fine SAND, trace fine to coarse Gravel,		
					3-4	trace Silt	1	20'
		S-5	36/24	20-23	1/24"	Very loose, brown, fine SAND, little fine Gravel, trace Silt	2	
					3			SILTY FINE SAND
		S-6	24/16	25-27	7-9	Medium dense, grey, olive/brown, fine SAND, some Silt,		
					6-6	trace- Wood		
						End of Exploration at 27'		
		S-7	24/16	25-27	7-9			
					6-6			

GRANULAR SOILS BLOWS/FT	DENSITY	COHESIVE SOILS BLOWS/FT	DENSITY
-4	VERY LOOSE	<2	VERY SOFT
-10	LOOSE	2-4	SOFT
-30	MEDIUM DENSE	4-8	M. STIFF
-50	DENSE	8-15	STIFF
-80	VERY DENSE	15-30	V. STIFF
		>30	HARD

REMARKS:
1. Encountered groundwater at approximately 20 feet.
2. Over drove split spoon approximately 12 inches.

OTES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-17

ZA

APPENDIX F

GEOENVIRONMENTAL INC.
ROADWAY, PROVIDENCE, RHODE ISLAND

TECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-18
SHEET 1 OF 1
FILE NO. 31834.2
CHKD BY DRC

NG CO. GZA DRILLING, INC.
MAN TI M VERNON
ENG. ASBJORN GUSTAFSON

BORING LOCATION SEE EXPLORATION LOCATION PLAN
GROUND SURFACE ELEV. DATUM
DATE START 7-10-97 DATE END 7-10-97

LER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF
PLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 IN

NG: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb
MER FALLING 24 IN.

NG SIZE: OTHER 3 3/4" HSA

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME

TH	CASING BLOWS	SAMPLE NO	PEN./REC	DEPTH (FT)	BLOWS/6"	SAMPLE DESCRIPTION / BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
		S-1	24/14	0.2-2.2	6-7	Medium dense, dark to light brown, fine SAND, trace+ Silt, trace		0.3' ASPHALT
					5-4	fine Gravel		FILL
								5'
		S-2	24/22	5-7	20-19	Dense, grey, fine SAND, some+ Silt in stratified lenses, trace	1	SILTY FINE SAND
					16-25	fine Gravel		
		S-3	3/2	9.5-9.8	100/3"	Very dense, brown, fine SAND and Gravel, trace Silt	2	11' GLACIAL TILL
		S-4	18/12	13-14.5	33-70	Very dense, brown, fine SAND, some angular, fine to coarse		
					100	Gravel, trace+ Silt		
						Refusal at 14.5'		

GRANULAR SOILS BLOWS/FT	DENSITY	COHESIVE SOILS BLOWS/FT	DENSITY
4	VERY LOOSE	<2	VERY SOFT
10	LOOSE	2-4	SOFT
30	MEDIUM DENSE	4-8	M. STIFF
50	DENSE	8-15	STIFF
0	VERY DENSE	15-30	V. STIFF
		>30	HARD

REMARKS:
1. Difficult to advance augers from 7 to 9.5 feet.
2. Advanced boring using rollerbit and water from 9.5 to 13 feet.
3. Groundwater not encountered.

TES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-18

ZA

APPENDIX F

GEOENVIRONMENTAL INC.
BROADWAY, PROVIDENCE, RHODE ISLAND
OTECH/GEOHYDROLOGICAL CONSULTANTS

PROJECT
RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

REPORT OF BORING NO. GZ-19
SHEET 1 OF 1
FILE NO. 31634.2
CHKD BY DRC

NG CO. GZA DRILLING, INC.
EMAN TIM VERNON
ENG. ASBJORN GUSTAFSON

BORING LOCATION SEE EXPLORATION LOCATION PLAN
GROUND SURFACE ELEV. ____ DATUM ____
DATE START 7-11-97 DATE END 7-11-97

PLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 IN
NG: UNLESS OTHERWISE NOTED, CASING DRIVEN USING A 300 lb MER FALLING 24 IN.
NG SIZE: OTHER 3 3/4" HSA

GROUNDWATER READINGS

DATE	TIME	WATER	CASING	STABILIZATION TIME

TH	CASING BLOWS	SAMPLE NO	SAMPLE REN./REC	SAMPLE DEPTH (FT)	SAMPLE BLOWS/6"	SAMPLE DESCRIPTION BURMISTER CLASSIFICATION	R K	STRATUM DESCRIPTION
		S-1	24/10	0.2-2.2	3-9	Medium dense, grey/brown, fine SAND, some- fine to coarse		0.2' ASPHALT
					13-11	Gravel, little Silt, little Ash, Cinders		
		S-2	24/15	5-7	3-2	Loose, brown, fine SAND, little fine to coarse Gravel, little		FILL
					5-6	Silt with 4-inch layer of Ash and Cinders in center of sample		
		S-3	24/17	10-12	3-3	Loose, brown, fine SAND, little Wood, trace fine Gravel, Silt,		
					3-4	Ash, Cinders		
		S-4	24/18	15-17	3-3	Loose, grey, fine SAND, little Silt, trace fine Gravel, trace- Glass		
					5-6			
		S-5	24/18	20-22	2-4	Loose, grey, ASH and CINDERS, trace Wood, Glass, Brick	1	20' FINE SAND
					4-5			
		S-6	24/8	25-27	2-3	Top 4": Loose, gray ASH and CINDERS		
					5-6	Bott 4": Loose, brown, fine SAND, little fine Gravel, little Silt		
		S-7	24/18	27-29	28-35	Very dense, dark grey, fine SAND, trace fine Gravel, trace Silt		
					19-23			
						End of Exploration at 29'		

GRANULAR SOILS BLOWS/FT	DENSITY
-4	VERY LOOSE
5-10	LOOSE
11-30	MEDIUM DENSE
31-50	DENSE
>50	VERY DENSE

COHESIVE SOILS BLOWS/FT	DENSITY
<2	VERY SOFT
2-4	SOFT
4-8	M. STIFF
8-15	STIFF
15-30	V. STIFF
>30	HARD

REMARKS:
1. Encountered groundwater at approximately 24 feet.

TES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING NO. GZ-19

ZA

APPENDIX F

APPENDIX F

LABORATORY ANALYSES

GZA

RESULTS OF SURFICIAL SOIL SAMPLING
ENVIRONMENTAL SITE ASSESSMENT
EASTSIDE MARKETPLACE PROPERTY
PROVIDENCE, RHODE ISLAND

PREPARED FOR:
Rhode Island Department of
Environmental Management
Providence, Rhode Island

PREPARED BY:
GZA GeoEnvironmental, Inc.
Providence, Rhode Island

December 1997
File No. 31834.5

FIGURES

GZA
GeoEnvironmental, Inc.

Engineers and Scientists

Principals:
John P. Hartley,
District Office Manager
Michael A. Powers, P.E., L.S.P.
David R. Carchedi, Ph.D., P.E.
John J. Spirito, P.E., L.S.P.
Philip P. Virgadamo, P.E., L.S.P.
Russell J. Morgan, P.E.

December 29, 1997
File No. 31834.5-C

Mr. Gregory S. Fine, PE
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02903

Re: ***Results of Surficial Soil Sampling***
Eastside Marketplace Property
Providence, Rhode Island

GZA

140 Broadway
Providence
Rhode Island 02903
401-421-4140
FAX 401-751-8613

Dear Mr. Fine:

In response to the department's request at our November 4, 1997 meeting, this letter report presents the results of the additional surficial soil sampling completed by GZA at the Eastside Marketplace property in Providence, Rhode Island (a *Site Locus* is provided as Figure 1). This report has been prepared behalf of our client, the Koffler Group, LLC, is considered an addendum to our October 10, 1997 ***Phase I & II Environmental Site Assessment*** and is subject to the limitations contained therein.

As described in our ***Phase I & II Environmental Site Assessment*** and summarized below, soil-arsenic (As) concentrations in one of the five samples collected from the property exceeded the 3.8 ppm Method 1 Industrial/Commercial Direct Exposure Criteria; thus requiring notification.

Sample ID	GZ-9	GZ-12	GZ-17	GZ-18	GZ-19
As concentration (ppm)	3.39	9.52	2.90	1.09	2.62

A Subsidiary of GZA GeoEnvironmental Technologies, Inc.

The objective of the present testing program was to evaluate arsenic concentrations in surficial soils in portions of the property not previously assessed. To meet this objective, on November 7, 1997, GZA personnel collected surficial soil samples from six locations along the site's eastern border (along the Seekonk River). Sampling location are shown on Figure 2, *Exploration Location Plan*. The samples represent composites prepared from hand-advanced excavation that ranged in depths of 16-inches to 20-inches below grade. The samples were transported in an ice-filled cooler under chain-of-custody procedures to our Environmental Chemistry Laboratory in Newton, Massachusetts for analytical testing.

FIGURES

The laboratory testing results are summarized below; laboratory data sheets are presented in Appendix A.

Sample ID	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6
As concentration (ppm)	**5.54**	**3.98**	3.66	**4.93**	**9.96**	**10.0**

The testing results of the "second round" of soil sampling reveal that five of the six samples exceeded the 3.8 ppm Method 1 Industrial/Commercial Direct Exposure Criteria. Consequently, to evaluate the significance of the data in terms of distribution of soil-arsenic concentrations beyond the boundaries of the site (i.e., Background Concentrations for Soils per Rule 8.06), GZA completed a statistical evaluation of the data. To accomplish this, we compared data from the Eastside Marketplace property (11 sampling locations) and with data from the adjoining Riverview Place property (27 sampling locations). The reader is referred to GZA's July 1997 ***Site Investigation Report Riverview Place*** **[Revised]** for a description of the sampling and testing program associated with that assessment study.

STATISTICAL ANALYSIS

Statistical analysis of the data was performed using Dove Technology, Inc.'s Monitor System statistical analysis program. This program is especially tailored for evaluating environmental data in accordance with EPA guidance documents. The existing "site data," described above, were grouped together into a composite sampling point referred to as "*Surficial.*" Similarly, the "background data" (grouped as "*Background*") were developed from 27 surface soil samples taken from Riverview Place development on the adjacent parcel. These composite data sets were analyzed in terms of their underlying data distribution properties for each parcel. They were then compared using statistical methods appropriate for the observed distributions. The Monitor System reports are presented in Appendix B and are discussed below.

Data Distribution

Both the *Surficial* and *Background* data sets appear to be normally distributed. The *Surficial* data set has a mean 5.24 ppm, a median of 3.98 ppm and a standard deviation of 3.170 ppm. In contrast, the *Background* data set has a mean of 14.996, a median of 14.100 and a standard deviation of 6.114 ppm. Based on a simple comparison of the means, the two data sets appear to be significantly different.

FIGURES

Data Comparison

The *Background* data set has upper and lower 95% confidence intervals of 12.578 and 17.415 respectively. All the *Surficial* data are below the lower confidence limit indicting that the site data is statistically lower than the *Background* data.

The two data sets were further compared using the non-parametric ANOVA model (Kruskall - Wallis). This test ranks the data within each set and statistically compares means and is considered to be suitable for comparing independently distributed normal or lognormal data sets. Results of this model indicate that a significant difference exists between the data sets at a 95 % confidence level.

Discussion

Statistically the *Surficial* data set and *Background* data set are unrelated. Although both exceed the Method 1 Industrial/Commercial Direct Exposure Criterion for arsenic of 3.8 ppm, the *Background* exceedances are significantly greater. The highest concentrations of the *Surficial* data set (9.5 - 10 ppm) are concentrated in the south central portion of the site (S-5, S-6 and GZ-12) and there is no apparent connection between this area of elevated arsenic and the higher *Background* arsenic concentrations on the neighboring Riverview property. Recent studies have demonstrated that elevated arsenic concentrations are common in urban areas. Bradley et al, (1994)[1] cite a mean arsenic concentration of 3.53 with an Upper 95% confidence interval of 4.27 for 20 samples from random locations in Providence. These values are similar to the *Surficial* data set and suggest that the site soils are consistent with ambient urban soil levels.

CONCLUSIONS AND RECOMMENDATIONS

Based on the analytical results and our statistical evaluation, it is GZA's opinion that the arsenic concentrations at the site are reflective of urban conditions of the area and do not support evidence of a release of hazardous materials. Arsenic concentrations are statistically lower than concentrations detected on the neighboring property that was used for a background determination. Based on the success of our background determination, we do not believe that the Eastside Marketplace property is subject to the Remediation Regulations.

The primary risk identified with the elevated arsenic concentrations is through direct exposure to soils. The undeveloped portion of the site is slated for commercial development, with the result that most of the area will be isolated beneath building slabs or pavement; clean fill or other landscaping techniques can be used to prevent exposure to soils with elevated arsenic in unpaved areas. We do not believe that the more extensive capping procedures recommended for the neighboring property are appropriate for the

[1] Bradley, L.J.N., Magee, B.H. and Allen S. L., 1994, Journal of Soil Contamination 3(4), p. 349 - 361.

FIGURES

subject site. Any surficial soils removed from the site will be managed in accordance with applicable RIDEM policies.

We trust that this letter report fulfills your present needs. Should you have any questions or require further information, please do not hesitate to call me at 421-4140 or via Email at *jhartley@gza.com*.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

John P. Hartley
Associate Principal

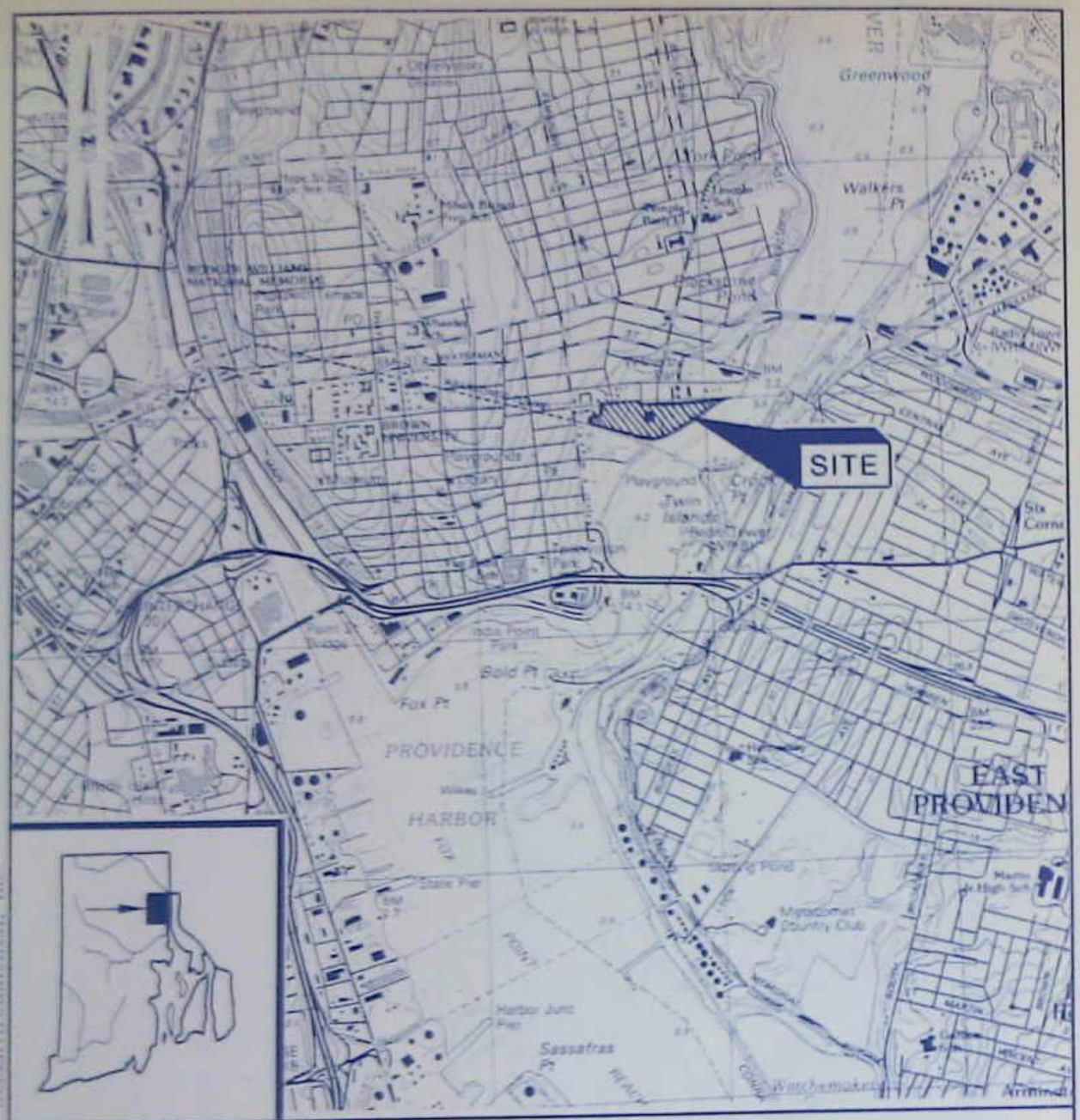
Julia Crowley
Project Reviewer

JPH:lag

Attachments: Figure 1 - Locus Plan
Figure 2 - Exploration Location Plan
Appendix A - Laboratory Testing Results
Appendix B - Monitor System Reports

cc: A. Schucht (Koffler)
D. Esposito (A,P&S)

FIGURES



FROM USGS PROVIDENCE, RI QUADRANGLE MAP
(CONTOUR ELEVATIONS ARE IN METERS ABOVE NGVD, AT 3 METER INTERVALS)

APPROXIMATE SCALE IN FEET

0' 1000' 2000' 4000'

GZA

RIVERVIEW PLACE

PROVIDENCE, RHODE ISLAND

LOCUS PLAN

SEPTEMBER 1997

FIGURE NO. 1

File No. 31614.2 © 1997 GZA GeoEnvironmental, Inc.

APPENDIX

GZA GeoEnvironmental, Inc.
320 Needham Street
Newton Upper Falls, MA 02164

ANALYTICAL REPORT

GZA GeoEnvironmental, Inc.
140 Broadway
Providence, RI 02903

J. Hartley

Project Name: VHB
Project No.: 31834.50

Date Received: 11/08/97
Date Reported: 11/20/97
Work Order No.: 9711-00068

Sample No.: 1

Sample ID: S-1
Sample Date: 11/07/97

Test Performed	Method	Results	Units	Tech	Analysis Date
PERCENT SOLID		86.5	%	CJH	11/12/97
METALS					
Arsenic	EPA 7060A	5.54	mg/Kg	AJY	11/19/97

APPENDIX B

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: VHB
Project No.: 31834.50

Work Order No.: 9711-00068

Sample ID: S-2
Sample Date: 11/07/97

Sample No.: 2

Test Performed	Method	Results	Units	Tech	Analysis Date
PERCENT SOLID		89.4	%	CJH	11/12/97
METALS					
Arsenic	EPA 7060A	3.98	mg/Kg	AJY	12/03/97

APPENDIX B

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: VHB
Project No.: 31834.50

Work Order No.: 9711-00068

Sample No.: 3

Sample ID: S-3
Sample Date: 11/07/97

Test Performed	Method	Results	Units	Tech	Analysis Date
PERCENT SOLID		91.3	%	CJH	11/12/97
METALS					
Arsenic	EPA 7060A	3.66	mg/Kg	AJY	12/03/97

APPENDIX B

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: VHB
Project No.: 31834.50

Work Order No.: 9711-00068

Sample ID: S-4
Sample Date: 11/07/97

Sample No.: 4

Test Performed	Method	Results	Units	Tech	Analysis Date
PERCENT SOLID		89.7	%	CJH	11/12/97
METALS					
Arsenic	EPA 7060A	4.93	mg/Kg	AJY	12/03/97

APPENDIX B

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: VHB
Project No.: 31834.50

Work Order No.: 9711-00068

Sample No.: 5

Sample ID: S-5
Sample Date: 11/07/97

Test Performed	Method	Results	Units	Tech	Analysis Date
PERCENT SOLID		88.3	%	CJH	11/12/97
METALS					
Arsenic	EPA 7060A	9.96	mg/Kg	AJY	11/19/97

APPENDIX B

GZA GeoEnvironmental, Inc.

ANALYTICAL REPORT

Project Name: VHB
Project No.: 31834.50

Work Order No.: 9711-00068

Sample ID: S-6
Sample Date: 11/07/97

Sample No.: 6

Test Performed	Method	Results	Units	Tech	Analysis Date
PERCENT SOLID		87.7	%	CJH	11/12/97
METALS					
Arsenic	EPA 7060A	10.0	mg/Kg	AJY	11/19/97

Inorganic Data Authorized By: MLG

% R = % Recovery
NA = Not Applicable

Soil data is reported on a dry weight basis unless otherwise specified.

Laboratory Identification Numbers:

MA: MA092 NH: 2028
CT: PH0579 NJ: 59759
NY: 11063 RI: A46
NC: 491

Please note that the laboratory signed copy of the chain of custody is an integral part of the data report.

APPENDIX B

GZA GeoEnvironmental, Inc. Phone 617/969-0050
320 Needham Street, Newton Upper Falls, MA 02164 Fax 617/965-7769

DATE: 12/4/97 FILE NO: 31834.50

TO: John Hartley FROM: Joyce Fossella

RE:

FAX NO: BF

CC: FAX NO.

CC: FAX NO.

TOTAL NUMBER OF PAGES (Including this cover letter): 7

COMMENTS:

Serving Clients' needs in industry, real estate, infrastructure and government through comprehensive, integrated environmental, remediation and geotechnical services.

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- Facility Renovation/ Demolition
- Asbestos & Lead Services

Transmitted by: Date: Time:

APPENDIX B

APPENDIX B

MONITOR SYSTEM REPORTS

Result Report (w/ Threshold Exceedences)

Company:	RIDEM Remedial Regulations	**Data Group:**	None
Site:	Eastside Marketplace Property	**Date Range:**	All
Program:	Statistical Evaluations	**Permit:**	
Report printed:	12/23/97 10:10:28AM	**Confidence Level:**	0.95
Reported by:	smk	**Log Transform:**	No
Report Options:	Threshold exceedances by sampling point		

Monitor 5

Parameter	Unit	Date	Sample ID	Result Value	Detection Limit	Regulatory Limit	Exceedence Value	Code
Unclassified								
Background								
Metals								
Arsenic	mg/Kg	1/ 1/97	surface-1	10.000	0.005	3.800	6.200	
Arsenic	mg/Kg	1/ 1/97	surface-2	11.000	0.005	3.800	7.200	
Arsenic	mg/Kg	1/ 1/97	surface-3	12.000	0.005	3.800	8.200	
Arsenic	mg/Kg	1/ 1/97	surface-4	9.000	0.005	3.800	5.200	
Arsenic	mg/Kg	1/ 1/97	surface-5	1.000	0.005	3.800	-	
Arsenic	mg/Kg	1/ 1/97	surface-6	19.000	0.005	3.800	15.200	
Arsenic	mg/Kg	1/ 1/97	surface-7	18.000	0.005	3.800	14.200	
Arsenic	mg/Kg	1/ 1/97	surface-8	8.000	0.005	3.800	4.200	
Arsenic	mg/Kg	1/ 1/97	surface-9	7.000	0.005	3.800	3.200	
Arsenic	mg/Kg	1/ 1/97	surface-10	23.000	0.005	3.800	19.200	
Arsenic	mg/Kg	1/ 1/97	surface-11	14.000	0.005	3.800	10.200	
Arsenic	mg/Kg	1/ 1/97	surface-12	13.000	0.005	3.800	9.200	
Arsenic	mg/Kg	1/ 1/97	surface-13	12.000	0.005	3.800	8.200	
Arsenic	mg/Kg	3/ 1/97	surface-14	19.000	0.005	3.800	15.200	
Arsenic	mg/Kg	3/ 1/97	surface-15	14.000	0.005	3.800	10.200	
Arsenic	mg/Kg	3/ 1/97	surface-16	28.000	0.005	3.800	24.200	
Arsenic	mg/Kg	3/ 1/97	surface-17	19.000	0.005	3.800	15.200	
Arsenic	mg/Kg	3/ 1/97	surface-18	17.000	0.005	3.800	13.200	
Arsenic	mg/Kg	3/ 1/97	surface-19	16.000	0.005	3.800	12.200	
Arsenic	mg/Kg	3/ 1/97	surface-20	19.000	0.005	3.800	15.200	
Arsenic	mg/Kg	3/ 1/97	surface-21	16.000	0.005	3.800	12.200	
Arsenic	mg/Kg	3/ 1/97	stock-1	14.100	0.005	3.800	10.300	
Arsenic	mg/Kg	3/ 1/97	stock-2	25.300	0.005	3.800	21.500	
Arsenic	mg/Kg	3/ 1/97	stock-3	14.600	0.005	3.800	10.800	
Arsenic	mg/Kg	3/ 1/97	stock-4	13.500	0.005	3.800	9.700	
Arsenic	mg/Kg	3/ 1/97	stock-5	7.900	0.005	3.800	4.100	
Arsenic	mg/Kg	3/ 1/97	stock-6	24.500	0.005	3.800	20.700	
Surficial								
Metals								
Arsenic	mg/Kg	7/11/97	S-1	3.390	0.005	3.800	-	
Arsenic	mg/Kg	7/11/97	S-1	9.520	0.005	3.800	5.720	
Arsenic	mg/Kg	7/11/97	S-1	2.900	0.005	3.800	-	
Arsenic	mg/Kg	7/11/97	S-1	1.090	0.005	3.800	-	
Arsenic	mg/Kg	7/11/97	S-1	2.620	0.005	3.800	-	
Arsenic	mg/Kg	11/ 7/97	surface-1	5.540	0.005	3.800	1.740	
Arsenic	mg/Kg	11/ 7/97	surface-2	3.980	0.005	3.800	0.180	
Arsenic	mg/Kg	11/ 7/97	surface-3	3.660	0.005	3.800	-	
Arsenic	mg/Kg	11/ 7/97	surface-4	4.930	0.005	3.800	1.130	

Arsenic	mg/Kg	11/ 7/97	surface-5	9.960	0.005	3.800	6.160
Arsenic	mg/Kg	11/ 7/97	surface-6	10.000	0.005	3.800	6.200

End of report

Monitor 5 *Dove Technologies* , Inc

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

LETTER OF RESPONSIBILITY February 24, 2006
CERTIFIED MAIL

Mr. Arthur Schucht
The Koffler Group, Inc.
One Providence Washington Plaza
9th Floor
Providence, RI 02903

RE: Proposed Adler's Hardware Store Parcel
1 Wayland Avenue
Plat 14 / Lot 584
Providence, RI 02906
Case No.: 2006 - 021

Dear Mr. Schucht:

On February 24, 2004, the Rhode Island Department of Environmental Management (the Department) amended the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in an efficient manner. A Letter of Responsibility (LOR) is a preliminary document used by the Department to codify and define the relationship between the Department and a Responsible Party.

Please be advised of the following facts:

1. The above referenced property is located at 1 Wayland Avenue in Providence, Rhode Island, hereinafter referred to as the "Site." The land is further identified by the Town of Providence Tax Assessor's Office as Plat 14, Lot 584.

2. **The Koffler Group, Inc.** is identified as the current owner of the Site by the City of Providence Tax Assessor's office and as such is a **Responsible Party** as defined by Rule 3.60 of the Remediation Regulations.

3. The Department is in receipt of a *Site Investigation Report (SIR)* dated January 2006 and submitted on January 26, 2006, on the behalf of The Koffler Group, Inc. by Mr. John P. Hartley of GZA GeoEnvironmental, Inc. (GZA).

4. The above referenced report identifies concentrations of lead, Total Petroleum Hydrocarbons (TPH) and polycyclic aromatic hydrocarbons (PAHs) exceeding the Residential Method 1 Direct Exposure Criteria for soil, and arsenic and benzo(a)pyrene exceeding the Industrial / Commercial Method 1 Direct Exposure Criteria as referenced in the Remediation Regulations.

5. Based upon the presence and nature of these **hazardous substances**, the Department concurs that a **release** of **hazardous materials** has occurred as defined by Rules 3.28, 3.29 and 3.54 of the Remediation Regulations.

As a result of the information known and conditions observed at the site, the Department requests that you comply with the following:

1. Conduct Public Notice in accordance with Rule 7.07 of the Remediation Regulations and provide copies of these notices to the Department on or before **March 7, 2006**. Letters of Public Notice should be sent by certified mail. Copies of these letters and mail receipts, along with a list of recipients should be sent to the Department **prior** to performing any additional fieldwork.

2. Complete and submit a Site Investigation Report (SIR) in accordance with Section 7.08 of the Remediation Regulations by **May 16, 2006**. Given that certain environmental work has already been performed at the Site, you may incorporate portions of the information already gathered as an SIR addendum to address the requirements of Section 7.0. The SIR should include at least two remedial alternatives other than no action/natural attenuation alternative. The Department's comments on the submitted report have been attached for your convenience.

3. Upon Department approval of the SIR, be prepared to bring the site into compliance with the Remediation Regulations.

Be advised that **The Koffler Group, Inc.**, as site owner, is responsible for the proper investigation and, if necessary, remediation of hazardous materials at this site. Also be advised that any remedial alternative that proposes to leave contaminated soil on-site at levels which exceed the Department's Residential Direct Exposure Criteria will at a minimum necessitate the recording of an institutional control in the form of an Environmental Land Usage Restriction (ELUR) on the deed for the site, and will likely require implementation of additional engineered controls to restrict human exposure.

As stated above, **The Koffler Group, Inc.** must notify all abutting property owners and tenants that additional investigation is about to occur prior to the implementation of any investigation field activities in accordance with the Industrial Property Remediation and Reuse Act (Rhode Island General Law 23-19.14, Section 11) and the Remediation Regulations Section 7.07. The notice should briefly indicate the purpose of the investigation, the work to be performed and the approximate schedule date of activities. Failure to comply with any of the aforementioned laws and regulations may result in enforcement actions as specified in Rhode Island General Law 23-19.1-17 and 23-19.1-18.

If you hav
Department
stephanie.wilk

Sincerely,

Stephanie A. Wilkes
Sanitary Engineer
Rhode Island DEM
Office of Waste Manageme

Cc: Kelly J. Owens, RIDE
John Hartley, GZA

Please notify this office within seven days of the receipt of this letter of your plans to address these items. All correspondences should be sent to the attention of:

Stephanie Wilkes – Engineer
RIDEM / Office of Waste Management
235 Promenade Street
Providence, RI 02908

If you have any questions regarding this letter or would like the opportunity to meet with Department personnel, please contact me by telephone at (401) 222-2797 Ext. 7233 or by e-mail at stephanie.wilkes@dem.ri.gov.

Sincerely,

Stephanie A. Wilkes
Sanitary Engineer
Rhode Island DEM
Office of Waste Management

Authorized by,

Jeffrey P. Crawford
Principal Environmental Scientist
Rhode Island DEM
Office of Waste Management

Cc: Kelly J. Owens, RIDEM / OWM
John Hartley, GZA

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

PROGRAM LETTER
CASE #2006-021

May 2, 2006

Mr. Arthur Schucht
The Koffler Group, Inc.
One Providence Washington Plaza
9th Floor
Providence, RI 02903

RE: Proposed Adler's Hardware Store Parcel
1 Wayland Avenue
Plat 14 / Lot 589
Providence, RI 02906

Dear Mr. Schucht:

On February 24, 2004, the Rhode Island Department of Environmental Management (the Department) amended the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in an efficient manner. The purpose of the *Program Letter* is to indicate that the Department deems the investigation of the reported release complete and to notify the Responsible Party that they must perform Public Notice in accordance with Section 7.07 and 7.09 of the Remediation Regulations.

The Department has the following documents on file in the matter of the above-referenced property (the Site):

- *Site Investigation Report (SIR),* dated January 2006, submitted by Mr. John P. Hartley of GZA GeoEnvironmental, Inc. (GZA) on behalf of The Koffler Group, Inc. and received by the Department on January 26, 2006; and,

- *Response to Comments Correspondence,* dated April 25, 2006, submitted by GZA on behalf of The Koffler Group, Inc. and received by the Department on April 26, 2006.

The Department regards the above-mentioned documents as collectively constituting the necessary requirements of the Site Investigation Report (SIR) pursuant to Section 7.08 of the Remediation Regulations. The items listed above will be referred to as the SIR in this and all future correspondences regarding this Site.

The Department requires that you initiate public notice pursuant to Rule 7.07 B and 7.09 of the Remediation Regulations to all abutting property owners, tenants, and the City of Providence on the

completed package with the preferred remedial alternative of encapsulation of contaminated soils through asphalt pavement, a building foundation and landscaped areas and the implementation of an Environmental Land Usage Restriction (ELUR) on the entire property. All Site soils are required to be capped by a standard method of 2-feet of clean fill or equivalent (i.e. 6-inches of clean sub-grade in conjunction with 4-inches of asphalt pavement / concrete; building foundations; or 1 foot of clean fill underlain with a geotextile material). The ELUR to be recorded on the property shall restrict use to Industrial / Commercial on the entire Site and will also ensure that the engineered cap is not disturbed. The ELUR will include a post-construction Soil Management Plan (SMP), which will outline the procedures for managing the soils on site should disturbances below the cap be required.

The Koffler Group, Inc. is reminded that they must meet *all* other Federal, State and local requirements prior to commencing any site activities.

Sections 7.07 and 7.09 of the Remediation Regulations address the requirements for public notice regarding the substantive findings of the completed investigation and the opportunity for public review and comment on the technical feasibility of the proposed remedial alternatives mentioned above. Attached to this letter is a template of a typical notification for your reference. Please submit a draft notification to the Department via email for review and approval *prior* to distribution. The Department will require a copy of the public notice letter and a list of all recipients, including abutters, tenants, and the City of Providence.

The Department will formally approve the SIR in the form of a *Remedial Decision Letter* once these issues have been addressed and upon Department approval of all final responses to relevant public comments. At that time, Site will enter the Remediation phase and will be required to submit a Remedial Action Work Plan (RAWP) and a draft ELUR and SMP for Department review and approval in accordance with Sections 8.0 and 9.0 of the Remediation Regulations.

All correspondence regarding this Site should be sent to the attention of:

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

REMEDIAL DECISION LETTER
CASE #2006-021

July 10, 2006

Mr. Arthur Schucht
The Koffler Group, Inc.
One Providence Washington Plaza
9th Floor
Providence, RI 02903

RE: Proposed Adler's Hardware Store Parcel
1 Wayland Avenue
Plat 14 / Lot 589
Providence, RI 02906

Dear Mr. Schucht:

On 24 February 2004, the Rhode Island Department of Environmental Management (the Department) amended the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in a timely and cost-effective manner. A **Remedial Decision Letter** is a formal Department approval of a remedy proposed by the performing party as a result of the findings of the Site Investigation.

The Department has the following documents on file in the matter of the above-referenced property (the Site):

- *Site Investigation Report (SIR)*, dated January 2006, submitted by Mr. John P. Hartley of GZA GeoEnvironmental, Inc. (GZA) on behalf of The Koffler Group, Inc. and received by the Department on January 26, 2006; and,

- *Response to Comments Correspondence*, dated April 25, 2006, submitted by GZA on behalf of The Koffler Group, Inc. and received by the Department on April 26, 2006.

Collectively, these documents fulfill the requirements of a Site Investigation Report (SIR) as described in Section 7.0 of the Remediation Regulations. In addition, according to our records, public notice was conducted to all abutting property owners, regarding the substantive findings of the completed investigation. The opportunity for public review and comment on the technical feasibility of the proposed remedial alternatives commenced on May 12, 2006. A request for a 2-week extension of the public comment period was received and granted on May 25, 2006, with the period ending on June 19, 2006. No comments were received.

The Department therefore, offers its concurrence with the proposed preferred remedial alternative as stated in the approved SIR, which is the **encapsulation of contaminated soils through asphalt pavement, a building foundation and landscaped areas and the implementation of an Environmental Land Usage Restriction (ELUR) on the entire property. All Site soils are required to be capped by a standard method of 2-feet of clean fill or equivalent (i.e. 6-inches of clean sub-grade in conjunction with 4-inches of asphalt pavement / concrete; building foundations; or 1 foot of clean fill underlain with a geotextile material). The ELUR to be recorded on the property shall restrict use to Industrial / Commercial on the entire Site and will also ensure that the engineered cap is not disturbed. The ELUR will include a post-construction Soil Management Plan (SMP), which will outline the procedures for managing the soils on site should disturbances below the cap be required.**

The Department approved ELUR shall be recorded in the City of Providence's Land Evidence Records thereby limiting future use of the property. A recorded copy of the ELUR will be forwarded back to the Department for our files.

In accordance with Sections 8.0 and 9.0 of the Remediation Regulations, please submit a RAWP and a Draft ELUR and SMP for Department review and approval on or before September 13, 2006. The RAWP should describe all technical details associated with the implementation of the approved remedy. All of the subsections outlined in Section 9 of the Remediation Regulations must be included in order to facilitate an expedited review and approval of the RAWP. If an item is not applicable to this Site, simply state that it is not applicable and provide an explanation in the RAWP.

Pursuant to Rule 10.02 of the Remediation Regulations, an application fee for Remedial Action Approvals in the amount of one thousand ($1,000) dollars must be made out to the State of Rhode Island General Treasurer and remitted to this office. Review of the RAWP will not begin until the fee is received.

Upon review and approval of the RAWP and receipt of the remedial action approval application fee, the Department will issue a Remedial Approval Letter, at which time remedial activities may commence. If you have any questions or are in need of any clarification regarding this document, please contact me by telephone at (401) 222-2797 ext. 7233 or by e-mail at stephanie.wilkes@dem.ri.gov.

Sincerely,

Stephanie A. Wilkes
Sanitary Engineer
Rhode Island DEM
Office of Waste Management

Approved By,

Jeffrey P. Crawford
Principal Environmental Scientist
Rhode Island DEM
Office of Waste Management

Cc: Kelly J. Owens, RIDEM / OWM
John P. Hartley, GZA
R. Michael Clark, GZA

GZA
GeoEnvironmental, Inc.

Engineers and
Scientists

November 20, 2007
File No. 31834.14-C

RECEIVED
D.E.M. / O.W.M.

2007 NOV 26 A 9:44

Ms. Stephanie Wilkes
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02908

Re: *Remedial Action Work Plan- Addendum*
Plat 15 Lot 591 Property
131-133 Pitman Street
Providence, Rhode Island
(RIDEM Case No. 2006-021)

140 Broadway
Providence
Rhode Island
02903
401-421-4140
Fax: 401-751-8613
www.gza.com

Dear Ms. Wilkes:

In response to the Department's November 16, 2007 letter, GZA GeoEnvironmental, Inc. (GZA) is pleased to provide this response to comments associated with the Department's review of the October 23, 2007 *Remedial Action Work Plan* (RAWP) associated with the above-referenced property (Site). This letter is considered an addendum to the October 23, 2007 *Remedial Action Work Plan*, and as such, is subject to the Limitations and Terms & Conditions of Engagement described therein.

To aid in your review, we have presented your comments in italics followed by our responses.

RIDEM Comment No. 1:

In accordance with Section 9.10, Design Standards and Technical Specifications, of the Remediation Regulations, the preparation of the RAWP must be supervised and stamped by a State of Rhode Island Registered Professional Engineer.

Response to Comment No. 1:

The preparation of the RAWP was supervised and the certification signed by David R. Carchedi, PE, PhD, a State of Rhode Island Professional Engineer. . To further address your comment, Mr. Carchedi's PE stamp is affixed to his signature presented at the close of this letter.

RIDEM Comment No. 2:

Page 7 of the submitted RAWP states that access and parking areas will be completed with a "6-inch base course composed of off-Site gravel and completed with a minimum of 3-inches of asphalt laid in 1.5-inch by 1.5-inch perpendicular lifts to the maximum extent possible." Please note that it is the Department's policy that an appropriate engineered cap to limit direct exposure consists of a minimum of two feet or equivalent, which includes six inches of clean sub-base overlain with a minimum of ***four (4) inches of asphalt or concrete pavement*** *laid in two inch by two inch perpendicular lifts. Please update the RAWP and corresponding construction plans to include this information.*

Response to Comment No. 2:

The RAWP and construction specifications will be revised to show that the asphalt cap will consist of 12-inches of "clean" compacted sub-base underlying two 2-inch perpendicular lifts of asphalt.

RIDEM Comment No. 3:

Page 9 of the submitted RAWP pertains to clean fill to be imported to the Site for the construction of the engineered cap. Please note that any clean fill, including sub-grade material and loam from native sources, imported to the Site to be utilized to construct the cap will be sampled prior to delivery and placement. Please not that all samples are to be discrete, grab samples. Composite samples are not acceptable. Clean fill and loam must be sampled for arsenic at a frequency of one sample per 500 cubic yards. ***One sample per 1,000 cubic yards is unacceptable.*** *One-quarter of the total number of compliance samples of clean fill and loam will be sampled for Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs),* ***Priority Pollutant 13 (PP 13) Metals*** *and Total Petroleum Hydrocarbons (TPH). In the event that there is less than 500 cubic yards of fill/loam brought on site, a minimum of one sample should be analyzed for all analytes (i.e. PP 13 Metals, SVOCs, VOCs and TPH). All soil that is to be utilized onsite must meet the Residential Direct Exposure Criteria (R-DEC) for all constituents or be certified to be non-jurisdictional by an environmental professional. Laboratory analytical results shall be submitted to the Department via fax and written approval via email to use the material must be received by the Department via fax and written approval via email to use the material must be received by the Department prior to use. Please also be advised that the Closure Report for the Site must include all original laboratory analytical data and a statement from the facility that provides the clean fill and/or loam attesting to the materials origin and suitability. Please update page 9 of the submitted RAWP and Page 5 of the submitted Soil Management Plan (SMP).*

Response to Comment No. 3:

Accepted, the RAWP (and SMP) will be modified accordingly.

RIDEM Comment No. 4:

Please provide a more comprehensive, color-coded redevelopment plan, to be referenced within the RAWP, ELUR and SMP, that clearly identifies and differentiates the engineered controls to be utilized onsite as part of the proposed remedy: two (2) feet of clean fill; on (1) foot of clean fill and geotextile liner; six (6) inches of clean sub-base and four (4) inches of asphalt pavement or concrete; and/or building foundations. Please also include surrounding landmarks, property boundaries, and all other relevant information.

Response to Comment No. 4:

See attached Figure 2 *Conceptual Landscaping Plan*. Note that this figure supersedes Figures 2 *Engineered Controls*, and C-6 *Conceptual Landscaping Plan* as presented in the RAWP.

RIDEM Comment No. 5:

The Department is in the process of reviewing and commenting on the submitted draft Environmental Land Usage Restriction (ELUR) and SMP. Upon completion of its review, the

Department will forward an electronic red-line strikeout version of the ELUR and SMP with the Department's comments to GZA.

Response to Comment No. 5:

Awaiting redline/strikeout versions of the ELUR and SMP.

RIDEM Comment No. 6:

The Department would like to remind The Koffler Group that the Department's approval of the RAWP is contingent upon its continuing commitment to meet all other Federal, State and local requirements that fall outside the jurisdiction of the Remediation Regulations.

Response to Comment No. 6:

Accepted

We trust that this information fulfills your present needs. Should you have any questions or comments, please feel free to contact us at (401) 421-4140, or via e-mail at jhartley@gza.com.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

John P. Hartley
Principal

David R. Carchedi, PE, PhD
Project Reviewer

R. Michael Clark
Senior Project Manager

PE Stamp

DAVID R. CARCHEDI
NO. # 4515
REGISTERED
PROFESSIONAL ENGINEER

Attachment: Figure 2 *Conceptual Landscaping Plan*

cc: A. Schucht (Koffler)

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RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

REMEDIAL APPROVAL LETTER

December 12, 2007

Mr. Arthur Schucht
The Koffler Group, Inc.
One Providence Washington Plaza
9th Floor
Providence, RI 02903

RE: Proposed Adler's Hardware Store Parcel
1 Wayland Avenue
Plat 14 / Lot 589
Providence, RI 02906
Case No.: 2006-021

Dear Mr. Schucht:

On February 24, 2004, the Rhode Island Department of Environmental Management's (the Department) Office of Waste Management (the Office) amended the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in a timely and cost-effective manner. A Remedial Approval Letter is a document used by the Department to approve remedial actions at contaminated sites that do not involve the use of complex engineered systems or techniques (i.e., groundwater pump and treat systems or soil vapor extraction systems).

In the matter of the above referenced site, the Department has on file the following documents submitted:

1. *Site Investigation Report (SIR)*, dated January 2006, submitted by Mr. John P. Hartley of GZA GeoEnvironmental, Inc. (GZA) on behalf of The Koffler Group, Inc. and received by the Department on January 26, 2006;

2. *Response to Comments Correspondence*, dated April 25, 2006, submitted by GZA on behalf of The Koffler Group, Inc. and received by the Department on April 26, 2006;

3. *Draft Environmental Land Usage Restriction (ELUR) and Soil Management Plan* (via email), dated October 23, 3007 and submitted by GZA on behalf of The Koffler Group, Inc.

4. *Remedial Action Work Plan (RAWP)*, dated October 2007, submitted by GZA on behalf of The Koffler Group, Inc. and received by the Department on October 24, 2007;

5. *Remedial Action Approval Fee*, submitted by GZA on October 24, 2007; and

6. *RAWP Addendum*, dated November 20, 2007, submitted by GZA on behalf of the Koffler Group, Inc. and received by the Department on November 26, 2007.

The RAWP and associated documentation describe a plan to isolate contaminated soils from human contact through the use of engineered controls (i.e. asphalt pavement, concrete walkways, building foundations, etc.) in conjunction with the implementation of a Department-approved Environmental Land Usage Restriction (ELUR) with attached Soil Management Plan (SMP), which will be recorded on the deed for the entire property. All Site soils are required to be capped by a standard method of 2-feet of clean fill or equivalent (i.e. 6-inches of clean sub-grade in conjunction with 4-inches of asphalt pavement / concrete; building foundations; or 1 foot of clean fill underlain with a geotextile material). The ELUR to be recorded on the property shall restrict use to Industrial / Commercial on the entire Site and will also ensure that the engineered cap is not disturbed. The ELUR will include a post-construction Soil Management Plan (SMP), which will outline the procedures for managing the soils on site should disturbances below the cap be required. As part of the ELUR, it is the responsibility of the property owner to provide for annual inspections of the property by a qualified environmental professional and submit a report, subject to review by the Department, which shall certify that the property is in compliance with the terms of the ELUR.

Based upon review and consideration of the above referenced documents, the Department approves the RAWP through this Remedial Approval Letter provided that:

1. All work must be performed in accordance with all applicable regulations and the Department approved RAWP.

2. Start of the work described in the Department approved RAWP revisions must be initiated within one hundred eighty (180) days of issuance of this Remedial Approval Letter.

3. All regulated soil remaining on-site shall be encapsulated by an engineered control consistent with those described in the Department approved RAWP.

4. Within sixty (60) days of completion of the work described in the Department approved RAWP, a Closure Report detailing the Remedial Action shall be submitted to the OWM. The Closure Report must also detail the Remedial Action with photographic documentation of the finalized Department approved cap.

5. Following recording of the ELUR, the Site shall be maintained and annually inspected to evaluate the compliance status of the Site with the ELUR. Within thirty (30) days of each annual inspection, an evaluation report shall be prepared and submitted to the Department detailing the findings of the inspection and noting any compliance violations at the Site.

6. Any changes in the activities detailed in the RAWP shall be reported to the Department by telephone within one (1) working day and in writing within five (5) working days.

7. The OW
associated wit

8. The OWM shall be
non-compliance with this R

Within sixty (60) days of completion of
the final Department-approved ELUR with
Providence Land Evidence Records for the property
Department within thirty (30) days from recording.
recorded ELUR and SMP, the Department will issue a Letter

This Remedial Approval Letter does not remove your obligation to
from other local, state, or federal agencies. **Please notify the Department**
hours in advance of any remedial work.

If you have any questions regarding this letter, please contact me by telep
extension 7233, or by email at stephanie.wilkes@dem.ri.gov.

Sincerely,

Stephanie A. Wilkes
Sanitary Engineer
Rhode Island DEM
Office of Waste Management

Kelly J. Owens, RIDEM / OWM
John P. Hartley, GZA
R. Michael Clark, GZA

cc:

Author

Jeff
Pr
R

7. The OWM shall be notified 48 hours prior to initiating the remedial activities at the Site associated with the Department approved RAWP revisions.

8. The OWM shall be immediately notified of any site or operation condition that results in non-compliance with this Remedial Approval Letter.

Within sixty (60) days of completion of the work described in the Department approved RAWP, the final Department-approved ELUR with attachments shall be recorded in the City of Providence Land Evidence Records for the property and a stamped, certified copy returned to the Department within thirty (30) days from recording. Upon receipt of a copy of the stamped and recorded ELUR and SMP, the Department will issue a Letter of Compliance for the property.

This Remedial Approval Letter does not remove your obligation to obtain any necessary permits from other local, state, or federal agencies. **Please notify the Department at least forty-eight (48) hours in advance of any remedial work.**

If you have any questions regarding this letter, please contact me by telephone at (401) 222-2797, extension 7233, or by email at stephanie.wilkes@dem.ri.gov.

Sincerely,

Stephanie A. Wilkes
Sanitary Engineer
Rhode Island DEM
Office of Waste Management

Authorized by,

Jeffrey P. Crawford
Principal Environmental Scientist
Rhode Island DEM
Office of Waste Management

cc: Kelly J. Owens, RIDEM / OWM
John P. Hartley, GZA
R. Michael Clark, GZA

GZA
GeoEnvironmental, Inc.

Engineers and
Scientists

August 20, 2008
File No. 31834.19-C

Ms. Stephanie Wilkes
RI Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02908

Re: Executed ELUR
Adler's Hardware Store Parcel (former)
Providence, Rhode Island
RIDEM Case No. 2006-021

Dear Ms. Wilkes:

On behalf of our client, The Koffler Group Inc., GZA GeoEnvironmental, Inc. (GZA) is pleased to provide the attached executed Environmental Land Usage Restriction for the above-referenced property. This represents the final component of the remedy, and as such, we look forward to issuance of the *Letter of Compliance*.

As described in my letter of August 15, 2008, a temporary alteration to the ELUR is on-going (sub-slab utility installation). GZA will document the completion of those construction activities in a separate letter.

We trust this letter satisfies your current needs. Please do not hesitate to call us at 421-4140 if you have any questions.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

John P. Hartley
Principal

CC: A. Schucht (Koffler)
Attachment: Executed ELUR

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Doc No: 00019078
Book: 9178 Page: 149

ENVIRONMENTAL LAND USAGE RESTRICTION

This Declaration of Environmental Land Usage Restriction (Restriction) is made on this 5TH day of AUG 2008 by The Koffler Group, and its successors and/or assigns (hereinafter, the "Grantor").

WITNESSETH:

WHEREAS, the Grantor is the owner in fee simple of certain real property identified as Plat 15, Lot 591 located at 131-133 Pitman Street in Providence, Rhode Island (the "Property"), more particularly described in Exhibit A (Legal Description) which is attached hereto and made a part hereof;

WHEREAS, the Property (Exhibit B Site Map) has been determined to contain soil which is contaminated with certain hazardous materials and/or petroleum in excess of applicable Industrial/Commercial Direct Exposure Criteria pursuant to the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases ("Remediation Regulations");

WHEREAS, the Grantor has determined that the environmental land use restrictions set forth below are consistent with the regulations adopted by the Rhode Island Department of Environmental Management ("Department") pursuant to R.I.G.L. § 23-19.14-1 et seq.;

WHEREAS, the Department's written approval of this Restriction is contained in the document entitled: *Remedial Approval Letter* issued pursuant to the Remediation Regulations;

WHEREAS, to prevent exposure to or migration of hazardous materials and/or petroleum and to abate hazards to human health and/or the environment and in accordance with the *Remedial Approval Letter*, the Grantor desires to impose certain restrictions upon the use, occupancy, and activities of and at the Property;

WHEREAS, the Grantor believes that this Restriction will effectively protect public health and the environment from such contamination; and

WHEREAS, the Grantor intends that such restrictions shall run with the land and be binding upon and enforceable against the Grantor and the Grantor's successors and assigns.

, THEREFORE, Grantor agrees as follows:

Restrictions Applicable to the Property: In accordance with the *Remedial Approval Letter* the use, occupancy and activity of and at the Property is restricted as follows:

i No residential use of the Property ;

ii No groundwater at the Property shall be used as potable water;

iii No soil at the Property shall be disturbed in any manner without written permission of the Department's Office of Waste Management, except as permitted in the *Soil Management Plan* approved by the Department in a written approval dated July 24, 2008 and attached hereto as Exhibit C;

iv Humans engaged in activities at the Property shall not be exposed to soils containing hazardous materials and/or petroleum in concentrations exceeding the applicable Department approved direct exposure criteria set forth in the Remediation Regulations; and

v The engineered controls at the Property described in the *Soil Management Plan* contained in Exhibit C attached hereto shall not be disturbed and shall be properly maintained to prevent humans engaged in industrial/commercial activity from being exposed to soils containing hazardous materials and/or petroleum in concentrations exceeding the applicable Department-approved industrial/commercial direct exposure criteria in accordance with the Remediation Regulations.

B. **No action shall be taken, allowed, suffered, or omitted** at the **Property if such action or omission is reasonably likely to:**

i Create a risk of migration of hazardous materials and/or petroleum;

ii Create a potential hazard to human health or the environment; or

iii Result in the disturbance of any engineered controls utilized at the Property, except as permitted in the Department-approved *Soil Management Plan* contained in Exhibit C.

C. **Emergencies:** In the event of any emergency which presents a significant risk to human health or to the environment, including but not limited to, maintenance and repair of utility lines or a response to emergencies such as fire or flood, the application of Paragraphs A (iii.-v.) and B above may be suspended, provided such risk cannot be abated without suspending such Paragraphs and the Grantor complies with the following:

i Grantor shall notify the Department's Office of Waste Management in writing of the emergency as soon as possible but no more than three (3) business days after Grantor's having learned of the emergency. (This does not remove Grantor's obligation to notify any other necessary state, local or federal agencies.);

Grantor shall limit both the extent and duration of the suspension to the minimum period reasonable and necessary to adequately respond to the emergency;

iii Grantor shall implement reasonable measures necessary to prevent actual, potential, present and future risk to human health and the environment resulting from such suspension;

iv Grantor shall communicate at the time of written notification to the Department its intention to conduct the emergency response actions and provide a schedule to complete the emergency response actions;

v Grantor shall continue to implement the emergency response actions, on the schedule submitted to the Department, to ensure that the Property is remediated in accordance with the Remediation Regulations (or applicable variance) or restored to its condition prior to such emergency. Based upon information submitted to the Department at the time the ELUR was recorded pertaining to known environmental conditions at the Property, emergency maintenance and repair of utility lines shall only require restoration of the Property to its condition prior to the maintenance and repair of the utility lines; and

vi Grantor shall submit to the Department, within ten (10) days after the completion of the emergency response action, a status report describing the emergency activities that have been completed.

D. **Release of Restriction; Alterations of Subject Area:** The Grantor shall not make, or allow or suffer to be made, any alteration of any kind in, to, or about any portion of the Property inconsistent with this Restriction unless the Grantor has received the Department's prior written approval for such alteration. If the Department determines that the proposed alteration is significant, the Department may require the amendment of this Restriction. Alterations deemed insignificant by the Department will be approved via a letter from the Department. The Department shall not approve any such alteration and shall not release the Property from the provisions of this Restriction unless the Grantor demonstrates to the Department's satisfaction that Grantor has managed the Property in accordance with applicable regulations.

E. **Notice of Lessees and Other Holders of Interests in the** Property: The Grantor, or any future holder of any interest in the Property, shall cause any lease, grant, or other transfer of any interest in the Property to include a provision expressly requiring the lessee, grantee, or transferee to comply with this Restriction. The failure to include such provision shall not affect the validity or applicability of this Restriction to the Property.

F. **Enforceability:** If any court of competent jurisdiction determines that any provision of this Restriction is invalid or unenforceable, the Grantor shall notify the Department in writing within fourteen (14) days of such determination.

nding Effect: All of the terms, covenants, and conditions of this Restriction shall run with ne land and shall be binding on the Grantor, its successors and assigns, and each owner and any other party entitled to control, possession or use of the Property during such period of ownership or possession.

H. **Inspection & Non-Compliance:** It shall be the obligation of the Grantor, or any future holder of any interest in the Property, to provide for annual inspections of the Property for compliance with the ELUR in accordance with Department requirements.

A qualified environmental professional will, on behalf of the Grantor or future holder of any interest in the Property, evaluate the compliance status of the Property on an annual basis. Upon completion of the evaluation, the environmental professional will prepare and simultaneously submit to the Department and to the Grantor or future holder of any interest in the Property an evaluation report detailing the findings of the inspection, and noting any compliance violations at the Property. If the Property is determined to be out of compliance with the terms of the ELUR, the Grantor or future holder of any interest in the Property shall submit a corrective action plan in writing to the Department within ten (10) days of receipt of the evaluation report, indicating the plans to bring the Property into compliance with the ELUR, including, at a minimum, a schedule for implementation of the plan.

In the event of any violation of the terms of this Restriction, which remains uncured more than ninety (90) days after written notice of violation, all Department approvals and agreements relating to the Property may be voided at the sole discretion of the Department.

I. **Terms Used Herein:** The definitions of terms used herein shall be the same as the definitions contained in Section 3 (DEFINITIONS) of the Remediation Regulations.

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Book: 9178 Page: 153

NESS WHEREOF, the Grantor has hereunto set (his/her) hand and seal on the day and
st forth above.

Koffler Group

y: _____ ANTHONY J. DELUCA
Grantor (signature) Grantor (typed name)

STATE OF RHODE ISLAND

COUNTY OF PROVIDENCE

In City of Providence, in said County and State, on the 5th day of August, 2008 before me personally appeared Anthony J. DeLuca, to me known and known by me to be the party executing the foregoing instrument and (he/she) acknowledged said instrument by (him/her) executed to be (his/her) free act and deed.

Notary Public: K L Bull

My Comm. Expires: 8-12-09

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

LETTER OF COMPLIANCE
CASE # 2006-021

September 3, 2008

Mr. Arthur Schucht
The Koffler Group, Inc.
One Providence Washington Plaza
9th Floor
Providence, RI 02903

RE: Proposed Adler's Hardware Store Parcel
1 Wayland Avenue
Plat 14 / Lot 589
Providence, RI 02906

Dear Mr. Schucht:

On February 24, 2004, the Rhode Island Department of Environmental Management (the "Department") enacted the amended Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the "Remediation Regulations"). The purpose of these regulations is to create an integrated program requiring reporting, investigation, and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment.

In the matter of the above-referenced property (the "Site"), the Department's Office of Waste Management (OWM) is in receipt of the following final documentation submitted pursuant to the Remediation Regulations in response to the reported release at the Site:

- *Remedial Action Closure Report*, prepared by GZA GeoEnvironmental, Inc. (GZA) dated July 2008, and received by the Department on July 29, 2008; and

- Certified copy of the Department approved *Environmental Land Usage Restriction (ELUR)* and *Soil Management Plan (SMP)*, which was recorded in the City of Providence Land Evidence Records for the subject property on August 5, 2008, and was received by the Department on August 20, 2008.

Based upon the information, representations, and the Department's receipt of the recorded ELUR and SMP, the OWM concurs that the property is in compliance with the Remediation Regulations at this time.

Please be advised, however, that the Department reserves the right to require additional actions at the subject Site pursuant to the Remediation Regulations should any of the following occur:

- Conditions at the property previously unknown to the Department are discovered;
- Information previously unknown to the Department becomes available;
- Policy and/or regulatory requirements change; and/or,
- Failure by the Koffler Group, Inc. or any future holder of any interest in the property, to adhere to the terms and conditions of the Department approved ELUR and/or SMP for the property.

Please also be advised that nothing in this letter relieves any Responsible Party or the Site from compliance with all other applicable local, State and/or Federal rules, regulations, and requirements.

If you have any further questions regarding this matter, please contact me by telephone at (401) 222-2797, extension 7233 or by email at stephanie.wilkes@dem.ri.gov.

Sincerely,

Stephanie A. Wilkes
Sanitary Engineer
Rhode Island DEM
Office of Waste Management

Authorized by:

Kelly J. Owens
Associate Supervising Engineer
Rhode Island DEM
Office of Waste Management

cc: Jeffrey Crawford, RIDEM/OWM
John P. Hartley, GZA
R. Michael Clark, GZA

Soils Study

and

Analytical Reports

for

Roger Williams Park
1000 Elmwood Avenue
Providence, Rhode Island 02905

at

Proposed
East Transit Street Boat Ramp
Providence, Rhode Island 02906

Prepared by:

Northeast Environmental
Testing Laboratory, Inc.
472 Smith Street, Providence, RI 02908

January, 2006

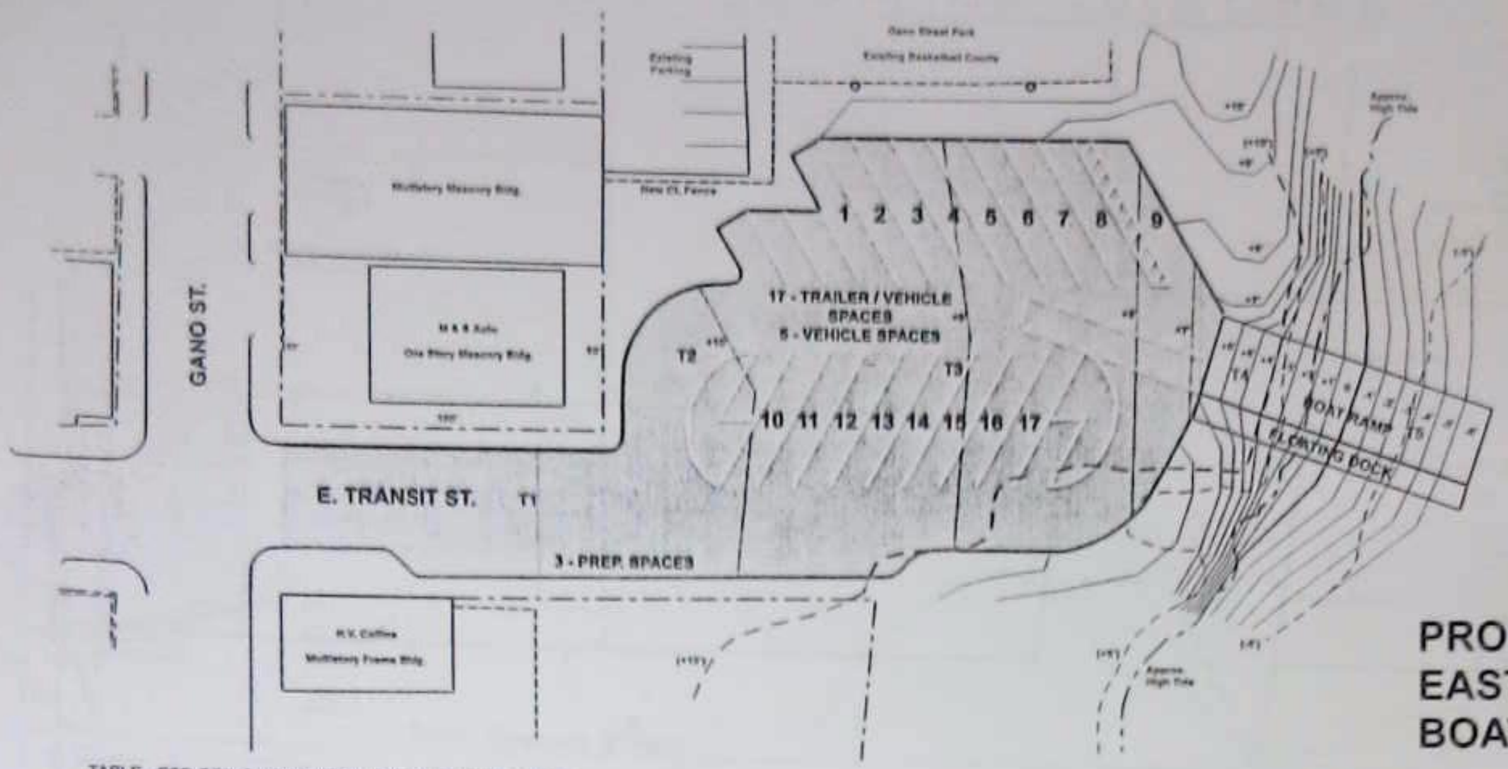


TABLE - EST. SOIL SAMPLE DEPTH BELOW EXISTING GRADE

LOCATION :

T-1 - 1' - 2' depth
T-2 - 1' - 2' depth
T-3 - 3' depth
T-4 - 6' depth
T-5 - 2' depth

ATTACHMENT - B

T1, etc. - Tentative Locations for Soil Tests

PROPOSED EAST TRANSIT ST. BOAT RAMP

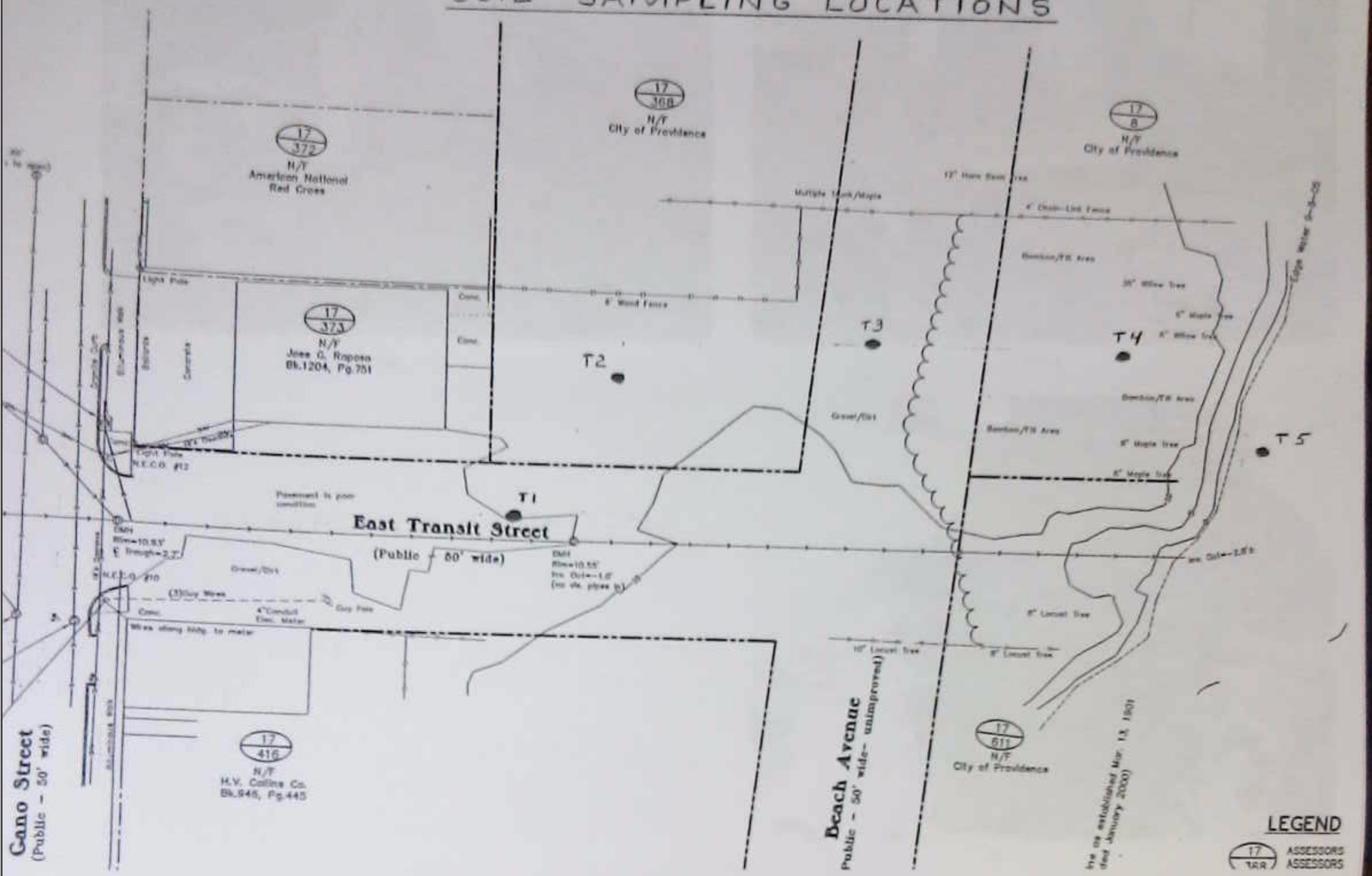
REVISED CONCEPT PLAN

DEPT. OF PUBLIC PARKS
ROGER WILLIAMS PARK
PROVIDENCE RI 02905

FEBRUARY 28, 2005

SCALE APPROXIMATE

SOIL SAMPLING LOCATIONS



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

LETTER OF RESPONSIBILITY June 25, 2007

CERTIFIED MAIL

Mr. Joel Boodon
City of Providence, Parks Department
Dalrymple Boathouse, Roger Williams Park
1000 Elmwood Avenue
Providence, RI 02905

RE: Proposed East Transit Street Boat Ramp
East Transit Street
Plat Map 17, Lots 8 & 611
Providence, RI 02906
Case No. 2007-016

Dear Mr. Boodon:

On February 24, 2004, the Rhode Island Department of Environmental Management (the Department) amended the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in an efficient manner. A Letter of Responsibility (LOR) is a preliminary document used by the Department to codify and define the relationship between the Department and a Responsible Party.

Please be advised of the following facts:

1. The Department is in receipt of a correspondence entitled "Notification of Release" (Release Notification) submitted on March 1, 2007, by the City of Providence. The Release Notification was submitted for the proposed East Transit Street Boat Ramp in Providence, Rhode Island, hereinafter referred to as the "Site."

2. The City of Providence has identified itself as the current owner of the Site, and as such, the City of Providence (the City) is a **Responsible Party** as defined by Rule 3.60 of the Remediation Regulations.

3. On March 1, 2007, the Department received a report entitled: Site Investigation Report and Notice of Release, City of Providence Park's Department, Proposed Boat Ramp Facility, E. Transit Street, Providence, Rhode Island dated February 2007, prepared and submitted by the City.

4. The Release Notification submitted for the site identifies concentrations of metals in the Site soil that exceed the Method 1 Residential and Industrial / Commercial Direct Exposure Criteria as referenced in the Remediation Regulations. Based on the presence and nature of these **hazardous substances** observed, the Department concurs that a **release** of **hazardous materials** has occurred as defined by Rule 3.28, 3.29 and 3.54 of the Remediation Regulations.

As a result of the information known and the conditions observed at the Site, the Department requests that you comply with the following:

a. Conduct Public Notice in accordance with Rule 7.07 of the Remediation Regulations and provide copies of these notices to the Department no later than **July 27, 2007**.

b. Conduct further investigation of the site soil and groundwater in accordance with Section 7.0 of the Remediation Regulations and the attached comments. Specific requirements of the additional investigation are outlined in the attached comments.

c. Upon completion of the additional Site Investigation, submit a Site Investigation Report Addendum by no later than **August 31, 2007**, or in accordance with an alternative project schedule approved by the Department.

d. Upon approval by the Department of the Site Investigation Report, be prepared to bring the site into compliance with the Remediation Regulations.

Be advised that the **City of Providence,** as site owner, is responsible for the proper investigation and, if necessary, remediation of hazardous materials at this site. Also be advised that any remedial alternative that proposes to leave contaminated soil on-site at levels which exceed the Department's Residential Direct Exposure Criteria or applicable Groundwater Criteria will at a minimum necessitate the recording of an Environmental Land Usage Restriction (ELUR) on the deed for the site, and will likely require implementation of additional engineered controls to restrict human exposure.

As stated above in item "a", the **City of Providence** must notify all abutting property owners and tenants that an additional investigation is about to occur prior to the implementation of any investigation field activities in accordance with the Industrial Property Remediation and Reuse Act (Rhode Island General Law 23-19.14, Section 11) and the Remediation Regulations (Section 7.07). The notice should briefly indicate the purpose of the investigation, the work to be performed and the approximate scheduled date of activities. Failure to comply with any of the aforementioned laws and regulations may

result in enforcement actions as specified in Rhode Island General Law 23-19.1-17 and 23-19.1-18.

Please notify this office within seven days of the receipt of this letter of your plans to address these items. All correspondence should be sent to the attention of:

Michael D. Andrews
RIDEM / Office of Waste Management
235 Promenade Street
Providence, RI 02908

If you have any questions regarding this letter or would like the opportunity to meet with Department personnel, please contact me by telephone at (401) 222-2797-extension 7140 or by e-mail at michael.andrews@dem.ri.gov

Sincerely,

Michael D. Andrews
Sanitary Engineer
Office of Waste Management

Authorized by,

Kelly J. Owens
Assoc. Supervising Engineer
Office of Waste Management

Cc: James McGinn, RIDEM / Planning and Development
Robert McMahon, City of Providence, Parks Dept.
Kevin Cute, RI Coastal Resources Management Council

Site Investigation Report and Notice of Release
City of Providence Park's Department
Proposed Boat Ramp Facility
E. Transit Street
Providence, Rhode Island

Prepared by

City of Providence Parks Department
Roger Williams Park
Dalrymple Boathouse
Providence, RI 02905
(401) 785-9450

February 2007
FINAL

DRAFT 16 February 2007

Ms. Kelly Owens
Supervising Engineer
Office of Waste Management
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908-5767

RE: NOR and SIR Checklist Submittal, Proposed City of Providence
Boat Ramp Facility, East Transit Street, Providence, Rhode Island

Dear Ms.Owens:

Pursuant to the Rhode Island Department of Environmental Management (RIDEM) *Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases* (Remediation Regulation, August 1996, as amended February 2004) the City of Providence Parks Department (CITY) is submitting the attached Site Investigation Report (SIR) Checklist (refer to Attachment A) and Release Notification Form (RNF, refer to Attachment B) for the site referenced above. Northeast Environmental Testing Laboratory, Inc. (NETL) prepared a Soils Study and Analytical Report for the above referenced site in January 2006, on behalf of the CITY. We have included the NETL soil study as Attachment C of this submittal. The NETL soil study noted constitutes the CITY's submittal of an SIR and notes the detected exceedence of Lead in soil.

Additionally, the CITY, with the assistance of an EA Engineering, Science, and Technology, Inc. (EA) geologist, has completed test pit field exercises on 20 September and 3 October 2006 at the above referenced site to determine the extent of fill materials located at the site. We have provided a copy of the Test Pit Logs (TP-1 through TP-7, refer to Attachment D) for RIDEM's use. The test pits were completed upon reaching refusal or soils thought to be native and not consisting of fill materials. A Test Pit Location Plan is provided as Figure 1. During the Test Pit activities, EA collected fill and native soil samples, and field screened the samples for methane, semi-volatile and volatile organic compounds (SVOCs and VOCs, respectively) using a flame ionization detector (FID). Only one field FID screen sample provided indications that methane was encountered during the field activities. A native soil sample obtained from 11 to 12 feet below grade in TP-6, immediately above a layer of peat, had an FID field measurement of 196.9 parts-per-million volume (ppmv) using a sample container headspace measurement technique. All other field measurements of soil samples collected from test pits were non-detect for VOCs, SVOCs and methane.

Groundwater at the site was encountered at approximately 11.5 feet below grade in TP-6. Native soils were encountered at depths of 6 to 11 feet below grade in the test pits.

The construction of a boat ramp facility at this site will require the removal of a currently 2,500 cubic yards of the fill materials at the subject site. It is the Park Dept's proposal to excavate the fill materials and use the material as fill for landscaping berms to be constructed at an abutting city park. The landscaping berms would be capped with a department approved engineered barrier to restrict direct exposure of the Lead impacted soils. Preliminary Site Plans for the subject Site are provided in Attachment E for discussion purposes.

If you have any questions please call me at (401) 785-9450.

Sincerely yours,

CITY OF PROVIDENCE PARKS
DEPARTMENT

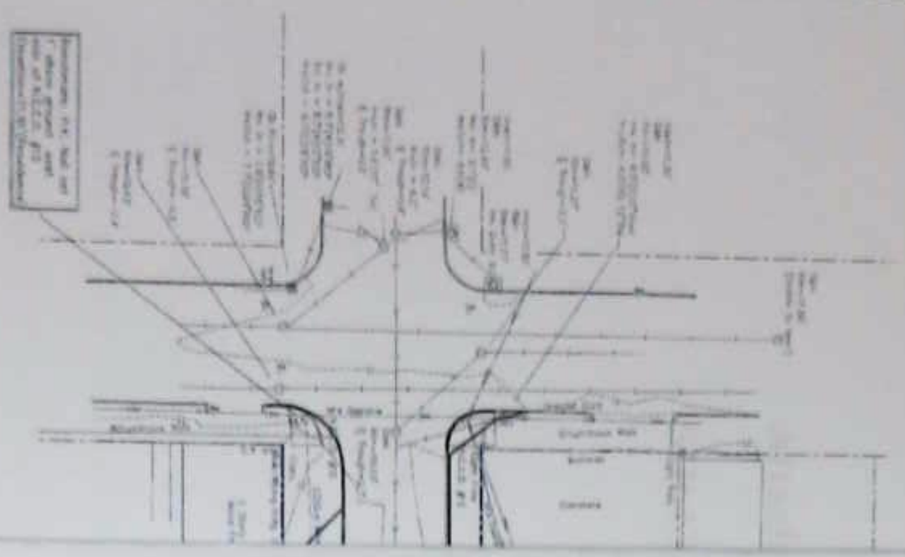
Name
Title

Initials

Attachments: A: SIR Checklist
B: Release Notification Form
C: NETL Soils Study and Analytical Report
D: Test Pit Logs
E: Preliminary Site Plans

cc: Joel Boodon, L.A., Dept. of Parks, City of Providence
John O'Brien, RIDEM – Freshwater Fisheries
James McGinn, RIDEM Div. of Planning & Development
Kevin Cute, CRMC


SITE LOCATION
E.Transit St.
Boat Ramp
East
Providenc
dence
Brown University
Athletic Complex
Brown
University
India
Point Park
Gano St
Angell St
S Angell St
Waterman St
Hope St
Wickenden St
Warren Ave
N Main St
S Main St
S Water St
Point St
Bridge St
Eddy St
Dyer St



02/01/07
03/28/06
11/15/05

Figure 1

Drawn by: JB	Drawing Date: November 15, 2005
Checked:	Sheet #: G-2
Approved:	

North

SCALE : 1" = 20'

0 10' 20' 40' 60'

REVISIONS

#	By	Items	Date
		Design Development	11/15/05

SITE PLAN SHOWING :

Existing Topography
Prelim. Proposed Grades
E.A. Test Pit Locations -
9/20/06

EAST TRANSIT ST. BOAT RAMP
SPRING 2006

PREPARED BY:

Department of Public Parks
Dalrymple Boathouse
Roger Williams Park
Providence, Rhode Island 02905

David N. Cicilline, Mayor of Providence
Alix R. Ogden, Superintendent of Parks

Attachment A

SIR Checklist

Section 7 of the "Remediation Regulations"
Site Investigation Report (SIR)Checklist

Contact Name: Joel Boodon, Providence Parks Department
Contact Address: Dalyrymple Boathouse, Roger Williams Park, Providence, Rhode Island 02905
Contact Telephone: (401) 785-9450

Site Name: Proposed East Transit Street Boat House
Site Address: East Transit Street, Providence, Rhode Island

OFFICE USE ONLY
SITE INVESTIGATION REPORT (SIR)SITE:
PROJECT CODE:
SIR SUBMITTAL DATE:
CHECKLIST SUBMITTAL DATE:

DIRECTIONS: *The box to the left of each item listed below is for the administrative review of the SIR submission and is for **RIDEM USE ONLY**. Under each item listed below, cross-reference the specific sections and pages in the SIR that provide detailed information that addresses each stated requirement. Failure to include cross-references may delay review and approval. If an item is not applicable, simply state that it is not applicable and provide an explanation in the SIR.*

☐ 7.03.A. List specific objectives of the SIR related to characterization of the release, impacts of the release and remedy.

Refer to Attachement C ("Soils Study and Analytical Reports," dated January 2006, prepared by Northeast Environmental Testing Laboratory, Inc.).

☐ 7.03.B. Include information reported in the Notification Of Release. A copy of the release notification form should be included in the SIR. Include information relating to short-term response, if applicable.

Hazardous Material Notification Form (Attachement B), dated 2 February 2007.

☐ 7.03.C. Include documentation of any past incidents or releases.

No documentation evidence of past releases were found.

☐ 7.03.D. Include list of prior property owners and operators, as well as sequencing of property transfers and time periods of occupancy.

Not included in SIR.

☐ 7.03.E. Include previously existing environmental information which characterizes the contaminated-site and all information that led to the discovery of the contaminated-site.

Refer to Attachment C, "Soils Study and Analytical Reports," dated January 2006, prepared by Northeast Environmental Testing Laboratory, Inc.

Test pit logs, dated 20 September and 3 October 2006, prepared by EA Engineering, Science, and Technology, Inc. (Attachement D).

☐ 7.03.F. Include current uses and zoning of the contaminated site, including brief statements of operations, processes employed, waste generated, hazardous materials handled, and any residential activities on the site, if applicable. (This section should be linked to the specific objectives section demonstrating how the compounds of concern in the investigation are those that are used or may have been used on the site or are those that may have impacted the site from an off-site source.)

Vacant Lot.

☐ 7.03.G. Include a locus map showing the location of the site using US Geological Survey 7.5-min quadrangle map or a copy of a section of that USGS map.

Refer Revised Concept Plan (Attachment B), "Soil Study and Analytical Reports," dated January 2006, prepared by Northeast Environmental Testing Laboratory, Inc.

☐ 7.03.H. Include a site plan, to scale, showing:

- ☐ Buildings
- ☐ Activities
- ☐ Structures
- ☐ North Arrow
- ☐ Wells
- ☐ UIC Systems, septic tanks, UST, piping and other underground structures
- ☐ Outdoor hazardous materials storage and handling areas
- ☐ Extent of paved areas
- ☐ Location of environmental samples previously taken with analytical results
- ☐ Waste management and disposal areas
- ☐ Property Lines

Refer to Revised Concept Plan (Attachment B) of the "Soil Study and Analytical Reports," dated January 2006, prepared by Northeast Environmental Testing Laboratory, Inc. and Attachement E of this submittal.

☐ 7.03.I. Include a general characterization of the property surrounding the area including, but not limited to:

- ☐ Location and distance to any surface water bodies within 500 ft of the site
- ☐ Location and distance to any environmentally sensitive areas within 500 ft of the site
- ☐ Actual sources of potable water for all properties immediately abutting the site
- ☐ Location and distance to all public water supplies, which have been active within the previous 2 years and within one mile of the site
- ☐ Determination as to whether the release impacts any off-site area utilized for residential or industrial/commercial property or both
- ☐ Determination of the underlying groundwater classification and if the classification is GB, the distance to the nearest GA area

Refer to Revised Concept Plan (Attachment B) of the "Soil Study and Analytical Reports," dated January 2006, prepared by Northeast Environmental Testing Laboratory, Inc. and Attachement E of this submittal.

☐ 7.03.J. Include classifications of surface and groundwater at and surrounding the site that could be impacted by a release.

Hazardous Material Notification Form (Attachment A), dated 2 February 2007.

☐ 7.03.K. Include a description of the contamination from the release, including:

- ☐ Free liquids on the surface
- ☐ LNAPL and DNAPL
- ☐ Concentrations of hazardous substances which can be shown to present an actual or potential threat to human health and any concentrations in excess of any of the remedial objectives
- ☐ Impact to environmentally sensitive areas
- ☐ Contamination of man-made structures
- ☐ Odors or stained soil
- ☐ Stressed vegetation

- ☐ Presence of excavated or stockpiled material and an estimate of its total volume
- ☐ Environmental sampling locations, procedures and copies of the results of any analytical testing at the site
- ☐ List of hazardous substances at the site
- ☐ Discuss if the contamination falls outside of the jurisdiction of the Remediation Regulations, including but not limited to USTs, UICs, and wetlands

Refer to Revised Concept Plan (Attachment B) of the "Soil Study and Analytical Reports," dated January 2006, prepared by Northeast Environmental Testing Laboratory, Inc. and Attachement E of this submittal.

All others are not applicable.

☐ 7.03.L. Include the concentration gradients of hazardous substances throughout the site for each media impacted by the release.

Sampling locations and results are included in "Soil Study and Analytical Reports," dated January 2006, prepared by Northeast Environmental Testing Laboratory, Inc.

☐ 7.03.M. Include the methodology and results of any investigation conducted to determine background concentrations of hazardous substances identified at the contaminated site.

Not applicable.

☐ 7.03.N. Include a listing and evaluation of the site specific hydrogeological properties which could influence the migration of hazardous substances throughout and away from the site, including but not limited to, where appropriate:

- ☐ Depth to GW
- ☐ Presence and effects of both the natural and man-made barriers to and conduits for contaminant migration
- ☐ Characterization of bedrock
- ☐ Groundwater contours, flow rates and gradients throughout the site

Refer to Test Pit Logs, dated 20 September and 3 October 2006, prepared by EA Engineering, Science, and Technology, Inc. (Attachment D).

☐ 7.03.O. Include a characterization of the topography, surface water and run-off flow patterns, including the flooding potential, of the site

Refer to Revised Concept Plan, "Soil Study and Analytical Reports, " dated January 2006, prepared by Northeast Environmental Testing Laboratory, Inc.

☐ 7.03.P. Include the potential for hazardous substances from the site to volatilize and any and all potential impacts of the volatilization to structures within the site.

Not applicable.

☐ 7.03.Q. Include the potential for entrainment of hazardous substances from the site by wind or erosion actions.

Not applicable.

☐ 7.03.R. Include detailed protocols for all fate and transport models used in the Site Investigation.

Not applicable.

☐ 7.03.S. Include a complete list of all samples taken, the location of all samples, parameters tested for and analytical methods used during the Site Investigation. (Be sure to include the samples locations and analytical results on a site figure).

Sampling locations ("Soil Sampling Plan") and results are included in "Soil Study and Analytical Reports, " dated January 2006, prepared by Northeast Environmental Testing Laboratory, Inc.

☐ 7.03.T. Include construction plans and development procedures for all monitoring wells. Well construction must be consistent with the requirements of Appendix I of the Groundwater Quality Regulations.

Not applicable.

☐ 7.03.U. Include procedures for the handling, storage and disposal of wastes derived from and during the investigation.

Not applicable.

☐ 7.03.V. Include a quality assurance and quality control evaluation summary report for sample handling and analytical procedures, including, but not limited to, chain-of-custody procedures and sample preservation techniques.

Refer to "Soil Study and Analytical Reports," dated January 2006, prepared by Northeast Environmental Testing Laboratory, Inc.

☐ 7.03.W. Include any other site-specific factor, that the Director believes, is necessary to make an accurate decision as to the appropriate remedial action to be taken at the site.

Not applicable.

☐ 7.04 Include Remedial Alternatives. The Site Investigation Report **must** contain a minimum of **2** remedial alternatives other than no action/natural attenuation alternative, unless this requirement is waived by the Department. It should be clear which of these alternatives is most preferable. All alternatives must be supported by relevant data contained in the Site Investigation Report and consistent with the current and reasonably forseeable land usage, and documentation of the following:

- ☐ Compliance with Section 8 (RISK MANGEMENT);
- ☐ Technical feasibility of the preferred remedial alternative;
- ☐ Compliance with Federal, State and local laws or other public concerns; and
- ☐ The ability of the performing party to perform the preferred remedial alternative

Refer to submittal cover letter and Preliminary Site Plans provided in Attachment E.

☐ 7.05 **Certification Requirements:** The Site Investigation Report and all associated progress reports must include the following statements signed by an authorized representative of the party specified:

- ☐ A statement signed by an authorized representative of the person who prepared the Site Investigation Report certifying the completeness and accuracy of the information contained in that report to the best of their knowledge; and
- ☐ A statement signed by the performing party responsible for the submittal of the Site Investigation Report certifying that the report is a complete and accurate representation of the site and the release and contains all known facts surrounding the release to the best of their knowledge

☐ 7.06 **Progress Reports:** If the Site Investigation is not complete, include a schedule for the submission of periodic progress reports on the status of the investigation and interim reports on any milestones achieved in the project

Not applicable.

☐ 7.07 **Public Notice:** Be prepared to implement public notice requirements per Section 7.07 and 7.09 of the Remediation Regulations when the Department deems the Site Investigation Report to be complete.

Agreed.

Attachment B

Release Notification Form

DIVISION OF SITE REMEDIATION
HAZARDOUS MATERIAL RELEASE NOTIFICATION FORM

THIS FORM IS NOT TO BE USED TO REPORT AN IMMINENT HAZARD

1. Notifier Information

Name: Joel Boodon, Providence Parks Department

Address: Dalrymple Boathouse, Roger Williams Park, Providence, Rhode Island 02905

Phone: (401) 785-9450

Status: X Owner ___ Operator ___ Secured Creditor ___ Voluntary

2. Property Information

Name of Site: Proposed East Transit Street Boat Ramp

Site Address: East Transit Street, Providence

Plat/Lot Numbers: A.P. 17, Lots 8 and 611

Site Contact Person: Joel Boodon, Providence Parks Department

Site Contact Phone: (401) 785-9450

Site Land Usage Type: ___ Residential X Industrial/Commercial

Location of Release: Eastern portion of the Site, along the Seekonk River

3. Release Information

Date of Discovery: January 2006

Sources: Historic filling activities

Release Media: Soil

Hazardous Materials and Concentrations: Lead in historic fill material at levels ranging from 172 to 605 parts per million (ppm), as described in the January 2006 "Soils Study and Analytical Reports at Proposed East Transit Street Boat Ramp, Providence, Rhode Island 02906," prepared by Northeast Environmental Testing Laboratory.

Extent of Contamination: Site-wide fill soils

4. Resource Information

Site Land Usage:	X Industrial/Commercial	___ Residential
Adjacent Land Usage:	X Industrial/Commercial	X Residential (recreational)
Site Groundwater Class:	___ GA/GAA	X GB
Adjacent Groundwater Class: (if different than site groundwater classification within 500 feet)	___ GA/GAA	X GB

Nearest Surface Water or Wetland: X Less than 500 feet ___ Greater than 500 feet

Potential for adverse impact No Yes/No

5. Potentially Responsible Parties

Name: None identified

Address: _____

Status: ___ Owner ___ Operator ___ Other: _____

Name: _____

Address: _____

Status: ___ Owner ___ Operator ___ Other: _____

6. Measures Taken or Proposed to be Taken in Response to Release

As part of the proposed boat ramp and associated parking area construction, fill will have to be removed to maintain proper grading. Therefore, as part of this removal, some impacted fill material will be removed and transported to the abutting park for use as landscape berms and capped by an engineered barrier. An engineered barrier as noted in this notification's cover letter will cap impacted soils remaining onsite.

7. Other Significant Remarks About Release (Will a background determination be made?)

Signature: _____ Date: / /

Title: _____

Attachment C

NETL Soils Study and Analytical Report
Dated January 2006

Soils Study

and

Analytical Reports

for

Roger Williams Park
1000 Elmwood Avenue
Providence, Rhode Island 02905

at

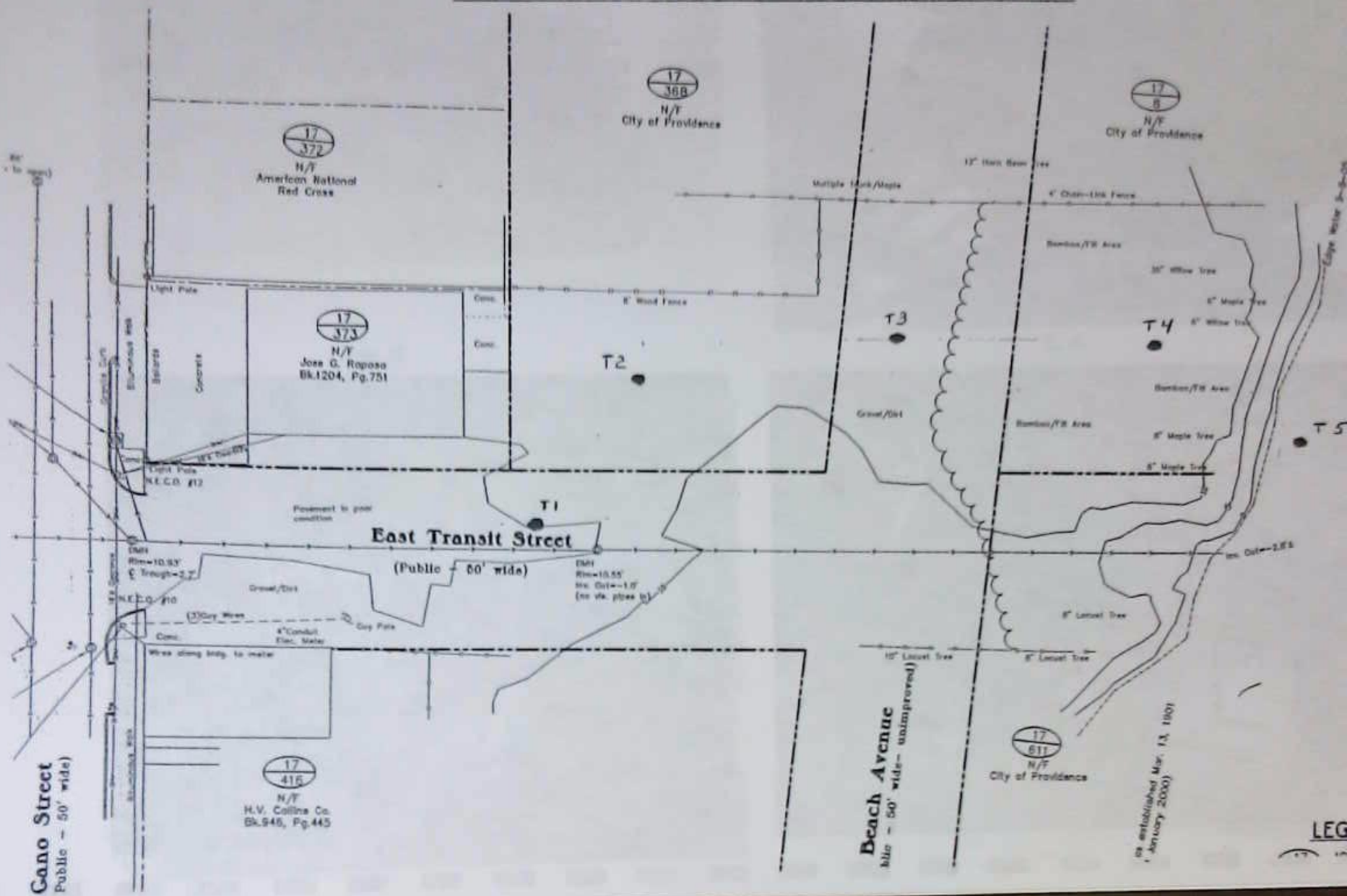
Proposed
East Transit Street Boat Ramp
Providence, Rhode Island 02906

Prepared by:

Northeast Environmental
Testing Laboratory, Inc.
472 Smith Street, Providence, RI 02908

January, 2006

SOIL SAMPLING LOCATIONS



LEG

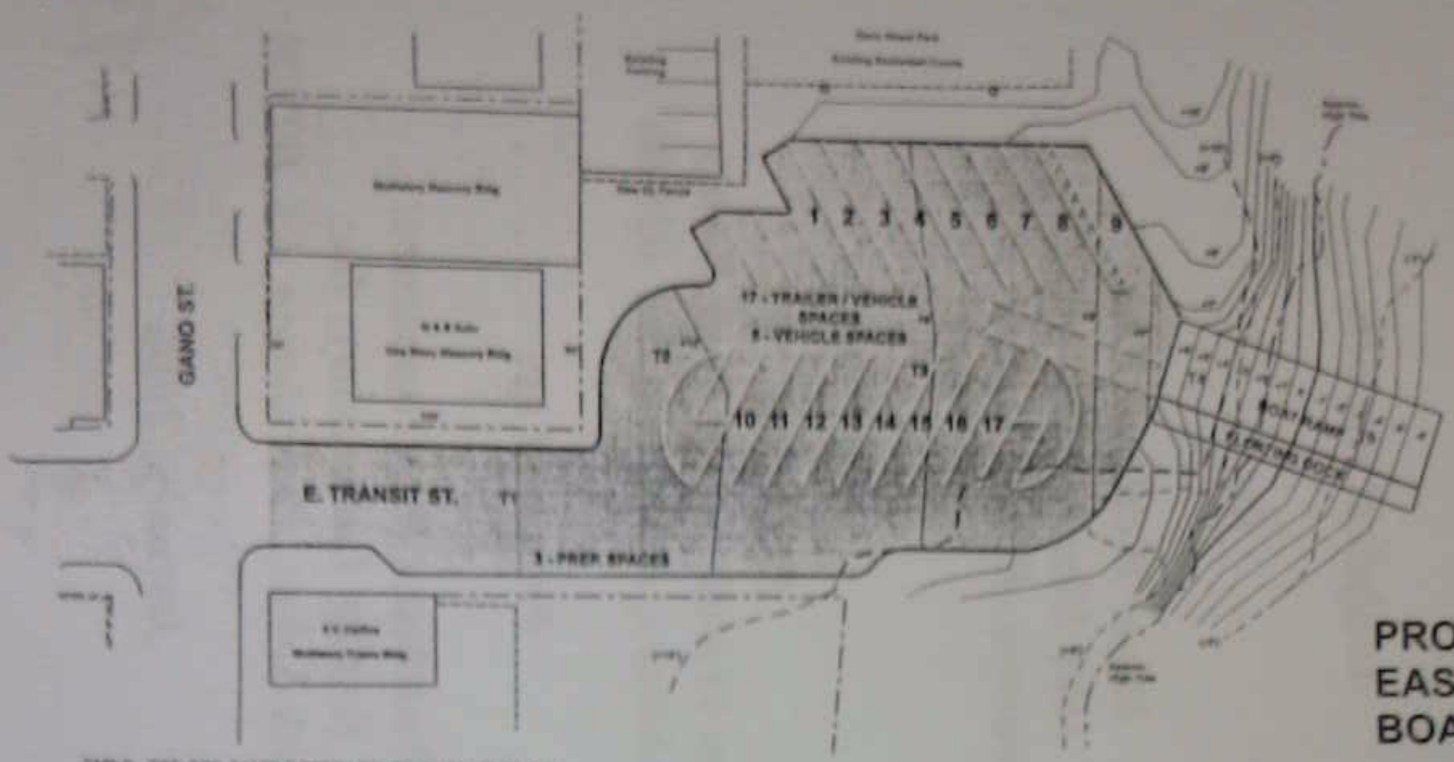


TABLE - EST. SOIL SAMPLE DEPTH BELOW EXISTING GRADE

LOCATION -

T-1 - 1' - 2' depth
T-2 - 1' - 2' depth
T-3 - 3' depth
T-4 - 6' depth
T-5 - 2' depth

ATTACHMENT - B

T1, etc. - Tentative Locations for Soil Tests

PROPOSED EAST TRANSIT ST BOAT RAMP

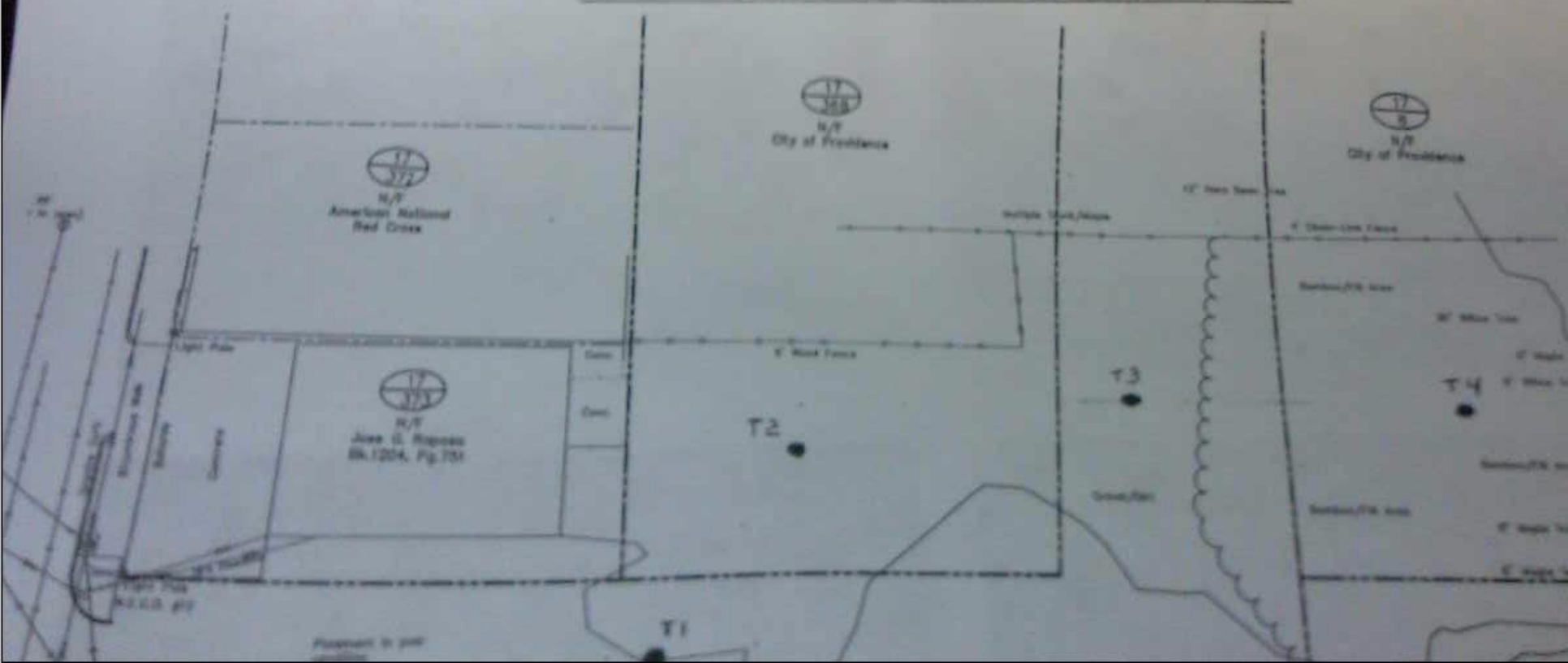
REVISED CONCEPT PLAN

DEPT. OF PUBLIC PARKS
ROGER WILLIAMS PARK
PROVIDENCE RI 02905

FEBRUARY 28, 2005

SCALE APPROXIMATE

SOIL SAMPLING LOCATIONS



T2

T2

SAMPLIN LOCATIONS

T 5

Volatile Organic Compounds (8260b)	RESULTS IN µg/kg Sample #1,	Sample #2,	Sample #3,	Sample #4

See Attached Sheets

PCB's & Pesticides (8082)	RESULTS IN mg/kg Sample #1,	Sample #2,	Sample #3,	Sample #4

See Attached Sheets

mg/kg = milligrams per kilogram
ppm = parts per million
< = less than
µg/kg = micrograms per kilogram

Methodology: The procedures followed in these analyses were from Test Methods for Evaluating Solid Wastes, SW-846, Third Edition.

Raymond A. Spinella
President/Co-Director

Joseph J. Spinella
Co-Director

clf

EPA Method 8260b
Volatile Organic Compounds

Compound Name	Concentration (µg/kg)	Detection Limit (µg/kg)
Ethylbenzene	ND	8.0
p-Xylene	ND	8.0
m-Xylene	ND	8.0
o-Xylene	ND	8.0
Styrene	ND	8.0
Bromoform	ND	16.0
Isopropylbenzene	ND	8.0
Bromobenzene	ND	8.0
1,1,2,2-tetrachloroethane	ND	8.0
1,2,3-trichloropropane	ND	16.0
n-propylbenzene	ND	8.0
2-chlorotoluene	ND	8.0
1,2,4-trimethylbenzene	ND	8.0
Benzyl chloride	ND	8.0
tert-butylbenzene	ND	8.0
1,2,3-trimethylbenzene	ND	8.0
sec-butylbenzene	ND	8.0
1,3-dichlorobenzene	ND	8.0
1,4-dichlorobenzene	ND	8.0
p-isopropyltoluene	ND	8.0
1,2-dichlorobenzene	ND	8.0
n-butylbenzene	ND	8.0
1,2-dibromo-3-chloropropane	ND	32.0
1,2,4-trichlorobenzene	ND	8.0
Hexachlorobutadiene	ND	16.0
Naphthalene	ND	8.0
1,2,3-trichlorobenzene	ND	16.0

ND – Non-Detected

EPA Method 8260b
Volatile Organic Compounds

Sample: 05-12154-2 Prov. Parks Dept.
Matrix: Soil

Date: 12-28-05
Operator: JS

Compound Name	Concentration (µg/kg)	Detection Limit (µg/kg)
Dichlorodifluoromethane	ND	8.0
Chloromethane	ND	40.0
Chloroethane	ND	16.0
Bromomethane	ND	40.0
Vinyl Chloride	ND	40.0
Trichlorofluoromethane	ND	24.0
Diethyl ether	ND	32.0
1,1-dichloroethene	ND	32.0
Carbon disulfide	ND	40.0
Vinyl acetate	ND	24.0
Methylene Chloride	ND	32.0
trans-1,2-dichloroethene	ND	32.0
Methyl tert-butyl ether (MTBE)	ND	40.0
1,1-dichloroethane	ND	8.0
2,2-dichloropropane	ND	32.0
cis-1,2-dichloroethene	ND	16.0
2-butanone	ND	24.0
Bromochloromethane	ND	16.0
Chloroform	ND	8.0
1,1,1-trichloroethane	ND	16.0
1-chlorobutane	ND	8.0
Carbon Tetrachloride	ND	16.0
1,1-dichloropropene	ND	8.0
Benzene	ND	8.0
1,2-dichloroethane	ND	24.0
Trichloroethylene	ND	8.0
1,2-dichloropropane	ND	8.0
Dibromomethane	ND	8.0
Bromodichloromethane	ND	8.0
2-chloroethylvinyl ether	ND	8.0
cis-1,3-dichloropropene	ND	8.0
4-methyl-2-pentanone	ND	40.0
Toluene	ND	8.0
trans-1,3-dichloropropene	ND	8.0
1,1,2-trichloroethane	ND	8.0
Tetrachloroethylene	ND	8.0
1,3-dichloropropane	ND	8.0
2-Hexanone	ND	16.0
Dibromochloromethane	ND	8.0
1,2-dibromoethane	ND	8.0
Chlorobenzene	ND	8.0
1,1,1,2-tetrachloroethane	ND	8.0

EPA Method 8082
PCB's

Sample: 05-12154-2 Prov. Park
Matrix: Soil

Date: 12-30-05
Operator: JS

Compound Name	Concentration (mg/kg)	Detection Limit (mg/kg)
Aroclor 1016	ND	1.0
Aroclor 1221	ND	1.0
Aroclor 1232	ND	1.0
Aroclor 1242	ND	1.0
Aroclor 1248	ND	1.0
Aroclor 1254	ND	1.0
Aroclor 1260	ND	1.0

ND – Non-Detected

EPA Method 8260b
Volatile Organic Compounds

Compound Name	Concentration (µg/kg)	Detection Limit (µg/kg)
Ethylbenzene	ND	8.0
p-Xylene	ND	8.0
m-Xylene	ND	8.0
o-Xylene	ND	8.0
Styrene	ND	8.0
Bromoform	ND	16.0
Isopropylbenzene	ND	8.0
Bromobenzene	ND	8.0
1,1,2,2-tetrachloroethane	ND	8.0
1,2,3-trichloropropane	ND	16.0
n-propylbenzene	ND	8.0
2-chlorotoluene	ND	8.0
1,2,4-trimethylbenzene	ND	8.0
Benzyl chloride	ND	8.0
tert-butylbenzene	ND	8.0
1,2,3-trimethylbenzene	ND	8.0
sec-butylbenzene	ND	8.0
1,3-dichlorobenzene	ND	8.0
1,4-dichlorobenzene	ND	8.0
p-isopropyltoluene	ND	8.0
1,2-dichlorobenzene	ND	8.0
n-butylbenzene	ND	8.0
1,2-dibromo-3-chloropropane	ND	32.0
1,2,4-trichlorobenzene	ND	8.0
Hexachlorobutadiene	ND	16.0
Naphthalene	ND	8.0
1,2,3-trichlorobenzene	ND	16.0

ND – Non-Detected

EPA Method 8260b
Volatile Organic Compounds

Sample: 05-12154-4 Prov. Parks Dept.
Matrix: Soil

Date: 12-28-05
Operator: JS

Compound Name	Concentration (µg/kg)	Detection Limit (µg/kg)
Dichlorodifluoromethane	ND	8.0
Chloromethane	ND	40.0
Chloroethane	ND	16.0
Bromomethane	ND	40.0
Vinyl Chloride	ND	40.0
Trichlorofluoromethane	ND	24.0
Diethyl ether	ND	32.0
1,1-dichloroethene	ND	32.0
Carbon disulfide	ND	40.0
Vinyl acetate	ND	24.0
Methylene Chloride	ND	32.0
trans-1,2-dichloroethene	ND	32.0
Methyl tert-butyl ether (MTBE)	ND	40.0
1,1-dichloroethane	ND	8.0
2,2-dichloropropane	ND	32.0
cis-1,2-dichloroethene	ND	16.0
2-butanone	ND	24.0
Bromochloromethane	ND	16.0
Chloroform	ND	8.0
1,1,1-trichloroethane	ND	16.0
1-chlorobutane	ND	8.0
Carbon Tetrachloride	ND	16.0
1,1-dichloropropene	ND	8.0
Benzene	ND	8.0
1,2-dichloroethane	ND	24.0
Trichloroethylene	ND	8.0
1,2-dichloropropane	ND	8.0
Dibromomethane	ND	8.0
Bromodichloromethane	ND	8.0
2-chloroethylvinyl ether	ND	8.0
cis-1,3-dichloropropene	ND	8.0
4-methyl-2-pentanone	ND	40.0
Toluene	ND	8.0
trans-1,3-dichloropropene	ND	8.0
1,1,2-trichloroethane	ND	8.0
Tetrachloroethylene	ND	8.0
1,3-dichloropropane	ND	8.0
2-Hexanone	ND	16.0
Dibromochloromethane	ND	8.0
1,2-dibromoethane	ND	8.0
Chlorobenzene	ND	8.0
1,1,1,2-tetrachloroethane	ND	8.0

EPA Method 8082
PCB's

Sample: 05-12154-4 Prov. Park
Matrix: Soil

Date: 12-30-05
Operator: JS

Compound Name	Concentration (mg/kg)	Detection Limit (mg/kg)
Aroclor 1016	ND	1.0
Aroclor 1221	ND	1.0
Aroclor 1232	ND	1.0
Aroclor 1242	ND	1.0
Aroclor 1248	ND	1.0
Aroclor 1254	ND	1.0
Aroclor 1260	ND	1.0

ND – Non-Detected

	RESULTS IN µg/kg
Volatile Organic Compounds (8260b)	See Attached Sheets
	RESULTS IN mg/kg
PCB's & Pesticides (8082)	See Attached Sheet

mg/kg = milligrams per kilogram
ppm = parts per million
< = less than
µg/kg = micrograms per kilogram

Methodology: The procedures followed in these analyses were from Test Methods for Evaluating Solid Wastes, SW-846, Third Edition.

Raymond A. Spinella
President/Co-Director

Joseph J. Spinella
Co-Director

clf

Northeast Environmental
Testing Laboratory, Inc.
472 Smith Street Providence, Rhode Island 02908
(401) 484-3400

Certificate of Analysis

Providence Parks Department
Dalrymple Boathouse
Roger Williams Park
Providence, RI 02905
ATTN: Joel Boodon

Invoice #: 05-12184
P.O. #:
Date Received: 12-28-05
Date Reported: 1-06-06

Sample Description: 1 soil sample collected

Sample Location: East Transit Boat Ramp
Providence, RI

Sample Identification: T5 Composite (1st grab at 1' - 2nd grab at 2')

Sample Date: 12-28-05

As requested, the above sample has been analyzed by this laboratory with the following results:

PARAMETERS	RESULTS IN mg/kg (ppm)	DETECTION LIMITS (ppm)
Total Metals		
Arsenic (As)	0.6	0.02
Barium (Ba)	6.2	0.1
Cadmium (Cd)	0.6	0.2
Chromium (T) (Cr)	9.7	0.5
Lead (Pb)	172.3	0.5
Mercury (Hg)	1.3	0.02
Selenium (Se)	0.3	0.02
Silver (Ag)	0.2	0.1

PARAMETER	RESULTS IN mg/kg (ppm)	DETECTION LIMIT (ppm)
TPH-8100	<20.0	20.0

Invoice #05-12184
Providence Parks Department

	RESULTS IN µg/kg
Volatile Organic Compounds (8260b)	See Attached Sheets

	RESULTS IN mg/kg
PCB's & Pesticides (8082)	See Attached Sheet

mg/kg = milligrams per kilogram
ppm = parts per million
< = less than
µg/kg = micrograms per kilogram

Methodology: The procedures followed in these analyses were fr
Solid Wastes, SW-846, Third Editio

Raymond A. Spinella
President/Co-Director

clf

EPA Method 8260b
Volatile Organic Compounds

Compound Name	Concentration (µg/kg)	Detection Limit (µg/kg)
Ethylbenzene	ND	8.0
p-Xylene	ND	8.0
m-Xylene	ND	8.0
o-Xylene	ND	8.0
Styrene	ND	8.0
Bromoform	ND	16.0
Isopropylbenzene	ND	8.0
Bromobenzene	ND	8.0
1,1,2,2-tetrachloroethane	ND	8.0
1,2,3-trichloropropane	ND	16.0
n-propylbenzene	ND	8.0
2-chlorotoluene	ND	8.0
1,2,4-trimethylbenzene	ND	8.0
Benzyl chloride	ND	8.0
tert-butylbenzene	ND	8.0
1,2,3-trimethylbenzene	ND	8.0
sec-butylbenzene	ND	8.0
1,3-dichlorobenzene	ND	8.0
1,4-dichlorobenzene	ND	8.0
p-isopropyltoluene	ND	8.0
1,2-dichlorobenzene	ND	8.0
n-butylbenzene	ND	8.0
1,2-dibromo-3-chloropropane	ND	32.0
1,2,4-trichlorobenzene	ND	8.0
Hexachlorobutadiene	ND	16.0
Naphthalene	ND	8.0
1,2,3-trichlorobenzene	ND	16.0

ND – Non-Detected

TABLE 1

DIRECT EXPOSURE CRITERIA		
Substance	**Residential (mg/kg)**	**Industrial/Commercial (mg/kg)**
1,2,4-Trichlorobenzene	96	10,000
2,4,5-Trichlorophenol	330	10,000
2,4,6-Trichlorophenol	58	520
Pesticides/PCBs		
Chlordane	0.5	4.4
Dieldrin	0.04	0.4
Polychlorinated biphenyls (PCBs)[b]	10	10
Inorganics		
Antimony	10	820
Arsenic[c]	7.0	7.0
Barium	5,500	10,000
Beryllium[c]	0.4	1.3
Cadmium	39	1,000
Chromium III (Trivalent)	1,400	10,000
Chromium VI (Hexavalent)	390	10,000
Copper	3,100	10,000
Cyanide	200	10,000
Lead[d]	150	500
Manganese	390	10,000
Mercury	23	610
Nickel	1,000	10,000
Selenium	390	10,000
Silver	200	10,000
Thallium	5.5	140

Attachment D

Test Pit Logs

EA Engineering, Science and Technology

TEST PIT LOG

Project: East Transit Street, Providence	Test Pit No: TP-1
Project No.: 62121.01	Date: 20 September 2006
Location: southwest edge of bamboo area	
Field Geologists: Jill Ann Parrett, P.G.	

Depth (ft)	Lithology Change (depth ft)	Material Description (Soil Density/Consistency, Color)	USCS	Remarks
0.0 – 1.5		Brown F-C SAND, some organics, little debris	SP	
1.5 – 10.0	1.5	Dark brown F-C SAND, some silt, little f-c gravel, trace cobbles	SP	Contains miscellaneous household waste
10.0+	10.0	Brown to gray/brown F-M SAND, some silt, little c sand, trace f gravel (moist)	SW	Presumed native material

Remarks: Rubbish in this test pit includes glass, metal, rubber, fabric, brick, oil filters

FID Headspace (fill) = 0.0

FID Headspace (native) = 0.0

Photo Log

EA Engineering, Science and Technology

TEST PIT LOG

Project: East Transit Street, Providence	Test Pit No: TP-2
Project No.: 62121.01	Date: 20 September 2006
Location: north edge of property (approximately 5 ft off fence), northwest corner of bamboo area	
Field Geologists: Jill Ann Parrett, P.G.	

Depth (ft)	Lithology Change (depth ft)	Material Description (Soil Density/Consistency, Color)	USCS	Remarks
0.0 – 0.5		Concrete slab at surface		
0.5 – 2.0	0.5	Brown F-C SAND, some f-c gravel, little organics	SP	
2.0 – 4.5	2.0	Brown F-M SAND, some silt, little c sand, trace f-m gravel	SP	Debris starts at 2.0 ft
4.5 - 8.0+	4.5	Brown to gray/brown F-M SAND, some silt, little c sand, trace f gravel (moist)	SW	Presumed native

Remarks: Rubbish in this test pit includes oyster shells, concrete, asphalt, miscellaneous household

FID Headspace (fill) = 0.0

FID Headspace (native) = 0.0

Photo Log

EA Engineering, Science and Technology

TEST PIT LOG

Project: East Transit Street, Providence	Test Pit No: TP-3
Project No.: 62121.01	Date: 20 September 2006
Location: 25 ft south of TP-1 (on high point of site)	
Field Geologists: Jill Ann Parrett, P.G.	

Depth (ft)	Lithology Change (depth ft)	Material Description (Soil Density/Consistency, Color)	USCS	Remarks
0.0 – 1.0		Brown F-C SAND, some f-c gravel, some organics		
1.0 – 8.0	1.0	Dark brown F-C SAND, some silt, little f-c gravel		Concrete increases with depth (below 4.0 ft)
8.0 – 9.0+	8.0	Brown/gray F-M SAND, some silt, little c sand, trace f-m gravel		Presumed native

Remarks: Rubbish in this test pit includes rope, brick, concrete, pipe and metal (automotive?), plastic

FID Headspace (fill) = 0.0

FID Headspace (native) = 0.0

Photo Log

EA Engineering, Science and Technology

TEST PIT LOG

Project: East Transit Street, Providence	Test Pit No: TP-4
Project No.: 62121.01	Date: 3 October 2006
Location: 25 ft south of TP-3, along southern boundary	
Field Geologists: Jill Ann Parrett, P.G.	

Depth (ft)	Lithology Change (depth ft)	Material Description (Soil Density/Consistency, Color)	USCS	Remarks
0.0 – 0.5		Brown to light brown F-C SAND, some silt, little c sand	SP	
0.5 – 6.0	0.5	Dark brown F-C SAND, some silt, little gravel	SP	Miscellaneous construction debris
6.0 – 8.0+	6.0	Brown F-M SAND, some silt, little gravel	SW	Presumed native

Remarks: Debris in this test pit includes concrete (greater proportion than previous TPs), brick, tires

FID Headspace (fill) = 0.0

FID Headspace (native) = 0.0

Photo Log

EA Engineering, Science and Technology

TEST PIT LOG

Project: East Transit Street, Providence	Test Pit No: TP-5
Project No.: 62121.01	Date: 3 October 2006
Location: Adjacent to slope on east side, just north of wash-out on south side	
Field Geologists: Jill Ann Parrett, P.G.	

Depth (ft)	Lithology Change (depth ft)	Material Description (Soil Density/Consistency, Color)	USCS	Remarks
0.0 – 8.0		Brown to light brown F-M SAND, some silt, little c sand, trace gravel	SP	Concrete, oyster shells at surface.
8.0 – 9.0+	8.0	Brown F-M SAND, little c sand, some silt, trace gravel	SW	Presumed native. Large rock at 8.0 ft.

Remarks: Rubbish in this test pit includes brick (increasing with depth), shells, concrete , plastic

FID Headspace (fill) = 0.0

FID Headspace (native) = 0.0

Photo Log

EA Engineering, Science and Technology

TEST PIT LOG

Project: East Transit Street, Providence	Test Pit No: TP-6
Project No.: 62121.01	Date: 3 October 2006
Location: 25 ft north of TP-5, adjacent to eastern slope	
Field Geologists: Jill Ann Parrett, P.G.	

Depth (ft)	Lithology Change (depth ft)	Material Description (Soil Density/Consistency, Color)	USCS	Remarks
0.0 – 11.0		Brown to light brown F-M SAND, some silt, little c sand, trace gravel	SW	Debris, increasing with depth
11.0 – 12.0	11.0	Same as above, no debris	SW	Presumed native
12.0+	12.0	Gray F SAND, some peat, wet	SW	Native.

Remarks: Debris in this test pit includes stone, concrete, and shells

FID Headspace (fill) = 0.0

FID Headspace (native, above peat layer) = 196.9 ppm (methane)

Photo Log

EA Engineering, Science and Technology

TEST PIT LOG

Project: East Transit Street, Providence	Test Pit No: TP-7
Project No.: 62121.01	Date: 3 October 2006
Location: 25 ft north of TP-6, northeast corner of site	
Field Geologists: Jill Ann Parrett, P.G.	

Depth (ft)	Lithology Change (depth ft)	Material Description (Soil Density/Consistency, Color)	USCS	Remarks
0.0 – 9.0+		Brown F-C SAND, some silt, little gravel to cobbles, trace boulders	SP	Refusal at 9.0 ft

Remarks: Debris in this test pit includes stone, concrete, brick

FID Headspace (fill) = 0.0

Photo Log

Attachment E

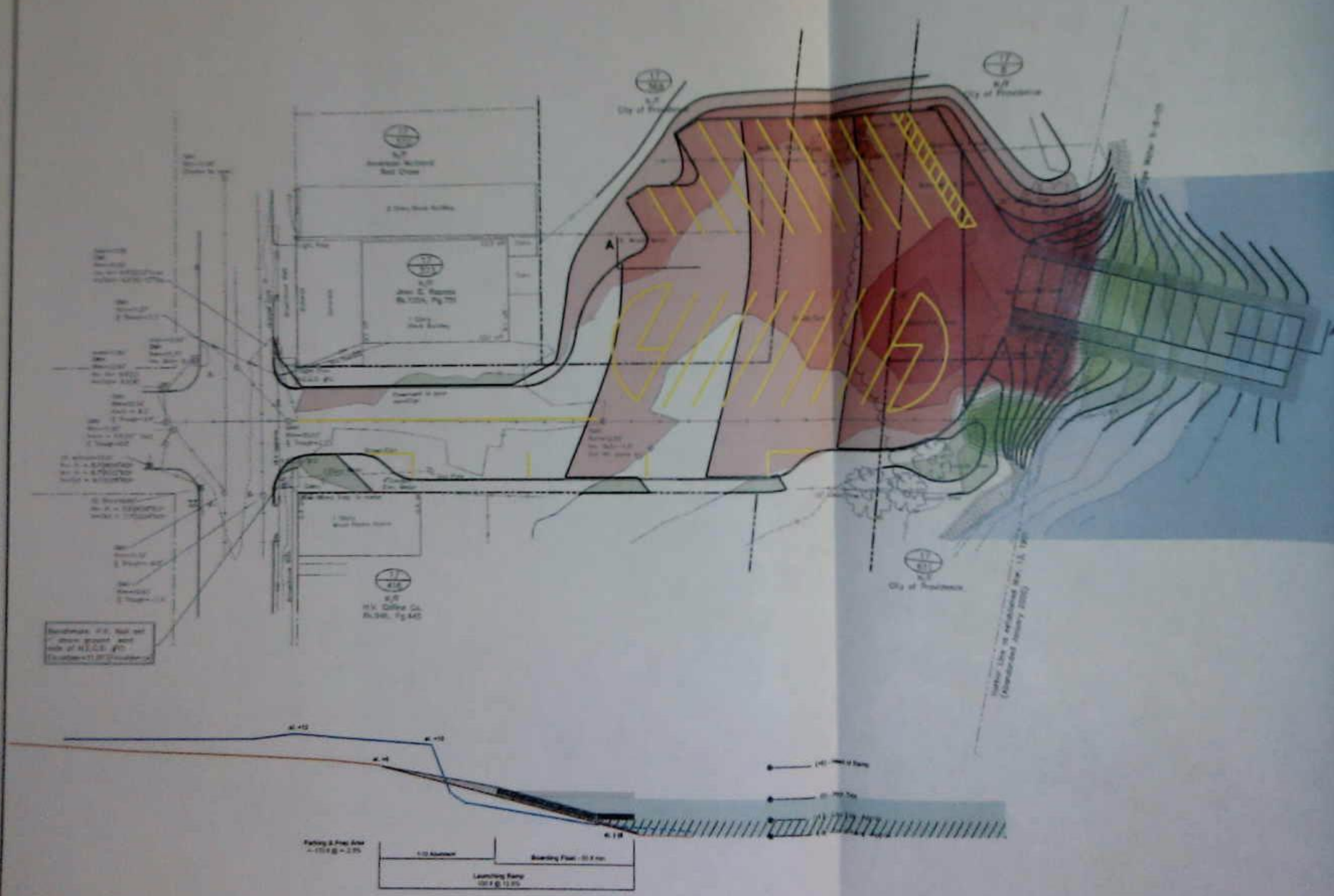
Preliminary Site Plans


Potential New Berm - #4
North of L.Field Fence
EXISTING BERM - #1
Possible Berm Extension
GANO PARK
Existing
Soccer Field
Potential New Berm - #3
Possible Berm Extension
EXISTING BERM - #2
Existing
Dog Park Area
Existing
Basketball Courts
Gano St
SEEKONK RIVER
GANO PARK
- EXISTING TOPO
- POSSIBLE EART
BERM EXTENS
E. TRANSIT ST.
BOATRAMP SIT

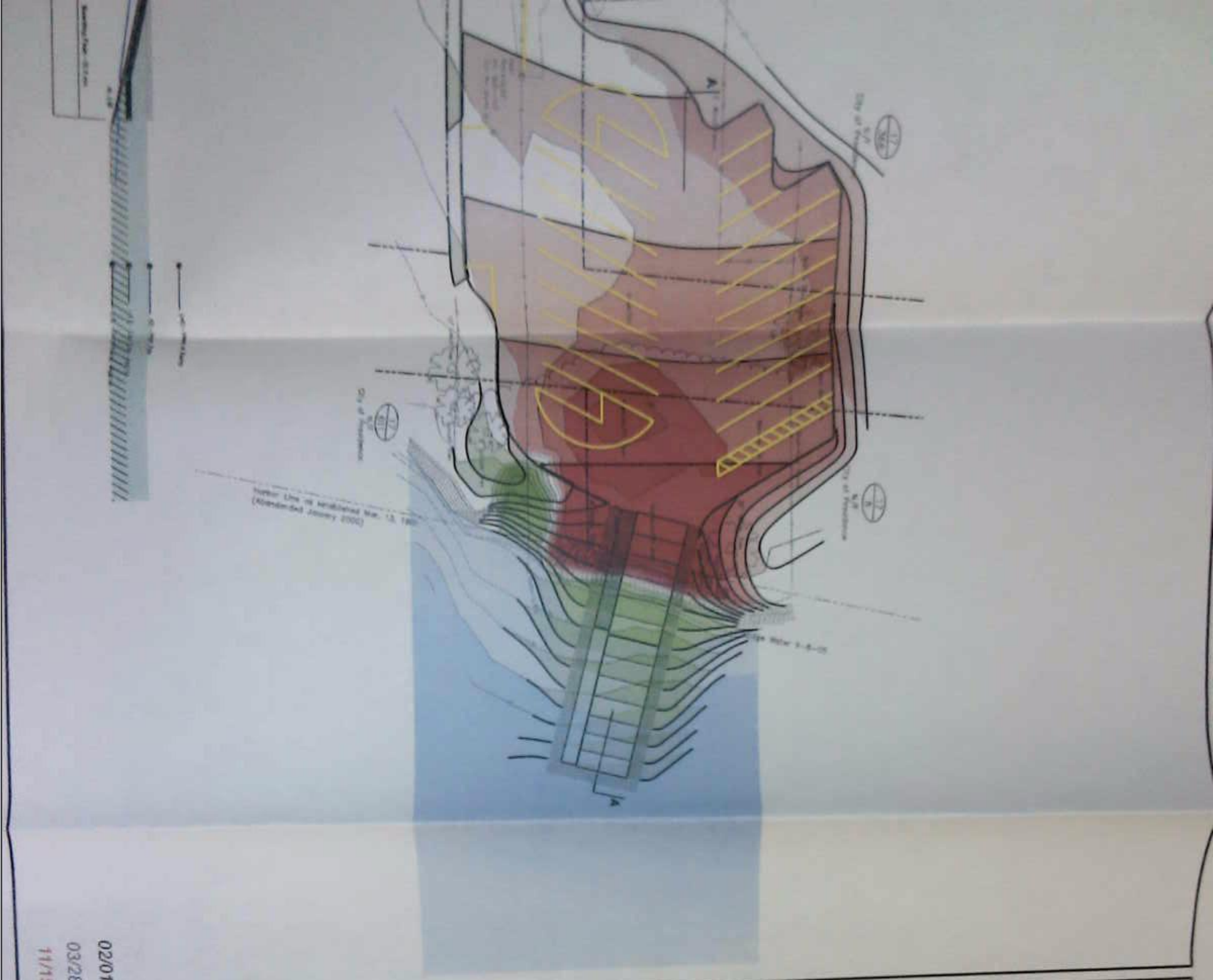
SEEKONK

GANO PARK
- EXISTING TOPO
- POSSIBLE EARTH BERM EXTENSIONS

E. TRANSIT ST.
BOATRAMP SITE



02/01/07
03/28/06
11/15/05



02/01/07
03/28/06
11/15/05

PRELIM. PLAN SHOWING :
CUT (red) & FILL (green)
Boat Ramp Elevations
Parking Layout

EAST TRANSIT ST. BOAT RAMP
SPRING 2006

PREPARED BY:

Department of Public Parks
Dalrymple Boathouse
Roger Williams Park
Providence, Rhode Island 02905

David N. Cicilline, Mayor of Providence
Alix R. Ogden, Superintendent of Parks

REVISIONS

#	By	Items	Date
		Design Development	11/15/05

SCALE : 1" = 20'
0 10' 20' 40' 60'
North

Drawn by: JB
Checked:
Approved:

Drawing Date:
November 15, 2005

Sheet #:
G-2

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

November 25, 2008

Mr. Robert McMahon
City of Providence, Parks Dept.
Dalrymple Boathouse, Roger Williams Park
1000 Elmwood Avenue
Providence, RI 02905

RE: **PROGRAM LETTER**
Proposed East Transit Street Boat Ramp
East Transit Street
Plat Map 17, Lots 8 & 611
Providence, RI 02906
Case No. 2007-016

Dear Mr. McMahon:

On February 24, 2004, the Rhode Island Department of Environmental Management (the Department) amended the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in an efficient manner. The purpose of a **Program Letter** is to indicate that the Department deems the investigation of the reported release complete and to notify the Performing Party that they must perform Public Notice in accordance with Sections 7.07 and 7.09 of the Remediation Regulations.

The Department has reviewed the following documents relative to the above referenced properties (the Site):

1. Notification of Release, dated February 27, 2007, prepared and submitted by the City of Providence Parks Department;

2. Report entitled: Site Investigation Report and Notice of Release, City of Providence Park's Department, Proposed Boat Ramp Facility, E. Transit Street, Providence, Rhode Island, dated February 2007 and prepared by the City of Providence Parks Department;

3. Correspondence entitled: Supplemental Site Investigation Work Plan, Proposed City of Providence Boat Ramp Facility, East Transit Street, Providence, Rhode Island, dated January 28, 2008, and prepared by EA Engineering, Science, and Technology, Inc.; and

4. Report entitled: Site Investigation Report, East Transit Street Boat Ramp, Plat 17, Lots 8, 368, and 611, Providence, Rhode Island, dated October 2008 and prepared by EA Engineering, Science, and Technology, Inc.

The Department regards the information provided in these reports, as collectively constituting the Site Investigation Report (SIR) for the Proposed East Transit Street Boat Ramp Site pursuant to Section 7.08 of the Remediation Regulations. The Department requires that the **City of Providence** implement Public Notice in accordance with Sections 7.07 and 7.09 of the Remediation Regulations to all abutters, tenants, and all utilities with easements regarding the preferred remedial alternative.

The preferred alternative requires the construction of an engineered barrier across the entire Site. This barrier will consist of one (1) foot of clean fill over a geotextile layer in landscaped areas and four (4) inches of asphalt pavement over six (6) inches of clean sub-base material. The boat ramp will be constructed of four (4) inches of concrete over six (6) inches of clean fill. An Environmental Land Usage Restriction (ELUR) shall be recorded on the deed for the entire property. The ELUR shall require the performance of annual inspections to document the status of the ELUR and the condition of the engineered controls at the Site. The ELUR shall include a soil management plan (SMP), which will address activities that disturb on-site soils. The ELUR, once approved by the Department, shall be recorded for the property (Plat 17, Lots 8, 368 and 611) in the Land Evidence Records for the City of Providence and a recorded copy forwarded back to the Department within fifteen (15) days of recording.

Sections 7.07 and 7.09 of the Remediation Regulations outline the requirements for public notice regarding the substantive findings of the completed investigation and the opportunity for public review and comment on the technical feasibility of the proposed remedial alternative mentioned above. Please submit a draft notification to the Department via e-mail for review and approval prior to distribution. The Department will require a copy of the public notice letter and a list of all recipients, including abutters, tenants, and attendees of the public meeting.

The Department will formally approve the SIR in the form of a Remedial Decision Letter once this Public Notice issue is addressed and upon Department approval of all final responses to relevant public comments.

If you have any questions regarding this letter, please contact me by telephone at (401) 222-2797 ext. 7140 or by email at michael.andrews@dem.ri.gov.

Sincerely,

Michael D. Andrews
Sanitary Engineer
Office of Waste Management

Authorized by,

Kelly J. Owens
Assoc. Supervising Engineer
Office of Waste Management

Cc: James McGinn, P.E., RIDEM / Planning and Development.
Kevin Cute, RI Coastal Resources Management Council
Jill Ann Parrett, EA Engineering, Science, and Technology, Inc.

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

REMEDIAL DECISION LETTER December 8, 2008
CASE No. 2007-016

Mr. Robert McMahon
City of Providence, Parks Dept.
Dalrymple Boathouse, Roger Williams Park
1000 Elmwood Avenue
Providence, RI 02905

RE: Proposed East Transit Street Boat Ramp
East Transit Street
Plat Map 17, Lots 8 & 611
Providence, RI 02906
Case No. 2007-016

Dear Mr. McMahon:

In 2004, the Rhode Island Department of Environmental Management (the Department) amended the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in a timely and cost-effective manner. A **Remedial Decision Letter (RDL)** is a formal, written communication from the Department that approves a site investigation, identifies the preferred remedial alternative and authorizes the development of a Remedial Action Work Plan in order to achieve the objectives of the environmental clean-up.

The Department has the following documents on file in the matter of the above referenced "Site" (as defined in the Industrial Property Remediation and Reuse Act):

1. Notification of Release, dated February 27, 2007, prepared and submitted by the City of Providence Parks Department;

2. Report entitled: Site Investigation Report and Notice of Release, City of Providence Park's Department, Proposed Boat Ramp Facility, E. Transit Street, Providence, Rhode Island, dated February 2007 and prepared by the City of Providence Parks Department;

3. Correspondence entitled: Supplemental Site Investigation Work Plan, Proposed City of Providence Boat Ramp Facility, East Transit Street, Providence, Rhode Island, dated January 28, 2008, and prepared by EA Engineering, Science, and Technology, Inc.;

4. Report entitled: Site Investigation Report, East Transit Street Boat Ramp, Plat 17, Lots 8, 368, and 611, Providence, Rhode Island, dated October 2008 and prepared by EA Engineering, Science, and Technology, Inc.; and

5. Public Notification Letter, dated October 22, 2008, and prepared by EA Engineering, Science, and Technology, Inc.

Collectively, these documents define "Existing Contamination" at the Site, and fulfill the requirements of a Site Investigation Report (SIR) as described in Section 7.08 of the Remediation Regulations. In addition, according to our records, public notice was conducted to all abutting property owners and tenants, regarding the substantive findings of the completed investigation in accordance with Rules 7.07 and 7.09 of the Remediation Regulations. The Department has received documentation demonstrating that the requirements of Rhode Island General Laws (R.I.G.L.), title 23, Health and Safety, Chapter 23-19.14, Industrial Property Remediation and Reuse Act, 23-19.14-5, Environmental Equity and Public Participation, have been fulfilled. A public meeting was held to discuss the site investigation and proposed remedial alternatives on October 30, 2008. The opportunity for public review and comment on the technical feasibility of the proposed remedial alternatives commenced on October 30, 2008 and the period closed on November 13, 2008. No comments were received.

The preferred remedial alternative, as described in the SIR, requires the construction of an engineered barrier across the entire Site. This barrier will consist of one (1) foot of clean fill over a geotextile layer in landscaped areas and four (4) inches of asphalt pavement over six (6) inches of clean sub-base material. The boat ramp will be constructed of four (4) inches of concrete over six (6) inches of clean fill. An Environmental Land Usage Restriction (ELUR) shall be recorded on the deed for the entire property. The ELUR shall require the performance of annual inspections to document the status of the ELUR and the condition of the engineered controls at the Site. The ELUR shall include a soil management plan (SMP), which will address activities that disturb on-site soils. The ELUR, once approved by the Department, shall be recorded for the property (Plat 17, Lots 8, 368 and 611) in the Land Evidence Records for the City of Providence and a recorded copy forwarded back to the Department within fifteen (15) days of recording.

The Department hereby approves the SIR, with the above identified preferred remedial alternative, and requires a Remedial Action Work Plan (RAWP) be submitted for review and approval, and implemented, to achieve the objectives of the environmental clean-up, in accordance with the following conditions:

1. In accordance with Sections 8.0 and 9.0 of the Remediation Regulations, a RAWP, a draft ELUR, and an SMP shall be submitted for Department review and approval within ninety (90) days. The RAWP shall describe all of the technical details, engineer design elements, and schedules associated with the implementation of the proposed remedy. All of the subsections outlined in Section 9.0 of the Remediation Regulations must be included in order to facilitate the review and approval of the RAWP. If an item is not applicable to this Site, simply state that it is not applicable and provide an explanation in the RAWP.

2. Pursuant to Rule 10.02 of the Remediation Regulations, an application fee for Remedial Action Approvals in the amount of one thousand ($1,000) dollars shall be made payable to the State of Rhode Island General Treasurer and remitted to this Office with submission of the RAWP.

3. Once the Department reviews the RAWP for consistency with Sections 8.0 and 9.0 of the Remediation Regulations, any written comments generated and forwarded as a result of the review(s) shall be incorporated forthwith into a revised RAWP, to be re-submitted for final approval.

4. Upon finalization of the RAWP, the Department will issue a **Remedial Approval Letter** (RAL) signifying Department approval. All remedial measures required by the Department shall be implemented, in accordance with the approved schedule, to ensure all applicable exposure pathways at the site are appropriately addressed.

   Please be advised that the Department reserves the right to require additional actions under the aforementioned Remediation Regulations at the Property should any of the following occur:

   A. Conditions at the Site previously unknown to the Department are discovered;
   B. Information previously unknown to the Department becomes available;
   C. Policy and/or regulatory requirements change; and/or
   D. Failure by the City of Providence or any future holder of any interest in the Property to adhere to the terms and conditions of the Department approved RAWP, schedule, RAL, ELUR and/or Soil Management Plan (SMP) for the Property.

If you have any questions regarding this letter, please contact me by telephone at (401) 222-2797 ext. 7140 or by email at michael.andrews@dem.ri.gov.

Sincerely,

Michael D. Andrews
Sanitary Engineer
Office of Waste Management

Authorized by,

Kelly J. Owens
Assoc. Supervising Engineer
Office of Waste Management

Site Investigation Report
East Transit Street Boat Ramp
Plat 17, Lots 8, 368, and 611
Providence, Rhode Island

Prepared for:

City of Providence Parks Department
Roger Williams Park – Dalrymple Boathouse
100 Elmwood Avenue
Providence, Rhode Island 02905

Prepared by:

EA Engineering, Science, and Technology, Inc.
2350 Post Road
Warwick, Rhode Island 02886

October 2008
EA Project No. 61891.06

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LIST OF ACRONYMS

AST	Aboveground storage tank
EA	EA Engineering, Science, and Technology, Inc.
ELUR	Environmental Land Usage Restriction
EPA	(U.S.) Environmental Protection Agency
FID	Flame ionization detector
PAH	Polycyclic aromatic hydrocarbons
PCB	Polychlorinated biphenyls
PID	Photoionization detector
PVC	Polyvinyl chloride
RCRA	Resource Conservation and Recovery Act
RDEC	Residential Direct Exposure Criteria
RIDEM	Rhode Island Department of Environmental Management
SVOC	Semivolatile organic compound
TCLP	Toxicity Characteristics Leaching Procedure
TPH	Total petroleum hydrocarbons
UST	Underground storage tank
VOA	Volatile organic analysis
VOC	Volatile organic compound

1. INTRODUCTION AND BACKGROUND

On behalf of City of Providence Parks Department, EA Engineering, Science, and Technology, Inc. (EA) is submitting this Site Investigation Report in accordance with the Rhode Island Department of Environmental Management (RIDEM) *Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases* (*Remediation Regulations*), March 1993, as amended August 1996 and February 2004. This work plan describes the investigation and sampling activities conducted to support the excavation and dredging to occur during the construction of a boat ramp at the terminus of East Transit Street in Providence, Rhode Island (the Site). The Site location is depicted on Figure 1.

The Site was historically a riverine marsh along the Seekonk River until filling activities occurred throughout the area between 1894 and 1935. The fill material is characterized as soils mixed with rubbish and construction/demolition debris, as well as ash layers. The City of Providence Parks Department has proposed constructing a boat ramp on the undeveloped Site. As part of the proposed boat ramp and associated parking area construction, fill will have to be removed to maintain proper grading. This site investigation was completed to determine the nature and extent of the fill materials expected to be excavated during construction activities.

2. SITE DESCRIPTION AND PREVIOUS ENVIRONMENTAL INVESTIGATIONS

The site of the proposed East Transit Street boat ramp is currently undeveloped and has been undeveloped throughout the scope of available records. Figure 1 is a Site Locus Map depicting the location of the proposed boat ramp at the eastern terminus of East Transit Street in Providence, Rhode Island. The Site is designated on the City of Providence Tax Assessor's Map as portions of Plat 17, Lots 8, 368, and 611. The Site is defined as an irregular shaped parcel, the boundaries of which are shown on the Site Plan (Figure 2). The Site is bordered to the north by a city-owned park, to the west by a small automobile junk yard, to the east by the Seekonk River, and to the south by an office/warehouse.

The western portion of the Site is currently utilized as an unpaved parking area. The eastern portion of the Site is unmaintained with overgrown mixed grasses and contains construction/demolition debris and rubbish. The topography in the area of the Site generally slopes towards the east and the Seekonk River. According to City of Providence personnel, the Site was formerly a riverine marsh area that was filled in the early 20th century. The soil is mapped as the Udorthents urban land complex (UD). The Soil Survey of Rhode Island describes this complex as moderately well drained to excessively drained soils that have been disturbed by cutting or filling, and areas that are covered by buildings and pavement.

Abutting the Site to the west is M & S Auto Repairing. The property is considered a Resource Conservation and Recovery Act (RCRA) small-quantity generator due to the waste oil generated by processes conducted during daily operations. In February 2004, the property was reported to have a leaking underground storage tank (UST). According to RIDEM personnel, the property is in legal proceedings and therefore the file cannot be reviewed. Additionally, a letter of non-compliance was issued by RIDEM for this property on 30 July 2004 due to waste oil, stored in a 55-gal drum and a 275-gal aboveground storage tank (AST), not being characterized prior to disposal. The situation was rectified and a letter of compliance was issued on 17 November 2004.

A soils study was conducted by Northeast Environmental Testing Laboratory, Inc. in January 2006. This study included test pitting and soil sampling in five locations. The test pits were excavated to a depth of 2 ft. The samples collected were composites of two grabs from within each test pit. The first grab was from either 8 or 12 in. below surface grade and the second grab was from 2 ft below surface grade. These samples were analyzed for metals, total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and pesticides. Results of the detected analytes are summarized in Table 1.

TABLE 1 ANALYTES DETECTED – SOIL SAMPLES JANUARY 2006

Analyte Detectd (mg/kg)	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	RIDEM RDEC
Arsenic	0.5	1.2	0.9	0.2	0.6	7.0
Barium	62.0	200.0	19.6	32.3	6.2	5,500
Cadmium	ND	0.2	ND	ND	0.6	39
Chromium	11.0	17.0	9.2	13.2	9.7	1,400
Lead	**539.2**	**605.0**	**268.6**	**191.1**	**172.3**	150
Mercury	1.0	0.6	0.3	0.5	1.3	23
Selenium	0.6	1.0	0.3	0.2	0.3	390
Silver	0.4	0.4	0.6	0.6	0.2	200

Note: mg/kg = Milligrams per Kilogram (parts per million).
RDEC = Residential Direct Exposure Criteria.
ND = Not detected above the Method Detection Limit.
Bold indicates an exceedance of the RIDEM RDEC.

The soil analyses did not detect TPH, VOCs, PCBs, or pesticides in any of the five samples. Lead is the only analyte detected above the RIDEM Residential Direct Exposure Criteria (RDEC); lead was detected above the RIDEM RDEC in each of the five soil samples. The City of Providence Parks Department completed a Hazardous Material Release Notification Form in response to the results of this soil analysis. The January 2006 Soils Study and Analytical Report is included in Appendix A.

In September 2006, EA advanced seven test pits at the Site to characterize the nature of the fill material. Figure 3 shows the approximate location of the test pits. They were excavated to depths between 8 and 12 ft below surface grade into the native soils beneath the fill material. The fill material was noted to contain various materials including concrete, metal, rubber, brick, marine shells, and household waste products. A flame ionization detector (FID) was used to detect hydrocarbons present in the soils. The fill material and native material were analyzed separately. A headspace reading of 196.9 parts per million (ppm) was measured above a native peat layer in the sixth test pit (TP-6) believed to be due to methane gas present from the anaerobic decomposition of plant matter. No visual or olfactory evidence of solvent or petroleum contamination were noted. The test pit logs are provided in Appendix B.

A groundwater monitoring well is located near the eastern edge of the unpaved parking area on the Site. The installation date and any results garnered from groundwater sampling activities of the monitoring well are unknown.

3. FIELD ACTIVITIES

In order to characterize the fill material found at the Site, EA conducted a site investigation at the proposed boat ramp location involving the collection of soil, groundwater, and sediment samples from the Site.

3.1 SOIL INVESTIGATION

On 8 September 2008, EA advanced three soil borings to further characterize the nature and extent of fill materials expected to be excavated during boat ramp construction activities. Boring locations are included on Figure 2. The soil borings were advanced using truck-mounted Geoprobe direct-push technology. The borings were advanced to approximately 5 ft below the groundwater surface. Soils throughout the length of the soil boring were screened for VOCs using a photoionization detector (PID) by the jar headspace method. No PID readings exceeded 2 ppm. Samples were collected using dedicated 5 ft long, 2-in. diameter acetate sleeves, and were logged using the United Soil Classification System and examined for evidence of fill material. Two soil samples from each soil boring within the presumed interval of fill material were collected for characterization purposes. The depth of the samples could not be accurately identified due to boring collapses and insignificant recovery within the poorly compacted fill. The depths of the samples collected may not signify the fill depth; however, all samples collected were comprised of fill material. The grab samples were submitted to a Rhode Island certified laboratory for analysis of the following parameters:

- Semivolatile organic compounds (SVOCs) by U.S. Environmental Protection Agency (EPA) Method 8270C
- Priority Pollutant Metals by EPA Method 3050B/6000/7000
- Toxicity Characteristic Leaching Procedure (TCLP) by EPA Method 1311/6000/7000.

As no elevated PID screening results were noted, no soil samples were submitted for laboratory analysis of VOCs. The Certificate of Analysis for the soil samples is included in Appendix C, and a summary of the detected analytes is provided in Table 2.

TABLE 2 ANALYTES DETECTED – SOIL SAMPLES 8 SEPTEMBER 2008

Analyte Detected (mg/kg)	MW-100 (2-4 ft)	MW-100 (9-11ft)	MW-101 (2-4 ft)	MW-101 (9-11 ft)	MW-102 (2-4 ft)	MW-102 (9-11 ft)	RIDEM RDEC
Total Metals							
Arsenic	5.8	4.0	4.5	4.6	3.8	5.9	7
Beryllium	0.35	0.32	0.29	0.33	0.31	0.33	0.4
Chromium	13.4	15.0	13.7	12.4	12.2	12.6	1400
Copper	32.9	32.4	45.8	31.5	49.4	26.9	3100
Lead	116	59.7	**179**	120	**234**	**181**	150
Mercury	0.237	0.202	0.330	0.199	0.232	0.248	23
Nickel	11.9	10.4	8.9	12.3	9.9	10.7	1000

Analyte Detected (mg/kg)	MW-100 (2-4 ft)	MW-100 (9-11ft)	MW-101 (2-4 ft)	MW-101 (9-11 ft)	MW-102 (2-4 ft)	MW-102 (9-11 ft)	RIDEM RDEC
Zinc	76.8	68.7	191	279	138	128	6000
Semi-Volatile Organic Compounds							
Acenaphthylene	ND	ND	3.02	ND	ND	ND	23
Anthracene	ND	ND	5.09	1.23	ND	0.393	35
Benzo(a)anthracene	**1.04**	**3.01**	**10.2**	**3.65**	**1.01**	**1.08**	0.9
Benzo(a)pyrene	**0.893**	**2.78**	**8.92**	**3.57**	**1.02**	**0.940**	0.4
Benzo(b)fluoranthene	0.886	**3.16**	**9.15**	**3.01**	**1.11**	0.883	0.9
Benzo(g,h,i)perylene	ND	ND	**5.10**	**1.69**	0.516	0.541	0.8
Benzo(k)fluoranthene	0.786	**2.29**	**6.61**	**3.51**	**0.990**	**1.01**	0.9
Carbazole	ND	ND	2.16	ND	ND	ND	--
Chrysene	**0.904**	**2.65**	**8.40**	**3.10**	**0.963**	**0.977**	0.4
Dibenzo(a,h)anthracene	ND	**1.05**	**0.999**	**0.507**	ND	ND	0.4
Dibenzofuran	ND	ND	2.29	ND	ND	ND	--
Fluoranthene	2.69	7.56	**29.7**	8.70	2.32	2.79	20
Fluorene	ND	ND	2.96	ND	ND	ND	28
Indeno(1,2,3-cd)pyrene	ND	ND	**4.71**	**1.67**	0.476	0.467	0.9
Naphthalene	ND	ND	1.21	ND	ND	ND	54
Phenanthrene	1.71	6.02	25.2	5.01	1.37	1.81	40
Pyrene	1.81	7.87	**22.0**	7.75	1.91	2.17	13
TCLP (mg/L)							
Lead	0.071	0.063	0.059	0.264	0.120	0.420	5*

Note: **Bold** indicates an exceedance of the applicable standard.
ND = Not detected above the Method Detection Limit.
-- = No standard established for this analyte.
RDEC is RIDEM's Residential Direct Exposure Criteria.
*TCLP Lead results compared to the EPA Toxicity Characteristic (5 mg/L).

Soil sample results indicate that lead is the only priority pollutant metal in exceedance of the RIDEM RDEC; lead was detected above the RIDEM RDEC in MW-101 (2-4 ft), MW-102 (2-4 ft), and MW-102 (9-11 ft). In the TCLP analysis lead was detected below the EPA's toxicity characteristic in each of the six samples. Several SVOCs were also detected at concentrations above the RIDEM RDEC; all SVOCs detected at elevated levels were within the polycyclic aromatic hydrocarbons (PAHs) group of SVOCs. Boring logs are included as Appendix D.

3.2 GROUNDWATER INVESTIGATION

Permanent groundwater monitoring wells were installed in each of the three soil borings on 8 September 2008. The locations are shown on Figure 4. The three groundwater monitoring wells were constructed of 2-in. diameter polyvinyl chloride (PVC) with the bottom 10 ft screened with 2-in. diameter PVC with 0.010-in. slotted screen. The wells were completed with locking steel standpipes, approximately 3 ft above ground surface. The annular space around the screen to 2 ft above the screen was filled with Size 2 clean sand. Bentonite was installed above the sand to

seal the annular space, and the wells were backfilled with local cutting to the surface. Well construction diagrams are included as Appendix D.

On 12 September 2008, each well was gauged using an oil/water interface probe. No separate-phase petroleum was noted on the water table. Following gauging, three times the standing well volume of water was purged using a low-flow peristaltic pump and dedicated polyethylene tubing. After the appropriate volume of water was purged, groundwater samples were collected in laboratory-provided hydrochloric acid-preserved volatile organic analysis (VOA) vials for analysis of VOCs by EPA Method 8260B at a Rhode Island certified laboratory. Additionally, a trip blank was submitted with the samples to verify that no VOC contamination occurred in transit. The Certificate of Analysis for the groundwater samples is provided in Appendix E.

No analytes were detected above the method reporting limit in the groundwater sample analysis. Therefore, the impacted fill material has shown to not be affecting groundwater quality at the Site.

3.3 SEDIMENT INVESTIGATION

In order to characterize potential dredge material, on 12 September 2008 EA collected two sediment samples from the area adjacent to the shoreline from an interval of approximately 0-3 ft below the sediment surface. The sampling locations are included on Figure 2. Sediment samples were collected using a stainless steel hand auger with a 3.25-in auger bucket. The auger was advanced to maximum bucket capacity, emptied into a dedicated aluminum tray, and the boring was then continued until a depth of approximately 3 ft was obtained. The collected sediment was homogenized in the aluminum tray. Objects larger than medium gravel were removed. The sediment was placed into the appropriate laboratory-provided and –preserved containers and submitted for analysis of the following parameters:

- Oil and grease by EPA Method 1664
- Percent solid
- Total organic carbon
- Total volatile solids
- Percent silt/clay
- Specific gravity
- VOCs by EPA Method 8260/5035
- Total petroleum hydrocarbons by EPA Method 8100
- SVOCs by EPA Method 8270
- Priority Pollutant Metals by EPA Method 6010/7741/graphite furnace
- Resource Conservation and Recovery Act (RCRA) 8 Metals – TCLP EPA Method 1311/6010
- Polychlorinated biphenyls by EPA Method 8082.

No VOCs were detected in any of the samples. The Certificate of Analysis for the sediment samples is included in Appendix F, and a summary of the detected analytes is provided in Table 3.

TABLE 3 ANALYTES DETECTED – SEDIMENT SAMPLES 12 SEPTEMBER 2008

Analyte Detected (ppm)	SD-EA-1	SD-EA-2	RIDEM RDEC
Total Metals			
Beryllium	0.22	0.29	0.4
Chromium	6.7	11.9	1,790
Copper	32.5	52.0	3,100
Lead	48.7	105	150
Mercury	ND	0.055	23
Nickel	6.3	8.9	1,000
Zinc	87.2	144	6,000
Total Petroleum Hydrocarbons			
TPH	123	255	500
Semi-Volatile Organic Compounds			
Benzo(a)anthracene	ND	**1.65**	0.9
Benzo(a)pyrene	**0.644**	**1.65**	0.4
Benzo(b)fluoranthene	**0.964**	**1.89**	0.9
Benzo(k)fluoranthene	ND	**1.36**	0.9
Chrysene	**0.622**	**1.55**	0.4
Bis(2-ethylhexyl)phthalate	ND	1.20	46
Dibenzo(a,h)anthracene	ND	**0.506**	0.4
Fluoranthene	1.15	3.31	20
Phenanthrene	ND	1.41	40
Pyrene	1.11	2.76	12
Polychlorinated Biphenyls			
Aroclor 1260	ND	0.0698	10
TCLP Metals			
Lead	0.209	0.302	5*
Oil & Grease	436	838	--
Total Organic Carbon	4600	38,000	--

Note: **Bold** indicates an exceedance of the applicable standard.
ND = Not detected above the Method Detection Limit.
-- = No standard established for this analyte.
RDEC is RIDEM's Residential Direct Exposure Criteria.
*TCLP Lead results compared to the EPA Toxicity Characteristic (5 mg/L)

Results indicate that sediment is impacted with PAHs, similar to the type of contamination noted in soils. Some sediment from the area of these two grab samples will be dredged to allow for the construction of the boat ramp. Following dredging, these soils will be disposed of off-site.

4. REMEDIAL ALTERNATIVES

Based upon the data collected during this investigation and those previously conducted on behalf of the City of Providence, it has been determined that remediation will be required to address the elevated concentrations of lead and PAHs relative to the RDEC within Site soils. These remedial alternatives have been evaluated using the proposed redevelopment of the Site as a boat ramp (recreational area) and associated parking area to determine the most practical options. Remedial alternatives are proposed in the following sections.

4.1 REMEDIAL ALTERNATIVE 1 – NO ACTION

As previously indicated, although the nature of the observed contamination indicates that migration is not a concern, it will be necessary to protect sensitive receptors (e.g., Seekonk River) and Site visitors in the future. This remedial alternative would not accomplish this goal and is therefore not recommended.

4.2 REMEDIAL ALTERNATIVE 2 – REMOVAL AND OFF-SITE DISPOSAL

One remedial alternative would involve the excavation and off-site disposal of all impacted soils at the Site. This alternative would remove any potential source of future contamination while removing the immediate direct exposure risks. However, this alternative may not be the most efficient or practical for the Site. The fill material is widespread at the Site and is presumed to extend onto neighboring lots. A removal effort may impact adjacent properties. Also, removing all material could worsen impacts to the adjacent Seekonk River. A removal would be expensive, and may result in a net loss of land area, as evidence exists that the land was created through the filling of wetlands along the river. Therefore, this remedial alternative is not recommended on a large scale at the Site.

However, given the nature of the proposed reuse at the Site, it is expected that some volume of impacted soil will be excavated and transported off-site for disposal. The Site needs to be brought to an appropriate grate to support boat ramp construction. At the time of this report, preliminary designs indicate that a total of 2,000 yds^3 may be excavated for disposal. Although this excavation will be taking place to address redevelopment requirements, it will serve to improve the environmental condition of the Site.

4.3 REMEDIAL ALTERNATIVE 3 – ENGINEERING CAP AND ENVIRONMENTAL LAND USAGE RESTRICTION

The third and preferred remedial alternative involves the construction of an engineered cap at the Site. Prior to cap construction, surficial debris removal will be to address the exposed miscellaneous waste material. Clearing, grubbing, and rough grading will also be required to establish a suitable base for construction. The grading will include establishing a more natural grade along the shoreline of the Seekonk River. Cap construction will include landscaped areas consisting of the compacted sub-base, a non-woven geotextile layer, and a layer of topsoil; paved parking areas consisting of 6 in. of certified clean fill material below 4 in. of asphalt paving; and

the boat ramp, which will consist of 6 in. of certified clean fill material below 4 in. of concrete. This cap will serve to isolate impacted soil from exposure to Site visitors and prevent environmental degradation of the adjacent river.

An Environmental Land Usage Restriction (ELUR) documenting maintenance, and annual inspections of the engineered cap will be recorded in the land evidence records for the property following completion of the remedial activities. The ELUR will include requirements for annual cap inspections and reports to RIDEM, as well as a soil management plan to prescribe measures to be taken in the event of future excavation activities at the Site.

EA recommends the implementation of this remedial alternative to bring the proposed East Transit Street Boat Ramp Site into compliance with the RIDEM Remediation Regulations. This remedial alternative will isolate the exposed fill material from direct exposure, and prevent potential migration onto adjacent recreational properties or into the adjacent river in the future. Upon RIDEM concurrence with this remedial alternative, the City of Providence will submit a Remedial Action Work Plan which will contain a detailed design to implement this remedial alternative at the proposed East Transit Street Boat Ramp Site.

CERTIFICATIONS

The undersigned certify that this Site Investigation Report is a complete and accurate representation of the activities that occurred at the Site and contains all known facts surrounding the Site to the best of their knowledge.

Jill Ann Parrett 10/6/08

Jill Ann Parrett, P.G. Date
EA Engineering, Science, and Technology, Inc.
Project Manager

Robert F. McMahon 10/10/8

Robert McMahon Date
Superintendent, Providence Parks Department
Site Owner

EA ENGINEERING, SCIENCE, AND TECHNOLOGY	SITE INVESTIGATION REPORT EAST TRANSIT STREET BOAT RAMP PROVIDENCE, RHODE ISLAND	LOCUS MAP FIGURE 1 PROVIDENCE QUADRANGLE USGS 1987

PROJECT MGR	DESIGNED BY	DRAWN BY	CHECKED BY	SCALE	DATE	PROJECT NO	FIGURE
JAP	RGM	RGM	JAP	NONE	5-16-2008	61891.06	-

EA ENGINEERING, SCIENCE, AND TECHNOLOGY	PROPOSED BOAT RAMP FACILITY EAST TRANSIT STREET PROVIDENCE, RHODE ISLAND	FIGURE 2 SITE PLAN SITE INVESTIGATION REPORT	DESIGNED BY: RGM	DRAWN BY: RGM	DATE: OCTOBER 2008	PROJECT NO.: 61891.06
			CHECKED BY: JAP	PROJECT MGR.: JAP	SCALE: AS NOTED	FIGURE: 2

EA Engineering, Science, and Technology, Inc.

Airport Professional Park
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www.eaest.com

28 January 2008

Mr. Michael D. Andrews
Sanitary Engineer
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02908

RE: Supplemental Site Investigation Work Plan
Proposed City of Providence Boat Ramp Facility, East Transit Street
Providence, Rhode Island
RIDEM Case No. 2007-016
EA Project No. 61891.06

Dear Mr. Andrews:

In response to the 25 June 2007 Letter of Responsibility, issued by the Rhode Island Department of Environmental Management (RIDEM) Office of Waste Management, EA Engineering, Science, and Technology, Inc. (EA) has prepared this Supplemental Site Investigation Work Plan to detail the proposed additional investigation activities at the proposed East Transit Street Boat Ramp. The Site is included on the City of Providence Tax Assessor Map 17 as Lots 8 and 611. EA has been contracted by the City of Providence to address the comments outlined in the Letter of Responsibility through additional investigation activities.

1. SCOPE OF WORK

1.1 SOIL INVESTIGATION

An EA geologist will oversee the installation of three soil borings to further characterize the nature and extent of fill materials expected to be excavated during boat ramp construction activities. These soil borings will be advanced using a truck-mounted Geoprobe. Soil borings will be advanced to at least 5 ft below the groundwater interface. Soils throughout the length of the soil borings will be screened using a flame ionization detector by the jar headspace method. Soils will also be thoroughly inspected for evidence of contamination, including staining or odors, and logged for composition. Two soil samples will be collected from each soil boring within the interval of fill material for characterization purposes. These grab samples will be submitted for laboratory analysis of the following parameters:

- Semivolatile organic compounds by U.S. Environmental Protection Agency (EPA) Method 8270

- Priority Pollutant Metals by EPA Method 6010/7741/graphite furnace
- Toxicity Characteristic Leaching Procedure Lead by EPA Method 1311/6010.

In the event that evidence of contamination is noted at any of these locations, soils will also be collected from the impacted interval and submitted for laboratory analysis of total petroleum hydrocarbons by EPA Method 8100 and volatile organic compounds by EPA Method 8260B/5035.

At least one of the borings will be installed in the footprint of the 3 October 2006 TP-6, along the eastern slope of the Site, at which elevated flame ionization detector headspace results were noted. Although EA has attributed these elevated screening results to the presence of peat within the native material underlying the fill, this conclusion will be evaluated through further investigation.

Proposed boring locations are included on the attached figure (Attachment A).

1.2 GROUNDWATER INVESTIGATION

Permanent groundwater monitoring wells will be installed in each of the three soil borings. These wells will be finished as 2-in. diameter groundwater monitoring wells, with the bottom 10-ft interval finished with 0.010-in. slotted screen and riser to approximately 2 ft above ground surface. The annular space around the screen will be surrounded by sand and sealed with bentonite and grout at the surface.

Each well will be gauged prior to sampling using an oil/water interface probe to determine whether separate-phase petroleum is present on the water table. Following gauging, three times the standing well volume of water will be purged. Following purging, a groundwater sample will be collected for laboratory analysis of volatile organic compounds by EPA Method 8260B.

1.3 SEDIMENT INVESTIGATION

In order to characterize potential dredge material, EA will collect two sediment samples from the area adjacent to the shoreline from an interval of approximately 0-3 ft below the sediment surface. Sediment samples will be collected using a sediment corer with a 3-in. core barrel. The core barrel is lined with 2.75-in diameter butyrate tubing. The core barrel and liner are assembled and retrieved in 2-ft sections. Core penetration will be to a depth of approximately 3 ft below bottom surface or to refusal. As sections are retrieved, the butyrate liner is capped and labeled. The capped core sections are retained on ice until they are processed.

Sediment cores will be homogenized in a stainless steel mixing bowl. Objects larger than medium gravel will be removed. The sediment will be placed into the appropriate containers and will be submitted for laboratory analysis of the following parameters:

- Oil and grease by EPA Method 1664
- Percent solid
- Total organic carbon

- Total volatile solids
- Percent silt/clay
- Specific gravity
- Volatile organic compounds by EPA Method 8260/5035
- Total petroleum hydrocarbons by EPA Method 8100
- Semivolatile organic compounds by EPA Method 8270
- Priority Pollutant Metals by EPA Method 6010/7741/graphite furnace
- Resource Conservation and Recover Act 8 Metals – Toxicity Characteristic Leaching Procedure EPA Method 1311/6010
- Polychlorinated biphenyls by EPA Method 8082.

Each sample container will be labeled with the core sample location, depth interval, time, date, sampler, preservation method (if appropriate), and analysis required.

1.4 SITE INVESTIGATION REPORT ADDENDUM

Following receipt of analytical results, EA will prepare a Site Investigation Report Addendum. This report will include historical data, previously collected data, and a summary of new data collected under the previous task. This Site Investigation Report Addendum will be prepared by EA to summarize these investigation activities in accordance with Section 7.0 of the RIDEM *Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases* (February 2004). This report will include documentation of all investigation activities and will propose at least two remedial alternatives to address the contamination.

If you have any comments or questions on the Supplemental Site Investigation Work Plan above, please contact me at (401) 736-3440, Extension 203.

Sincerely yours,

EA ENGINEERING, SCIENCE,
AND TECHNOLOGY, INC.

Timothy C. Regan, P.E., MBA
Senior Engineer

TCR/mkp
Attachment

EA ENGINEERING SCIENCE AND TECHNOLOGY	PROPOSED BOAT RAMP FACILITY LAST TRANSIT STREET	SITE PLAN FIGURE 2 APPENDIX A	DESIGNED BY RGM	DRAWN BY RGM	DATE 1-28-08	PROJECT NO. 61861.08
			CHECKED BY JAP	PROJECT MGR. JAP	SCALE 1" = 40'	FIGURE 2

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

July 13, 2009

REMEDIAL APPROVAL LETTER

Mr. Robert McMahon
City of Providence, Parks Dept.
Dalrymple Boathouse, Roger Williams Park
1000 Elmwood Avenue
Providence, RI 02905

RE: Proposed East Transit Street Boat Ramp
East Transit Street
Plat Map 17, Lots 8, 368 & 611
Providence, RI 02906
Case No. 2007-016

Dear Mr. McMahon:

On February 24, 2004, the Rhode Island Department of Environmental Management's (the Department) Office of Waste Management (the Office) amended the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in a timely and cost-effective manner. A **Remedial Approval Letter** (RAL) is a document used by the Department to approve remedial actions at contaminated sites that do not involve the use of complex engineered systems or techniques (e.g., groundwater pump and treat systems, soil vapor extraction systems, etc.).

In the matter of the above referenced property (the "Site"), the Department has on file the following documents submitted on behalf of the City of Providence Parks Department (the City):

1. Notification of Release, dated February 27, 2007, prepared and submitted by the City of Providence Parks Department;

2. Report entitled: Site Investigation Report and Notice of Release, City of Providence Park's Department, Proposed Boat Ramp Facility, E. Transit Street, Providence, Rhode Island, dated February 2007 and prepared by the City of Providence Parks Department;

3. Correspondence entitled: Supplemental Site Investigation Work Plan, Proposed City of Providence Boat Ramp Facility, East Transit Street, Providence, Rhode Island, dated January 28, 2008, and prepared by EA Engineering, Science, and Technology, Inc.;

4. Report entitled: Site Investigation Report, East Transit Street Boat Ramp, Plat 17, Lots 8, 368, and 611, Providence, Rhode Island, dated October 2008 and prepared by EA Engineering, Science, and Technology, Inc.;

5. Correspondence entitled: Public Notification Letter, dated October 22, 2008, and prepared by EA Engineering, Science, and Technology, Inc.; and

6. Report entitled: Remedial Action Work Plan, East Transit Street Boat Ramp Project, East Transit Street, Providence, Rhode Island, dated March 2009 and prepared by EA Engineering, Science, and Technology, Inc.;

Together these documents fulfill the requirements of Section 8.00 (Risk Management) and Section 9.00 (Remedial Action Work Plan) of the Remediation Regulations.

The Remedial Action Work Plan (RAWP) requires the construction of an engineered barrier across the entire Site. This barrier will consist of one (1) foot of clean fill over a geotextile layer in landscaped areas and four (4) inches of asphalt pavement over six (6) inches of clean sub-base material. The boat ramp will be constructed of four (4) inches of concrete over six (6) inches of clean fill. An Environmental Land Usage Restriction (ELUR) shall be recorded on the deed for the entire property. The ELUR shall require the performance of annual inspections to document the status of the ELUR and the condition of the engineered controls at the Site. The ELUR shall include a soil management plan (SMP), which will address activities that disturb on-site soils. The ELUR shall be recorded for the property (Plat 17, Lots 8, 368 and 611) in the Land Evidence Records for the City of Providence and a recorded copy forwarded back to the Department within fifteen (15) days of recording.

The Department approves the draft ELUR, SMP and RAWP provided that all activities and procedures detailed in the RAWP and associated documentation are strictly followed. Any changes in the RAWP shall be pre-approved by the Department and any minor changes shall be reported to the Department by telephone within one (1) working day and in writing within five (5) working days.

No later than thirty (30) days following the completion of the Remedial Action at the site, a Remedial Action Closure Report detailing the Remedial Action and current status of the property shall be submitted to the Department for review and approval. Upon approval of the Closure Report, and receipt of a copy of the stamped and recorded Department-approved ELUR and SMP for the property, the Department will issue a Letter of Compliance for the property.

The Department no longer requires the submittal of analytical data **prior** to clean fill being brought to a Site. It is the sole responsibility of the City and their consultant to analyze the material and certify that the material meets the Department's Residential Direct Exposure Criteria (RDEC), as defined by the Remediation Regulations, for all constituents, and is suitable for use on the Site. The Department strongly suggests that enough representative samples of the clean fill are collected prior to moving the material to the Site to satisfy the City and their consultant that the material meets RDEC. Please note that the Department reserves its rights to sample the clean fill, if suspect, to confirm compliance with the RDEC.

Pursuant to Rule 10.02 of the Remediation Regulations, the Department requires that the City submit an application fee for Remedial Action Approvals in the amount of one thousand ($1,000) dollars. The check shall be made payable to the State of Rhode Island General Treasurer and remitted to this Office as soon as possible.

This Remedial Approval Letter does not remove your obligations to obtain any other necessary permits from other local, state, or federal agencies. **Please notify the Department at least forty-eight (48) hours in advance of any remedial work.**

If you have any questions or are in need of any clarification regarding this document, please contact me by telephone at (401) 222-2797 ext. 7140 or by e-mail at michael.andrews@dem.ri.gov.

Sincerely,

Michael D. Andrews
Sanitary Engineer
Office of Waste Management

Authorized by,

Kelly J. Owens
Assoc. Supervising Engineer
Office of Waste Management

Cc: James McGinn, P.E., RIDEM / Planning and Development.
Kevin Cute, RI Coastal Resources Management Council

ENVIRONMENTAL SITE ASSESSMENT
SEEKONK RIVER APARTMENTS
PROVIDENCE, RHODE ISLAND

PREPARED FOR:
FERLAND CORPORATION
PAWTUCKET, RHODE ISLAND

PREPARED BY:
GOLDBERG-ZOINO & ASSOCIATES, INC.
PROVIDENCE, RHODE ISLAND

FILE NO. Y-30040
JUNE 1987

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GZA
GOLDBERG • ZOINO & ASSOCIATES, INC.
GEOTECHNICAL-GEOHYDROLOGICAL CONSULTANTS

June 9, 1987
File No. Y-30040

Ferland Corporation
30 Monticello Road
Pawtucket, R.I. 02861

Attention: Mr. R. James Ferland

RE: Environmental Site Assessment
Seekonk River Apartments
Providence, Rhode Island

Dear Mr. Ferland:

Goldberg-Zoino & Associates, Inc. (GZA) has prepared this report summarizing the results of an environmental site assessment conducted at the above-referenced site in Providence, Rhode Island.

Test results, generated as part of this assessment, revealed the presence of two unknown volatile organic compounds (VOCs) at trace levels in one soil sample. It is GZA's opinion that such levels of VOCs are commonly encountered by GZA during the course of similar site assessments.

With the absence of information suggesting a definable or on-going source of these compounds, or a nearby sensitive receptor which might be significantly affected by even low levels of contamination, it has generally been GZA's opinion that the presence of trace levels of unknown VOCs does not, in itself, warrant further study.

This report has been prepared in accordance with the Terms and Conditions set forth in Section 7.00 and Appendix A. No other warranty, expressed or implied, is made.

We trust the report presented herein satisfies your current requirements. Should you have any questions or comments, please do not hesitate to contact the undersigned. We have appreciated the opportunity to assist you on this project.

Very truly yours,

GOLDBERG-ZOINO & ASSOCIATES, INC.

Thomas R. Quigley
Environmental Engineer

Frank W. Clark, P.E.
Associate

John P. Hartley
Project Reviewer

TRQ/NAC:lam

Enclosure

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1.00 INTRODUCTION

This report details work observed and performed by Goldberg-Zoino & Associates, Inc. (GZA) at the proposed Seekonk River Apartments development abutting East George Street and Butler Avenue in Providence, Rhode Island. This work was initiated in accordance with GZA's proposal dated April 24, 1987. The purpose of the assessment was to evaluate whether hazardous material or oil is present in the soil and groundwater at the site.

Previous to GZA's involvement with this site, a separate environmental study was completed in 1986 by Waterman Engineering Company of East Providence, Rhode Island. Applicable information from that study will be referenced herein; however, GZA is not privy to the details associated with the execution of that study.

1.10 SITE BACKGROUND

The subject site is approximately 6 acres in size and is located in the eastern portion of Providence, Rhode Island, as shown on Locus Plan, Figure 1. The subject property is bordered to the north by East George Street, by the Seekonk River to east and south, and to the west by Butler Avenue.

The site is presently owned by the Koffler Realty Association. Previous to their ownership in 1986, the land was owned by the Koffler Corporation. Mr. Richard Bornstein purchased the property from Brown University in 1982. Brown University's ownership dated back to the pre-World War II era.

From the post-World War II era to 1982, Brown University's Nuclear Physics Department conducted particle acceleration experiments on-site. Upon vacating the site, Brown University hired a private company to "scrub down" the site twice to rid the structures of residual contamination associated with the neutron bombardment experiments.

The Rhode Island Department of Health (RIDOH) performed an independent inspection and survey of the nuclear laboratory facilities at the site on March 8, 1982. The RIDOH reported "the results of the field measurements for beta/gamma radiation were negative" and "the facilities were found to have met the requirements for decontamination and to be releaseable for unrestricted use" (refer to RIDOH letter in Appendix B).

1.20 SITE DESCRIPTION

The property has historically been the site of erratic filling, with a ground surface that is very irregular and partially covered with heavy brush and trees. Several mounds of stockpiled

debris are located within the central portion of the site. A vegetated wet area exists within the southwestern corner of the site. In general, the subject property gradually slopes from the northern boundary at East George Street to the southern border at the Seekonk River (refer to Exploration Location Plan, Figure No. 2).

Within the northwestern portion of the site are located the foundation remains of two nuclear physics structures that housed two laboratories and office space operated by Brown University. This relatively flat, grass-lined area is surrounded by a chain link fence. The foundation remains from a former greenhouse are located at the north/central portion of the subject property. Other than the three foundations, there are no other structures on-site.

2.00 SITE HISTORY

As part of the site assessment, the Providence Assessor's Office, Rhode Island Historical Society and the Providence Public Works Department were contacted with regard to the history of the subject property. In addition, RIDOH, the Providence Fire Department and the Rhode Island Department of Environmental Management (RIDEM) were contacted regarding their knowledge of the possible presence of hazardous materials or oil at the site (refer to Appendix B for a list of individuals and agencies contacted for site specific information).

2.10 LOCAL FILE SEARCH

Conversations with local officials at the Providence Fire and Public Works Departments indicated there were no records of complaints or other indications of the presence of hazardous material or oil at the study site. There was no record of underground storage tanks at the site within the Fire Department files.

A worker for the neighboring Salvation Army complex, familar with th
the site background, stated that during Brown University's owner-
ship, household refuse and construction-type debris was
backfilled into the Seekonk River. Previous to this activity,
boats would dock at the rear or southside of the former mill
complex.

Turn of the century insurance maps, reviewed at the Rhode Island
Historical Society, confirm the fact that the subject site did
not exist in its present state, but paper streets were super-
imposed over the Seekonk River in this area.

The general area is serviced by public water supply and sewer systems. Due to the current undeveloped nature of the site, however, water and sewer services do not extend onto the site itself. The Narragansett Bay Commission maintains a sewer easement across the subject site (refer to Figure No. 2).

2.20 STATE FILE SEARCH

A review of the "Incident Response Files" for the City of Providence was conducted at the RIDEM/Division of Air and Hazardous Materials office in Providence, Rhode Island on May 5, 1987. There was no record of complaints or other indications of the presence of hazardous material or oil at the site.

However, records indicate that on the abutting commercial property (IGA Foodliner) to the west, an abandoned acid barrel was accidently broken open by workmen cutting down tree limbs. RIDEM called Clean Harbors, a licensed hazardous waste contractor, who neutralized the acid with soda ash and transported the material to their waste facility for eventual disposal.

A RIDEM official reported that there were no Resource Conservation and Recovery Act (RCRA) files for the commercial operations located in the immediate area of the site. This suggests that these nearby operations either do not generate waste materials considered hazardous or do not file the required documents associated with the generation of hazardous waste.

3.00 SITE RECONNAISSANCE

On April 22, 1987, GZA environmental engineer Thomas R. Quigley visited the site to view the property for surficial evidence of the presence of hazardous material or oil at the site, and to identify potential off-site sources of contamination.

3.10 GEOHYDROLOGICAL OBSERVATIONS

Based on a review of the USGS topographic map of the area, and the fact that the site is located on the Seekonk River, both surface water runoff and groundwater from the site are expected to flow from north to south across the site toward the river (refer to Figure No. 2).

3.20 AREA RECONNAISSANCE

The area abutting the site to the north is occupied by East George Street, a sand and gravel roadway. Further to the north is the former Colored Worsted Mill complex that presently houses the Salvation Army. To the northeast is located the Frank N. Gustafson & Sons, Inc. Construction Company.

Abutting the site to the east and south is the Seekonk River, which tidally joins with the Providence River further to the south. West of the site is the IGA Foodliner supermarket. Further to the west, northwest and north is residential property.

4.00 SUBSURFACE EXPLORATIONS

GZA conducted limited test pit and well installation programs to gather information on the possible presence of oil and hazardous material in the soil and groundwater beneath the site.

The location of the monitoring wells (borings), utilized in the initial environmental assessment by Waterman Engineering, are shown on Figure No. 2. The boring logs for that study can be found in Appendix E.

4.10 FIELD EXPLORATIONS

Six test pits (TP-1 through TP-6) were completed by St.Germain and Son, Inc. of Taunton, Massachusetts on May 6, 1987. GZA engineers, Thomas R. Quigley and Norbert J. Schulz, were on-site to designate exploration locations, observe excavation efforts, and log recovered soil and groundwater samples.

Test pit locations were chosen based upon perceived areas of environmental concern or possible sites of contamination within the scope of a limited subsurface exploration program. Several areas of the site could not be accessed due to mounds of debris and a vegetated wet area within the extreme southwest portion of the site. Test pit locations are shown on the Exploration Location Plan, Figure No. 2. Copies of the test pit logs are attached in Appendix C.

Test pits were performed using a large tracked backhoe with a 1/4 cubic yard bucket having a maximum reach of approximately 18 feet. The test pits ranged in depth from approximately 7 feet to 17.5 feet. The explorations were terminated when groundwater was encountered, numerous cave-ins occurred or the backhoe had reached its maximum reach.

From April 23 through May 5, 1987, two borings (B-6 and B-7) were completed by Guild Drilling Co., Inc. of East Providence, Rhode Island. These borings were part of an extensive exploration program, along the Seekonk River, conducted as part of a sewer replacement project.

GZA obtained permission from the coordinating authority (Narragansett Bay Commission), and the design firm involved in the sewer replacement project (Metcalf & Eddy) to install a well in each of the two borings conducted on the subject site upon their completion.

4.20 OBSERVATION WELL INSTALLATIONS

The two observation wells, designated B-6 and B-7 consist of a machine slotted (.010 inch slot), 1-1/2 inch diameter, PVC well screen located approximately ten feet into the saturated zone to above the estimated groundwater level. A solid PVC riser pipe was placed to about ground surface, and a 3-inch diameter gatebox was installed to provide for future well access.

A backfill of medium grain-size filter sand was placed in the annular space around each well screen to approximately groundwater level. A bentonite pellet subsurface seal approximately 2 to 3 feet thick was placed above the filter sand, along with another bentonite seal at the base of the gatebox, and a surficial cement seal. These seals were placed to aid in minimizing surface water infiltration. Specific observation well installation details are included on the logs in Appendix D.

4.30 SUBSURFACE CONDITIONS

The following provides a brief description of the subsurface conditions encountered during the exploration program in the study area. This description is generalized and actual conditions are somewhat more complex than described below. Refer to the test pit and boring logs in Appendices C and D for a more detailed description of the soils encountered at each exploration.

Within all six test pits, refuse and construction debris fill was encountered from ground surface to the bottom of all excavations. As recorded on the two logs provided by Metcalf & Eddy, boring B-6 encountered fill to approximately 30 feet, while B-7 encountered fill to approximately 18 feet. Beneath the fill material was 20 to 26 feet of soft to medium stiff organic silt within both boreholes, underlain by additional layers of apparent fill organics, sand, gravel and silt to depths of over 100 feet.

Groundwater was encountered in five of the six test pits, and water levels were recorded from approximately 10 feet to 16 feet. The approximate groundwater depths are indicated on the test pit logs in Appendix C.

Groundwater was recorded in wells within boring B-6 at 10.1 feet and boring B-7 at 16.4 feet on June 2, 1987. The stabilized (over one month) groundwater depths are indicated on the well installation schematics in Appendix D.

Water level readings were made at the times and under the conditions stated on the test pit and boring logs in Appendices C and D. This information has been reviewed and interpretations made in the text of the report. However, it should be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, tidal influence from the Seekonk River, and other factors different from those present at the time measurements were made.

5.00 SOIL/WATER QUALITY SAMPLING, SCREENING AND ANALYSIS

Surface soil, subsurface soil and groundwater samples collected in conjunction with the test pit and boring explorations were screened in GZA's Newton Water Quality Laboratory for volatile organic compounds (VOCs). Groundwater samples were also screened for pH and specific conductance. Additional groundwater samples were submitted to Rhode Island Analytical Laboratory, Inc. (RIAL) of Warwick, Rhode Island, for EPA Priority Pollutant VOCs and eight drinking water metals analyses.

The sampling program from the initial assessment involved the compositing of soil samples within each of the six boreholes. These six samples were then analyzed for characteristics of EP toxicity on the eight drinking water metals, and for VOCs. After monitoring wells were installed in each of the six boreholes, groundwater samples were analyzed for the same parameters.

Laboratory analyses of soil and groundwater samples from a total of six boreholes and monitoring wells (MW-1 through MW-6) recorded low levels of four drinking water metals and five VOCs. The soil sample from MW-1 recorded a detectable level for silver, while the groundwater samples from MW-2 and MW-3 indicated the presence of chromium and lead, and cadmium and chromium, respectively.

All soil samples in the MW series indicated the presence of low levels of three VOCs, while all groundwater samples in the series, except MW-1 indicated low levels of two other VOCs.

Refer to Figure No. 2 for the location of these six monitoring wells. The analytical results from this initial study are attached in Appendix E.

5.10 SOIL AND WATER SAMPLING

Soil samples were obtained in each test pit at approximately 2-foot intervals. All soil samples were labelled, kept cool and retained in clean 8 ounce glass jars for subsequent VOC screening and soil classification.

On May 6, 1987, GZA obtained groundwater samples from four test pit explorations (TP-2, TP-3,TP-4 and TP-6). These samples were collected from ponded groundwater within the open excavation. Test pit locations were chosen for groundwater sampling based on areas of concern and representative areas within the subject site.

On May 8, 1987, GZA obtained samples from the two observation wells installed at the site. Water samples were obtained using 5-foot stainless steel bailers with teflon ball valves. Separate (i.e. one per well) precleaned bailers were used for each well to prevent cross contamination.

Three times the initial volume of the standing water in each well was removed before sampling to remove stagnant water. The wells were then allowed to recharge. All samples were labelled, kept cool and sealed in 40 ml septum vials and 1 liter containers for analysis.

These well samples were submitted to RIAL. As noted, this laboratory was contracted to conduct analyses on groundwater samples for VOCs using EPA Method 601/602, and for the drinking water heavy metals. These additional tests were conducted in response to the initial environmental study performed by Waterman Engineering in 1986.

5.20 LABORATORY SCREENINGS AND ANALISES

5.21 Soil

Soil samples collected from the test pits were screened for VOCs using a vapor detection device (HNU Model PI-101). Based on the preliminary soils data, which are summarized in Table 1, low levels of VOCs were detected in seven of the thirty-five samples. None of these samples registered levels above what GZA considers a background concentration level of 1 ppm using this instrument.

The soil samples with the highest readings from the two test pits that recorded positive results (TP-4 and TP-5) were subjected to more comprehensive screening using a Century Systems Model OVA-128 gas chromatograph (GC). The GC screening of sample TP-4(S-6) registered low levels of two VOCs. Samples TP-4(S-3), TP-5(S-4) and TP-5(S-7) did not register a positive reading above the detection limit of the GC instrumentation with the exception of methane, a naturally occurring gas related to the anaerobic decomposition of organic material. The GC screening results of soil are presented in Table 2.

5.22 Groundwater

An Extech Model 651 Digital meter was used to measure the pH of groundwater samples collected from the site. The pH data, a measure of the relative alkalinity or acidity of the water, is presented in Table 3. The pH values of the groundwater collected from the site generally ranged from 6.2 to 8.7. The values, ranging from 6.2 to 7.4, are fairly consistent with levels commonly observed in New England groundwater. Levels exceeding 8.5 are considered to be slightly elevated.

An Extech Model 440 Digital meter was employed to measure specific conductance. Specific conductance values, an indirect measure of the concentration of dissolved ions in the sample, are presented in Table 3. The levels of conductivity, which ranged from 698 to 1776 micromhos/cm, do not fall within the range commonly detected in New England groundwater, but are not uncommon readings in urban/industrial environments and filled areas.

A Hewlett Packard 5890A gas chromatograph, which allows for the detection and relative quantification of individual VOCs, was employed to screen the three groundwater samples obtained from test pits TP-2, TP-3 and TP-4. The sample from test pit TP-6 was submitted to RIAL for analysis by EPA Method 601/602. With the abandonment of a sewer borehole exploration at the northeastern end of the site, the groundwater sample from test pit TP-6 became a downgradient sampling station substitution. These samples did not indicate the presence of VOCs above the analytical detection limit of 1 ppb. The results are summarized in Tables 4 and 5.

The two groundwater samples obtained from the two borings (B-6 and B-7) did not indicate the presence of any of the eight drinking water metals above the analytical detection limit indicated on the data table. The results are summarized in Table 5.

6.00 SUMMARY AND CONCLUSIONS

An environmental site assessment was conducted at the proposed Seekonk River Apartments site in Providence, Rhode Island. The assessment included a site visit, a review of site history, state and local records, a field exploration program, and laboratory screening and analysis of soil and groundwater samples.

An earlier environmental study conducted by Waterman Engineering reported low levels of five VOCs and four metals within the soil and groundwater on-site. The present study did not detect drinking water metals or VOCs in the groundwater, but two unidentified VOCs were detected within the soil on-site.

Based on the studies conducted and observations made as part of the present assessment, it is GZA's opinion that low levels of VOCs, other than methane, are present in only one soil sample at the site. These low levels of VOCs identified in the soil do not represent a significant threat to public health.

There have not been any recorded incidents of contamination on the site. The subject property is located in an urban/industrial area where there are no known drinking water supply wells or surface water supply systems downgradient of the site. The screened groundwater samples did not register detectable levels of VOCs.

It is GZA's opinion that the trace levels of unknown VOCs, such as those observed within the soil samples, are commonly encountered by GZA during the course of similar site assessments.

With the absence of information suggesting a definable or on-going source of these compounds, or a nearby sensitive receptor which might be significantly affected by even low levels of contamination, it has generally been GZA's opinion that the presence of trace levels of unknown VOCs does not, in itself, warrant further study.

7.00 LIMITATIONS

This report is subject to the limitations set forth in Appendix A.

GZA's site assessment was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area. GZA observed that degree of care and skill generally exercised by other consultants under similar circumstances and conditions.

GZA

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GZA's findings and conclusions must be considered not as scientific certainties but as probabilities based on our professional judgment concerning the significance of the limited data gathered during the course of the site assessment. Specifically, GZA does not and cannot represent that the site contains no hazardous material, oil, or other latent condition beyond that observed by GZA during its site assessment.

The above observations were made under the conditions stated in this report. The conclusions presented above were based on these observations. Should additional relevant information become available in the future, these data should be reviewed by GZA, and the conclusions presented herein may be modified.

The purpose of this report was to assess the physical characteristics of the proposed Seekonk River Apartments site in Providence, Rhode Island with regard to the presence in the soil and groundwater of hazardous material or oil. No attempt was made to check on the compliance of present or past owners of the site with federal, state, or local laws and regulations.

This study and report have been prepared on behalf of, and for the exclusive use of, the client solely for use in an environmental evaluation of the site. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor be used by any other party, in whole or in part, without the prior written consent of GZA.

However, GZA acknowledges and agrees that the report may be conveyed to the lender associated with the proposed development of the site by client. The report has been prepared in accordance with the terms and conditions set forth in Appendix A. No other warranty, expressed or implied, is made.

APPENDIX C

LINCOLN ENVIRONMENTAL
JANUARY 1997

FILE COPY

SUBSURFACE INVESTIGATION

Assessor's Plat 15, Lot 35
Providence, Rhode Island

January 30, 1997

Prepared for:

Koffler Development, L.L.C.
One Providence Washington Place
Providence, RI 02903

Prepared by:

Lincoln Environmental, Inc.
333 Washington Highway
Smithfield, Rhode Island 02917

Lincoln Project Number SS6128A
File F:\FIRM\SS6128A\SS6128A.RPT

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LINCOLN ENVIRONMENTAL
MARCH 1997

APPENDIX E

SOIL SAMPLING/ANALYSIS REPORT
ASSESSOR'S PLAT 15, LOT 35
BUTLER/EAST GEORGE STREETS
PROVIDENCE, RHODE ISLAND

MARCH 3, 1997

Performed for:

KOFFLER DEVELOPMENT, L.L.C.
One Providence Washington Place
Providence, RI 02903

Performed by:

LINCOLN ENVIRONMENTAL, INC.
333 Washington Highway
Smithfield, RI 02917

LINCOLN PROJECT NUMBER SS6128B
LINCOLN FILE f:\firm\ss6128b\ss6128b.rpt

APPENDIX E

Lincoln Environmental, Inc.

333 Washington Highway
Smithfield, Rhode Island 02917-1946
(401) 232-3353
(401) 232-1130 FAX

Other Offices:
Glastonbury, Connecticut 06033
Westford, Massachusetts 01886

March 3, 1997

Mr. Arthur Schucht
Koffler Development, L.L.C.
One Providence Washington Place
Providence, RI 02903

RE: Additional Soil Sampling
Assessor's Plat 15, Lot 35
Butler/East George Streets
Providence, RI

Dear Mr. Schucht:

This report documents the additional soil sampling and laboratory analysis performed at the site. The sampling was performed pursuant to the scope of work outlined in Lincoln Proposal Number 97R088 which was executed on February 13, 1997

If there are any questions, please contact the undersigned at 232-3353.

Sincerely,

LINCOLN ENVIRONMENTAL, INC.

Stephen Furia (ext. 115)
Environmental Engineer

Steve Cadorette (ext. 146)
Civil Engineer

cc: Dennis Esposito, Adler Pollack & Sheehan
John Hartley, Goldberg Zoino & Associates

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APPENDIX E

1.0 INTRODUCTION

A subsurface investigation was performed by Lincoln Environmental, Inc. (Lincoln) at Assessor's Plat 15, Lot 35, in Providence, Rhode Island (**Figure 1**) during the months of December 1996 and January 1997. Data collected during the investigation was summarized in a report titled "Subsurface Investigation, Assessor's Plat 15, Lot 35, Providence, Rhode Island" and dated January 30, 1997. This report was submitted to the Rhode Island Department of Environmental Management (RIDEM) on February 7, 1997.

At a meeting between representatives of the site owner, Koffler Development, L.L.C., and RIDEM personnel held on February 10, 1997, RIDEM personnel requested that additional sampling be performed. The focus of these efforts would be characterization of arsenic, lead, and semi-volatile organic compounds (SVOCs) in site soils and the determination of the potential for on-site use of the existing soil stockpile.

A soil sampling plan, designed to obtain the additional data requested during the February 10, 1997 meeting with RIDEM, was submitted to RIDEM on February 12, 1997. Written RIDEM approval of the sampling plan was received on February 13, 1997. A copy of the approval is appended to this document.

In order to address RIDEM requirements, Lincoln performed additional soil sampling on February 13 and February 14, 1997. The additional sampling and analytical results are discussed in the sections which follow.

APPENDIX E

2.0 SOIL SAMPLE ACQUISITION

In order to obtain a representative sample distribution, a geometric sampling grid required by Section 8.10 (A.ii) of the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations) was superimposed on the site plan. The sampling grid is depicted on **Figure 2**.

Prior to obtaining the soil samples, Lincoln utilized surveying equipment to locate the sampling points. In instances where the grid node was located within the sewer easement or on the soil stockpile, the sample locations were moved to avoid sampling soils from those areas.

Twenty soil samples were collected by Lincoln personnel on February 13 and 14, 1997. The soil samples were obtained using a clean shovel, transferred to an appropriate sample container, sealed, and placed in a cool, dry place for storage. The samples were transmitted via chain of custody protocols to Rhode Island Analytical Laboratories (RIAL) of Warwick, Rhode Island.

3.0 ARSENIC SAMPLING

During the subsurface investigation completed in January, four samples collected from 0 to 2 feet below grade were found to contain arsenic concentrations ranging from 10.2 to 23 mg/kg. The four samples collected during the January 1997 subsurface investigation are considered to be representative of sample grid nodes A-1, A-3, B-3, and C-1.

In order to comply with the Remediation Regulations sampling requirements, 17 soil samples secured by Lincoln on February 13 and 14, 1997 were analyzed for arsenic concentrations . Analysis was performed pursuant to appropriate EPA methods. Arsenic sample locations are shown on **Figure 2**.

Arsenic was detected in each sample at concentrations ranging from 1 milligram per kilogram (mg/kg) to 28 mg/kg. The analytical results, including those performed in the January 1997 subsurface investigation, are presented in **Table 1** and on **Figure 3**.

4.0 LEAD SAMPLING

During the subsurface investigation completed in January, one sample, collected from 0 to 2 feet below grade at sample location GZA-5A, was found to contain a lead concentration of 57.7 mg/kg. This sample is considered to be representative of sample grid node A-3.

In order to comply with the Remediation Regulations sampling requirements, 20 soil samples, secured by Lincoln on February 13 and 14, 1997, were analyzed for lead concentrations. Analysis was performed pursuant to appropriate EPA methods. Lead sample locations are shown on **Figure 2**.

Lead was detected in each sample at concentrations ranging from 24 mg/kg to 559 mg/kg. The analytical results, including those performed in the January 1997 subsurface investigation, are presented in **Table 1** and on **Figure 3**.

5.0 SEMI VOLATILE ORGANIC COMPOUND SAMPLING

Fill layers ranging from 15 to 47 feet thick were identified by GZA Geoenvironmental, Inc. during the installation of monitoring wells GZA-1 through GZA-6. Due to the prevalence of fill across the site, RIDEM requested that semi-volatile organic compound (SVOC) sampling be performed.

On February 13 and 14, 1997, Lincoln obtained soil samples from 0 to 2 feet below grade at seven sample locations; A-4, A-6, B-1, B-2, B-3, B-4, and C-2 (**Figure 2**). These samples were submitted

to RIAL via chain of custody protocols for analysis of SVOC by EPA Method 8270. The analytical results revealed that SVOC were detected in each sample. The analytical results are presented in **Table 2**.

6.0 SOIL STOCKPILE SAMPLING

During work performed previously by Lincoln, a soil stockpile was identified at the site. The soil stockpile location is depicted on **Figure 2**.

In order to evaluate the suitability of this material for on-site usage, six soil samples were obtained from the stockpiled soil and submitted for laboratory analysis of RCRA 8 total metals by appropriate EPA Methods, volatile organic compounds (VOC) by EPA Method 8240, and semi-volatile organic compounds (SVOC) by EPA Method 8270.

Arsenic, barium, cadmium, chromium and lead were detected in each of the six samples. Mercury was detected in four of the six soil samples. Silver was detected in only the SS-4 soil sample. Selenium was not detected in any of the soil samples. No VOC were detected in any of the samples. SVOC were detected in five of the six soil samples. The SVOC and metals analytical data from the soil stockpile samples has been summarized in **Table 3** and **Table 4**.

7.0 FINDINGS

In February of 1997, Lincoln completed additional soil sampling and analysis. The sample collection and analysis were performed in accordance with the RIDEM approved February 13, 1997 sample plan. The pertinent findings of this scope of work are summarized in the following paragraphs.

- Twenty-one soil samples secured from the sample points depicted on **Figure 2** were analyzed for arsenic. With the exception of the A-5 sample, arsenic concentrations greater than the RIDEM residential direct exposure criteria were detected in each of the samples.

- Twenty-one soil samples secured from the sample points depicted on **Figure 2** were analyzed for lead. Lead concentrations greater than the RIDEM residential direct exposure criteria were detected in the samples from A-2, A-4, B-5, C-1, C-2, and D-2.

- Seven soil samples, secured from sample points A-4, A-6, B-1, B-2, B-3, B-4, and C-2 were analyzed for SVOC by EPA Method 8270. With the exception of the samples from B-1 and B-2, SVOC concentrations greater than the RIDEM residential direct exposure criteria were detected in each of the samples.

- Six soil samples were secured from the soil stockpile. Arsenic was detected in each of the soil samples at concentrations greater than the RIDEM residential direct exposure criteria. Lead was detected in four of the six soil samples at concentrations greater than the RIDEM residential direct exposure criteria. With the exception of sample location SS-2, SVOC were detected in each of soil samples at concentrations greater than the RIDEM residential direct exposure criteria.

8.0 LIMITATIONS

Information obtained from public agencies, site inspection, limited sampling and laboratory chemical analysis was used to characterize the site. The accuracy of the conclusions derived from this information is based solely on the accuracy of the information reported. Events occurring on the site after February 14, 1997 are beyond the scope of this report. If information becomes available concerning the site which is not included in this report, it should be made available to Lincoln Environmental so that conclusions and/or recommendations can be re-examined and modified where applicable.

No attempt was made to determine the compliance of present or former owners or operators of the site with federal, state, or municipal environmental or land use laws or regulations. Due to the fact that geological and soil formations are inherently random, variable and indeterminate (heterogeneous) in nature, the professional services and opinions provided by Lincoln Environmental under this agreement are not guaranteed to be a representation of complete site conditions, which are subject to change with time as a result of natural or man-made processes.

Although the services are extensive, findings and conclusions are limited to and by the information obtained. Lincoln Environmental makes no expressed or implied representations or warranties regarding any changes in condition of the premises after the date of the on-site field work. In addition, further subsurface investigatory methods are available that could further define the soil and groundwater conditions.

Photoionization detector (PID) field screening is not as sensitive as laboratory analysis and conclusions drawn from such screening are limited to those contaminants potentially detectable with a 10.0 electron volt lamp. No representation regarding the potential results of additional field screening, laboratory testing, or regarding the potential results or tests for materials not tested for

is expressed or implied. Any qualitative or quantitative information regarding the site which was not available to Lincoln Environmental at the time of this assessment may result in a modification of the representations made in this report.

Table 1

Summary of Arsenic and Lead Soil Analytical Data

Butler and East George Streets, Providence, RI

Sample Point	Arsenic Concentration (mg/kg)	RIDEM Arsenic RDEC* (mg/kg)	Lead Concentration (mg/kg)	RIDEM Lead RDEC* (mg/kg)
A-1	10	1.7	29	150
A-2	11	1.7	204	150
A-3	12	1.7	58	150
A-4	9	1.7	559	150
A-5	1	1.7	146	150
A-6	19	1.7	52	150
A-7	15	1.7	123	150
B-1	8	1.7	52	150
B-2	7	1.7	60	150
B-3	23	1.7	73	150
B-4	14	1.7	12	150
B-5	13	1.7	376	150
B-6	12	1.7	48	150
C-1	19	1.7	175	150
C-2	14	1.7	153	150
C-3	28	1.7	114	150
C-4	19	1.7	43	150
D-1	17	1.7	106	150
D-2	16	1.7	331	150
D-3	19	1.7	35	150
E-1	16	1.7	124	150

Sample Dates: A1,A3,C1 and B3 arsenic samples were obtained on January 23,1997
The remaining arsenic samples were obtained on February 13 and 14, 1997

A3 lead sample obtained on January 23, 1997
The remaining lead samples were obtained on February 13 and 14, 1997

NOTE: shaded cells indicate that the RIDEM RDEC has been exceeded

*indicates the RIDEM arsenic direct exposure objective for residential property usage

*indicates the RIDEM lead direct exposure objective for residential property usage

APPENDIX E

Table 2

Summary of SVOC Soil Analytical Data
Butler and East George Streets, Providence, RI

	RIDEM RDEC* (mg/kg)	A-4 (mg/kg)	A-6 (mg/kg)	B-1 (mg/kg)	B-2 (mg/kg)	B-3 (mg/kg)	B-4 (mg/kg)	C-2 (mg/kg)
Acenaphthene	43.0	ND	ND	ND	ND	ND	ND	1.6
Acenaphthylene	23.0	0.5	ND	ND	ND	ND	ND	ND
Anthracene	35.0	1.1	1.0	ND	ND	0.6	ND	2.2
Benzo(a)anthracene	0.9	1.7	1.9	ND	ND	2.0	0.6	3.3
Benzo(a)pyrene	0.4	1.3	1.5	ND	ND	2.1	0.6	1.9
Benzo(b)fluoranthene	0.9	1.3	1.5	ND	ND	2.3	0.6	1.8
Benzo(g,h,i)perylene	0.6	2.1	1.6	ND	ND	ND	ND	2.8
Benzo(k)fluoranthene	0.9	1.4	1.5	ND	ND	2.6	0.8	1.9
Biphenyl, 1,1-	0.8	ND	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalte	46.0	2.8	ND	0.9	0.6	ND	ND	ND
Bis(2-chloroethyl)ether	0.6	ND	ND	ND	ND	ND	ND	ND
Bis(2-chloroisipropyl)ether	9.1	ND	ND	ND	ND	ND	ND	ND
Chloroaniline, 4-(p-)	310.0	ND	ND	ND	ND	ND	ND	ND
Chlorophenol, 2-	50.0	ND	ND	ND	ND	ND	ND	ND
Chrysene	0.4	2.1	3.5	ND	ND	1.8	0.8	3.5
Dibenzo(a,h)anthracene	0.4	ND	0.6	ND	ND	ND	ND	0.6
Dichlorobenzene, 1,2- (o-DCB)	510.0	ND	ND	ND	ND	ND	ND	ND
Dichlorobenzene, 1,3- (m-DCB)	430.0	ND	ND	ND	ND	ND	ND	ND
Dichlorobenzene, 1,4- (p-DCB)	27.0	ND	ND	ND	ND	ND	ND	ND
Dichlorobenzidine, 3,3-	1.4	ND	ND	ND	ND	ND	ND	ND
Dichlorophenol, 2,4-	30.0	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	340.0	ND	ND	ND	ND	ND	ND	ND
Dimethyl phenol, 2,4-	1400.0	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	1900.0	ND	ND	ND	ND	ND	ND	ND
Dinitrophenol 2,4-	160.0	ND	ND	ND	ND	ND	ND	ND
Dinitrotoluene, 2,4-	0.9	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	20.0	3.6	3.2	0.6	1.1	2.1	1.9	4.2
Fluorene	28.0	ND	ND	ND	ND	ND	ND	1.4
Hexachlorobenzene	0.4	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	8.2	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	46.0	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.9	1.6	1.3	ND	ND	ND	ND	2.1
Methyl naphthalene, 2-	123.0	ND	ND	ND	ND	ND	ND	0.5
Naphthalene	54.0	ND	ND	ND	ND	ND	1.6	0.9
Pentachlorophenol	5.3	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	40.0	2.3	2.1	ND	0.6	1.9	2.0	1.7
Phenol	6000.0	ND	ND	ND	ND	ND	ND	ND
Pyrene	13.0	4.1	3.5	0.5	1.0	2.7	1.5	4.6
Trichlorobenzene, 1,2,4-	95.0	ND	ND	ND	ND	ND	ND	ND
Trichlorophenol, 2,4,5-	330.0	ND	ND	ND	ND	ND	ND	ND
Trichlorophenol, 2,4,6-	58	ND	ND	ND	ND	ND	ND	ND

* direct exposure criteria limit for residential property usage
NOTE: shaded cells indicate that the RIDEM RDEC has been exceeded
ND= not detected above laboratory detection limits

APPENDIX E

Table 3

Summary of SVOC Soil Analytical Data - Soil Pile
Butler and East George Streets, Providence, RI

	RIDEM RDEC* (mg/kg)	SS-1 (mg/kg)	SS-2 (mg/kg)	SS-3 (mg/kg)	SS-4 (mg/kg)	SS-5 (mg/kg)	SS-6 (mg/kg)
Acenaphthene	43.0	ND	ND	ND	ND	ND	ND
Acenaphthylene	23.0	1.7	ND	ND	ND	1.0	1.1
Anthracene	35.0	2.2	ND	0.6	ND	1.2	1.2
Benzo(a)anthracene	0.9	**5.4**	ND	**1.7**	0.7	**1.8**	**2.3**
Benzo(a)pyrene	0.4	**2.6**	ND	**1.0**	ND	**0.9**	**1.0**
Benzo(b)fluoranthene	0.9	**2.3**	ND	0.9	ND	0.7	**1.0**
Benzo(g,h,i)perylene	0.8	**4.7**	ND	**1.5**	ND	**1.7**	**1.9**
Benzo(k)fluoranthene	0.9	**2.2**	ND	**1.0**	ND	0.9	**1.0**
Biphenyl, 1,1-	0.8	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl)phthalte	46.0	0.6	ND	ND	ND	0.5	0.5
Bis(2-chloroethyl)ether	0.6	ND	ND	ND	ND	ND	ND
Bis(2-chloroisipropyl)ether	9.1	ND	ND	ND	ND	ND	ND
Chloroaniline, 4-(p-)	310.0	ND	ND	ND	ND	ND	ND
Chlorophenol, 2-	50.0	ND	ND	ND	ND	ND	ND
Chrysene	0.4	**5.3**	ND	**1.7**	**0.7**	**1.7**	**2.2**
Dibenzo(a,h)anthracene	0.4	**0.8**	ND	ND	ND	ND	ND
Dichlorobenzene, 1,2- (o-DCB)	510.0	ND	ND	ND	ND	ND	ND
Dichlorobenzene, 1,3- (m-DCB)	430.0	ND	ND	ND	ND	ND	ND
Dichlorobenzene, 1,4- (p-DCB)	27.0	ND	ND	ND	ND	ND	ND
Dichlorobenzidine, 3,3-	1.4	ND	ND	ND	ND	ND	ND
Dichlorophenol, 2,4-	30.0	ND	ND	ND	ND	ND	ND
Diethyl phthalate	340.0	ND	ND	ND	ND	ND	ND
Dimethyl phenol, 2,4-	1400.0	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	1900.0	ND	ND	ND	ND	ND	ND
Dinitrophenol 2,4-	160.0	ND	ND	ND	ND	ND	ND
Dinitrotoluene, 2,4-	0.9	ND	ND	ND	ND	ND	ND
Fluoranthene	20.0	5.1	ND	2.6	1.7	2.9	3.4
Fluorene	28.0	1.2	ND	ND	ND	0.8	0.7
Hexachlorobenzene	0.4	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	6.2	ND	ND	ND	ND	ND	ND
Hexachloroethane	46.0	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.9	**3.9**	ND	**1.2**	ND	**1.2**	**1.4**
Methyl naphthalene, 2-	123.0	ND	ND	ND	ND	ND	ND
Naphthalene	54.0	ND	ND	ND	ND	0.7	ND
Pentachlorophenol	5.3	1.6	ND	1.6	ND	ND	ND
Phenanthrene	40.0	ND	ND	ND	0.8	1.2	2.5
Phenol	6000.0	ND	ND	ND	ND	ND	ND
Pyrene	13.0	8.0	ND	4.0	2.1	5.0	4.4
Trichlorobenzene, 1,2,4-	96.0	ND	ND	ND	ND	ND	ND
Trichlorophenol, 2,4,5-	330.0	ND	ND	ND	ND	ND	ND
Trichlorophenol, 2,4,6-	58	ND	ND	ND	ND	ND	ND

* direct exposure criteria limit for residential property usage
NOTE: shaded cells indicate that the RIDEM RDEC has been exceeded
ND= not detected above laboratory detection limits

APPENDIX E

Table 4

Summary of Soil Stockpile Analytical Data - RCRA 8 Metals

Butler and East George Streets, Providence, RI

Sample Point	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)
SS-1	14.1	45.5	1.69	12.7	138	0.29	ND	ND
SS-2	25.3	125	1.56	15.8	31	ND	ND	ND
SS-3	14.6	56.2	1.29	24.7	227	0.43	ND	ND
SS-4	13.5	51.7	1.29	27	161	1.24	ND	1.68
SS-5	7.93	71	2.02	14.9	31.1	ND	ND	ND
SS-6	24.5	61.2	1.91	16.5	166	0.57	ND	ND
RIDEM RDEC	1.7	5500	39	1400	150	23	390	200

RDEC= RIDEM residential direct expsoure criteria

NOTE: shaded cells indicate that the RDEC was exceeded

ND= not detected above laboratory detection limits

SOURCE: U.S. GEOLOGICAL SURVEY MAP

FIGURE 1

SITE LOCATION MAP

DATE: 10/2/95
LE JOB NO. SS6128

DWG. SS6128SL
BY: JM

Lincoln Environmental
Smithfield, Rhode Island (401)232-3353

LOT 35 – PLAT 15
PROVIDENCE, RI

APPENDIX E

State of Rhode Island and Providence Plantations
Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

FEB 18 1997

13 February 1997

Steve Cadorette
Civil Engineer
Lincoln Environmental, Inc.
333 Washington Highway
Smithfield, R.I. 02917-1946

RE: Sampling Plan for Plat 15, Lot 35 Butler/East George Streets
Providence, R.I.

Dear Mr. Cadorette:

As per our phone conversation, the Office of Waste Management has received and reviewed the abovementioned sampling plan. Based upon our review and discussion, the Department concurs with the plan and the additional Semi-Volatile Compounds (SVOCs) sampling at point B-3. The Department looks forward to completion of the soil analyses and assisting this project towards its goal.

Sincerely,

Jeffrey Crawford
Principal Environmental Scientist
Office of Waste Management

cc: G. Fine

koffler.let/jc

Telephone 401-277-2797 TDD 277-6800
FAX 401-277-3812/3813

APPENDIX E

APPENDIX E

PUBLIC NOTICE DOCUMENTATION

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767 TDD 401-831-5508

CERTIFIED MAIL November 7, 1997

Mr. Arthur Schucht
Koffler Realty Associates V L.L.C.
One Providence-Washington Plaza
Ninth Floor
Providence, Rhode Island 02903

RE: Remedial Action Order of Approval for Koffler Realty Associates V L.L.C.
Riverview Place at Butler Avenue (Plat 15, Lot 35)
Providence R.I. (the "Site")

Dear Mr. Schucht:

Enclosed please find the **Order of Approval** (Order) which was issued for the proposed remediation plan at the Site. Please review the stipulations of this Order thoroughly to ensure your compliance with the requirements.

Please notify this office 48 hours prior to the initiation of any work at the Site related to the proposed remediation relative to this Order. If you have any questions regarding this matter, please contact Jeffrey Crawford (401) 277-3872 (Ext. 7102).

This order shall be recorded in the land evidence records of the City of Providence as required by law.

Sincerely,

James W. Fester

James Fester, P.E.
Associate Director
Department of Environmental Management

cc: Terrence Gray, Chief, RIDEM/OWM
Greg Fine, Supervising Engineer, RIDEM/OWM
Jeffrey Crawford, RIDEM/OWM
Claude Cote, Esq., RIDEM/Office of Legal Services
Dennis Esposito, Esq., Koffler Realty Associates V L.L.C.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

In the matter of the application
or Remedial Action Approval at:
Koffler Realty Associates V L.L.C. Property
Riverview Place at Butler Avenue
Providence, Rhode Island (the "Site")

Case No. 97-11

ORDER OF APPROVAL

In the above entitled matter wherein **Arthur Schucht in his capacity with Koffler Realty Associates V L.L.C.**, filed with the Rhode Island Department of Environmental Management, Office of Waste Management (the Department) the following plans and specifications: Remedial Action Work Plan for Riverview Place dated October 1997 by GZA, Inc. This document meets the requirements of a Remedial Action Work Plan (RAWP) as described in Section 8 of the Department's Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations). The RAWP describes a means to prevent pollution as defined in Chapter 46-12 of the General Laws of 1956, as amended and the Department's Remediation Regulations, as amended August 1996 in accordance therewith.

Upon consideration thereof, the Department approves said plan or means to prevent pollution provided that:

1. The remedy as described in the RAWP shall be implemented within ninety (90) days of receipt of this Order.

2. The soil remediation goal shall be the Method 1 Residential Direct Exposure Criteria achieved by encapsulation as described in the RAWP and in accordance with the Remediation Regulations.

3. Sampling of all media involved in the remedial action shall be conducted in accordance with the requirements of the RAWP.

4. Remedial work must be consistent with Section 11.00 Remedial Action in the Remediation Regulations.

5. At the conclusion of the remedial action, a closure report detailing the remedial action shall be submitted to the Department in accordance with item 10.

6. All waste derived from implementation of the RAWP shall be managed in accordance with the Remediation Regulations and the Rules and Regulations for Hazardous Waste Management, as appropriate.

7. Results of all environmental sampling shall be sent to the Department in accordance with item 11.

8. The Department shall be immediately notified of any action, occurrence or condition that results in non-compliance with this Order.

9. Any Remedial Action interruptions shall be reported to the Department by telephone within one (1) working day and in writing within seven (7) days in accordance with item 11.

10. This Order does not remove Charter's obligation to obtain any necessary permits from other state, local, or federal agencies.

11. All notices and submissions should be sent to:

Jeffrey Crawford
Department of Environmental Management
Office of Waste Management
235 Promenade Street, 3rd Floor
Providence, RI 02908
Telephone Number (401) 277-2797, Ext. 7102

This Order shall remain in full force and effect as long as said plan or means shall be operated and maintained in a condition satisfactory to the Department. Failure to comply with all points stipulated in this Order shall result in the issuance of a Notice of Violation and Order against the owner of the property.

This Order shall be subject to modification or revocation in accordance with law.

Entered as the Order of the Department this 7 day of November, 1997.

By: James W. Fester
James Fester
Associate Director
Department of Environmental Management

koffler.ous

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767 TDD 401-831-5508

REMEDIAL DECISION LETTER

24 July 1997

Mr. Arthur Schucht
Koffler Realty Associates V, L.L.C.
c/o Koffler Development
1 Providence-Washington Plaza
Ninth Floor
Providence, R.I. 02903

RE: Riverview Place- Plat 15, Lot 35 Providence

Dear Mr. Schucht:

On 4 September 1996, the Rhode Island Department of Environmental Management (the Department) amended the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in a timely and cost-effective manner. A Remedial Decision Letter is a formal Department approval of a remedy proposed by the performing party as a result of the findings of the Site Investigation.

In the matter of the above referenced site, the Department has received and reviewed the following documents submitted by Lincoln Environmental, Inc. and GZA Geo Environmental,Inc. on behalf of Koffler Development:

Subsurface Investigation Report dated January 30, 1997 by Lincoln Environmental,Inc. submitted on February 7, 1997; and

Site Investigation Report (draft) dated April 1997 by GZA, Inc. submitted on April 14, 1997; and

Revised Site Investigation Report dated July 1997 by GZA Inc. submitted on July 23, 1997.

Collectively, these documents fulfill the requirements of a Site Investigation (SI) Report as described in Section 7 of the Remediation Regulations. Furthermore, given that appropriate public notice has been conducted pursuant to Rule 7.07 (Public Notice), the Department offers

its concurrence with the proposed remedial alternative which is the compaction and containment of the contaminated soil material in order to meet the appropriate Method 1 Residential Remedial Objectives as defined in the Remediation Regulations.

The Department anticipates receiving the Remedial Action Work Plan (RAWP) within 15 days and which is expected to describe the technical details associated with the implementation of this remedy. Department personnel will review the RAWP for consistency with Sections 8 and 9 of the Remediation Regulations. Once the Department's review is complete, any written comments generated as a result of the review will be forwarded to you immediately. Upon finalization of the RAWP, the Department will issue an Order of Approval signifying that the remediation process can begin.

In closing, please be advised that pursuant to Rule 10.02 of the Remediation Regulations, the application fee for Remedial Action Approvals is one thousand ($1,000) dollars. Please remit a check in that amount to this office made out to the **State of Rhode Island - General Treasurer**. If you have any questions or are in need of any clarification regarding this document, please contact Jeffrey Crawford at (401) 277-3872 ext. 7102.

Sincerely,

Greg S. Fine, P.E.
Supervising Engineer
Office of Waste Management

cc: Terrence Gray, Chief, RIDEM, Office of Waste Management
Claude Cote, Esq, RI DEM Office of Legal Services
Jeffrey Crawford, RI DEM Office of Waste Management
Dennis Esposito, Esq. - Adler, Pollack & Sheehan

koff.rdl

GZA

TABLES

FIGURES

SITE INVESTIGATION REPORT
RIVERVIEW PLACE (REVISED)
KOFFLER REALTY ASSOCIATES V
PROVIDENCE, RHODE ISLAND

PREPARED FOR:
Koffler Realty Associates V, L.L.C.
Providence, Rhode Island

PREPARED BY:
GZA GeoEnvironmental, Inc.
Providence, Rhode Island

July 1997
File No. 31834.1

GZA
GeoEnvironmental, Inc.

Engineers and Scientists

Principals:
John P. Hartley,
District Office Manager
Michael A. Powers, P.E., L.S.P.
David R. Carchedi, Ph.D., P.E.
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Philip P. Virgadamo, P.E., L.S.P.

July 22, 1997
File No. 31834.1

Mr. Gregory S. Fine, P.E.
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02903

Re: Site Investigation Report - *Revised*
Koffler Realty Associates V, L.L.C.
Providence, Rhode Island

Dear Mr. Fine:

On behalf of our client, Koffler Realty Associates V, L.L.C., GZA GeoEnvironmental, Inc. (GZA) is pleased to submit this revised ***Site Investigation Report*** for property identified as Providence Assessor's Plat 15, Lot 35. This report has been prepared to address the requirements of Section 7 of the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, and has been modified to address the Department's 16 May 1997 review comments on the April 1997 SIR submittal.

To facilitate your review of the report modifications, we have provided the following key which identifies the sections of the report which were revised referenced to your review comment numbers.

Comment No.	Subject	Report Section	Comment
1	Direct exposure criteria exceedances (easement and waterfront)	4.20 & Figure 3	Details of the proposed corrective action will be presented in the RAWP
1	Protectiveness of remedy	6.00	
2	Notification - construction workers	4.30	
2	Notification - NBC	4.30 & 5.20	
3	Notification - abutting owners	—	Reference noted
3	Notification - CRMC	5.20	
4	RAWP	6.00	Acknowledgment of comment
4	ELUR	6.00	Acknowledgment of comment
5	Certification	7.00	Signatures have been included
6	Figure 2	Figure 2	Figure 2 has been modified to illustrate exceedances of residential direct exposure criteria
6	ELUR	—	ELUR will be applied to entire site

We trust that this revised *SIR* adequately addresses the department's review comments, and look forward to receiving your approval. If you or your staff have any questions or require further information, please do not hesitate to call John at 421-4140 (x3401).

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

John P. Hartley
Associate Principal

Julia Crowley
Project Reviewer

JPH:lag

cc: Arthur Schucht, Koffler Development
Dennis Esposito, Adler Pollock & Sheehan

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1.00 INTRODUCTION

On behalf of our client, Koffler Realty Associates V, L.L.C. (Koffler), GZA GeoEnvironmental, Inc. (GZA) has prepared this revised ***Site Investigation Report*** (SIR) for the Riverview Place development project located on Butler Avenue in Providence, Rhode Island. This property (the site) is identified as plat 15, lot 35 on the Providence Tax Assessor's Map; a Locus Plan is provided as Figure 1. This report has been revised to address review comments prepared by the RIDEM as presented in their May 16, 1997 letter.

This SIR is based on information gathered during four investigations of the property which took place during the time period between October 1986 to March 1997. These investigations were conducted by Waterman Engineering, GZA and Lincoln Environmental. This SIR organizes existing site data to address the requirements of the RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations), specifically Section 7, and the Letter of Responsibility issued to Koffler Realty Associates V, L.L.C. by the RIDEM.

This SIR has been prepared with the understanding that the future use of the property will consist of an elderly housing complex containing approximately 75 full-time residents (Riverview Place). This SIR is subject to the limitations presented in Section 8 and Appendix A.

2.00 BACKGROUND

2.10 SITE HISTORY

The site is currently owned by Koffler Realty Associates V, L.L.C. Previous to this, the property was owned by the Koffler Corporation, Richard Bornstein (1982 to 1986) and Brown University. Brown University's ownership history dates back to prior to World War II.

From the post-World War II era to 1982, Brown University's Nuclear Physics Department conducted particle acceleration experiments on site. Upon vacating the property, Brown University hired a private consultant to "scrub down" the site twice to "rid" site structures of any residual contamination associated with their activities. The Rhode Island Department of Health (RIDOH) performed an independent inspection and survey of the site on March 8, 1982. The RIDOH reported, "...the results of the field measurements for beta/gamma radiation were negative" and, "...the facilities were found to have met the requirements for decontamination and to be releasable for unrestricted use."

The only other reported activity at the property was a greenhouse. No information could be found as to the operational time period or operator of the greenhouse.

Environmental investigations of the property have been conducted by: Waterman Engineering (October 1986), GZA (June 1987) and Lincoln Environmental (January and March 1997). The majority of the environmental characterization data contained in this report was gathered by Lincoln Environmental.

The site was reported to the RIDEM on February 7, 1997, due to the discovery that a release of hazardous materials had possibly occurred on the property.

2.20 SITE DESCRIPTION

The site is triangular in shape and encompasses approximately six acres bordered by the Providence Salvation Army facility to the north, Butler Avenue and a supermarket to the west and the Seekonk River to the southeast. The local land usage in the vicinity of the site is generally residential with municipally supplied water and sanitary services.

It is our understanding that the site was created by the gradual filling of a former coastal area. The fill consists of: native soil, sediment, boulders, building demolition debris, wood, ash and small amounts of residential solid waste. A 35 foot-wide easement containing a Narragansett Bay Commission sewer traverses the property parallel with the river, approximately 100 feet inland (refer to Figure 2, Site Plan). There are several large stockpiles on the property which were created during the installation of the sewer. The contents of the piles are visually similar to the surface of the property.

The site topography is level at approximately 15 feet above mean sea level. The sewer easement is well vegetated with grass, while the remainder of the site surface shows evidence of filling and supports little to no vegetation. The river embankment area is more thickly vegetated and slopes steeply. It contains varying amounts of debris, which has apparently washed ashore or was placed historically.

2.30 ENVIRONMENTAL SETTING

Groundwater in the vicinity of the site is classified as GB by RIDEM. This classification and is common in urban areas indicates that the groundwater is presumed to be degraded. The Seekonk River, which is saline, is classified as SC by RIDEM. This classification indicates that RIDEM's water quality goal for the water body is to support fish and wildlife, limited contact recreation, industrial cooling and navigation.

Sub-surface conditions have been investigated in three of the four studies of the site. These investigations indicate that fill extends to a depth of approximately 25 feet below the ground surface. Below the fill are layers of silt and fine sand to at least 100 feet below the ground surface. Depth to groundwater at the site varies from approximately 7 to 18 feet below grade.

3.00 SITE INVESTIGATION FINDINGS

As noted, there have been four hazardous materials and petroleum investigations of the site. These investigations included sampling and analysis of surficial soils, subsurface soils and groundwater for: metals, volatile organic compounds, semi-volatile organic compounds, pesticides, herbicides and total petroleum hydrocarbons. All sampling locations are shown on Figure 2. Copies of each of these reports are provided in Appendices B, C and D. The available records of the Waterman Engineering investigation are contained in the GZA 1987 report (in Appendix B).

The following table presents the analytes investigated by study and media.

Company	Media	No. Samples - Analyte
Waterman	Groundwater	6-Priority Pollutant VOCs 6-Dissolved RCRA 8 Metals
	Sub-soil	6-Priority Pollutant VOCs
GZA	Groundwater	2-Priority Pollutant VOCs 2-Dissolved RCRA 8 Metals
Lincoln	Groundwater	6-VOCs (Method 8260) 3-TPH (Method 8100)
	Sub-soil	4-VOCs (Method 8260) 5-Total RCRA 8 Metals
	Surface soil (Greenhouse)	1-VOCs (Method 8260) 1-Pesticides (method 8080) 1-Herb (Method 8150B)
	Soil pile	7-VOCs (Method 8260) 7-SVOCs (Method 8260) 7-RCRA 8 Metals
	Surface soil	21-Arsenic 21-Lead 6-SVOCs (Method 8260)

Due to the proposed residential land use for the property, the RIDEM Remediation Regulations utilize the Residential Direct Exposure Criteria throughout the soil column to the groundwater table. However, given the site geochemical distribution and the fact that the proposed development will either cover the site with an impermeable surface or 2 feet of clean fill or control direct access, through the placement of restrictive plantings. GZA has assessed site data using an approach more similar to industrial\commercial land usage than residential. Thus, soil data from the upper 2 feet of the soil column is analyzed separately from sub-surface soils (2 feet below the ground surface to the water table).

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Lincoln	Groundwater	6-VOCs (Method 8260) 3-TPH (Method 8100)
	Sub-soil	4-VOCs (Method 8260) 5-Total RCRA 8 Metals
	Surface soil (Greenhouse)	1-VOCs (Method 8260) 1-Pesticides (method 8080) 1-Herb (Method 8150B)
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3.10 SURFICIAL AND STOCKPILE SOILS

Due to the character of the local land usage and the planned site development (see Section 4.20), Lincoln's investigations concentrated on surficial soils and soil piles, as direct contact with any contamination existing in this media is the only identified long-term potential exposure route at the site. The results of this sampling indicate similar contaminant characteristics for the surficial soil and the soil piles. All analytical results have been compared to the RIDEM Direct Exposure Criteria for Residential Land Usage (Table 1 of the Remediation Regulations). This comparison indicates exceedances of the standards (presented in Tables 1, 2 and 3 of this report) as summarized below:

- Arsenic in 26 out of 27 samples with the highest concentration being 28 parts per million (ppm) and the residential direct exposure remedial objective being 1.7 ppm;
- Lead in 11 out of 27 samples with the highest concentration being 559 ppm and the residential direct exposure remedial objective being 150 ppm;
- Benzo(a)anthracene in 8 out of 13 samples with the highest concentration being 5.4 ppm and the residential direct exposure remedial objective being 0.9 ppm;
- Benzo(a)pyrene in 9 out of 13 samples with the highest concentration being 2.6 ppm and the residential direct exposure remedial objective being 0.4 ppm;
- Benzo(a)fluoranthene in 6 out of 13 samples with the highest concentration being 2.3 ppm and the residential direct exposure remedial objective being 0.9 ppm;
- Benzo(g,h,i)perylene in 7 out of 13 samples with the highest concentration being 4.7 ppm and the residential direct exposure remedial objective being 0.8 ppm;
- Benzo(k)fluoranthene in 7 out of 13 samples with the highest concentration being 2.6 ppm and the residential direct exposure remedial objective being 0.9 ppm;
- Chrysene in 9 out of 13 samples with the highest concentration being 5.3 and the residential direct exposure remedial objective being 0.4 ppm;
- Dibenzo(a,h)anthracene in 3 out of 13 samples with the highest concentration being 0.8 ppm and the residential direct exposure remedial objective being 0.4 ppm; and
- Indeno(1,2,3-cd)pyrene in 7 out of 13 samples with the highest concentration being 3.9 ppm and the residential direct exposure remedial objective being 0.9 ppm.

3.20 SUBSURFACE SOIL

As summarized in Table 3, no exceedances of the RIDEM GB Leachability Criteria were detected in any soil samples. Only one contaminant with an established RIDEM GB Leachability Criteria was detected. This compound, benzene, was detected in the 1986 Waterman investigation at 1 ppm compared to the standard of 4.3 ppm. Benzene has not been detected in any of the groundwater samples collected from the site.

Exceedances of the RIDEM Residential Direct Exposure Criteria were detected for arsenic (5 out of 5 samples with the highest concentration being 23 ppm) and lead (1 out of 5 samples, 334 ppm).

3.30 GROUNDWATER

Groundwater has been investigated in 3 out of 4 of the site investigations conducted, yielding a total of 14 groundwater samples from 14 monitoring wells. As summarized in Table 4, no exceedance of the RIDEM Remediation Regulation's GB Groundwater Criteria has been detected.

3.40 SUMMARY

Exceedances of the RIDEM Residential Direct Exposure Criteria have been detected in soil at the site for 10 contaminants (2 inorganic and 8 semi-volatile organic compounds). It our opinion that the concentrations detected and their distribution are indicative of urban fill rather than an active release of contamination. Nevertheless, to address regulatory requirements, it will be necessary to address this condition during the development of the property. The sampling strategy for the property took into consideration that to the extent practical, the site surface will be covered in some manner, measures will be implemented to restrict access to certain areas, and that an Environmental Land Usage Restriction will be filed.

4.00 PROPOSED REMEDY

The planned development of the site includes construction of an approximately 3.18-acre complex consisting of a multi-story elderly housing facility with a terrace, walkways, associated landscaping, driveways and parking areas. The proposed building footprint and other significant proposed site features are shown in Figure 3.

The key objectives of the site's development plan are:

- Incorporate design requirements to limit the need for excavation of contaminated soils, and minimize or eliminate the need for off-site soil disposal; and

- Eliminate the potential that future site residents or visitors can come into contact with contaminated soil through design of the development.

As the objective of the site development is to eliminate direct contact with contaminated soils through development of the property, it is our opinion that the Department should waive the requirements of Rule 7.04 (Development of Remedial Alternatives) with regard to the screening of remedial alternatives. This opinion is based on the fact that the property is almost entirely composed of fill extending to below the water table and that the findings of this report indicate that contaminant levels are typical of urban settings and do not indicate a spill of hazardous materials, nor the existence of an active source of contamination. Accordingly, modifications to the project design will significantly control the opportunity for direct exposure to contaminated soil via various encapsulation and control methods, and will thus make the site compliant with Rule 8.01 of the Regulations.

4.10 SOIL MANAGEMENT

Activities that may involve the management of contaminated soils will likely include pre-construction and construction activities associated with the compaction of the fill layer, construction of building foundations and installation of site utilities.

The building is proposed to be constructed on shallow spread footings in the existing fill. Pre-construction activities will address issues associated with the presence of loose zones identified in the fill layers and organic soils at the base of the fill layer below the building and paved areas. Construction plans call for densification of the fill layer to provide support for the shallow spread footings. Areas of the building footprint will be pre-loaded using the existing soil pile, potentially supplemented with additional clean soil brought to the property, if sufficient volume does not exist on-site. This geotechnical design process reduces the potential for long-term settlement.

So as not to require the excavation of the fill layer, Deep Dynamic Compaction (DDC) techniques will be completed to densify the existing material. DDC consists of repeatedly dropping a weight on to the ground surface in a grid pattern using a crane. This procedure will take 4 to 6 weeks to complete. This process generates little dust beyond the immediate impact zone of the weight.

On completion of the DDC, the resulting surface craters will be leveled and compacted (resulting in an expected drop in surface grade across the site of 12 to 18 inches) and the site will be pre-loaded. After settlement has occurred (estimated to require approximately 12 additional weeks after DDC completion), any excess soils from the former soil piles and the clean pre-loading materials will be stripped and properly managed off site.

Excavations for the spread footings will be completed in the compacted fill. Any excavated fill generated during the construction of the footings will be reinterred on the site.

4.20 FINAL RESPONSE ACTION\SITE DEVELOPMENT

Eliminating the potential for humans to come into direct contact with contaminated soil at the site is the goal of the proposed remedial action. To accomplish this goal, GZA proposes to use a combination of methods tied to site development, topographic and regulatory considerations. Specifically:

1. As shown on Figure 3, the building footprint and paved areas will account for approximately 46% of the surface of that portion of the site slated for development. The remaining portions of the site slated for development will be covered with 2 feet of clean fill or a geosynthetic cap and vegetated with sod or other landscaping.

2. With respect to the shoreline area (that area between the NBC easement and the Seekonk River), due to its topography, wave action and tidal fluctuations, and CRMC regulatory considerations, it is not feasible to cap or remove surficial fills. Consequently, as shown on Figure 3, GZA proposes to limit access through the establishment of a restrictive natural barrier of thick bushes to supplement the existing vegetation. In those limited area of the shoreline where filling is feasible and desirable, off-site clean fill and grass cover will be placed. As shown on Figure 3, the shoreline area to be filled includes the construction of a gazebo structure. The gazebo will be elevated approximately 15 feet above the waterline and will be made accessible via an elevated wooden walkway and a paved pathway.

   We understand that this approach will require a variance of the regulations. Section 4.40 below provides information to support this request.

3. The NBC sewer easement covers approximately 12% of the site surface area and Koffler is restricted with regard to its use and development. Based on our conversations with the NBC (R. Bernier) and the contractor responsible for the construction of the sewerline, it is our understanding that the sewerline construction involved the installation of steel sheeting on either side of the sewerline along its length, the placement of a geosynthetic membrane upon which was placed gravel fill and 4 to 6 inches of topsoil for seeding. It is our understanding that the top soil was brought to the property from off-site. Consequently, we are not proposing engineering controls to this area of the property.

4.30 INSTITUTIONAL CONTROLS

It is GZA's understanding that it will be necessary for Koffler to file an Environmental Land Usage Restriction (ELUR) for the property (i.e., plat 15, lot 35). The ELUR will document Koffler's commitment to maintain the proposed response actions at the site and provide notice to successors in interest for the property of the agreed upon restrictions. These restrictions will be in place after the site is developed and will prohibit the excavation or disturbance of surficial features (soil cover, synthetic cover and restrictive plantings) which could result in human exposures.

Koffler will also notify project and future construction workers of site conditions prior to the initiation of construction. That notification will occur through the completion of a pre-construction safety meeting. As described in Section 5.20 below, discussions have been held with the NBC regarding site conditions and construction plans. Formal notification will be accomplished through the issuance of a copy of this SIR to the NBC.

4.40 JUSTIFICATION FOR VARIANCE REQUEST

As described above, topographic and regulatory constraints limit the ability to complete the direct access control measures to be completed on the development portion of the property. As an alternative, GZA has proposed to control access to this area of the site through the use of restrictive plantings and by the placement of off-site clean fill and loam (with seeding) in the area of the waterfront where access will be allowed (refer to Figure 3).

Lincoln's data indicates that arsenic and lead concentrations in fills along the waterfront are consistent with those recorded elsewhere on the site. Consequently, the waterfront area is viewed as representing no more of a source area than the balance of the site. In fact, the ***Site Investigation*** data demonstrates that no exceedances of the GB Leachability or GB Groundwater Objectives were identified.

Under current site conditions, access to soils within the waterfront is severely limited due to the steep embankments and the density of vegetative growth. Access to the area will further be controlled through the proposed restrictive plantings. In addition, unauthorized access onto the property will be further limited once the site is occupied and maintained following development.

We believe that site conditions upon completion of the activities described herein will effectively provide protection to human health and the environment, and in fact, will result in improved site safety and aesthetic considerations. The fill conditions are not believed to have caused pollution to surface water or groundwater beyond ambient conditions. Further, we do not believe that conditions along the waterfront will violate provisions of any other pertinent federal or state statutes, rules or regulations.

It is our opinion, given the urban setting of the area, the area groundwater classification and the direct access control measures proposed, that the variance is appropriate and is protective of the human health and the environmental.

5.00 NOTICES

5.10 PUBLIC NOTICE

As required by Rule 7.07 (Public Notice), Mr. Arthur Schucht of Koffler and\or his representative Robert Stolzman of Adler, Pollock and Sheehan met with the abutting property owners and notified them of the proposed project. On March 17, 1997 Mr. Schucht met with Captain Taylor of Salvation Army, the owners of the lot abutting the site to the north and on March 27 and 28, 1997 Mr. Stolzman met with Ralph Lewis (for Lydwin R. Young Associates), Frank Gustafson and Harold Schein the owners of property abutting the site to the west. These meeting are documented in Appendix E.

5.20 OTHER NOTICES

Discussions have been held with the CRMC with respect to development within their jurisdictional area of the site, and a formal permit application and hearings will be required. As described in Section 4.20 above, GZA has also been in contact with the NBC with respect to the proposed remedy. The NBC will also be formally contacted prior to the initiation of the DDC work to establish their requirements for seismic monitoring along the sewerline. This coordination is consistent with our approach on other projects in Rhode Island where DDC was completed in the area of NBC sewerlines (i.e., the former Manton Avenue Landfill and the former B.B. Greenberg property).

6.00 PROJECT SCHEDULE

Koffler is prepared to submit the ***Remedial Action Work Plan*** upon receiving a Remedial Decision Letter from RIDEM. The proposed schedule for earthwork activities at the site is shown in the following table. It is our understanding that the developer intends to start pre-construction activities in the spring and building construction by September 1997.

Task	Estimated Completion Date
Soil balance estimate	Ongoing
Finalize project design	Ongoing
Deep Dynamic Compaction	4 to 6 weeks after initiation date
Preloading	12 weeks after DDC completion
Foundation excavation	1 month after completion of pre-loading
Landscaping	3 weeks after completion of building exterior
Filing the ELUR	Within 60 days of landscaping completion
Filing closure report	Within 30 days of filing the ELUR
Project completion	August 1998

Following the RAWP approval and completion of the remedial action, GZA will provide documentation to the Department which demonstrates that the direct exposure control measures have been constructed. We understand that the Department will issue a Letter of Compliance upon receipt of a stamped (recorded) copy of the ELUR.

To ensure the permanency and long-term protectiveness of the remedy, the RAWP will include a property maintenance plan. That plan will describe requirements and procedures to maintain the integrity of capped and landscaped areas of the site.

7.00 CERTIFICATION

GZA certifies to the best of its knowledge that this ***Site Investigation Report*** is complete and accurate.

John P. Hartley
Associate Principal

Koffler Realty Associates V, L.L.C. certifies to the best of its knowledge that this Site Investigation Report is a complete and accurate representation of the site and contains all known facts concerning the release of hazardous substances at the site.

Arthur Schucht
Koffler Realty Associates V, L.L.C.

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8.00 LIMITATIONS

GZA's work relating to this report and the currently proposed activities at the site was primarily that of a regulatory consultant. The opinions contained in this report are based on data gathered by GZA and others.

GZA's work was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area, and GZA observed that degree of care and skill generally exercised by other consultants under similar circumstances and conditions. This report is also subject to the following specific limitations and those contained in Appendix A.

This report was designed to provide an appropriate level of remediation given our current understanding of site conditions, proposed development objectives for the property and our interpretation of specific regulatory requirements. If development plans or property use changes significantly, or if additional data is obtained during the course of development, GZA reserves the right to modify any or all of the criteria specified in this plan.

TABLES

FIGURES

APPENDIX C

FIGURES

MATELY DETERMINED

TABLES

Sample	Lincoln Environmental (January and March 1997) Surface Soil Samples GH 3	A4	A6	B1	B2	B3	B4	C2	Soil Stock Pile Samples SS1	SS2	SS3	SS4	SS5	SS6
Semi-Volatiles														
Acenaphthene	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	NA	0.5	ND	ND	ND	ND	ND	ND	1.7	ND	ND	ND	1	1.1
Anthracene	NA	1.1	1	ND	ND	0.6	ND	2.2	2.2	ND	0.6	ND	1.2	1.2
Benzo(a)anthracene	NA	1.7	1.9	ND	ND	2	0.6	3.3	5.4	ND	1.7	0.7	1.8	2.3
Benzo(a)pyrene	NA	1.3	1.5	ND	ND	2.1	0.6	1.9	2.6	ND	1	ND	0.9	1
Benzo(a)fluoranthene	NA	1.3	1.5	ND	ND	2.3	0.6	1.8	2.3	ND	0.9	ND	0.7	1
Benzo(g,h,i)perylene	NA	2.1	1.6	ND	ND	ND	ND	2.8	4.7	ND	1.5	ND	1.7	1.9
Benzo(k)fluoranthene	NA	1.4	1.5	ND	ND	2.6	0.8	1.9	2.2	ND	1	ND	0.9	1
Bis(2-ethylhexyl)phthalate	NA	2.8	ND	0.9	0.6	ND	ND	ND	0.6	ND	ND	ND	0.5	0.5
Chrysene	NA	2.1	3.5	ND	ND	1.8	0.8	3.5	5.3	ND	1.7	0.7	1.7	2.2
Dibenzo(a,h)anthracene	NA	ND	0.6	ND	ND	ND	ND	0.6	0.8	ND	ND	ND	ND	ND
Fluoranthene	NA	3.8	3.2	0.6	1.1	2.1	1.9	4.2	5.1	ND	2.6	1.7	2.9	3.4
Fluorene	NA	ND	ND	ND	ND	ND	ND	1.4	1.2	ND	ND	ND	0.8	0.7
Indeno(1,2,3-cd)pyrene	NA	1.6	1.3	ND	ND	ND	ND	2.1	3.9	ND	1.2	ND	1.2	1.4
2-Methyl Naphthalene	NA	ND	ND	ND	ND	ND	ND	0.5	ND	ND	ND	ND	ND	ND
Naphthalene	NA	ND	ND	ND	ND	ND	1.6	0.9	ND	ND	ND	ND	0.7	ND
Phenanthrene	NA	2.3	2.1	ND	0.6	1.9	2	1.7	ND	ND	ND	0.8	1.2	2.5
Pyrene	NA	4.1	3.5	0.5	1	2.7	1.5	4.6	8	ND	4	2.1	5	4.4
Pesticides/Herbicides														
4-4-DDD	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-4-DDE	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-4-DDT	0.06	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-T	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals														
Arsenic	NA	9	19	8	7	23	14	14	14.1	25.3	14.6	13.5	7.9	24.5
Barium	NA	NA	NA	NA	NA	NA	NA	NA	45.5	125	56.2	51.7	71	61.2
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	1.69	1.56	1.29	1.29	2.02	1.91
Chromium	NA	NA	NA	NA	NA	NA	NA	NA	12.7	15.8	24.7	27	14.9	16.5
Lead	NA	559	52	52	60	73	12	153	138	31	227	161	311	166
Mercury	NA	NA	NA	NA	NA	NA	NA	NA	0.29	ND	0.43	1.24	ND	0.57
Silver	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	1.68	ND	ND

Notes

ND = Not Detected

NA = Not Analyzed

All results in units of milligrams per killigram

Shaded results indicate an exceedance of the RIDEM residential direct exposure criteria

TABLE 2
KOFFLER REALTY
SURFACE AND STOCK PILE SOIL LEAD AND ARSENIC DATA SUMMARY

Sample	Arsenic	Lead
A-1	10	29
A-2	11	204
A-3	12	58
A-4	9	559
A-5	1	146
A-6	19	52
A-7	15	123
B-1	8	52
B-2	7	60
B-3	23	73
B-4	14	12
B-5	13	376
B-6	12	48
C-1	19	175
C-2	14	153
C-3	28	114
C-4	19	43
D-1	17	106
D-2	16	331
D-3	19	36
E-1	16	124
SS-1	14.1	138
SS-2	25.3	31
SS-3	14.6	227
SS-4	13.5	161
SS-5	7.9	311
SS-6	24.5	166
Arithmetic Mean	14.89	144.74
Geometric Mean	13.12	101.43
Geometric Variance	6.33	127.37

Notes
All results in units of milligram per kilogram
Shaded results indicate an exceedance of the RIDEM residential direct exposure criteria (arsenic 1.7 ppm & lead 150 ppm)

KOPPLER REALTY

SUB-SURFACE SOIL DATA SUMMARY

Firm	Waterman Engineering (October 1986)						Lincoln Environmental (January 1997)				
Sample	MW 1	MW 2	MW 3	MW 4	MW 5	MW 6	GZA 1	GZA 2	GZA 3	GZA 4	GZA 5
Volatiles											
Benzene	1	1	1	1	1	1	ND	ND	ND	NA	ND
Bromomethane	2	5	2	2	1	1	ND	ND	ND	NA	ND
Chloromethane	2	3	2	2	2	2	ND	ND	ND	NA	ND
2-Butanone (MEK)	ND	ND	ND	ND	ND	ND	2.3	ND	ND	NA	ND
Metals											
Arsenic	NA	NA	NA	NA	NA	NA	23	20.5	15.6	8.42	5.48
Barium	NA	NA	NA	NA	NA	NA	30.3	51.2	44.4	17.8	65.8
Cadmium	NA	NA	NA	NA	NA	NA	1.76	1.81	1.8	1.29	1.28
Chromium	NA	NA	NA	NA	NA	NA	32.1	22.3	15.1	11.9	11.4
Lead	NA	NA	NA	NA	NA	NA	18.2	117	122	7.43	334
Mercury	NA	NA	NA	NA	NA	NA	ND	1.26	0.443	ND	ND
Silver	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	2.28

Notes

ND = Not Detected

NA = Not Analyzed

All Results in units of milligram per kilogram

Shaded results indicate an exceedance of the RIDEM residential direct exposure criteria

KOFFLER REALTY
GROUNDWATER DATA SUMMARY

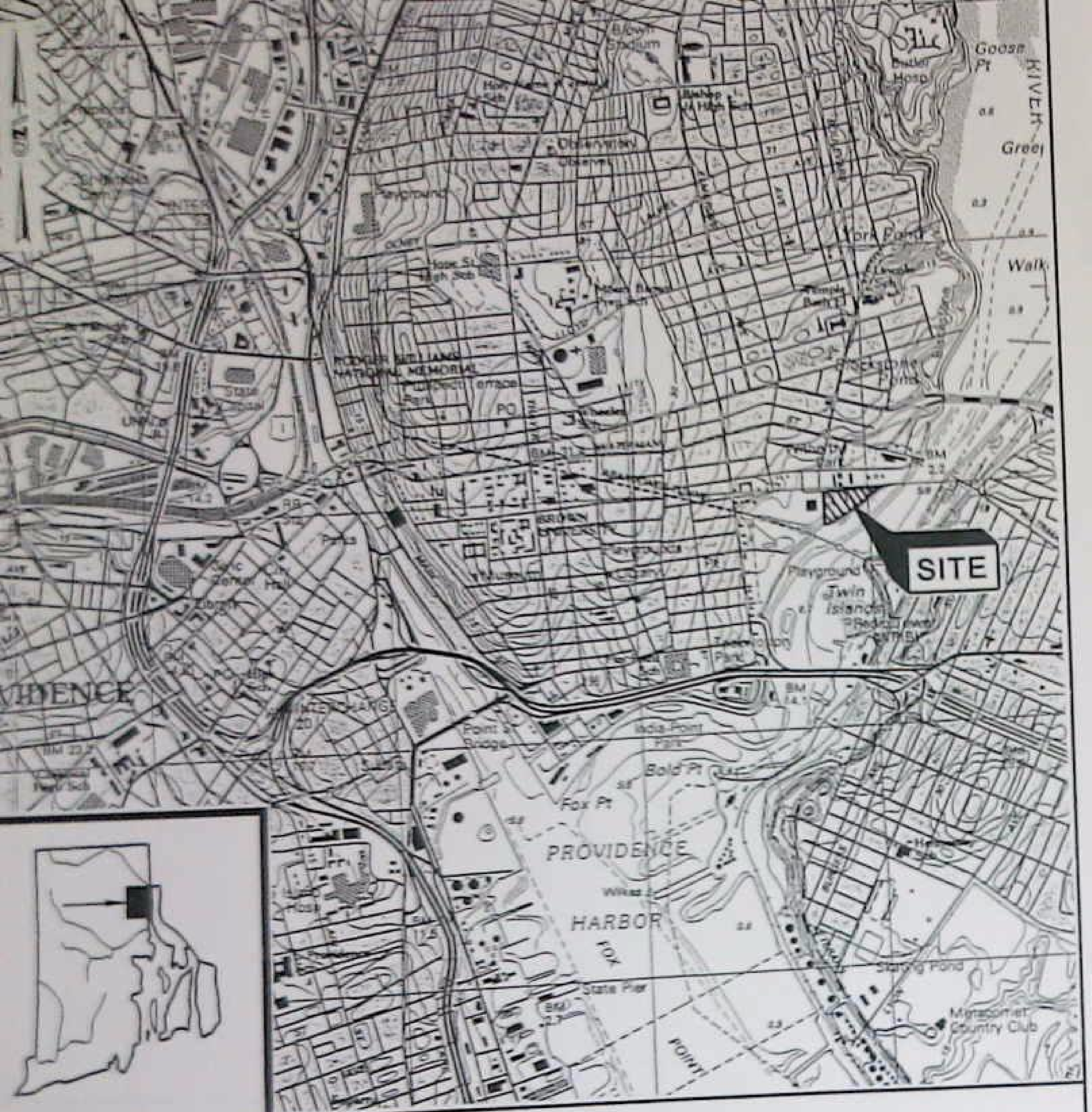
Firm	Waterman Engineering (October 1986)						GZA (May 1987)		Lincoln Environmental (January 1997)					
Sample	MW 1	MW 2	MW 3	MW 4	MW 5	MW 6	OW 6	OW 7	GZA 1	GZA 2	GZA 3	GZA 4	GZA 5	GZA 6
Volatiles														
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	4	4	5	4	3	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	ND	1	1	2	1	1	ND	ND	ND	ND	ND	ND	ND	ND
TPH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	ND	ND
Metals														
Cadmium	ND	ND	0.01	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
Chromium	ND	0.06	0.14	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
Lead	ND	0.08	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA

Notes
ND = Not Detected
NA = Not Analyzed
Volatile organic compound results in units of parts per billion
Metals results in units of milligrams per liter

APPENDIX C APPENDIX D APPENDIX E

MATELY DETERMINED

FIGURES



FROM USGS PROVIDENCE, RI QUADRANGLE MAP
(CONTOUR ELEVATIONS ARE IN METERS ABOVE NGVD, AT 3 METER INTERVALS)

APPROXIMATE SCALE IN FEET

0' 1000' 2000' 4000'

GZA	KOFFLER DEVELOPMENT SITE INSPECTION REPORT PROVIDENCE, RHODE ISLAND	LOCUS PLAN APRIL 1997 FIGURE NO. 1

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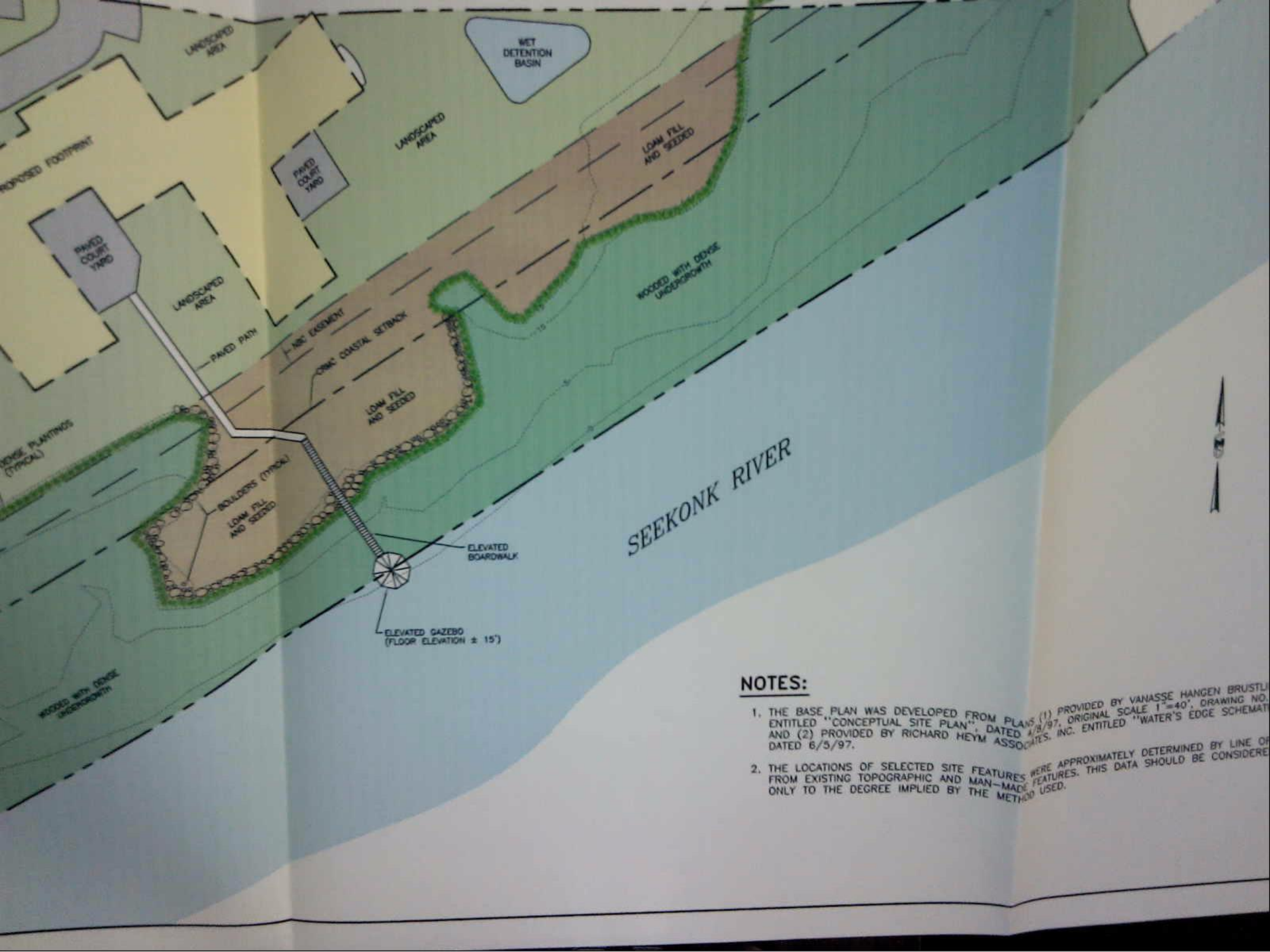


NOTES:

1. THE BASE PLAN WAS DEVELOPED FROM PLANS (1) PROVIDED BY VANASSE HANGEN BRUSTLI ENTITLED "CONCEPTUAL SITE PLAN", DATED 4/8/97, ORIGINAL SCALE 1"=40', DRAWING NO. AND (2) PROVIDED BY RICHARD HEYM ASSOCIATES, INC. ENTITLED "WATER'S EDGE SCHEMAT DATED 6/5/97.
2. THE LOCATIONS OF SELECTED SITE FEATURES WERE APPROXIMATELY DETERMINED BY LINE OF FROM EXISTING TOPOGRAPHIC AND MAN-MADE FEATURES. THIS DATA SHOULD BE CONSIDERE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

NOTES:

1. THE BASE PLAN WAS DEVELOPED FROM PLANS (1) PROVIDED BY VANASSE HANGEN BRUSTLIN, INC. ENTITLED "CONCEPTUAL SITE PLAN", DATED 4/8/97, ORIGINAL SCALE 1"=40', DRAWING NO. C-1; AND (2) PROVIDED BY RICHARD HEYM ASSOCIATES, INC. ENTITLED "WATER'S EDGE SCHEMATIC", DATED 6/5/97.

2. THE LOCATIONS OF SELECTED SITE FEATURES WERE APPROXIMATELY DETERMINED BY LINE OF SIGHT FROM EXISTING TOPOGRAPHIC AND MAN-MADE FEATURES. THIS DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

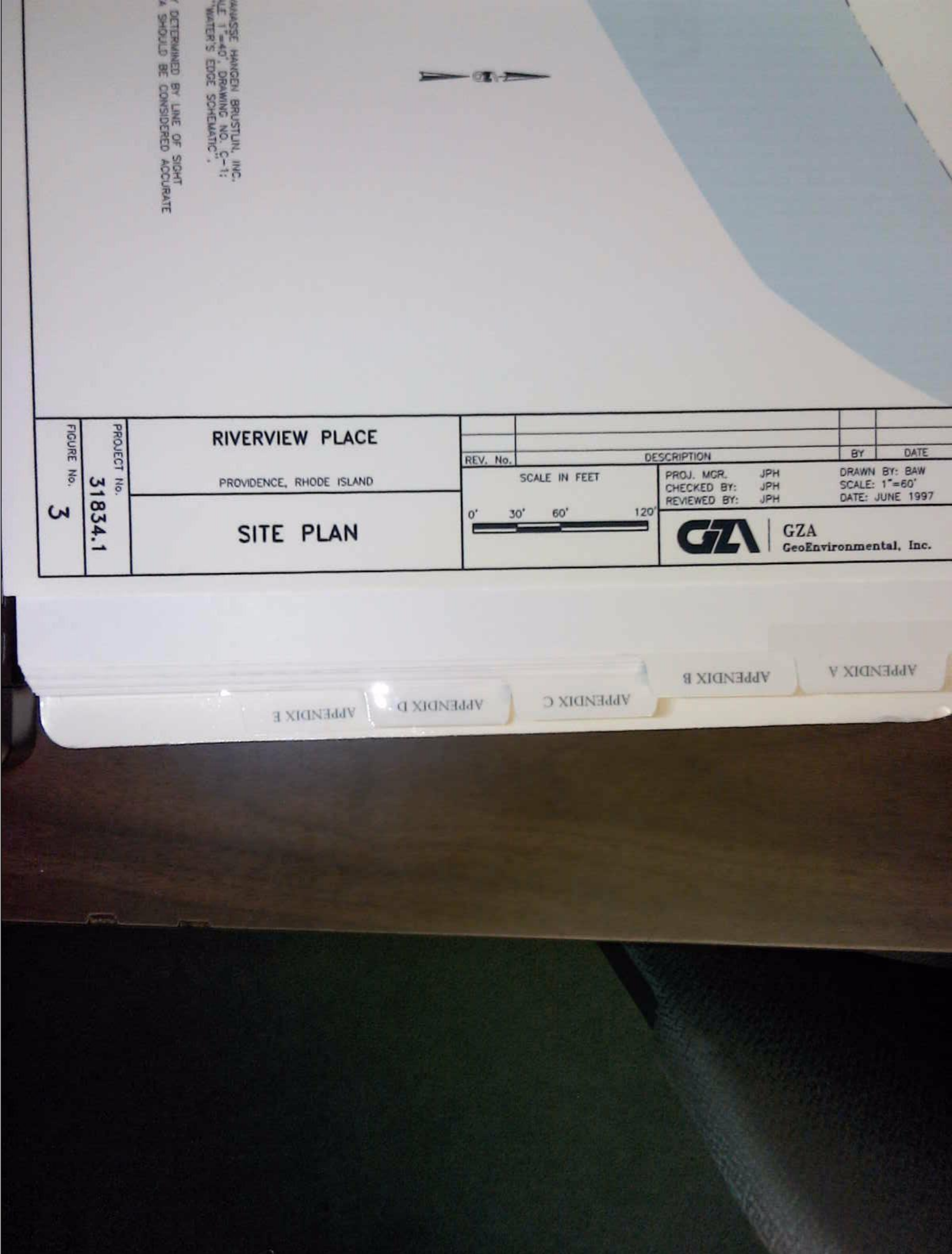
NO.	DESCRIPTION	BY
	PROJ. MGR.	JPH
	CHECKED BY:	JPH
	REVIEWED BY:	JPH

GZA

SCALE IN FEET
0' 30' 60' 120'

RIVERVIEW PLACE
PROVIDENCE, RHODE ISLAND

SITE PLAN



REV. No.	DESCRIPTION	BY	DATE

RIVERVIEW PLACE

PROVIDENCE, RHODE ISLAND

SITE PLAN

SCALE IN FEET

0' 30' 60' 120'

PROJ. MGR. JPH
CHECKED BY: JPH
REVIEWED BY: JPH

DRAWN BY: BAW
SCALE: 1"=60'
DATE: JUNE 1997

GZA
GeoEnvironmental, Inc.

PROJECT No. 31834.1

FIGURE No. 3

APPENDIX A
APPENDIX B
APPENDIX C
APPENDIX D
APPENDIX E

APPENDIX B

APPENDIX C

APPENDIX D

APPENDIX E

APPENDIX A

LIMITATIONS

SITE ASSESSMENT LIMITATIONS

The observations described in this report were made under the conditions stated therein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by Client. The work described in this report was carried out in accordance with the attached Terms & Conditions of Engagement.

In preparing this report, GZA GeoEnvironmental, Inc. (GZA) has relied on certain information provided by state and local officials and other parties referenced therein, and on information contained in the files of state and/or local agencies available to GZA at the time of the site assessment. Although there may have been some degree of overlap in the information provided by these various sources, GZA did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this site assessment.

In the event that bank counsel or title examiner for Client obtains information on environmental or hazardous waste issues at the site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

Observations were made of the site and of structures on the site as indicated within the report. Where access to portions of the site or to structures on the site was unavailable or limited, GZA renders no opinion as to the presence of hazardous material or oil, or to the presence of indirect evidence relating to hazardous material or oil, in that portion of the site or structure. In addition, GZA renders no opinion as to the presence of hazardous material or oil, or to the presence of indirect evidence relating to hazardous material or oil, where direct observation of the interior walls, floor, or ceiling of a structure on a site was obstructed by objects or coverings on or over these surfaces.

Unless otherwise specified in the report, GZA did not perform testing or analyses to determine the presence or concentration of asbestos or polychlorinated biphenyls (PCB's) at the site or in the environment at the site.

The purpose of this report was to assess the physical characteristics of the subject site with respect to the presence in the environment of hazardous material or oil. No specific attempt was made to check on the compliance of present or past owners or operators of the site with federal, state, or local laws and regulations, environmental or otherwise.

The conclusions and recommendations contained in this report are based in part upon the data obtained from a limited number of soil and/or groundwater samples obtained from widely spaced subsurface explorations. The nature and extent of variations between these explorations may not become evident until further exploration. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

Water level readings have been made in the test pits, borings, and/or observation wells at the times and under the conditions stated on the test pit or boring logs. However, it must be noted that fluctuations in the level of groundwater may occur due to variations in rainfall and other factors different from those prevailing at the time measurements were made.

Except as noted within the text of the report, no quantitative laboratory testing was performed as part of the site assessment. Where such analyses have been conducted by an outside laboratory, GZA has relied upon the data provided, and has not conducted an independent evaluation of the reliability of these data.

The conclusions and recommendations contained in this report are based in part upon various types of chemical data and are contingent upon their validity. These data have been reviewed and interpretations made in the report. As indicated within the report, some of these data are preliminary "screening" level data, and should be confirmed with quantitative analyses if more specific information is necessary. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, these data should be reviewed by GZA and the conclusions and recommendations presented herein modified accordingly.

Chemical analyses have been performed for specific parameters during the course of this site assessment, as described in the text. However, it should be noted that additional chemical constituents not searched for during the current study may be present in soil and/or groundwater at the site.

It is recommended that GZA be retained to provide further engineering services during construction and/or implementation of any remedial measures recommended in this report. This is to allow GZA to observe compliance with the concepts and recommendations contained herein, and to allow the development of design changes in the event that subsurface conditions differ from those anticipated.

APPENDIX B

GZA 1987 REPORT

APPENDIX C

APPENDIX D

APPENDIX E

TABLES

FIGURES

APPENDIX

SUBSURFACE INVESTIGATION

Assessor's Plat 15, Lot 35
Providence, Rhode Island

January 30, 1997

Prepared for:

Koffler Development, L.L.C.
One Providence Washington Place
Providence, RI 02903

Prepared by:

Lincoln Environmental, Inc.
333 Washington Highway
Smithfield, Rhode Island 02917

Lincoln Project Number SS6128A
File F:\FIRM\SS6128A\SS6128A.RPT

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TABLES

FIGURES

EXECUTIVE SUMMARY

Lincoln Environmental, Inc. (Lincoln) has completed a subsurface investigation at the property identified as Assessor's Plat 15, Lot 35 in Providence, Rhode Island. The pertinent findings of this investigation are summarized below:

- Six monitoring wells were installed by Goldberg Zoino and Associates (GZA). According to the boring logs completed by GZA, the drilling of monitoring wells GZA-1 through GZA-6 took place from December 16, 1996 to December 31, 1996. Each monitoring well was constructed of two inch diameter PVC riser and screen pipe.

- Lincoln visited the site on the following dates to observe GZA drilling activities, to screen soil samples, and to secure soil samples for analysis: December 16-20, December 24, and December 26 of 1996. In coordination with GZA, Lincoln obtained soil samples from the borings and submitted them for laboratory analysis of total metal and volatile organic compound concentrations. No headspace concentrations greater than 1 ppm were detected in site soil samples.

- Foundation remains were observed in an area identified in GZA's 1987 report as a former greenhouse. Lincoln observed three empty 55 gallon drums in the center of the foundation remains. Five soil samples were secured from the soils within the foundation remains at a depth of one foot below grade. Lincoln screened the samples with a photoionization detector. None of the soil samples exhibited detectable headspace concentrations. Lincoln submitted the soil sample collected from the middle of the foundation remains for laboratory analysis of pesticides and herbicides concentrations. The sample exhibited concentrations of three pesticides and one herbicide.

- At the verbal authorization of Arthur Schucht of Koffler, Lincoln returned to the site on January 23, 1997 to sample surficial soils. Using a clean shovel, Lincoln personnel obtained four composite soil samples (GZA-1A, GZA-2A, GZA-4A, and GZA-5A) from a depth of 0 to 2 feet below grade on the site. The sample locations have been included on **Figure 2**. The soil samples were transported via chain of custody protocols to Rhode Island Analytical Laboratories for analysis of total arsenic by appropriate EPA methods. In addition, the sample from GZA-5A was analyzed for total lead by appropriate methods.

- Metals were detected in the soil samples. With the exception of arsenic and lead, the metal concentrations were below Rhode Island Department of Environmental Management (RIDEM) reporting requirements. Arsenic concentrations ranged from a minimum of 5.48 ppm to a maximum of 23 ppm. Lead concentrations ranged from a minimum of 7.43 ppm to a maximum of 334 ppm. The arsenic concentrations in each soil sample were above the

RIDEM reporting requirements. The lead concentration in the GZA-5 soil sample was above the RIDEM reporting requirements.

- No volatile organic compounds were detected in any of the soil samples submitted for analysis, with the exception of the detection of 2.3 mg/kg of 2-butanone in the sample from GZA-1. Three pesticides and one herbicide were detected at concentrations less than 0.06 mg/kg in the soil sample submitted from the center of the former greenhouse. The RIDEM does not have any reporting criteria for 2-butanene, the three detected pesticides, or the detected herbicide.

- On January 7, 1997, Lincoln returned to the site to survey the tops of the monitoring wells for their location and elevation relative to an arbitrary benchmark on the site. In addition, Lincoln used an interface probe to gauge the depth to groundwater and evaluate the presence or absence of non-aqueous phase liquid (NAPL). No NAPL was detected on any of the site monitoring wells.

- On January 7, 1997, groundwater samples were obtained from the site monitoring wells. The samples were submitted to Rhode Island Analytical Laboratory for analysis of volatile organic compounds (VOC) via EPA Method 8240. In addition, the samples obtained from GZA-3, GZA-5, and GZA-6 were analyzed for total petroleum hydrocarbons (TPH) via EPA Method 8100 Modified. No TPH or VOC were detected in site groundwater at concentrations greater than the laboratory detection limits.

1.0 INTRODUCTION

Lincoln Environmental Inc. (Lincoln) was retained by Koffler Development, L.L.C. (Koffler) to complete a subsurface investigation at the property identified as Assessor's Map 15, Lot 35 in Providence, Rhode Island, herein referred to as the site. **Figure 1** depicts the location of the site property on a United States Geological Survey (USGS), Providence, Rhode Island topographical map.

The purpose of this study was to evaluate the quality of the soil and groundwater at the site with respect to the presence of oil and/or hazardous materials.

2.0 SUMMARY OF PREVIOUS ENVIRONMENTAL SITE ASSESSMENTS

In 1986, Waterman Engineering of East Providence, Rhode Island completed an environmental study of the property. In 1987, Goldberg Zoino and Associates (GZA) completed an environmental site assessment. In October of 1996, Lincoln performed a Phase I Environmental Site Assessment. Based upon the research which was performed by Lincoln, a potential for a release of oil or hazardous materials (OHM) was identified. The potential stems from both on-site and off-site sources.

The site has been historically filled with debris and refuse. The test pits dug by GZA in 1987 revealed the presence of fill material including: construction debris, ash, pipes, metal, refuse, and paint cans. The site inspection revealed the presence of debris piles. According to Arthur Schucht of Koffler, the debris piles were generated from excavation of soil from the sewer easement which traverses the site property. The specific contents of the debris piles and the material historically used as fill could not be determined. The 1987 GZA report also noted the existence of a former greenhouse.

Based upon the conclusions of the Phase I ESA, Lincoln recommended that a subsurface investigation be conducted to characterize site soil and groundwater conditions with respect to oil and/or hazardous materials.

3.0 SCOPE OF INVESTIGATION

3.1 Rationale for Scope of Work

In order to achieve the goal of the investigation, six monitoring wells were installed by GZA. During well drilling, soil samples were secured and submitted to a laboratory for analysis. Following well construction, groundwater samples were secured from the monitoring wells and submitted to a laboratory for analysis. The groundwater monitoring wells were located as shown on **Figure 2** to evaluate groundwater flow direction and provide adequate site coverage. Sampling protocols used for soil and groundwater sample acquisition are discussed in the sections which follow.

3.2 Pre-Drilling Activities

A Health and Safety plan (HASP) was drafted and used by Lincoln for the observation of drilling and for field activities conducted at the site. The HASP is presented as **Appendix 1**.

3.3 Observation of Drilling/Monitoring Well Installation

All subsurface drilling and monitoring well installation was performed by GZA. According to the boring logs completed by GZA, the drilling of monitoring wells GZA-1 through GZA-6 took place from December 16, 1996 to December 31, 1996. Each monitoring well was constructed with two inch diameter PVC riser and screen pipe. The completed boring logs, including the well construction details reported by GZA, are presented in **Appendix 2**.

Lincoln visited the site on the following dates to observe drilling by GZA, to screen soil samples, and to secure soil samples for analysis: December 16-20, December 24, and December 26 of 1996. In coordination with GZA, Lincoln obtained soil samples from the borings and submitted them for analysis.

3.4 Groundwater Elevation Survey

On January 7, 1997, Lincoln personnel surveyed each monitoring well to obtain the top of casing elevation relative to an arbitrary datum point. In addition, Lincoln used an ORS electronic interface probe to gauge the depth to water in each well. The water level in two of the monitoring wells (GZA-1 and GZA-3) was detected at a depth above the screened interval of the monitoring well. Therefore, the presence/absence of non aqueous phase liquid (NAPL) could not be evaluated. NAPL was not detected in any of the other monitoring wells.

The depth to water ranged between 7.32 and 18.26 feet below the grade level. Field measurements and gauging data can be found in **Appendix 3**. Based upon the data obtained, a groundwater flow map was generated which indicates apparent groundwater flow is in a southerly direction. Groundwater characteristics are further described in Section 4.

3.5 Soil Sampling/Screening/Analysis

GZA utilized a split spoon sampling device to obtain soil samples. Lincoln screened samples by utilizing an OVM photoionization detector (PID) equipped with a 10.0 eV lamp to implement a typical jar headspace screening procedure for volatile organic compounds. The screening procedure is detailed in **Appendix 4.**

One soil sample from each boring, with the exception of GZA-6, was submitted to Rhode Island Analytical Laboratories of Warwick, Rhode Island for analysis. The samples were obtained via split spoon sampling by GZA. GZA placed the soil samples from GZA-1 (19'-21'), GZA-3 (5'-7'), and GZA-4 (14'-16') in the appropriate sample jars and transferred them to Lincoln. Lincoln secured the samples from GZA-2 (10'-12') and GZA-5 (15'-17') by placing soil from the split spoon sampler into the appropriate jars. Each sample was transported via chain of custody protocols to Rhode Island Analytical Laboratories for analysis. Each of the aforementioned samples, with the exception of the sample from GZA-4, were analyzed for volatile organic compounds (VOC) by EPA Method 8240 and for RCRA 8 total metals by appropriate EPA Methods. The sample from GZA-4 was analyzed for RCRA 8 total metals only.

On December 24, 1996, Lincoln observed the remains of a concrete block foundation on the eastern portion of the site. The area within the foundation remains was bare soil. According to the 1987 GZA environmental site assessment, a former greenhouse was present in this area. Lincoln observed three unlabeled 55 gallon steel drums within the area bordered by the foundation remains. The drums were apparently empty. On December 26, 1996, Lincoln secured five soil samples from a depth of one foot below grade in the bare soil area within the observed foundations remains. Each of the samples was screened for volatile organic compounds using the procedure described in **Appendix 4**. In addition, the sample from the center of foundation remains was submitted via chain of custody protocols to Rhode Island Analytical Laboratories for analysis of VOC by EPA Method 8240, of pesticides by EPA Method 8080, and of herbicides by EPA Method 8150B.

At the verbal authorization of Arthur Schucht of Koffler, Lincoln returned to the site on January 23, 1997 to sample surficial site soils. Using a clean shovel, Lincoln personnel obtained four composite soil samples (GZA-1A, GZA-2A, GZA-4A, and GZA-5A) from a depth of 0 to 2 feet below grade. The sample locations have been included on **Figure 2**. The soil samples were placed into clean glass jars and transported via chain of custody protocols to Rhode Island Analytical Laboratories for analysis of total arsenic by appropriate EPA methods. In addition, the sample from GZA-5A was analyzed for total lead by appropriate methods.

3.6 Groundwater Sampling/Analysis

On January 7, 1997, Lincoln personnel collected a groundwater sample from each of the six monitoring wells installed by GZA. Prior to collecting a sample, a dedicated bailer was used to remove three well volumes of standing water. Groundwater samples were then secured by lowering a dedicated bailer into each monitoring well. Once filled with water from the monitoring well, the bailer was retrieved. The groundwater sample was transferred to the appropriate sample jar. The jar was then labeled and stored in a cooler with ice. The sample jars were transported via chain of custody protocols to Rhode Island Analytical Laboratories for analysis of VOC by EPA Method 8240. In addition, in order to evaluate the potential impact from the underground storage tanks on the northern abutting Salvation Army property, the samples from GZA-3, GZA-5, and GZA-6 were also analyzed for total petroleum hydrocarbons by EPA Method 8100M.

4.0 GEOLOGY

Based upon the GZA well construction logs, it appears that the site is generally underlain by a fill layer consisting of fine to coarse sands interspersed with some areas of silt, brick, concrete, asphalt, glass fragments, shell fragments, ashes, wood fragments, and gravel. The fill layer is present from the surface to a maximum observed depth of approximately 30 feet below grade. Beneath the fill layer, there is a layer of organic silt to a maximum observed depth of 54 feet below grade.

5.0 GROUNDWATER FLOW DIRECTION

Based upon the elevation survey of the site monitoring wells, the groundwater appears to flow in a southerly direction toward the Seekonk River. The inferred groundwater contours are depicted on **Figure 2**.

6.0 RESULTS OF SOIL SAMPLING/SCREENING/ANALYSES

None of the soil samples, which were screened for volatile organic compounds (VOC) via the headspace screening procedure, revealed a detectable headspace concentration, with the exception of the sample from GZA-1 which revealed a headspace concentration of 1 ppm. **Table 1** is a summary of the soil headspace screening results.

Several metals were detected via laboratory analysis in site soil samples. In particular, arsenic and lead were detected in each soil sample for which they were analyzed. Arsenic concentrations ranged from a minimum of 5.48 ppm to a maximum of 23 ppm. Lead concentrations ranged from a minimum of 7.43 ppm to a maximum of 334 ppm.

No volatile organic compounds were detected in any of the soil samples submitted for this analysis, with the exception of the detection of 2.3 mg/kg of 2-butanone in the sample from GZA-1.

Three pesticides and one herbicide were detected at concentrations less than 0.06 mg/kg in the soil sample submitted from the center of the former greenhouse.

Table 2 summarizes all of the soil analytical results from this project. The laboratory results and chain of custody documentation for the soil samples analyzed are presented as **Appendix 5**.

6.1 Comparison with RIDEM Soil Standards

In order to compare the soil analytical results to established state environmental regulations, Lincoln consulted the Rhode Island Department of Environmental Management's Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations), as amended August, 1996. Using the Direct Exposure Criteria concentrations in soil provided in Section 8.0 of the Remediation Regulations and based upon the proposed site usage for residential purposes, the residential exposure criteria concentrations have been listed in **Table 2** for comparative purposes.

Each soil sample analyzed exhibited arsenic concentrations which are greater than the RIDEM Direct Exposure concentration for residential development. In addition, the lead concentration exhibited in the GZA-5 15 to 17 feet below grade soil sample, exceeded the RIDEM Direct Exposure concentration for residential development. No additional soil samples exhibited metal or VOC concentrations which were greater than RIDEM Direct Exposure concentrations for residential development.

7.0 RESULTS OF GROUNDWATER SAMPLING/ANALYSES

No VOC or TPH concentrations were detected above laboratory detection limits in any of the groundwater samples analyzed. **Table 3** summarizes the groundwater analytical results. The laboratory results and chain of custody documentation for the groundwater samples analyzed are presented in **Appendix 6**.

8.0 CONCLUSIONS

Based upon the investigation completed, arsenic has been detected in soil samples from the site at concentrations greater than the RIDEM Direct Exposure Criteria for residential property usage. The concentrations of arsenic detected in site soils are also greater than the RIDEM Direct Exposure Criteria for industrial/commercial property usage. The source of the arsenic was not discovered.

Lead was detected in one soil sample at a concentration greater than the RIDEM Direct Exposure Criteria for residential development. The source of the lead in site soils was not discovered.

According to section 5.01 B of the RIDEM Remediation Regulations, the arsenic and lead soil concentrations which exceed the RIDEM Direct Exposure Criteria require RIDEM notification within 15 days of the discovery of the release. Lincoln advises that the RIDEM be notified of these findings.

Three pesticides and one herbicide were detected in soil samples at a depth of one foot below grade in the soils within the former greenhouse foundation. Although the source of the detected pesticide and herbicide concentrations is unknown, there is a potential that the reported former greenhouse was the source. The RIDEM Remediation Regulations do not contain any standards for the detected pesticides and herbicide.

9.0 LIMITATIONS

Information obtained from public agencies, site inspection, limited sampling and laboratory chemical analysis was used to characterize the site. The accuracy of the conclusions derived from this information is based solely on the accuracy of the information reported. Events occurring on the site after January 23, 1997 are beyond the scope of this report. If information becomes available concerning the site which is not included in this report, it should be made available to Lincoln Environmental so that conclusions and/or recommendations can be re-examined and modified where applicable.

No attempt was made to determine the compliance of present or former owners or operators of the site with federal, state, or municipal environmental or land use laws or regulations. Due to the fact that geological and soil formations are inherently random, variable and indeterminate (heterogeneous) in nature, the professional services and opinions provided by Lincoln Environmental under this agreement are not guaranteed to be a representation of complete site conditions, which are subject to change with time as a result of natural or man-made processes.

Although the services are extensive, findings and conclusions are limited to and by the information obtained. Lincoln Environmental makes no expressed or implied representations or warranties regarding any changes in condition of the premises after the date of the on-site inspection(s). In addition, further subsurface investigatory methods are available that could further define the soil and groundwater conditions.

Photoionization detector (PID) field screening is not as sensitive as laboratory analysis and conclusions drawn from such screening are limited to those contaminants potentially detectable with a 10.0 electron volt lamp. No representation regarding the potential results of additional field screening, laboratory testing, or regarding the potential results or tests for materials not tested for is expressed or implied. Any qualitative or quantitative information regarding the site which was not available to Lincoln Environmental at the time of this assessment may result in a modification of the representations made in this report.

Table 1	Soil Sample Jar Headspace Screening Results Koffler Development, L.L.C. Plat 15, Lot 35, Providence, RI	
Sample Location	**Depth Below Grade (feet)**	**OVM PID Reading (ppm) v/v Isobutylene**
GZA-1	0-2	1
	5-7	ND
	10-12	ND
	19-21	ND
GZA-2	19-21	ND
GZA-3	10-12	ND
GZA-5	0-2	ND
	5-7	ND
	10-12	ND
	15-17	ND
GREENHOUSE 1	1	ND
GREENHOUSE 2	1	ND
GREENHOUSE 3	1	ND
GREENHOUSE 4	1	ND
GREENHOUSE 5	1	ND

ND= not detected by the photoionization detector

Table 2

Summary of Soil Analytical Results
Koffler Development, L.L.C.
Plat 15, Lot 35, Providence, RI

Sample Location	Arsenic* (mg/kg)	Barium* (mg/kg)	Cadmium* (mg/kg)	Chromium* (mg/kg)	Lead* (mg/kg)	Mercury* (mg/kg)	Silver* (mg/kg)
GZA-1 (19'-21')	23	30.3	1.76	32.1	18.2	ND	ND
GZA-1A (0'-2')	19	NA	NA	NA	NA	NA	NA
GZA-2 (10'-12')	20.5	51.2	1.81	22.3	117	1.26	ND
GZA-2A (0'-2')	23	NA	NA	NA	NA	NA	NA
GZA-3 (5'-7')	15.6	44.4	1.80	15.1	122	0.443	ND
GZA-4 (14'-16')	8.42	17.8	1.29	11.9	7.43	ND	ND
GZA-4A (0'-2')	10.2	NA	NA	NA	NA	NA	NA
GZA-5 (15'-17')	5.48	65.8	1.28	11.4	334	ND	2.28
GZA-5A (0'-2')	11.8	NA	NA	NA	57.7	NA	NA
GHOUSE #3 (CENTER)	NA	NA	NA	NA	NA	NA	NA
RIDEM Direct Exposure Criteria	**1.7**	**5,500**	**39**	**390**	**150**	**23**	**200**

NOTE: only detected compounds have been presented above. For a complete listing of analyses, see laboratory data in the appendices.
NOTE: shaded cells indicate concentrations greater than RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (as amended August 1996) Direct Exposure Criteria for residential development
NA = the sample was not analyzed for the indicated analyte
ND = the analyte was not detected in the sample above laboratory detection limits
* = RCRA 8 Metals by EPA Methods

Table 2 (cont'd) Summary of Soil Analytical Results Koffler Development, L.L.C. Plat 15, Lot 35, Providence, RI					
Sample Location	**2-Butanone (mg/kg)**	**4,4'-DDD (mg/kg)**	**4,4'-DDE (mg/kg)**	**4,4'-DDT (mg/kg)**	**2,4,5-T (mg/kg)**
GZA-1 (19'-21')	2.3	NA	NA	NA	NA
GZA-2 (10'-12')	ND	NA	NA	NA	NA
GZA-3 (5'-7')	ND	NA	NA	NA	NA
GZA-4 (14'-16')	NS	NA	NA	NA	NA
GZA-5 (15'-17')	ND	NA	NA	NA	NA
GHOUSE #3 (CENTER)	ND	0.01	0.03	0.06	0.02
RIDEM Direct Exposure Criteria*	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

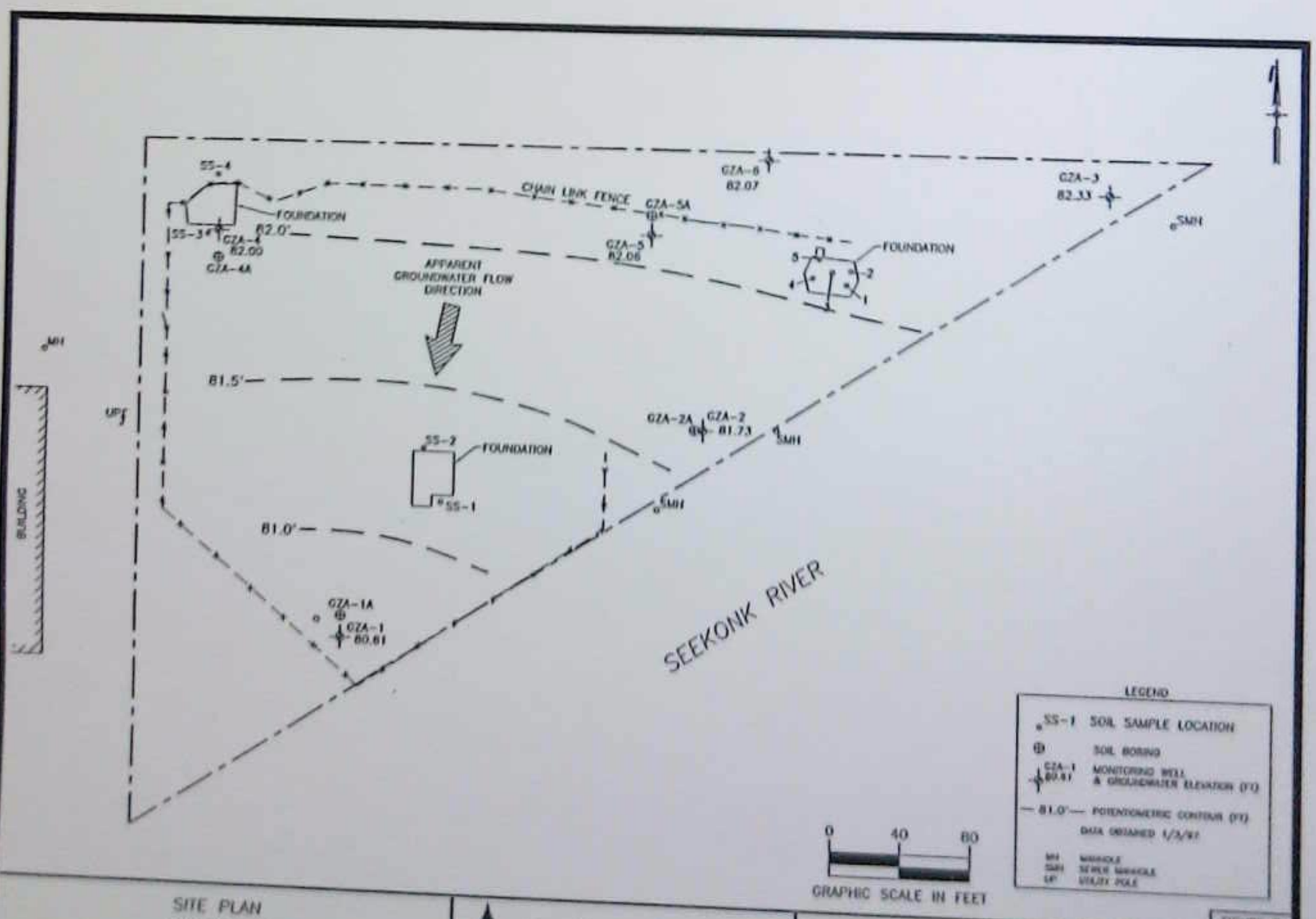
NA

NOTE: only detected compounds have been presented above. For a complete listing of analyses, see laboratory data in the appendices.
NOTE: shaded cells indicate concentrations greater than RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (as amended August 1996) Direct Exposure Criteria for residential development

NA = the sample was not analyzed for the indicated analyte
N/A= not applicable
ND = the analyte was not detected in the sample above laboratory detection limits
* = RCRA 8 Metals by EPA Methods

Table 3	Summary of Groundwater Analytical Results Koffler Development, L.L.C. Plat 15, Lot 35, Providence, RI	
Monitoring Well	**VOC* (mg/l)**	**TPH** (mg/l)**
GZA-1	ND	NA
GZA-2	ND	NA
GZA-3	ND	ND
GZA-4	ND	NA
GZA-5	ND	ND
GZA-6	ND	ND

NA= the sample was not analyzed for the indicated analyte
ND= the analyte was not detected in the sample above laboratory detection limits
* volatile organic compounds by EPA Method 8240
** total petroleum hydrocarbons by EPA Method 8100M

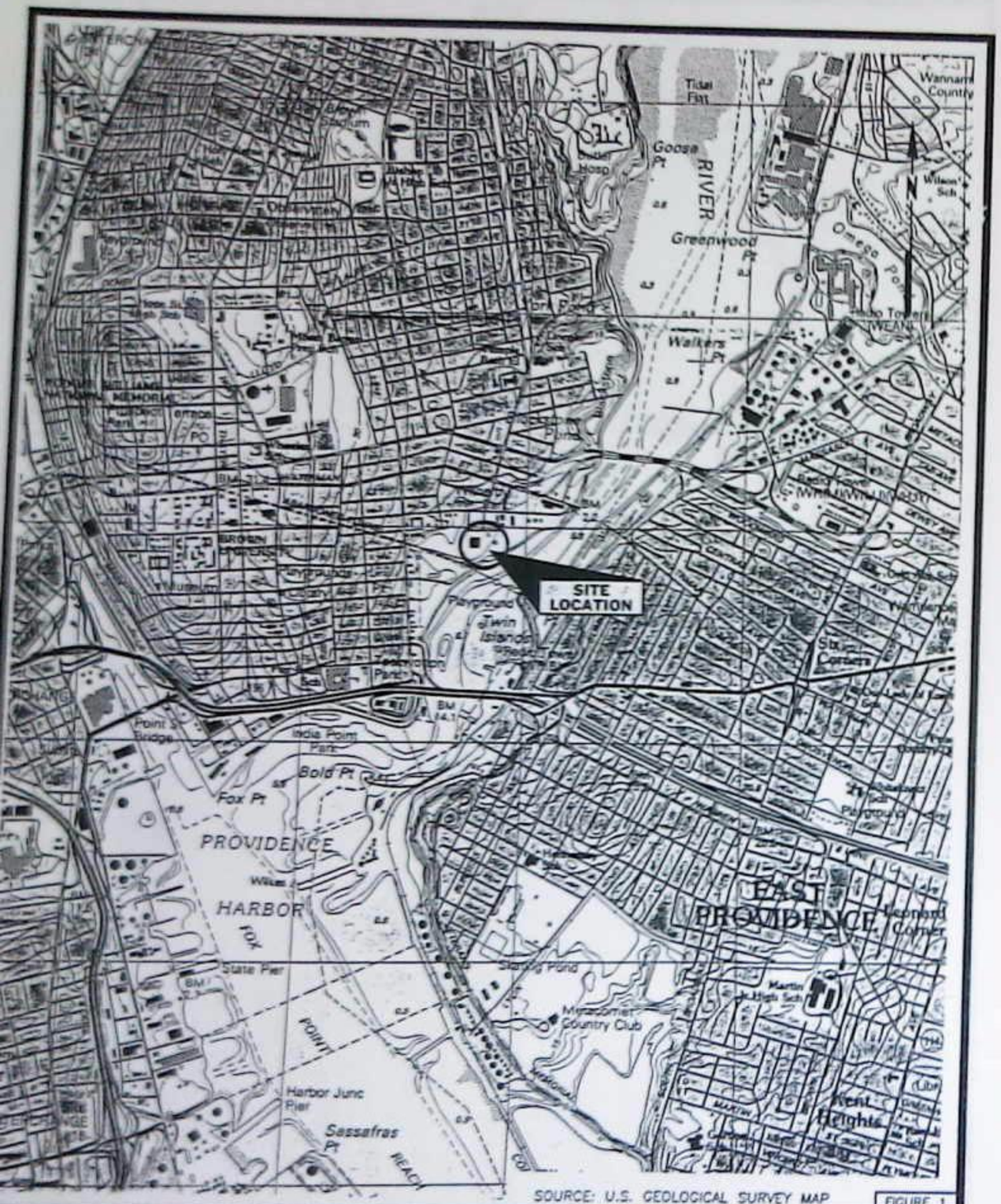


SITE PLAN
SCALE: 1" = 80'
DATE: 1/30/97
LE JOB NO. SS6128A
DWG: SS6128A
BY: DJM

Lincoln Environmental
Smithfield, Rhode Island (401)232-3353

BUTLER AVENUE / EAST GEORGE STREET
PROVIDENCE, RI

FIGURE 2



SOURCE: U.S. GEOLOGICAL SURVEY MAP

FIGURE 1

ITE LOCATION MAP

10/2/96 DWG: SS6128SL
E NO. SS6128 BY: JM

Lincoln Environmental
Smithfield, Rhode Island (401)232-3353

LOT 35 – PLAT 15
PROVIDENCE, RI

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767 TDD 401-831-5508

CERTIFIED MAIL

January 12, 1999

Mr. Arthur Schucht
Koffler Realty Associates V L.L.C.
One Providence-Washington Plaza
Ninth Floor
Providence, Rhode Island 02903

RE: Remedial Action Order of Approval for Koffler Realty Associates V L.L.C.
Riverview Place at Butler Avenue (Plat 15, Lot 35)
Providence R.I. (the "Site")

Dear Mr. Schucht:

Enclosed please find the **Order of Approval** (Order) which has been re-issued for the proposed remediation plan at the Site. Please review the stipulations of this Order thoroughly to ensure your compliance with the requirements.

Please notify this office 48 hours prior to the initiation of any work at the Site related to the proposed remediation relative to this Order. If you have any questions regarding this matter, please contact Jeffrey Crawford (401) 222-2797 (Ext. 7102).

This order shall be recorded in the land evidence records of the City of Providence as required by law. A recorded copy of the first issuance was never received at this Office and subsequently the Order expired. Please record this re-issued Order and return a copy to this Office within 30 days.

Sincerely,

Terrence Gray, P.E.
Chief, Office of Waste Management
Department of Environmental Management

cc: Greg Fine, Supervising Engineer, RIDEM/OWM
Jeffrey Crawford, RIDEM/OWM
Claude Cote, Esq., RIDEM/Office of Legal Services
Dennis Esposito, Esq., Koffler Realty Associates V L.L.C.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

In the matter of the application
or Remedial Action Approval at:
Koffler Realty Associates V L.L.C. Property
Riverview Place at Butler Avenue
Providence, Rhode Island (the "Site")

Case No. 97-11

ORDER OF APPROVAL

In the above entitled matter wherein **Arthur Schucht in his capacity with Koffler Realty Associates V L.L.C.**, filed with the Rhode Island Department of Environmental Management, Office of Waste Management (the Department) the following plans and specifications: Remedial Action Work Plan for Riverview Place dated October 1997 by GZA, Inc. This document meets the requirements of a Remedial Action Work Plan (RAWP) as described in Section 8 of the Department's Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations). The RAWP describes a means to prevent pollution as defined in Chapter 46-12 of the General Laws of 1956, as amended and the Department's Remediation Regulations, as amended August 1996 in accordance therewith.

Upon consideration thereof, the Department approves said plan or means to prevent pollution provided that:

1. The remedy as described in the RAWP shall be implemented within ninety (90) days of receipt of this Order.

2. The soil remediation goal shall be the Method 1 Residential Direct Exposure Criteria achieved by encapsulation as described in the RAWP and in accordance with the Remediation Regulations.

3. Sampling of all media involved in the remedial action shall be conducted in accordance with the requirements of the RAWP.

4. Remedial work must be consistent with Section 11.00 Remedial Action in the Remediation Regulations.

5. At the conclusion of the remedial action, a closure report detailing the remedial action shall be submitted to the Department in accordance with item 10.

6. All waste derived from implementation of the RAWP shall be managed in accordance with the Remediation Regulations and the Rules and Regulations for Hazardous Waste Management, as appropriate.

7. Results of all environmental sampling shall be sent to the Department in accordance with item 11.

8. The Department shall be immediately notified of any action, occurrence or condition that results in non-compliance with this Order.

9. Any Remedial Action interruptions shall be reported to the Department by telephone within one (1) working day and in writing within seven (7) days in accordance with item 11.

10. This Order does not remove Koffler's obligation to obtain any necessary permits from other state, local, or federal agencies.

11. All notices and submissions should be sent to:

Jeffrey Crawford
Department of Environmental Management
Office of Waste Management
235 Promenade Street, 3rd Floor
Providence, RI 02908
Telephone Number (401) 222-2797, Ext. 7102

This Order shall remain in full force and effect as long as said plan or means shall be operated and maintained in a condition satisfactory to the Department. Failure to comply with all points stipulated in this Order shall result in the issuance of a Notice of Violation and Order against the owner of the property.

This Order shall be subject to modification or revocation in accordance with law.

Entered as the Order of the Department this 12th day of January 1999.

By: Terrence Gray
Terrence Gray, P.E.
Chief
Department of Environmental Management

koffler.ooa

GZA
GeoEnvironmental, Inc.

Engineers and Scientists

February 8, 2000
File No. 31834.1-C

Mr. Jeffrey Crawford
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02903

Re: Riverview Place (Plat 15/Lot35)
RIDEM Case No. 97-11
Providence, Rhode Island

Dear Jeffrey:

As a follow-up to our phone conversation, this letter serves to describe a modification to the *Remedial Action Work Plan* associated with the Riverview Place project.

Specifically, Sections 3.30 and 4.20 of the plan indicate that to control exposure to impacted soils, at least 2 feet of soil/loam cover would be used on portions of the site. It is now proposed that a combination of geosynthetic material (i.e., snow fence) and soil be used to meet this objective. Per our discussion, it is understood that the final soil cover thickness should be 10- to 12-inches. (if snow fence 16" minimum loam and seed) 2/9/00

Should you have any questions or require further information, please do not hesitate to call me at 421-4140 (Ext. 3401).

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

John P. Hartley
Principal

cc: A. Schucht (Koffler)
D. Esposito (A,P&S)
Gus Raposa (VHB)

G:\JOBS\ENV\31834-1.TOC\LETTER12.DOC

GZA
GeoEnvironmental, Inc.

Engineers and Scientists

November 28, 2000
File No. 31834.1-C

Mr. Jeffrey Crawford
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02903

Re: *Remedial Action Summary Report*
Riverview Place Development
Providence, Rhode Island
RIDEM Case No. 97-11

Dear Mr. Crawford:

On behalf of our client, the Koffler Group, GZA GeoEnvironmental, Inc. (GZA) is pleased to provide this report describing the remedial activities completed at the Riverview Place Development project.

By way of background, the following is a listing of project-related submittals, which represents a summary of the project's regulatory milestones. All of these reports/ documents have been provided to the Department and should be available in your project files. GZA would be pleased to provide additional copies of specific documents at your request.

- July 1997 *Site Investigation Report*
- October 1997 *Remedial Action Work Plan Riverview Place Property*
- April 1998 *Remedial Action Work Plan Schedule*
- January 1999 *Remedial Action Order of Approval* (RIDEM letter)
- February 2000 Letter to RIDEM (J. Crawford) requesting modifications to soil cap specification.

As described in the project-related information identified above, the Site is identified as Plat 15, Lot 35 and encompasses approximately six acres of land along the Seekonk River on the "East Side" of Providence. The recently completed site development involved the construction of an approximately 3.18-acre complex consisting of a three-story elderly housing facility with a terrace, walkways, associated landscaping, driveways and parking areas. So as not to require excavation of the fill layer, Deep Dynamic Compaction (DDC) techniques were completed to densify the existing material. As shown in the attached Site Plan, building footprints and paved areas account for approximately 46% of the surface of the site.

RE
NOV 30 2000

Four hazardous materials and petroleum investigations of the site have been completed. The investigations included the sampling and analysis of surficial soils, subsurface soils, and groundwater for metals, volatile organic compounds, semi-volatile organic compounds, pesticides, and total petroleum hydrocarbons. The notification and subsequent remedial activities were based on the existence of the arsenic, lead and certain PAHs in soils at concentrations above Method 1 Direct Exposure Criteria. It was our opinion that these compounds were typical constituents of urban soils and were likely attributable to historic filling of the site. Our evaluation of groundwater at the site did not provide evidence of GB or UCL exceedances.

Based on the findings of our site investigations the remedial objectives established for the site were designed to minimize the potential for exposure to contaminated soils at the site during and after site development activities. The following remedies proposed and approved for the Site were completed as part of the earthwork activities; see photographs depicting the interim and final site surface areas.

- To control exposure to impacted soils, a geosynthetic filter fabric material was installed in conjunction with 10 to 12 inches of topsoil and grass cover.

- The site design incorporated measures to isolate residual soil (non-excavated contaminated soils found generally at depth) to prevent long-term direct exposure. This approach consisted of the encapsulation of soils beneath the building slab and asphalt pavement (which represents approximately 46% of the final surface area of the site).

- The establishment of a restrictive natural vegetative barrier at certain shoreline locations. The plantings were spaced at intervals to form the barrier upon maturity, creating a vegetative barrier along approximately 1,100 feet of the shoreline area.

- To help ensure the long-term protection of the remedy, an Environmental Land Usage Restriction (institutional control) has been placed on the deed of the property.

We trust this report satisfies your current needs, and await your issuance of the Letter of Compliance. In the meantime, please do not hesitate to call us at 421-4140 if you have any questions.

Very truly yours,

GZA GeoEnvironmental, Inc.

Mark Burbelo
Sr. Project Manager

John P. Hartley
Principal

Cc: A. Schuct (Koffler)
D. Esposito (AP&S)

Attachments: Site Plan
Photographs

Koffler Koffler Realty / Riverview Place

ENVIRONMENTAL LAND USAGE RESTRICTION

This Declaration of Environmental Land Usage Restriction ("Restriction") is made this 15th day of March, 2001, by RICHMOND PLACE, LLC, as successor in interest to KOFFLER REALTY ASSOCIATES V, LLC (the "Grantor").

W I T N E S S E T H

WHEREAS, Grantor is the owner in fee simple of certain real property (the "Property") known as Assessor's Plat 15 lot 35 in the City of Providence, Rhode Island, more particularly described on Exhibit A (Legal Description of Property) which is attached hereto and made a part hereof; and

WHEREAS, a portion of the Property has been determined to contain hazardous substances in excess of Department criteria pursuant to the Department's Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the "Remediation Regulations"); and

WHEREAS, the Grantor has determined that the Restrictions set forth below are consistent with regulations adopted by the Department of Environmental Management ("the Department") pursuant to Section 23-19.1-14 of the Rhode Island General Laws; and

WHEREAS, the Department's written approval of the Restriction is contained in the document entitled Remedial Decision Letter (7/97) and Order of Approval (1/99) issued pursuant to the Remediation Regulations; and

WHEREAS, the Property has been determined to contain hazardous substances in soils in excess of Department criteria in the Remediation Regulations, specifically the Industrial/Commercial Direct Exposure in areas not readily accessible for remediation; and

WHEREAS, to prevent exposure to or migration of hazardous substances and to abate hazards to human health and/or the environment, and in accordance with the Remedial Decision Letter and Order of Approval, the Grantor desires to impose certain restrictions upon the use, occupancy, and activities of and to the Contaminated Site; and

WHEREAS, the Grantor believes that this restriction will effectively protect public health and the environment from hazardous substances; and

WHEREAS, Grantor intends that such restrictions shall run with the land and be binding upon and enforceable against Grantor and Grantor's successors and assigns.

NOW, THEREFORE, Grantor agrees as follows:

A. **Purpose.** In accordance with the Remedial Decision Letter and Order of Approval, the purpose of this Environmental Land Usage Restriction is to assure:

   i. that humans engaged in residential activity are not exposed to soils at the Contaminated Site, containing hazardous substances in concentrations exceeding the applicable Department approved residential direct exposure criteria pursuant to the Remediation Regulations; and

   ii. that the engineered controls described in the Remedial Action Work Plan are not disturbed and are properly maintained to prevent humans from being exposed to soils at the Contaminated Site containing hazardous substances in concentrations exceeding the applicable Department approved residential direct exposure criteria pursuant to the Remediation Regulations.

B. **Restrictions Applicable to the Contaminated Site.** In furtherance of the purposes of this Environmental Land Usage Restriction, Grantor shall assure that use, occupancy, and activity of and at the Contaminated Site as follows:

   i. surficial soils, landscaping and man-made structures at the Contaminated Site described in the Remedial Action Work Plan shall not be disturbed in any manner which could result in soils containing hazardous substances exceeding the applicable residential direct exposure criteria pursuant to the Remediation Regulations becoming exposed at the ground surface, except as set forth in Paragraph D herein; and

   ii. no subsurface structure not described in the Remedial Action Work Plan shall be constructed on the Contaminated Site as set forth in Paragraph D herein.

C. **No action shall be taken, allowed, suffered, or omitted if such action or omission is reasonably likely to:**

   i. create a risk or migration of hazardous substances or potential hazard to human health or the environment; or

ii. result in a disturbance of the structural integrity of any engineering controls designed or utilized at the Contaminated Site to contain hazardous substances or limit human exposure to hazardous substances.

D. Emergencies. In the event of any emergency which presents a significant risk to human health or to the environment, including but not limited to maintenance and repair of utility lines or a response to emergencies such as fire or flood, the application of Paragraphs B and C above may be suspended, provided such risk cannot be abated without suspending such paragraphs and the Grantor complies with the following:

i. notifies in writing the Department's Office of Waste Management of the emergency as soon as possible but no more than three (3) business days after having learned of the emergency; (This does not remove Grantor's obligation to notify any other necessary state, local or federal agencies.)

ii. limits both the extent and duration of the suspension to the minimum reasonable and necessary to adequately respond to the emergency;

iii. implements reasonable measures necessary, at that time, to prevent actual, potential, present and future risk to human health and the environment resulting from such suspension;

iv. At the time of written notification to the Office of Waste Management, the notifying party shall communicate their intentions to conduct the emergency response actions and provide a schedule to complete the emergency response actions;

v. continue to implement the emergency response actions, on the schedule submitted to the Department, to ensure that the Property is remediated in accordance with the Remediation Regulations (and/or applicable variance) or restored to its condition prior to such emergency. Based upon information available to the Department at the time of execution pertaining to environmental conditions at the Property, maintenance and repair of utility lines shall only require restoration of the Property to its condition prior to the maintenance and repair of the utility lines; and

vi. At the completion of the emergency response action, the property owner or his representative shall submit to the

Department a status report describing the emergency activities, which have been completed.

E. **Release of Restriction; Alterations of Subject Area.** Grantor shall not make, or allow, or suffer to be made, any alterations of any kind in, to, or about any portion of any of the Contaminated Site inconsistent with this Environmental Land Usage Restriction unless the Grantor has first received the Department's written approval of such alteration. If the Department determines that the proposed alteration is significant it may require the amendment of this restriction. Insignificant alteration will be approved by the Department via a letter from the Department. The Department shall not approve any such alteration and shall not release the Property from the provisions of this Environmental Land Usage Restriction unless the Grantor demonstrates to the Department's satisfaction that Grantor has managed the Contaminated Site in accordance with the Remediation Regulations.

F. **Notice to Lessee and Other Holder of Interests in the Property.** Grantor, or any future holder of any interest in the Property, shall cause any lease, grant, or other transfer of any interest in the Property to include a provision expressly requiring the lessee, grantee, or transferee to comply with this Environmental Land Usage Restriction and easement. The failure to include such provision shall not affect the validity or applicability to the property of the Environmental Land Usage Restriction and easement.

G. **Severability and Termination.** If any court of competent jurisdiction determines that any provision of this Environmental Land Usage Restriction is invalid or unenforceable, the Grantor shall notify the Department in writing within fourteen (14) days of such determination.

H. **Binding Effect.** All of the terms, covenants, and conditions of this Environmental Land Usage Restriction shall run with the land and shall be binding on the Grantor, the Grantor's successors and assigns, and each owner and any other party entitled to possession or use of the Property during such period of ownership or possession.

I. **Inspection & Non-Compliance.** It is the obligation of the Grantor or any future holder of any interest in the Property, to provide for annual independent inspections of the Property for compliance with the Restriction.

An officer or director of the company with direct knowledge of past and present conditions of the Property (the "Company Representative"), or an environmental professional, will, on behalf of

the Grantor, or any future holder of any interest in the Property will evaluate the compliance status of the Property on an annual basis. Upon completion of the evaluation, the environmental professional will prepare and simultaneously submit to the Department and to the Grantor or future holder of interest in the Property an evaluation report detailing the findings of the inspection and noting any compliance violations at the Property. If the Property is determined to be out of compliance with the terms of the Restriction, the Grantor or future holder of interest in the Property will submit a corrective action plan in writing to the Department within ten (10) days of receipt of the evaluation report, indicating the plans to bring the Property into compliance with the Restriction, including, at a minimum, a schedule for implementation of the plan.

In the event that the Grantor or any future holder of any interest in the Property commits a substantial violation of the terms of this Restriction which remains uncured more than ninety (90) days after written notice of violation, this Restriction and all other approvals and agreements relating to the Property shall be null and void at the option of the Department upon recording such notice in the Land Evidence Records of the City of Providence.

J. **Terms Used Herein.** The definitions of terms used herein shall be the same as the definitions contained in Section 3 (DEFINITIONS) of the Remediation Regulations.

It is so Agreed:

RICHMOND PLACE, LLC

3/23/01
Grantor Date

So Sworn Before Me:

Francis C. O'Connell
Notary Public
Date
My Commission Expires: 7-18-01

58052_2.DOC

Property Address:
East George St. / Butler Ave.

Exhibit A BK 455 PG 125

DESCRIPTION OF PARCEL A.P. 15 LOT 38

Beginning at point at the intersection of the southerly line of East George Street with the easterly line of Butler Avenue, said point also being the most northwesterly corner of the herein described parcel;

THENCE, N 89°-52'-21" E along the southerly line of said East George Street, a distance of eight hundred forty feet (840.00') to a point,

THENCE, S 00°-07'-39" E, a distance of six and 93/100 feet (6.93') to a point,

THENCE, S 32°-24'-10" E, a distance of thirty and 52/100 feet (30.52') to a point in the northerly harbor line of the Seekonk River, said last two courses being bounded easterly by land now or formerly of Harold I. Schein,

THENCE, S 57°-37'-07" W along said Seekonk River harbor line, a distance of one thousand twelve and 54/100 feet (1012.54') to point in the easterly line at the southerly terminus of Butler Avenue,

THENCE, N 00°-07'-39" W along the easterly line of said Butler Avenue a distance of five hundred seventy three and 11/100 feet (573.11') to the point of beginning.

Including all right, title and interest of grantor in that property abandoned by the City of Providence by City Council Resolution No. 489 dated August 11, 2000 and recorded in the office of the Recorder of Deeds at Book 4480, page 283; and

Also including that real property granted to this grantor by Quit-Claim deed from Salvation Army of Rhode Island dated March 22, 2000 and recorded in the office of the Recorder of Deeds in the City of Providence at Book 4480, page 288.

PROVIDENCE, RI
RECEIVED FOR RECORD
2003 JUN 17 P 3:08
BARBARA A. TRONCY
ACTING RECORDER OF DEEDS

PROVIDENCE, RI
RECEIVED FOR RECORD
2003 DEC 29 A 11:11
BARBARA A. TRONCY
ACTING RECORDER OF DEEDS
Barbara A. Troncy

RIW P - Koffler

GZA
GeoEnvironmental, Inc.

Engineers and
Scientists

November 28, 2000
File No. 31834.1-C

Mr. Jeffrey Crawford
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02903

Re: *Remedial Action Summary Report*
Riverview Place Development
Providence, Rhode Island
RIDEM Case No. 97-11

Dear Mr. Crawford:

On behalf of our client, the Koffler Group, GZA GeoEnvironmental, Inc. (GZA) is pleased to provide this report describing the remedial activities completed at the Riverview Place Development project.

By way of background, the following is a listing of project-related submittals, which represents a summary of the project's regulatory milestones. All of these reports/ documents have been provided to the Department and should be available in your project files. GZA would be pleased to provide additional copies of specific documents at your request.

- July 1997 *Site Investigation Report*
- October 1997 *Remedial Action Work Plan Riverview Place Property*
- April 1998 *Remedial Action Work Plan Schedule*
- January 1999 *Remedial Action Order of Approval* (RIDEM letter)
- February 2000 Letter to RIDEM (J. Crawford) requesting modifications to soil cap specification.

As described in the project-related information identified above, the Site is identified as Plat 15, Lot 35 and encompasses approximately six acres of land along the Seekonk River on the "East Side" of Providence. The recently completed site development involved the construction of an approximately 3.18-acre complex consisting of a three-story elderly housing facility with a terrace, walkways, associated landscaping, driveways and parking areas. So as not to require excavation of the fill layer, Deep Dynamic Compaction (DDC) techniques were completed to densify the existing material. As shown in the attached Site Plan, building footprints and paved areas account for approximately 46% of the surface of the site.

NOV 30 2000

Four hazardous materials and petroleum investigations of the site have been completed. The investigations included the sampling and analysis of surficial soils, subsurface soils, and groundwater for metals, volatile organic compounds, semi-volatile organic compounds, pesticides, and total petroleum hydrocarbons. The notification and subsequent remedial activities were based on the existence of the arsenic, lead and certain PAHs in soils at concentrations above Method 1 Direct Exposure Criteria. It was our opinion that these compounds were typical constituents of urban soils and were likely attributable to historic filling of the site. Our evaluation of groundwater at the site did not provide evidence of GB or UCL exceedances.

Based on the findings of our site investigations the remedial objectives established for the site were designed to minimize the potential for exposure to contaminated soils at the site during and after site development activities. The following remedies proposed and approved for the Site were completed as part of the earthwork activities; see photographs depicting the interim and final site surface areas.

- To control exposure to impacted soils, a geosynthetic filter fabric material was installed in conjunction with 10 to 12 inches of topsoil and grass cover.

- The site design incorporated measures to isolate residual soil (non-excavated contaminated soils found generally at depth) to prevent long-term direct exposure. This approach consisted of the encapsulation of soils beneath the building slab and asphalt pavement (which represents approximately 46% of the final surface area of the site).

- The establishment of a restrictive natural vegetative barrier at certain shoreline locations. The plantings were spaced at intervals to form the barrier upon maturity, creating a vegetative barrier along approximately 1,100 feet of the shoreline area.

- To help ensure the long-term protection of the remedy, an Environmental Land Usage Restriction (institutional control) has been placed on the deed of the property.

We trust this report satisfies your current needs, and await your issuance of the Letter of Compliance. In the meantime, please do not hesitate to call us at 421-4140 if you have any questions.

Very truly yours,

GZA GeoEnvironmental, Inc.

Mark Burbelo
Sr. Project Manager

John P. Hartley
Principal

Cc: A. Schuct (Koffler)
D. Esposito (AP&S)

Attachments: Site Plan
Photographs

GZA
GeoEnvironmental, Inc.

Engineers and Scientists

February 8, 2000
File No. 31834.1-C

Mr. Jeffrey Crawford
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02903

Re: Riverview Place (Plat 15/Lot35)
RIDEM Case No. 97-11
Providence, Rhode Island

Dear Jeffrey:

As a follow-up to our phone conversation, this letter serves to describe a modification to the *Remedial Action Work Plan* associated with the Riverview Place project.

Specifically, Sections 3.30 and 4.20 of the plan indicate that to control exposure to impacted soils, at least 2 feet of soil/loam cover would be used on portions of the site. It is now proposed that a combination of geosynthetic material (i.e., snow fence) and soil be used to meet this objective. Per our discussion, it is understood that the final soil cover thickness should be 10- to 12-inches. (if snow fence 16" minimum height dce 2/9

Should you have any questions or require further information, please do not hesitate to call me at 421-4140 (Ext. 3401).

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

John P. Hartley
Principal

cc: A. Schucht (Koffler)
D. Esposito (A.P&S)
Gus Raposa (VHB)

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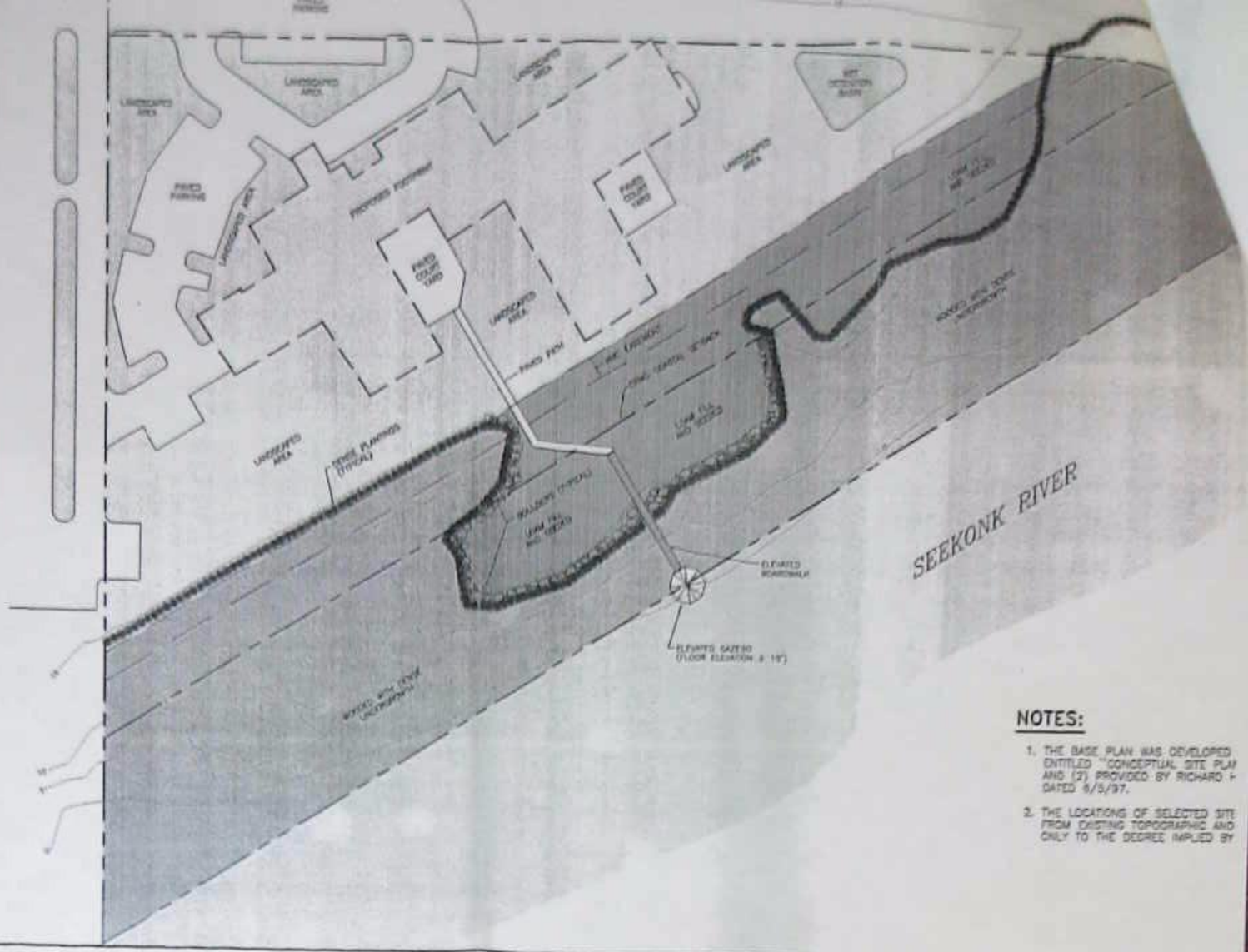

NOTES:

1. THE BASE PLAN WAS DEVELOPED ENTITLED "CONCEPTUAL SITE PLAN AND (2) PROVIDED BY RICHARD H DATED 6/5/97.
2. THE LOCATIONS OF SELECTED SITE FROM EXISTING TOPOGRAPHIC AND ONLY TO THE DEGREE IMPLIED BY

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

LETTER OF COMPLIANCE

Richard Bornstein, Manager
Koffler Realty Associates V, LLC
One Providence Washington Plaza
Providence, Rhode Island 02903

June 23, 2003

RE: Riverview Place
Butler Avenue
Providence, Rhode Island
Plat 15, Lot 35
CASE # 97-011

Dear Mr. Bornstein:

The Rhode Island Department of Environmental Management, Office of Waste Management has received the final documentation requested concerning the historical release at the Butler Avenue property and the Site Investigation Report dated April 27, 1997 submitted by GZA, Inc. pursuant to the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations).

Based upon the receipt of the recorded Environmental Land Usage Restriction (Rec. 12/29/00), the Office of Waste Management concurs that the property is in compliance with the Remediation Regulations at this time.

Be advised that the Department reserves the right to require additional actions under the abovementioned Regulations at the subject property should any of the following occur:

A. Conditions at the site previously unknown to the Department are discovered.

B. Information previously unknown to the Department becomes available.

C. Policy and/or regulatory requirements change.

D. Violation of the ELUR .

Nothing in this letter relieves the responsible party, nor the site, from compliance with all other applicable State or Federal regulations.

If you have any further questions regarding this matter, please feel free to call Jeff Crawford at his telephone 222-2797(x7102) or contact him by his e-mail address jcrawfor@dem.state.ri.us

Sincerely,

Kelly Owens

Kelly Owens, Supervising Engineer
Office of Waste Management

cc: Jeffrey Crawford, Principal Environmental Scientist OWM

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

Mr. Lawrence Gerber
Epoch SL III, Inc.
51 Sawyer Road, Suite 500
Waltham, Massachusetts 02453

January 4, 2007

RE: former Riverview Place
Butler Avenue
Providence, Rhode Island
Plat 15, Lot 35
CASE # 97-011
OWM-SR-2006-23

Dear Mr. Gerber:

The Rhode Island Department of Environmental Management's (the Department) Office of Waste Management (OWM) has received and reviewed your Compliance Inspection Report response dated August 31, 2006 and received September 1, 2006 to the Notice of Intent to Enforce (NOI) issued to Epoch SL III, Inc. on August 3, 2006 for the above referenced property. Based upon the information submitted by your consultant, the Department concurs that the property is in compliance with the Department's Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, (Remediation Regulations), amended February 24, 2004, and the recorded Environmental Land Usage Restriction (ELUR).

Please be advised that the next Annual Compliance Report for the property is due in October 1st, 2007.

If you have any questions or need clarification regarding this letter, please contact me by telephone at (401) 222-2797 x7102 or by E-mail at jeff.Crawford@dem.ri.gov.

Sincerely,

Jeffrey P. Crawford
Principal Environmental Scientist
Office of Waste Management

Cc: Kelly Owens, Supervising Engineer OWM
Tracy Tyrrell, Supervisor, OC&I

SR-28-0715

GZA
GeoEnvironmental, Inc.

Engineers and Scientists

August 27, 2014
File No. 31834.26

Mr. Timothy Fleury
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street, 3rd Floor
Providence, Rhode Island 02903

530 Broadway
Providence
Rhode Island
02909
401-421-4140
Fax: 401-751-8613
http://www.gza.com

Re: *Environmental Land Use Restriction Evaluation Report – July 21, 2014*
EPOCH Senior Living Center
1 Butler Avenue
Providence, Rhode Island
(RIDEM Case No. 97-011)

Dear Mr. Fleury:

On behalf of our client, EPOCH Senior Living LLC, (Owner), GZA is pleased to provide this *Environmental Land Use Restriction Evaluation Report* describing the existing conditions at the EPOCH Senior Living Center located at 1 Butler Avenue in Providence, Rhode Island (the "Site"). The Site is has been previously subject to investigation and remediation due to soil and groundwater impacts associated with the presence of urban fills. This report is presented subject to the attached limitations.

In accordance with the Environmental Land Usage Restriction (ELUR) recorded for the Site, and presently on file at the RIDEM, an annual site compliance evaluation is required. The purpose of the ELUR is to assure that:

- The Site is not used for residential activities;
- Groundwater is not used for potable purposes;
- The engineered controls described in Exhibit C [of the ELUR] are not disturbed and are properly maintained; and
- Provide notification of existing Site conditions to persons conducting activities that may disturb Site soils.

GZA visited the Site on July 21, 2014 to evaluate compliance with the ELUR. As indicated on the appended checklist, the following observations were made:

- Site use is residential senior housing.
- Groundwater is not used for potable purposes.

- Final cover at the Site was observed to consist of asphalt parking areas, landscaped areas, and the existing building. These conditions are not consistent with those present at the time of recording the ELUR.
- Several landscaped areas show signs of erosion. In some areas the erosion has exposed the underlying geotextile fabric.
- A portion of the asphalt pavement in the parking area has been removed and filled with coarse sand.

In response to the observed issues with the final cover at the Site, maintenance personnel placed crushed stone in areas where landscaping had signs of erosion. The sections of asphalt that had been removed by NBC for utility maintenance are scheduled to be patched in October. Based on our observations and in consideration of the the fact that the required asphalt patching has been scheduled we find the site to be in compliance with the requirements of the ELUR. The ELUR Site Compliance Checklist is included as Attachment B. Photos taken during the Site visit, and after performing maintenance are included as Attachment C.

We trust that this information fulfills your present needs. Should you have any questions or require further information, please do not hesitate to call the undersigned at 421-4140.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Sara Haupt, E.I.T.
Project Engineer

Mark Burbelo
Senior Project Manager

Edward Summerly
Principal

Attachments: Attachment A – Limitations
Attachment B – ELUR Compliance Checklist
Attachment C – Photographs

Cc: Beth Anderson (banderson@epochsl.com)
Epoch Senior Living, LLC
51 Sawyer Road, Suite 500
Waltham, Massachusetts 02453

J:\ENV\31834.26.mjb\Report\31834.26 ELUR Compl Cov Ltr.doc

ENVIRONMENTAL LAND USE RESTRICTION (ELUR) EVALUATION LIMITATIONS

Use of Report

1. GZA GeoEnvironmental, Inc. (GZA) prepared this report on behalf of, and for the exclusive use of the client for the stated purpose(s) and location(s) identified in the Proposal for Services and/or Report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not identified in the agreement, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to GZA.
2. The Objective of this Annual ELUR Evaluation Report was to observe and document whether physical conditions and activities at the Site are consistent with the recorded land use restriction. The observations described in the Report were made under the conditions stated at the time of the reconnaissance.

Standard of Care

3. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Report and/or our Proposal for Services, and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the limited information gathered during the course of our work. Conditions other than described in this report may be found at the subject location(s).
4. Our services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made.

Compliance with Regulations and Codes

5. Our services were performed to render an opinion on the conditions, features and uses specifically identified in the ELUR. Unless specifically addressed within the Report, we rendered no opinion on the compliance of site conditions or activities with local, state, or federal codes or regulations.

Reliance on Information from Others

6. In certain situations, we relied upon information made available by the site contact, key site manager and/or other parties referenced in the Report. GZA did not attempt to independently verify the accuracy or completeness of that information. Inconsistencies in this information which we have noted, if any, are discussed in the Report.

Limits to Observations

7. As indicated in the Report, we made observations at the Site with respect to the specific restrictions identified in the ELUR. Observations were made of the Site and of structures on the Site as indicated within the Report. Where access to portions of the Site or to structures on the Site was unavailable or limited, GZA renders no opinion as to conditions at these locations. Additionally, some activities or events of potential interest at the Site may have been transient and not observable at the time of our visit.

Additional Services

8. GZA recommends that we be retained to provide services during any future: site observations, design, implementation activities, construction and/or property development/redevelopment. This will allow us the opportunity to evaluate how such changes could affect compliance with the requirements of the ELUR.

Hager GeoScience Inc.

596 Main Street Woburn, MA 01801

Tel 781-935-8111 Fax 781-935-2717

July 22, 2004
File 200451

GZA GeoEnvironmental, Inc.
Attention: Mike Clark
One Edgewater Drive
Norwood, MA 02062

Re: Geophysical survey to locate USTs
2 Richmond Square
Providence, RI

Dear Mr. Clark:

This letter describes the results of a geophysical survey conducted by Hager GeoScience, Inc. (HGI) for GZA GeoEnvironmental, Inc. (GZA) at 2 Richmond Square in Providence, Rhode Island. A portion of the site was formerly occupied by a filling station, and the survey was conducted in the area formerly occupied by the filling station and associated USTs.

DATA COLLECTION

HGI personnel conducted the investigation on July 12th, 2004 using ground penetrating radar. The GZA on-site representative determined the survey grid locations and was present during a portion of the survey. Data were collected in all accessible portions of the designated survey area in two directions along traverses spaced 2.5 feet apart. HGI personnel used spray paint and fiberglass tapes to mark survey grid locations in the field. Survey control was maintained by taping distances from fixed surface cultural features and noted on the site plan map and survey notes. HGI prepared an AutoCAD survey plan from maps provided by GZA on which it plotted the locations of the GPR traverses (Figure 1).

GPR data was collected using a GSSI SIR 2 system with 400-MHz antenna and survey wheel cart. Data was recorded with the acquisition time window set to 100 nanoseconds (ns), a time range selected to exceed the maximum two-way signal travel time at this site. The time range recorded provided an average depth of signal penetration of approximately 16 feet. Data were displayed in real time on the radar system's color display for quality control and initial data review purposes.

All acquired data were stored on the system's 6 Gbyte hard drive and transferred to PC for later analysis using the RADAN for Windows NT™ software. A detailed description of the GPR method and its limitations is presented in a separate section at the end of this letter report.

RESULTS

Figures 1 and 2 show the results of the survey. No UST was detected, but we have plotted several other features of possible interest on Figure 1. A large area of disturbed soil was detected at the approximate location of the former filling station building, with possibly a second such area to the east. The GPR also detected several present and/or former utility line; the most prominent of these, parallel to the south survey border, is probably an electric conduit from the transformers. Figure 2, a slice through a 3D model prepared from the GPR data at a depth of approximately 4 feet, shows a map of these features.

Please contact us at (781) 935-8111 if you have any questions or need additional information.

Respectfully yours,
HAGER GEOSCIENCE, INC.

Jutta L. Hager, Ph.D.
President

GROUND PENETRATING RADAR

DESCRIPTION OF THE METHOD

The principle of ground penetrating radar (GPR) is the same as that used by police radar, except that GPR transmits electromagnetic energy into the ground. The energy is reflected back to the surface from interfaces between materials with contrasting electrical (dielectric and conductivity) and physical properties. The greater the contrast between two materials in the subsurface, the stronger the reflection observed on the GPR record. The depth of GPR signal penetration depends on the properties of the subsurface materials and the frequency of the antenna used to collect radar data. The lower the antenna frequency, the greater the signal penetration, but the lower the signal resolution.

Data Collection. GPR data are collected using a Geophysical Survey Systems (GSSI) SIR 2000/3000 ground penetrating radar system. GPR data are digitally recorded on the internal hard drive, or flash-memory of the system. System controls allow the GPR operator to filter out noise, attributed to both coupling noise, caused by conductive soil conditions, spurious noise caused by local EMF fields and internal system noise. For shallow surveys, we use 400-, 200-, 100- or 1500-megahertz (MHz) antennas. For deeper penetration, we use lower frequency antennas ranging from 200 MHz to 15 MHz, depending on the anticipated depth of the target(s) and the degree of signal penetration. All of these antenna configurations can collect data in continuous mode or as discrete point measurements using signal-stacking techniques. Since there is a tradeoff between signal penetration and resolution, test lines are run using different antennas at several frequencies and then the highest frequency antenna that produces the highest quality data is used. In some cases, data are collected with several antenna frequencies.

The horizontal scale of the GPR record shows distance along the survey traverse. In the continuous data collection mode, the horizontal scale on each GPR record is determined by the antenna speed along the surface. When a survey wheel is used, the GPR system records data with a fixed number of traces per unit distance. The GPR record is automatically marked at specified distance intervals along the survey line. The velocity of the transmitted signal and the recording time window or range determines the vertical scale of the radar record. The recording time interval, or range, represents the maximum two-way travel time in which data are recorded. The conversion of two-way travel time to depth depends on the propagation velocity of the GPR signal, which is site specific. When little or no information is available about the makeup of subsurface materials, we estimate propagation velocities from handbook values and experience at similar sites or by CDP velocity surveys with a bi-static antenna.

Data Processing. After completion of data collection, the GPR data are transferred to a PC for review and processing using RADAN NT for Windows™ software. When appropriate, we prepare 3D models of GPR data, which can be sliced in the X, Y, and Z directions.

The size, shape, and amplitude of GPR reflections are used to interpret GPR data. Objects such as metallic UST's and utilities produce reflections with high amplitude and distinctive hyperbolic shapes. Clay, concrete pipes boulders and other in-situ features may produce radar signatures of similar shape but lower amplitude. The boundaries between saturated and unsaturated materials such as sand and clay, bedrock and overburden generally also produce strong reflections.

LIMITATIONS OF THE METHOD

GPR signal penetration is site-specific. It is determined by the dielectric properties of local soil and fill materials. GPR signals propagate well in resistive materials such as sand and gravel; however, soils containing clay, ash- or cinder-laden fill or fill saturated with brackish or otherwise electrically conductive groundwater cause GPR signal attenuation and loss of target resolution. Concrete containing rebar or wire mesh also inhibits signal penetration.

The interpreted depths of objects detected using GPR are based on on-site calibration, handbook values, and/or estimated GPR signal propagation velocities from similar sites. GPR velocities and depth estimates may vary if the medium under investigation or soil water content is not uniform throughout the site.

Utilities are interpreted on the basis of reflections of similar size and depth that exhibit a linear trend; however GPR cannot unambiguously determine that all such reflectors are related. Fiberglass UST's, or utilities composed of plastic or clay may be difficult to detect if situated in soils with similar electromagnetic properties, or if situated in fill with other reflecting targets which generate "clutter" or signal scattering and thus obscure other deeper reflectors. Objects buried beneath reinforced concrete pads or slabs may also be difficult, but possible, to detect.

Changes in the speed at which the GPR antenna is moved along the surface causes slight variations in the horizontal scale of the recorded traverse. Distance interpolation may be performed to minimize the error in interpreted object positions. The variation in the horizontal scale of the GPR record may be controlled, to a certain extent, with a distance encoder or Survey Wheel. The GPR antenna produces a cone-shaped signal pattern that emanates approximately 45 degrees from horizontal front and back of the antenna. Therefore, buried objects may be detected before the antenna is located directly over them. GPR anomalies may appear larger than actual target dimensions.

GPR interpretation is more subjective than other geophysical methods. The interpretive method is based on the identification of reflection patterns that do not uniquely identify a subsurface target. Borings, test pits, site utility plans and other ground-truth are recommended to verify the interpreted GPR results.

SITE INVESTIGATION REPORT
RICHMOND SQUARE
PROVIDENCE, RHODE ISLAND

PREPARED FOR:
Essex River Ventures
Andover, Massachusetts

PREPARED BY:
GZA GeoEnvironmental, Inc.
Norwood, Massachusetts

September 2004
File No. 18184.02

TABLES

FIGURES

GeoEnvironmental, Inc.

Engineers and Scientists

September 23, 2004
File No. 18184.02

Mr. Robert King
Essex River Ventures
77 Main Street
Andover, Massachusetts 01810

Re: Site Investigation Report
Richmond Square
Providence, Rhode Island

Dear Mr. King:

In accordance with our proposal dated May 13, 2004, GZA GeoEnvironmental, Inc. (GZA) has conducted a Phase I and II Environmental Site Assessment (a.k.a. a Site Investigation Report) of the above-referenced real estate in Providence, Rhode Island (Site). This report has been prepared in accordance with our signed contract and is subject to the Limitations and Terms and Conditions in Appendix A.

This report is based on our review of available historical and environmental records; visual observations of the surface of the Site and adjoining properties; and personal interviews with available persons having knowledge of the property. a Limited Phase II subsurface investigation included a ground penetrating radar survey, the advancement of test borings, the installation of monitoring wells, and the collection of soil and groundwater samples for screening and/or laboratory analysis. Section 13.00 of the report, our Findings and Conclusions, is considered an Executive Summary and should be reviewed in conjunction with the entire report.

We have appreciated the opportunity to work with you on this project. Should you have any questions, please call any of the undersigned at (781) 278-3700.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

R. Michael Clark
Senior Project Manager

John P. Hartley
Principal

Judy A. Gilbert
Project Reviewer

Attachment: Report

G:\18184\18184-02.RMC\Reports\18184-02-cll.doc

TABLES

FIGURES

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TABLES

FIGURES

TABLE OF CONTENTS (continued)

TABLES

FIGURES

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TABLES

TABLES

FIGURES

1.00 INTRODUCTION

This report presents the results of a Phase I and II Environmental Site Assessment (a.k.a. Site Investigation Report) conducted by GZA GeoEnvironmental, Inc. (GZA) for Essex River Ventures, Inc. of eight adjoining land parcels located at Richmond Square in Providence, Rhode Island (collectively defined herein as the "Site"). Authorization to proceed on this project was granted in accordance with our May 13, 2004 proposal for services, with additional tasks performed in accordance with proposals dated June 25, 2004 and August 9, 2004.

1.10 PROJECT OBJECTIVE

The objective of the initial phase of the Environmental Site Assessment was to render an opinion as to whether surficial or historical evidence indicates the presence of recognized environmental conditions which could result in the presence of hazardous materials or oil in the environment, as defined in the American Society for Testing and Materials (ASTM) Standard Practice E1527 for Phase I Environmental Site Assessments.

As defined by ASTM Method E1527, "the term recognized environmental condition means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, past release, or material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property."

During the course of the Phase I study, previous studies performed by others indicated evidence of polyaromatic hydrocarbon (PAH) concentrations in Site soils at concentrations above the Rhode Island Department of Environmental Management's (RIDEM's) Method 1 Residential Direct Exposure Criteria. These findings, in GZA's opinion, required the owner of the property to notify RIDEM in accordance with Rule 5.01B of the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations–DEM-DSR-01-93, as amended). Subsurface exploratory programs were subsequently implemented by GZA to further evaluate subsurface soil and groundwater quality to meet the requirements to address applicable sections of Rule 7.00 of the RIDEM's Remediation Regulations.

1.20 SCOPE OF SERVICES

GZA's assessment of the Site was completed in general accordance with the ASTM Method E1527 and our proposal for services. The scope of services consisted of the following activities:

- a Site reconnaissance to observe surficial evidence of recognized environmental conditions, document current site use and use of adjoining properties;

- review of federal and state regulatory agency databases identified by ASTM for the Site and a selected radius around the Site;
- review of the Site history through available ASTM Standard Historical Sources;
- review of a 1997 *Environmental Services Report* prepared by Cistar Associates for the 1 Richmond Square portion of the Site;
- contact with local regulatory agencies to inquire about environmental conditions at the Site and in its vicinity;
- review of the properties within ¼ mile of the Site to identify potential use of hazardous materials;
- a ground penetrating radar (GPR) survey in the area of a former on-Site gasoline station;
- the completion of soil test borings and the installation of groundwater monitoring wells, and the collection of soil and groundwater samples for screening and/or laboratory analysis; and
- the preparation of this report presenting our findings.

This report presents GZA's field observations, results, and opinions and is subject to modification if subsequent information is developed by GZA or any other party. This report has been prepared in accordance with the limitations presented in Appendix A.

2.00 BACKGROUND SITE INFORMATION

The following information was obtained during GZA's Site reconnaissance, from a review of municipal records and from interviews with people knowledgeable about the Site. Photographs depicting Site conditions at the time of GZA's assessment are presented in Appendix B. Additional information on Site use and activity at the Site is contained in Section 6.00, and information concerning area observations is contained in Section 7.00.

2.10 SITE LOCATION

The Site is located at Richmond Square, a commercial development located at the end of Waterman and Pitman Streets in the East Side portion of Providence, Rhode Island. The Site is located approximately 3,500 feet northeast of the Route 195/Gano Street interchange, and is adjoined to the east and south by the Seekonk River. A *Locus Plan* is attached as Figure 1.

TABLES

FIGURES

2.20 SITE DESCRIPTION

The Site consists of eight land parcels totaling approximately 5.3 acres of developed land occupied by three office buildings (1, 2 and 4 Richmond Square), an office/commercial building (3 Richmond Square) and two restaurants (The Gatehouse and Café de Vie). Grounds are predominately paved for access and parking, with some landscaping, except along the riverbank which is naturally vegetated. A storm drain easement traverses the northerly portion of Lot 6, between Richmond Square and the Seekonk River. A *Site Plan*, developed from a historical aerial photograph, is attached as Figure 2. The following table provides the City of Providence Tax Assessor's Map and Lot Number for each parcel, as well as a description of its current condition.

Map	Lot	Square Feet	Address	Features
15	8	74,433	1 Richmond Square.	Multi-story brick office building (Richmond Square Business and Technology Center) with a basement; surrounded by paved/landscaped areas
15	60	31,453	2 Richmond Square.	Two-story masonry office building with a basement; surrounded by paved/landscaped areas.
15	451	28,807	3 Richmond Square.	One-story masonry office building with a walk-in basement; surrounded by paved/landscaped areas (Café de Vie).
15	469	14,185	4 Richmond Square	Five-story masonry building with a basement; surrounded by paved/landscaped areas.
15	340	4,399	392 Waterman Street.	One story building (The Gatehouse, a restaurant) with a walk-in basement.
15	10	3,216	11 Richmond Square.	Paved parking area with a landscaped traffic island.
15	467	12,737	291 East George Street rear.	Paved parking lot.
15	6	61,950	291 East George Street.	Paved parking lot.

2.30 CURRENT SITE USE

At the time of GZA's Site visit, the properties were occupied by multi-tenant buildings housing offices and commercial businesses, landscaped areas, and paved parking lots. It is our understanding that the Client intends to construct a multi-story residential apartment complex on Lot 6, currently a parking lot, located between Pitman Street and the Seekonk River.

2.40 ADJOINING AND AREA PROPERTY USE

The area in the vicinity of the Site consists of residential and commercial properties. Properties adjoining the Site parcels are described below.

TABLES

FIGURES

2.40.1 1 Richmond Square

The 1 Richmond Square property is adjoined to the north, east and south by Waterman Street, Richmond Square, and Pitman Street, respectively, and is adjoined to the west by Whitherby Park.

2.40.2 2 Richmond Square

The 2 Richmond Street property is adjoined to the north by wooded land, to the east by East River Street, to the south by Waterman Street, and to the west by an access road to the Henderson Bridge (which traverses the Seekonk River). Wooded land is located beyond the access road. Adjoining to the east is East River Street, beyond which are a paved parking lot and a gift shop (Simple Pleasures).

2.40.3 3 & 4 Richmond Square

This portion of the Site is adjoined by the Seekonk River to the south and east; the 4 Richmond Square portion of the Site is abutted to the north by a paved parking area and the Simple Pleasures gift shop; while Pitman Street and Richmond Square form the north and westerly boundaries. A secured area apparently being used as a boatyard (251 Pitman Street) adjoins the southwest side.

2.50 SITE UTILITIES

The five on-Site buildings are serviced by municipal water and sewer, and underground electric, cable and telephone. All of the buildings are heated with natural gas.

3.00 ENVIRONMENTAL SETTING

The following sections provide information regarding the general physiographic and hydrogeologic conditions in the Site area.

3.10 TOPOGRAPHY AND DRAINAGE

U.S. Geological Survey (USGS) topographic mapping of the area (Providence, RI Quadrangle, dated 1957, photorevised 1970 and 1975), shows the Site located at Cold Springs Point. Site elevation varies from approximately 20 feet above mean sea level (MSL) at the northern extent of 2 Richmond Square property, and sloping down to approximately 10 feet at the edge of the riverbank along the Lot 6 parking lot, at which point the topography drops steeply to the tidally influenced Seekonk River. Drainage at the Site generally flows in a general easterly to southerly direction toward the river.

3.20 GROUNDWATER FLOW DIRECTION

Based on review of topographic mapping, regional groundwater flow in the area of the Site was anticipated to be generally to the southeast, toward the tidally-influenced Seekonk River. Groundwater readings measured in borings completed by GZA as part of this study, (refer to Section 11.40), indicate the depth to groundwater ranges from approximately 8.6 to 16.2 feet below the ground surface (bgs) across the Site and flows in a general southeasterly direction. It should be noted that groundwater flow direction may vary due to underground utilities (e.g., storm drains, sewers, and utility conduits), tidal influence from the Seekonk River, variations in groundwater recharge or soil heterogeneities.

Groundwater beneath the Site is classified GB by RIDEM and is considered unsuitable for use as a drinking water source due to known or presumed degradation. GB groundwater designation is typical for urban locations in Rhode Island.

4.00 HISTORICAL USE INFORMATION

The Site history was developed from municipal records at the Providence Tax Assessor's Office. Sanborn Fire Insurance Maps, aerial photographs and City Directories were also reviewed to evaluate historical use of the Site. GZA interviewed Mr. Michael Schein, Site Manager of Richmond Square Business and Technology center (Key Site Manager). A list of references and persons interviewed is included in Section 9.00.

4.10 SITE AND AREA HISTORY SUMMARY

The 1 Richmond Square parcel was occupied by an abrasive manufacturing company (American Emery Wheel Works/American Grinding Wheels) from the early 1900s until the early 1980s, when the building was converted into office space.

The 2 Richmond Square parcel, which was originally part of a larger property occupied by a shipbuilding company, was occupied by a machine shop in the early 1900s, and then by a restaurant and/or a gasoline filling station from the 1940s through the 1970s. The existing office building was constructed in the mid 1980s.

The 3 Richmond Square parcel and adjoining paved parking area (Lot 6) were historically occupied by a plumbing/construction contactor, a bait shop, dwellings, a car wash and a "covering"/chemical company (Lot 6) in the early 1900s. None of these facilities are currently present. The existing 3 Richmond office/commercial building was constructed in the early1960s.

The Gatehouse restaurant parcel was formerly a dwelling occupied by the gate tender for the Red Bridge, which formerly extended across the Seekonk River. The 4 Richmond Square parcel/Lot 10 is located on a former portion of an extension of Waterman Street that accessed the Red Bridge, until the bridge was taken out of service in the 1970s. The

existing office building was constructed in the late 1980s. An area of Lot 467, located on the south side of 4 Richmond Square, was identified as a transformer yard from the 1950s through the 1980s.

Adjoining property uses included a shipbuilding company (American Ship Windlass, Co; 1900) adjoining the 2 Richmond Square parcel to the west, and residences adjoining to the north. In the 1950s this portion of the Site was adjoined by Arden Jewelry Manufacturing Company to the north-northwest and a "factory building" to the north. By the 1980s, these two facilities were no longer present and a ramp was under construction for the new bridge located north of the Site (the Henderson Bridge).

In 1921, a cotton goods manufacturing company (Taunton Manufacturing Company), and a blacksmith/auto repair shop with a gasoline underground storage tank (UST) adjoined The Gatehouse restaurant parcel to the north. In the 1950s, a gasoline filling station (currently the Simple Pleasures gift shop) adjoined The Gatehouse restaurant parcel to the northwest.

Throughout its history, the Site has been bordered by the Seekonk River to the south and east, and buildings used for unidentified "storage" to the southwest.

4.20 CITY DIRECTORIES REVIEW

City Directories dated 1940 to 2003 were reviewed in five-year intervals at the Providence Public Library. Historical sources indicated that the on-Site lots had prior addresses, identified in parenthesis below, before the development of Richmond Square. The various addresses associated with the Site were reviewed for Site occupants.

4.20.1 1 Richmond Square (331 Waterman Street)

City Directories dated 1940 to 1980 identified the lot's occupant as American Emery Wheel Works, an abrasive manufacturer. The later City Directories (1985 to 2003) identified the lot as One Richmond Business and Technology Center, a multi-tenant office building.

4.20.2 2 Richmond Square (356 to 360 Waterman Street)

From 1940 to 1970, the lot was occupied by a diner and a gasoline filling station (Red Bridge Service Station, 360 Waterman Street). The 1975 City Directory also identified the diner; however, the gasoline filling station was not listed. The later City Directories identified the lot as 2 Richmond Square occupied by a multi-tenant office building.

4.20.3 3 Richmond Square (281 to 285 Pitman Street); Lot 6 (291 Pitman Street)

From 1940 to 1955, these lots were not listed. In 1960, occupants were identified as a bait shop (Frankie's Live Bait, 291 Pitman Street) and as a plumbing and heating

company (285 Pitman Street). From 1965 to 1980, the 281 Pitman Street property was occupied by a heating/plumbing company and/or building contractor, and the 291 Pitman Street property was occupied by a car wash (1975). The remaining City Directories identified the use of the 3 Richmond Square property as commercial and office space.

4.20.4 4 Richmond Square (391 Waterman Street)

This lot was not identified in the earlier City Directories. From 1990 to 2003, the lot, identified as 4 Richmond Square, was used as office space.

4.20.5 The Gatehouse Restaurant (392 Waterman Street)

Earlier directories indicated that the lot was occupied by a residence (gatehouse keeper) until 1975. The later City Directories (1985 to 2003) identified the lot occupant as a restaurant (The Gatehouse).

4.20.6 Lot 10 and Lot 467

These lots were not listed in the City Directories reviewed.

4.30 HISTORICAL TOPOGRAPHIC MAP REVIEW

Historical topographic maps of the Providence Quadrangle for the years dated 1894, 1939, and 1951, were obtained from GZA's in-house files and from http://www.unh.edu/docs. Due to the dense urban area surrounding the Site, individual buildings were not shown. All three maps showed a bridge (Red Bridge) extending from the area of the Gatehouse restaurant parcel and the 4 Richmond Square parcel across the Seekonk River.

4.30 HISTORIC ATLAS REVIEW

Sanborn Fire Insurance Atlases dated 1900, 1921, 1950, 1956, and 1982, were provided by Environmental Data Resources (EDR). Copies of the Sanborn atlases are included in Appendix C. A summary of information obtained through our review is provided below.

4.40.1 1 Richmond Square

All the maps reviewed identified the occupancy by the American Emery Wheel Works and American Grinding Wheels, an abrasive manufacturer. The 1900 map identifies a gasoline UST located to the south of the original building. In the remaining maps, there have been extensive building expansions and the tank is no longer identified.

4.40.2 2 Richmond Square

The 1900 and 1921 maps show the 2 Richmond Street parcel as part of a larger property occupied by the American Ship Windlass Company. The Site is shown on the maps as occupied by a machine shop in 1900 and as vacant land in 1921. In 1950 and

1956, the 2 Richmond Square property was occupied by a restaurant along Waterman Street and a gasoline filling station at the corner of Waterman and East River Streets. The 1951 map shows gasoline USTs associated with the filling station. The 1982 map shows the existing office building.

4.40.3 4 Richmond Square and The Gatehouse Restaurant

All the maps reviewed show the 4 Richmond Square parcel as an extension of Waterman Street providing access to a bridge (the former Red Bridge) traversing the Seekonk River. The Gatehouse restaurant parcel is shown as a dwelling used by the "Bridge Tender."

4.40.4 3 Richmond Square (Lots 6, 10 and 467)

The 1900 and 1921 maps show the parcels occupied by a "store house" (3 Richmond Square); a covering company, a chemical company, and dwellings (Lot 6).

The 1951 and 1956 maps show a building identified as "plumbing" at the 3 Richmond Square parcel, and the 1982 map shows the existing 3 Richmond Square building. The 1951, 1956, and 1982 maps show a store and dwelling at Lot 6 and a transformer yard at Lot 10.

4.40.5 Adjoining Properties

Historic adjoining properties uses are compiled as follows.

- 1 Richmond Square. This portion of the Site has historically been adjoined to the west by undeveloped land.
- 2 Richmond Square. In 1900, 2 Richmond Square is a portion of the American Ship Windlass, Co; a shipbuilding company, and is adjoined by the facility to the north and west. In 1921, the Site is adjoined by the American Chemical Company to the west and a building utilized the storage of machinery to the northwest. The map also shows a vacant foundry to the north and further northwest, a large vacant industrial building. The 1951 and 1956 maps show a restaurant to the west, the machinery storage building, the foundry identified as a factory and the vacant industrial building is occupied by the Arden Jewelry Manufacturing Company. In 1982, none of these buildings are shown on the map. A building of unknown use is shown at 360 Waterman Street (to the west) and a ramp under construction is shown to the west and northwest.
- 3 Richmond Square. This portion of the Site has historically been adjoined to the west by stores and outbuildings used for storage.
- 4 Richmond Square. This portion of the Site is adjoined to the east by the Seekonk River (and the abandoned Red Bridge), and to the south and west by

portions of the study Site. In 1921, it was adjoined to the north by a dwelling and two small buildings of unidentified use. The 1921 map identifies a building to the west-northwest occupied by a blacksmith and a repair shop; while to the east is a dwelling. A buried gasoline tank is identified within the building footprint. North of the Site is the Taunton Manufacturing Company, a cotton goods manufacturer. On the 1951 and 1956 maps, a gasoline filling station is shown at the location of the blacksmith building. Four gasoline tanks are identified. In the 1982 map, the cotton manufacturer and gasoline station buildings are no longer present and the area is described as used for truck parking. Two small buildings of unknown use are shown.

4.50 AERIAL PHOTOGRAPH REVIEW

Aerial photographs for the years 1951-1952, 1962, 1972, 1982, and 1992 were available for review. Given the scale of these photographs (i.e., 1" = 1,320') relative to the size of the Site, features of direct environmental concern (drum storage, tanks, etc.) cannot be distinguished. However, review of these photographs in conjunction with the Sanborn Historic Fire Insurance Maps provides general information on land development and evolution of Site structures.

4.50.1 1 Richmond Square

In the 1951-1952, 1962, 1972, and 1982 photographs, the 1 Richmond Square property was occupied by a mill-style building (American Emery Wheel Works). The 1992 photograph shows the property features similar to as it currently exists.

4.50.2 2 Richmond Square

In the 1951-1952, ,1962 and 1972 photographs, the 2 Richmond Square property was occupied by two buildings (a restaurant and a gasoline filling station). The 1982 photograph shows one building (the restaurant) on the property, and the 1992 photograph shows property features similar to as it currently exists.

The 1952 and 1962 photographs show the north and west areas, currently wooded land and the access road to the Henderson Bridge, adjoining the 2 Richmond Square property, as developed land with buildings (auto repair and warehouse; refer to Section 4.50).

4.50.3 4 Richmond Square, The Gatehouse restaurant and Lot 10

In the 1951-1952, 1962, 1972, and 1982 photographs, the 4 Richmond Square property and Lot 10 were the access road to the Red Bridge, which is shown in three (1951-1952, 1962 and 1972) of the photographs. The 1992 photograph shows features of both parcels similar to as they currently exist.

The 1951-1952, 1962, 1972 and 1982 photographs show a building (dwelling) at The Gatehouse restaurant property. The 1992 photographs shows property features similar to as they currently exist.

4.50.4 3 Richmond Square, Lot 6 and Lot 467

The 1951-1952 photographs show smaller buildings on the three properties. The existing building at the 2 Richmond Square parcel was shown on the remaining photographs. The smaller buildings were shown on the remaining parcels until 1992, when features were shown to be similar to as they currently exist.

4.60 TITLE SEARCH

No abstract of title was provided to GZA for review. Completion of a title search was not included in the scope of this assessment.

4.70 BUILDING DEPARTMENT RECORDS

At the time of GZA's visit, we were informed that Building Department records pertaining to the study Site were archived, and could not be reviewed.

4.80 PROPERTY TAX FILES AND HISTORY OF OWNERSHIP

Tax Assessor's records indicated that Caneel Bay, Ltd. is the current owner of five of the Site parcels. The remaining parcels are currently owned by RI Industrial Facilities Corp. (1 Richmond Square), Harold I. Schein (Lot 6), and Narragansett Electric (Lot 467). Past ownership and dates of purchase were not available at the time of GZA's visit.

Tax Assessor's Field Cards indicated that the 2 Richmond Square building was constructed in 1984, the 3 Richmond Square building was constructed in 1960, the 4 Richmond Square building was constructed in 1989, and The Gatehouse restaurant was constructed in 1871.

5.00 PREVIOUS SITE INVESTIGATIONS

GZA was provided by the Client with a copy of a 1997 *Environmental Services Report* prepared by Cistar Associates, Inc. (Cistar). Cistar's study area consisted of the 1 Richmond Square parcel only. Cistar's scope of services was identified in the text as including a reconnaissance and history of the 1 Richmond Square parcel; a subsurface program consisting of the completion of four soil borings (B-1 to B-4) and the screening and analyses of soil samples; and a GPR survey to evaluate areas of potential USTs. A copy of the Cistar report is attached as Appendix D, and the locations of Cistar's soil borings are shown on the attached *Exploration Location Plan* presented as Figure 3.

According to the Cistar report, a plan titled "Property Survey and Topography, Richmond Square Development Project, 1983" identified a 4,000-gallon "buried oil tank" off the southwest corner of the existing building; a "fill and vent pipe" located off the south central wall of the existing building; and a "7,000-gallon oil tank" located within the footprint of the current building. Cistar indicated that "based on the results of [the GPR] survey, the noted UST(s) in [these exterior locations have] been removed" and "[an identified interior] anomaly was not large and did not appear to resemble a buried UST which was integral."

Cistar performed a subsurface exploratory program consisting of the completion of four test borings, and the collection of soil samples for screening and/or analysis. Borings (B-1 and B-2) were completed at downgradient locations on the parcel, B-3 was completed in an area downgradient of a previously identified "fill and vent pipe," and B-4 was completed in an area downgradient of a previously identified "4,000-gallon UST." Borings were completed to depths of 12 to 17 feet bgs and groundwater was observed at 9 to 13 feet bgs. Elevated (4.6 to 30.1 parts per million or ppm) soil screening results (total volatile organic compounds or VOCs) were reported in the soil samples collected from borings B-3 and B-4; low levels of total petroleum hydrocarbons (64 to 173 ppm) were detected in two samples collected from borings B-3 and B-4. Cistar reports that no petroleum stains or odors were noted in the soil samples collected from the Site.

Cistar noted that laboratory analyses of soil samples indicated that concentrations of benzo(a)pyrene and arsenic exceeded RIDEM reporting concentrations at depth. Cistar concluded that "no concentrations of total volatile organic compounds, total petroleum hydrocarbons, polynuclear aromatic hydrocarbons or metals which require remediation under the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases…were found at the [1 Richmond Square parcel]."

6.00 SITE RECONNAISSANCE

The purpose of GZA's Site reconnaissance was to make surficial observations for evidence of recognized environmental conditions that could result in the presence of hazardous materials in the soil and/or groundwater. GZA Assistant Project Manager Dean Giuliano assessed the Site on May 25, 2004 and was accompanied by Mr. Michael Schein, Site Manager of Richmond Square Business and Technology Center. Observations were documented and pertinent features or areas of environmental concern were photographed and are referenced in the text. A summary of each attribute assessed is presented below.

6.10 EXTERIOR SITE OBSERVATIONS

The Site was visually assessed for conditions that could result in a release of hazardous materials to the environment. Five of the Site parcels are occupied by buildings used as office and/or commercial space surrounded by paved/landscaped areas, and the remaining parcels are used as paved parking areas.

6.10.1 Underground Storage Tanks (USTs)

No surficial evidence of USTs (i.e., fill ports, vent pipes, pavement repairs, etc.) was observed during the Site reconnaissance, in particular within areas identified by prior studies as possibly containing USTs.

6.10.2 Aboveground Storage Tanks (ASTs)

No evidence of fuel oil ASTs was observed at the Site. Two pad-mounted liquid propane cylinders were observed of the south side of the 1 Richmond Square building. Mr. Schein indicated that these cylinders were previously used by a former tenant as a fuel source for an emergency electrical generator. These cylinders and the emergency generator are no longer in use.

6.10.3 Hazardous Substances or Petroleum Products Use

A fenced area to the north of the 1 Richmond Square building contained a pad-mounted emergency electrical generator, which according to signage, is powered by fuel oil. Mr. Schein indicated that the fuel oil is stored within the cabinet of the generator. The storage capacity was not known. As the fenced area was locked, GZA could not access the area. Observations made through the fence noted no staining or drains around the generator. No other storage, use, or surficial evidence of disposal of chemicals, hazardous substances, or petroleum products was observed at the Site.

6.10.4 Staining

No surficial staining, other than minor staining on asphalt in parking areas, was observed on exterior areas of the property.

6.10.5 Electrical Transformers/Equipment

Pad-mounted transformers were observed on the exterior portions of the Site. No staining was observed in the areas of the transformers, which are labeled as owned by The Narragansett Electric Company.

6.10.6 Drywells and Sumps

No surficial evidence of exterior drywells or sumps was observed during GZA's Site reconnaissance.

6.10.7 Pits, Ponds, and Lagoons

No surficial evidence of pits, ponds, or lagoons was observed during GZA's Site reconnaissance.

6.10.8 Wells

No potable wells were observed at the Site. Municipal records indicated that the Site buildings are connected to the municipal water system.

Monitoring wells were installed at the Site as a part of our Phase II study (see Section 11.00).

6.10.9 Solid Waste

Solid waste containers were observed at the Site. No staining was observed around the base of the receptacles. Solid waste is removed from the Site by independent contractors.

6.10.10 Process Wastewater

No process wastewater is generated at the Site.

6.10.11 Septic System

No evidence of septic systems was observed at the Site. Municipal records indicated that the Site buildings are connected to the municipal sewer system, and have been since construction.

6.10.12 Stressed Vegetation

No evidence of stressed vegetation was observed on the Site.

6.10.13 Soil/Water Sampling

Soil and groundwater screening/analyses was performed by others at the 1 Richmond Square parcel (refer to Section 5.00) and by GZA as part of this study (see Section 11.00).

6.10.14 Oil/Water Separators

No evidence of oil/water separators was observed.

6.10.15 Surface Water Runoff

Catch basins, which discharge to the municipal drainage system, were observed in parking areas adjacent to buildings. Surface water runoff is also expected to follow the topography toward the Seekonk River

6.10.16 Other Observations

No other significant exterior observations were made.

6.20 INTERIOR OBSERVATIONS

An interior reconnaissance of the five Site buildings, including occupied areas and storage areas, was completed to observe evidence of recognized environmental conditions. Due to privacy concerns, GZA was asked by the Client not to observe the interior of the tenant space occupied by Sention, a medical research and development company (4 Richmond Square). The remaining tenant space in the 1, 2 and 3 Richmond Square buildings is used as office space. The Café de Vie restaurant is located in the walk-in basement of the 3 Richmond Square building. The conditions observed are presented below.

6.20.1 Construction

The 1, 2 and 4 Richmond Square buildings contain basements, and the 3 Richmond Square building and The Gatehouse restaurant have walk-in lower levels. The interior construction of the five buildings consists of carpeted/tiled floors, sheet rock walls, and suspended tile/sheetrock/wood studded ceilings. Utility areas were observed to consist of concrete floors, open ceilings, and sheetrock walls.

6.20.2 Heating and Cooling

The buildings' heating systems are powered by natural gas, and the cooling systems are powered by electricity.

6.20.3 Current Site Use

At the time of GZA's visit, the 1, 2 and 4 Richmond Square buildings were used as office space; the 3 Richmond Square building was used as office and commercial space including a café (Café de Vie); and the fifth building is The Gatehouse restaurant.

6.20.4 Chemical Use and Storage Areas

The storage or use of oils or chemicals was not observed within the five Site buildings. Mr. Schein indicated that no oils or hazardous materials are currently used or stored within the five Site buildings.

6.20.5 Hazardous Wastes Generated and Waste Storage Areas

No storage or generation of hazardous waste was observed within the accessible areas of the five Site buildings. Mr. Schein was not aware of hazardous waste generated or stored at the Site. Sention, Inc., a tenant at 4 Richmond Square, was identified as a generator of hazardous waste by federal databases reviewed (refer to Section 8.10), but as described above, GZA was not provided access to this area of the Site.

6.20.6 Stains or Corrosion

No staining was observed within the buildings.

6.20.7 Floor Drains or Sumps

Floor drains were observed in the rest rooms and utility areas. Mr. Schein indicated that the floor drains discharge to the sewer system. No other floor drains were observed or reportedly located within the building.

Four sumps were observed in the basement of the 1 Richmond Square building and one sump was observed in the basement of The Gatehouse restaurant. Mr. Schein was unaware of the sumps discharge point. No sheens or discoloration was noted on the water within the sump pits.

6.20.8 Other Interior Observations

No other significant interior observations were made.

7.00 VICINITY RECONNAISSANCE

As part of GZA's Site assessment, a reconnaissance of the properties adjoining the Site, as well as the vicinity within a ¼-mile radius of the Site, was conducted from public properties. The results of GZA's vicinity reconnaissance are presented below.

7.10 HAZARDOUS MATERIALS AT ADJOINING PROPERTIES

Developed adjoining properties are occupied by a boat yard and a gift shop (Simple Pleasures). Significant use or storage of oil or hazardous materials is unlikely at these properties, although fuel oil may be stored for heating purposes.

7.20 HAZARDOUS MATERIALS USE AT VICINITY PROPERTIES

Properties in the vicinity of the Site are used for residential and commercial purposes. The storage and/or use of oils or hazardous materials in the general vicinity of the Site are unlikely, although fuel oil may be stored for heating purposes.

8.00 REGULATORY DATABASE REVIEW

The following section is based on public information obtained various federal, state and local agencies that maintain environmental regulatory databases. These databases provide information about the regulatory status of a property and incidents involving the use,

storage, release and/or transportation of oil or hazardous materials. Information was gathered by GZA personnel and by a professional data search service FirstSearch Technology Corporation (FirstSearch). Federal, state, and local regulatory information is presented in Appendix E. A discussion of the reviewed information is presented in the following sections.

8.10 FEDERAL AGENCY DATABASES

Six federal databases were provided by FirstSearch and reviewed by GZA. These reports and the search distances used to review these databases are presented below.

Database	Date	Radius Searched	Hits Within Radius Searched
National Priorities List (NPL) The NPL, or Superfund sites list, is EPA's database of confirmed uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund program.	April 8, 2004	1 Mile	0
Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) The CERCLIS database is a compilation by EPA of the sites that EPA has investigated or is currently investigating for a release or threatened release of hazardous substances.	February 9, 2004	½ Mile	0
Resource Conservation and Recovery Act (RCRA) Generator Database EPA's RCRA program identifies hazardous waste generators and tracks hazardous waste from the point of generation to the point of disposal.	February 9, 2004	Site and adjoining properties	2
RCRA Treatment, Storage and Disposal (TSD) Facility Database The RCRA TSD Facilities database is a compilation by EPA of reporting facilities that store, treat or dispose of hazardous waste.	February 9, 2004	1 Mile	0
RCRA Corrective Action Database (CORRACTS) The RCRA CORRACTS list is EPA's list of treatment, storage, or disposal facilities subject to corrective action under RCRA.	February 9, 2004	1 Mile	0
Emergency Response Notification System (ERNS) The ERNS list is a national database used to collect information on reported releases of oil and hazardous substances. The database contains information from spill reports made to federal authorities including the EPA, U.S. Coast Guard, National Response Center, and Department of Transportation.	December 31, 2003	Site only	0

Two facilities at the Site are included on the RCRA list of hazardous waste generators. They include Cell Based Delivery, Inc. and Sention, Inc., tenants of the 4 Richmond Square building, and are identified as a "very small quantity" generator of hazardous

waste, (producing less than 100 kilograms per month [kg/mo]), and a "small quantity" generator of hazardous waste (producing between 100 and 1,000 kg/mo), respectively. According to the FirstSearch report, no RCRA violations have been cited for either company. Mr. Schein indicated that Cell Based Delivery, Inc. is no longer a tenant at the Site. No NPL, CERCLIS, or ERNS sites or RCRA TSD or CORRACTS facilities were identified within the respective search radii.

8.20 STATE AGENCY DATABASE REVIEW

Five state database searches were provided by FirstSearch and reviewed by GZA. These reports and the search distances used to review them are presented below. Due to the dense urban setting of the Site, GZA has reduced the search distance.

Database	Last Update	Search Radii	Hits Within Radius Searched
RIDEM State Sites List RIDEM's list of Sites designated for further investigation or remedial action	January 7, 2004	½ mile	8
Leaking Underground Storage Tanks (LUSTs) RIDEM's database listing of Leaking Underground Storage Tanks	January 7, 2004	¼ mile	5
Solid Waste Facilities/Landfills The State Solid Waste Facilities/Landfill List includes solid waste disposal and landfill activities.	January 24, 2001	¼ mile	0
State Registered Active Underground Storage Tanks (USTs) RIDEM's database listing of active Underground Storage Tanks facilities	April 1, 2004	¼ mile	1
RIDEM State Spills List RIDEM's list of reported spills or oil or hazardous materials	January 4, 2001	¼ mile	5

8.20.1 State-Listed Sites

Eight state-listed sites were identified within ½ mile of the study Site. Of these, six are located across the Seekonk River in East Providence, and therefore are considered isolated from the Site. The remaining two sites are located approximately ½ mile to the southwest and crossgradient of the Site. Based on locations and/or the southeasterly groundwater flow direction, none of these state-listed sites are considered likely to have impacted the soil or groundwater at the Site.

8.20.2 Spills Sites

The 2 Richmond Square portion of the Site is included on the RIDEM State Spills List. The database summary report indicates that in 1996, an unknown amount of "chlorine diozide" was released at the 2 Richmond Square parcel. The spill was brought to the attention of RIDEM by the Providence Fire Department.

On September 14, 2004, GZA reviewed available files at RIDEM to obtain additional information on the release. A RIDEM Division of Site Remediation *Response Report Form* indicates that on August 30, 1996, the 2 Richmond Square building was evacuated due to the release of chlorine dioxide (not the chlorine diozide described above). According to the report, an area of the building occupied by Cytotherapeutics, Inc. was being sterilized using a process that generates a chlorine dioxide gas. The gas apparently set off a smoke alarm. The Providence Fire Department responded and the building was evacuated. RIDEM and the Board of Health were notified. At the request of RIDEM, chlorine dioxide levels were monitored on the third and fourth floors; no detectable levels of the gas were detected and workers were allowed back into the building. Based on the information provided in the report, no impact to the environment resulted from the release. A copy of the report is presented in Appendix F.

An additional four spill sites were identified within an approximate ¼-mile radius of the Site. Two occurred in East Providence and are not of concern due to their remote location, across the Seekonk River. The other two included a release of HTH (solid form of chlorine) that caused a fire at the Salvation Army facility, approximately 0.18 mile southwest and crossgradient of the Site, and a release of approximately 10 gallons of oil at 165 Medway Street, approximately 0.25 mile northwest of the Site. Neither incidence is considered likely to have impacted the soil or groundwater at the Site.

8.20.3 LUST Sites

Five LUST sites were identified within a ½-mile radius of the Site. Of these, two are located across the Seekonk River in East Providence. The remaining three include Rosewood Healthcare, an active site located 0.26 mile southwest and crossgradient of the Site; the Dulgarian (Myopic Books), an inactive site located approximately 0.33 mile northwest of the Site; and Wayland Square Realty, an active site located approximately 0.38 mile northwest and crossgradient of the Site. Based on the regulatory status and/or location, none of these sites are considered likely to have impacted the soil or groundwater at the study Site.

8.20.4 USTs

No USTs are shown registered to the study Site. A 1,000-gallon UST registered to Frank N. Gustafson & Sons, Inc. that adjoins the 3 Richmond Square portion of the Site is listed as permanently closed. The facility is not listed as a LUST site.

8.30 LOCAL REGULATORY AGENCIES

To obtain information concerning the possible release of oil or hazardous materials at or near the study Site, GZA contacted the Providence Fire Department.

8.30.1 Fire Department

GZA has submitted a written request to review Fire Department records pertaining to past or current USTs located at the Site. GZA has not received a response from the Fire Department. Upon receipt of the Fire Department information, the Client will be contacted with any pertinent information.

9.00 INTERVIEWS

GZA interviewed or attempted to contact staff at the following Providence municipal offices: Assessor's Office, Building Department, Engineering/Planning Department, Fire Department, and Water and Sewer Department. GZA also interviewed Mr. Michael Schein, Site Manager of Richmond Square Business and Technology Center. The information provided by each is discussed and referenced in the text.

10.00 GROUND PENETRATING RADAR (GPR) SURVEY

On July 12, 2004, under contract to GZA, Hager GeoScience, Inc. (HGI) of Woburn, Massachusetts, performed a GPR survey on the area of 2 Richmond Square which had formerly been occupied by a gasoline station. The survey indicated the presence of disturbed soils in the approximate location of the filling station building, as well as a "second such area to the east." HGI also noted several present and or former utility lines. However, HGI concluded in its survey that no USTs were detected. A copy of the GPR report is presented as Appendix G.

11.00 PHASE II SUBSURFACE EXPLORATORY PROGRAM

At the Client's request, GZA performed a two-phased subsurface exploratory program to evaluate subsurface soil and groundwater conditions at the Site. The first phase consisted of the installation of eight groundwater monitoring wells at upgradient and downgradient locations along the Site's perimeter, an evaluation of groundwater flow direction, the gauging of wells for evidence of separate phase product, and the collection of groundwater samples for laboratory analysis.

The second phase of the subsurface exploratory program was completed to evaluate both soil and groundwater conditions within interior portions of the Site and included geotechnical borings in the approximate area of a proposed multifamily residential building to be constructed at the Site. The second phase included the installation of a groundwater monitoring well in the former gasoline station area, and soil borings in the vicinity of the former transformer yard, and in the area of the proposed building, located in the vicinity of

the former chemical building. Soil and groundwater samples were collected for laboratory analysis.

11.10 PHASE IIa SOIL BORING AND MONITORING WELL INSTALLATION

On July 14, 2004, eight monitoring wells were installed at the Site by New England GeoTech, of Jamestown, Rhode Island. These borings, identified as GZ-1 through GZ-8, were pneumatically advanced using Geoprobe techniques. Well locations are indicated on the attached *Exploration Location Plan* presented as Figure 3. The borings were advanced to depths of 20 feet bgs, and, based on an inferred southeasterly groundwater flow toward the river were located as follows:

- Wells GZ-1, GZ-2 and GZ-3 were placed at upgradient locations of the Site to evaluate off-Site groundwater quality entering the Site. Based on an inferred southeasterly groundwater flow direction, these wells are downgradient of a former jewelry manufacturer and foundry.

- Wells GZ-4 through GZ-8 were placed at downgradient locations along the top of the river bank to evaluate groundwater quality having passed beneath the Site.

Each boring was pneumatically advanced and continuous sampling was performed. A GZA field technician was on Site during drilling activities to observe the explorations, characterize the subsurface materials using the Modified Burmeister Classification System, and maintain boring logs. GZA located the explorations in the field by taping and line-of-sight measurements from existing site features.

Groundwater monitoring wells constructed of 2-inch-inner-diameter (ID) Schedule 40 PVC, were installed in each of the geoprobe borings, with the exception of well GZ-2, which was fitted with a 1-inch PVC well. Each well was constructed such that the wellscreen was set to span the water table encountered during drilling, with solid riser then run to grade. No glue or cement was used in the construction of the monitoring well. A fine sand filter pack was placed in the annular space around the 10-foot wellscreen and a bentonite seal above the filter pack in each well. The wells were completed with road box cemented flush with grade. Well installation details are presented on the attached boring logs in Appendix H.

11.20 PHASE IIb SOIL BORING AND MONITORING WELL INSTALLATION

Between August 6 and 11, 2004, seven test borings, identified as GZ-101 through GZ-107, were completed at the Site by GeoSearch, Inc. of Sterling, Massachusetts. The borings were advanced using truck-mounted hollow stem augers, with the exception of boring GZ-107, a deep boring which was initiated using augers to a depth of 30 feet bgs, and then advanced to 85 feet bgs using standard drive and wash techniques. Standard Penetration Tests (SPT) were performed at 5-foot intervals in each boring, with the exception of GZ-107, in which SPTs were performed at 5-foot intervals to a depth of 30 feet and at 10-foot intervals thereafter. SPTs were conducted using a 140-pound hammer, raised with a

cathead and rope, to advance the split spoon sampler, in general accordance with ASTM Standard D1586, "Standard Penetration Test and Split-Barrel Sampling of Soils."

The borings served to evaluate areas of environmental concern including the former gas station, transformer yard and chemical manufacturer, provide geotechnical information for construction of the proposed multifamily residential building, and provide precharacterization data to evaluate off-Site disposal alternatives for excavated material. The Phase IIb soil borings were located as follows.

- Boring GZ-101 was placed in the area of the former gasoline station located on the 2 Richmond Square portion of the property. A groundwater monitoring well was installed in this boring.
- Boring GZ-102 was placed in the area of the former transformer yard.
- Borings GZ-103 through GZ-107 were placed in the approximate footprint of the proposed building and the area of the former chemical building.

To evaluate groundwater conditions in the area of the former on-Site gasoline station, a monitoring well constructed of 2-inch Schedule 40 PVC was installed in soil boring GZ-101. Consistent with the Phase IIa programs, the well was constructed such that the wellscreen was set to span the water table encountered during drilling; solid riser was then run to grade. A sand filter pack was installed around the 10-foot wellscreen and a bentonite seal above the filter pack. The well was completed with protective road box cemented flush with grade. Please refer to the attached boring logs in Appendix I for more detailed well construction information.

11.30 SUBSURFACE CONDITIONS

Subsurface conditions at the Site were found to generally consist of a thin layer of asphalt in the existing parking area or grass cover in the existing landscape areas; over approximately 5.5 to 25 feet of miscellaneous granular rubble fill consisting of brick, coal ash and wood; underlain by a 4.5- to 11-foot-thick, discontinuous layer of organic silt; underlain by natural outwash deposits of silt, sand and gravel. Organic silt was encountered in borings GZ-104 and GZ-105 at the southwestern end of the proposed building. Rollerbit refusal on possible bedrock was encountered in boring GZ-107 at a depth of approximately 84 feet. For further detail, please refer to the Geotechnical Study prepared by GZA and provided under separate cover.

11.40 GROUNDWATER FLOW EVALUATION

Following the installation of the eight monitoring wells installed as part of Phase IIa, a differential leveling survey was performed. The top of PVC elevation was recorded for each of the monitoring wells relative to an arbitrary 100.00 foot benchmark, set on the top of a catch basin located near GZ-1. On July 21, 2004, the depth to groundwater reading was recorded for each of the wells. Previous gauging of well GZ-6 on July 16, 2004

during the well sampling program indicated that groundwater levels in the wells along the Seekonk River were tidally influenced.

Groundwater contours were developed based on the field data and are indicated on Figure 3, *Site Exploration Plan*. As initially inferred, the data indicates that groundwater flow beneath the Site is in a general southeasterly direction toward the Seekonk River.

11.50 SOIL SAMPLING PROGRAM

GZA's soil sampling program consisted of the collection of soil samples during drilling activities for field screening for total VOCs and the submittal of selected samples for quantitative laboratory analysis. All samples were collected in clean glass jars and/or laboratory-supplied containers, packed in ice and transported under chain-of-custody to the testing laboratory. Samples collected for VOC analysis were placed in methanol-preserved, 40-ml glass vials. Selected soil samples collected during the test boring program were submitted for analysis to evaluate impact from historical Site use and/or precharacterizing for off-Site disposal/reuse alternatives.

A soil sample collected from boring GZ-102 (0 to 2' bgs), located in the vicinity of the former electrical transformer yard, was submitted for the following analysis:

Parameter	Methodology
Polychlorinated biphenyls (PCBs)	8082
PAHs	8270
Total petroleum hydrocarbons (TPH)	8100M
USEPA RCRA 8 metals	6010/7471

Three samples collected from borings GZ-103, GZ-104, and GZ-107, placed within the approximate footprint of the proposed building and in the vicinity of the former chemical manufacturing facility, were submitted for the following precharacterization analyses.

Parameter	Methodology
VOCs	8260
PCBs	8082
TPH	8100M
PAHs	8270
PCBs	8082
RCRA 8 metals	6010/7471
PH	E150.1/SW9045
Flashpoint	SW846-1010
Cyanide and sulfide reactivity	SW846-7.3

Analytical results are discussed in Section 12.10.

11.60 GROUNDWATER SAMPLING PROGRAM

On July 16 and August 9, 2004, groundwater samples were collected from each of the monitoring wells using the USEPA recommended low-flow sampling technique with a peristaltic pump and dedicated tubing to avoid cross contamination. The groundwater sampling was performed in accordance with EPA's July 30, 1996 Low Stress (low flow) Purging and Sampling Procedure (SOP GW-001). As part of that sampling methodology, well stabilization was determined through the measurement of specific water quality parameters recorded during the purging process. During groundwater sampling, a variable speed peristaltic pump was utilized to control the rate of purging and limit the drawdown caused by this operation. Dedicated 3/8-inch-outer-diameter (OD) polyethylene tubing, installed in each of the existing wells, was utilized as the intake and discharge tubing for the pumps. Pharmaceutical grade tubing was employed as the pump head tubing and connected to the intake and discharge tubing by clamps sufficient to prevent the introduction of air into the sample.

Samples were placed in laboratory-supplied, hydrochloric acid-preserved, 40-ml glass vials, non-preserved amber glass containers, and in nitric acid-preserved, 250-ml plastic bottles, as appropriate. Samples were kept cool and transported under chain-of-custody to the testing laboratories for analysis. Samples collected from wells GZ-1 through GZ-8 were analyzed for the parameters outlined below. The sample collected from GZ-101 was analyzed for TPH and VOCs only.

Parameter	Methodology
VOCs	8260
PCBs	8082
TPH	8100M
PAHs	8270
PCBs	8082
RCRA 8 metals	6010/7471

A copy of the field data generated during the sampling program is attached as Appendix J. Analytical results are discussed in Section 12.20.

12.00 SOIL AND GROUNDWATER SAMPLING RESULTS

The following sections discuss the results of the screening and or laboratory analysis of soil and groundwater samples performed under this study. Copies of the laboratory reports are presented in Appendix K.

12.10 SOIL SAMPLE SCREENING RESULTS

All soil samples collected during drilling/geoprobe activities were screened in the field for total VOCs using a photoionization detector (PID) and jar-headspace methods. The PID measures relative levels of VOCs referenced to a benzene-in-air-standard and is commonly used to detect the presence of gasoline compounds, industrial solvents, and other volatile compounds. Although the PID screening cannot be directly used to quantify VOC concentrations or identify individual compounds, the results can serve as a relative indicator of VOC levels.

PID readings generally ranged from below the instrument detection limit to 0.6 ppm in all the borings except GZ-101, located on 2 Richmond Square in the vicinity of the gasoline station. Readings in this boring ranged from none detected (ND) in soils above the groundwater table to 1,700 ppm in a soil sample collected from below the groundwater table. Refer to the attached boring logs for field screening results.

12.20 SOIL ANALYTICAL RESULTS

Soil samples collected from borings completed within the former electrical transformer yard and the proposed building location were submitted for laboratory analysis. Results are compiled in Tables 2 and 3, and are discussed in the following subsections.

12.20.1 Transformer Yard Soil Results

A soil sample was collected at a depth of 0 to 2 feet bgs in boring GZ-104, located in the approximate area of a former transformer yard, based on information provided in historic Sanborn maps. The sample was submitted to GZA's Environmental Chemistry Laboratory (ECL) and analyzed for TPH, PAHs, PCBs, and RCRA 8 metals to evaluate environmental impact (if any) from activities at the former transformer yard. Analytical results are compiled in Table 2, and compared to the Method 1 Residential Direct Exposure Criteria (RDEC), as presented in Section 8.00 of RIDEM's Remediation Regulations. An interpretation of the data is as follows:

- TPH: The detected concentration of 130 ppm is below the RDEC.
- PCBs: No PCBs were detected in the sample above method detection limits.
- PAHs: Benzo(a)anthracene, chrysene and benzo(a)pyrene were detected at concentrations above the RDEC.
- RCRA 8 Metals: The soil sample contained five of the eight target metals at concentrations above the method detection limit; but below the RDEC.

The analytical results suggest no significant impact to shallow soils. The PAHs detected are consistent with analytical data compiled by Cistar, and believed to be the result of the urban fill present at the Site, as opposed to discrete releases. The RDEC exceedences,

however, do trigger the RIDEM notification requirement. In accordance with Section 5.01 of the Remediation Regulations, a responsible party must notify RIDEM in writing within 15 days after discovery of the release.

12.20.2 Proposed Building Location Soil Results

A total of five borings (GZ-103 through GZ-107) were completed within the approximate proposed building footprint and in the vicinity of the former chemical manufacturing facility. Three samples collected from borings GZ-103, GZ-104, and GZ-107 were submitted for precharacterization analysis to evaluate off-Site disposal alternatives. Each sample was a composite of the 0-2' and 5-7' sampling interval.

The results of the analyses of these samples are presented in Table 3, where they are compared to the criteria set forth in DEP Policy # Comm-97-001, *Reuse and Disposal of Contaminated Soil at Massachusetts Landfills*, the Rhode Island Resource Recovery Corporation's (RIRRC) acceptance standards for use as daily cover and/or alternative fill at the Central Landfill, and RIDEM's Method 1 RDEC. Results are interpreted as follows.

- VOCs: None of the sample contained VOC concentrations above the method detection limits.

- PAHs: Samples from GZ-104 and GZ-107 contained PAHs at concentrations above the RDEC. The results from the sample from GZ-104 exceeded the landfill acceptance criteria for Massachusetts and Rhode Island. The benzo(a)pyrene concentration in GZ-104 exceeded the RIRRC criteria. No PAHS were detected in the GZ-103 sample.

- TPH: TPH results for sample GZ-104 exceeded the RDEC; however, the result meets the landfill acceptance criterion.

- PCBs: PCBs were not detected in any of the samples above the method detection limits.

- Metals: The total lead concentration in sample GZ-104 exceeded the RDEC. Metals concentrations for all three samples met the landfill acceptance criterion.

- Hazardous Waste None of the samples exhibited characteristics which would require defining soils, in terms of off-Site disposal, as a hazardous waste.

The analytical data from borings GZ-103 and GZ-107 suggest that the material would likely be acceptable at both the RIRRC Central Landfill and Massachusetts permitted lined/unlined landfills. While the concentration of some PAHs in the sample from boring GZ-104 exceeded the acceptance criterion for all three alternatives, the results suggest that asphalt from the Site parking lot may have been present in the sample, providing falsely high readings, which are not representative of actual soil quality. If this is the case, it is our opinion that the material, once excavated, stockpiled and re-sampled, may meet the landfill

criteria. However, the data does indicate the material is suitable for recycling at permitted asphalt batch plants in Massachusetts.

The PAH results and the elevated lead, TPH, and PAH concentrations exceed the RIDEM RDEC, thereby requiring RIDEM notification.

12.30 GROUNDWATER ANALYTICAL RESULTS

As part of Phase IIa, eight monitoring wells were installed at the Site at upgradient and downgradient locations along the Site perimeter, based on an inferred southeasterly groundwater flow direction. These wells were sampled and analyzed to evaluate groundwater quality entering and leaving the Site. The groundwater monitoring well installed in boring GZ-101 as a part of Phase IIb, was sampled to evaluate impact, if any, from the former gasoline station located at 2 Richmond Square. Results are compiled in Table 1, and compared to the applicable RIDEM GB Groundwater Objectives, as presented in Section 8.00 of the Remediation Regulations. A discussion of the results follows:

- VOCs: VOCs were detected in six of the nine wells. None of the concentrations detected exceeded applicable GB Groundwater Objectives. Of note, vinyl chloride was detected in wells GZ-1, GZ-3, and GZ-101. GZ-1 and GZ-3 were placed at locations on the upgradient side of Site (refer to Figure 3), indicating an off-Site source. The results for groundwater sample GZ-101, located in the former gasoline station area, were consistent with those from upgradient well GZ-1.

- PCBs: None of the samples contained detectable PCB concentrations above the method detection limits.

- PAHs: PAH concentrations were detected in wells GZ-2 and GZ-7. GZ-2, which contained six PAH concentrations, is located upgradient; while GZ-7 is at a downgradient location near the river. RIDEM has not established GB Groundwater Objectives for PAHs.

- TPH: Only the sample from well GZ-101 contained TPH concentrations (2.3 ppm) above the method detection limit. RIDEM does not maintain a GB Groundwater Objective for TPH (beyond the presence of free phased product, which is considered an Upper Concentration Limit).

- Metals: Arsenic was detected in upgradient well GZ-2, and in downgradient wells GZ-6 and GZ-7; barium was detected in seven of the eight wells analyzed; and lead was detected in upgradient wells GZ-1 and GZ-2, and in downgradient wells GZ-6 and GZ-7. RIDEM has not established GB Groundwater Objectives for metals.

- LNAPL: Each wells was gauged for the presence of light non-aqueous phase liquid (LNAPL) using an electronic oil/water interface probe. No evidence of LNAPL was recorded with the instrument or observed during sampling procedures.

In general, the groundwater analytical data did not exhibit any analytes at concentrations exceeding applicable RIDEM GB Groundwater Objectives. Upgradient wells typically exhibited higher analyte concentrations (both on an individual basis and in aggregate) than those placed at downgradient locations. This data suggests that groundwater condition does not further degrade as it migrates across the Site (i.e., no identified on-Site sources contributing to groundwater impact.)

13.00 FINDINGS AND CONCLUSIONS

A combined Phase I and II Environmental Site Assessment has been conducted by GZA of eight parcels of land within the Richmond Square area of Providence, Rhode Island. The study included a Site reconnaissance, a review of Site history, a review of available prior environmental assessments, a review of local, state and federal regulatory databases and/or records, interviews with persons and/or agencies familiar with the Site, a GPR survey, and a subsurface exploratory program consisting of the completion of test borings, the installation of groundwater monitoring wells, and the collection of soil and groundwater samples for screening and/or laboratory analysis.

The findings below are based on the work conducted as part of this assessment.

1. The Site consists of approximately 5.3 acres of developed land located on the Seekonk River in the Richmond Square area of Providence, Rhode Island. The Site is occupied by three office buildings (1, 2, and 4 Richmond Square), an office/commercial building (3 Richmond Square) and two restaurants (The Gatehouse and Café de Vie). Grounds are predominately paved for access and parking, with some landscaping, except along the riverbank which is naturally vegetated. The buildings are serviced by municipal water and sewer systems, and the heating systems are powered by natural gas.

2. The 1 Richmond Square parcel was occupied by an abrasive manufacturing company (American Emery Wheel Works/American Grinding Wheels) from the early 1900s until the early 1980s, when the building was converted into office space. The 2 Richmond Square parcel, prior to the construction of the existing building in the mid 1980s, was occupied by a machine shop associated with a ship building company (early 1900s), and then by a restaurant and/or a gasoline filling station (the 1940s through the 1970s).

   The 3 Richmond Square parcel and adjoining paved parking lot (Lot 6) were occupied by a plumbing/construction contactor, a bait shop, dwellings, a car wash and a covering company/chemical company in the early-1900s. The current 3 Richmond office/commercial building was constructed in the early 1960s. The Gatehouse restaurant parcel was occupied by a dwelling used by the gate tender of the Red Bridge, which formerly extended across the Seekonk River. The 4 Richmond Square parcel (Lot 10) was historically an access road to the Red Bridge, until the bridge was no longer used in the 1970s, and the current office building was constructed in the late

1980s. A transformer yard was historically located just to the southwest of 4 Richmond Square from the 1950s through the 1980s.

3. A review of available historical information identified the following companies/activities located potentially upgradient of the Site: the American Ship Windlass, Co, a shipbuilding company; a foundry; Arden Jewelry Manufacturing Co.; Taunton Manufacturing Company (cotton goods manufacturing company); a blacksmith/auto repair shop; and a gasoline filling station.

4. No evidence of existing underground storage tanks (USTs) was observed at the Site. A 1997 report by Cistar identified historical evidence of three prior USTs located at the 1 Richmond Square parcel, including a 4,000-gallon "buried oil tank" off the southwest corner of the existing building; a "fill and vent pipe" located off the south central wall of the existing building; and a "7,000-gallon oil tank" located within the footprint of the current building. A GPR survey conducted as part of Cistar's study indicated that the USTs had been removed and "[an identified interior] anomaly was not large and did not appear to resemble a buried UST which was integral."

   As part of Cistar's study, soil samples were collected from general downgradient locations from the former UST locations. Soil analyses indicated that concentrations of benzo(a)pyrene and arsenic exceeded the Rhode Island Department of Environmental Management (RIDEM) reporting concentrations in effect at that time. Cistar concluded that the elevated concentrations were not detected within 2 feet of the ground surface, and therefore, the Site did not require remediation under the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases.

5. State and federal databases were reviewed for the Site and potential impact from off-Site sources. Cell Based Delivery, Inc. (a former tenant) and Sention, Inc. (a current tenant), of 1 Richmond Square were identified as RCRA hazardous waste generators. Due to privacy concerns, GZA was not able to observe the interior of the Sention tenant space or interview Sention personnel. No RCRA violations have been cited for either company.

6. A RIDEM Division of Site Remediation *Response Report Form* indicates that on August 30, 1996, the 2 Richmond Square building (occupied by Cytotherapeutics, Inc.) was evacuated due to the release of chlorine dioxide gas being used as a sanitizing agent, which set off the building's fire alarm. Chlorine dioxide levels were monitored on the third and fourth floors (areas affected by the release); no detectable levels of the gas were detected and workers were allowed back into the building. Based on the information provided in the report, no impact to the environment resulted from the release.

7. Groundwater at the Site has been designated by RIDEM as a GB resource. This use classification is assigned to areas in which the groundwater is designated to be unsuitable for public or private drinking water use without pretreatment due to known or presumed degradation. This use classification is common to urban areas in Rhode Island. There are no Class GA or GAA groundwater designations within 500 feet of the Site.

8. A GPR survey was performed by Hager GeoScience in the vicinity of the former on-Site gasoline station. The survey indicated the presence of disturbed soils in the approximate location of the filling station building, as well as a "second such area to the east." HGI also noted several present and or former utility lines. However, HGI concluded in its survey that no USTs were detected.

9. Phase II subsurface exploratory programs included the collection of soil and groundwater samples for screening and/or laboratory analysis. A summary of our findings is as follows.

- Subsurface conditions at the Site were found to generally consist of 5.5 feet to 25 feet of miscellaneous fill material, consisting of brick, coal ash and wood underlain by sand and gravel underlain by sand and silt. A layer of organic material ranging from 4.5 to 11 feet thick was encountered in two of the borings located in the easterly parking lot area.

- Well rim elevations were surveyed relative to an arbitrary 100-foot datum and depth to groundwater recorded in all of the wells installed as part of this assessment. Inferred groundwater flow beneath the Site is in a general southeasterly direction toward the Seekonk River. Wells placed along the river were noted to be tidally influenced.

- Soil samples were screened for total volatile organic compounds (VOCs) with a photoionization detector (PID). Readings generally ranged from none detected (ND) to 0.6 parts per million (ppm) in all the borings except GZ-101, located on 2 Richmond Square in the vicinity of the gasoline station. Readings in this boring ranged from ND in soils above the groundwater table to 1,700 ppm in a soil sample collected from below the groundwater table. Based on the absence of significant concentrations of VOCs in the groundwater sample collected from this location, the PID reading suggests the presence of highly weathered petroleum hydrocarbons in saturated soils.

- A shallow soil sample (GZ-102) collected from the vicinity of the former transformer yard was analyzed for Total Petroleum Hydrocarbons (TPH), polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and RCRA 8 metals to evaluate environmental impact (if any) from this former use. The data suggested no significant impact. PAHs were detected at concentrations above the Residential Direct Exposure Criteria (RDEC; but consistent with other areas of the Site), remaining analytes were either non-detectable or below the RDEC.

- A total of five borings (GZ-103 through GZ-107) were placed within the approximate proposed building footprint and in the vicinity of the former chemical manufacturing facility. Three samples collected from borings GZ-103, GZ-104, and GZ-107 were submitted for precharacterization analysis to evaluate off-Site disposal alternatives. Each sample was a composite of the 0-2' and 5-7' sampling interval. A summary is as follows:

- No VOCs or PCBs were detected in any of the samples;
- None of the samples exhibited hazardous waste characteristics;
- PAHs were detected at concentrations above the RDEC in two of the samples;
- One sample (GZ-104) contained total PAHs above the Massachusetts landfill acceptance criteria; and
- One sample (GZ-104) contained lead and TPH concentrations above the RDEC.

- A total of nine groundwater monitoring wells were installed at the Site at upgradient and downgradient locations along the Site perimeter (based on an inferred southeasterly groundwater flow direction) and in the former gasoline station area. Samples from wells GZ-1 through GZ-8 were analyzed for PAHs, VOCs, PCBs, and RCRA 8 metals. A sample from well GZ-101 was analyzed for VOCs and TPH. A summary is as follows:

  - VOCs were detected in six of the nine wells. None of the concentrations detected exceeded applicable GB Groundwater Objectives. Vinyl chloride detected in samples from upgradient wells (GZ-1, GZ-3) and well GZ-101 (located within the 2 Richmond Square parcel), is believed to be associated with an upgradient off-Site source (i.e., the former Arden Jewelry Manufacturing Co.);

  - The VOC results for groundwater sample GZ-101, located in the former gasoline station area, were consistent with those from upgradient well GZ-1, and did not indicate significant impact from gasoline (BTEX) compounds. The well contained TPH at a concentration of 2.3 ppm, however, the presence of free-phased product was not observed in this well, or any others installed at the Site;

  - None of the samples contained detectable PCB concentrations;

  - PAH concentrations were detected in wells GZ-2 and GZ-7. GZ-2 represents an upgradient location, while GZ-7 is at a downgradient location, near the river. With the exception of naphthalene, which was not detected in GZ-2, the PAH concentrations in GZ-2 were higher than those detected in GZ-7. RIDEM has not established GB Groundwater Objectives for PAHs; and

  - Groundwater samples were tested for RCRA 8 metals (totals basis). Arsenic was detected in upgradient well GZ-2, and in downgradient wells GZ-6 and GZ-7; barium was detected in seven of the eight wells analyzed; and lead was detected in upgradient wells GZ-1 and GZ-2, and in downgradient wells GZ-6 and GZ-7. The levels detected were generally consistent among those wells exhibiting detectable concentrations and did not suggest any trends for metals entering the groundwater beneath the Site. RIDEM has not established GB Groundwater Objectives for metals.

The groundwater analytical data did not reveal any analytes at concentrations exceeding applicable and established RIDEM GB Groundwater Objectives. Upgradient wells typically exhibited higher analyte concentrations than those placed at downgradient locations. This data suggests that groundwater does not degrade as it migrates across the Site (i.e., no identified on-Site sources contributing to groundwater impact).

14.00 CERTIFICATIONS

To address Rule 7.05 of the Remediation Regulations, the following statements of certification are provided on the following page.

GZA GeoEnvironmental, Inc. certifies to the best of its knowledge, that this Site Investigation Report is complete and accurate.

John P. Hartley
Principal
GZA GeoEnvironmental, Inc

Essex River Ventures certifies, to the best of its knowledge, that this Site Investigation report is a complete and accurate representation of the site and the release and contains all known facts surrounding the release.

Mr. Robert King
Essex River Ventures

15.00 DEVELOPMENT OF REMEDIAL ALTERNATIVES

As summarized above, based on the character of deep soil fill and chemical profile encountered at the Site, it is GZA's opinion that the observed conditions are associated with historical filling that occurred at the Site during the early 1900s. Such conditions are a widespread occurrence in urban areas of Rhode Island.

As described, concentrations of vinyl chloride and other VOCs were detected at the highest concentrations in wells placed along the northernmost and upgradient portion of the Site. It is our opinion these contaminants are the result of an off-Site source.

In view of the foregoing, and to address the requirements of the Remediation Regulations, we have evaluated three remedial responses in connection with the observed regulatory soil exceedances at the Site:

- No Action Alternative – Soils at the Site have been shown to contain contaminants above the Residential Method 1 Direct Exposure Criteria. As such, potential future excavation of impacted soils for unprotected (uncapped/uncovered) use on or off Site presents an unacceptable risk. Consequently, the No Action Alternative is viewed as inappropriate for the Site.

- Excavation and Off-Site Disposal of Impacted Soils – While this response will reduce the long-term direct exposure risk, it is cost-prohibitive. The data generated from the study demonstrates that the PAHs and lead concentrations detected are associated with urban fill present throughout the Site and not a discrete source. The fill was found to be widely distributed across the Site, at a thickness ranging from 10 to 20 feet. The excavation of the soil could compromise the integrity of the on-Site buildings. The excavation of impacted fill is not considered a technically or financially feasible remedial alternative.

- Institutional Controls - The surface area of the Site is predominately covered by either asphalt pavement or buildings, with some minimal landscaping. Direct exposure is considered unlikely under current conditions. It is GZA's opinion that the establishment of an Environmental Land Usage Restriction would assure the long-term maintenance of the Site. The establishment of an environmental land usage restriction on the title of the property will:

  - require that the Site existing cover material remain in place and in good condition;
  - require RIDEM notification and the development of a Soil Management Plan should soil excavation be planned; and
  - prohibit the use of groundwater at the Site for drinking water.

As described in Section 2.20, it is the Client's intention to ultimately construct a multi-unit residential apartment building on Lot 6, currently a parking lot adjoining 3 Richmond Square. As part of the construction, and in accordance with the ELUR proposed for the Site, construction (earth-working) activities would be performed in accordance with a RIDEM-approved Soil Management Plan, to address the on-Site management, evaluation, and off-Site disposal of impacted excess soils encountered during construction.

TABLES

FIGURES

APPENDIX A APPENDIX B APPENDIX C FIGURES

TABLES

TABLE 1

GROUNDWATER ANALYTICAL RESULTS
Richmond Square
Providence, Rhode Island

Sample ID: / Sample Date:	GZ-1 7/16/2004	GZ-2 7/16/2004	GZ-3 7/16/2004	GZ-4 7/16/2004	GZ-5 7/16/2004	GZ-6 7/16/2004	GZ-7 7/16/2004	GZ-8 7/16/2004	GZ-101 8/9/2004	RIDEM GB Objective
Volatile Organic Compounds										
Vinyl Chloride	34	<1	21	<2	<2	<1	<1	<1	22	NA
Methyl Tert-Butyl Ether	<1	<1	<1	<1	5.4	<1	<1	3.2	<1	5,000
trans-1,2-Dichloroethene	1.3	<1	<1	<1	<1	<1	<1	<1	1.2	2,800
cis-1,2-Dichloroethene	86	<1	32	11	<1	<1	<1	<1	92	2,400
Benzene	<1	<1	13	<1	<1	<1	<1	<1	<1	140
Trichloroethene	21	<1	13	5.1	<1	<1	<1	<1	8.5	540
1,1,1-Trichloroethane	1.0	<1	<1	<1	<1	<1	<1	<1	<1	
sec-Butylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	1.5	NA
Polychlorinated Biphenyls	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Polynuclear Aromatic Hydrocarbons										
Naphthalene	<5	<5	<5	<5	<5	<5	31	<5	-	NA
2-Methylnaphthalene	<5	<5	<5	<5	<5	<5	<5	<5	-	NA
Acenaphthylene	<5	<5	<5	<5	<5	<5	<5	<5	-	NA
Acenaphthene	<5	13	<5	<5	<5	<5	<5	<5	-	NA
Fluorene	<5	10	<5	<5	<5	<5	<5	<5	-	NA
Phenanthrene	<5	16	<5	<5	<5	<5	23	<5	-	NA
Anthracene	<5	28	<5	<5	<5	<5	<5	<5	-	NA
Fluoranthene	<5	23	<5	<5	<5	<5	<5	<5	-	NA
Pyrene	<5	23	<5	<5	<5	<5	<5	<5	-	NA
Benzo [a] Anthracene	<5	<5	<5	<5	<5	<5	<5	<5	-	NA
Chrysene	<5	<5	<5	<5	<5	<5	<5	<5	-	NA
Benzo [b] Fluoranthene	<5	<5	<5	<5	<5	<5	<5	<5	-	NA
Benzo [k] Fluoranthene	<5	<5	<5	<5	<5	<5	<5	<5	-	NA
Benzo [a] Pyrene	<5	<5	<5	<5	<5	<5	<5	<5	-	NA
Indeno [1,2,3-cd] Pyrene	<5	<5	<5	<5	<5	<5	<5	<5	-	NA
Dibenzo [a,h] Anthracene	<5	<5	<5	<5	<5	<5	<5	<5	-	NA
Benzo [g,h,i] Perylene	<5	<5	<5	<5	<5	<5	<5	<5	-	NA
Total Petroleum Hydrocarbons	<250	<250	<250	<250	<250	<250	<250	<250	2,300	NA
Metals										
Silver	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	NA
Arsenic	<10	11	<10	<10	<10	11	10	<10	-	NA
Barium	71.6	24.8	24	14.1	<5	82.2	122	112	-	NA
Cadmium	<	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	NA
Chromium	<5	<5	<5	6.3	<5	<5	<5	<5	-	NA
Mercury	<	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	NA
Lead	11	10	<10	<10	<10	46	22	<10	-	NA
Selenium	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-	NA

Abbreviations: NA = Not available, ND = Not detected, -- = Not analyzed for

Notes:
1. Results and RIDEM GB Objectives presented in parts per billion (ppb) or micrograms per liter (ug/L).
2. RIDEM GB Objectives obtained from the RIDEM *Remediation Regulations*, February 2004.
3. Concentrations in BOLD indicate result exceeds the applicable RIDEM GB Objective standard.

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APPENDIX A

APPENDIX B

APPENDIX C

FIGURES

TABLE 2

SOIL SAMPLE RESULTS - FORMER TRANSFORMER YARD

Richmond Square
Providence, Rhode Island

Sample ID Sample Date Depth (ft)	GZ-102 8/6/2004 0-2 ft	RIDEM Method 1 Residential Direct Exposure Criteria
TPH	130	500
PAHs:		-
Naphthalene	<0.33	54.0
Acenaphthyalene	<0.33	23.0
Acenaphthene	<0.33	43.0
Fluorene	<0.33	28.0
Phenanthrene	0.54	40.0
Anthracene	<0.33	35.0
Fluoranthene	1.90	20.0
Pyrene	1.80	13.0
Benzo(a)anthracene	**1.30**	0.9
Chrysene	**0.93**	0.4
Benzo(b)fluoranthene	0.83	0.9
Benzo(k)fluoranthene	0.71	0.9
Benzo(a)pyrene	**0.85**	0.4
Indeno(1,2,3-cd)pyrene	0.33	0.9
Benzo(g,h,i)perylene	<0.33	0.8
2-Methylnaphthalene	<0.33	123.0
PCBs	ND	10
Metals:		
Silver	<0.505	200
Arsenic	4.73	7
Barium	26.1	5,500
Cadmium	<0.505	39
Chromium	8.79	1,400
Mercury	0.166	23
Lead	64.8	150
Selenium	<2.53	390

Notes:

1. Units are parts per million (ppm) unless otherwise indicated.
2. ND - Not detected.
3. Bold value indicates a regulatory exceedance

G:\18184\18184-02.RMC\TABLES\[18184.02 Transf Yard Soil Data.xls]Sheet1

APPENDIX A

APPENDIX B

APPENDIX C

FIGURES

TABLE 3

SOIL SAMPLE RESULTS - PROPOSED BUILDING AREA
Richmond Square
Providence, Rhode Island

Parameter	GZ-103	GZ-104	GZ-107	RIDEM RDEC	RIRRC	MA Lined Landfills	MA Unlined Landfills	MA Asphalt Batch Plant
Total VOCs:	ND	ND	ND	-	-	10	4	30-1,800
PAHs:	ND			-				
Anthracene		10	<1.7	35	10,000			
Phenantherne		56	6.1	40	10,000			
Fluoranthene		97	9.7	20	10,000			
Pyrene		75	6.7	13	10,000			
Benzo(a)anthracene		37	4.7	0.9	7.8			
Chrysene		16	1.8	0.4	780			
Benzo(b)fluoranthene		32	3.5	0.9	7.8			
Benzo(k)fluoranthene		10	<1.7	0.9	78			
Benzo(a)pyrene		29	2.9	0.4	0.8			
Indeno(1,2,3-cd)pyrene		12	<1.7	0.9	7.8			
Benzo(g,h,I)perylene		13	<1.7	0.8	10,000			
Total PAHs		387.00	35.40	-	-	100	100	-
Total Petroleum Hydrocarbons	ND	1,900	ND	500	2,500	5,000	2,500	5,000-60,000
PCBs	ND	ND	ND	10	10	<2	<2	<2
Metals								
Arsenic	4.58	6.6	4.82	7.0	7.0	40	40	30
Cadmium	<0.50	<0.50	<0.50	39	1,000	80	30	11-30
Chromium	8.14	9.28	11.5	1,400	10,000	1,000	1,000	500
Lead	110	192	31.7	150	500	2,000	1,000	1,000
Mercury	0.11	0.16	<0.10	23	610	10	10	3-10.
Silver	<0.50	<0.50	<0.50	200	10,000	-	-	-
Barium	42.9	34.9	21.8	5,500	10,000	-	-	-
Selenium	<2.5	<2.5	<2.5	390	10,000	-	-	-
Characteristics of Hazardous Waste								
TCLP Metals (mg/l)								
Lead	0.145	0.424	-	5				
Flashpoint (°F)	>200	>200	>200	>140				
Reactivity:				non-reactive				
Cyanide	<1.0	<1.0	<1.0					
Sulfide	<20	<20	<20					
pH (SU)	7.31	7.23	7.38	2< and <12.5				

Notes:

1. Units are parts per million (ppm) unless otherwise indicated.
2. ND - Not detected.
3. RIDEM Residential Direct Exposure Criterion (RDEC) obtained from the RIDEM Remediation Regulations, February 2004.
4. The recycling/disposal criteria presented in the table were obtained from Massachusetts Department of Environmental Protection (DEP) Policy # COMM 97-001 as well as permit requirements for receiving facilities located in the Massachusetts area, and are considered typical for the industry. It should be noted that the receiving facility may require additional analytical parameters or more stringent acceptance limits.
5. TCLP lead standard for the RI Resource Recovery Corporation (RIRRC) is 2.5 mg/l.

SOURCE : SCANNED USGS TOPOGRAPHIC QUADRANGLES DISTRIBUTED BY THE RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM, RIGIS.
DATA SET CREDIT: This DRG was produced through an Innovative Partnership agreement between The Land Information Technology Company, Ltd., of Aurora, CO and the USGS.

Data Supplied by RIGIS

0 1,000 2,000 4,000
Feet

GZA	PROJ. MGR.: JAG DESIGNED BY: JAG REVIEWED BY: DSG OPERATOR: MAT DATE: 06/02/04	SITE LOCUS MAP	JOB NO. 18184.00
		RICHMOND SQUARE PROVIDENCE, RHODE ISLAND	FIGURE NO. 1

APPENDIX A
APPENDIX B
APPENDIX C
APPENDIX D
APPENDIX E
APPENDIX F

N
W E
S

SOURCE:
AERIAL ORTHOPHOTO IMAGES PROVIDED BY THE RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM, RIGIS AND DISTRIBUTED IN AUGUST 2000. AERIAL PHOTOGRAPHY TAKEN IN APRIL 1997 FOR NATIONAL GRID-USA AND THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION, RIDOT.

RIGIS

0 100 200 400
Feet

GZA

PROJ. MGR.: JAG
DESIGNED BY: JAG
REVIEWED BY: DSG
OPERATOR: MAT
DATE: 06/02/04

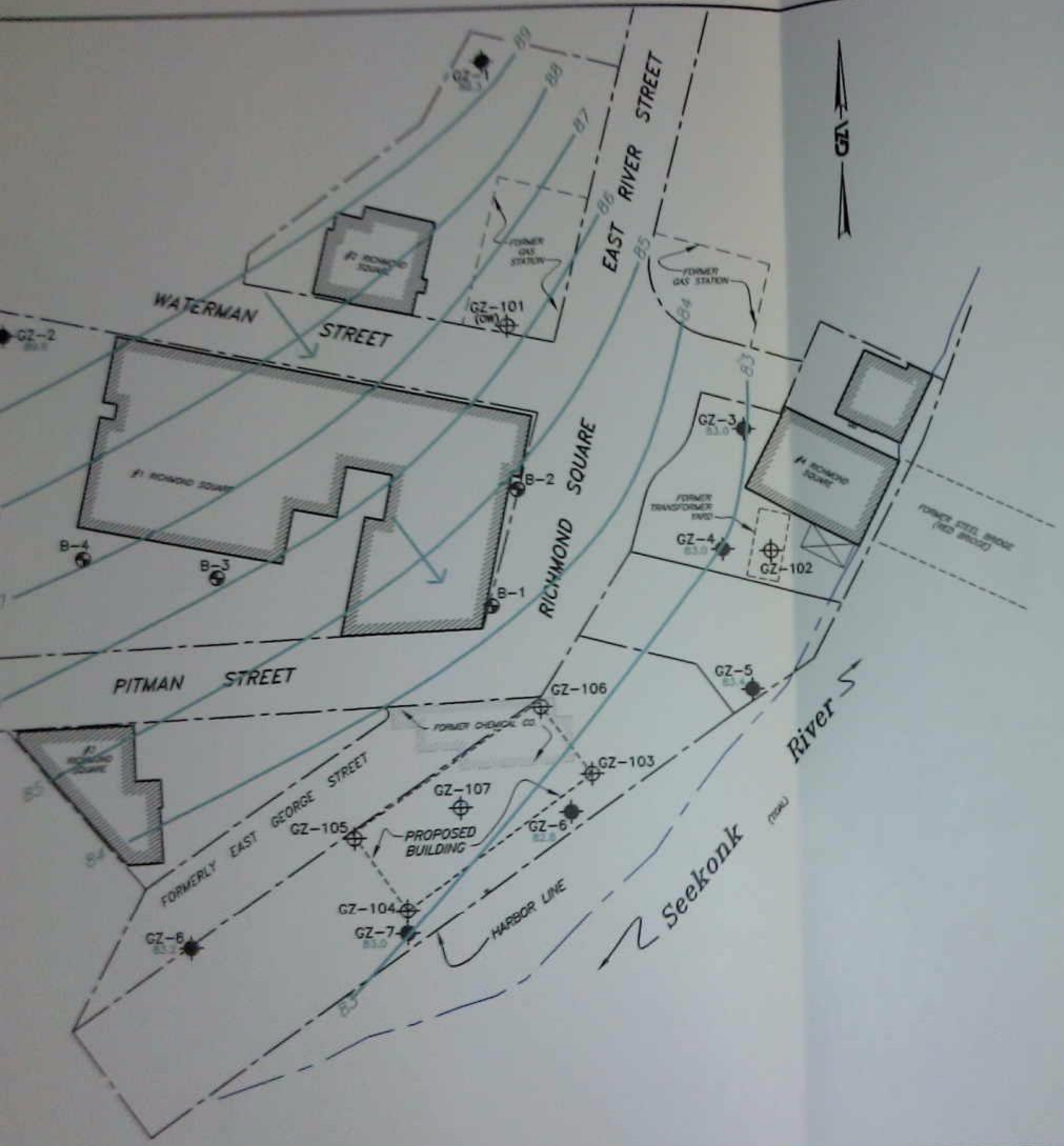
SITE PLAN

RICHMOND SQUARE
PROVIDENCE, RHODE ISLAND

JOB NO.
18184.00

FIGURE NO.
2

APPENDIX A
APPENDIX B
APPENDIX C
APPENDIX D
APPENDIX E
APPENDIX F



LEGEND:

- B-1 — SOIL BORINGS INSTALLED BY CISTAR ASSOCIATES, INC. ON JANUARY 14, 1997.
- GZ-1 (89.3) — MONITORING WELLS INSTALLED BY NEW ENGLAND GEOTECH AND OBSERVED BY GZA PERSONNEL ON JULY 14, 2004.
  - ELEV. IN FEET (ASSUMED DATUM)
- GZ-101 (OW) — SOIL BORINGS INSTALLED BY GEOSEARCH, INC. AND OBSERVED & LOGGED BY GZA PERSONNEL ON AUGUST 6th THROUGH 11th, 2004.
  - OBSERVATION WELL INSTALLED
- PROPERTY LINE
- 88 — GROUNDWATER CONTOUR
- INFERRED FLOW DIRECTION

NOTES:

1) BASE MAP DEVELOPED FROM PLAN PROVIDED BY CAPITO AND WICK LTD. ENTITLED "ALTA/ACSM LAND TITLE SURVEY, RICHMOND SQAURE, PROVIDENC, R.I. PREPARED FOR ESSEX RIVER VENTURES, LLC" DATED JUNE 7, 2004, ORIGINAL SCALE 1"=50', DRAWING No. 1.

2) THE LOCATION AND ELEVATIONS OF THE BORINGS WERE APPROXIMATELY DETERMINED BY TAPING & FROM LINE OF SIGHT FROM EXISTING TOPOGRAPHIC FEATURES. THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

SCALE: 1" = 80 FEET
0 40' 80' 160'

OPERATOR: CRB
CHECKED BY: REN
DATE: 7/23

PREPARED BY: RMC
REVISED BY: RMC
REVISED BY: RMC

RICHMOND SQUARE
PROVIDENCE, RHODE ISLAND

PROJECT NO.
18184.02

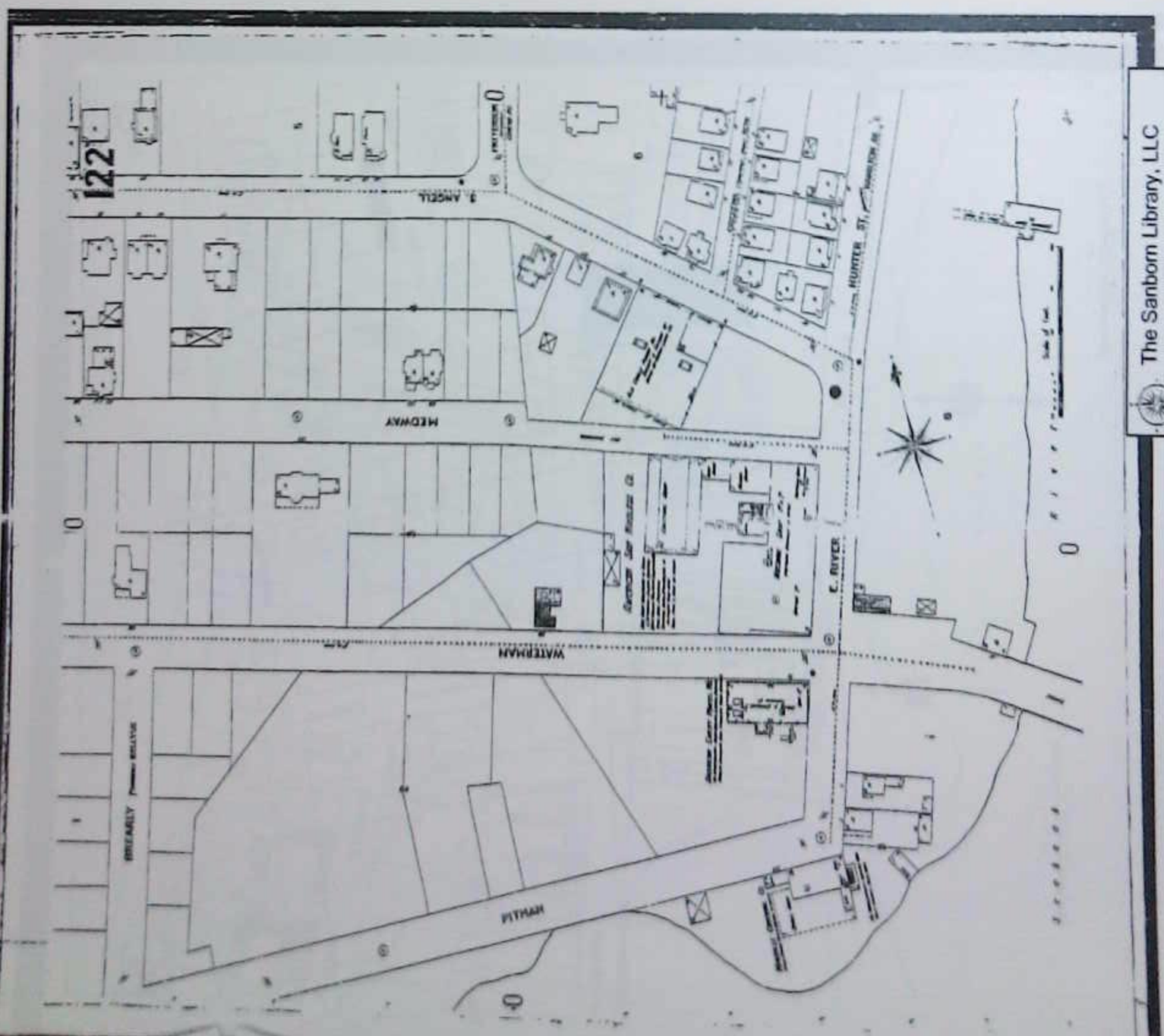
FIGURE NO.
3

APPENDIX G | APPENDIX H | APPENDIX I | APPENDIX D | APPENDIX E | APPENDIX F

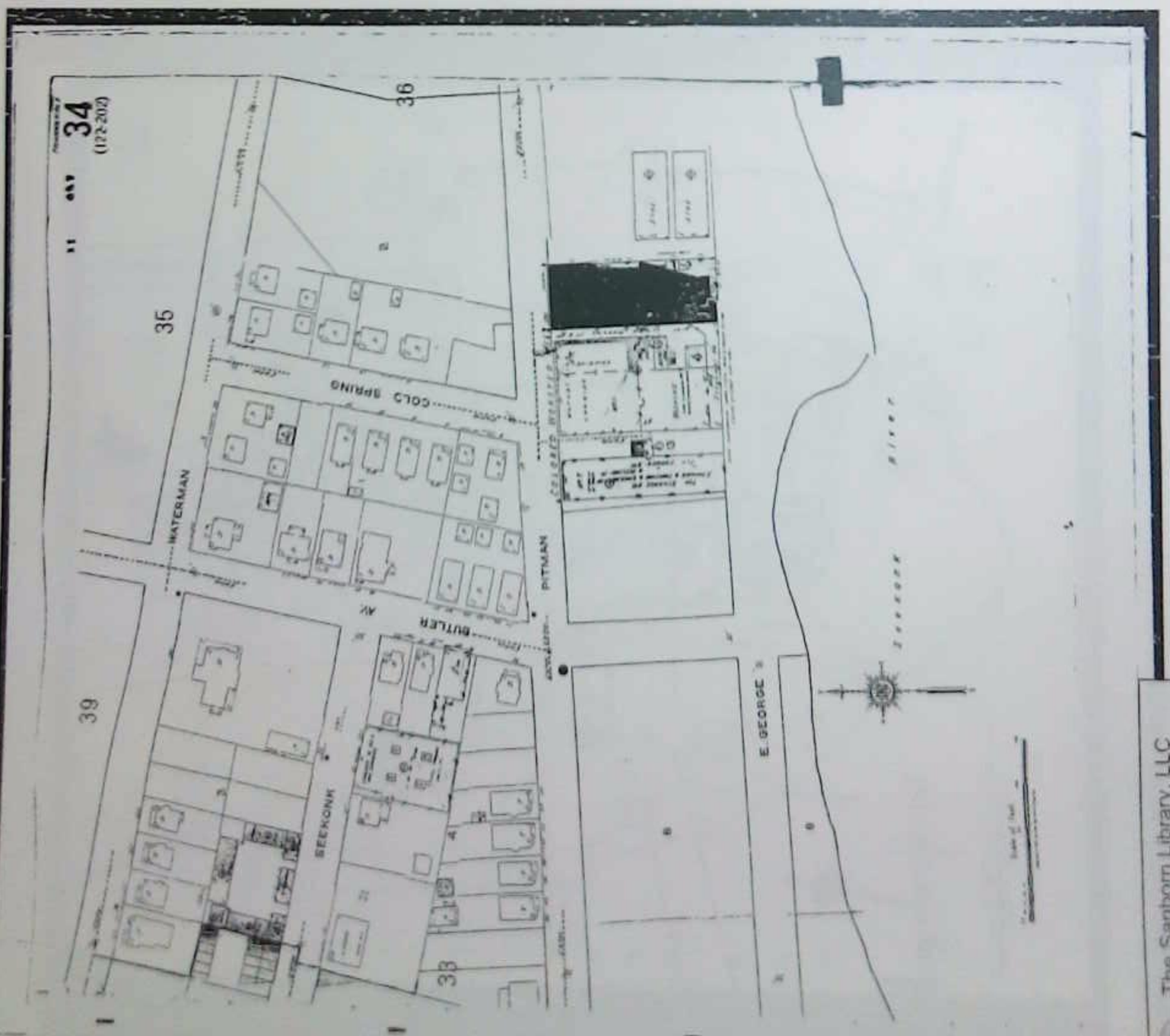
APPENDIX C

SELECTED HISTORICAL MAPS

APPENDIX G | APPENDIX H | APPENDIX I | APPENDIX D | APPENDIX E | APPENDIX F



APPENDIX G | APPENDIX H | APPENDIX I | APPENDIX D | APPENDIX E | APPENDIX F



...IRONMENTAL SERVICES
REPORT

Conducted
on

ONE RICHMOND SQUARE
PROVIDENCE, RHODE ISLAND

for

Brendon P. Smith, Esquire
One Turks Head Place
Providence, RI 02903
7 February 1997
CISTAR Project No. C971523G

...inslow
...al Scientist
...ager

Signature

... Geisser, PE, LSP
...ental Engineer

Signature

MICHAEL F. GEISSER
No. 5250
REGISTERED
PROFESSIONAL ENGINEER

...017 TURNPIKE STREET • CANTON, MASSACHUSETTS 02021 • 617-821-4142
...240 PAWTUCKET AVE. • EAST PROVIDENCE, RHODE ISLAND 02916 • 401-431-9044

APPENDIX G
APPENDIX H
APPENDIX I
APPENDIX J
APPENDIX E
APPENDIX F

APPENDIX E

DATABASE SEARCH REPORT

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

LETTER OF RESPONSIBILITY April 13, 2005

CERTIFIED MAIL

Mr. John W. Fenton, President
Essex River Ventures, Inc.
77 Main Street
Andover, MA 01810

RE: Properties located at 1, 2, 3, & 4 Richmond Square
Map 15, Lots 6, 8, 10, 60, 340, 451, 467 & 469
Providence, Rhode Island
RIDEM CASE # 2005-026

Dear Mr. Fenton:

On February 24, 2004, the Rhode Island Department of Environmental Management (the Department) amended the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in an efficient manner. A Letter of Responsibility (LOR) is a preliminary document used by the Department to codify and define the relationship between the Department and a Responsible Party.

Please be advised of the following facts:

1. The Department is in receipt of a *Hazardous Material Release Notification Form* (Release Notification) submitted on February 28, 2005, on the behalf of Essex River Ventures, Inc. by GZA GeoEnvironmental, Inc. (GZA). The Release Notification was submitted for 1, 2, 3, & 4 Richmond Square in Providence, Rhode Island, hereinafter referred to as the "Site."

2. Essex River Ventures, Inc. is identified as the current owner of the Site by the City of Providence Office of The Recorder of Deeds, and, as such, Essex River Ventures, Inc. is a **Responsible Party** as defined by Rule 3.60 of the Remediation Regulations.

3. Mr. John W. Fenton is identified as the President of Essex River Ventures, Inc. by the Office of the Secretary of the Commonwealth of Massachusetts.

4. On February 28, 2005, the Department received a report entitled *"Site Investigation Report, Richmond Square, Providence, Rhode Island,"* dated September 2004, submitted by GZA on the behalf of Essex River Ventures, Inc.

5. The documents submitted for the Site identify concentrations of hazardous substances in the soil and groundwater that exceed the Method 1 Residential and Industrial / Commercial Direct Exposure Criteria as referenced in the Remediation Regulations. Based on the presence and nature of these **hazardous substances** observed, the Department concurs that a **release** of **hazardous materials** has occurred as defined by Rule 3.28, 3.29 and 3.54 of the Remediation Regulations.

As a result of the information known and conditions observed at the Site, the Department requests that you address the attached questions, concerns and/or comments in order to complete the Site Investigation in accordance with Section 7 of the Remediation Regulations.

All correspondence should be sent to the attention of:

Michael D. Andrews
RIDEM / Office of Waste Management
235 Promenade Street
Providence, RI 02908

If you have any questions regarding this letter, please contact me by telephone at (401) 222-2797 extension 7140 or by e-mail at michael.andrews@dem.ri.gov.

Sincerely,

Michael D. Andrews
Sanitary Engineer
Office of Waste Management

Authorized by,

Kelly J. Owens
Assoc. Supervising Engineer
Office of Waste Management

cc w/ attach.: Robert B. King, Essex River Ventures, Inc.
R. Michael Clark, GZA GeoEnvironmental, Inc.
John P. Hartley, GZA GeoEnvironmental, Inc.

MH

GZA
GeoEnvironmental, Inc.

Engineers and
Scientists

February 24, 2005
File No. 18184.02-C

Ms. Kelly Owens
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02908

Re: Notification of Release
Richmond Square Property
1-4 Richmond Street
Providence, Rhode Island

GZA
340 Broadway
Providence
Rhode Island 02903
401-421-4140
FAX 401-751-8613
www.gza.net

Dear Ms. Owens:

On behalf of our client, Essex River Ventures, this letter serves as a Notification of Release pursuant to Rule 5.01 of the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations).

As presented in more detail in the attached *Site Investigation Report*, the notification is associated with Method 1 Direct Exposure Criteria exceedances for total petroleum hydrocarbons, certain polynuclear aromatic hydrocarbons and lead in soil samples from the site. We observed no groundwater, GB-Leachability or UCL exceedances. Based on the concentrations of the analytes detected and our knowledge of the area, we believe that the exceedances are associated with the historical use the site and likely reflect area-wide conditions.

To address requirements of the Remediation Regulations, Section 15 of the *Site Investigation Report* provides an evaluation of remedial alternatives.

We trust that this information fulfills your present needs. Should you have any questions or comments, please feel free to contact us at (401) 421-4140, or via e-mail at *jhartley@gza.com*.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Paula M. Grady

R. Michael Clark
Senior Project Manager

John P. Hartley
Principal

Attachment: Site Investigation Report
Notification Form
Certification Page

Cc: R. King (Essex River Ventures)

G:\JOBS\ESA\18184.02\18184.02DEMNOTIFICATIONLETTER.COM

DIVISION OF SITE REMEDIATION
HAZARDOUS MATERIAL RELEASE NOTIFICATION FORM

THIS FORM IS NOT TO BE USED TO REPORT AN IMMINENT HAZARD

1. **Notifier Information:**

Name:	Mr. Robert King Essex River Ventures
Address:	255 Friend Street Boston, Massachusetts
Phone:	(617) 742-2299 ext. 101

Status: y Owner __ Operator __Secured Creditor __ Voluntary

2. **Property Information**

Name of Site:	Richmond Square
Site Address:	1, 2, 3 & 4 Richmond Square Providence Rhode Island 02906
Map/Lot Number:	Map 15, Lots 6, 8, 10, 60 340, 451, 467 & 469
Site Contact Person:	Mr. Robert King
Site Contact Phone:	(617) 742-2299 ext. 101
Site Land Usage Type:	y_Residential (Future – 1 building/new construction) y_ Industrial/Commercial (Current)
Location of Release:	Soil

3. **Release Information**

Date of Discovery:	September 2004
Source:	Urban fill
Release media:	Soil
Hazardous Materials and Concentrations:	Polycyclic aromatic hydrocarbons, lead and total petroleum hydrocarbons detected in soil at concentrations above Method 1 Residential Direct Exposure Criteria.
Extent of Contamination:	Site-wide

4. **Resource Information**

Site Land Usage:	_x_ Ind./Commercial	__ Residential
Adjacent Land Usage:	_x_ Ind./Commercial	__ Residential
Site Groundwater Class:	__ GA/GAA	_x_ GB
Adjacent Groundwater Class: (if different than site groundwater classification within 500 feet)	__ GA/GAA	_x_ GB
Nearest Surface Water or Wetland:	_x_ Less than 500 Feet	__ Greater than 500 Feet
Potential for adverse impact:	__ Yes	_x_ No

5. **Potentially Responsible**

Name: Essex River Ventures

Address: 255 Friend Street
Boston, Massachusetts

Status: _x_ Owner ___ Operator ____ Other:

Name:

Address:

Status: __Owner ___ Operator ____ Other:

6. **Measures Taken or Proposed to be Taken in Response to Release:**

Refer to the attached *Site Investigation Report*

7. **Other Significant Remarks About Release:**

Signature: John P. Stewart

Date: February 22, 2005

Title: Principal

RECEIVED
DEP/DSWM
2005 FEB 28 A 11:53

SITE INVESTIGATION REPORT ADDENDUM 1-4 RICHMOND SQUARE PROPERTY PROVIDENCE, RHODE ISLAND (RIDEM Case No. 2005-026)

PREPARED FOR:
Essex River Ventures
Andover, Massachusetts

PREPARED BY:
GZA GeoEnvironmental, Inc.
Providence, Rhode Island

October 2005
File No. 32970

GZA
GeoEnvironmental, Inc.

Engineers and Scientists

October 11, 2005
File No. 32970-C

Mr. Michael Andrews
RIDEM\Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02908

Re: *Site Investigation Report-Addendum*
Richmond Square Property
1-4 Richmond Square
Providence, Rhode Island
(RIDEM Case No. 2005-026)

TABLES

Dear Mr. Andrews:

On behalf of our client, Essex Richmond, LLC, GZA GeoEnvironmental Inc. (GZA) is pleased to provide this *Site Investigation Report-Addendum* associated with the Richmond Square Property in Providence, Rhode Island (Site). The work scope was developed in response to the Department's April 13, 2005 *Letter of Responsibility*. This report is considered an addendum to our September 23, 2004 *Site Investigation Report*, and as such, is subject to the terms and conditions and limitations referenced therein.

To assist in your review of this report, we have presented the results of our additional site investigation activities in the same order as the comments contained in the *Letter of Responsibility*.

ADDITIONAL SOIL SAMPLING – PROPOSED RESIDENTIAL BUILDING

On August 1, 2005, three additional Geoprobes were installed in the proposed residential building area (located on the 3 Richmond Square parcel) by New Hampshire Test Boring of Brockton, Massachusetts. The borings, identified as GZ-204 through GZ-206, were pneumatically advanced using Geoprobe techniques to depths of 10 feet below ground surface (bgs). The boring locations are indicated on the attached *Exploration Location Plan* presented as Figure 2. A GZA field technician was on-Site during drilling activities to observe the explorations, characterize the subsurface materials using the Modified Burmeister Classification System, and maintain boring logs (copies of which are provided at Appendix A). GZA located the explorations in the field by taping and line-of-sight measurements from existing Site features.

Soil samples were collected at 5-foot intervals. Soil samples collected during the test boring program were screened in the field for total volatile organic compounds (TVOCs) with a photo-ionization detector (PID) using the jar-head space technique. The PID measures relative levels of TVOCs referenced to an isobutylene-in-air-standard. Although the PID screening cannot be directly used to quantify VOC concentrations or to identify individual compounds, the results can serve as a relative indicator of VOC levels. The TVOC screening results, which are provided on the boring logs in Appendix A, reveal that soil samples collected from the unsaturated zone (that is, from above the observed groundwater table) in each of the borings provided low TVOC concentrations (less than 1 ppmv). The S-1 (0 to 2 feet) sample from boring GZ-205 provided TVOC concentration of 3.8 ppmv.

Soil samples were collected in laboratory-supplied containers, packed in ice and transported under chain-of-custody to GZA's Environmental Chemistry Laboratory for analysis. One shallow (identified as S-1, collected from the 0 to 2' interval) and one deeper (identified as S-2, collected from the 5 to 7' interval) subsurface soil sample from each boring (6 total) were selected for laboratory testing for polycyclic aromatic hydrocarbons (Method 8270), total petroleum hydrocarbons (Method 8100M) and RCRA 8 metals (Method 6010/7471). Laboratory testing results and the applicable RIDEM criteria are summarized on Table 1 and discussed below. For reference, the table also includes the soil analytical data from the September 2004 SIR. Copies of the laboratory data reports are provided in Appendix B.

- Total Petroleum Hydrocarbons - TPH concentrations ranged from non-detected (less than 10 mg/kg) in two samples to 3,100 mg/kg. Of the six samples, only a single sample (GZ-205/S-1) contained TPH at a concentration (3,100 mg/kg) above the Method 1 Direct Exposure Criteria and the GB-Leachability Criterion.

- Polycyclic Aromatic Hydrocarbons – PAHs were detected in three of the six samples. Of the 16 target PAHs present amongst the three samples, nine individual compounds were present at concentrations above the Method 1 Residential Direct Exposure Criteria. No PAH concentrations were above the Method 1 Industrial/Commercial Direct Exposure Criteria. The individual and aggregate PAH concentrations were generally lower than those associated with the composite samples collected from the parcel, during the 2004 investigation.

- RCRA 8 Metals – Target metals were present in each of the six samples. Metals found at concentrations above the Method 1 Residential Direct Exposure Criteria were limited to arsenic (10.5 to 13.7 mg/kg in four of six samples), and lead (152 mg/kg and 218 mg/kg in two of six samples). These findings are generally consistent with those of the 2004 investigation.

These newly collected data support our initial evaluation of the project data. That is, based on the character of deep soil fill and chemical profile encountered in soil samples from the Site; it is GZA's opinion that the observed conditions are associated with historical filling that occurred at the Site during the early-1900s. We observed no apparent "hot spot" areas amenable to targeted soil removal efforts to effectively reduce contaminant concentrations. Notwithstanding, future construction activities in this portion of the Site will incorporate soils management plans to characterize for off-Site disposal any excess materials generated as a result of construction.

ADDITIONAL MONITORING WELLS – WEST/NORTHWEST OF BUILDING 2

RIDEM's request for additional monitoring wells was based on the opinion that supplemental groundwater quality data was needed to support the "downgradient property status" request. To address this request, concurrent with Task 1, on August 1, 2005, GZA installed three wells in Geoprobe boring placed within the 2 Richmond Square parcel: two monitoring wells (GZ-202 and GZ-203) to the southwest of well GZ-1 (north of Waterman Street), and one monitoring well (GZ-201) to the east of well GZ-1 (on the western side of East River Street). The well locations are shown on the attached Figure 2, *Exploration Location Plan*.

TABLES

Each Geoprobe boring was advanced to a depth of 20 feet bgs. Groundwater monitoring wells constructed of 1-inch-inner-diameter (ID) Schedule 40 PVC, were installed in each of the Geoprobe borings. Each well was constructed such that the wellscreen was set to span the water table encountered during drilling, with solid riser then run to grade. No glue or cement was used in the construction of the monitoring well. A fine sand filter pack was placed in the annular space around the 10-foot wellscreen and a bentonite seal above the filter pack in each well. The wells were completed with road box cemented flush with grade. Well installation details are presented on the boring logs presented in Appendix A. On August 30, 2005, an elevation survey of the top of PVC riser for the six wells was performed using standard differential surveying techniques relative to an arbitrary 100 foot datum. Depths to static groundwater readings were recorded for each of the wells using an electronic water level meter. The elevation data and groundwater readings are summarized below.

TABLES

Monitoring Well ID	Top of PVC Elevation	8/12/2005	
		Depth to Groundwater	Groundwater Elevation
	(ft)	(ft)	(ft)
GZ-1	102.2	12.79	89.4
GZ-3	99.4	16.25	83.2
GZ-101	98.4	14.32	84.0
GZ-201	102.8	14.52	88.3
GZ-202	100.5	11.20	89.3
GZ-203	100.0	10.60	89.4

Based on the results of the elevation survey and our groundwater readings, groundwater in the area of the Site is anticipated to flow in a southeasterly direction; towards the Seekonk River, which forms the Site's eastern border. It should be noted that fluctuations of the groundwater levels may occur due to variations in rainfall and other factors different than those prevailing at the time the readings were taken. Groundwater contours developed from these data are shown on Figure 3.

Following a minimum 3-day stabilization period, groundwater samples were collected from each of the newly installed wells (GZ-201, GZ-202, and GZ-203) and existing wells GZ-1, GZ-3 and GZ-101 and tested for volatile organic compounds. Samples were placed in laboratory-supplied, hydrochloric acid-preserved, 40-ml glass vials, packed in an ice chest, and transported under chain-of-custody to GZA's Environmental Chemistry Laboratory for VOC analysis (Method 8021 or 8260 [GZ-101]). Laboratory testing results and the applicable RIDEM criteria are summarized on Table 2 and discussed below. Copies of the laboratory data reports are provided in Appendix B.

The data reveal that the chlorinated VOCs: Vinyl Chloride, Trichloroethene, cis-1,2-Dichloroethene, Chloroform and/or 1,1-Dichloroethene were detected in groundwater samples collected from the newly installed wells. The concentration of 1,1-Dichloroethene in the sample from well GZ-203 (9.8 ug/l) was above the 7.0 ug/l GB Groundwater Objective. We observed no other GB Groundwater Objective exceedances. The re-sampling of existing wells GZ-101 and GZ-3 support the prior data in terms of both contaminant types and concentrations.

Based on the groundwater elevation data indicating a general southeasterly flow direction, the supplemental groundwater evaluation supports our initial assessment that the observed chlorinated VOC impacts at the Site are associated with an off-Site source. That is, chlorinated VOCs have been detected in each of the four groundwater monitoring wells installed along the Site's upgradient property-line. That same chemical profile was observed in samples from wells located downgradient of this property-line at lower concentrations.

INTERIOR AIR SAMPLING

RIDEM requested, based on the presence of certain volatile organic compounds in groundwater, that interior air samples be collected from the basements of buildings 1, 2, and 4 and the Gatehouse Restaurant. The purpose of the indoor air sampling was to evaluate whether VOCs are present inside the building. The objective of the sampling was not to determine if VOCs, if any, were from exterior or interior sources.

To accomplish this, a 6-liter Summa canister (a stainless steel, chemically inert air collection vessel with a settable flow controller) was set-up in the lowest level of each of the four identified buildings. At the time of sampling, the buildings were occupied and the air conditioning systems were operational. To evaluate background ambient air quality conditions, a fifth Summa canister was established on the exterior of Building 2. The samples were identified as follows:

- Building 1 (basement);
- Building 2 (basement);
- Building 4 (basement);
- Gatehouse (lower level); and
- "Outside (Building 2)."

Canisters were left in place for a period of approximately 8 hours. Upon their retrieval on the evening on August 15, 2005, the canisters were shipped via FedEx to Air Toxics Ltd. of Folsom, California for laboratory testing using EPA Method TO-15 GC/MS Full Scan (32 target Compounds). The selected analytical scan included those contaminants of concern detected in groundwater entering the Site.

Air Toxics' Laboratory Report is provided in Appendix C. The report indicates that no target compound detections in canister samples, Building 1, Building 2, Building 4, or Outside Building 2. The compound Freon 12 (dichlorodifluoromethane) was detected in the Gatehouse canister at a concentration of 2.8 ppbv (or 14 uG/m3). Freon 12 is a colorless gas (at room temperature) and is used commonly as a refrigerant. Its presence in the sample from the Gatehouse building may indicte that it is associated with the restaurant's refridgeration systems.

EXISTING LABORATORY DATA

Included as Appendix D are the laboratory data reports from Cistar Associates' February 7, 1997 *Environmental Services Report*.

EXISTING SURFACE CONDITIONS PLAN

Included as Figure 4 is a plan depicting the location of the areas of the Site which contain landscaped and vegetated surfaces. You will note that the areas are primarily located along the fringes of the property-lines and buildings. They generally represent only narrow landscape borders; the majority of the Site's surfaces are either asphalt-paved or covered by buildings.

DISCUSSION

Based on the additional work performed at the Site at RIDEM's request, as discussed above, it is GZA's opinion that the newly acquired data and information does not alter GZA's opinion as to the appropriate remedial strategy for the subject property. That is, the establishment of an Environmental Land Usage Restriction (coupled with a *Soils Management Plan* and *Health and Safety Plan*) to restrict the use and the long-term maintenance of existing surfaces at the Site to assure that humans engaged in Site activities are not exposed to impacted soils. Furthermore, no new information was generated to suggest that the Site is not suitable for future construction activities as long as such activities are performed in accordance with the *Soils Management Plan* and ELUR and the end results are in compliance with the ELUR.

CERTIFICATION

To address Rule 7.05 of the Remediation Regulations, the following statements of certification are provided on the following page.

GZA GeoEnvironmental, Inc. certifies to the best of its knowledge, that this Site Investigation Report is complete and accurate.

John P. Hartley
Principal
GZA GeoEnvironmental, Inc

Essex Richmond certifies, to the best of its knowledge, that this Site Investigation report is a complete and accurate representation of the site and the release and contains all known facts surrounding the release.

Mr. Robert King
Essex Richmond, LLC

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

March 1, 2006

Mr. John W. Fenton
Essex Richmond, LLC
60 McLean Street
Wellesley, MA 02481-5404

RE: **PROGRAM LETTER**
Properties located at 1, 2, 3, & 4 Richmond Square
Map 15, Lots 6, 8, 10, 60, 340, 451, 467 & 469
Providence, Rhode Island
RIDEM CASE # 2005-026

Dear Mr. Fenton:

On February 24, 2004, the Rhode Island Department of Environmental Management (the Department) amended the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in an efficient manner. The purpose of a Program Letter is to indicate that the Department deems the investigation of the reported release complete and to notify the performing party that they must perform Public Notice in accordance with Sections 7.07 and 7.09 of the Remediation Regulations.

The Department has reviewed the following documents relative to the above referenced property:

1. **Notification of Release**, dated February 24, 2005, prepared and submitted by GZA GeoEnvironmental, Inc. (GZA);

2. Report entitled: **Site Investigation Report, Richmond Square, Providence, Rhode Island**, dated September 2004, prepared and submitted by GZA;

3. Report entitled: **Site Investigation Report Addendum, 1-4 Richmond Square Property, Providence, Rhode Island,** dated October 2005, prepared and submitted by GZA;

4. Correspondence entitled: **Site Investigation Report – Addendum, 1-4 Richmond Square Property, Providence, Rhode Island**, dated January 9, 2006, prepared and submitted by GZA;

5. Correspondence entitled: **Site Investigation Report – Addendum No. 2, 1-4 Richmond Square Property, Providence, Rhode Island**, dated February 21, 2006, prepared and submitted by GZA.

The Department regards the information provided in these reports as collectively constituting the Site Investigation Report (SIR) pursuant to Section 7.08 of the Remediation Regulations. The Department requires that **Essex Richmond, LLC** give public notice to all abutters, tenants, and the City Planner regarding the preferred remedial alternative.

The preferred remedial alternative includes the use of engineered controls that shall include the existing asphalt pavement, building foundations and dense vegetated landscaped areas. These controls will serve as a barrier against direct exposure to site soils. A 2-foot soil cap or equivalent will be installed over grass-covered landscaped areas of the Site to prevent direct exposure to surface soils. Also, the Department shall require the implementation of an approved Environmental Land Usage Restriction (ELUR) for the entire property. The ELUR will require the performance of annual inspections to document the status of the ELUR and shall include a soil management plan (SMP), which will address activities that disturb on-site soils. The ELUR, once approved by the Department, shall be recorded for the property (Map 15, Lots 6, 8, 10, 60, 340, 451, 467 & 469) in the Land Evidence Records for the City of Providence and a recorded copy forwarded back to the Department.

Sections 7.07 and 7.09 of the Remediation Regulations address the requirements for public notice regarding the substantive findings of the completed investigation and the opportunity for public review and comment on the technical feasibility of the proposed remedial alternatives mentioned above. Attached to this letter is a template of a typical notification for your reference. Please submit a draft notification to the Department via e-mail for review and approval prior to distribution. The Department will require a copy of the public notice letter and a list of all recipients, including abutters, tenants, and the City of Providence.

The Department will formally approve the SIR in the form of a Remedial Decision Letter once this issue is addressed and upon Department approval of all final responses to relevant public comments.

If you have any questions regarding this letter, please contact me by telephone at (401) 222-2797 ext. 7140 or by email at michael.andrews@dem.ri.gov

Sincerely,

Michael D. Andrews
Sanitary Engineer
Office of Waste Management

Approved by,

Jeffrey P. Crawford
Principal Environmental Scientist
Office of Waste Management

REMEDIAL ACTION WORK PLAN
1-4 RICHMOND SQUARE PROPERTY
PROVIDENCE, RHODE ISLAND
(RIDEM CASE NO. 2005-026)

ON-BEHALF OF:
Essex Richmond, LLC
Providence, Rhode Island

PREPARED FOR:
RIDEM
Providence, Rhode Island

PREPARED BY:
GZA GeoEnvironmental, Inc.
Providence, Rhode Island

October 2006
File No. 32970.01

GZA
GeoEnvironmental, Inc.

Engineers and Scientists

October 18, 2006
File No. 32970.01

Mr. Michael D. Andrews
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02903

Re: *Remedial Action Work Plan*
1-4 Richmond Square Property
Providence, Rhode Island
(RIDEM Case No. 2005-026)

Dear Mr. Andrews:

On behalf of our client, Essex Richmond, LLC, GZA GeoEnvironmental, Inc. (GZA) is pleased to provide this *Remedial Action Work Plan* (RAWP) associated with the 1-4 Richmond Square Property. This RAWP has been prepared in accordance with the terms and conditions of our signed proposals to Essex Richmond, LLC, dated January 25, 2006.

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The RAWP has been prepared to address the requirements of Section 9.00 of the RIDEM's Rules and Regulations for the Investigation and Remediation of Hazardous Materials Releases (Remediation Regulations) and in response to the Department's March 1, 2006 *Program Letter*, and the March 22, 2006 *Remedial Decision Letter*. This report is subject to the limitations presented in Section 16.00 and Appendix A.

We trust that this information fulfills your present needs. Should you have any questions or comments, please feel free to contact us at (401) 421-4140, or via e-mail at *jhartley@gza.com*.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

John P. Hartley
Principal

R. Michael Clark
Senior Project Manager

for Justin S. Monaghan
Consultant/Reviewer

cc: Ken Kazarian, Kenwood Construction

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1.00 INTRODUCTION

On behalf of our client, Essex Richmond, LLC, GZA GeoEnvironmental, Inc. (GZA) is pleased to provide this *Remedial Action Work Plan* (RAWP) associated with the Richmond Square property (RIDEM Case No. 2005-026). The RAWP has been prepared to address the requirements of Section 9.00 of the RIDEM's Rules and Regulations for the Investigation and Remediation of Hazardous Materials Releases (Remediation Regulations) and in response to the Department's March 1, 2006 *Program Letter*, and March 22, 2006 *Remedial Decision Letter*.

This RAWP has been prepared in accordance with the terms and conditions of our signed proposal dated January 25, 2006 and is subject to the limitations presented in Section 16.00 and Appendix A. It may be subject to modification if additional information is developed subsequently by GZA or any other party.

The RAWP is based on information contained in the following regulatory submittals:

1. *Site Investigation Report* dated September 23, 2004 prepared by GZA on behalf of Essex Richmond, LLC. (The *Site Investigation Report* incorporates laboratory testing data and information associated with prior environmental studies performed at the Site by GZA and others);

2. June 30, 2005 letter to RIDEM prepared by GZA to describe the proposed scope of work for additional environmental services;

3. *Site Investigation Report - Addendum* dated October 11, 2005 prepared by GZA in response to the comments presented in the RIDEM's April 13, 2005 *Letter of Responsibility*;

4. January 9, 2006 letter to RIDEM prepared by GZA in response to the comments presented in the Department's November 17, 2005 following review of the October 11, 2005 *Site Investigation Report- Addendum;* and

5. *Site Investigation Report- Addendum No. 2*, dated February 21, 2006 prepared by GZA in response to the RIDEM's November 17, 2005 letter associated with the review of the October 11, 2005 *Site Investigation Report–Addenda*.

2.00 BACKGROUND

The following information was obtained from prior reports prepared by GZA and others, during GZA's site reconnaissance and from interviews with individuals knowledgeable about the subject property. The sections below represent a summary of the information presented in the reports/documents reviewed above.

2.10 SITE LOCATION, DESCRIPTION, AND USE

The Site is located at Richmond Square, a commercial development located at the terminus of Waterman and Pitman Streets in the Eastside portion of Providence, Rhode Island. The Site is located approximately 3,500 feet northeast of the Route 195/Gano Street interchange, and is adjoined to the east and south by the Seekonk River. A *Locus Plan* is attached as Figure 1.

The Site consists of eight parcels totaling approximately 5.3 acres of developed land occupied by three office buildings (1, 2 and 4 Richmond Square), an office/commercial building (3 Richmond Square) and two restaurants (The Gatehouse and Café de Vie). The grounds of the Site are predominately paved for access and parking, with some landscaping; except along the riverbank, which is naturally vegetated. A Narragansett Bay Commission (NBC) storm drain easement traverses the northerly portion of Lot 6, between Richmond Square and the Seekonk River. An *Exploration Location Plan* attached as Figure 2, depicts the locations and configuration of key Site features.

The following table provides the City of Providence Tax Assessor's Map and Lot Number for each parcel, as well as a description of their current uses.

Map	Lot	Square Feet	Address	Features
15	8	74,433	1 Richmond Square.	Multi-story brick office building (Richmond Square Business and Technology Center) with a basement; surrounded by paved/landscaped areas
	60	31,453	2 Richmond Square.	2-story masonry office building with a basement; surrounded by paved/landscaped areas.
	451	28,807	3 Richmond Square.	1-story masonry office building with a walk-in basement; surrounded by paved/landscaped areas (Café de Vie).
	469	14,185	4 Richmond Square	5-story masonry building with a basement; surrounded by paved/landscaped areas.
	340	4,399	392 Waterman Street.	1-story building (The Gatehouse, a restaurant) with a walk-in basement.
	10	3,216	11 Richmond Square.	Paved parking area with a landscaped traffic island.
	467	12,737	291 East George Street rear.	Paved parking lot.
	6	61,950	291 East George Street.	Paved parking lot.

3.00 ENVIRONMENTAL SETTING

The following sections provide information regarding the general physiographic and hydrologic conditions in the area of the Site.

3.10 TOPOGRAPHY AND DRAINAGE

The Site lies along the western bank of the tidally-influenced Seekonk River. U.S. Geological Survey (USGS) topographic mapping of the area (Providence, RI Quadrangle, dated 1957, photorevised 1970 and 1975) shows the Site located at Cold Springs Point. Site elevations vary from approximately 20 feet above mean sea level (MSL) at the northern extent of 2 Richmond Square property, and sloping down to approximately 10 feet at the top edge of the riverbank, at which point the topography drops steeply to the Seekonk River. Drainage at the Site generally flows in an easterly to southerly direction toward the river.

3.20 GROUNDWATER

Based on review of topographic mapping, regional groundwater flow in the area of the Site is anticipated to be generally to the southeast, toward the tidally-influenced Seekonk River. Groundwater elevations measured in monitoring wells completed by GZA indicate a depth to groundwater ranging from approximately 8.6 to 16.2 feet below the ground surface (bgs) across the Site and, groundwater flow in a general southeasterly direction. It should be noted that groundwater flow direction may vary due to underground utilities (e.g., storm drains, sewers, and utility conduits), tidal influence from the Seekonk River, and variations in groundwater recharge or soil heterogeneities.

The groundwater at and surrounding the Site is classified by the RIDEM as GB. This classification is assigned to groundwater resources which have been designated not suitable for drinking water use without treatment. This designation is common to developed/urban areas of Rhode Island. There is no Class GA or Class GAA designated groundwater resources within a ½-half mile radius of the Site.

3.30 SUBSURFACE SOIL CONDITIONS

The subsurface profile at the Site generally consists of a thin layer of asphalt in the existing parking areas or grass cover in the existing landscape areas; underlain by approximately 5.5 to 25 feet of miscellaneous granular rubble fill consisting of brick, coal ash and wood; underlain by a 4.5- to 11-foot-thick, discontinuous layer of organic silt; overlying natural outwash deposits of silt, sand and gravel. Organic silt was encountered in borings advanced at the southwestern end of the proposed buildings (Lot 6). Refusal on possible bedrock was encountered in boring GZ-107 at a depth of approximately 84 feet below grade. Refer to Figure 2 *Exploration Location Plan.*

4.00 HISTORICAL USE INFORMATION

The Site has been developed and occupied since the early-1900s for industrial/commercial uses. Historical information indicates that the 1 Richmond Square parcel was occupied by an abrasive manufacturing company (American Emery Wheel Works/American Grinding Wheels) from the early-1900s until the early-1980s, when the building was converted into office space. The 2 Richmond Square parcel, prior to the construction of the existing building in the mid-1980s, was occupied by a machine shop associated with a ship building company (early-1900s), and then by a restaurant and/or a gasoline filling station (the 1940s through the 1970s).

The 3 Richmond Square parcel and adjoining paved parking lot (Lot 6) were occupied by a plumbing/construction contactor, a bait shop, dwellings, a car wash and a covering company/chemical company in the early-1900s. The current 3 Richmond Square office/commercial building was constructed in the early-1960s. The Gatehouse restaurant parcel was occupied by a dwelling used by the gate tender of the Red Bridge, which formerly extended across the Seekonk River at this location. The 4 Richmond Square parcel (Lot 10) was historically an access road to the Red Bridge, until the bridge was no longer used in the 1970s, and the current office building was constructed in the late-1980s. A transformer yard was located just to the southwest of 4 Richmond Square from the 1950s through the 1980s.

5.00 SITE DEVELOPMENT

Essex Richmond, LLC intends to develop the southerly portion of the Site to include 3 Richmond Square parcel and the existing parking lot located at the terminus of Pitman Street (Lot 6) for mixed residential/commercial use. The remaining existing structures at the Site will continue as commercial use, with no new construction or significant alterations planned.

The development plans involve the construction of two new 3-story mixed use condominium structures. The building along Pitman Street will have 5,100 square-feet (SF) of ground level street-front commercial space. Building A (along Pitman) will be 32,235 SF (foot print of 11,447) and Building B (along the river) will be 51,145 SF (footprint of 18,400 SF). The existing 3 Richmond Square building will be demolished in support of this construction. The ground level (first floor) of each will feature at grade parking. There will be a total of 35 to 40 residential units. Parking will include approximately 70 spaces. Refer to Figure C-2 (prepared by Vanasse Hangen Brustlen, Inc. (VHB) for the location and configuration of the new development.

As indicated the *Conceptual Landscape Plan* (Figure C-5 prepared by VHB), the completed project will result in most of the subject area being covered by either buildings or pavement. Note that the final area of open/green space will be influenced by comments received from the Coastal Resource Management Council (CRMC) and the RIDEM Office of Water Resources.

6.00 REGULATORY EXCEEDANCES

The laboratory testing results associated with the combined environmental investigations performed at the Site were compiled into a single database to support an evaluation of Site-wide conditions and the selection of the selected and approved remedial alternative described herein

6.10 SOIL

The analytical data presented in the September 2004 *Site Investigation Report* and October 2005 *Site Investigation Report Addendum* revealed that Method 1 Direct Exposure Criteria exceedances were associated with arsenic and lead, 11 individual polycyclic aromatic hydrocarbons (PAHs), and to a lesser degree, total petroleum hydrocarbons (TPH). These exceedances were distributed across the Site and were found in both shallow and deep soils. The data compiled by GZA demonstrates that these contaminants are likely associated with the presence of urban fill found throughout the property. Volatile organic compounds and Polychlorinated Biphenyls in soil have not been identified as contaminants of concern. We observed no contaminants at concentrations above the Upper Concentration Limits.

In January 2006, a GZA collected shallow (0 to 2') soil samples from the four landscaped areas not containing dense vegetative cover. [No samples were collected from the natural and vegetated areas along the river embankment, which will be addressed as part of Site redevelopment.] Samples were analyzed for TPH, PAH and RCRA 8 metals. The laboratory testing results indicated the presence of five individual PAHs, arsenic and lead at concentrations above the Residential Direct Exposure Criteria in samples S-1, S-2, and S-4. The landscaped areas exhibiting these exceedances are illustrated on Figure 3, *Shallow Soil Sampling Locations*.

6.20 GROUNDWATER

Groundwater quality data from the Site reveal that the chlorinated VOCs: vinyl chloride, trichloroethylene, cis-1,2-dichloroethene, chloroform and/or 1,1-dichloroethene were detected in groundwater samples. The concentration of 1,1-dichloroethene in the samples from well GZ-203 (9.8 ug/l) was above the 7.0 ug/l GB Groundwater Objective. We observed no other GB Groundwater Objective exceedances.

Groundwater elevation data indicates a general southeasterly flow direction. The groundwater evaluation supports the assessment that the observed chlorinated VOC impacts at the Site are associated with an off-Site source. That is, chlorinated VOCs have been detected in each of the four groundwater monitoring wells installed along the Site's upgradient property-line. That same chemical profile was observed in samples from wells located downgradient of this property-line, but at lower concentrations. Consequently, Essex Richmond, LLC is not considered a responsible party for these conditions.

7.00 REMEDIAL OBJECTIVES

The Remedial Objectives presented below address both the proposed construction of the two multi-unit residential building on Lot 6, and the remaining portions of the Site property (which will continue in their current configurations and uses). While it is the intention of the developer to retain most "impacted" soil on-Site; it is understood that if the proposed development project is not successful in utilizing all impacted soils on-Site (i.e. excess or geotechnically unsuitable soil is generated), the quality of such excess materials will be characterized through laboratory testing to support off-Site disposal/recycling at an appropriately licensed facility. The *Remedial Action Summary Report* will present information regarding the quality, volume, disposal facility, and dates of shipment of the excess soils.

Based on our environmental evaluations, the following broad remedial objectives have been established for the Site:

- Incorporate design requirements to limit the need for excavation of impacted soils and maximize the reuse of soils on-Site;

- Reduce the potential that future Site occupants and visitors can come into contact with soils containing contaminants at concentrations above the Residential Direct Exposure Criteria.

- Establish procedures/protocols for soils management during construction and following completion of the development project; and

- Protect the long-term effectiveness of the remedial measures through implementation of an Environmental Land Use Restriction.

In accordance with Section 9.00 of the Remediation Regulations, this RAWP addresses remedial objectives for all potentially impacted media (soil, groundwater, surface water/sediment and air). Remedial objectives for each of the media prescribed by the regulations are discussed below.

7.10 SOIL

As described above, Method 1 exceedances observed at the Site were limited to TPH, PAHs and metals at concentrations above the Residential Direct Exposure Criteria. As the proposed use of the Site is considered a combination of commercial and residential exposure scenarios, remedial objectives for soil have been included.

7.20 GROUNDWATER

Environmental studies performed by GZA identified GB Groundwater Objective exceedances in groundwater at the Site due to the presence of chlorinated VOCs. Based on an evaluation of groundwater flow, the contamination is the result of an off-Site source. Accordingly, as Essex Richmond, LLC is not a Responsible party for these conditions, this RAWP does not include response actions associated with groundwater.

In response to the Department's request, Essex Richmond, LLC will however grant access to the Site for future environmental investigations that may be required of potential responsible parties. This approval is subject to the stipulated conditions presented in the January 9, 2006 letter prepared by GZA.

7.30 AIR

Based on the results of an indoor air quality program performed by GZA at RIDEM's request, air quality inside the existing structures has not been impacted by the VOCs detected in groundwater. The contaminants present in Site soils are of low volatility. As such, no specific remedial objectives have been established for air. As described below, dust control measures will be implemented during construction activities to control the generation of wind-blown dusts.

7.40 SURFACE WATER/SEDIMENT

Because of the location of the Site, relative to the Seekonk River (i.e., CRMC jurisdictional boundaries), certain construction activities and remedial actions will be subject to requirements of the Coastal Resource Management Council. VHB will be designing and permitting the stormwater management system; which will be presented to the CRMC and appropriate RIDEM program leads.

8.00 REMEDIAL COMPONENTS

The remedial objectives for the Site have been developed to control and/or evaluate known conditions that represent regulatory exceedances as established in the Remediation Regulations. Each element of the remedial program is described separately below.

8.10 CONTRACTORS AND/OR CONSULTANTS

The following table provides a list of the Contractors and Consultants involved in the project design and permitting, and implementation of the remedy:

Firm	Role	Contacts	Address	Phone Number
GZA	Environmental Engineering Geotechnical Engineering	John Hartley Michael Clark Russ Morgan, PE Justin Monaghan	140 Broadway Providence, RI 02903	421-4140
SG&A	Design and Specifications	William Gisness, AIA Steve Cunningham, AIA	200 High Street Boston, MA 02903	617-443-0680
VHB	Civil Engineering/ Permitting	Gus Raposo, PE Susan Moberg	530 Broadway Providence, RI 02110	272-8100
Kenwood Construction	General Contractor	Ken Kazarian	103 Wilson Avenue East Providence, RI 02916	434-7311

GZA will be present at the Site during periods of construction activities that involve the remedial components described herein. Consistent with our practice, daily field summaries describing these construction activities will be prepared. Photographic evidence of the completion of key remedial components (e.g., placement of the geotextile material, the thickness of the final soil cap and the placement and thickness of the bituminous asphalt and concrete pavement) will be provided in the *Remedial Action Summary Report*.

8.20 ENGINEERED CONTROLS

Exterior surfaces of the Site (both proposed and existing) will consist of both landscaped and solid surface areas (concrete [walkways] and asphalt [parking and access areas] refer to Figure C-5). Exterior surface areas subject to remediation will be prepared in accordance with the specifications summarized below. Preparation of landscaped areas in the proposed development area may differ from those proposed herein based on requirements of the RIDEM Office of Water Resources and the CRMC.

- **Asphalt pavement** – Access and parking areas will be completed with a 6-inch base course composed of off-Site gravel and completed with two, 2-inch perpendicular lifts of asphalt.

- **Concrete pavement** – Walkways will be completed with concrete pavement poured in-place at a thickness of 4-inches. The slab of the buildings will be completed with concrete pavement poured in-place at a thickness of 6-inches.

- **Inland landscaped areas** – As indicated in Section 6.10, four existing landscaped areas exhibited PAH, arsenic and lead at concentrations above the Residential Direct Exposure Criteria. To address this risk, these landscaped areas, identified on Figure 3, will be capped by excavating the upper 1-foot of soil, installing a permeable geotextile fabric, and backfilling with pre-characterized soil from an off-Site source. The selected remedial approach will also be incorporated into the planned construction/development activities for the property.

Based on the guidelines provided by the Department, the geotextile material specified below has been selected for use at the site. Note that landscaped areas selected to receive plantings will be prepared by pre-excavating trenches and/or holes to a minimum depth of 2 feet and backfilled with clean, imported material. For shallower plantings (between 1 and 2 feet), the geosynthetic textile material will be placed at the bottom of the excavation, with a 1-foot minimum cover.

Manufacturer	TC Mirafi
Product Name	N-Series/140-N
Type	Non-woven geotextile
Material of Construction	Polypropylene stable fibers
Apparent Opening Size- ASTM D4751 (US Sieve)	70
Flow Rate - ASTM D4491 (gal/min/ft2)	135 gal/min/ft2
Grab Tensile Strength - ASTM D4632 (lbs)	120 lbs
Mullen Burst Strength -ASTM D3786 (psi)	400 psi
Puncture - ASTM D4833 (lbs)	120 lbs

- **Shoreline area** – As previously noted, development of the eastern shoreline area of the Site is jurisdictional to the requirements of the CRMC. The shoreline area has shown a considerable degree of erosion due to tidal and wave action. Accordingly, the shoreline will be stabilized by the placement rock rip-rap at a minimum 1:1 slope. The revetment design is shown on Figures EW1 and EW2.

As shown on Figure C-3, the area landward of the restored embankment will feature landscaping and the construction of a 6-foot wide impervious walking path. Figure C-5 illustrates that the area will be extensively re-vegetated with both mature hardwoods and native plant species. The area will also feature a "rain garden." This shallow (3-foot deep) vegetated basin has been designed to accept, temporally store and infiltrate stormwater from all impervious surfaces (parking, roofs and walkways) from this parcel. Per CRMC requirements, it has been designed to control stormwater for the first ½-inch of a rain event.

Areas accepting the plantings and loam and seed will be constructed in accordance with the procedures and requirements described above (Inland Landscaped Areas). Impacted soils removed from this to support construction, if any, will be characterized, managed and disposed of in accordance with Section 8.40 below.

8.30 BEST MANAGEMENT PRACTICES

During remediation of landscaped areas, and development of the southerly portion of the Site (3 Richmond Square and Lot 6), the general contractor will be responsible for the implementation of standard construction best management practices as appropriate, to reduce the likelihood of the release of impacted media from the Site. These will include the following practices:

- **Dust Controls** – The contractor will prepare a dust and dirt containment plan prior to beginning work. The contractor will maintain a water truck(s) at the Site to control airborne dust during soil excavation, grading and other site development activities. Initiation of dust control measures will be the responsibility of the owner's representative and the contractor. The water truck shall be outfitted with sprinkler hoses and bars that allow surface watering in the area of the truck. The contractor shall use the water truck when the site soils become dry and there is potential for airborne dust. The contractor shall have a sufficient number of operable water trucks to maintain a moist soil surface at all areas of the site were exposed soils exist. Additionally, the contractor shall install and maintain the facilities to fill and maintain the water truck(s).

  Stockpiled soils will be staged on and covered with polyethylene sheeting to control the generation of wind-blown dusts. As noted below, daily shut-down procedures will include the covering and securing of all stockpiled soils with polyethylene sheeting and the application of water (via the water truck) to exposed surfaces as needed.

- **Stormwater Controls** – To protect off-Site areas from the stormwater run-off of impacted soils, all construction activities will be subject to an *Erosion and Sediment Control Plan* and *Construction Stormwater Pollution Prevention Plan*, which will be prepared by VHB and presented to the appropriate RIDEM and CRMC program leads. These controls will likely involve the placement of siltation fabric across storm drains, and the establishment of staked hay bales and/or siltation fencing in areas of the Site susceptible to erosion. GZA's on-Site field engineer will provide recommendations to the on-site representative and/or the general contractor for the establishment or modification of these controls, as appropriate based on site conditions, as construction/earthwork activities advance.

8.40 SOIL EXCAVATION, ON-SITE MANAGEMENT AND DISPOSAL

Excavation activities will be observed by a GZA field engineer and daily job logs will be maintained describing the day's activities. Excavated soil will either be "live-loaded" or placed on polyethylene sheeting (minimum 6 ml thickness) and covered with same for temporary storage. Hay bales, filter fabrics and other means will be employed to prevent runoff from the excavation areas and/or stockpiles from entering storm water drains. Any open excavation will be secured at the end of each work day to prevent access from on-Site workers and/or trespassers.

Soils selected for off-Site disposal will be subjected to sampling and laboratory testing. The frequency of testing and analytical testing program will be based on the specific requirements of the disposal facility.

8.50 STORMWATER MANAGEMENT

Development of the southerly portion of the Site (Lot 6) will include the design, installation and operation of a stormwater management system that will comply with the RIDEM Water Quality Regulations, as well as applicable CRMC regulations regarding the treatment of stormwater runoff. Through the use of best management practices and low impact development engineering design, the system will be designed to collect and treat stormwater prior to direct to the Seekonk River. It is anticipated that the stormwater management system will incorporate such features as buildings with green (vegetated) roof tops, a closed drainage system including deep sump catch basins and/or swirl-type sediment settling chambers, surface detention/infiltration areas, and stormwater recycling for use in site irrigation. It is understood that these measures will require approvals/permits from the Office of Water Resources and the CRMC.

At this time we anticipate that several RIDEM Office of Water Resources permits will be required for stormwater discharge. To ensure compliance with the State Water Quality Regulations, a Water Quality Certification will be required to address how site disturbances during construction activities will impact the Seekonk River. Based on the project size (between 1 and 5 acres), the project will be automatically authorized under the RIDEM Rhode Island Pollutant Discharge Elimination System (RIPDES) program General Permit for Storm Water Discharge Associated with Construction Activity. A requisite Storm Water Pollution Prevention Plan (SWPPP) will be prepared by VHB to describe all stormwater control measures to minimize potential contamination of runoff during construction and detail permanent storm water management practices.

8.60 POINTS OF COMPLIANCE

"Active" response actions to be completed at the Site include the excavation of the top 1-foot of impacted soil in the subject landscaped areas, and soil excavation in the proposed development and the construction of engineered controls to restrict future exposures to impacted soils. Accordingly, the point of compliance established for the Site will include an evaluation of the quality of soil brought to the Site to serve as final cover.

It will be the assigned responsibility of the Site contractor to provide assurances (through laboratory testing) that off-Site soil used for landscaping does not contain contaminants at concentrations above the Method 1 Residential Direct Exposure Criteria. Accordingly, samples representative of the off-site supply (1 sample per each 1,000-cubic yards of soil) will be required to be tested for the following analyte groups.

Analyte	EPA Test Method
Total Petroleum Hydrocarbons	8100M
Volatile Organic Compounds	8260
Semi-Volatile Organic Compounds	8270
RCRA 8 Metals	6010 & 7471A

Demonstration of the soil supply in meeting the Residential Direct Exposure Criteria will be made prior to the delivery of the material to the Site. Soils not meeting the Method 1 Residential Direct Exposure Criteria will be rejected for use at the Site. Laboratory testing results of the selected soil source will be provided to RIDEM as part of the Remedial Action Summary Report.

8.70 CONTINGENCY PLAN

GZA has prepared a Contingency/Health & Safety Plan, attached as Appendix D, to address unanticipated conditions/incidents encountered at the property during construction. The Contingency/Health & Safety Plan is applicable to GZA personnel and will be available at the Site at all times during the implementation of the remedial actions described herein.

The following provides a listing of points of contacts who will be contacted in the event of an unanticipated incident involving hazardous materials.

Firm	Contact	Address	Phone Number
GZA	Michael Clark	140 Broadway Providence, RI 02903	421-4140 (781) 983-1657 (cell)
Essex Richmond, LLC	John Fenton	255 Friend Street Boston, MA 02114	(617) 742-2299 (x100)
RIDEM	Michael Andrews Jeffrey Crawford	235 Promenade Street Providence, RI 02903	222-2797 (x7140) 222-2797 (x7102)
Marshall Environmental Group, Inc. Environmental Response Contractor	Peter Marshall	10 Dawn Lane Warwick, RI 02886-6925	639-3714

8.80 OPERATING LOG

An Operating Log will be developed and maintained at the Site during the period of construction. The log will be readily available at the Site during its construction. Subsequent to this period, the log will be retained for a minimum period of three years. The Operating Log will include, at a minimum, the following information:

- Dates and time periods during which the remedial components described herein were ongoing;
- Records of any laboratory analysis and field screening performed as part of the remedial action;
- Description of instances under which the Contingency Plan was implemented; and

- Inspection reports detailing compliance with the remedial specifications described herein and the actions taken to address non-compliant practices/conditions.

A copy of the Operating Log will be provided to the Department at the completion of the project as part of the *Remedial Action Summary Report*.

9.00 SHUT-DOWN AND POST-CLOSURE REQUIREMENTS

The following section has been prepared to address the requirements of Section 9.16 of the Remediation Regulations.

9.10 SHUT-DOWN REQUIRMENTS

In the event that the development project is cancelled, or if construction activities are suspended for an extended period of time, (i.e., greater than 2 weeks), the RIDEM will be so notified and the security fencing will remain in-place, closed and locked.

Daily shut-down procedures will include the covering and securing of all Site-generated stockpiled soils with polyethylene sheeting and, if warranted, the application of water (via the water truck) to exposed surfaces. Additionally, off-hour access to Site will be controlled by locking the temporary construction fencing.

9.20 SECURITY PROCEDURES

During construction activities, access to the site will be limited to the owner's contractors, consultants or other designated representatives through the construction fencing and gates, safety fencing, yellow barrier tape, warning signs, and/or other barricades. It will be the responsibility of the general contractor to address the following:

- Development of a site-specific safety and health plan which meets state and federal regulations;
- Evaluation of off-Site soil;
- Site security, including fencing off work areas for safety purposes;
- Traffic control;
- Debris removal, haulage, and recycling or disposal
- Dust control; and
- Daily Site maintenance of any property on public way.

9.30 MONITORING WELL CLOSURES

Monitoring wells located at 3 Richmond Square and on Lot 6 will likely be destroyed during construction activities (Refer to Figure 2). In view of such, GZA will coordinate the permanent closure of the groundwater monitoring wells in accordance with Section 12 of the Groundwater Regulations. New and/or replacement wells will not be installed at these locations. Wells located elsewhere on the Richmond Square site will be left intact so that they may be accessed for groundwater sampling and analysis. However; Essex Richmond, LLC will not be responsible for the maintenance, repair or replacement of these wells should they be damaged during future activities/events.

10.00 INSTITUTIONAL CONTROLS

To protect the long-term effectiveness of the remedy, an Environmental Land Usage Restriction (ELUR) will be recorded on the deed of the property. The ELUR, a draft of which is provided in Appendix B, will make reference to the *Soil Management Plan* presented in Appendix C. The *Soil Management Plan* was developed to establish procedures to be followed should any future work at the Site involve the disturbance of the surfaces and the excavation of underlying soils. The draft ELUR, will serve to:

- require that the Site's cover materials (soil cap, asphalt pavement and buildings) remain in-place and in good condition;
- prohibit the use of groundwater at the Site for drinking water;
- require RIDEM notification should soil excavation below soil cap, asphalt pavement and/or buildings be planned;
- include a *Soils Management Plan* which will define how the Site will be managed in the event that such soil disturbances are necessary;
- prohibit activities that may interfere with the remedial action and its maintenance, long-term monitoring or other measures necessary to assure the integrity of the remedial action;
- require prior notice to RIDEM of the owner's intent to convey any interest in the property;
- grant RIDEM the right to enter the property for monitoring compliance with the remedial actions; and
- require annual certification by an Environmental Professional as to the integrity of the engineered controls.

A copy of the final, Department-approved recorded ELUR will be submitted to the RIDEM within 10 days of its recording in the City of Providence Land Evidence Records. As the ELUR will apply to the Site in its entirety, a legal description of the property will be referenced in and attached (as an exhibit) to the ELUR.

In conjunction with an ELUR, the Site owner will institute monitoring and maintenance procedures, including requirements to maintain pavement covers in good condition and procedures to be followed to notify contractors of existing Site conditions in the event of utility repair or other activities that might disturb potentially contaminated soils. Provisions will be made to provide notices to the general community as necessary (Rule 9.17).

11.00 COMPLIANCE DETERMINATION (Rule 9.18)

As long as the remedial measures described in this plan are implemented and maintained, the Site will be considered to be compliant with the remedial objectives. At the completion of the landscape remediation and construction project, GZA will develop a *Remedial Action Summary Report* describing the construction activities and documenting the Site's compliance with the remedial objectives. We understand that RIDEM will issue an Interim Letter of Compliance for the Site once these conditions are met.

Long-term maintenance procedures will include requirements to maintain soil and/or pavement caps in good condition and procedures to be followed to notify contractors of existing Site conditions in the event of utility repair or other activities that might disturb potentially contaminated soils.

To evaluate the Site's compliance status with respect to the ELUR, the owner will institute yearly monitoring and maintenance procedures to be followed to ensure that the capped soils remain secure. A qualified environmental professional will conduct a yearly evaluation of the property. The evaluation will include a reconnaissance of the property at which time the condition of the pavement and capped portion of the Site will be documented. Additionally, the evaluation will include apparent changes in the nature of Site use and apparent changes to the physical condition of the property (with respect to alterations that may affect the integrity of the engineering modifications described in the RAWP and ELUR). Annual inspections reports, prepared by a qualified individual, will be submitted to the RIDEM.

12.00 PROJECT MANAGEMENT

GZA, under contract with the Essex Richmond, LLC, will provide oversight for the remedial activities, including:

- review and concurrence of a Site-specific Safety and Health Plan which addresses applicable state and federal regulations, including persons to be notified in the event of an unexpected incident involving hazardous materials at the Site, and availability of the plan;

- collecting required samples and interpreting laboratory results;
- coordination of the excavation, characterization and disposition of contaminated materials;
- evaluating and proposing modifications to the work plan and interfacing with RIDEM;
- provide an Interim Remedial Action Summary Report to RIDEM upon completion of the placement of geotextile fabric and cover in the existing landscaped areas designated for remediation (located outsides the proposed construction area) and
- provide a *Remedial Action Summary Report* to RIDEM at the conclusion of the construction project.

13.00 PROJECT SCHEDULE

The owner is prepared to implement the remedial action plan upon receiving the Remedial Approval Letter from RIDEM. The anticipated schedule for the Site activities is summarized in the following table:

Task/ Regulatory Milestone	**Target Date/ Time to Complete from receipt of RIDEM Approval**
Submission of Remedial Action Approval Fee	15 days
Initiation of Construction – Revetment	Winter 2006
Completion of Construction – Revetment	Spring 2007
Installation of piles and initial earthwork	Spring 2007
Start of construction – buildings	Summer 2007
Final site surfaces, earthwork and landscaping	Fall 2007
Filing of ELUR	Fall 2007
Filing *Remedial Activities Summary Report*	Fall 2007

14.00 REMEDIAL ACTION APPROVAL FEE

The Remedial Action Approval Fee in the amount of $1,000 issued by Essex Richmond, LLC and made payable to the General Treasurer–State of Rhode Island will be provided under separate cover.

NOTES:

1) BASE MAP DEVELOPED FROM PLAN PROVIDED BY CAPITO AND WICK LTD. ENTITLED "ALTA/ACSM LAND TITLE SURVEY, RICHMOND SQAURE, PROVIDENC, R.I. PREPARED FOR ESSEX RIVER VENTURES, LLC" DATED JUNE 7. 2004, ORIGINAL SCALE 1"=50', DRAWING No. 1.

2) THE LOCATION AND ELEVATIONS OF THE SITE FEATURES WERE APPROXIMATELY DETERMINED BY TAPING & FROM LINE OF SIGHT FROM EXISTING TOPOGRAPHIC FEATURES. THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

LEGEND:

PROPERTY LINE

INDICATES APPROXIMATE LOCATION OF LANDSCAPED AND/OR VEGETATED AREAS. ALL OTHERS ARE ASPHALT PAVED OR CONTAIN BUILDINGS.

▲ S-1 0-2' SOIL SAMPLES COLLECTED BY GZA ON 1/30/06 USING HAND AUGER TECHNIQUES.

SCALE: 1"=80'
0 40 80 160

OPERATOR: CRB
CHECKER : RMC
DATE : 2/16/06

PROJ MGR: RMC
DESIGNED BY: RMC
REVIEWED BY: RMC

GZA
GeoEnvironmental, Inc.
Engineers and Scientists
ONE EDGEWATER DRIVE
NORWOOD, MA 02062
(781) 278-3700
(781) 278-5701

RICHMOND SQUARE
PROVIDENCE, RHODE ISLAND
SHALLOW SOIL SAMPLING

PROJECT NO.
32970.01

FIGURE NO.
3

GZA-J:\ENV\32970-01.rmc\GZA-DWG\F-01.DWG [FIG-1] October 13, 2006 - 1:07pm peter.sumner

GZA
GeoEnvironmental, Inc.

November 27, 2006
File No. 32970.01-C

Mr. Michael D. Andrews
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02903

Re: *Remedial Action Work Plan* - Modification
1-4 Richmond Square Property
Providence, Rhode Island
(RIDEM Case No. 2005-026)

149 Broadway
Providence
Rhode Island
02903
401-421-4140
Fax: 401-751-8613
www.gza.com

Dear Mr. Andrews:

In response to your email of November 14, 2006, this letter serves to address the Department's comments associated with the review of our October 18, 2006 *Remedial Action Work Plan* (RAWP) for the 1-4 Richmond Square Property. This letter was prepared on behalf of Essex Richmond, LLC, and is considered an addendum to the RAWP. As such, it is subject to the Terms and Conditions of Engagement and limitation contained or referenced therein.

Comment 1: Section 8.60 (Points of Compliance) is hereby modified as follows:

"Clean fill and loam will be sampled for arsenic at a frequency of one sample per 500 cubic yards. One-quarter of the total number of compliance samples of clean fill and loam will be sampled for volatile organic compounds, semi- volatile organic compound, total metals, and total petroleum hydrocarbons. All soil that is to be utilized on-Site must meet the Method 1 Residential Direct Exposure Criteria for all target constituents or, be certified to be non-jurisdictional by an environmental professional."

Comment 2: The *Remedial Action Summary Report* will include all original laboratory analytical data and a statement from the facility that provides the clean fill and/or loam attesting to the materials origin and suitability.

Comment 3: The Environmental Land Usage Restriction will include a *Site Plan* as an exhibit, which clearly identifies the specifications of each capped surface at the property. A draft copy of that figure is attached for your review.

We trust that this information fulfills your present needs. Should you have any questions or comments, please feel free to contact us at (401) 421-4140, or via e-mail at *jhartley@gza.com*.

Very truly yours,

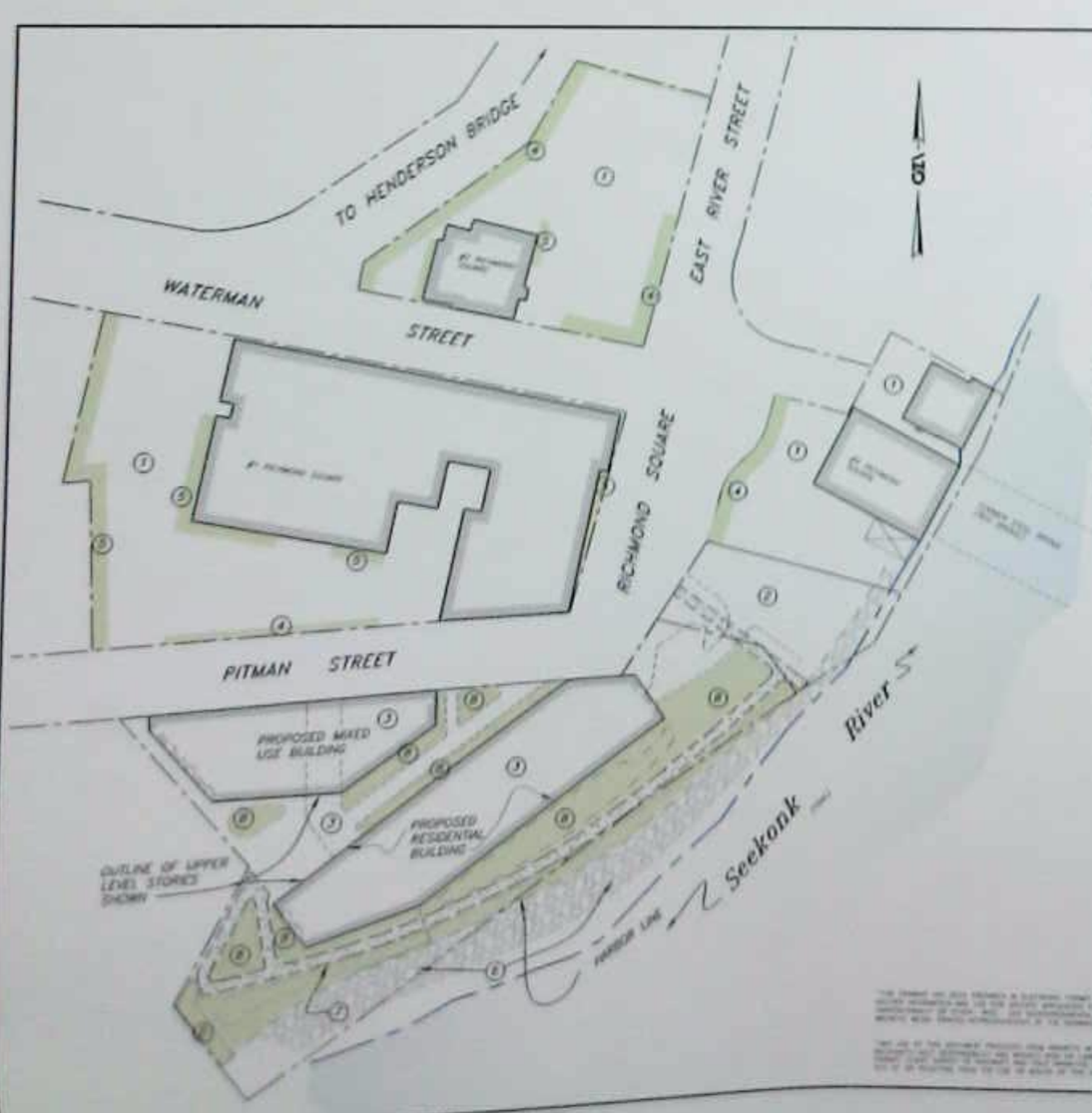
GZA GEOENVIRONMENTAL, INC.

John P. Hartley
Principal

R. Michael Clark
Senior Project Manager

cc: Ken Kazarian, Kenwood Construction
Beth O'Donnell. Essex River ventures
Sue Moberg (VHB)

Attachment: *Site Plan*



NOTES:

1. EXISTING ASPHALT AND CONCRETE PAVEMENT – MAINTAIN CURRENT CONDITION.
2. PROPOSED ASPHALT PAVEMENT – ACCESS AND PARKING AREAS WILL BE COMPLETED WITH A 6-INCH BASE COURSE COMPOSED OF OFF-SITE GRAVEL AND COMPLETED WITH TWO, 2-INCH PERPENDICULAR LIFTS OF ASPHALT.
3. PROPOSED CONCRETE PAVEMENT – WALKWAYS WILL BE COMPLETED WITH CONCRETE PAVEMENT POURED IN PLACE AT A THICKNESS OF 4-INCHES. THE SLAB OF THE BUILDINGS WILL BE COMPLETED WITH CONCRETE PAVEMENT POURED IN-PLACE AT A THICKNESS OF 8-INCHES.
4. SELECT EXISTING INLAND LANDSCAPED AREAS – CAPPED BY EXCAVATING THE UPPER 1-FOOT OF SOIL, INSTALLING A PERMEABLE GEOTEXTILE FABRIC AND BACKFILLING WITH 1-FOOT LIFT OF PRE-CHARACTERIZED SOIL FROM AN OFF-SITE SOURCE.
5. REMAINING EXISTING INLAND LANDSCAPED AREAS – MAINTAIN CURRENT CONDITION.
6. SHORELINE – STABILIZED BY THE PLACEMENT ROCK RIP-RAP AT A MINIMUM 1:1 SLOPE.
7. WALKING PATH – CONSTRUCTION OF A 6-FOOT WIDE IMPERVIOUS WALKING PATH COMPLETED WITH CONCRETE PAVEMENT POURED IN-PLACE AT A THICKNESS OF 4-INCHES.
8. SHORELINE LANDSCAPED AREAS (INCLUDING "RAIN GARDEN") – INSTALLATION OF PERMEABLE GEOTEXTILE FABRIC AND BACKFILL WITH 1-FOOT LIFT OF PRE-CHARACTERIZED SOIL FROM OFF-SITE SOURCE.
9. BASE MAP DEVELOPED FROM PLAN PROVIDED BY DAVID AND NICK LTD. ENTITLED "ALTA/ACSM LAND TITLE SURVEY, RICHMOND SQUARE, PROVIDENCE, R.I. PREPARED FOR ESSEX RIVER VENTURES, LLC" DATED JUNE 7, 2004, ORIGINAL SCALE 1"=30', DRAWING No. 1.
10. THE LOCATION AND ELEVATIONS OF THE SITE FEATURES WERE APPROXIMATELY DETERMINED BY TAPING & FROM LINE OF SIGHT FROM EXISTING TOPOGRAPHIC FEATURES. THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

LEGEND:

PROPERTY LINE

INDICATES APPROXIMATE LOCATION OF LANDSCAPED AND/OR VEGETATED AREAS

SCALE: 1"=80'
0 40 80 160

PROJ MGR:	RMC	UPDATED: DRB
DESIGNED BY:	JPH	CHECKED: RDN
REVIEWED BY:	RMC	DATE: 1/31/04

GZA GeoEnvironmental, Inc.
Engineers and Scientists

RICHMOND SQUARE

PROVIDENCE, RHODE ISLAND

FINAL SITE SURFACES

PROJECT NO.
32970.01

FIGURE NO.
4

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

December 22, 2006

REMEDIAL APPROVAL LETTER

Mr. John W. Fenton
Essex Richmond, LLC
255 Friend Street
Boston, MA 02114

RE: Properties located at 1, 2, 3, & 4 Richmond Square
Map 15, Lots 6, 8, 10, 60, 340, 451, 467 & 469
Providence, Rhode Island
RIDEM CASE # 2005-026

Dear Mr. Fenton:

On February 24, 2004, the Rhode Island Department of Environmental Management (the Department) Office of Waste Management (the Office) amended the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in a timely and cost-effective manner. A Remedial Approval Letter is a document used by the Department to approve remedial actions at contaminated sites that do not involve the use of complex engineered systems or techniques (i.e., groundwater pump and treat systems or soil vapor extraction systems).

The Department has reviewed the following documents relative to the above referenced property:

1. **Notification of Release**, dated February 24, 2005, prepared and submitted by GZA GeoEnvironmental, Inc. (GZA);

2. Report entitled: **Site Investigation Report, Richmond Square, Providence, Rhode Island**, dated September 2004, prepared and submitted by GZA;

3. Report entitled: **Site Investigation Report Addendum, 1-4 Richmond Square Property, Providence, Rhode Island,** dated October 2005, prepared and submitted by GZA;

4. Correspondence entitled: **Site Investigation Report – Addendum, 1-4 Richmond Square Property, Providence, Rhode Island**, dated January 9, 2006, prepared and submitted by GZA;

5. Correspondence entitled: **Site Investigation Report – Addendum No. 2, 1-4 Richmond Square Property, Providence, Rhode Island**, dated February 21, 2006, prepared and submitted by GZA;

6. **Public Notice to Abutters**, dated March 7, 2006;

7. Report entitled: **Remedial Action Work Plan, 1-4 Richmond Square Property, Providence, Rhode Island**, dated October 2006, prepared and submitted by GZA;

8. **Remedial Approval Fee**, received by the Department on October 24, 2006, and submitted by GZA; and

9. Correspondence entitled: **Remedial Action Work Plan – Modification, 1-4 Richmond Square Property, Providence, Rhode Island**, dated November 27, 2006, prepared and submitted by GZA.

The RAWP requires the use of engineered controls that shall include the existing asphalt pavement, building foundations and dense vegetated landscaped areas. These controls will serve as a barrier against direct exposure to site soils. A 2-foot soil cap or equivalent will be installed over grass-covered landscaped areas of the Site to prevent direct exposure to surface soils. Also, the Department shall require the implementation of an approved Environmental Land Usage Restriction (ELUR) for the entire property. The ELUR will require the performance of annual inspections to document the status of the engineered controls and shall include a soil management plan (SMP), which will address future activities that may disturb contaminated on-site soils. The ELUR shall be recorded for the property (Map 15, Lots 6, 8, 10, 60, 340, 451, 467 & 469) in the Land Evidence Records for the City of Providence and a recorded copy forwarded back to the Department.

At this time, the Office offers its concurrence with the proposed remedial action for the property. The Department approves the draft ELUR and RAWP provided that all activities and procedures detailed in the RAWP are strictly followed. Any major changes in the RAWP shall be pre-approved by the Department and any minor changes reported to the Department by telephone within one (1) working day and in writing within five (5) working days.

No later than thirty (30) days following the completion of the Remedial Action at the site, a Remedial Action Closure Report detailing the Remedial Action and the current status of the property shall be submitted to the Department for review and approval. Upon approval of the Closure Report, and receipt of a copy of the stamped and recorded Department-approved ELUR for the property, the Department will issue a Letter of Compliance for the property.

This Remedial Approval Letter does not remove your obligations to obtain any other necessary permits from other local, state, or federal agencies. **Please notify the Department at least forty-eight (48) hours in advance of any remedial work.**

If you have any questions or are in need of any clarification regarding this document, please contact me by telephone at (401) 222-2797 ext. 7146 or by e-mail at michael.andrews@dem.ri.gov

Sincerely,

Michael D. Andrews
Sanitary Engineer
Office of Waste Management

Authorized by,

Jeffrey P. Crawford
Principal Environmental Scientist
Office of Waste Management

cc: Kelly Owens, RIDEM / OWM
Grover Fugate, R.I. Coastal Resources Management Council
R. Michael Clark, GZA GeoEnvironmental, Inc.
John Hartley, GZA GeoEnvironmental, Inc.

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

March 22, 2006

REMEDIAL DECISION LETTER

Mr. John W. Fenton
Essex Richmond, LLC
255 Friend Street
Boston, MA 02114

RE: Properties located at 1, 2, 3, & 4 Richmond Square
Map 15, Lots 6, 8, 10, 60, 340, 451, 467 & 469
Providence, Rhode Island
RIDEM CASE # 2005-026

Dear Mr. Fenton:

On February 24, 2004, the Rhode Island Department of Environmental Management (the Department) amended the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in a timely and cost-effective manner. A **Remedial Decision Letter** is a formal Department approval of a remedy proposed by the performing party as a result of the findings of the Site Investigation.

In the matter of the above referenced site, the Department's Office of Waste Management (OWM) has on file the following documents submitted on behalf of Essex Richmond, LLC:

1. **Notification of Release**, dated February 24, 2005, prepared and submitted by GZA GeoEnvironmental, Inc. (GZA);

2. Report entitled: **Site Investigation Report, Richmond Square, Providence, Rhode Island**, dated September 2004, prepared and submitted by GZA;

3. Report entitled: **Site Investigation Report Addendum, 1-4 Richmond Square Property, Providence, Rhode Island,** dated October 2005, prepared and submitted by GZA;

4. Correspondence entitled: **Site Investigation Report – Addendum, 1-4 Richmond Square Property, Providence, Rhode Island**, dated January 9, 2006, prepared and submitted by GZA;

5. Correspondence entitled: **Site Investigation Report – Addendum No. 2, 1-4 Richmond Square Property, Providence, Rhode Island**, dated February 21, 2006, prepared and submitted by GZA.

6. **Public Notice to Abutters**, dated March 7, 2006;

The aforementioned documents collectively meet the requirements of a Site Investigation Report (SIR) as defined by Section 7.08 of the Remediation Regulations. Furthermore, given that appropriate public notice for the Site Investigation has been conducted pursuant to Rule 7.07 (Public Notice), as well as public review and comment pursuant to Rule 7.09 (Remedy Selection), the Department offers its concurrence with the preferred remedial alternative submitted by GZA which includes the use of engineered controls that shall include the existing asphalt pavement, building foundations and dense vegetated landscaped areas. These controls will serve as a barrier against direct exposure to site soils. A 2-foot soil cap or equivalent will be installed over grass-covered landscaped areas of the Site to prevent direct exposure to surface soils. Also, the Department shall require the implementation of an approved Environmental Land Usage Restriction (ELUR) for the entire property. The ELUR will require the performance of annual inspections to document the status of the engineered controls and shall include a soil management plan (SMP), which will address future activities that may disturb contaminated on-site soils. The ELUR, once approved by the Department, shall be recorded for the property (Map 15, Lots 6, 8, 10, 60, 340, 451, 467 & 469) in the Land Evidence Records for the City of Providence and a recorded copy forwarded back to the Department.

Please submit a draft Remedial Action Work Plan to the Department for review and approval on or before June 1, 2006. Once the Department's review for consistency with Sections 8 and 9 of the Remediation Regulations is complete, any written comments generated as a result of the review will be forwarded to you immediately. Upon finalization of the RAWP, the Department will issue a Remedial Approval Letter (RAL) signifying that the Department approved RAWP may be implemented.

Pursuant to Rule 10.02 of the Remediation Regulations, the Remedial Action Approval Application (RAAA) Fee is one thousand ($1000.00) dollars. Please remit a check in that amount to this Office made out to the **"General Treasurer-State of Rhode Island."** Upon receipt of the RAAA Fee, the Department will begin to review the RAWP.

If you have any questions or are in need of any clarification regarding this document, please contact me by telephone at (401) 222-2797 ext. 7140 or by e-mail at michael.andrews@dem.ri.gov

GZA
GeoEnvironmental, Inc.

Engineers and Scientists

RECEIVED
O.E.M. / O.W.M.
2006 JAN 11 P 12:13

January 9, 2006
File No. 32970-C

Mr. Michael D. Andrews
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02903

Re: *Site Investigation Report-Addendum*
1-4 Richmond Square Property
Providence, Rhode Island
(RIDEM Case No. 2005-026)

140 Broadway
Providence
Rhode Island
02903
401-421-4140
Fax: 401-751-8613
www.gza.com

Dear Mr. Andrews:

This letter has been prepared in response to the Department's November 17, 2005 letter associated with the review of the October 11, 2005 *Site Investigation Report–Addenda*. That letter presented two comments which needed to be addressed prior to the issuance of the *Program Letter* in accordance with Section 7 of the Remediation Regulations. Each of those comments is addressed below.

1. *The Department requests that a 2 foot or equivalent cap be proposed in all landscaped and/or vegetated areas of the Site as identified on Figure 4 of the Site Investigation Report–Addenda.*

Please be advised that, with the exception of the area located along the Seekonk River (discussed below), the landscaped and vegetated areas of the Site represent minimal fringe areas to parking lots and walkways These areas are not actively accessed or utilized by site occupants. As depicted on the attached photographs, they are finished with densely planted ornamental hedges, groundcover, and/or mature trees with grass cover. Based on these conditions, these areas represent no significant increase in direct exposure risks. Additionally, the placement of a soil cover over those areas containing mature trees will result in damage to the plantings. As the site as a whole will be subject to an Environmental Land Usage Restriction, institutional controls will be in-place to restrict the unauthorized disturbance of these areas.

GZA now understands that the grass-covered area located between the parking lot and the Seekonk River (see Photographs 1 & 2) is, in fact, part of the subject property. This area is jurisdictional to CRMC requirements, and it is Essex Richmond's intention to address the modification and use of this area in accordance with agency's requirements. Essex Richmond, LLC is currently developing plans to implement improvements in this area. In concept, this land area will be designed and constructed to include a ±10-foot vegetative strip, a ±6-foot paved shoreline walkway, and additional landscape plantings to the edge of paving (the parking lot).

As these improvements will involve some degree of earth-moving and grading, we will incorporate the installation of a 2 foot or equivalent cap into the design. The details of this will be presented in the forthcoming *Remedial Action Work Plan*.

2. *The Department requests that Essex Richmond LLC provide access to their property for future environmental investigations that may be required of potential responsible parties.*

   Essex Richmond, LLC will grant the requested access to the subject property for these purposes with the understanding that boring locations will be reviewed and approved by Essex Richmond, LLC prior to their completion. Additionally, with support from the Department, that any disturbances to the site caused by the borings will be minimized, repaired in a neat manner and returned to their original condition.

We trust that this information fulfills your current needs. Should you have any questions or comments, please feel free to call us at 421-4140.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

R. Michael Clark
Sr. Project Manager

John P. Hartley
Principal

JPH:clz

Attachment: Photographs

cc: C. Stern (Essex Richmond LLC)
S. Moberg (VHB)

J:\ESA\32970.rmc\SIR Report Addendum\32970 RIDEM LET.doc

GZA
GeoEnvironmental, Inc.

Engineers and
Scientists

February 21, 2006
File No. 32970-C

Mr. Michael D. Andrews
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02903

Re: *Site Investigation Report-Addendum No.2*
1-4 Richmond Square Property
Providence, Rhode Island
RIDEM Case No. 2005-026

Dear Mr. Andrews:

On behalf of our Client, Essex Richmond, GZA GeoEnvironmental, Inc. (GZA) is pleased to present this *Site Investigation Report-Addendum No. 2* for work performed at the Richmond Square site. This report describes additional field activities performed at the Site which included the collection and laboratory analysis of shallow soil samples within certain grass-covered areas of the Richmond Square property. This report is considered an addendum to our September 23, 2004 *Site Investigation Report*, and as such, is subject to the terms and conditions and limitations referenced therein.

The work described in this addendum report was performed in general conformance with RIDEM's January 24, 2006 letter (associated with the Department's review of our January 9, 2006 letter addressing the installation of a cap in all vegetated areas of the Site). In its response, the RIDEM concurred with GZA that landscaped areas covered with dense vegetation and/or ground cover would prevent direct exposure to potential contaminants in the subsurface; however, it was the Department's opinion that areas covered by only grass would not provide adequate protection. The Department requested that at least one shallow surface sample be collected from each grass-covered landscape area for analysis.

Field Activities:

On January 30, 2006, a GZA field engineer was on-Site at Richmond Square to collect shallow soil samples from areas not containing dense vegetative cover. Samples were collected using hand-augering techniques from the 0 to 2' interval. Specifically, a total of four samples were collected from the following locations:

Soil Sample ID	Location	Photograph No.
S-1	Corner of East River St. and Waterman St	1
S-2	Between 2 Richmond Sq. and the access road to Henderson Bridge	2
S-3	In front of 4 Richmond Sq.	3
S-4	Between 1 Richmond Sq. and Pitman St	4

These locations are indicated on the attached *Site Plan*. For reference, we have also included photographs of the subject areas. It should be noted that samples were not collected from the grassed area along the river embankment. This area is subject to be redeveloped, and as indicated in our letter dated January 9, 2006, as part of this development, engineered controls in the form of a cap and/or similar RIDEM-approved impediment will be installed to prevent direct exposure risks.

Soil samples were collected in clean, glass jars, packed in ice and transported under chain-of-custody protocol to GZA's Environmental Chemistry Laboratory, located in Hopkinton, Massachusetts.

Analytical Results:

In accordance with RIDEM's request, the samples were analyzed for the following parameters:

Analyte	EPA Methodologies
Total Petroleum Hydrocarbons (TPH)	8100M
Polycyclic Aromatic Hydrocarbons (PAHs)	8270C
RCRA 8 Metals	6010B/7471A

Analytical results are compiled on the attached Table and compared to current RIDEM Method 1 Residential and Industrial/Commercial Direct Exposure Criterion. Copies of the laboratory reports are provided as Attachment A. The results are interpreted as follows:

TPH: TPH results for all four samples were below the Method 1 Criterion.

PAHs: PAH results in three of the samples exceeded the Residential Direct Exposure Criteria and results in two of the sample exceeded the Industrial/Commercial Direct Exposure Criteria.

Metals: Arsenic concentrations in two of the samples exceeded both the Residential and the Industrial/Commercial Direct Exposure Criterion. Lead concentration in one of the samples exceeded the Residential Direct Exposure Criterion.

Soil Sample ID	Location	Photograph No.
S-1	Corner of East River St. and Waterman St	1
S-2	Between 2 Richmond Sq. and the access road to Henderson Bridge	2
S-3	In front of 4 Richmond Sq.	3
S-4	Between 1 Richmond Sq. and Pitman St	4

These locations are indicated on the attached *Site Plan*. For reference, we have also included photographs of the subject areas. It should be noted that samples were not collected from the grassed area along the river embankment. This area is subject to be redeveloped, and as indicated in our letter dated January 9, 2006, as part of this development, engineered controls in the form of a cap and/or similar RIDEM-approved impediment will be installed to prevent direct exposure risks.

Soil samples were collected in clean, glass jars, packed in ice and transported under chain-of-custody protocol to GZA's Environmental Chemistry Laboratory, located in Hopkinton, Massachusetts.

Analytical Results:

In accordance with RIDEM's request, the samples were analyzed for the following parameters:

Analyte	EPA Methodologies
Total Petroleum Hydrocarbons (TPH)	8100M
Polycyclic Aromatic Hydrocarbons (PAHs)	8270C
RCRA 8 Metals	6010B/7471A

Analytical results are compiled on the attached Table and compared to current RIDEM Method 1 Residential and Industrial/Commercial Direct Exposure Criterion. Copies of the laboratory reports are provided as Attachment A. The results are interpreted as follows:

TPH: TPH results for all four samples were below the Method 1 Criterion.

PAHs: PAH results in three of the samples exceeded the Residential Direct Exposure Criteria and results in two of the sample exceeded the Industrial/Commercial Direct Exposure Criteria.

Metals: Arsenic concentrations in two of the samples exceeded both the Residential and the Industrial/Commercial Direct Exposure Criterion. Lead concentration in one of the samples exceeded the Residential Direct Exposure Criterion.

evision to the Recommended Remedial Alternative:

The remedial alternative presented in our September 23, 2004 *Site Investigation Report* was the establishment of an environmental land usage restriction on the title of the property, the requirements of which would:

- require that the Site existing cover material remain in place and in good condition;
- require RIDEM notification and the development of a Soil Management Plan should soil excavation be planned; and
- prohibit the use of groundwater at the Site for drinking water.

In addition to the above outlined components of the proposed remedial alternative, GZA also recommends that the engineered controls in the form of 2-feet of cover, and/or the installation of a geotextile warning barrier and one foot of cover be installed at the subject four grass-covered areas of the Site. Details of the engineered controls will be provided in the Remedial Action Work Plan following receipt of the *Remedial Decision Letter*.

We trust that this information fulfills your current needs. Should you have any questions or comments, please feel free to call us at 421-4140.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

R. Michael Clark
Sr. Project Manager

John P. Hartley
Principal

RMC/JPH:clz

Attachment: Table
Figure
Photographs
Laboratory Report

cc: C. Stern (Essex Richmond LLC)

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TABLE 1

SOIL SAMPLE RESULTS VERSUS RIDEM SOIL STANDARDS

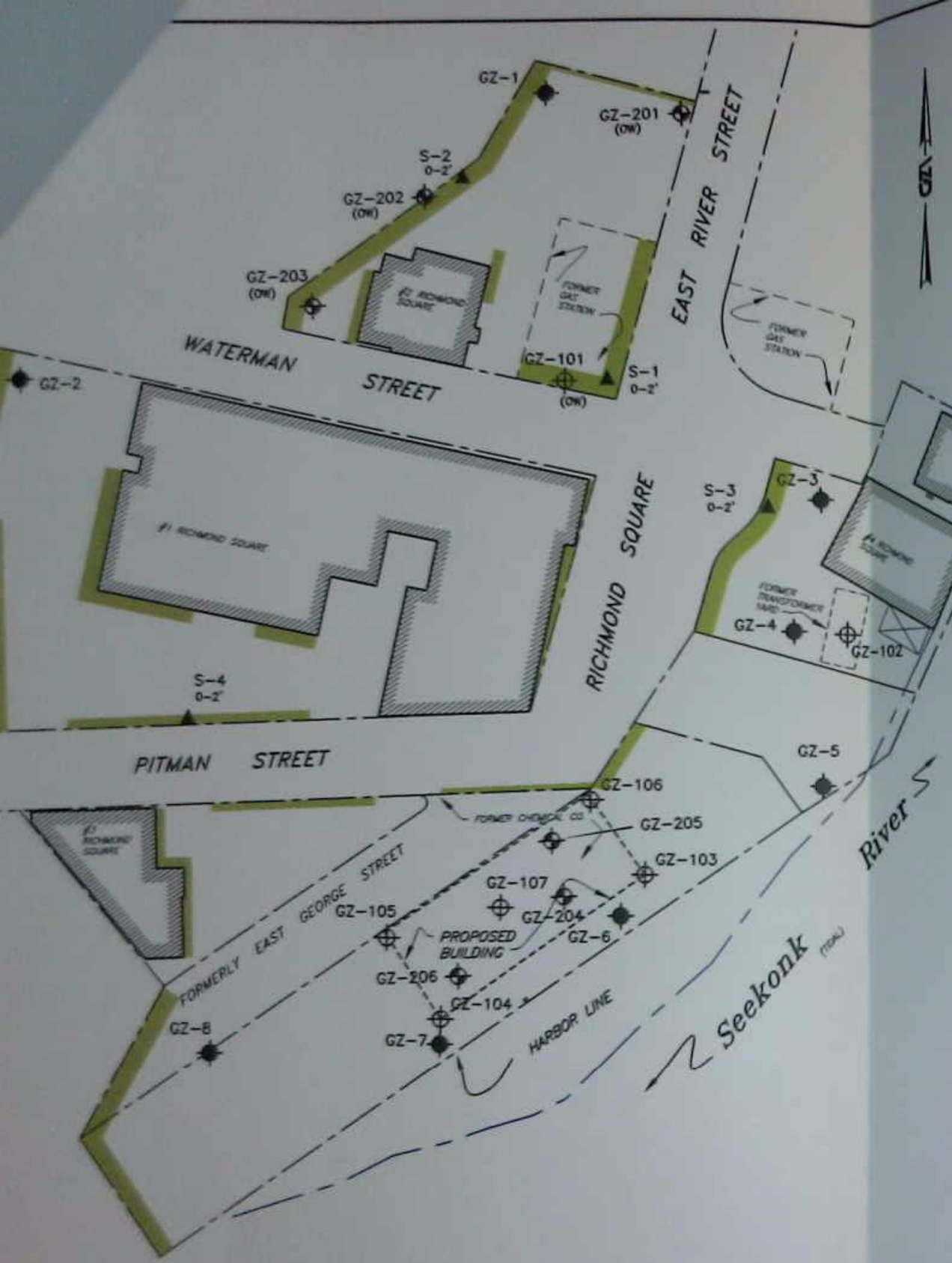
Richmond Square
Providence, Rhode Island

Sample ID Sample Date Depth (ft)	S-1 1/30/2006 0.2'	S-2 1/30/2006 0.2'	S-3 1/30/2006 0.2'	S-4 1/30/2006 0.2'	Residential Direct Exposure Criteria	Ind./Comm. Direct Exposure Criteria
TPH	83	200	130	89	500	2,500
PAHs:						
Naphthalene	<0.33	<0.33	<0.33	<0.33	-	
2-Methylnaphthalene	<0.33	<0.33	<0.33	<0.33	54	10,000
Acenaphthylene	<0.33	0.78	<0.33	<0.33	123	10,000
Acenaphthene	<0.33	<0.33	<0.33	<0.33	23	10,000
Fluorene	<0.33	<0.33	<0.33	<0.33	43	10,000
Phenanthrene	0.34	1.1	1.4	1.4	28	10,000
Anthracene	<0.33	0.58	0.4	<0.33	40	10,000
Fluoranthene	0.78	3	1.7	2.1	35	10,000
Pyrene	0.63	2.9	1.3	1.7	20	10,000
Benzo(a)anthracene	<0.33	1.5	0.65	0.86	13	10,000
Chrysene	0.38	1.9	0.76	1.2	0.9	7.8
Benzo(b)fluoranthene	<0.33	1.3	0.52	0.94	0.4	780
Benzo(k)fluoranthene	<0.33	1.2	0.43	0.78	0.9	8
Benzo(a)pyrene	<0.33	1.2	0.55	0.91	0.9	78
Indeno(1,2,3-cd)pyrene	<0.33	0.76	<0.33	0.58	0.4	0.8
Dibenzo(a,h)anthracene	<0.33	<0.33	<0.33	<0.33	0.9	7.8
Benzo(g,h,i)perylene	<0.33	0.68	<0.33	0.52	0.4	0.8
Metals:					0.8	10,000
Silver	<0.589	<0.577	<0.553	<0.521		
Arsenic	7.40	4.81	3.68	18.4	200	10,000
Barium	43.8	34.6	23.3	93.7	7	7
Cadmium	<0.589	<0.577	<0.553	13.5	5,500	10,000
Chromium	14.1	9.66	9.01	406	39	1,000
Mercury	0.0888	0.0893	0.077	0.0394	1,400	10,000
Lead	41.6	118	39.3	217	23	610
Selenium	<2.95	<2.89	<2.76	<2.61	150	500
					390	10,000

Notes:

1. Units are parts per million (ppm) unless otherwise indicated.
2. ND - Not detected.
3. Bold value indicates a residential DEC exceedance
4. Shaded value indicates an industrial/commercial DEC exceedance
5. NA - RIDEM has not promulgated a Method 1 RDEC for this parameter

I:\ENV\32970.enc\SIR Report Addendum\[32970.00 Shallow soil data.xls]Sheet1



NOTES:

1) BASE MAP DEVELOPED FROM PLAN PROVIDED BY CAPITO AND WICK LTD. ENTITLED "ALTA/ACSM LAND TITLE SURVEY, RICHMOND SQAURE, PROVIDENC, R.I. PREPARED FOR ESSEX RIVER VENTURES, LLC" DATED JUNE 7. 2004, ORIGINAL SCALE 1"=50', DRAWING No. 1.

2) THE LOCATION AND ELEVATIONS OF THE SITE FEATURES WERE APPROXIMATELY DETERMINED BY TAPING & FROM LINE OF SIGHT FROM EXISTING TOPOGRAPHIC FEATURES. THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

LEGEND:

PROPERTY LINE

INDICATES APPROXIMATE LOCATION OF LANDSCAPED AND/OR VEGETATED AREAS. ALL OTHERS ARE ASPHALT PAVED OR CONTAIN BUILDINGS.

▲ S-1 0-2' SOIL SAMPLES COLLECTED BY GZA ON 1/30/06 USING HAND AUGER TECHNIQUES.

SCALE: 1"=80'
0 40 80

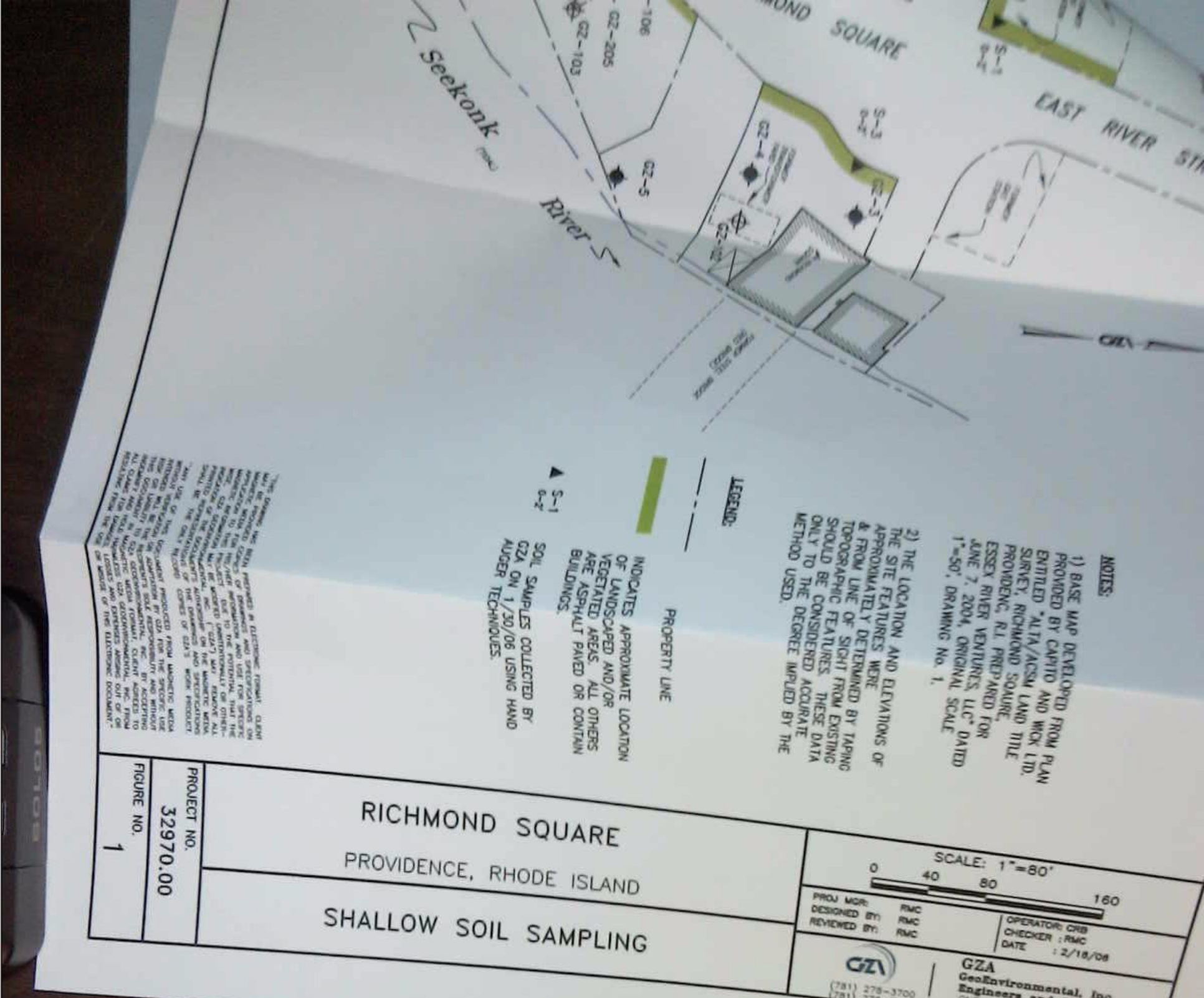
PROJ MGR: PMC
DESIGNED BY: PMC
REVIEWED BY: PMC
OPERATOR: CB
CHECKER: PMC
DATE: 2/

GZA
GeoEnvironmental
Engineers and
ONE EDGEWATER
(781) 278-3700

RICHMOND SQUARE
PROVIDENCE, RHODE ISLAND
SHALLOW SOIL SAMPLING

PROJECT NO.
32970.00

FIGURE NO.
1



NOTES:

1) BASE MAP DEVELOPED FROM PLAN PROVIDED BY CAPITO AND WICK LTD. ENTITLED "ALTA/ACSM LAND TITLE SURVEY, RICHMOND SQAURE, PROVIDENC, R.I. PREPARED FOR ESSEX RIVER VENTURES, LLC" DATED JUNE 7, 2004, ORIGINAL SCALE 1"=50', DRAWING No. 1.

2) THE LOCATION AND ELEVATIONS OF THE SITE FEATURES WERE APPROXIMATELY DETERMINED BY TAPING & FROM LINE OF SIGHT FROM EXISTING TOPOGRAPHIC FEATURES. THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

LEGEND:

PROPERTY LINE

INDICATES APPROXIMATE LOCATION OF LANDSCAPED AND/OR VEGETATED AREAS. ALL OTHERS ARE ASPHALT PAVED OR CONTAIN BUILDINGS.

▲ S-1 G-2 SOIL SAMPLES COLLECTED BY GZA ON 1/30/06 USING HAND AUGER TECHNIQUES.

PROJECT NO. 32970.00	RICHMOND SQUARE
FIGURE NO. 1	PROVIDENCE, RHODE ISLAND
	SHALLOW SOIL SAMPLING

SCALE: 1"=80'
0 40 80 160

PROJ MGR: RMC
DESIGNED BY: RMC
REVIEWED BY: RMC
OPERATOR: CRB
CHECKER : RMC
DATE : 2/16/06

GZA
GeoEnvironmental, Inc.
Engineers and Scientists
ONE EDGEWATER DRIVE
NORWOOD, MA 02062
(781) 278-3700
(781) 278-5701

Memorandum

Appendix E: Municipal Office File Review Documentation

10 Dorrance Street
Suite 400
Providence, RI 02903
P 401.272.8100

293 POWER ST

Location	293 POWER ST	**Assessment**	$366,900
Mblu	14/ / 316/ /	**Appraisal**	$366,900
Acct#	01403160000	**PID**	31981
Owner	CITY OF PROVIDENCE	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$10,000	$356,900	$366,900
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$10,000	$356,900	$366,900

Owner of Record

Owner	CITY OF PROVIDENCE	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	CITY HALL PROVIDENCE, RI 02903	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Vacant Land
Model	
Grade:	

Stories:	
Occupancy:	
Exterior Wall 1:	
Exterior Wall 2:	
Roof Structure:	
Roof Cover:	
Interior Wall 1:	
Interior Wall 2:	
Interior Floor 1	
Interior Floor 2	
Heat Fuel:	
Heat Type:	
AC Type	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs:	
Total Rooms	
Bath Style	
Kitchen Style:	
Total Kitchens	
Fireplaces	
Extra Openings	
Gas Fireplaces	
Parking	
CDU	
Bsmt Garages	
Fin Bsmt Area	
Rec Rm Area	
Rec Rm Type	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//\00\02\93

Building Layout

Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 920

Land Line Valuation

Size (Acres) 2.05

Description	Mun Lnd Com	**Depth**	
Zone	OS	**Assessed Value**	$356,900
Neighborhood	254F	**Appraised Value**	$356,900
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	Paving Asph			10000 SF	$10,000	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$10,000	$356,900	$366,900

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$10,000	$356,900	$366,900

10 BEACH

Location	10 BEACH	**Assessment**	$282,000
Mblu	14/ / 328/ /	**Appraisal**	$282,000
Acct#	01403280000	**PID**	26289
Owner	CITY OF PROVIDENCE	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$282,000	$282,000
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$282,000	$282,000

Owner of Record

Owner	CITY OF PROVIDENCE	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	CITY HALL PROVIDENCE, RI 02903	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Vacant Land
Model	
Grade:	

Stories:	
Occupancy:	
Exterior Wall 1:	
Exterior Wall 2:	
Roof Structure:	
Roof Cover:	
Interior Wall 1:	
Interior Wall 2:	
Interior Floor 1	
Interior Floor 2	
Heat Fuel:	
Heat Type:	
AC Type	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs:	
Total Rooms	
Bath Style	
Kitchen Style:	
Total Kitchens	
Fireplaces	
Extra Openings	
Gas Fireplaces	
Parking	
CDU	
Bsmt Garages	
Fin Bsmt Area	
Rec Rm Area	
Rec Rm Type	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//\00\02\4(

Building Layout

Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 920

Land Line Valuation

Size (Acres) 1.44

Description	Mun Lnd Com	**Depth**	
Zone	OS	**Assessed Value**	$282,000
Neighborhood	254F	**Appraised Value**	$282,000
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$282,000	$282,000

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$282,000	$282,000

291 EAST GEORGE

Location	291 EAST GEORGE	**Assessment**	$705,600
Mblu	15/ / 6/ /	**Appraisal**	$705,600
Acct#	01500060000	**PID**	29857
Owner	ESSEX RICHMOND 1 LLC	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$55,000	$650,600	$705,600
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$55,000	$650,600	$705,600

Owner of Record

Owner	ESSEX RICHMOND 1 LLC	**Sale Price**	$0
Co-Owner		**Book & Page**	6942/ 326
Address	1 RICHMOND SQ UNIT 100C PROVIDENCE, RI 02906	**Sale Date**	11/24/2004

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Vacant Land
Model	
Grade:	

Stories:	
Occupancy:	
Exterior Wall 1:	
Exterior Wall 2:	
Roof Structure:	
Roof Cover:	
Interior Wall 1:	
Interior Wall 2:	
Interior Floor 1	
Interior Floor 2	
Heat Fuel:	
Heat Type:	
AC Type	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs:	
Total Rooms	
Bath Style	
Kitchen Style:	
Total Kitchens	
Fireplaces	
Extra Openings	
Gas Fireplaces	
Parking	
CDU	
Bsmt Garages	
Fin Bsmt Area	
Rec Rm Area	
Rec Rm Type	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//\00\02\7

Building Layout

Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 203

Land Line Valuation

Size (Acres) 1.41

Description	Acc Comm Lnd	**Depth**	
Zone	W1	**Assessed Value**	$650,600
Neighborhood	254F	**Appraised Value**	$650,600
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	Paving Asph			55000 SF	$55,000	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$55,000	$650,600	$705,600

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$55,000	$650,600	$705,600

331 WATERMAN ST

Location	331 WATERMAN ST	**Assessment**	$5,290,400
Mblu	15/ / 8/ /	**Appraisal**	$5,290,400
Acct#	01500080000	**PID**	35354
Owner	ESSEX RICHMOND 1 LLC	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$3,985,200	$1,305,200	$5,290,400
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$3,985,200	$1,305,200	$5,290,400

Owner of Record

Owner	ESSEX RICHMOND 1 LLC	**Sale Price**	$0
Co-Owner		**Book & Page**	6942/ 141
Address	1 RICHMOND SQ UNIT 100C PROVIDENCE, RI 02906	**Sale Date**	11/24/2004

Ownership History

Ownership History			
Owner	**Sale Price**	**Book & Page**	**Sale Date**
RICHMOND SQUARE TECHNOLOGY PARK ASSOCIAT	$0	6942/ 138	11/24/2004

Building Information

Building 1 : Section 1

Year Built: 1941
Replacement Cost: $6,061,387
Building Percent Good: 62
Replacement Cost Less Depreciation: $3,758,100

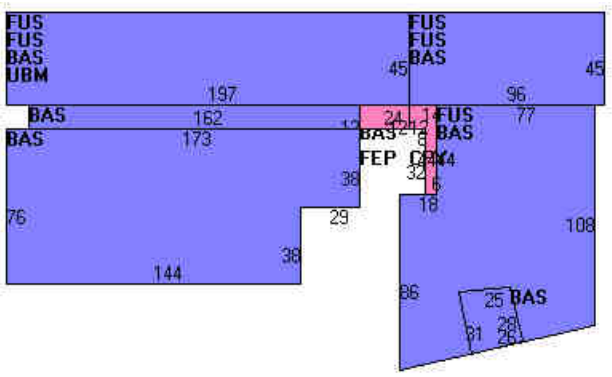
Building Attributes	
Field	**Description**
STYLE	Office Bldg
MODEL	Comm/Ind
Grade:	B-

Stories:	3
Occupancy:	1
Exterior Wall 1:	Brick
Exterior Wall 2:	
Roof Struct:	Flat
Roof Cover:	Tar + Gravel
Interior Wall 1:	Plaster
Interior Wall 2:	
Interior Floor 1:	Carpet
Interior Floor 2:	
Heating Fuel:	Oil
Heating Type:	Forced Air
AC Type:	Central
CLT Use	Office Buildin
Bldg Use:	Office
Ttl Rooms:	
Ttl Bedrms:	
Ttl Baths:	
Ttl Half Baths:	
Ttl Xtra Fix:	
1st Floor Use:	
Heat/AC:	Heat/Ac Pkgs
Frame Type:	Masonry
Baths/Plumbing:	Average
Ceiling/Wall:	Ceil & Walls
Rooms/Prtns:	Average
Wall Height:	14
% Comn Wall:	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//\00\03\25

Building Layout



Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features				Legend
Code	**Description**	**Size**	**Value**	**Bldg #**
ELV2	Pass per stop	3 STOPS	$46,500	1
SPR1	Sprinklers-Wet	8865 SF	$14,800	1
SPR1	Sprinklers-Wet	38336 SF	$64,200	1
SPR1	Sprinklers-Wet	23346 SF	$39,100	1
SPR1	Sprinklers-Wet	13185 SF	$22,100	1

Land

Land Use

Use Code	218
Description	Office
Zone	W1
Neighborhood	254D
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	1.71
Depth	
Assessed Value	$1,305,200
Appraised Value	$1,305,200

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	Paving Asph			28000 SF	$28,000	1
LT	Light	2	Double	7 UNITS	$12,400	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$3,985,200	$1,305,200	$5,290,400

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$3,985,200	$1,305,200	$5,290,400

11 RICHMOND SQ

Location	11 RICHMOND SQ	**Assessment**	$142,200
Mblu	15/ / 10/ /	**Appraisal**	$142,200
Acct#	01500100000	**PID**	35355
Owner	ESSEX RICHMOND 1 LLC	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$8,000	$134,200	$142,200
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$8,000	$134,200	$142,200

Owner of Record

Owner	ESSEX RICHMOND 1 LLC	**Sale Price**	$0
Co-Owner		**Book & Page**	6942/ 225
Address	1 RICHMOND SQ UNIT 100C PROVIDENCE, RI 02906	**Sale Date**	11/24/2004

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Vacant Land
Model	
Grade:	

Stories:	
Occupancy:	
Exterior Wall 1:	
Exterior Wall 2:	
Roof Structure:	
Roof Cover:	
Interior Wall 1:	
Interior Wall 2:	
Interior Floor 1	
Interior Floor 2	
Heat Fuel:	
Heat Type:	
AC Type	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs:	
Total Rooms	
Bath Style	
Kitchen Style:	
Total Kitchens	
Fireplaces	
Extra Openings	
Gas Fireplaces	
Parking	
CDU	
Bsmt Garages	
Fin Bsmt Area	
Rec Rm Area	
Rec Rm Type	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//\00\03\25

Building Layout

Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 203

Land Line Valuation

Size (Acres) 0.19

Description	Acc Comm Lnd	**Depth**	
Zone	W1	**Assessed Value**	$134,200
Neighborhood	254F	**Appraised Value**	$134,200
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	Paving Asph			8000 SF	$8,000	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$8,000	$134,200	$142,200

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$8,000	$134,200	$142,200

1 BUTLER AVE

Location	1 BUTLER AVE	**Assessment**	$10,535,600
Mblu	15/ / 35/ /	**Appraisal**	$10,535,600
Acct#	01500350000	**PID**	31288
Owner	EPOCH SL III INC	**Building Count**	2

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$9,005,600	$1,530,000	$10,535,600
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$9,005,600	$1,530,000	$10,535,600

Owner of Record

Owner	EPOCH SL III INC	**Sale Price**	$0
Co-Owner		**Book & Page**	8971/ 316
Address	31 STATE ST 9TH FL C/O MARVIN F. POER AND COMPANY BOSTON, MA 02109	**Sale Date**	01/08/2008

Ownership History

Ownership History			
Owner	**Sale Price**	**Book & Page**	**Sale Date**
EPOCH SL III INC	$10,000,000	6740/ 362	08/25/2004

Building Information

Building 1 : Section 1

Year Built:	2000
Replacement Cost:	$5,302,481
Building Percent Good:	90
Replacement Cost Less Depreciation:	$4,772,200

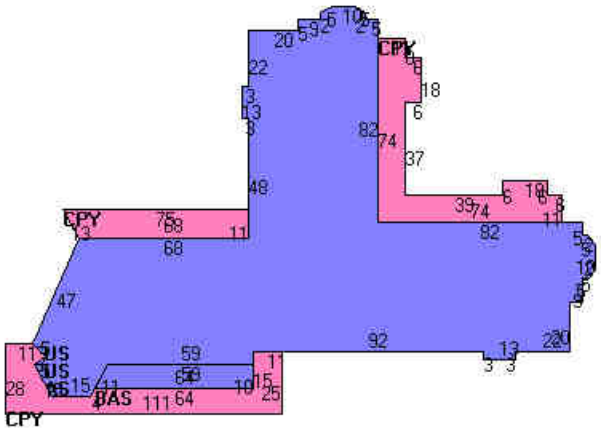
Building Attributes	
Field	**Description**
STYLE	Assit Living
MODEL	Comm/Ind

Grade:	C+
Stories:	3
Occupancy:	102
Exterior Wall 1:	Stucco
Exterior Wall 2:	
Roof Struct:	Gable
Roof Cover:	Asphalt Shingl
Interior Wall 1:	Plaster
Interior Wall 2:	
Interior Floor 1:	Carpet
Interior Floor 2:	
Heating Fuel:	Oil
Heating Type:	Forced Air
AC Type:	Unit/Ac
CLT Use	Nursing Home
Bldg Use:	Asst/Ind Living
Ttl Rooms:	
Ttl Bedrms:	
Ttl Baths:	
Ttl Half Baths:	
Ttl Xtra Fix:	
1st Floor Use:	
Heat/AC:	None
Frame Type:	Steel
Baths/Plumbing:	Average
Ceiling/Wall:	Ceil & Walls
Rooms/Prtns:	Average
Wall Height:	10
% Comn Wall:	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//\00\02\87

Building Layout



Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Building 2 : Section 1

Year Built: 2000
Replacement Cost: $4,217,756
Building Percent Good: 93
Replacement Cost Less Depreciation: $3,922,500

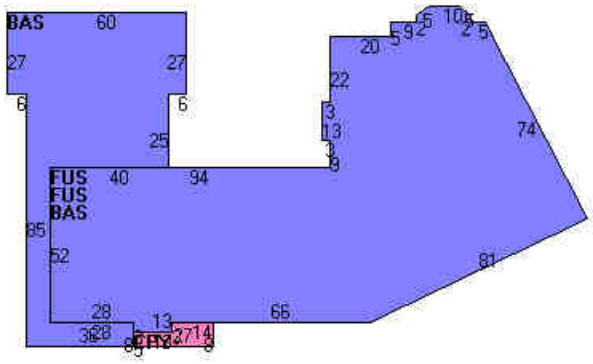
Building Attributes : Bldg 2 of 2	
Field	**Description**
STYLE	Nursing Home
MODEL	Comm/Ind
Grade:	B
Stories:	3

Occupancy:	1
Exterior Wall 1:	Stucco
Exterior Wall 2:	
Roof Struct:	Flat
Roof Cover:	Tar + Gravel
Interior Wall 1:	Plaster
Interior Wall 2:	
Interior Floor 1:	Carpet
Interior Floor 2:	
Heating Fuel:	Oil
Heating Type:	Forced Air
AC Type:	Unit/Ac
CLT Use	Nursing Home
Bldg Use:	Nursing Home
Ttl Rooms:	
Ttl Bedrms:	
Ttl Baths:	
Ttl Half Baths:	
Ttl Xtra Fix:	
1st Floor Use:	
Heat/AC:	None
Frame Type:	Steel
Baths/Plumbing:	Average
Ceiling/Wall:	Ceil & Walls
Rooms/Prtns:	Average
Wall Height:	10
% Comn Wall:	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//default.jp

Building Layout



Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features				Legend
Code	**Description**	**Size**	**Value**	**Bldg #**
SPR1	Sprinklers-Wet	36900 SF	$92,700	2
ELV2	Pass per stop	3 STOPS	$67,500	1
SPR1	Sprinklers-Wet	48585 SF	$118,100	1

Land

Land Use

Use Code 286
Description Asst/Ind Living

Land Line Valuation

Size (Acres) 7.01
Depth

Zone	W1	**Assessed Value**	$1,530,000
Neighborhood		**Appraised Value**	$1,530,000
Alt Land Appr Category	No		

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	Paving Asph			12000 SF	$12,000	1
SPL1	InGround Pool	CR	Concrete	518 SF	$8,300	1
UTIL	Utility	FR	Frame	96 SF	$1,200	1
CNP	Canopy	NLT	No Lites	773 SF	$7,300	1
PAT1	Patio	CR	Concrete	1500 SF	$3,800	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$9,005,600	$1,530,000	$10,535,600

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$9,005,600	$1,530,000	$10,535,600

356 WATERMAN ST

Location	356 WATERMAN ST	**Assessment**	$1,116,300
Mblu	15/ / 60/ /	**Appraisal**	$1,116,300
Acct#	01500600000	**PID**	34501
Owner	ESSEX RICHMOND 1 LLC	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$533,100	$583,200	$1,116,300
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$533,100	$583,200	$1,116,300

Owner of Record

Owner	ESSEX RICHMOND 1 LLC	**Sale Price**	$0
Co-Owner		**Book & Page**	6942/ 322
Address	1 RICHMOND SQ UNIT 100C PROVIDENCE, RI 02906	**Sale Date**	11/24/2004

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built: 1984
Replacement Cost: $1,043,677
Building Percent Good: 48
Replacement Cost Less Depreciation: $501,000

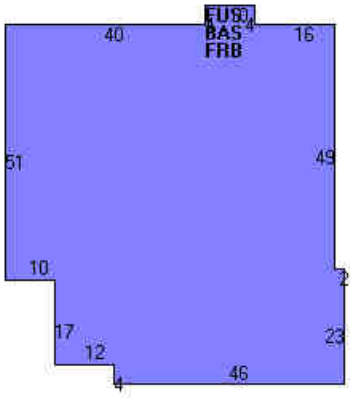
Building Attributes	
Field	**Description**
STYLE	Office Bldg
MODEL	Comm/Ind
Grade:	B-

Stories:	2
Occupancy:	1
Exterior Wall 1:	Stucco
Exterior Wall 2:	
Roof Struct:	Flat
Roof Cover:	Tar + Gravel
Interior Wall 1:	Plaster
Interior Wall 2:	
Interior Floor 1:	Carpet
Interior Floor 2:	
Heating Fuel:	Oil
Heating Type:	Forced Air
AC Type:	Central
CLT Use	Office Buildin
Bldg Use:	Office
Ttl Rooms:	
Ttl Bedrms:	
Ttl Baths:	
Ttl Half Baths:	
Ttl Xtra Fix:	
1st Floor Use:	
Heat/AC:	Heat/Ac Pkgs
Frame Type:	Masonry
Baths/Plumbing:	Average
Ceiling/Wall:	Ceil & Walls
Rooms/Prtns:	Average
Wall Height:	10
% Comn Wall:	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//\00\03\17

Building Layout



Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	218
Description	Office
Zone	W1

Land Line Valuation

Size (Acres)	0.72
Depth	
Assessed Value	$583,200

Neighborhood 254D
Alt Land Appr No
Category

Appraised Value $583,200

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	Paving Asph			22800 SF	$22,800	1
RW3	Ret Wall ST			450 UNITS	$700	1
LT	Light	2	Double	3 UNITS	$5,300	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$533,100	$583,200	$1,116,300

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$533,100	$583,200	$1,116,300

41 WAYLAND AVE

Location	41 WAYLAND AVE	**Assessment**	$880,800
Mblu	15/ / 66/ /	**Appraisal**	$880,800
Acct#	01500660000	**PID**	34502
Owner	STATE OF RHODE ISLAND	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$880,800	$880,800
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$880,800	$880,800

Owner of Record

Owner	STATE OF RHODE ISLAND	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	PROVIDENCE, RI 02903 PROVIDENCE, RI 02903	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Vacant Land
Model	
Grade:	

Stories:	
Occupancy:	
Exterior Wall 1:	
Exterior Wall 2:	
Roof Structure:	
Roof Cover:	
Interior Wall 1:	
Interior Wall 2:	
Interior Floor 1	
Interior Floor 2	
Heat Fuel:	
Heat Type:	
AC Type	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs:	
Total Rooms	
Bath Style	
Kitchen Style:	
Total Kitchens	
Fireplaces	
Extra Openings	
Gas Fireplaces	
Parking	
CDU	
Bsmt Garages	
Fin Bsmt Area	
Rec Rm Area	
Rec Rm Type	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//default.jp

Building Layout

Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 913

Land Line Valuation

Size (Acres) 1.50

Description	State Land Res	**Depth**	
Zone	W1	**Assessed Value**	$880,800
Neighborhood	254F	**Appraised Value**	$880,800
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$880,800	$880,800

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$880,800	$880,800

5 RICHMOND SQ

Location	5 RICHMOND SQ	**Assessment**	$504,400
Mblu	15/ / 321/ /	**Appraisal**	$504,400
Acct#	01503210000	**PID**	39623
Owner	FRANK N GUSTAFSON AND	**Building Count**	2

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$107,400	$397,000	$504,400
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$107,400	$397,000	$504,400

Owner of Record

Owner	FRANK N GUSTAFSON AND	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	225 WAMPANOAG TRL RIVERSIDE, RI 02915-2211	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built: 1942
Replacement Cost: $89,538
Building Percent Good: 53
Replacement Cost Less Depreciation: $47,500

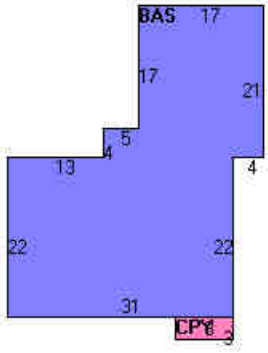
Building Attributes	
Field	**Description**
STYLE	Store
MODEL	Comm/Ind
Grade:	C-

Stories:	1
Occupancy:	1
Exterior Wall 1:	Concr/CinderBl
Exterior Wall 2:	
Roof Struct:	Flat
Roof Cover:	Tar + Gravel
Interior Wall 1:	Plaster
Interior Wall 2:	
Interior Floor 1:	Carpet
Interior Floor 2:	
Heating Fuel:	Oil
Heating Type:	Steam
AC Type:	Central
CLT Use	Office Buildin
Bldg Use:	Office
Ttl Rooms:	
Ttl Bedrms:	
Ttl Baths:	
Ttl Half Baths:	
Ttl Xtra Fix:	
1st Floor Use:	
Heat/AC:	Heat/Ac Split
Frame Type:	Masonry
Baths/Plumbing:	Average
Ceiling/Wall:	Ceil & Walls
Rooms/Prtns:	Average
Wall Height:	10
% Comn Wall:	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//\00\03\6(

Building Layout



Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Building 2 : Section 1

Year Built: 1960
Replacement Cost: $86,739
Building Percent Good: 54
Replacement Cost Less Depreciation: $46,800

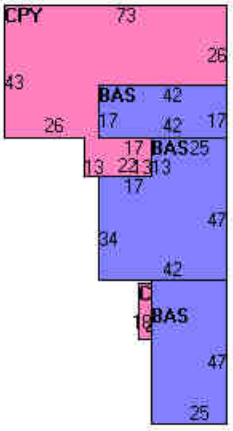
Building Attributes : Bldg 2 of 2	
Field	**Description**
STYLE	Warehouse
MODEL	Ind/Comm
Grade:	D
Stories:	1

Occupancy:	1
Exterior Wall 1:	Minimum
Exterior Wall 2:	
Roof Struct:	Flat
Roof Cover:	Tar + Gravel
Interior Wall 1:	Minim/Masonry
Interior Wall 2:	
Interior Floor 1:	Dirt/None
Interior Floor 2:	
Heating Fuel:	None
Heating Type:	None
AC Type:	None
CLT Use	Warehouse/ Lt
Bldg Use:	Ind/Whs Mdl 96
Ttl Rooms:	
Ttl Bedrms:	
Ttl Baths:	
Ttl Half Baths:	
Ttl Xtra Fix:	
1st Floor Use:	
Heat/AC:	None
Frame Type:	Wood Frame
Baths/Plumbing:	None
Ceiling/Wall:	Average
Rooms/Prtns:	Average
Wall Height:	14
% Comn Wall:	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//default.jp

Building Layout



Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	217
Description	Retail
Zone	W1
Neighborhood	254F
Alt Land Appr	No

Land Line Valuation

Size (Acres)	0.62
Depth	
Assessed Value	$397,000
Appraised Value	$397,000

Category

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
CNP1	Canopy Ave			1150 SF	$10,400	1
SHD1	Shed	FR	Frame	40 SF	$200	1
FN1	Fence, Chain	6	6 ft	360 LF	$2,500	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$107,400	$397,000	$504,400

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$107,400	$397,000	$504,400

392 WATERMAN ST

Location	392 WATERMAN ST	**Assessment**	$579,600
Mblu	15/ / 340/ /	**Appraisal**	$579,600
Acct#	01503400000	**PID**	39261
Owner	ESSEX RICHMOND 1 LLC	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$409,900	$169,700	$579,600
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$409,900	$169,700	$579,600

Owner of Record

Owner	ESSEX RICHMOND 1 LLC	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	1 RICHMOND SQ UNIT 100C PROVIDENCE, RI 02906	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:	1871
Replacement Cost:	$547,497
Building Percent Good:	73
Replacement Cost Less Depreciation:	$399,700

Building Attributes	
Field	**Description**
STYLE	Restaurant
MODEL	Comm/Ind
Grade:	A

Stories:	2
Occupancy:	1
Exterior Wall 1:	Brick
Exterior Wall 2:	
Roof Struct:	Gable
Roof Cover:	Wood Shingle
Interior Wall 1:	Plaster
Interior Wall 2:	
Interior Floor 1:	Carpet
Interior Floor 2:	
Heating Fuel:	Oil
Heating Type:	Forced Air
AC Type:	Central
CLT Use	Restaurant
Bldg Use:	Restaurant/Bar
Ttl Rooms:	
Ttl Bedrms:	
Ttl Baths:	
Ttl Half Baths:	
Ttl Xtra Fix:	
1st Floor Use:	
Heat/AC:	Heat/Ac Pkgs
Frame Type:	Wood Frame
Baths/Plumbing:	Average
Ceiling/Wall:	Ceil & Walls
Rooms/Prtns:	Average
Wall Height:	9
% Comn Wall:	

Building Photo

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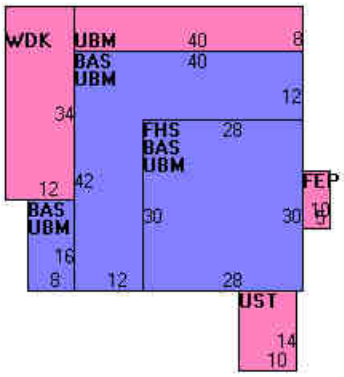
Building Layout



Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features				Legend
Code	**Description**	**Size**	**Value**	**Bldg #**
CLR1	Cooler	140 SF	$3,100	1
BT1	Basement Top	320 SF	$2,700	1

Land

Land Use

Use Code	230
Description	Restaurant/Bar

Land Line Valuation

Size (Acres)	0.10
Depth	

Zone	W1	**Assessed Value**	$169,700
Neighborhood	254F	**Appraised Value**	$169,700
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	Paving Asph			2000 SF	$2,000	1
WDK	Wood Deck			320 SF	$2,400	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$409,900	$169,700	$579,600

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$409,900	$169,700	$579,600

86 WAYLAND AVE

Location	86 WAYLAND AVE	**Assessment**	$458,200
Mblu	15/ / 446/ /	**Appraisal**	$458,200
Acct#	01504460000	**PID**	39148
Owner	CITY OF PROVIDENCE	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$458,200	$458,200
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$458,200	$458,200

Owner of Record

Owner	CITY OF PROVIDENCE	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	CITY HALL PROVIDENCE, RI 02903	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Vacant Land
Model	
Grade:	

Stories:	
Occupancy:	
Exterior Wall 1:	
Exterior Wall 2:	
Roof Structure:	
Roof Cover:	
Interior Wall 1:	
Interior Wall 2:	
Interior Floor 1	
Interior Floor 2	
Heat Fuel:	
Heat Type:	
AC Type	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs:	
Total Rooms	
Bath Style	
Kitchen Style:	
Total Kitchens	
Fireplaces	
Extra Openings	
Gas Fireplaces	
Parking	
CDU	
Bsmt Garages	
Fin Bsmt Area	
Rec Rm Area	
Rec Rm Type	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//default.jp

Building Layout

Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 920

Land Line Valuation

Size (Acres) 0.41

Description	Mun Lnd Com	**Depth**	
Zone	OS	**Assessed Value**	$458,200
Neighborhood	254F	**Appraised Value**	$458,200
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$458,200	$458,200

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$458,200	$458,200

281 PITMAN ST

Location	281 PITMAN ST	**Assessment**	$649,700
Mblu	15/ / 451/ /	**Appraisal**	$649,700
Acct#	01504510000	**PID**	36122
Owner	ESSEX RICHMOND 1 LLC	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$12,600	$637,100	$649,700
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$12,600	$637,100	$649,700

Owner of Record

Owner	ESSEX RICHMOND 1 LLC	**Sale Price**	$0
Co-Owner		**Book & Page**	6942/ 230
Address	1 RICHMOND SQ UNIT 100C PROVIDENCE, RI 02906	**Sale Date**	11/24/2004

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Outbuildings
Model	
Grade:	

Stories:	
Occupancy:	
Exterior Wall 1:	
Exterior Wall 2:	
Roof Structure:	
Roof Cover:	
Interior Wall 1:	
Interior Wall 2:	
Interior Floor 1	
Interior Floor 2	
Heat Fuel:	
Heat Type:	
AC Type	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs:	
Total Rooms	
Bath Style	
Kitchen Style:	
Total Kitchens	
Fireplaces	
Extra Openings	
Gas Fireplaces	
Parking	
CDU	
Bsmt Garages	
Fin Bsmt Area	
Rec Rm Area	
Rec Rm Type	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//\00\03\32

Building Layout

Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 298

Land Line Valuation

Size (Acres) 0.66

Description	Comm OBY	**Depth**	
Zone	W1	**Assessed Value**	$637,100
Neighborhood	254F	**Appraised Value**	$637,100
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	Paving Asph			9000 SF	$12,600	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$12,600	$637,100	$649,700

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$12,600	$637,100	$649,700

88 WAYLAND AVE

Location	88 WAYLAND AVE	**Assessment**	$922,800
Mblu	15/ / 456/ /	**Appraisal**	$922,800
Acct#	01504560000	**PID**	35152
Owner	CITY OF PROVIDENCE	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$922,800	$922,800
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$922,800	$922,800

Owner of Record

Owner	CITY OF PROVIDENCE	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	CITY HALL PROVIDENCE, RI 02903	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Vacant Land
Model	
Grade:	

Stories:	
Occupancy:	
Exterior Wall 1:	
Exterior Wall 2:	
Roof Structure:	
Roof Cover:	
Interior Wall 1:	
Interior Wall 2:	
Interior Floor 1	
Interior Floor 2	
Heat Fuel:	
Heat Type:	
AC Type	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs:	
Total Rooms	
Bath Style	
Kitchen Style:	
Total Kitchens	
Fireplaces	
Extra Openings	
Gas Fireplaces	
Parking	
CDU	
Bsmt Garages	
Fin Bsmt Area	
Rec Rm Area	
Rec Rm Type	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//default.jp

Building Layout

Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 920

Land Line Valuation

Size (Acres) 1.76

Description	Mun Lnd Com	**Depth**	
Zone	OS	**Assessed Value**	$922,800
Neighborhood	254F	**Appraised Value**	$922,800
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$922,800	$922,800

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$922,800	$922,800

84 WAYLAND AVE

Location	84 WAYLAND AVE	**Assessment**	$2,100
Mblu	15/ / 457/ /	**Appraisal**	$2,100
Acct#	01504570000	**PID**	34738
Owner	CITY OF PROVIDENCE	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$2,100	$2,100
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$2,100	$2,100

Owner of Record

Owner	CITY OF PROVIDENCE	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	CITY HALL PROVIDENCE, RI 02903	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Vacant Land
Model	
Grade:	

Stories:	
Occupancy:	
Exterior Wall 1:	
Exterior Wall 2:	
Roof Structure:	
Roof Cover:	
Interior Wall 1:	
Interior Wall 2:	
Interior Floor 1	
Interior Floor 2	
Heat Fuel:	
Heat Type:	
AC Type	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs:	
Total Rooms	
Bath Style	
Kitchen Style:	
Total Kitchens	
Fireplaces	
Extra Openings	
Gas Fireplaces	
Parking	
CDU	
Bsmt Garages	
Fin Bsmt Area	
Rec Rm Area	
Rec Rm Type	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//default.jp

Building Layout

Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 920

Land Line Valuation

Size (Acres) 0.01

Description	Mun Lnd Com	**Depth**	
Zone	OS	**Assessed Value**	$2,100
Neighborhood	254F	**Appraised Value**	$2,100
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$2,100	$2,100

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$2,100	$2,100

291 EAST GEORGE (REAR)

Location	291 EAST GEORGE (REAR)	**Assessment**	$301,400
Mblu	15/ / 467/ /	**Appraisal**	$301,400
Acct#	01504670000	**PID**	33199
Owner	NARRAGANSETT ELECTRIC CO	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$9,000	$292,400	$301,400
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$9,000	$292,400	$301,400

Owner of Record

Owner	NARRAGANSETT ELECTRIC CO	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	40 SYLVAN RD WALTHAM, MA 02451-2286	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Vacant Land
Model	
Grade:	

Stories:	
Occupancy:	
Exterior Wall 1:	
Exterior Wall 2:	
Roof Structure:	
Roof Cover:	
Interior Wall 1:	
Interior Wall 2:	
Interior Floor 1	
Interior Floor 2	
Heat Fuel:	
Heat Type:	
AC Type	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs:	
Total Rooms	
Bath Style	
Kitchen Style:	
Total Kitchens	
Fireplaces	
Extra Openings	
Gas Fireplaces	
Parking	
CDU	
Bsmt Garages	
Fin Bsmt Area	
Rec Rm Area	
Rec Rm Type	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//\00\03\05

Building Layout

Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 499

Land Line Valuation

Size (Acres) 0.29

Description	Utility Vac Ln	**Depth**	
Zone	W1	**Assessed Value**	$292,400
Neighborhood	254F	**Appraised Value**	$292,400
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	Paving Asph			9000 SF	$9,000	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$9,000	$292,400	$301,400

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$9,000	$292,400	$301,400

4 RICHMOND SQ

Location	4 RICHMOND SQ	**Assessment**	$3,120,300
Mblu	15/ / 469/ /	**Appraisal**	$3,120,300
Acct#	01504690000	**PID**	31828
Owner	ESSEX RICHMOND 1 LLC	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$2,723,700	$396,600	$3,120,300
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$2,723,700	$396,600	$3,120,300

Owner of Record

Owner	ESSEX RICHMOND 1 LLC	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	1 RICHMOND SQ UNIT 100C PROVIDENCE, RI 02906	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built: 1989
Replacement Cost: $3,702,329
Building Percent Good: 73
Replacement Cost Less Depreciation: $2,702,700

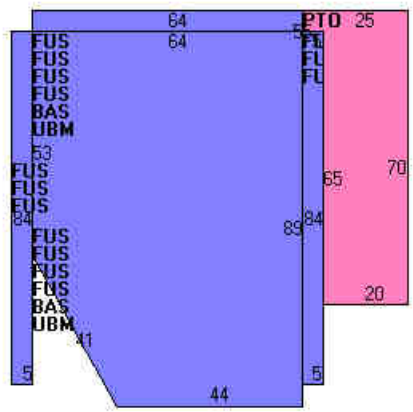
Building Attributes	
Field	**Description**
STYLE	Office Bldg
MODEL	Comm/Ind
Grade:	A

Stories:	5
Occupancy:	1
Exterior Wall 1:	Concr/CinderBl
Exterior Wall 2:	
Roof Struct:	Mansard
Roof Cover:	Tar + Gravel
Interior Wall 1:	Plaster
Interior Wall 2:	
Interior Floor 1:	Carpet
Interior Floor 2:	
Heating Fuel:	Oil
Heating Type:	Forced Air
AC Type:	Central
CLT Use	Office Buildin
Bldg Use:	Office
Ttl Rooms:	
Ttl Bedrms:	
Ttl Baths:	
Ttl Half Baths:	
Ttl Xtra Fix:	
1st Floor Use:	
Heat/AC:	Heat/Ac Pkgs
Frame Type:	Masonry
Baths/Plumbing:	Average
Ceiling/Wall:	Ceil & Walls
Rooms/Prtns:	Average
Wall Height:	12
% Comn Wall:	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//\00\02\92

Building Layout



Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features				Legend
Code	**Description**	**Size**	**Value**	**Bldg #**
ELV2	Pass per stop	6 STOPS	$109,500	1

Land

Land Use

Use Code	218
Description	Office
Zone	W1
Neighborhood	254F

Land Line Valuation

Size (Acres)	0.33
Depth	
Assessed Value	$396,600
Appraised Value	$396,600

Alt Land Appr Category No

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	Paving Asph			1000 SF	$1,000	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$2,723,700	$396,600	$3,120,300

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$2,723,700	$396,600	$3,120,300

201 PITMAN ST

Location	201 PITMAN ST	**Assessment**	$6,710,500
Mblu	15/ / 480/ /	**Appraisal**	$6,710,500
Acct#	01504800000	**PID**	41455
Owner	SALVATION ARMY OF RI	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$4,082,300	$2,628,200	$6,710,500
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$4,082,300	$2,628,200	$6,710,500

Owner of Record

Owner	SALVATION ARMY OF RI	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	201 PITMAN ST PROVIDENCE, RI 02906	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built: 1950
Replacement Cost: $6,449,032
Building Percent Good: 58
Replacement Cost Less Depreciation: $3,740,400

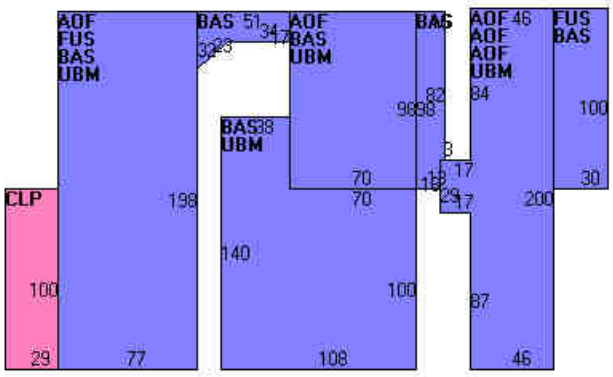
Building Attributes	
Field	**Description**
STYLE	Warehouse
MODEL	Comm/Ind
Grade:	B+

Stories:	3
Occupancy:	1
Exterior Wall 1:	Average
Exterior Wall 2:	
Roof Struct:	Average
Roof Cover:	Average
Interior Wall 1:	Typical
Interior Wall 2:	
Interior Floor 1:	Typical
Interior Floor 2:	
Heating Fuel:	Gas
Heating Type:	Forced Air
AC Type:	None
CLT Use	Support Area
Bldg Use:	Charitable Bldg
Ttl Rooms:	
Ttl Bedrms:	
Ttl Baths:	
Ttl Half Baths:	
Ttl Xtra Fix:	
1st Floor Use:	
Heat/AC:	None
Frame Type:	Masonry
Baths/Plumbing:	Extensive
Ceiling/Wall:	Average
Rooms/Prtns:	Above Average
Wall Height:	14
% Comn Wall:	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//\00\03\74

Building Layout



Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features				Legend
Code	**Description**	**Size**	**Value**	**Bldg #**
AW1	Aerial Walk	112 SF	$19,200	1
SPR1	Sprinklers-Wet	153490 SF	$240,400	1

Land

Land Use

Use Code 977
Description Charitable Bldg

Land Line Valuation

Size (Acres) 3.28
Depth

Zone	W1	**Assessed Value**	$2,628,200
Neighborhood	254F	**Appraised Value**	$2,628,200
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	Paving Asph			50500 SF	$50,500	1
FN1	Fence, Chain	4	4 ft	1080 LF	$5,900	1
SHD1	Shed	FR	Frame	48 SF	$300	1
SHD1	Shed	FR	Frame	60 SF	$400	1
FN2	Fence, WD	4	4 ft	2520 LF	$18,900	1
FN1	Fence, Chain	4	4 ft	1150 LF	$6,300	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$4,082,300	$2,628,200	$6,710,500

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$4,082,300	$2,628,200	$6,710,500

27 E RIVER ST

Location	27 E RIVER ST	**Assessment**	$997,800
Mblu	15/ / 483/ /	**Appraisal**	$997,800
Acct#	01504830000	**PID**	35150
Owner	BROWN AND IVES LAND COMPANY LLC	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$33,400	$964,400	$997,800
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$33,400	$964,400	$997,800

Owner of Record

Owner	BROWN AND IVES LAND COMPANY LLC	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	50 S MAIN ST PROVIDENCE, RI 02903-2919	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:	1895
Replacement Cost:	$62,178
Building Percent Good:	53
Replacement Cost Less Depreciation:	$33,000

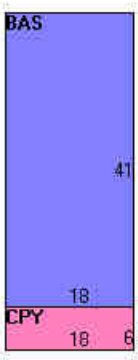
Building Attributes	
Field	**Description**
STYLE	Store
MODEL	Comm/Ind

Grade:	C-
Stories:	1
Occupancy:	1
Exterior Wall 1:	Brick
Exterior Wall 2:	Concr/CinderBl
Roof Struct:	Gable
Roof Cover:	Asphalt Shingl
Interior Wall 1:	Plaster
Interior Wall 2:	
Interior Floor 1:	Carpet
Interior Floor 2:	
Heating Fuel:	Oil
Heating Type:	Space Heater
AC Type:	None
CLT Use	Retail Store
Bldg Use:	Retail
Ttl Rooms:	
Ttl Bedrms:	
Ttl Baths:	
Ttl Half Baths:	
Ttl Xtra Fix:	
1st Floor Use:	
Heat/AC:	None
Frame Type:	Masonry
Baths/Plumbing:	None
Ceiling/Wall:	Ceil & Walls
Rooms/Prtns:	Average
Wall Height:	8
% Comn Wall:	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//\00\03\23

Building Layout



Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	217
Description	Retail
Zone	W1

Land Line Valuation

Size (Acres)	2.02
Depth	
Assessed Value	$964,400

Neighborhood 254F
Alt Land Appr No
Category

Appraised Value $964,400

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	Paving Asph			200 SF	$200	1
FN1	Fence, Chain	4	4 ft	30 LF	$200	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$33,400	$964,400	$997,800

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$33,400	$964,400	$997,800

2 BUTLER ST

Location	2 BUTLER ST	**Assessment**	$4,902,000
Mblu	15/ / 487/ /	**Appraisal**	$4,902,000
Acct#	01504870000	**PID**	10500
Owner	RIVERVIEW RETAIL LLC	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$3,442,600	$1,459,400	$4,902,000
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$3,442,600	$1,459,400	$4,902,000

Owner of Record

Owner	RIVERVIEW RETAIL LLC	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	10 MEMORIAL BLVD UNIT 901 PROVIDENCE, RI 02903	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built: 1959
Replacement Cost: $4,608,829
Building Percent Good: 69
Replacement Cost Less Depreciation: $3,180,100

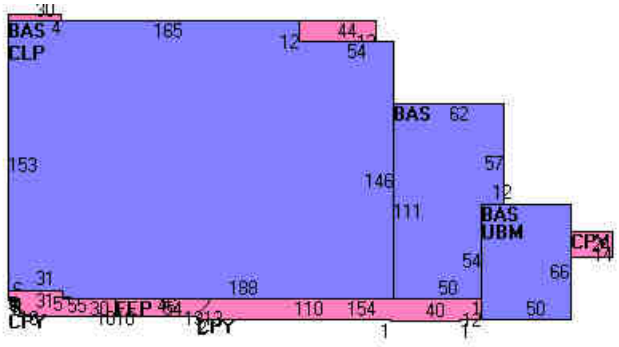
Building Attributes	
Field	**Description**
STYLE	Supermarket
MODEL	Comm/Ind
Grade:	A-

Stories:	1
Occupancy:	4
Exterior Wall 1:	Concr/CinderBl
Exterior Wall 2:	
Roof Struct:	Flat
Roof Cover:	Tar + Gravel
Interior Wall 1:	Plaster
Interior Wall 2:	
Interior Floor 1:	Carpet
Interior Floor 2:	
Heating Fuel:	Oil
Heating Type:	Forced Air
AC Type:	Central
CLT Use	Discount Store
Bldg Use:	Retail
Ttl Rooms:	
Ttl Bedrms:	
Ttl Baths:	
Ttl Half Baths:	
Ttl Xtra Fix:	
1st Floor Use:	
Heat/AC:	Heat/Ac Pkgs
Frame Type:	Wood Frame
Baths/Plumbing:	Average
Ceiling/Wall:	Ceil & Walls
Rooms/Prtns:	Average
Wall Height:	19
% Comn Wall:	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//default.jp

Building Layout



Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features				Legend
Code	**Description**	**Size**	**Value**	**Bldg #**
SPR1	Sprinklers-Wet	33799 SF	$63,000	1
SPR1	Sprinklers-Wet	10541 SF	$19,600	1

Land

Land Use

Use Code 217
Description Retail

Land Line Valuation

Size (Acres) 5.12
Depth

Zone	W1	**Assessed Value**	$1,459,400
Neighborhood	254F	**Appraised Value**	$1,459,400
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	Paving Asph			120000 SF	$120,000	1
PAV1	Paving Asph			30000 SF	$30,000	1
LT	Light	2	Double	12 UNITS	$21,200	1
FN1	Fence, Chain	4	4 ft	267 LF	$1,500	1
FN2	Fence, WD	4	4 ft	60 LF	$500	1
CNP	Canopy	NLT	No Lites	700 SF	$6,700	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$3,442,600	$1,459,400	$4,902,000

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$3,442,600	$1,459,400	$4,902,000

OFF GANO

Location	OFF GANO	**Assessment**	$273,900
Mblu	17/ / 8/ /	**Appraisal**	$273,900
Acct#	01700080000	**PID**	39575
Owner	CITY OF PROVIDENCE	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$12,000	$261,900	$273,900
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$12,000	$261,900	$273,900

Owner of Record

Owner	CITY OF PROVIDENCE	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	CITY HALL PROVIDENCE, RI 02903	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Vacant Land
Model	
Grade:	

Stories:	
Occupancy:	
Exterior Wall 1:	
Exterior Wall 2:	
Roof Structure:	
Roof Cover:	
Interior Wall 1:	
Interior Wall 2:	
Interior Floor 1	
Interior Floor 2	
Heat Fuel:	
Heat Type:	
AC Type	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs:	
Total Rooms	
Bath Style	
Kitchen Style:	
Total Kitchens	
Fireplaces	
Extra Openings	
Gas Fireplaces	
Parking	
CDU	
Bsmt Garages	
Fin Bsmt Area	
Rec Rm Area	
Rec Rm Type	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//default.jp

Building Layout

Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 920

Land Line Valuation

Size (Acres) 0.27

Description	Mun Lnd Com	**Depth**	
Zone	C2	**Assessed Value**	$261,900
Neighborhood	254F	**Appraised Value**	$261,900
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	Paving Asph			11975 SF	$12,000	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$12,000	$261,900	$273,900

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$12,000	$261,900	$273,900

101 GANO ST

Location	101 GANO ST	**Assessment**	$765,100
Mblu	17/ / 416/ /	**Appraisal**	$765,100
Acct#	01704160000	**PID**	41285
Owner	H V COLLINS COMPANY	**Building Count**	3

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$276,500	$488,600	$765,100
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$276,500	$488,600	$765,100

Owner of Record

Owner	H V COLLINS COMPANY	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	99 GANO ST PROVIDENCE, RI 02906-3822	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:	1900
Replacement Cost:	$138,763
Building Percent Good:	62
Replacement Cost Less Depreciation:	$86,000

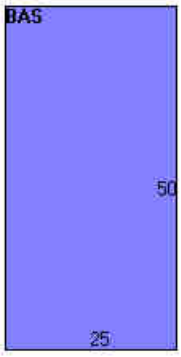
Building Attributes	
Field	**Description**
STYLE	Office Bldg
MODEL	Comm/Ind
Grade:	C

Stories:	1
Occupancy:	2
Exterior Wall 1:	Brick
Exterior Wall 2:	
Roof Struct:	Flat
Roof Cover:	Tar + Gravel
Interior Wall 1:	Plaster
Interior Wall 2:	
Interior Floor 1:	Carpet
Interior Floor 2:	
Heating Fuel:	Oil
Heating Type:	Forced Air
AC Type:	Central
CLT Use	Office Buildin
Bldg Use:	Office
Ttl Rooms:	
Ttl Bedrms:	
Ttl Baths:	
Ttl Half Baths:	
Ttl Xtra Fix:	
1st Floor Use:	
Heat/AC:	Heat/Ac Pkgs
Frame Type:	Wood Frame
Baths/Plumbing:	Average
Ceiling/Wall:	Ceil & Walls
Rooms/Prtns:	Average
Wall Height:	10
% Comn Wall:	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//\00\03\73

Building Layout



Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Building 2 : Section 1

Year Built: 1954
Replacement Cost: $221,781
Building Percent Good: 62
Replacement Cost Less Depreciation: $137,500

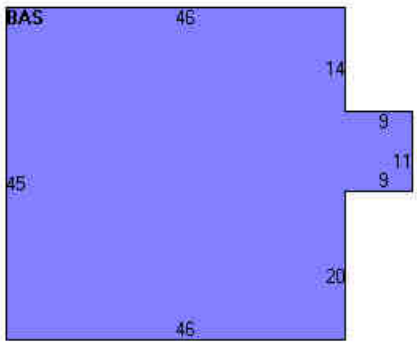
Building Attributes : Bldg 2 of 3	
Field	**Description**
STYLE	Office Bldg
MODEL	Comm/Ind
Grade:	C
Stories:	1

Occupancy:	2
Exterior Wall 1:	Concr/CinderBl
Exterior Wall 2:	
Roof Struct:	Flat
Roof Cover:	Tar + Gravel
Interior Wall 1:	Plaster
Interior Wall 2:	
Interior Floor 1:	Vinyl/Asphalt
Interior Floor 2:	
Heating Fuel:	Oil
Heating Type:	Forced Air
AC Type:	Central
CLT Use	Office Buildin
Bldg Use:	Office
Ttl Rooms:	
Ttl Bedrms:	
Ttl Baths:	
Ttl Half Baths:	
Ttl Xtra Fix:	
1st Floor Use:	
Heat/AC:	Heat/Ac Pkgs
Frame Type:	Masonry
Baths/Plumbing:	Average
Ceiling/Wall:	Ceil & Walls
Rooms/Prtns:	Average
Wall Height:	14
% Comn Wall:	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//default.jp

Building Layout



Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Building 3 : Section 1

Year Built: 1952
Replacement Cost: $78,427
Building Percent Good: 58
Replacement Cost Less Depreciation: $45,500

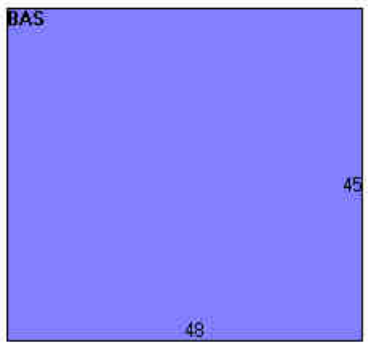
Building Attributes : Bldg 3 of 3	
Field	**Description**
STYLE	Warehouse
MODEL	Ind/Comm
Grade:	D
Stories:	1
Occupancy:	1

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//default.jp

Exterior Wall 1:	Pre-Finsh Metl
Exterior Wall 2:	
Roof Struct:	Gable
Roof Cover:	Metal/Tin
Interior Wall 1:	Typical
Interior Wall 2:	
Interior Floor 1:	Typical
Interior Floor 2:	
Heating Fuel:	None
Heating Type:	None
AC Type:	None
CLT Use	Warehouse/ Lt
Bldg Use:	Ind/Whs Mdl 96
Ttl Rooms:	
Ttl Bedrms:	
Ttl Baths:	
Ttl Half Baths:	
Ttl Xtra Fix:	
1st Floor Use:	
Heat/AC:	None
Frame Type:	Pre-Fab Metal
Baths/Plumbing:	Light
Ceiling/Wall:	None
Rooms/Prtns:	Average
Wall Height:	18
% Comn Wall:	

Building Layout



Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	218
Description	Office
Zone	C2
Neighborhood	257F
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	0.75
Depth	
Assessed Value	$488,600
Appraised Value	$488,600

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
FN1	Fence, Chain	4	4 ft	451 LF	$2,500	1
MS1	Miscellaneous			432 UNITS	$0	1
PAV1	Paving Asph			5000 SF	$5,000	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$276,500	$488,600	$765,100

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$276,500	$488,600	$765,100

Memorandum

Appendix F: Site Photographs

10 Dorrance Street
Suite 400
Providence, RI 02903
P 401.272.8100

Photos:

Photo #: 1 	Description: View of the start of Segment 1A, looking east towards the Seekonk River.
Photo #: 2 	Description: View of proposed bike path looking north. Area of proposed water crossing shown.
Photo #: 3 	Description: View of Gano Dog Park.

Photo #: 4 	Description: View of earthen berm, looking south, located to the east of Gano Park.
Photo #: 5 	Description: View of proposed bike path area, looking north, just south of the abandoned railroad tracks.
Photo #: 6 	Description: View of proposed bike path area, looking north, just north of the abandoned railroad tracks.

Photo #: 7 	Description: View of the proposed bike path behind Eastside Marketplace, looking south.
Photo #: 8 	Description: One of several manhole covers located in the general vicinity of the proposed bike path behind Eastside Marketplace.
Photo #: 9 	Description: View of proposed bike path, looking south, behind the EPOCH Senior Living Center.

Photo #: 10 	Description: Construction occurring at the proposed located where the bike path will turn north and follow Pitman Street.
Photo #: 11 	Description: Approximate location where the bike path will join with Pitman Street.
Photo #: 12 	Description: View of two transformers or electrical boxes located to the northwest of the roundabout at Richmond Square.

Memorandum

Appendix G: Laboratory Soil Data

10 Dorrance Street
Suite 400
Providence, RI 02903
P 401.272.8100

Soil Data Table
Blackstone River Bikeway - Segment 1A
Providence, RI
VHB Project No. 72017.01

Soil Sample Designation	RIDEM RDEC (mg/kg)	RIDEM I/CDEC (mg/kg)	GB Leachability	HA-1	HA-2	HA-3	HA-4	HA-5	HA-6	HA-7	Trip Blank
Sample Depth (ft.)				0.5-1.5'	0.5-1.5'	0.5-1.5'	0.5-1.5'	0.5-1.5'	0.5-1.5'	0.5-1.5'	-
Date Sampled				12/23/2014	12/23/2014	12/23/2014	12/23/2014	12/23/2014	12/23/2014	12/23/2014	-
RCRA 8 Metals (mg/kg)											
Arsenic	**7**	**7**	**NS**	**9.8**	ND <2.8	**5.2**	**5.5**	**4.7**	**12**	**21**	-
Barium	**5,500**	**10,000**	**NS**	**50**	**34**	**68**	**120**	**59**	**320**	**31**	-
Cadmium	**39**	**1,000**	**NS**	**0.46**	ND <0.28	**0.45**	**0.36**	ND <0.27	**1.5**	ND <0.27	-
Chromium	**390**	**10,000**	**NS**	**14**	**10**	**22**	**11**	**10**	**38**	**20**	-
Lead	**150**	**500**	**NS**	**130**	**63**	**180**	**500**	**110**	**510**	**22**	-
Mercury	**23**	**610**	**NS**	**0.19**	**0.15**	**0.5**	**0.44**	**0.29**	**2.7**	ND <0.093	-
Selenium	**390**	**10,000**	**NS**	ND <6.5	ND <5.16	ND <5.9	ND <5.6	ND <5.4	ND <5.7	ND <5.4	-
Silver	**200**	**10,000**	**NS**	**1.4**	ND <1.1	**1.7**	**1.3**	**1.4**	**3.9**	**1.5**	-
TCLP Metals (mg/L)											
Lead			**NS**	-	-	-	**0.53**	-	**3.8**	-	-
Semi-Volatile Organic Compounds (mg/kg)											
Acenaphthene	**43**	**10,000**	**NS**	ND <0.43	ND <0.38	-	ND <0.38	ND <0.36	-	ND <0.36	-
Acenaphthylene	**23**	**10,000**	**NS**	ND <0.43	ND <0.38	-	**0.42**	ND <0.36	-	ND <0.36	-
Anthracene	**35**	**10,000**	**NS**	ND <0.43	ND <0.38	-	**1.3**	ND <0.36	-	ND <0.36	-
Benzo(a)anthracene	**0.9**	**7.8**	**NS**	ND <0.43	ND <0.38	-	**3.5**	**0.78**	-	ND <0.36	-
Benzo(b)fluoranthene	**0.9**	**7.8**	**NS**	ND <0.43	**0.49**	-	**2.6**	**0.56**	-	ND <0.36	-
Benzo(k)fluoranthene	**0.9**	**78**	**NS**	ND <0.43	**0.44**	-	**2.4**	**0.66**	-	ND <0.36	-
Benzo(g,h,i)perylene	**0.8**	**10,000**	**NS**	ND <0.43	ND <0.38	-	**1.6**	**0.49**	-	ND <0.36	-
Benzo(a)pyrene	**0.4**	**0.8**	**NS**	ND <0.40	**0.43**	-	**2.8**	**0.78**	-	ND <0.36	-
Chrysene	**0.4**	**780**	**NS**	ND <0.40	**0.44**	-	**3.2**	**0.8**	-	ND <0.36	-
Dibenzo(a,h)anthracene	**0.4**	**0.8**	**NS**	ND <0.40	ND <0.38	-	**0.42**	ND <0.36	-	ND <0.36	-
Fluoranthene	**20**	**10,000**	**NS**	**0.71**	**0.65**	-	**7.5**	**1.6**	-	ND <0.36	-
Fluorene	**28**	**10,000**	**NS**	ND <0.43	ND <0.38	-	**0.38**	ND <0.36	-	ND <0.36	-
Indeno(1,2,3-cd)pyrene	**0.9**	**7.8**	**NS**	ND <0.43	ND <0.38	-	**1.5**	**0.46**	-	ND <0.36	-
2-Methylnaphthalene	**123**	**10,000**	**NS**	ND <0.43	ND <0.38	-	ND <0.38	ND <0.36	-	ND <0.36	-
Naphthalene	**54**	**10,000**	**NS**	ND <0.43	ND <0.38	-	ND <0.38	ND <0.36	-	ND <0.36	-
Phenanthrene	**40**	**10,000**	**NS**	ND <0.43	ND <0.38	-	**5.2**	**0.67**	-	ND <0.36	-
Pyrene	**13**	**10,000**	**NS**	**0.62**	**0.65**	-	**6.3**	**1.4**	-	ND <0.36	-
Total Petroleum Hydrocarbons (mg/kg)											
TPH	**500**	**2,500**	**NS**	**500**	-	**380**	-	**140**	-	-	-
Volatile Organic Compounds (mg/kg)											
Acetone	**7,800**	**10,000**	**NS**	ND <0.0509	-	ND <0.0475	-	-	-	ND <0.0418	ND <0.0500
Benzene	**2.5**	**200**	**4.3**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Bromodichloromethane	**10**	**92**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Bromoform	**81**	**720**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Bromomethane	**0.8**	**2900**	**NS**	ND <0.0102	-	ND <0.0095	-	-	-	ND <0.0084	ND <0.0100
Carbon Tetrachloride	**1.5**	**44**	**5.0**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Chlorobenzene	**210**	**10,000**	**100**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Dibromochloromethane	**7.6**	**68**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Chloroform	**1.2**	**940**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
1,2-Dibromo-3-Chloropropane	**0.5**	**4.1**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
1,2-Dichloropropane	**1.9**	**84**	**70**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Ethylbenzene	**71**	**10,000**	**62**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Isopropylbenzene	**27**	**10,000**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Methyl tert-Butyl Ether	**390**	**10,000**	**100**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Naphthalene	**54**	**10,000**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Styrene	**13**	**190**	**64**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Tetrachloroethene	**12**	**110**	**4.2**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Toluene	**190**	**10,000**	**54**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
Vinyl Chloride	**0.02**	**3**	**NS**	ND <0.0102	-	ND <0.0095	-	-	-	ND <0.0084	ND <0.0100
o-Xylene	**110**	**10,000**	**NS**	ND <0.0051	-	ND <0.0047	-	-	-	ND <0.0042	ND <0.0050
m,p-Xylene	**110**	**10,000**	**NS**	ND <0.0102	-	ND <0.0095	-	-	-	ND <0.0084	ND <0.0100
Pesticides (mg/kg)											
Chlorodane	**0.5**	**4.4**	**NS**	-	-	-	ND <0.4	-	ND <0.4	-	-
Dieldrin	**0.04**	**0.4**	**NS**	-	-	-	ND <0.04	-	ND <0.04	-	-
Polychlorinated Biphenyls (mg/kg)											
Aroclor-1016	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-
Aroclor-1221	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-
Aroclor-1232	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-
Aroclor-1242	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-
Aroclor-1248	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-
Aroclor-1254	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-
Aroclor-1260	**10**	**10**	**NS**	-	-	-	-	-	-	ND <0.1	-

Notes:

1. Units: mg/Kg (milligrams per kilogram) or mg/L (milligrams per liter) as noted.
2. RIDEM RDEC, I/CDEC and GB Groundwater Leachability as defined in Section 8.0 of the *Remediation Regulations.*
3. **Bold** indicates a concentration above the laboratory detection limits.
4. Lightly shaded indicates a concentration above RIDEM RDEC.
5. Dark shaded and underlined indicates a concentration above RIDEM I/CDEC.
6. *Italics* indicate a concentration above RIDEM GB Groundwater Leachability.
7. - Not Analyzed
8. NS - No Standard exists within the Remediation Regulations

R.I. ANALYTICAL
Specialists in Environmental Services

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Attn: Ms. Shelby Miller
10 Dorrance Street
Suite 400
Providence, RI 02903

Date Received: 12/23/2014
Date Reported: 1/6/2015
P.O. #:
Work Order #: 1412-28533

DESCRIPTION: PROJECT #72017.01 BRBW SEGMENT 1A

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory and a subcontracted laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate Of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.

Certification #: RI LAI0033, MA M-RI015, CT PH-0508, ME RI00015
NH 2537, NY 11726

If you have any questions regarding this work, or if we may be of further assistance, please contact us.

Approved by:

Data Reporting

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 001
SAMPLE DESCRIPTION: HA-2 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 06:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Semi-Volatile Organic Comp.						
Acenaphthene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Acenaphthylene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Anthracene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Benzidine	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Benzo(a)anthracene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Benzo(b)fluoranthene	0.49	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Benzo(k)fluoranthene	0.44	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Benzo(g,h,i)perylene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Benzo(a)pyrene	0.43	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Bis(2-chloroethyl)ether	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Bis(2-Chloroethoxy)methane	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Bis(2-Chloroisopropyl)Ether	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Bis(2-ethylhexyl)phthalate	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
4-Bromophenyl phenyl ether	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Butylbenzyl phthalate	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2-Chloronaphthalene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
4-Chlorophenyl phenyl ether	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Chrysene	0.44	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Dibenzo(a,h)anthracene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Di-n-butyl phthalate	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
1,2-Dichlorobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
1,3-Dichlorobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
1,4-Dichlorobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
3,3'-Dichlorobenzidine	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Diethyl phthalate	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Dimethyl phthalate	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,4-Dinitrotoluene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,6-Dinitrotoluene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Di-n-octyl phthalate	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
1,2-Diphenylhydrazine	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Fluoranthene	0.65	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Fluorene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Hexachlorobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Hexachlorobutadiene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Hexachlorocyclopentadiene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Hexachloroethane	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Indeno(1,2,3-cd)pyrene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Isophorone	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2-Methylnaphthalene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 001
SAMPLE DESCRIPTION: HA-2 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 06:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Naphthalene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Nitrobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
N-nitrosodimethylamine	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
N-nitrosodiphenylamine	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
N-nitrosodi-n-propylamine	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Phenanthrene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Pyrene	0.65	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
1,2,4-Trichlorobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
4-Chloro-3-methylphenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2-Chlorophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,4-Dichlorophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,4-Dimethylphenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2-Methyl-4,6-dinitrophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,4-Dinitrophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2-Nitrophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
4-Nitrophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Pentachlorophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Phenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,4,5-Trichlorophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,4,6-Trichlorophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
4-Chloroaniline	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Dibenzofuran	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2-Methyl Phenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
3 & 4-Methylphenols	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Aniline	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Acetophenone	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Azobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Surrogates			RANGE	SW-846 8270D	12/30/2014 15:21	KF
Phenol-d5	55		30-130%	SW-846 8270D	12/30/2014 15:21	KF
2-Fluorophenol	54		30-130%	SW-846 8270D	12/30/2014 15:21	KF
2,4,6-Tribromophenol	70		30-130%	SW-846 8270D	12/30/2014 15:21	KF
Nitrobenzene-d5	53		30-130%	SW-846 8270D	12/30/2014 15:21	KF
2-Fluorobiphenyl	54		30-130%	SW-846 8270D	12/30/2014 15:21	KF
P-Terphenyl-d14	59		30-130%	SW-846 8270D	12/30/2014 15:21	KF
Semi Extraction date				SW846 3546	12/29/2014 12:50	KS
Total Metals						
Arsenic	<2.8	2.8	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW
Barium	34	0.56	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW
Cadmium	<0.28	0.28	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW
Chromium	10	1.7	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 001
SAMPLE DESCRIPTION: HA-2 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 06:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Lead	63	2.2	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW
Mercury	0.15	0.11	mg/kg dry	SW-846 7471B	12/30/2014 14:48	JRW
Selenium	<5.6	5.6	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW
Silver	<1.1	1.1	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW
ICP Digestion				SW-846 3050B	12/29/2014 10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014 14:07	JRW
Moisture	12.7		%	SM2540 G.	12/24/2014 8:47	AK

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 002
SAMPLE DESCRIPTION: HA-1 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
TPH						
TPH GC/FID	500	390	mg/kg dry	SW846 8100M	12/25/2014 1:00	KD
Surrogate			RANGE	SW-846 8100M	12/25/2014 1:00	KD
2-Fluorobiphenyl	127		40-140%	SW-846 8100M	12/25/2014 1:00	KD
Moisture	23.3		%	SM2540 G.	12/24/2014 8:47	AK
PAH						
Naphthalene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Acenaphthylene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Acenaphthene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Fluorene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Phenanthrene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Anthracene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Fluoranthene	0.71	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Pyrene	0.62	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Benzo(a)anthracene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Chrysene	<0.40	0.40	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Benzo(b)fluoranthene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Benzo(k)fluoranthene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Benzo(a)pyrene	<0.40	0.40	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Indeno(1,2,3-cd)pyrene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Dibenzo(a,h)anthracene	<0.40	0.40	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Benzo(g,h,i)perylene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
2-Methylnaphthalene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Moisture	23.3		%	SM2540 G.	12/24/2014 8:47	AK
Surrogates			RANGE	SW-846 8270D	12/30/2014 15:51	KF
Nitrobenzene-d5	44		30-130%	SW-846 8270D	12/30/2014 15:51	KF
2-Fluorobiphenyl	43		30-130%	SW-846 8270D	12/30/2014 15:51	KF
P-Terphenyl-d14	41		30-130%	SW-846 8270D	12/30/2014 15:51	KF
Semi Extraction date				SW846 3546	12/29/2014 12:50	KS
Total Metals						
Arsenic	9.8	3.2	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW
Barium	50	0.65	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW
Cadmium	0.46	0.32	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW
Chromium	14	2.0	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW
Lead	130	2.6	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW
Mercury	0.19	0.11	mg/kg dry	SW-846 7471B	12/30/2014 14:50	JRW
Selenium	<6.5	6.5	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW
Silver	1.4	1.3	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 002
SAMPLE DESCRIPTION: HA-1 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
ICP Digestion	49.75			SW-846 3050B	12/29/2014 10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014 14:07	JRW
Volatile Organic Compounds						
Acetone	<0.0509	0.0509	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Tertiary Amyl Methyl Ether	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Benzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Bromobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Bromochloromethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Bromodichloromethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Bromoform	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Bromomethane	<0.0102	0.0102	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Sec-butylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
n-Butylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
tert-Butylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Carbon Disulfide	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Carbon Tetrachloride	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Chlorobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Dibromochloromethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Chloroethane	<0.0102	0.0102	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Chloroform	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Chloromethane	<0.0102	0.0102	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
2-Chlorotoluene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
4-Chlorotoluene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2-Dibromo-3-Chloropropane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2-Dibromoethane(EDB)	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Dibromomethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,3-Dichlorobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2-Dichlorobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,4-Dichlorobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
n-Propylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Dichlorodifluoromethane	<0.0102	0.0102	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1-Dichloroethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2-Dichloroethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1-Dichloroethene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
cis-1,2-Dichloroethene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
trans-1,2-Dichloroethylene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2-Dichloropropane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,3-Dichloropropane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
2,2-Dichloropropane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1-Dichloropropene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 002
SAMPLE DESCRIPTION: HA-1 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
cis-1,3-Dichloropropene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
trans-1,3-Dichloropropylene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Diethyl ether	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Diisopropyl Ether (DIPE)	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,4-Dioxane	<0.102	0.102	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Ethyl Tertiary Butyl Ether	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Ethylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Hexachlorobutadiene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
2-Hexanone	<0.0509	0.0509	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Isopropylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
p-Isopropyltoluene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
2-Butanone(MEK)	<0.0509	0.0509	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
4-Methyl-2-pentanone(MIBK)	<0.0509	0.0509	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
MTBE	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Methylene Chloride	<0.0255	0.0255	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Naphthalene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1,2-Trichloroethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Styrene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1,1,2-Tetrachloroethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1,2,2-Tetrachloroethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Tetrachloroethene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Tetrahydrofuran	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Toluene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2,4-Trichlorobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2,3-Trichlorobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1,1-Trichloroethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Trichloroethene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Trichlorofluoromethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2,3-Trichloropropane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2,4-Trimethylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,3,5-Trimethylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Vinyl Chloride	<0.0102	0.0102	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
o-Xylene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
m,p-Xylene	<0.0102	0.0102	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Surrogates			RANGE	5035/8260C	12/24/2014 18:45	*ET
Dibromofluoromethane	116		70-130%	5035/8260C	12/24/2014 18:45	*ET
Toluene-d8	105		70-130%	5035/8260C	12/24/2014 18:45	*ET
4-Bromofluorobenzene	90		70-130%	5035/8260C	12/24/2014 18:45	*ET
1,2 Dichloroethane-d4	140		70-130%	5035/8260C	12/24/2014 18:45	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 003
SAMPLE DESCRIPTION: HA-3 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
TPH						
TPH GC/FID	380	350	mg/kg dry	SW846 8100M	12/25/2014 1:47	KD
Surrogate			RANGE	SW-846 8100M	12/25/2014 1:47	KD
2-Fluorobiphenyl	132		40-140%	SW-846 8100M	12/25/2014 1:47	KD
Moisture	15.1		%	SM2540 G.	12/24/2014 8:47	AK
Total Metals						
Arsenic	5.2	2.9	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
Barium	68	0.59	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
Cadmium	0.45	0.29	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
Chromium	22	1.8	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
Lead	180	2.4	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
Mercury	0.50	0.10	mg/kg dry	SW-846 7471B	12/30/2014 14:54	JRW
Selenium	<5.9	5.9	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
Silver	1.7	1.2	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
ICP Digestion	50.00			SW-846 3050B	12/29/2014 10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014 14:07	JRW
Volatile Organic Compounds						
Acetone	<0.0475	0.0475	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Tertiary Amyl Methyl Ether	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Benzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Bromobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Bromochloromethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Bromodichloromethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Bromoform	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Bromomethane	<0.0095	0.0095	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Sec-butylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
n-Butylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
tert-Butylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Carbon Disulfide	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Carbon Tetrachloride	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Chlorobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Dibromochloromethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Chloroethane	<0.0095	0.0095	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Chloroform	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Chloromethane	<0.0095	0.0095	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
2-Chlorotoluene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
4-Chlorotoluene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2-Dibromo-3-Chloropropane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 003
SAMPLE DESCRIPTION: HA-3 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
1,2-Dibromoethane(EDB)	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Dibromomethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,3-Dichlorobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2-Dichlorobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,4-Dichlorobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
n-Propylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Dichlorodifluoromethane	<0.0095	0.0095	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,1-Dichloroethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2-Dichloroethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,1-Dichloroethene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
cis-1,2-Dichloroethene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
trans-1,2-Dichloroethylene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2-Dichloropropane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,3-Dichloropropane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
2,2-Dichloropropane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,1-Dichloropropene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
cis-1,3-Dichloropropene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
trans-1,3-Dichloropropylene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Diethyl ether	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Diisopropyl Ether (DIPE)	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,4-Dioxane	<0.0950	0.0950	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Ethyl Tertiary Butyl Ether	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Ethylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Hexachlorobutadiene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
2-Hexanone	<0.0475	0.0475	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Isopropylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
p-Isopropyltoluene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
2-Butanone(MEK)	<0.0475	0.0475	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
4-Methyl-2-pentanone(MIBK)	<0.0475	0.0475	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
MTBE	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Methylene Chloride	<0.0237	0.0237	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Naphthalene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,1,2-Trichloroethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Styrene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,1,1,2-Tetrachloroethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,1,2,2-Tetrachloroethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Tetrachloroethene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Tetrahydrofuran	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Toluene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2,4-Trichlorobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2,3-Trichlorobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 003
SAMPLE DESCRIPTION: HA-3 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
1,1,1-Trichloroethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Trichloroethene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Trichlorofluoromethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2,3-Trichloropropane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2,4-Trimethylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,3,5-Trimethylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Vinyl Chloride	<0.0095	0.0095	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
o-Xylene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
m,p-Xylene	<0.0095	0.0095	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Surrogates			RANGE	5035/8260C	12/26/2014 13:43	*ET
Dibromofluoromethane	96		70-130%	5035/8260C	12/26/2014 13:43	*ET
Toluene-d8	105		70-130%	5035/8260C	12/26/2014 13:43	*ET
4-Bromofluorobenzene	86		70-130%	5035/8260C	12/26/2014 13:43	*ET
1,2 Dichloroethane-d4	111		70-130%	5035/8260C	12/26/2014 13:43	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 004
SAMPLE DESCRIPTION: HA-4 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED		ANALYST
Pesticides							
Aldrin	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Alpha-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Beta-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Delta-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Gamma-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Chlordane	<0.4	0.4	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
4-4'-DDD	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
4-4'-DDE	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
4-4'-DDT	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Dieldrin	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Endosulfan I	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Endosulfan II	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Endosulfan Sulfate	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Endrin	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Endrin Aldehyde	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Endrin Ketone	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Heptachlor	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Heptachlor epoxide	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Methoxychlor	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Toxaphene	<0.4	0.4	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Moisture	11.8		%	SM2540 G.	12/24/2014	8:47	AK
Surrogate			RANGE	SW-846 8081B	1/2/2015	14:05	JEB
Tetrachloro-m-xylene (TCMX)	70		30-150%	SW-846 8081B	1/2/2015	14:05	JEB
Decachlorobiphenyl	30		30-150%	SW-846 8081B	1/2/2015	14:05	JEB
Pest/PCB Extraction date	Extracted			SW846 3546	12/29/2014	11:55	KS
PAH							
Naphthalene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Acenaphthylene	0.42	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Acenaphthene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Fluorene	0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Phenanthrene	5.2	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Anthracene	1.3	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Fluoranthene	7.5	0.75	mg/kg dry	SW-846 8270D	12/31/2014	16:28	KF
Pyrene	6.3	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Benzo(a)anthracene	3.5	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Chrysene	3.2	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Benzo(b)fluoranthene	2.6	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Benzo(k)fluoranthene	2.4	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 004
SAMPLE DESCRIPTION: HA-4 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Benzo(a)pyrene	2.8	0.38	mg/kg dry	SW-846 8270D	12/30/2014 16:23	KF
Indeno(1,2,3-cd)pyrene	1.5	0.38	mg/kg dry	SW-846 8270D	12/30/2014 16:23	KF
Dibenzo(a,h)anthracene	0.42	0.38	mg/kg dry	SW-846 8270D	12/30/2014 16:23	KF
Benzo(g,h,i)perylene	1.6	0.38	mg/kg dry	SW-846 8270D	12/30/2014 16:23	KF
2-Methylnaphthalene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 16:23	KF
Moisture	11.8		%	SM2540 G.	12/24/2014 8:47	AK
Surrogates			RANGE	SW-846 8270D	12/30/2014 16:23	KF
Nitrobenzene-d5	36		30-130%	SW-846 8270D	12/30/2014 16:23	KF
2-Fluorobiphenyl	37		30-130%	SW-846 8270D	12/30/2014 16:23	KF
P-Terphenyl-d14	38		30-130%	SW-846 8270D	12/30/2014 16:23	KF
Semi Extraction date				SW846 3546	12/29/2014 12:50	KS
Total Metals						
Arsenic	5.5	2.8	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
Barium	120	0.56	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
Cadmium	0.36	0.28	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
Chromium	11	1.7	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
Lead	500	2.2	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
Mercury	0.44	0.098	mg/kg dry	SW-846 7471B	12/30/2014 14:56	JRW
Selenium	<5.6	5.6	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
Silver	1.3	1.1	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
ICP Digestion	49.50			SW-846 3050B	12/29/2014 10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014 14:07	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 005
SAMPLE DESCRIPTION: HA-7 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Semi-Volatile Organic Comp.						
Acenaphthene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Acenaphthylene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Anthracene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Benzidine	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Benzo(a)anthracene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Benzo(b)fluoranthene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Benzo(k)fluoranthene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Benzo(g,h,i)perylene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Benzo(a)pyrene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Bis(2-chloroethyl)ether	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Bis(2-Chloroethoxy)methane	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Bis(2-Chloroisopropyl)Ether	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Bis(2-ethylhexyl)phthalate	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
4-Bromophenyl phenyl ether	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Butylbenzyl phthalate	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2-Chloronaphthalene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
4-Chlorophenyl phenyl ether	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Chrysene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Dibenzo(a,h)anthracene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Di-n-butyl phthalate	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
1,2-Dichlorobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
1,3-Dichlorobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
1,4-Dichlorobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
3,3'-Dichlorobenzidine	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Diethyl phthalate	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Dimethyl phthalate	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,4-Dinitrotoluene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,6-Dinitrotoluene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Di-n-octyl phthalate	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
1,2-Diphenylhydrazine	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Fluoranthene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Fluorene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Hexachlorobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Hexachlorobutadiene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Hexachlorocyclopentadiene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Hexachloroethane	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Indeno(1,2,3-cd)pyrene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Isophorone	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2-Methylnaphthalene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 005
SAMPLE DESCRIPTION: HA-7 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Naphthalene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Nitrobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
N-nitrosodimethylamine	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
N-nitrosodiphenylamine	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
N-nitrosodi-n-propylamine	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Phenanthrene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Pyrene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
1,2,4-Trichlorobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
4-Chloro-3-methylphenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2-Chlorophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,4-Dichlorophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,4-Dimethylphenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2-Methyl-4,6-dinitrophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,4-Dinitrophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2-Nitrophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
4-Nitrophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Pentachlorophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Phenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,4,5-Trichlorophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,4,6-Trichlorophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
4-Chloroaniline	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Dibenzofuran	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2-Methyl Phenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
3 & 4-Methylphenols	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Aniline	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Acetophenone	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Azobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Surrogates			RANGE	SW-846 8270D	12/30/2014 16:54	KF
Phenol-d5	79		30-130%	SW-846 8270D	12/30/2014 16:54	KF
2-Fluorophenol	79		30-130%	SW-846 8270D	12/30/2014 16:54	KF
2,4,6-Tribromophenol	103		30-130%	SW-846 8270D	12/30/2014 16:54	KF
Nitrobenzene-d5	79		30-130%	SW-846 8270D	12/30/2014 16:54	KF
2-Fluorobiphenyl	79		30-130%	SW-846 8270D	12/30/2014 16:54	KF
P-Terphenyl-d14	91		30-130%	SW-846 8270D	12/30/2014 16:54	KF
Semi Extraction date				SW846 3546	12/29/2014 12:50	KS
Total Metals						
Arsenic	21	2.7	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW
Barium	31	0.54	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW
Cadmium	<0.27	0.27	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW
Chromium	20	1.6	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 005
SAMPLE DESCRIPTION: HA-7 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Lead	22	2.1	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW
Mercury	<0.093	0.093	mg/kg dry	SW-846 7471B	12/30/2014 14:57	JRW
Selenium	<5.4	5.4	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW
Silver	1.5	1.1	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW
ICP Digestion	49.75			SW-846 3050B	12/29/2014 10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014 14:07	JRW
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Aroclor-1254	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Surrogate			RANGE	SW-846 8082A	12/30/2014 12:42	KD
Tetrachloro-m-xylene (TCMX)	60		30-150%	SW-846 8082A	12/30/2014 12:42	KD
Decachlorobiphenyl	71		30-150%	SW-846 8082A	12/30/2014 12:42	KD
Extraction date				SW846 3546	12/29/2014 11:55	KS
Moisture	7.0		%	SM2540 G.	12/24/2014 8:47	AK
Volatile Organic Compounds						
Acetone	<0.0418	0.0418	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Tertiary Amyl Methyl Ether	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Benzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Bromobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Bromochloromethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Bromodichloromethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Bromoform	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Bromomethane	<0.0084	0.0084	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Sec-butylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
n-Butylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
tert-Butylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Carbon Disulfide	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Carbon Tetrachloride	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Chlorobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Dibromochloromethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Chloroethane	<0.0084	0.0084	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Chloroform	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Chloromethane	<0.0084	0.0084	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
2-Chlorotoluene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 005
SAMPLE DESCRIPTION: HA-7 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
4-Chlorotoluene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2-Dibromo-3-Chloropropane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2-Dibromoethane(EDB)	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Dibromomethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,3-Dichlorobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2-Dichlorobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,4-Dichlorobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
n-Propylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Dichlorodifluoromethane	<0.0084	0.0084	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1-Dichloroethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2-Dichloroethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1-Dichloroethene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
cis-1,2-Dichloroethene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
trans-1,2-Dichloroethylene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2-Dichloropropane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,3-Dichloropropane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
2,2-Dichloropropane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1-Dichloropropene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
cis-1,3-Dichloropropene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
trans-1,3-Dichloropropylene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Diethyl ether	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Diisopropyl Ether (DIPE)	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,4-Dioxane	<0.0837	0.0837	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Ethyl Tertiary Butyl Ether	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Ethylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Hexachlorobutadiene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
2-Hexanone	<0.0418	0.0418	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Isopropylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
p-Isopropyltoluene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
2-Butanone(MEK)	<0.0418	0.0418	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
4-Methyl-2-pentanone(MIBK)	<0.0418	0.0418	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
MTBE	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Methylene Chloride	<0.0209	0.0209	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Naphthalene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1,2-Trichloroethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Styrene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1,1,2-Tetrachloroethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1,2,2-Tetrachloroethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Tetrachloroethene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Tetrahydrofuran	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Toluene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 005
SAMPLE DESCRIPTION: HA-7 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
1,2,4-Trichlorobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2,3-Trichlorobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1,1-Trichloroethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Trichloroethene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Trichlorofluoromethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2,3-Trichloropropane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2,4-Trimethylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,3,5-Trimethylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Vinyl Chloride	<0.0084	0.0084	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
o-Xylene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
m,p-Xylene	<0.0084	0.0084	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Surrogates			RANGE	5035/8260C	12/26/2014 14:40	*ET
Dibromofluoromethane	100		70-130%	5035/8260C	12/26/2014 14:40	*ET
Toluene-d8	102		70-130%	5035/8260C	12/26/2014 14:40	*ET
4-Bromofluorobenzene	92		70-130%	5035/8260C	12/26/2014 14:40	*ET
1,2 Dichloroethane-d4	117		70-130%	5035/8260C	12/26/2014 14:40	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 006
SAMPLE DESCRIPTION: HA-6 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 08:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED		ANALYST
Pesticides							
Aldrin	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Alpha-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Beta-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Delta-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Gamma-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Chlordane	<0.4	0.4	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
4-4'-DDD	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
4-4'-DDE	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
4-4'-DDT	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Dieldrin	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Endosulfan I	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Endosulfan II	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Endosulfan Sulfate	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Endrin	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Endrin Aldehyde	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Endrin Ketone	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Heptachlor	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Heptachlor epoxide	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Methoxychlor	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Toxaphene	<0.4	0.4	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Moisture	12.1		%	SM2540 G.	12/24/2014	8:33	AK
Surrogate			RANGE	SW-846 8081B	1/2/2015	14:42	JEB
Tetrachloro-m-xylene (TCMX)	60		30-150%	SW-846 8081B	1/2/2015	14:42	JEB
Decachlorobiphenyl	30		30-150%	SW-846 8081B	1/2/2015	14:42	JEB
Pest/PCB Extraction date	Extracted			SW846 3546	12/29/2014	11:55	KS
Total Metals							
Arsenic	12	2.8	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
Barium	320	0.57	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
Cadmium	1.5	0.28	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
Chromium	38	1.7	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
Lead	510	2.3	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
Mercury	2.7	1.1	mg/kg dry	SW-846 7471B	12/30/2014	15:11	JRW
Selenium	<5.7	5.7	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
Silver	3.9	1.1	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
ICP Digestion	49.75			SW-846 3050B	12/29/2014	10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014	14:07	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 007
SAMPLE DESCRIPTION: HA-5 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 08:08

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
TPH						
TPH GC/FID	140	130	mg/kg dry	SW846 8100M	12/25/2014 3:20	KD
Surrogate			RANGE	SW-846 8100M	12/25/2014 3:20	KD
2-Fluorobiphenyl	103		40-140%	SW-846 8100M	12/25/2014 3:20	KD
Moisture	8.8		%	SM2540 G.	12/24/2014 8:33	AK
PAH						
Naphthalene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Acenaphthylene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Acenaphthene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Fluorene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Phenanthrene	0.67	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Anthracene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Fluoranthene	1.6	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Pyrene	1.4	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Benzo(a)anthracene	0.78	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Chrysene	0.80	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Benzo(b)fluoranthene	0.56	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Benzo(k)fluoranthene	0.66	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Benzo(a)pyrene	0.78	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Indeno(1,2,3-cd)pyrene	0.46	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Dibenzo(a,h)anthracene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Benzo(g,h,i)perylene	0.49	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
2-Methylnaphthalene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Moisture	8.8		%	SM2540 G.	12/24/2014 8:33	AK
Surrogates			RANGE	SW-846 8270D	12/30/2014 17:25	KF
Nitrobenzene-d5	62		30-130%	SW-846 8270D	12/30/2014 17:25	KF
2-Fluorobiphenyl	62		30-130%	SW-846 8270D	12/30/2014 17:25	KF
P-Terphenyl-d14	68		30-130%	SW-846 8270D	12/30/2014 17:25	KF
Semi Extraction date				SW846 3546	12/29/2014 12:50	KS
Total Metals						
Arsenic	4.7	2.7	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW
Barium	59	0.54	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW
Cadmium	<0.27	0.27	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW
Chromium	10	1.6	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW
Lead	110	2.2	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW
Mercury	0.29	0.098	mg/kg dry	SW-846 7471B	12/30/2014 15:00	JRW
Selenium	<5.4	5.4	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW
Silver	1.4	1.1	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 007
SAMPLE DESCRIPTION: HA-5 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 08:08

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
ICP Digestion	49.26			SW-846 3050B	12/29/2014 10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014 14:07	JRW

Low Level 5035 analyzed by ESS Laboratory.

CERTIFICATE OF ANALYSIS

Data Reporting
RI Analytical Laboratories, Inc.
41 Illinois Avenue
Warwick, RI 02888

RE: RIAL Sampling (1412-28533)
ESS Laboratory Work Order Number: 1412500

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

REVIEWED
By ESS Laboratory at 11:33 am, Dec 31, 2014

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 NELAC Standards, A2LA 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: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

SAMPLE RECEIPT

The following samples were received on December 23, 2014 for the analyses specified on the enclosed Chain of Custody Record.

Low Level VOA vials were frozen by ESS Laboratory on December 23, 2014 at 17:35.

Lab Number	Sample Name	Matrix	Analysis
1412500-01	1412-28533-002	Soil	8260B Low
1412500-02	1412-28533-003	Soil	8260B Low
1412500-03	1412-28533-005	Soil	8260B Low
1412500-04	1412-28533-008	Soil	8260B Low

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

PROJECT NARRATIVE

5035/8260B Volatile Organic Compounds / Low Level

1412500-01	**Surrogate recovery(ies) above upper control limit (S+).**
	1,2-Dichloroethane-d4 (140% @ 70-130%)
CXL0357-CCV1	**Continuing Calibration recovery is above upper control limit (C+).**
	1,4-Dioxane (178% @ 70-130%)
CXL0372-CCV1	**Continuing Calibration recovery is above upper control limit (C+).**
	1,4-Dioxane (191% @ 70-130%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

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
8015D - 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 and Graphite Furnace Digestion
3020A - Aqueous 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

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-002
Date Sampled: 12/23/14 07:00
Percent Solids: 77
Initial Volume: 6.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,1,1-Trichloroethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,1,2,2-Tetrachloroethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,1,2-Trichloroethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,1-Dichloroethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,1-Dichloroethene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,1-Dichloropropene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2,3-Trichlorobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2,3-Trichloropropane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2,4-Trichlorobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2,4-Trimethylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2-Dibromo-3-Chloropropane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2-Dibromoethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2-Dichlorobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2-Dichloroethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2-Dichloropropane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,3,5-Trimethylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,3-Dichlorobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,3-Dichloropropane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,4-Dichlorobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,4-Dioxane	ND (0.102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1-Chlorohexane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
2,2-Dichloropropane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
2-Butanone	ND (0.0509)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
2-Chlorotoluene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
2-Hexanone	ND (0.0509)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
4-Chlorotoluene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
4-Isopropyltoluene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
4-Methyl-2-Pentanone	ND (0.0509)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Acetone	ND (0.0509)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Benzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-002
Date Sampled: 12/23/14 07:00
Percent Solids: 77
Initial Volume: 6.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Bromochloromethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Bromodichloromethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Bromoform	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Bromomethane	ND (0.0102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Carbon Disulfide	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Carbon Tetrachloride	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Chlorobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Chloroethane	ND (0.0102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Chloroform	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Chloromethane	ND (0.0102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
cis-1,2-Dichloroethene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
cis-1,3-Dichloropropene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Dibromochloromethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Dibromomethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Dichlorodifluoromethane	ND (0.0102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Diethyl Ether	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Di-isopropyl ether	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Ethyl tertiary-butyl ether	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Ethylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Hexachlorobutadiene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Isopropylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Methyl tert-Butyl Ether	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Methylene Chloride	ND (0.0255)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Naphthalene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
n-Butylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
n-Propylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
sec-Butylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Styrene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
tert-Butylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Tertiary-amyl methyl ether	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-002
Date Sampled: 12/23/14 07:00
Percent Solids: 77
Initial Volume: 6.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrachloroethene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Tetrahydrofuran	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Toluene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
trans-1,2-Dichloroethene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
trans-1,3-Dichloropropene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Trichloroethene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Trichlorofluoromethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Vinyl Acetate	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Vinyl Chloride	ND (0.0102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Xylene O	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Xylene P,M	ND (0.0102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Xylenes (Total)	ND (0.0102)		8260B Low		1	12/24/14 18:45		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*140 %*	*S+*	*70-130*
Surrogate: 4-Bromofluorobenzene	*90 %*		*70-130*
Surrogate: Dibromofluoromethane	*116 %*		*70-130*
Surrogate: Toluene-d8	*105 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-003
Date Sampled: 12/23/14 07:15
Percent Solids: 85
Initial Volume: 6.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,1,1-Trichloroethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,1,2,2-Tetrachloroethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,1,2-Trichloroethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,1-Dichloroethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,1-Dichloroethene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,1-Dichloropropene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2,3-Trichlorobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2,3-Trichloropropane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2,4-Trichlorobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2,4-Trimethylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2-Dibromo-3-Chloropropane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2-Dibromoethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2-Dichlorobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2-Dichloroethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2-Dichloropropane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,3,5-Trimethylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,3-Dichlorobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,3-Dichloropropane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,4-Dichlorobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,4-Dioxane	ND (0.0950)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1-Chlorohexane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
2,2-Dichloropropane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
2-Butanone	ND (0.0475)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
2-Chlorotoluene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
2-Hexanone	ND (0.0475)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
4-Chlorotoluene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
4-Isopropyltoluene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
4-Methyl-2-Pentanone	ND (0.0475)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Acetone	ND (0.0475)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Benzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-003
Date Sampled: 12/23/14 07:15
Percent Solids: 85
Initial Volume: 6.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Bromochloromethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Bromodichloromethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Bromoform	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Bromomethane	ND (0.0095)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Carbon Disulfide	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Carbon Tetrachloride	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Chlorobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Chloroethane	ND (0.0095)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Chloroform	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Chloromethane	ND (0.0095)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
cis-1,2-Dichloroethene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
cis-1,3-Dichloropropene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Dibromochloromethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Dibromomethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Dichlorodifluoromethane	ND (0.0095)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Diethyl Ether	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Di-isopropyl ether	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Ethyl tertiary-butyl ether	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Ethylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Hexachlorobutadiene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Isopropylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Methyl tert-Butyl Ether	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Methylene Chloride	ND (0.0237)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Naphthalene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
n-Butylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
n-Propylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
sec-Butylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Styrene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
tert-Butylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Tertiary-amyl methyl ether	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-003
Date Sampled: 12/23/14 07:15
Percent Solids: 85
Initial Volume: 6.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrachloroethene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Tetrahydrofuran	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Toluene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
trans-1,2-Dichloroethene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
trans-1,3-Dichloropropene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Trichloroethene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Trichlorofluoromethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Vinyl Acetate	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Vinyl Chloride	ND (0.0095)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Xylene O	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Xylene P,M	ND (0.0095)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Xylenes (Total)	ND (0.0095)		8260B Low		1	12/26/14 13:43		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*111 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*86 %*		*70-130*
Surrogate: Dibromofluoromethane	*96 %*		*70-130*
Surrogate: Toluene-d8	*105 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-005
Date Sampled: 12/23/14 07:50
Percent Solids: 83
Initial Volume: 7.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,1,1-Trichloroethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,1,2,2-Tetrachloroethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,1,2-Trichloroethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,1-Dichloroethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,1-Dichloroethene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,1-Dichloropropene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2,3-Trichlorobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2,3-Trichloropropane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2,4-Trichlorobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2,4-Trimethylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2-Dibromo-3-Chloropropane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2-Dibromoethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2-Dichlorobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2-Dichloroethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2-Dichloropropane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,3,5-Trimethylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,3-Dichlorobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,3-Dichloropropane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,4-Dichlorobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,4-Dioxane	ND (0.0837)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1-Chlorohexane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
2,2-Dichloropropane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
2-Butanone	ND (0.0418)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
2-Chlorotoluene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
2-Hexanone	ND (0.0418)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
4-Chlorotoluene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
4-Isopropyltoluene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
4-Methyl-2-Pentanone	ND (0.0418)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Acetone	ND (0.0418)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Benzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-005
Date Sampled: 12/23/14 07:50
Percent Solids: 83
Initial Volume: 7.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Bromochloromethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Bromodichloromethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Bromoform	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Bromomethane	ND (0.0084)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Carbon Disulfide	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Carbon Tetrachloride	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Chlorobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Chloroethane	ND (0.0084)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Chloroform	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Chloromethane	ND (0.0084)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
cis-1,2-Dichloroethene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
cis-1,3-Dichloropropene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Dibromochloromethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Dibromomethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Dichlorodifluoromethane	ND (0.0084)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Diethyl Ether	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Di-isopropyl ether	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Ethyl tertiary-butyl ether	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Ethylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Hexachlorobutadiene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Isopropylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Methyl tert-Butyl Ether	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Methylene Chloride	ND (0.0209)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Naphthalene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
n-Butylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
n-Propylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
sec-Butylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Styrene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
tert-Butylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Tertiary-amyl methyl ether	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-005
Date Sampled: 12/23/14 07:50
Percent Solids: 83
Initial Volume: 7.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrachloroethene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Tetrahydrofuran	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Toluene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
trans-1,2-Dichloroethene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
trans-1,3-Dichloropropene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Trichloroethene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Trichlorofluoromethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Vinyl Acetate	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Vinyl Chloride	ND (0.0084)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Xylene O	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Xylene P,M	ND (0.0084)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Xylenes (Total)	ND (0.0084)		8260B Low		1	12/26/14 14:40		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*117 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*92 %*		*70-130*
Surrogate: Dibromofluoromethane	*100 %*		*70-130*
Surrogate: Toluene-d8	*102 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-008
Date Sampled: 12/23/14 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-04
Sample Matrix: Soil
Units: mg/kg
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,1,1-Trichloroethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,1,2,2-Tetrachloroethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,1,2-Trichloroethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,1-Dichloroethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,1-Dichloroethene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,1-Dichloropropene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2,3-Trichlorobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2,3-Trichloropropane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2,4-Trichlorobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2,4-Trimethylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2-Dibromoethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2-Dichlorobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2-Dichloroethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2-Dichloropropane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,3,5-Trimethylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,3-Dichlorobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,3-Dichloropropane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,4-Dichlorobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,4-Dioxane	ND (0.100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1-Chlorohexane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
2,2-Dichloropropane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
2-Butanone	ND (0.0500)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
2-Chlorotoluene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
2-Hexanone	ND (0.0500)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
4-Chlorotoluene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
4-Isopropyltoluene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
4-Methyl-2-Pentanone	ND (0.0500)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Acetone	ND (0.0500)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Benzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-008
Date Sampled: 12/23/14 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-04
Sample Matrix: Soil
Units: mg/kg
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Bromochloromethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Bromodichloromethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Bromoform	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Bromomethane	ND (0.0100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Carbon Disulfide	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Carbon Tetrachloride	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Chlorobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Chloroethane	ND (0.0100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Chloroform	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Chloromethane	ND (0.0100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
cis-1,2-Dichloroethene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
cis-1,3-Dichloropropene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Dibromochloromethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Dibromomethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Dichlorodifluoromethane	ND (0.0100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Diethyl Ether	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Di-isopropyl ether	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Ethyl tertiary-butyl ether	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Ethylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Hexachlorobutadiene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Isopropylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Methyl tert-Butyl Ether	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Methylene Chloride	ND (0.0250)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Naphthalene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
n-Butylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
n-Propylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
sec-Butylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Styrene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
tert-Butylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Tertiary-amyl methyl ether	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-008
Date Sampled: 12/23/14 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-04
Sample Matrix: Soil
Units: mg/kg
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrachloroethene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Tetrahydrofuran	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Toluene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
trans-1,2-Dichloroethene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
trans-1,3-Dichloropropene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Trichloroethene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Trichlorofluoromethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Vinyl Acetate	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Vinyl Chloride	ND (0.0100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Xylene O	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Xylene P,M	ND (0.0100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*108 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*95 %*		*70-130*
Surrogate: Dibromofluoromethane	*102 %*		*70-130*
Surrogate: Toluene-d8	*100 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42430 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane	ND	0.100	mg/kg wet							
1-Chlorohexane	ND	0.0050	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0500	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							
2-Hexanone	ND	0.0500	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0500	mg/kg wet							
Acetone	ND	0.0500	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							
Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42430 - 5035										
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Dibromochloromethane	ND	0.0050	mg/kg wet							
Dibromomethane	ND	0.0050	mg/kg wet							
Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0250	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							
Vinyl Acetate	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Xylenes (Total)	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0544*		mg/kg wet	*0.05000*		*109*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0486*		mg/kg wet	*0.05000*		*97*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0509*		mg/kg wet	*0.05000*		*102*	*70-130*			
Surrogate: Toluene-d8	*0.0507*		mg/kg wet	*0.05000*		*101*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0422	0.0050	mg/kg wet	0.05000		84	70-130			
1,1,1-Trichloroethane	0.0414	0.0050	mg/kg wet	0.05000		83	70-130			
1,1,2,2-Tetrachloroethane	0.0391	0.0050	mg/kg wet	0.05000		78	70-130			
1,1,2-Trichloroethane	0.0396	0.0050	mg/kg wet	0.05000		79	70-130			
1,1-Dichloroethane	0.0386	0.0050	mg/kg wet	0.05000		77	70-130			
1,1-Dichloroethene	0.0406	0.0050	mg/kg wet	0.05000		81	70-130			
1,1-Dichloropropene	0.0402	0.0050	mg/kg wet	0.05000		80	70-130			
1,2,3-Trichlorobenzene	0.0444	0.0050	mg/kg wet	0.05000		89	70-130			

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42430 - 5035										
1,2,3-Trichloropropane	0.0412	0.0050	mg/kg wet	0.05000		82	70-130			
1,2,4-Trichlorobenzene	0.0443	0.0050	mg/kg wet	0.05000		89	70-130			
1,2,4-Trimethylbenzene	0.0423	0.0050	mg/kg wet	0.05000		85	70-130			
1,2-Dibromo-3-Chloropropane	0.0399	0.0050	mg/kg wet	0.05000		80	70-130			
1,2-Dibromoethane	0.0410	0.0050	mg/kg wet	0.05000		82	70-130			
1,2-Dichlorobenzene	0.0409	0.0050	mg/kg wet	0.05000		82	70-130			
1,2-Dichloroethane	0.0377	0.0050	mg/kg wet	0.05000		75	70-130			
1,2-Dichloropropane	0.0392	0.0050	mg/kg wet	0.05000		78	70-130			
1,3,5-Trimethylbenzene	0.0440	0.0050	mg/kg wet	0.05000		88	70-130			
1,3-Dichlorobenzene	0.0406	0.0050	mg/kg wet	0.05000		81	70-130			
1,3-Dichloropropane	0.0408	0.0050	mg/kg wet	0.05000		82	70-130			
1,4-Dichlorobenzene	0.0456	0.0050	mg/kg wet	0.05000		91	70-130			
1,4-Dioxane	0.900	0.100	mg/kg wet	1.000		90	70-130			
1-Chlorohexane	0.0430	0.0050	mg/kg wet	0.05000		86	70-130			
2,2-Dichloropropane	0.0423	0.0050	mg/kg wet	0.05000		85	70-130			
2-Butanone	0.195	0.0500	mg/kg wet	0.2500		78	70-130			
2-Chlorotoluene	0.0406	0.0050	mg/kg wet	0.05000		81	70-130			
2-Hexanone	0.210	0.0500	mg/kg wet	0.2500		84	70-130			
4-Chlorotoluene	0.0414	0.0050	mg/kg wet	0.05000		83	70-130			
4-Isopropyltoluene	0.0423	0.0050	mg/kg wet	0.05000		85	70-130			
4-Methyl-2-Pentanone	0.208	0.0500	mg/kg wet	0.2500		83	70-130			
Acetone	0.208	0.0500	mg/kg wet	0.2500		83	70-130			
Benzene	0.0406	0.0050	mg/kg wet	0.05000		81	70-130			
Bromobenzene	0.0427	0.0050	mg/kg wet	0.05000		85	70-130			
Bromochloromethane	0.0415	0.0050	mg/kg wet	0.05000		83	70-130			
Bromodichloromethane	0.0417	0.0050	mg/kg wet	0.05000		83	70-130			
Bromoform	0.0443	0.0050	mg/kg wet	0.05000		89	70-130			
Bromomethane	0.0392	0.0100	mg/kg wet	0.05000		78	70-130			
Carbon Disulfide	0.0421	0.0050	mg/kg wet	0.05000		84	70-130			
Carbon Tetrachloride	0.0424	0.0050	mg/kg wet	0.05000		85	70-130			
Chlorobenzene	0.0397	0.0050	mg/kg wet	0.05000		79	70-130			
Chloroethane	0.0400	0.0100	mg/kg wet	0.05000		80	70-130			
Chloroform	0.0399	0.0050	mg/kg wet	0.05000		80	70-130			
Chloromethane	0.0390	0.0100	mg/kg wet	0.05000		78	70-130			
cis-1,2-Dichloroethene	0.0411	0.0050	mg/kg wet	0.05000		82	70-130			
cis-1,3-Dichloropropene	0.0424	0.0050	mg/kg wet	0.05000		85	70-130			
Dibromochloromethane	0.0445	0.0050	mg/kg wet	0.05000		89	70-130			
Dibromomethane	0.0400	0.0050	mg/kg wet	0.05000		80	70-130			
Dichlorodifluoromethane	0.0357	0.0100	mg/kg wet	0.05000		71	70-130			
Diethyl Ether	0.0400	0.0050	mg/kg wet	0.05000		80	70-130			
Di-isopropyl ether	0.0394	0.0050	mg/kg wet	0.05000		79	70-130			
Ethyl tertiary-butyl ether	0.0408	0.0050	mg/kg wet	0.05000		82	70-130			
Ethylbenzene	0.0419	0.0050	mg/kg wet	0.05000		84	70-130			
Hexachlorobutadiene	0.0430	0.0050	mg/kg wet	0.05000		86	70-130			

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch CL42430 - 5035										
Isopropylbenzene	0.0418	0.0050	mg/kg wet	0.05000		84	70-130			
Methyl tert-Butyl Ether	0.0423	0.0050	mg/kg wet	0.05000		85	70-130			
Methylene Chloride	0.0465	0.0250	mg/kg wet	0.05000		93	70-130			
Naphthalene	0.0422	0.0050	mg/kg wet	0.05000		84	70-130			
n-Butylbenzene	0.0431	0.0050	mg/kg wet	0.05000		86	70-130			
n-Propylbenzene	0.0410	0.0050	mg/kg wet	0.05000		82	70-130			
sec-Butylbenzene	0.0413	0.0050	mg/kg wet	0.05000		83	70-130			
Styrene	0.0426	0.0050	mg/kg wet	0.05000		85	70-130			
tert-Butylbenzene	0.0423	0.0050	mg/kg wet	0.05000		85	70-130			
Tertiary-amyl methyl ether	0.0420	0.0050	mg/kg wet	0.05000		84	70-130			
Tetrachloroethene	0.0413	0.0050	mg/kg wet	0.05000		83	70-130			
Tetrahydrofuran	0.0392	0.0050	mg/kg wet	0.05000		78	70-130			
Toluene	0.0411	0.0050	mg/kg wet	0.05000		82	70-130			
trans-1,2-Dichloroethene	0.0408	0.0050	mg/kg wet	0.05000		82	70-130			
trans-1,3-Dichloropropene	0.0405	0.0050	mg/kg wet	0.05000		81	70-130			
Trichloroethene	0.0400	0.0050	mg/kg wet	0.05000		80	70-130			
Trichlorofluoromethane	0.0362	0.0050	mg/kg wet	0.05000		72	70-130			
Vinyl Acetate	0.0432	0.0050	mg/kg wet	0.05000		86	70-130			
Vinyl Chloride	0.0407	0.0100	mg/kg wet	0.05000		81	70-130			
Xylene O	0.0400	0.0050	mg/kg wet	0.05000		80	70-130			
Xylene P,M	0.0824	0.0100	mg/kg wet	0.1000		82	70-130			
Xylenes (Total)	0.122	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0456*		mg/kg wet	*0.05000*		*91*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0472*		mg/kg wet	*0.05000*		*94*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0475*		mg/kg wet	*0.05000*		*95*	*70-130*			
Surrogate: Toluene-d8	*0.0483*		mg/kg wet	*0.05000*		*97*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0441	0.0050	mg/kg wet	0.05000		88	70-130	4	25	
1,1,1-Trichloroethane	0.0449	0.0050	mg/kg wet	0.05000		90	70-130	8	25	
1,1,2,2-Tetrachloroethane	0.0423	0.0050	mg/kg wet	0.05000		85	70-130	8	25	
1,1,2-Trichloroethane	0.0429	0.0050	mg/kg wet	0.05000		86	70-130	8	25	
1,1-Dichloroethane	0.0425	0.0050	mg/kg wet	0.05000		85	70-130	9	25	
1,1-Dichloroethene	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	9	25	
1,1-Dichloropropene	0.0441	0.0050	mg/kg wet	0.05000		88	70-130	9	25	
1,2,3-Trichlorobenzene	0.0456	0.0050	mg/kg wet	0.05000		91	70-130	3	25	
1,2,3-Trichloropropane	0.0445	0.0050	mg/kg wet	0.05000		89	70-130	8	25	
1,2,4-Trichlorobenzene	0.0455	0.0050	mg/kg wet	0.05000		91	70-130	3	25	
1,2,4-Trimethylbenzene	0.0453	0.0050	mg/kg wet	0.05000		91	70-130	7	25	
1,2-Dibromo-3-Chloropropane	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	11	25	
1,2-Dibromoethane	0.0432	0.0050	mg/kg wet	0.05000		86	70-130	5	25	
1,2-Dichlorobenzene	0.0427	0.0050	mg/kg wet	0.05000		85	70-130	4	25	
1,2-Dichloroethane	0.0418	0.0050	mg/kg wet	0.05000		84	70-130	10	25	
1,2-Dichloropropane	0.0432	0.0050	mg/kg wet	0.05000		86	70-130	10	25	
1,3,5-Trimethylbenzene	0.0469	0.0050	mg/kg wet	0.05000		94	70-130	7	25	

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch CL42430 - 5035										
1,3-Dichlorobenzene	0.0436	0.0050	mg/kg wet	0.05000		87	70-130	7	25	
1,3-Dichloropropane	0.0435	0.0050	mg/kg wet	0.05000		87	70-130	6	25	
1,4-Dichlorobenzene	0.0465	0.0050	mg/kg wet	0.05000		93	70-130	2	25	
1,4-Dioxane	0.982	0.100	mg/kg wet	1.000		98	70-130	9	20	
1-Chlorohexane	0.0457	0.0050	mg/kg wet	0.05000		91	70-130	6	25	
2,2-Dichloropropane	0.0461	0.0050	mg/kg wet	0.05000		92	70-130	9	25	
2-Butanone	0.216	0.0500	mg/kg wet	0.2500		87	70-130	10	25	
2-Chlorotoluene	0.0435	0.0050	mg/kg wet	0.05000		87	70-130	7	25	
2-Hexanone	0.227	0.0500	mg/kg wet	0.2500		91	70-130	8	25	
4-Chlorotoluene	0.0445	0.0050	mg/kg wet	0.05000		89	70-130	7	25	
4-Isopropyltoluene	0.0446	0.0050	mg/kg wet	0.05000		89	70-130	5	25	
4-Methyl-2-Pentanone	0.225	0.0500	mg/kg wet	0.2500		90	70-130	8	25	
Acetone	0.233	0.0500	mg/kg wet	0.2500		93	70-130	11	25	
Benzene	0.0444	0.0050	mg/kg wet	0.05000		89	70-130	9	25	
Bromobenzene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	6	25	
Bromochloromethane	0.0447	0.0050	mg/kg wet	0.05000		89	70-130	7	25	
Bromodichloromethane	0.0456	0.0050	mg/kg wet	0.05000		91	70-130	9	25	
Bromoform	0.0463	0.0050	mg/kg wet	0.05000		93	70-130	4	25	
Bromomethane	0.0463	0.0100	mg/kg wet	0.05000		93	70-130	17	25	
Carbon Disulfide	0.0462	0.0050	mg/kg wet	0.05000		92	70-130	9	25	
Carbon Tetrachloride	0.0457	0.0050	mg/kg wet	0.05000		91	70-130	8	25	
Chlorobenzene	0.0414	0.0050	mg/kg wet	0.05000		83	70-130	4	25	
Chloroethane	0.0449	0.0100	mg/kg wet	0.05000		90	70-130	12	25	
Chloroform	0.0436	0.0050	mg/kg wet	0.05000		87	70-130	9	25	
Chloromethane	0.0437	0.0100	mg/kg wet	0.05000		87	70-130	11	25	
cis-1,2-Dichloroethene	0.0446	0.0050	mg/kg wet	0.05000		89	70-130	8	25	
cis-1,3-Dichloropropene	0.0460	0.0050	mg/kg wet	0.05000		92	70-130	8	25	
Dibromochloromethane	0.0468	0.0050	mg/kg wet	0.05000		94	70-130	5	25	
Dibromomethane	0.0436	0.0050	mg/kg wet	0.05000		87	70-130	9	25	
Dichlorodifluoromethane	0.0387	0.0100	mg/kg wet	0.05000		77	70-130	8	25	
Diethyl Ether	0.0439	0.0050	mg/kg wet	0.05000		88	70-130	9	25	
Di-isopropyl ether	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	12	25	
Ethyl tertiary-butyl ether	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	10	25	
Ethylbenzene	0.0441	0.0050	mg/kg wet	0.05000		88	70-130	5	25	
Hexachlorobutadiene	0.0442	0.0050	mg/kg wet	0.05000		88	70-130	3	25	
Isopropylbenzene	0.0449	0.0050	mg/kg wet	0.05000		90	70-130	7	25	
Methyl tert-Butyl Ether	0.0460	0.0050	mg/kg wet	0.05000		92	70-130	9	25	
Methylene Chloride	0.0492	0.0250	mg/kg wet	0.05000		98	70-130	6	25	
Naphthalene	0.0434	0.0050	mg/kg wet	0.05000		87	70-130	3	25	
n-Butylbenzene	0.0462	0.0050	mg/kg wet	0.05000		92	70-130	7	25	
n-Propylbenzene	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	8	25	
sec-Butylbenzene	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	7	25	
Styrene	0.0448	0.0050	mg/kg wet	0.05000		90	70-130	5	25	
tert-Butylbenzene	0.0448	0.0050	mg/kg wet	0.05000		90	70-130	6	25	

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42430 - 5035										
Tertiary-amyl methyl ether	0.0462	0.0050	mg/kg wet	0.05000		92	70-130	10	25	
Tetrachloroethene	0.0422	0.0050	mg/kg wet	0.05000		84	70-130	2	25	
Tetrahydrofuran	0.0417	0.0050	mg/kg wet	0.05000		83	70-130	6	25	
Toluene	0.0445	0.0050	mg/kg wet	0.05000		89	70-130	8	25	
trans-1,2-Dichloroethene	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	8	25	
trans-1,3-Dichloropropene	0.0447	0.0050	mg/kg wet	0.05000		89	70-130	10	25	
Trichloroethene	0.0435	0.0050	mg/kg wet	0.05000		87	70-130	9	25	
Trichlorofluoromethane	0.0390	0.0050	mg/kg wet	0.05000		78	70-130	7	25	
Vinyl Acetate	0.0488	0.0050	mg/kg wet	0.05000		98	70-130	12	25	
Vinyl Chloride	0.0456	0.0100	mg/kg wet	0.05000		91	70-130	11	25	
Xylene O	0.0419	0.0050	mg/kg wet	0.05000		84	70-130	5	25	
Xylene P,M	0.0862	0.0100	mg/kg wet	0.1000		86	70-130	4	25	
Xylenes (Total)	0.128	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0488*		mg/kg wet	*0.05000*		*98*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0480*		mg/kg wet	*0.05000*		*96*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0497*		mg/kg wet	*0.05000*		*99*	*70-130*			
Surrogate: Toluene-d8	*0.0484*		mg/kg wet	*0.05000*		*97*	*70-130*			
Batch CL42626 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane	ND	0.100	mg/kg wet							
1-Chlorohexane	ND	0.0050	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0500	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42626 - 5035										
2-Hexanone	ND	0.0500	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0500	mg/kg wet							
Acetone	ND	0.0500	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							
Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Dibromochloromethane	ND	0.0050	mg/kg wet							
Dibromomethane	ND	0.0050	mg/kg wet							
Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0250	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42626 - 5035										
Vinyl Acetate	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Xylenes (Total)	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0550*		mg/kg wet	*0.05000*		*110*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0479*		mg/kg wet	*0.05000*		*96*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0482*		mg/kg wet	*0.05000*		*96*	*70-130*			
Surrogate: Toluene-d8	*0.0510*		mg/kg wet	*0.05000*		*102*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0445	0.0050	mg/kg wet	0.05000		89	70-130			
1,1,1-Trichloroethane	0.0499	0.0050	mg/kg wet	0.05000		100	70-130			
1,1,2,2-Tetrachloroethane	0.0434	0.0050	mg/kg wet	0.05000		87	70-130			
1,1,2-Trichloroethane	0.0458	0.0050	mg/kg wet	0.05000		92	70-130			
1,1-Dichloroethane	0.0456	0.0050	mg/kg wet	0.05000		91	70-130			
1,1-Dichloroethene	0.0439	0.0050	mg/kg wet	0.05000		88	70-130			
1,1-Dichloropropene	0.0470	0.0050	mg/kg wet	0.05000		94	70-130			
1,2,3-Trichlorobenzene	0.0476	0.0050	mg/kg wet	0.05000		95	70-130			
1,2,3-Trichloropropane	0.0465	0.0050	mg/kg wet	0.05000		93	70-130			
1,2,4-Trichlorobenzene	0.0474	0.0050	mg/kg wet	0.05000		95	70-130			
1,2,4-Trimethylbenzene	0.0468	0.0050	mg/kg wet	0.05000		94	70-130			
1,2-Dibromo-3-Chloropropane	0.0475	0.0050	mg/kg wet	0.05000		95	70-130			
1,2-Dibromoethane	0.0428	0.0050	mg/kg wet	0.05000		86	70-130			
1,2-Dichlorobenzene	0.0446	0.0050	mg/kg wet	0.05000		89	70-130			
1,2-Dichloroethane	0.0482	0.0050	mg/kg wet	0.05000		96	70-130			
1,2-Dichloropropane	0.0455	0.0050	mg/kg wet	0.05000		91	70-130			
1,3,5-Trimethylbenzene	0.0484	0.0050	mg/kg wet	0.05000		97	70-130			
1,3-Dichlorobenzene	0.0441	0.0050	mg/kg wet	0.05000		88	70-130			
1,3-Dichloropropane	0.0436	0.0050	mg/kg wet	0.05000		87	70-130			
1,4-Dichlorobenzene	0.0490	0.0050	mg/kg wet	0.05000		98	70-130			
1,4-Dioxane	1.06	0.100	mg/kg wet	1.000		106	70-130			
1-Chlorohexane	0.0443	0.0050	mg/kg wet	0.05000		89	70-130			
2,2-Dichloropropane	0.0512	0.0050	mg/kg wet	0.05000		102	70-130			
2-Butanone	0.234	0.0500	mg/kg wet	0.2500		94	70-130			
2-Chlorotoluene	0.0451	0.0050	mg/kg wet	0.05000		90	70-130			
2-Hexanone	0.238	0.0500	mg/kg wet	0.2500		95	70-130			
4-Chlorotoluene	0.0459	0.0050	mg/kg wet	0.05000		92	70-130			
4-Isopropyltoluene	0.0464	0.0050	mg/kg wet	0.05000		93	70-130			
4-Methyl-2-Pentanone	0.252	0.0500	mg/kg wet	0.2500		101	70-130			
Acetone	0.252	0.0500	mg/kg wet	0.2500		101	70-130			
Benzene	0.0466	0.0050	mg/kg wet	0.05000		93	70-130			
Bromobenzene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130			
Bromochloromethane	0.0446	0.0050	mg/kg wet	0.05000		89	70-130			
Bromodichloromethane	0.0500	0.0050	mg/kg wet	0.05000		100	70-130			

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42626 - 5035										
Bromoform	0.0469	0.0050	mg/kg wet	0.05000		94	70-130			
Bromomethane	0.0505	0.0100	mg/kg wet	0.05000		101	70-130			
Carbon Disulfide	0.0480	0.0050	mg/kg wet	0.05000		96	70-130			
Carbon Tetrachloride	0.0508	0.0050	mg/kg wet	0.05000		102	70-130			
Chlorobenzene	0.0409	0.0050	mg/kg wet	0.05000		82	70-130			
Chloroethane	0.0456	0.0100	mg/kg wet	0.05000		91	70-130			
Chloroform	0.0473	0.0050	mg/kg wet	0.05000		95	70-130			
Chloromethane	0.0480	0.0100	mg/kg wet	0.05000		96	70-130			
cis-1,2-Dichloroethene	0.0462	0.0050	mg/kg wet	0.05000		92	70-130			
cis-1,3-Dichloropropene	0.0497	0.0050	mg/kg wet	0.05000		99	70-130			
Dibromochloromethane	0.0470	0.0050	mg/kg wet	0.05000		94	70-130			
Dibromomethane	0.0465	0.0050	mg/kg wet	0.05000		93	70-130			
Dichlorodifluoromethane	0.0470	0.0100	mg/kg wet	0.05000		94	70-130			
Diethyl Ether	0.0467	0.0050	mg/kg wet	0.05000		93	70-130			
Di-isopropyl ether	0.0468	0.0050	mg/kg wet	0.05000		94	70-130			
Ethyl tertiary-butyl ether	0.0483	0.0050	mg/kg wet	0.05000		97	70-130			
Ethylbenzene	0.0446	0.0050	mg/kg wet	0.05000		89	70-130			
Hexachlorobutadiene	0.0461	0.0050	mg/kg wet	0.05000		92	70-130			
Isopropylbenzene	0.0454	0.0050	mg/kg wet	0.05000		91	70-130			
Methyl tert-Butyl Ether	0.0493	0.0050	mg/kg wet	0.05000		99	70-130			
Methylene Chloride	0.0478	0.0250	mg/kg wet	0.05000		96	70-130			
Naphthalene	0.0449	0.0050	mg/kg wet	0.05000		90	70-130			
n-Butylbenzene	0.0486	0.0050	mg/kg wet	0.05000		97	70-130			
n-Propylbenzene	0.0454	0.0050	mg/kg wet	0.05000		91	70-130			
sec-Butylbenzene	0.0456	0.0050	mg/kg wet	0.05000		91	70-130			
Styrene	0.0451	0.0050	mg/kg wet	0.05000		90	70-130			
tert-Butylbenzene	0.0459	0.0050	mg/kg wet	0.05000		92	70-130			
Tertiary-amyl methyl ether	0.0491	0.0050	mg/kg wet	0.05000		98	70-130			
Tetrachloroethene	0.0420	0.0050	mg/kg wet	0.05000		84	70-130			
Tetrahydrofuran	0.0456	0.0050	mg/kg wet	0.05000		91	70-130			
Toluene	0.0475	0.0050	mg/kg wet	0.05000		95	70-130			
trans-1,2-Dichloroethene	0.0444	0.0050	mg/kg wet	0.05000		89	70-130			
trans-1,3-Dichloropropene	0.0491	0.0050	mg/kg wet	0.05000		98	70-130			
Trichloroethene	0.0461	0.0050	mg/kg wet	0.05000		92	70-130			
Trichlorofluoromethane	0.0440	0.0050	mg/kg wet	0.05000		88	70-130			
Vinyl Acetate	0.0508	0.0050	mg/kg wet	0.05000		102	70-130			
Vinyl Chloride	0.0508	0.0100	mg/kg wet	0.05000		102	70-130			
Xylene O	0.0427	0.0050	mg/kg wet	0.05000		85	70-130			
Xylene P,M	0.0866	0.0100	mg/kg wet	0.1000		87	70-130			
Xylenes (Total)	0.129	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0530*		mg/kg wet	*0.05000*		*106*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0496*		mg/kg wet	*0.05000*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0495*		mg/kg wet	*0.05000*		*99*	*70-130*			
Surrogate: Toluene-d8	*0.0496*		mg/kg wet	*0.05000*		*99*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

5035/8260B Volatile Organic Compounds / Low Level

Batch CL42626 - 5035

LCS Dup

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
1,1,1,2-Tetrachloroethane	0.0447	0.0050	mg/kg wet	0.05000		89	70-130	0.4	25	
1,1,1-Trichloroethane	0.0490	0.0050	mg/kg wet	0.05000		98	70-130	2	25	
1,1,2,2-Tetrachloroethane	0.0441	0.0050	mg/kg wet	0.05000		88	70-130	2	25	
1,1,2-Trichloroethane	0.0467	0.0050	mg/kg wet	0.05000		93	70-130	2	25	
1,1-Dichloroethane	0.0456	0.0050	mg/kg wet	0.05000		91	70-130	0.1	25	
1,1-Dichloroethene	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	0.8	25	
1,1-Dichloropropene	0.0470	0.0050	mg/kg wet	0.05000		94	70-130	0.1	25	
1,2,3-Trichlorobenzene	0.0473	0.0050	mg/kg wet	0.05000		95	70-130	0.6	25	
1,2,3-Trichloropropane	0.0473	0.0050	mg/kg wet	0.05000		95	70-130	2	25	
1,2,4-Trichlorobenzene	0.0465	0.0050	mg/kg wet	0.05000		93	70-130	2	25	
1,2,4-Trimethylbenzene	0.0461	0.0050	mg/kg wet	0.05000		92	70-130	1	25	
1,2-Dibromo-3-Chloropropane	0.0493	0.0050	mg/kg wet	0.05000		99	70-130	4	25	
1,2-Dibromoethane	0.0438	0.0050	mg/kg wet	0.05000		88	70-130	2	25	
1,2-Dichlorobenzene	0.0436	0.0050	mg/kg wet	0.05000		87	70-130	2	25	
1,2-Dichloroethane	0.0482	0.0050	mg/kg wet	0.05000		96	70-130	0.08	25	
1,2-Dichloropropane	0.0456	0.0050	mg/kg wet	0.05000		91	70-130	0.3	25	
1,3,5-Trimethylbenzene	0.0477	0.0050	mg/kg wet	0.05000		95	70-130	1	25	
1,3-Dichlorobenzene	0.0442	0.0050	mg/kg wet	0.05000		88	70-130	0.2	25	
1,3-Dichloropropane	0.0447	0.0050	mg/kg wet	0.05000		89	70-130	3	25	
1,4-Dichlorobenzene	0.0481	0.0050	mg/kg wet	0.05000		96	70-130	2	25	
1,4-Dioxane	1.04	0.100	mg/kg wet	1.000		104	70-130	1	20	
1-Chlorohexane	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	2	25	
2,2-Dichloropropane	0.0501	0.0050	mg/kg wet	0.05000		100	70-130	2	25	
2-Butanone	0.246	0.0500	mg/kg wet	0.2500		98	70-130	5	25	
2-Chlorotoluene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	0.04	25	
2-Hexanone	0.252	0.0500	mg/kg wet	0.2500		101	70-130	6	25	
4-Chlorotoluene	0.0455	0.0050	mg/kg wet	0.05000		91	70-130	0.9	25	
4-Isopropyltoluene	0.0456	0.0050	mg/kg wet	0.05000		91	70-130	2	25	
4-Methyl-2-Pentanone	0.259	0.0500	mg/kg wet	0.2500		104	70-130	3	25	
Acetone	0.277	0.0500	mg/kg wet	0.2500		111	70-130	9	25	
Benzene	0.0465	0.0050	mg/kg wet	0.05000		93	70-130	0.3	25	
Bromobenzene	0.0444	0.0050	mg/kg wet	0.05000		89	70-130	2	25	
Bromochloromethane	0.0446	0.0050	mg/kg wet	0.05000		89	70-130	0.09	25	
Bromodichloromethane	0.0512	0.0050	mg/kg wet	0.05000		102	70-130	2	25	
Bromoform	0.0476	0.0050	mg/kg wet	0.05000		95	70-130	1	25	
Bromomethane	0.0499	0.0100	mg/kg wet	0.05000		100	70-130	1	25	
Carbon Disulfide	0.0481	0.0050	mg/kg wet	0.05000		96	70-130	0.2	25	
Carbon Tetrachloride	0.0498	0.0050	mg/kg wet	0.05000		100	70-130	2	25	
Chlorobenzene	0.0414	0.0050	mg/kg wet	0.05000		83	70-130	1	25	
Chloroethane	0.0467	0.0100	mg/kg wet	0.05000		93	70-130	2	25	
Chloroform	0.0469	0.0050	mg/kg wet	0.05000		94	70-130	0.7	25	
Chloromethane	0.0478	0.0100	mg/kg wet	0.05000		96	70-130	0.3	25	
cis-1,2-Dichloroethene	0.0453	0.0050	mg/kg wet	0.05000		91	70-130	2	25	

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42626 - 5035										
cis-1,3-Dichloropropene	0.0494	0.0050	mg/kg wet	0.05000		99	70-130	0.6	25	
Dibromochloromethane	0.0473	0.0050	mg/kg wet	0.05000		95	70-130	0.8	25	
Dibromomethane	0.0458	0.0050	mg/kg wet	0.05000		92	70-130	2	25	
Dichlorodifluoromethane	0.0456	0.0100	mg/kg wet	0.05000		91	70-130	3	25	
Diethyl Ether	0.0476	0.0050	mg/kg wet	0.05000		95	70-130	2	25	
Di-isopropyl ether	0.0471	0.0050	mg/kg wet	0.05000		94	70-130	0.6	25	
Ethyl tertiary-butyl ether	0.0490	0.0050	mg/kg wet	0.05000		98	70-130	1	25	
Ethylbenzene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	1	25	
Hexachlorobutadiene	0.0456	0.0050	mg/kg wet	0.05000		91	70-130	1	25	
Isopropylbenzene	0.0450	0.0050	mg/kg wet	0.05000		90	70-130	0.8	25	
Methyl tert-Butyl Ether	0.0495	0.0050	mg/kg wet	0.05000		99	70-130	0.3	25	
Methylene Chloride	0.0475	0.0250	mg/kg wet	0.05000		95	70-130	0.6	25	
Naphthalene	0.0453	0.0050	mg/kg wet	0.05000		91	70-130	0.9	25	
n-Butylbenzene	0.0482	0.0050	mg/kg wet	0.05000		96	70-130	0.9	25	
n-Propylbenzene	0.0453	0.0050	mg/kg wet	0.05000		91	70-130	0.3	25	
sec-Butylbenzene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	0.9	25	
Styrene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	0.2	25	
tert-Butylbenzene	0.0454	0.0050	mg/kg wet	0.05000		91	70-130	1	25	
Tertiary-amyl methyl ether	0.0496	0.0050	mg/kg wet	0.05000		99	70-130	1	25	
Tetrachloroethene	0.0419	0.0050	mg/kg wet	0.05000		84	70-130	0.2	25	
Tetrahydrofuran	0.0491	0.0050	mg/kg wet	0.05000		98	70-130	7	25	
Toluene	0.0471	0.0050	mg/kg wet	0.05000		94	70-130	0.9	25	
trans-1,2-Dichloroethene	0.0446	0.0050	mg/kg wet	0.05000		89	70-130	0.4	25	
trans-1,3-Dichloropropene	0.0492	0.0050	mg/kg wet	0.05000		98	70-130	0.2	25	
Trichloroethene	0.0451	0.0050	mg/kg wet	0.05000		90	70-130	2	25	
Trichlorofluoromethane	0.0428	0.0050	mg/kg wet	0.05000		86	70-130	3	25	
Vinyl Acetate	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	3	25	
Vinyl Chloride	0.0492	0.0100	mg/kg wet	0.05000		98	70-130	3	25	
Xylene O	0.0429	0.0050	mg/kg wet	0.05000		86	70-130	0.4	25	
Xylene P,M	0.0869	0.0100	mg/kg wet	0.1000		87	70-130	0.3	25	
Xylenes (Total)	0.130	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0528*		mg/kg wet	*0.05000*		*106*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0494*		mg/kg wet	*0.05000*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0485*		mg/kg wet	*0.05000*		*97*	*70-130*			
Surrogate: Toluene-d8	*0.0494*		mg/kg wet	*0.05000*		*99*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Notes and Definitions

U	Analyte included in the analysis, but not detected
S+	Surrogate recovery(ies) above upper control limit (S+).
C+	Continuing Calibration recovery is above upper control limit (C+).
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: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP)
A2LA Accredited: Testing Cert# 2864.01
http://www.a2la.org/scopepdf/2864-01.pdf

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

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI0002
http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/documents/AllLabs.xls

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

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.depweb.state.pa.us/portal/server.pt/community/labs/13780/laboratory_accreditation_program/590095

CHEMISTRY

A2LA Accredited: Testing Cert # 2864.01
Lead in Paint, Phthalates, Lead in Children's Metals Products (Including Jewelry)
http://www.A2LA.org/dirsearchnew/newsearch.cfm

CPSC ID# 1141
Lead Paint, Lead in Children's Metals Jewelry
http://www.cpsc.gov/cgi-bin/labapplist.aspx

CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

41 Illinois Avenue
Warwick, RI 02888
Tel: 800-937-2580
Fax: 401-738-1970

131 Coolidge St, Bldg. 2
Hudson, MA 01749
Tel: 888-228-3334
Fax: 978-568-0078

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type [T]	Preservation Code [P]	Matrix Code [M]	VOCs	RCRA 8 Metals	PCBs	Pesticides	PAHs	SVOCs	TPH
12/23/14	0650	HA-2 (0.5-1.5')	G	1G	NP	S		X				X	
12/23/14	0700	HA-1 (0.5-1.5')	G	3V/1G	M/NP	S	X	X			X		X
12/23/14	0715	HA-3 (0.5-1.5')	G	3V/1G	M/NP	S	X	X					X
12/23/14	0725	HA-4 (0.5-1.5')	G	1G	NP	S		X		X	X		
12/23/14	0750	HA-7 (0.5-1.5')	G	3V/2G	M/NP	S	X	X	X			X	
12/23/14	0800	HA-6 (0.5-1.5')	G	1G	NP	S		X		X			
12/23/14	0808	HA-5 (0.5-1.5')	G	1G	NP	S		X			X		X
		Trip Blank					X				X (8W)		X (8W)

Client Information

Company Name: Vanasse Hangen Brustlin, Inc.
Address: 10 Dorrance Street, Suite 400
City / State / Zip: Providence, RI 02903
Telephone: 272-8100 Fax: 273-9694
Contact Person: Shelby Miller

Project Information

Project Name: BRBW Segment 1A
P.O. Number: Project Number: 72017.01
Report To: Shelby Miller/Peter Crivas Phone: 272-8100 Fax: 273-9694
Sampled by: Shelby Miller
Quote No: Email address: samiller@vhb.com/pgrivers@vhb.com

Relinquished By	Date	Time	Received By	Date	Time
Shelby A Miller	12/23/14	1200	Carl Lacunic	12/23/14	1200

Turn Around Time

- [X] Normal — [X] EMAIL Report
- [ ] 5 Business days.
- [ ] Rush _____ (business days)

Project Comments

Circle if applicable: GW-1, GW-2, GW-3, S-1, S-2, S-3 MCP Data Enhancement QC Package? Yes No

RIDEM RDEC

28

Lab Use Only

- [ ] Sample Pick Up Only
- [ ] RIAL sampled; attach field hours
- [X] Shipped on ice

Workorder No: 1412-28533

Container Types: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile

Preservation Codes: NP=None, N=HNO_3, H=HCl, S=H_2SO_4, SH=NaOH, SB=$NaHSO_4$, M=MeOH, T=$Na_2S_2O_3$, Z=ZnOAc, I=Ice

Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, Sl=Sludge, A=Air, B=Bulk/Solid, O=_____

R.I. ANALYTICAL
Specialists in Environmental Services

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Attn: Ms. Shelby Miller
10 Dorrance Street
Suite 400
Providence, RI 02903

Date Received: 1/12/15
Date Reported: 1/14/15
P.O. #:
Work Order #: 1501-00662

DESCRIPTION: PROJECT# 72017.01 BRBW SEGMENT 1A

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate Of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.

Certification #: RI LAI0033, MA M-RI015, CT PH-0508, ME-RI00015
NH-2537, NY 11726

This Certificate represents all data associated with the referenced work order and is paginated for completeness. The complete Certificate includes one attachment; the original Chain of Custody.

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:

Data Reporting
enc: Chain of Custody

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.

Date Received: 1/12/15

Work Order #: 1501-00662

PROJECT# 72017.01 BRBW SEGMENT 1A

Sample # 001
SAMPLE DESCRIPTION: HA-4 (1412-28533-004)
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED		ANALYST
TCLP Metals							
Lead	0.53	0.50	mg/l	SW-846 6010C	1/14/15	10:51	JRW
ICP Digestion				EPA 200.7	1/13/15	23:05	OMC
TCLP Extraction	Extracted			SW-846 1311	1/12/15	18:30	JPB

Sample # 002
SAMPLE DESCRIPTION: HA-6 (1412-28533-006)
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 08:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED		ANALYST
TCLP Metals							
Lead	3.8	0.50	mg/l	SW-846 6010C	1/14/15	10:56	JRW
ICP Digestion				EPA 200.7	1/13/15	23:05	OMC
TCLP Extraction	Extracted			SW-846 1311	1/12/15	18:30	JPB

QA/QC Report

Client: Vanasse Hangen Brustlin, Inc.
WO #: 1501-00662
Date: 1/14/2015

-Method Blanks Results-

Parameter	Units	Results	Date Analyzed
TCLP Metals			
TCLP Lead	mg/l	<0.50	1/14/2015

-Laboratory Control Standard-

Parameter	Units	Spike Conc.	Detected Conc.	% Rec.	Date Analyzed
TCLP Metals					
TCLP Lead	mg/l	1.00	1.02	102	1/14/2015
TCLP Lead	mg/l	1.00	0.999	100	1/14/2015

R.I. ANALYTICAL
Specialists in Environmental Services

CHAIN OF CUSTODY RECORD

41 Illinois Avenue
Warwick, RI 02888-3007
800-937-2580 • Fax: 401-738-1970

131 Coolidge St., Suite 105
Hudson, MA 01749-1331
800-937-2580 • Fax: 978-568-0078

Date Collected	Time Collected	Field Sample Identification	Grab or Composite (06-21-10)	# of Containers & Type [C]	Preservation Code [P]	Matrix Code [M]	
12/23/14	0725	HA-4 (1412-28533-004)	G	1G	UP	S	✓ TCLP
↓	0800	HA-Lo (1412-28533-006)	G	1G	NP	S	✓

Client Information

Company Name: Camasse Hangen Brustlin, Inc.
Address: 10 Dorrance Street
City / State / Zip: Suite 400 Prov. RI 02903
Telephone: 401 272-8100 Fax:
Contact Person: Shelby Miller

Project Information

Project Name: BRBW Segment 1A
P.O. Number: Project Number: 72017.01
Report To: Phone: Fax
Sampled By:
Quote No:
Email report to these addresses:

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
Per attached email from Shelby Miller	1/2/15	1445	Christen Mello	1/2/15	1445

Turn Around Time

- [ ] Normal
- [x] EMAIL Report
- [x] 5 Business days. Possible surcharge
- [ ] Rush – Date Due: ___/___/___

Project Comments

Circle if applicable: GW-1, GW-2, GW-3, S-1, S-2, S-3 MCP Data Enhancement QC Package? Yes No

relog WO# 1412-28533-004 & -006

Temp. Upon Receipt °C

Lab Use Only

- [ ] Sample Pick-Up Only
- [ ] RIAL sampled; attach field hours
- [ ] Shipped on ice

Workorder No: 1501 - 662

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SB=$NaHSO_4$, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc
Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____

Appendix D: Providence Tax Assessor Information

41 WAYLAND AVE

Location	41 WAYLAND AVE	**Assessment**	$880,800
Mblu	15/ / 66/ /	**Appraisal**	$880,800
Acct#	01500660000	**PID**	34502
Owner	STATE OF RHODE ISLAND	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$880,800	$880,800
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$880,800	$880,800

Owner of Record

Owner	STATE OF RHODE ISLAND	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	PROVIDENCE, RI 02903 PROVIDENCE, RI 02903	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Vacant Land
Model	
Grade:	

Stories:	
Occupancy:	
Exterior Wall 1:	
Exterior Wall 2:	
Roof Structure:	
Roof Cover:	
Interior Wall 1:	
Interior Wall 2:	
Interior Floor 1	
Interior Floor 2	
Heat Fuel:	
Heat Type:	
AC Type	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs:	
Total Rooms	
Bath Style	
Kitchen Style:	
Total Kitchens	
Fireplaces	
Extra Openings	
Gas Fireplaces	
Parking	
CDU	
Bsmt Garages	
Fin Bsmt Area	
Rec Rm Area	
Rec Rm Type	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//default.jp

Building Layout

Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 913

Land Line Valuation

Size (Acres) 1.50

Description	State Land Res	**Depth**	
Zone	W1	**Assessed Value**	$880,800
Neighborhood	254F	**Appraised Value**	$880,800
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$880,800	$880,800

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$880,800	$880,800

86 WAYLAND AVE

Location	86 WAYLAND AVE	**Assessment**	$458,200
Mblu	15/ / 446/ /	**Appraisal**	$458,200
Acct#	01504460000	**PID**	39148
Owner	CITY OF PROVIDENCE	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$458,200	$458,200
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$458,200	$458,200

Owner of Record

Owner	CITY OF PROVIDENCE	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	CITY HALL PROVIDENCE, RI 02903	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Vacant Land
Model	
Grade:	

Stories:	
Occupancy:	
Exterior Wall 1:	
Exterior Wall 2:	
Roof Structure:	
Roof Cover:	
Interior Wall 1:	
Interior Wall 2:	
Interior Floor 1	
Interior Floor 2	
Heat Fuel:	
Heat Type:	
AC Type	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs:	
Total Rooms	
Bath Style	
Kitchen Style:	
Total Kitchens	
Fireplaces	
Extra Openings	
Gas Fireplaces	
Parking	
CDU	
Bsmt Garages	
Fin Bsmt Area	
Rec Rm Area	
Rec Rm Type	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//default.jp

Building Layout

Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 920

Land Line Valuation

Size (Acres) 0.41

Description	Mun Lnd Com	**Depth**	
Zone	OS	**Assessed Value**	$458,200
Neighborhood	254F	**Appraised Value**	$458,200
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$458,200	$458,200

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$458,200	$458,200

88 WAYLAND AVE

Location	88 WAYLAND AVE	**Assessment**	$922,800
Mblu	15/ / 456/ /	**Appraisal**	$922,800
Acct#	01504560000	**PID**	35152
Owner	CITY OF PROVIDENCE	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$922,800	$922,800
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$922,800	$922,800

Owner of Record

Owner	CITY OF PROVIDENCE	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	CITY HALL PROVIDENCE, RI 02903	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Vacant Land
Model	
Grade:	

Stories:	
Occupancy:	
Exterior Wall 1:	
Exterior Wall 2:	
Roof Structure:	
Roof Cover:	
Interior Wall 1:	
Interior Wall 2:	
Interior Floor 1	
Interior Floor 2	
Heat Fuel:	
Heat Type:	
AC Type	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs:	
Total Rooms	
Bath Style	
Kitchen Style:	
Total Kitchens	
Fireplaces	
Extra Openings	
Gas Fireplaces	
Parking	
CDU	
Bsmt Garages	
Fin Bsmt Area	
Rec Rm Area	
Rec Rm Type	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//default.jp

Building Layout

Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 920

Land Line Valuation

Size (Acres) 1.76

Description	Mun Lnd Com	**Depth**	
Zone	OS	**Assessed Value**	$922,800
Neighborhood	254F	**Appraised Value**	$922,800
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$922,800	$922,800

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$0	$922,800	$922,800

OFF GANO

Location	OFF GANO	**Assessment**	$273,900
Mblu	17/ / 8/ /	**Appraisal**	$273,900
Acct#	01700080000	**PID**	39575
Owner	CITY OF PROVIDENCE	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$12,000	$261,900	$273,900
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$12,000	$261,900	$273,900

Owner of Record

Owner	CITY OF PROVIDENCE	**Sale Price**	$0
Co-Owner		**Book & Page**	99999/9999
Address	CITY HALL PROVIDENCE, RI 02903	**Sale Date**	07/07/2012

Ownership History

Ownership History
No Data for Ownership History

Building Information

Building 1 : Section 1

Year Built:
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Vacant Land
Model	
Grade:	

Stories:	
Occupancy:	
Exterior Wall 1:	
Exterior Wall 2:	
Roof Structure:	
Roof Cover:	
Interior Wall 1:	
Interior Wall 2:	
Interior Floor 1	
Interior Floor 2	
Heat Fuel:	
Heat Type:	
AC Type	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs:	
Total Rooms	
Bath Style	
Kitchen Style:	
Total Kitchens	
Fireplaces	
Extra Openings	
Gas Fireplaces	
Parking	
CDU	
Bsmt Garages	
Fin Bsmt Area	
Rec Rm Area	
Rec Rm Type	

Building Photo

(http://images.vgsi.com/photos/ProvidenceRIPhotos//default.jp

Building Layout

Building Sub-Areas	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 920

Land Line Valuation

Size (Acres) 0.27

Description	Mun Lnd Com	**Depth**	
Zone	C2	**Assessed Value**	$261,900
Neighborhood	254F	**Appraised Value**	$261,900
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
PAV1	Paving Asph			11975 SF	$12,000	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$12,000	$261,900	$273,900

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$12,000	$261,900	$273,900

Appendix E:
Soil Certificates of Analysis

R.I. ANALYTICAL
Specialists in Environmental Services

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Attn: Ms. Shelby Miller
10 Dorrance Street
Suite 400
Providence, RI 02903

Date Received: 12/23/2014
Date Reported: 1/6/2015
P.O. #:
Work Order #: 1412-28533

DESCRIPTION: PROJECT #72017.01 BRBW SEGMENT 1A

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory and a subcontracted laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate Of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.

Certification #: RI LAI0033, MA M-RI015, CT PH-0508, ME RI00015
NH 2537, NY 11726

If you have any questions regarding this work, or if we may be of further assistance, please contact us.

Approved by:

Data Reporting

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 001
SAMPLE DESCRIPTION: HA-2 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 06:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Semi-Volatile Organic Comp.						
Acenaphthene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Acenaphthylene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Anthracene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Benzidine	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Benzo(a)anthracene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Benzo(b)fluoranthene	0.49	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Benzo(k)fluoranthene	0.44	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Benzo(g,h,i)perylene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Benzo(a)pyrene	0.43	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Bis(2-chloroethyl)ether	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Bis(2-Chloroethoxy)methane	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Bis(2-Chloroisopropyl)Ether	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Bis(2-ethylhexyl)phthalate	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
4-Bromophenyl phenyl ether	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Butylbenzyl phthalate	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2-Chloronaphthalene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
4-Chlorophenyl phenyl ether	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Chrysene	0.44	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Dibenzo(a,h)anthracene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Di-n-butyl phthalate	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
1,2-Dichlorobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
1,3-Dichlorobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
1,4-Dichlorobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
3,3'-Dichlorobenzidine	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Diethyl phthalate	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Dimethyl phthalate	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,4-Dinitrotoluene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,6-Dinitrotoluene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Di-n-octyl phthalate	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
1,2-Diphenylhydrazine	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Fluoranthene	0.65	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Fluorene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Hexachlorobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Hexachlorobutadiene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Hexachlorocyclopentadiene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Hexachloroethane	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Indeno(1,2,3-cd)pyrene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Isophorone	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2-Methylnaphthalene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 001
SAMPLE DESCRIPTION: HA-2 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 06:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Naphthalene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Nitrobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
N-nitrosodimethylamine	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
N-nitrosodiphenylamine	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
N-nitrosodi-n-propylamine	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Phenanthrene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Pyrene	0.65	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
1,2,4-Trichlorobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
4-Chloro-3-methylphenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2-Chlorophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,4-Dichlorophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,4-Dimethylphenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2-Methyl-4,6-dinitrophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,4-Dinitrophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2-Nitrophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
4-Nitrophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Pentachlorophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Phenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,4,5-Trichlorophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2,4,6-Trichlorophenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
4-Chloroaniline	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Dibenzofuran	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
2-Methyl Phenol	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
3 & 4-Methylphenols	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Aniline	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Acetophenone	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Azobenzene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 15:21	KF
Surrogates			RANGE	SW-846 8270D	12/30/2014 15:21	KF
Phenol-d5	55		30-130%	SW-846 8270D	12/30/2014 15:21	KF
2-Fluorophenol	54		30-130%	SW-846 8270D	12/30/2014 15:21	KF
2,4,6-Tribromophenol	70		30-130%	SW-846 8270D	12/30/2014 15:21	KF
Nitrobenzene-d5	53		30-130%	SW-846 8270D	12/30/2014 15:21	KF
2-Fluorobiphenyl	54		30-130%	SW-846 8270D	12/30/2014 15:21	KF
P-Terphenyl-d14	59		30-130%	SW-846 8270D	12/30/2014 15:21	KF
Semi Extraction date				SW846 3546	12/29/2014 12:50	KS
Total Metals						
Arsenic	<2.8	2.8	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW
Barium	34	0.56	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW
Cadmium	<0.28	0.28	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW
Chromium	10	1.7	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 001
SAMPLE DESCRIPTION: HA-2 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 06:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Lead	63	2.2	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW
Mercury	0.15	0.11	mg/kg dry	SW-846 7471B	12/30/2014 14:48	JRW
Selenium	<5.6	5.6	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW
Silver	<1.1	1.1	mg/kg dry	SW-846 6010C	12/29/2014 12:49	JRW
ICP Digestion				SW-846 3050B	12/29/2014 10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014 14:07	JRW
Moisture	12.7		%	SM2540 G.	12/24/2014 8:47	AK

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 002
SAMPLE DESCRIPTION: HA-1 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
TPH						
TPH GC/FID	500	390	mg/kg dry	SW846 8100M	12/25/2014 1:00	KD
Surrogate			RANGE	SW-846 8100M	12/25/2014 1:00	KD
2-Fluorobiphenyl	127		40-140%	SW-846 8100M	12/25/2014 1:00	KD
Moisture	23.3		%	SM2540 G.	12/24/2014 8:47	AK
PAH						
Naphthalene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Acenaphthylene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Acenaphthene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Fluorene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Phenanthrene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Anthracene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Fluoranthene	0.71	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Pyrene	0.62	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Benzo(a)anthracene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Chrysene	<0.40	0.40	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Benzo(b)fluoranthene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Benzo(k)fluoranthene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Benzo(a)pyrene	<0.40	0.40	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Indeno(1,2,3-cd)pyrene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Dibenzo(a,h)anthracene	<0.40	0.40	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Benzo(g,h,i)perylene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
2-Methylnaphthalene	<0.43	0.43	mg/kg dry	SW-846 8270D	12/30/2014 15:51	KF
Moisture	23.3		%	SM2540 G.	12/24/2014 8:47	AK
Surrogates			RANGE	SW-846 8270D	12/30/2014 15:51	KF
Nitrobenzene-d5	44		30-130%	SW-846 8270D	12/30/2014 15:51	KF
2-Fluorobiphenyl	43		30-130%	SW-846 8270D	12/30/2014 15:51	KF
P-Terphenyl-d14	41		30-130%	SW-846 8270D	12/30/2014 15:51	KF
Semi Extraction date				SW846 3546	12/29/2014 12:50	KS
Total Metals						
Arsenic	9.8	3.2	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW
Barium	50	0.65	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW
Cadmium	0.46	0.32	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW
Chromium	14	2.0	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW
Lead	130	2.6	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW
Mercury	0.19	0.11	mg/kg dry	SW-846 7471B	12/30/2014 14:50	JRW
Selenium	<6.5	6.5	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW
Silver	1.4	1.3	mg/kg dry	SW-846 6010C	12/29/2014 12:53	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 002
SAMPLE DESCRIPTION: HA-1 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
ICP Digestion	49.75			SW-846 3050B	12/29/2014 10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014 14:07	JRW
Volatile Organic Compounds						
Acetone	<0.0509	0.0509	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Tertiary Amyl Methyl Ether	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Benzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Bromobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Bromochloromethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Bromodichloromethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Bromoform	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Bromomethane	<0.0102	0.0102	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Sec-butylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
n-Butylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
tert-Butylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Carbon Disulfide	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Carbon Tetrachloride	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Chlorobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Dibromochloromethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Chloroethane	<0.0102	0.0102	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Chloroform	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Chloromethane	<0.0102	0.0102	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
2-Chlorotoluene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
4-Chlorotoluene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2-Dibromo-3-Chloropropane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2-Dibromoethane(EDB)	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Dibromomethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,3-Dichlorobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2-Dichlorobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,4-Dichlorobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
n-Propylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Dichlorodifluoromethane	<0.0102	0.0102	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1-Dichloroethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2-Dichloroethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1-Dichloroethene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
cis-1,2-Dichloroethene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
trans-1,2-Dichloroethylene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2-Dichloropropane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,3-Dichloropropane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
2,2-Dichloropropane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1-Dichloropropene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 002
SAMPLE DESCRIPTION: HA-1 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
cis-1,3-Dichloropropene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
trans-1,3-Dichloropropylene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Diethyl ether	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Diisopropyl Ether (DIPE)	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,4-Dioxane	<0.102	0.102	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Ethyl Tertiary Butyl Ether	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Ethylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Hexachlorobutadiene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
2-Hexanone	<0.0509	0.0509	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Isopropylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
p-Isopropyltoluene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
2-Butanone(MEK)	<0.0509	0.0509	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
4-Methyl-2-pentanone(MIBK)	<0.0509	0.0509	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
MTBE	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Methylene Chloride	<0.0255	0.0255	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Naphthalene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1,2-Trichloroethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Styrene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1,1,2-Tetrachloroethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1,2,2-Tetrachloroethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Tetrachloroethene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Tetrahydrofuran	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Toluene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2,4-Trichlorobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2,3-Trichlorobenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,1,1-Trichloroethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Trichloroethene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Trichlorofluoromethane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2,3-Trichloropropane	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,2,4-Trimethylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
1,3,5-Trimethylbenzene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Vinyl Chloride	<0.0102	0.0102	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
o-Xylene	<0.0051	0.0051	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
m,p-Xylene	<0.0102	0.0102	mg/kg dry	5035/8260C	12/24/2014 18:45	*ET
Surrogates			RANGE	5035/8260C	12/24/2014 18:45	*ET
Dibromofluoromethane	116		70-130%	5035/8260C	12/24/2014 18:45	*ET
Toluene-d8	105		70-130%	5035/8260C	12/24/2014 18:45	*ET
4-Bromofluorobenzene	90		70-130%	5035/8260C	12/24/2014 18:45	*ET
1,2 Dichloroethane-d4	140		70-130%	5035/8260C	12/24/2014 18:45	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 003
SAMPLE DESCRIPTION: HA-3 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
TPH						
TPH GC/FID	380	350	mg/kg dry	SW846 8100M	12/25/2014 1:47	KD
Surrogate			RANGE	SW-846 8100M	12/25/2014 1:47	KD
2-Fluorobiphenyl	132		40-140%	SW-846 8100M	12/25/2014 1:47	KD
Moisture	15.1		%	SM2540 G.	12/24/2014 8:47	AK
Total Metals						
Arsenic	5.2	2.9	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
Barium	68	0.59	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
Cadmium	0.45	0.29	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
Chromium	22	1.8	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
Lead	180	2.4	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
Mercury	0.50	0.10	mg/kg dry	SW-846 7471B	12/30/2014 14:54	JRW
Selenium	<5.9	5.9	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
Silver	1.7	1.2	mg/kg dry	SW-846 6010C	12/29/2014 12:58	JRW
ICP Digestion	50.00			SW-846 3050B	12/29/2014 10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014 14:07	JRW
Volatile Organic Compounds						
Acetone	<0.0475	0.0475	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Tertiary Amyl Methyl Ether	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Benzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Bromobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Bromochloromethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Bromodichloromethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Bromoform	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Bromomethane	<0.0095	0.0095	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Sec-butylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
n-Butylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
tert-Butylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Carbon Disulfide	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Carbon Tetrachloride	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Chlorobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Dibromochloromethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Chloroethane	<0.0095	0.0095	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Chloroform	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Chloromethane	<0.0095	0.0095	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
2-Chlorotoluene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
4-Chlorotoluene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2-Dibromo-3-Chloropropane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 003
SAMPLE DESCRIPTION: HA-3 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
1,2-Dibromoethane(EDB)	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Dibromomethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,3-Dichlorobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2-Dichlorobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,4-Dichlorobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
n-Propylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Dichlorodifluoromethane	<0.0095	0.0095	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,1-Dichloroethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2-Dichloroethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,1-Dichloroethene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
cis-1,2-Dichloroethene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
trans-1,2-Dichloroethylene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2-Dichloropropane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,3-Dichloropropane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
2,2-Dichloropropane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,1-Dichloropropene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
cis-1,3-Dichloropropene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
trans-1,3-Dichloropropylene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Diethyl ether	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Diisopropyl Ether (DIPE)	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,4-Dioxane	<0.0950	0.0950	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Ethyl Tertiary Butyl Ether	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Ethylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Hexachlorobutadiene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
2-Hexanone	<0.0475	0.0475	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Isopropylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
p-Isopropyltoluene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
2-Butanone(MEK)	<0.0475	0.0475	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
4-Methyl-2-pentanone(MIBK)	<0.0475	0.0475	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
MTBE	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Methylene Chloride	<0.0237	0.0237	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Naphthalene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,1,2-Trichloroethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Styrene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,1,1,2-Tetrachloroethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,1,2,2-Tetrachloroethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Tetrachloroethene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Tetrahydrofuran	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Toluene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2,4-Trichlorobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2,3-Trichlorobenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 003
SAMPLE DESCRIPTION: HA-3 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
1,1,1-Trichloroethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Trichloroethene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Trichlorofluoromethane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2,3-Trichloropropane	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,2,4-Trimethylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
1,3,5-Trimethylbenzene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Vinyl Chloride	<0.0095	0.0095	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
o-Xylene	<0.0047	0.0047	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
m,p-Xylene	<0.0095	0.0095	mg/kg dry	5035/8260C	12/26/2014 13:43	*ET
Surrogates			RANGE	5035/8260C	12/26/2014 13:43	*ET
Dibromofluoromethane	96		70-130%	5035/8260C	12/26/2014 13:43	*ET
Toluene-d8	105		70-130%	5035/8260C	12/26/2014 13:43	*ET
4-Bromofluorobenzene	86		70-130%	5035/8260C	12/26/2014 13:43	*ET
1,2 Dichloroethane-d4	111		70-130%	5035/8260C	12/26/2014 13:43	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 004
SAMPLE DESCRIPTION: HA-4 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED		ANALYST
Pesticides							
Aldrin	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Alpha-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Beta-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Delta-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Gamma-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Chlordane	<0.4	0.4	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
4-4'-DDD	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
4-4'-DDE	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
4-4'-DDT	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Dieldrin	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Endosulfan I	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Endosulfan II	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Endosulfan Sulfate	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Endrin	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Endrin Aldehyde	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Endrin Ketone	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Heptachlor	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Heptachlor epoxide	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Methoxychlor	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Toxaphene	<0.4	0.4	mg/kg dry	SW-846 8081B	1/2/2015	14:05	JEB
Moisture	11.8		%	SM2540 G.	12/24/2014	8:47	AK
Surrogate			RANGE	SW-846 8081B	1/2/2015	14:05	JEB
Tetrachloro-m-xylene (TCMX)	70		30-150%	SW-846 8081B	1/2/2015	14:05	JEB
Decachlorobiphenyl	30		30-150%	SW-846 8081B	1/2/2015	14:05	JEB
Pest/PCB Extraction date	Extracted			SW846 3546	12/29/2014	11:55	KS
PAH							
Naphthalene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Acenaphthylene	0.42	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Acenaphthene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Fluorene	0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Phenanthrene	5.2	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Anthracene	1.3	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Fluoranthene	7.5	0.75	mg/kg dry	SW-846 8270D	12/31/2014	16:28	KF
Pyrene	6.3	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Benzo(a)anthracene	3.5	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Chrysene	3.2	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Benzo(b)fluoranthene	2.6	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF
Benzo(k)fluoranthene	2.4	0.38	mg/kg dry	SW-846 8270D	12/30/2014	16:23	KF

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 004
SAMPLE DESCRIPTION: HA-4 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Benzo(a)pyrene	2.8	0.38	mg/kg dry	SW-846 8270D	12/30/2014 16:23	KF
Indeno(1,2,3-cd)pyrene	1.5	0.38	mg/kg dry	SW-846 8270D	12/30/2014 16:23	KF
Dibenzo(a,h)anthracene	0.42	0.38	mg/kg dry	SW-846 8270D	12/30/2014 16:23	KF
Benzo(g,h,i)perylene	1.6	0.38	mg/kg dry	SW-846 8270D	12/30/2014 16:23	KF
2-Methylnaphthalene	<0.38	0.38	mg/kg dry	SW-846 8270D	12/30/2014 16:23	KF
Moisture	11.8		%	SM2540 G.	12/24/2014 8:47	AK
Surrogates			RANGE	SW-846 8270D	12/30/2014 16:23	KF
Nitrobenzene-d5	36		30-130%	SW-846 8270D	12/30/2014 16:23	KF
2-Fluorobiphenyl	37		30-130%	SW-846 8270D	12/30/2014 16:23	KF
P-Terphenyl-d14	38		30-130%	SW-846 8270D	12/30/2014 16:23	KF
Semi Extraction date				SW846 3546	12/29/2014 12:50	KS
Total Metals						
Arsenic	5.5	2.8	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
Barium	120	0.56	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
Cadmium	0.36	0.28	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
Chromium	11	1.7	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
Lead	500	2.2	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
Mercury	0.44	0.098	mg/kg dry	SW-846 7471B	12/30/2014 14:56	JRW
Selenium	<5.6	5.6	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
Silver	1.3	1.1	mg/kg dry	SW-846 6010C	12/29/2014 13:08	JRW
ICP Digestion	49.50			SW-846 3050B	12/29/2014 10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014 14:07	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 005
SAMPLE DESCRIPTION: HA-7 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Semi-Volatile Organic Comp.						
Acenaphthene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Acenaphthylene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Anthracene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Benzidine	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Benzo(a)anthracene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Benzo(b)fluoranthene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Benzo(k)fluoranthene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Benzo(g,h,i)perylene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Benzo(a)pyrene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Bis(2-chloroethyl)ether	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Bis(2-Chloroethoxy)methane	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Bis(2-Chloroisopropyl)Ether	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Bis(2-ethylhexyl)phthalate	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
4-Bromophenyl phenyl ether	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Butylbenzyl phthalate	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2-Chloronaphthalene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
4-Chlorophenyl phenyl ether	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Chrysene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Dibenzo(a,h)anthracene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Di-n-butyl phthalate	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
1,2-Dichlorobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
1,3-Dichlorobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
1,4-Dichlorobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
3,3'-Dichlorobenzidine	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Diethyl phthalate	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Dimethyl phthalate	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,4-Dinitrotoluene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,6-Dinitrotoluene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Di-n-octyl phthalate	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
1,2-Diphenylhydrazine	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Fluoranthene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Fluorene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Hexachlorobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Hexachlorobutadiene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Hexachlorocyclopentadiene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Hexachloroethane	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Indeno(1,2,3-cd)pyrene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Isophorone	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2-Methylnaphthalene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 005
SAMPLE DESCRIPTION: HA-7 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Naphthalene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Nitrobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
N-nitrosodimethylamine	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
N-nitrosodiphenylamine	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
N-nitrosodi-n-propylamine	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Phenanthrene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Pyrene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
1,2,4-Trichlorobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
4-Chloro-3-methylphenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2-Chlorophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,4-Dichlorophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,4-Dimethylphenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2-Methyl-4,6-dinitrophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,4-Dinitrophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2-Nitrophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
4-Nitrophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Pentachlorophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Phenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,4,5-Trichlorophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2,4,6-Trichlorophenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
4-Chloroaniline	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Dibenzofuran	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
2-Methyl Phenol	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
3 & 4-Methylphenols	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Aniline	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Acetophenone	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Azobenzene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 16:54	KF
Surrogates			RANGE	SW-846 8270D	12/30/2014 16:54	KF
Phenol-d5	79		30-130%	SW-846 8270D	12/30/2014 16:54	KF
2-Fluorophenol	79		30-130%	SW-846 8270D	12/30/2014 16:54	KF
2,4,6-Tribromophenol	103		30-130%	SW-846 8270D	12/30/2014 16:54	KF
Nitrobenzene-d5	79		30-130%	SW-846 8270D	12/30/2014 16:54	KF
2-Fluorobiphenyl	79		30-130%	SW-846 8270D	12/30/2014 16:54	KF
P-Terphenyl-d14	91		30-130%	SW-846 8270D	12/30/2014 16:54	KF
Semi Extraction date				SW846 3546	12/29/2014 12:50	KS
Total Metals						
Arsenic	21	2.7	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW
Barium	31	0.54	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW
Cadmium	<0.27	0.27	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW
Chromium	20	1.6	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 005
SAMPLE DESCRIPTION: HA-7 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
Lead	22	2.1	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW
Mercury	<0.093	0.093	mg/kg dry	SW-846 7471B	12/30/2014 14:57	JRW
Selenium	<5.4	5.4	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW
Silver	1.5	1.1	mg/kg dry	SW-846 6010C	12/29/2014 13:12	JRW
ICP Digestion	49.75			SW-846 3050B	12/29/2014 10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014 14:07	JRW
PCB						
Aroclor-1016	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Aroclor-1221	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Aroclor-1232	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Aroclor-1242	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Aroclor-1248	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Aroclor-1254	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Aroclor-1260	<0.1	0.1	mg/kg dry	SW-846 8082A	12/30/2014 12:42	KD
Surrogate			RANGE	SW-846 8082A	12/30/2014 12:42	KD
Tetrachloro-m-xylene (TCMX)	60		30-150%	SW-846 8082A	12/30/2014 12:42	KD
Decachlorobiphenyl	71		30-150%	SW-846 8082A	12/30/2014 12:42	KD
Extraction date				SW846 3546	12/29/2014 11:55	KS
Moisture	7.0		%	SM2540 G.	12/24/2014 8:47	AK
Volatile Organic Compounds						
Acetone	<0.0418	0.0418	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Tertiary Amyl Methyl Ether	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Benzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Bromobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Bromochloromethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Bromodichloromethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Bromoform	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Bromomethane	<0.0084	0.0084	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Sec-butylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
n-Butylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
tert-Butylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Carbon Disulfide	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Carbon Tetrachloride	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Chlorobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Dibromochloromethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Chloroethane	<0.0084	0.0084	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Chloroform	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Chloromethane	<0.0084	0.0084	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
2-Chlorotoluene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 005
SAMPLE DESCRIPTION: HA-7 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
4-Chlorotoluene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2-Dibromo-3-Chloropropane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2-Dibromoethane(EDB)	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Dibromomethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,3-Dichlorobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2-Dichlorobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,4-Dichlorobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
n-Propylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Dichlorodifluoromethane	<0.0084	0.0084	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1-Dichloroethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2-Dichloroethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1-Dichloroethene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
cis-1,2-Dichloroethene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
trans-1,2-Dichloroethylene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2-Dichloropropane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,3-Dichloropropane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
2,2-Dichloropropane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1-Dichloropropene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
cis-1,3-Dichloropropene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
trans-1,3-Dichloropropylene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Diethyl ether	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Diisopropyl Ether (DIPE)	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,4-Dioxane	<0.0837	0.0837	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Ethyl Tertiary Butyl Ether	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Ethylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Hexachlorobutadiene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
2-Hexanone	<0.0418	0.0418	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Isopropylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
p-Isopropyltoluene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
2-Butanone(MEK)	<0.0418	0.0418	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
4-Methyl-2-pentanone(MIBK)	<0.0418	0.0418	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
MTBE	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Methylene Chloride	<0.0209	0.0209	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Naphthalene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1,2-Trichloroethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Styrene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1,1,2-Tetrachloroethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1,2,2-Tetrachloroethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Tetrachloroethene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Tetrahydrofuran	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Toluene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 005
SAMPLE DESCRIPTION: HA-7 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
1,2,4-Trichlorobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2,3-Trichlorobenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,1,1-Trichloroethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Trichloroethene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Trichlorofluoromethane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2,3-Trichloropropane	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,2,4-Trimethylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
1,3,5-Trimethylbenzene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Vinyl Chloride	<0.0084	0.0084	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
o-Xylene	<0.0042	0.0042	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
m,p-Xylene	<0.0084	0.0084	mg/kg dry	5035/8260C	12/26/2014 14:40	*ET
Surrogates			RANGE	5035/8260C	12/26/2014 14:40	*ET
Dibromofluoromethane	100		70-130%	5035/8260C	12/26/2014 14:40	*ET
Toluene-d8	102		70-130%	5035/8260C	12/26/2014 14:40	*ET
4-Bromofluorobenzene	92		70-130%	5035/8260C	12/26/2014 14:40	*ET
1,2 Dichloroethane-d4	117		70-130%	5035/8260C	12/26/2014 14:40	*ET

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 006
SAMPLE DESCRIPTION: HA-6 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 08:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED		ANALYST
Pesticides							
Aldrin	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Alpha-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Beta-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Delta-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Gamma-BHC	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Chlordane	<0.4	0.4	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
4-4'-DDD	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
4-4'-DDE	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
4-4'-DDT	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Dieldrin	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Endosulfan I	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Endosulfan II	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Endosulfan Sulfate	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Endrin	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Endrin Aldehyde	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Endrin Ketone	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Heptachlor	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Heptachlor epoxide	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Methoxychlor	<0.04	0.04	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Toxaphene	<0.4	0.4	mg/kg dry	SW-846 8081B	1/2/2015	14:42	JEB
Moisture	12.1		%	SM2540 G.	12/24/2014	8:33	AK
Surrogate			RANGE	SW-846 8081B	1/2/2015	14:42	JEB
Tetrachloro-m-xylene (TCMX)	60		30-150%	SW-846 8081B	1/2/2015	14:42	JEB
Decachlorobiphenyl	30		30-150%	SW-846 8081B	1/2/2015	14:42	JEB
Pest/PCB Extraction date	Extracted			SW846 3546	12/29/2014	11:55	KS
Total Metals							
Arsenic	12	2.8	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
Barium	320	0.57	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
Cadmium	1.5	0.28	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
Chromium	38	1.7	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
Lead	510	2.3	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
Mercury	2.7	1.1	mg/kg dry	SW-846 7471B	12/30/2014	15:11	JRW
Selenium	<5.7	5.7	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
Silver	3.9	1.1	mg/kg dry	SW-846 6010C	12/29/2014	13:17	JRW
ICP Digestion	49.75			SW-846 3050B	12/29/2014	10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014	14:07	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 007
SAMPLE DESCRIPTION: HA-5 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 08:08

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
TPH						
TPH GC/FID	140	130	mg/kg dry	SW846 8100M	12/25/2014 3:20	KD
Surrogate			RANGE	SW-846 8100M	12/25/2014 3:20	KD
2-Fluorobiphenyl	103		40-140%	SW-846 8100M	12/25/2014 3:20	KD
Moisture	8.8		%	SM2540 G.	12/24/2014 8:33	AK
PAH						
Naphthalene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Acenaphthylene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Acenaphthene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Fluorene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Phenanthrene	0.67	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Anthracene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Fluoranthene	1.6	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Pyrene	1.4	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Benzo(a)anthracene	0.78	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Chrysene	0.80	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Benzo(b)fluoranthene	0.56	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Benzo(k)fluoranthene	0.66	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Benzo(a)pyrene	0.78	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Indeno(1,2,3-cd)pyrene	0.46	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Dibenzo(a,h)anthracene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Benzo(g,h,i)perylene	0.49	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
2-Methylnaphthalene	<0.36	0.36	mg/kg dry	SW-846 8270D	12/30/2014 17:25	KF
Moisture	8.8		%	SM2540 G.	12/24/2014 8:33	AK
Surrogates			RANGE	SW-846 8270D	12/30/2014 17:25	KF
Nitrobenzene-d5	62		30-130%	SW-846 8270D	12/30/2014 17:25	KF
2-Fluorobiphenyl	62		30-130%	SW-846 8270D	12/30/2014 17:25	KF
P-Terphenyl-d14	68		30-130%	SW-846 8270D	12/30/2014 17:25	KF
Semi Extraction date				SW846 3546	12/29/2014 12:50	KS
Total Metals						
Arsenic	4.7	2.7	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW
Barium	59	0.54	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW
Cadmium	<0.27	0.27	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW
Chromium	10	1.6	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW
Lead	110	2.2	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW
Mercury	0.29	0.098	mg/kg dry	SW-846 7471B	12/30/2014 15:00	JRW
Selenium	<5.4	5.4	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW
Silver	1.4	1.1	mg/kg dry	SW-846 6010C	12/29/2014 13:21	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Date Received: 12/23/2014
Work Order #: 1412-28533

Sample # 007
SAMPLE DESCRIPTION: HA-5 (0.5-1.5')
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 08:08

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED	ANALYST
ICP Digestion	49.26			SW-846 3050B	12/29/2014 10:02	OMC
Mercury Digestion				SW-846 7471B	12/30/2014 14:07	JRW

Low Level 5035 analyzed by ESS Laboratory.

CERTIFICATE OF ANALYSIS

Data Reporting
RI Analytical Laboratories, Inc.
41 Illinois Avenue
Warwick, RI 02888

RE: RIAL Sampling (1412-28533)
ESS Laboratory Work Order Number: 1412500

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

REVIEWED
By ESS Laboratory at 11:33 am, Dec 31, 2014

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 NELAC Standards, A2LA 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: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

SAMPLE RECEIPT

The following samples were received on December 23, 2014 for the analyses specified on the enclosed Chain of Custody Record.

Low Level VOA vials were frozen by ESS Laboratory on December 23, 2014 at 17:35.

Lab Number	Sample Name	Matrix	Analysis
1412500-01	1412-28533-002	Soil	8260B Low
1412500-02	1412-28533-003	Soil	8260B Low
1412500-03	1412-28533-005	Soil	8260B Low
1412500-04	1412-28533-008	Soil	8260B Low

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

PROJECT NARRATIVE

5035/8260B Volatile Organic Compounds / Low Level

1412500-01	**Surrogate recovery(ies) above upper control limit (S+).**
	1,2-Dichloroethane-d4 (140% @ 70-130%)
CXL0357-CCV1	**Continuing Calibration recovery is above upper control limit (C+).**
	1,4-Dioxane (178% @ 70-130%)
CXL0372-CCV1	**Continuing Calibration recovery is above upper control limit (C+).**
	1,4-Dioxane (191% @ 70-130%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

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
8015D - 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 and Graphite Furnace Digestion
3020A - Aqueous 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

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-002
Date Sampled: 12/23/14 07:00
Percent Solids: 77
Initial Volume: 6.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,1,1-Trichloroethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,1,2,2-Tetrachloroethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,1,2-Trichloroethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,1-Dichloroethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,1-Dichloroethene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,1-Dichloropropene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2,3-Trichlorobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2,3-Trichloropropane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2,4-Trichlorobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2,4-Trimethylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2-Dibromo-3-Chloropropane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2-Dibromoethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2-Dichlorobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2-Dichloroethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,2-Dichloropropane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,3,5-Trimethylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,3-Dichlorobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,3-Dichloropropane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,4-Dichlorobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1,4-Dioxane	ND (0.102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
1-Chlorohexane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
2,2-Dichloropropane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
2-Butanone	ND (0.0509)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
2-Chlorotoluene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
2-Hexanone	ND (0.0509)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
4-Chlorotoluene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
4-Isopropyltoluene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
4-Methyl-2-Pentanone	ND (0.0509)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Acetone	ND (0.0509)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Benzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-002
Date Sampled: 12/23/14 07:00
Percent Solids: 77
Initial Volume: 6.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Bromochloromethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Bromodichloromethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Bromoform	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Bromomethane	ND (0.0102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Carbon Disulfide	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Carbon Tetrachloride	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Chlorobenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Chloroethane	ND (0.0102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Chloroform	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Chloromethane	ND (0.0102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
cis-1,2-Dichloroethene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
cis-1,3-Dichloropropene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Dibromochloromethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Dibromomethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Dichlorodifluoromethane	ND (0.0102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Diethyl Ether	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Di-isopropyl ether	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Ethyl tertiary-butyl ether	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Ethylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Hexachlorobutadiene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Isopropylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Methyl tert-Butyl Ether	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Methylene Chloride	ND (0.0255)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Naphthalene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
n-Butylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
n-Propylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
sec-Butylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Styrene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
tert-Butylbenzene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Tertiary-amyl methyl ether	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-002
Date Sampled: 12/23/14 07:00
Percent Solids: 77
Initial Volume: 6.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrachloroethene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Tetrahydrofuran	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Toluene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
trans-1,2-Dichloroethene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
trans-1,3-Dichloropropene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Trichloroethene	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Trichlorofluoromethane	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Vinyl Acetate	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Vinyl Chloride	ND (0.0102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Xylene O	ND (0.0051)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Xylene P,M	ND (0.0102)		8260B Low		1	12/24/14 18:45	CXL0357	CL42430
Xylenes (Total)	ND (0.0102)		8260B Low		1	12/24/14 18:45		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*140 %*	*S+*	*70-130*
Surrogate: 4-Bromofluorobenzene	*90 %*		*70-130*
Surrogate: Dibromofluoromethane	*116 %*		*70-130*
Surrogate: Toluene-d8	*105 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-003
Date Sampled: 12/23/14 07:15
Percent Solids: 85
Initial Volume: 6.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,1,1-Trichloroethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,1,2,2-Tetrachloroethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,1,2-Trichloroethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,1-Dichloroethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,1-Dichloroethene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,1-Dichloropropene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2,3-Trichlorobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2,3-Trichloropropane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2,4-Trichlorobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2,4-Trimethylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2-Dibromo-3-Chloropropane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2-Dibromoethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2-Dichlorobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2-Dichloroethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,2-Dichloropropane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,3,5-Trimethylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,3-Dichlorobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,3-Dichloropropane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,4-Dichlorobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1,4-Dioxane	ND (0.0950)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
1-Chlorohexane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
2,2-Dichloropropane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
2-Butanone	ND (0.0475)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
2-Chlorotoluene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
2-Hexanone	ND (0.0475)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
4-Chlorotoluene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
4-Isopropyltoluene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
4-Methyl-2-Pentanone	ND (0.0475)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Acetone	ND (0.0475)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Benzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-003
Date Sampled: 12/23/14 07:15
Percent Solids: 85
Initial Volume: 6.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Bromochloromethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Bromodichloromethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Bromoform	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Bromomethane	ND (0.0095)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Carbon Disulfide	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Carbon Tetrachloride	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Chlorobenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Chloroethane	ND (0.0095)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Chloroform	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Chloromethane	ND (0.0095)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
cis-1,2-Dichloroethene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
cis-1,3-Dichloropropene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Dibromochloromethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Dibromomethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Dichlorodifluoromethane	ND (0.0095)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Diethyl Ether	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Di-isopropyl ether	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Ethyl tertiary-butyl ether	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Ethylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Hexachlorobutadiene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Isopropylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Methyl tert-Butyl Ether	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Methylene Chloride	ND (0.0237)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Naphthalene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
n-Butylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
n-Propylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
sec-Butylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Styrene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
tert-Butylbenzene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Tertiary-amyl methyl ether	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-003
Date Sampled: 12/23/14 07:15
Percent Solids: 85
Initial Volume: 6.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrachloroethene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Tetrahydrofuran	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Toluene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
trans-1,2-Dichloroethene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
trans-1,3-Dichloropropene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Trichloroethene	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Trichlorofluoromethane	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Vinyl Acetate	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Vinyl Chloride	ND (0.0095)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Xylene O	ND (0.0047)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Xylene P,M	ND (0.0095)		8260B Low		1	12/26/14 13:43	CXL0372	CL42626
Xylenes (Total)	ND (0.0095)		8260B Low		1	12/26/14 13:43		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*111 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*86 %*		*70-130*
Surrogate: Dibromofluoromethane	*96 %*		*70-130*
Surrogate: Toluene-d8	*105 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-005
Date Sampled: 12/23/14 07:50
Percent Solids: 83
Initial Volume: 7.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,1,1-Trichloroethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,1,2,2-Tetrachloroethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,1,2-Trichloroethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,1-Dichloroethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,1-Dichloroethene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,1-Dichloropropene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2,3-Trichlorobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2,3-Trichloropropane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2,4-Trichlorobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2,4-Trimethylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2-Dibromo-3-Chloropropane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2-Dibromoethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2-Dichlorobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2-Dichloroethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,2-Dichloropropane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,3,5-Trimethylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,3-Dichlorobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,3-Dichloropropane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,4-Dichlorobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1,4-Dioxane	ND (0.0837)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
1-Chlorohexane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
2,2-Dichloropropane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
2-Butanone	ND (0.0418)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
2-Chlorotoluene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
2-Hexanone	ND (0.0418)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
4-Chlorotoluene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
4-Isopropyltoluene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
4-Methyl-2-Pentanone	ND (0.0418)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Acetone	ND (0.0418)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Benzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-005
Date Sampled: 12/23/14 07:50
Percent Solids: 83
Initial Volume: 7.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Bromochloromethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Bromodichloromethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Bromoform	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Bromomethane	ND (0.0084)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Carbon Disulfide	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Carbon Tetrachloride	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Chlorobenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Chloroethane	ND (0.0084)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Chloroform	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Chloromethane	ND (0.0084)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
cis-1,2-Dichloroethene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
cis-1,3-Dichloropropene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Dibromochloromethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Dibromomethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Dichlorodifluoromethane	ND (0.0084)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Diethyl Ether	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Di-isopropyl ether	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Ethyl tertiary-butyl ether	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Ethylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Hexachlorobutadiene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Isopropylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Methyl tert-Butyl Ether	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Methylene Chloride	ND (0.0209)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Naphthalene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
n-Butylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
n-Propylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
sec-Butylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Styrene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
tert-Butylbenzene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Tertiary-amyl methyl ether	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-005
Date Sampled: 12/23/14 07:50
Percent Solids: 83
Initial Volume: 7.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrachloroethene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Tetrahydrofuran	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Toluene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
trans-1,2-Dichloroethene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
trans-1,3-Dichloropropene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Trichloroethene	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Trichlorofluoromethane	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Vinyl Acetate	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Vinyl Chloride	ND (0.0084)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Xylene O	ND (0.0042)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Xylene P,M	ND (0.0084)		8260B Low		1	12/26/14 14:40	CXL0372	CL42626
Xylenes (Total)	ND (0.0084)		8260B Low		1	12/26/14 14:40		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*117 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*92 %*		*70-130*
Surrogate: Dibromofluoromethane	*100 %*		*70-130*
Surrogate: Toluene-d8	*102 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-008
Date Sampled: 12/23/14 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-04
Sample Matrix: Soil
Units: mg/kg
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,1,1-Trichloroethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,1,2,2-Tetrachloroethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,1,2-Trichloroethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,1-Dichloroethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,1-Dichloroethene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,1-Dichloropropene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2,3-Trichlorobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2,3-Trichloropropane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2,4-Trichlorobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2,4-Trimethylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2-Dibromoethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2-Dichlorobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2-Dichloroethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,2-Dichloropropane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,3,5-Trimethylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,3-Dichlorobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,3-Dichloropropane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,4-Dichlorobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1,4-Dioxane	ND (0.100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
1-Chlorohexane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
2,2-Dichloropropane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
2-Butanone	ND (0.0500)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
2-Chlorotoluene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
2-Hexanone	ND (0.0500)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
4-Chlorotoluene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
4-Isopropyltoluene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
4-Methyl-2-Pentanone	ND (0.0500)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Acetone	ND (0.0500)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Benzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-008
Date Sampled: 12/23/14 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-04
Sample Matrix: Soil
Units: mg/kg
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Bromochloromethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Bromodichloromethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Bromoform	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Bromomethane	ND (0.0100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Carbon Disulfide	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Carbon Tetrachloride	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Chlorobenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Chloroethane	ND (0.0100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Chloroform	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Chloromethane	ND (0.0100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
cis-1,2-Dichloroethene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
cis-1,3-Dichloropropene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Dibromochloromethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Dibromomethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Dichlorodifluoromethane	ND (0.0100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Diethyl Ether	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Di-isopropyl ether	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Ethyl tertiary-butyl ether	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Ethylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Hexachlorobutadiene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Isopropylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Methyl tert-Butyl Ether	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Methylene Chloride	ND (0.0250)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Naphthalene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
n-Butylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
n-Propylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
sec-Butylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Styrene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
tert-Butylbenzene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Tertiary-amyl methyl ether	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling
Client Sample ID: 1412-28533-008
Date Sampled: 12/23/14 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 1412500
ESS Laboratory Sample ID: 1412500-04
Sample Matrix: Soil
Units: mg/kg
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrachloroethene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Tetrahydrofuran	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Toluene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
trans-1,2-Dichloroethene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
trans-1,3-Dichloropropene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Trichloroethene	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Trichlorofluoromethane	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Vinyl Acetate	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Vinyl Chloride	ND (0.0100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Xylene O	ND (0.0050)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430
Xylene P,M	ND (0.0100)		8260B Low		1	12/24/14 14:01	CXL0357	CL42430

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*108 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*95 %*		*70-130*
Surrogate: Dibromofluoromethane	*102 %*		*70-130*
Surrogate: Toluene-d8	*100 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42430 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane	ND	0.100	mg/kg wet							
1-Chlorohexane	ND	0.0050	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0500	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							
2-Hexanone	ND	0.0500	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0500	mg/kg wet							
Acetone	ND	0.0500	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							
Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42430 - 5035										
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Dibromochloromethane	ND	0.0050	mg/kg wet							
Dibromomethane	ND	0.0050	mg/kg wet							
Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0250	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							
Vinyl Acetate	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Xylenes (Total)	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0544*		mg/kg wet	*0.05000*		*109*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0486*		mg/kg wet	*0.05000*		*97*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0509*		mg/kg wet	*0.05000*		*102*	*70-130*			
Surrogate: Toluene-d8	*0.0507*		mg/kg wet	*0.05000*		*101*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0422	0.0050	mg/kg wet	0.05000		84	70-130			
1,1,1-Trichloroethane	0.0414	0.0050	mg/kg wet	0.05000		83	70-130			
1,1,2,2-Tetrachloroethane	0.0391	0.0050	mg/kg wet	0.05000		78	70-130			
1,1,2-Trichloroethane	0.0396	0.0050	mg/kg wet	0.05000		79	70-130			
1,1-Dichloroethane	0.0386	0.0050	mg/kg wet	0.05000		77	70-130			
1,1-Dichloroethene	0.0406	0.0050	mg/kg wet	0.05000		81	70-130			
1,1-Dichloropropene	0.0402	0.0050	mg/kg wet	0.05000		80	70-130			
1,2,3-Trichlorobenzene	0.0444	0.0050	mg/kg wet	0.05000		89	70-130			

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42430 - 5035										
1,2,3-Trichloropropane	0.0412	0.0050	mg/kg wet	0.05000		82	70-130			
1,2,4-Trichlorobenzene	0.0443	0.0050	mg/kg wet	0.05000		89	70-130			
1,2,4-Trimethylbenzene	0.0423	0.0050	mg/kg wet	0.05000		85	70-130			
1,2-Dibromo-3-Chloropropane	0.0399	0.0050	mg/kg wet	0.05000		80	70-130			
1,2-Dibromoethane	0.0410	0.0050	mg/kg wet	0.05000		82	70-130			
1,2-Dichlorobenzene	0.0409	0.0050	mg/kg wet	0.05000		82	70-130			
1,2-Dichloroethane	0.0377	0.0050	mg/kg wet	0.05000		75	70-130			
1,2-Dichloropropane	0.0392	0.0050	mg/kg wet	0.05000		78	70-130			
1,3,5-Trimethylbenzene	0.0440	0.0050	mg/kg wet	0.05000		88	70-130			
1,3-Dichlorobenzene	0.0406	0.0050	mg/kg wet	0.05000		81	70-130			
1,3-Dichloropropane	0.0408	0.0050	mg/kg wet	0.05000		82	70-130			
1,4-Dichlorobenzene	0.0456	0.0050	mg/kg wet	0.05000		91	70-130			
1,4-Dioxane	0.900	0.100	mg/kg wet	1.000		90	70-130			
1-Chlorohexane	0.0430	0.0050	mg/kg wet	0.05000		86	70-130			
2,2-Dichloropropane	0.0423	0.0050	mg/kg wet	0.05000		85	70-130			
2-Butanone	0.195	0.0500	mg/kg wet	0.2500		78	70-130			
2-Chlorotoluene	0.0406	0.0050	mg/kg wet	0.05000		81	70-130			
2-Hexanone	0.210	0.0500	mg/kg wet	0.2500		84	70-130			
4-Chlorotoluene	0.0414	0.0050	mg/kg wet	0.05000		83	70-130			
4-Isopropyltoluene	0.0423	0.0050	mg/kg wet	0.05000		85	70-130			
4-Methyl-2-Pentanone	0.208	0.0500	mg/kg wet	0.2500		83	70-130			
Acetone	0.208	0.0500	mg/kg wet	0.2500		83	70-130			
Benzene	0.0406	0.0050	mg/kg wet	0.05000		81	70-130			
Bromobenzene	0.0427	0.0050	mg/kg wet	0.05000		85	70-130			
Bromochloromethane	0.0415	0.0050	mg/kg wet	0.05000		83	70-130			
Bromodichloromethane	0.0417	0.0050	mg/kg wet	0.05000		83	70-130			
Bromoform	0.0443	0.0050	mg/kg wet	0.05000		89	70-130			
Bromomethane	0.0392	0.0100	mg/kg wet	0.05000		78	70-130			
Carbon Disulfide	0.0421	0.0050	mg/kg wet	0.05000		84	70-130			
Carbon Tetrachloride	0.0424	0.0050	mg/kg wet	0.05000		85	70-130			
Chlorobenzene	0.0397	0.0050	mg/kg wet	0.05000		79	70-130			
Chloroethane	0.0400	0.0100	mg/kg wet	0.05000		80	70-130			
Chloroform	0.0399	0.0050	mg/kg wet	0.05000		80	70-130			
Chloromethane	0.0390	0.0100	mg/kg wet	0.05000		78	70-130			
cis-1,2-Dichloroethene	0.0411	0.0050	mg/kg wet	0.05000		82	70-130			
cis-1,3-Dichloropropene	0.0424	0.0050	mg/kg wet	0.05000		85	70-130			
Dibromochloromethane	0.0445	0.0050	mg/kg wet	0.05000		89	70-130			
Dibromomethane	0.0400	0.0050	mg/kg wet	0.05000		80	70-130			
Dichlorodifluoromethane	0.0357	0.0100	mg/kg wet	0.05000		71	70-130			
Diethyl Ether	0.0400	0.0050	mg/kg wet	0.05000		80	70-130			
Di-isopropyl ether	0.0394	0.0050	mg/kg wet	0.05000		79	70-130			
Ethyl tertiary-butyl ether	0.0408	0.0050	mg/kg wet	0.05000		82	70-130			
Ethylbenzene	0.0419	0.0050	mg/kg wet	0.05000		84	70-130			
Hexachlorobutadiene	0.0430	0.0050	mg/kg wet	0.05000		86	70-130			

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch CL42430 - 5035										
Isopropylbenzene	0.0418	0.0050	mg/kg wet	0.05000		84	70-130			
Methyl tert-Butyl Ether	0.0423	0.0050	mg/kg wet	0.05000		85	70-130			
Methylene Chloride	0.0465	0.0250	mg/kg wet	0.05000		93	70-130			
Naphthalene	0.0422	0.0050	mg/kg wet	0.05000		84	70-130			
n-Butylbenzene	0.0431	0.0050	mg/kg wet	0.05000		86	70-130			
n-Propylbenzene	0.0410	0.0050	mg/kg wet	0.05000		82	70-130			
sec-Butylbenzene	0.0413	0.0050	mg/kg wet	0.05000		83	70-130			
Styrene	0.0426	0.0050	mg/kg wet	0.05000		85	70-130			
tert-Butylbenzene	0.0423	0.0050	mg/kg wet	0.05000		85	70-130			
Tertiary-amyl methyl ether	0.0420	0.0050	mg/kg wet	0.05000		84	70-130			
Tetrachloroethene	0.0413	0.0050	mg/kg wet	0.05000		83	70-130			
Tetrahydrofuran	0.0392	0.0050	mg/kg wet	0.05000		78	70-130			
Toluene	0.0411	0.0050	mg/kg wet	0.05000		82	70-130			
trans-1,2-Dichloroethene	0.0408	0.0050	mg/kg wet	0.05000		82	70-130			
trans-1,3-Dichloropropene	0.0405	0.0050	mg/kg wet	0.05000		81	70-130			
Trichloroethene	0.0400	0.0050	mg/kg wet	0.05000		80	70-130			
Trichlorofluoromethane	0.0362	0.0050	mg/kg wet	0.05000		72	70-130			
Vinyl Acetate	0.0432	0.0050	mg/kg wet	0.05000		86	70-130			
Vinyl Chloride	0.0407	0.0100	mg/kg wet	0.05000		81	70-130			
Xylene O	0.0400	0.0050	mg/kg wet	0.05000		80	70-130			
Xylene P,M	0.0824	0.0100	mg/kg wet	0.1000		82	70-130			
Xylenes (Total)	0.122	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0456*		mg/kg wet	*0.05000*		*91*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0472*		mg/kg wet	*0.05000*		*94*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0475*		mg/kg wet	*0.05000*		*95*	*70-130*			
Surrogate: Toluene-d8	*0.0483*		mg/kg wet	*0.05000*		*97*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0441	0.0050	mg/kg wet	0.05000		88	70-130	4	25	
1,1,1-Trichloroethane	0.0449	0.0050	mg/kg wet	0.05000		90	70-130	8	25	
1,1,2,2-Tetrachloroethane	0.0423	0.0050	mg/kg wet	0.05000		85	70-130	8	25	
1,1,2-Trichloroethane	0.0429	0.0050	mg/kg wet	0.05000		86	70-130	8	25	
1,1-Dichloroethane	0.0425	0.0050	mg/kg wet	0.05000		85	70-130	9	25	
1,1-Dichloroethene	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	9	25	
1,1-Dichloropropene	0.0441	0.0050	mg/kg wet	0.05000		88	70-130	9	25	
1,2,3-Trichlorobenzene	0.0456	0.0050	mg/kg wet	0.05000		91	70-130	3	25	
1,2,3-Trichloropropane	0.0445	0.0050	mg/kg wet	0.05000		89	70-130	8	25	
1,2,4-Trichlorobenzene	0.0455	0.0050	mg/kg wet	0.05000		91	70-130	3	25	
1,2,4-Trimethylbenzene	0.0453	0.0050	mg/kg wet	0.05000		91	70-130	7	25	
1,2-Dibromo-3-Chloropropane	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	11	25	
1,2-Dibromoethane	0.0432	0.0050	mg/kg wet	0.05000		86	70-130	5	25	
1,2-Dichlorobenzene	0.0427	0.0050	mg/kg wet	0.05000		85	70-130	4	25	
1,2-Dichloroethane	0.0418	0.0050	mg/kg wet	0.05000		84	70-130	10	25	
1,2-Dichloropropane	0.0432	0.0050	mg/kg wet	0.05000		86	70-130	10	25	
1,3,5-Trimethylbenzene	0.0469	0.0050	mg/kg wet	0.05000		94	70-130	7	25	

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch CL42430 - 5035										
1,3-Dichlorobenzene	0.0436	0.0050	mg/kg wet	0.05000		87	70-130	7	25	
1,3-Dichloropropane	0.0435	0.0050	mg/kg wet	0.05000		87	70-130	6	25	
1,4-Dichlorobenzene	0.0465	0.0050	mg/kg wet	0.05000		93	70-130	2	25	
1,4-Dioxane	0.982	0.100	mg/kg wet	1.000		98	70-130	9	20	
1-Chlorohexane	0.0457	0.0050	mg/kg wet	0.05000		91	70-130	6	25	
2,2-Dichloropropane	0.0461	0.0050	mg/kg wet	0.05000		92	70-130	9	25	
2-Butanone	0.216	0.0500	mg/kg wet	0.2500		87	70-130	10	25	
2-Chlorotoluene	0.0435	0.0050	mg/kg wet	0.05000		87	70-130	7	25	
2-Hexanone	0.227	0.0500	mg/kg wet	0.2500		91	70-130	8	25	
4-Chlorotoluene	0.0445	0.0050	mg/kg wet	0.05000		89	70-130	7	25	
4-Isopropyltoluene	0.0446	0.0050	mg/kg wet	0.05000		89	70-130	5	25	
4-Methyl-2-Pentanone	0.225	0.0500	mg/kg wet	0.2500		90	70-130	8	25	
Acetone	0.233	0.0500	mg/kg wet	0.2500		93	70-130	11	25	
Benzene	0.0444	0.0050	mg/kg wet	0.05000		89	70-130	9	25	
Bromobenzene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	6	25	
Bromochloromethane	0.0447	0.0050	mg/kg wet	0.05000		89	70-130	7	25	
Bromodichloromethane	0.0456	0.0050	mg/kg wet	0.05000		91	70-130	9	25	
Bromoform	0.0463	0.0050	mg/kg wet	0.05000		93	70-130	4	25	
Bromomethane	0.0463	0.0100	mg/kg wet	0.05000		93	70-130	17	25	
Carbon Disulfide	0.0462	0.0050	mg/kg wet	0.05000		92	70-130	9	25	
Carbon Tetrachloride	0.0457	0.0050	mg/kg wet	0.05000		91	70-130	8	25	
Chlorobenzene	0.0414	0.0050	mg/kg wet	0.05000		83	70-130	4	25	
Chloroethane	0.0449	0.0100	mg/kg wet	0.05000		90	70-130	12	25	
Chloroform	0.0436	0.0050	mg/kg wet	0.05000		87	70-130	9	25	
Chloromethane	0.0437	0.0100	mg/kg wet	0.05000		87	70-130	11	25	
cis-1,2-Dichloroethene	0.0446	0.0050	mg/kg wet	0.05000		89	70-130	8	25	
cis-1,3-Dichloropropene	0.0460	0.0050	mg/kg wet	0.05000		92	70-130	8	25	
Dibromochloromethane	0.0468	0.0050	mg/kg wet	0.05000		94	70-130	5	25	
Dibromomethane	0.0436	0.0050	mg/kg wet	0.05000		87	70-130	9	25	
Dichlorodifluoromethane	0.0387	0.0100	mg/kg wet	0.05000		77	70-130	8	25	
Diethyl Ether	0.0439	0.0050	mg/kg wet	0.05000		88	70-130	9	25	
Di-isopropyl ether	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	12	25	
Ethyl tertiary-butyl ether	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	10	25	
Ethylbenzene	0.0441	0.0050	mg/kg wet	0.05000		88	70-130	5	25	
Hexachlorobutadiene	0.0442	0.0050	mg/kg wet	0.05000		88	70-130	3	25	
Isopropylbenzene	0.0449	0.0050	mg/kg wet	0.05000		90	70-130	7	25	
Methyl tert-Butyl Ether	0.0460	0.0050	mg/kg wet	0.05000		92	70-130	9	25	
Methylene Chloride	0.0492	0.0250	mg/kg wet	0.05000		98	70-130	6	25	
Naphthalene	0.0434	0.0050	mg/kg wet	0.05000		87	70-130	3	25	
n-Butylbenzene	0.0462	0.0050	mg/kg wet	0.05000		92	70-130	7	25	
n-Propylbenzene	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	8	25	
sec-Butylbenzene	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	7	25	
Styrene	0.0448	0.0050	mg/kg wet	0.05000		90	70-130	5	25	
tert-Butylbenzene	0.0448	0.0050	mg/kg wet	0.05000		90	70-130	6	25	

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42430 - 5035										
Tertiary-amyl methyl ether	0.0462	0.0050	mg/kg wet	0.05000		92	70-130	10	25	
Tetrachloroethene	0.0422	0.0050	mg/kg wet	0.05000		84	70-130	2	25	
Tetrahydrofuran	0.0417	0.0050	mg/kg wet	0.05000		83	70-130	6	25	
Toluene	0.0445	0.0050	mg/kg wet	0.05000		89	70-130	8	25	
trans-1,2-Dichloroethene	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	8	25	
trans-1,3-Dichloropropene	0.0447	0.0050	mg/kg wet	0.05000		89	70-130	10	25	
Trichloroethene	0.0435	0.0050	mg/kg wet	0.05000		87	70-130	9	25	
Trichlorofluoromethane	0.0390	0.0050	mg/kg wet	0.05000		78	70-130	7	25	
Vinyl Acetate	0.0488	0.0050	mg/kg wet	0.05000		98	70-130	12	25	
Vinyl Chloride	0.0456	0.0100	mg/kg wet	0.05000		91	70-130	11	25	
Xylene O	0.0419	0.0050	mg/kg wet	0.05000		84	70-130	5	25	
Xylene P,M	0.0862	0.0100	mg/kg wet	0.1000		86	70-130	4	25	
Xylenes (Total)	0.128	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0488*		mg/kg wet	*0.05000*		*98*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0480*		mg/kg wet	*0.05000*		*96*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0497*		mg/kg wet	*0.05000*		*99*	*70-130*			
Surrogate: Toluene-d8	*0.0484*		mg/kg wet	*0.05000*		*97*	*70-130*			
Batch CL42626 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane	ND	0.100	mg/kg wet							
1-Chlorohexane	ND	0.0050	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0500	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42626 - 5035										
2-Hexanone	ND	0.0500	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0500	mg/kg wet							
Acetone	ND	0.0500	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							
Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Dibromochloromethane	ND	0.0050	mg/kg wet							
Dibromomethane	ND	0.0050	mg/kg wet							
Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0250	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42626 - 5035										
Vinyl Acetate	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Xylenes (Total)	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0550*		mg/kg wet	*0.05000*		*110*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0479*		mg/kg wet	*0.05000*		*96*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0482*		mg/kg wet	*0.05000*		*96*	*70-130*			
Surrogate: Toluene-d8	*0.0510*		mg/kg wet	*0.05000*		*102*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0445	0.0050	mg/kg wet	0.05000		89	70-130			
1,1,1-Trichloroethane	0.0499	0.0050	mg/kg wet	0.05000		100	70-130			
1,1,2,2-Tetrachloroethane	0.0434	0.0050	mg/kg wet	0.05000		87	70-130			
1,1,2-Trichloroethane	0.0458	0.0050	mg/kg wet	0.05000		92	70-130			
1,1-Dichloroethane	0.0456	0.0050	mg/kg wet	0.05000		91	70-130			
1,1-Dichloroethene	0.0439	0.0050	mg/kg wet	0.05000		88	70-130			
1,1-Dichloropropene	0.0470	0.0050	mg/kg wet	0.05000		94	70-130			
1,2,3-Trichlorobenzene	0.0476	0.0050	mg/kg wet	0.05000		95	70-130			
1,2,3-Trichloropropane	0.0465	0.0050	mg/kg wet	0.05000		93	70-130			
1,2,4-Trichlorobenzene	0.0474	0.0050	mg/kg wet	0.05000		95	70-130			
1,2,4-Trimethylbenzene	0.0468	0.0050	mg/kg wet	0.05000		94	70-130			
1,2-Dibromo-3-Chloropropane	0.0475	0.0050	mg/kg wet	0.05000		95	70-130			
1,2-Dibromoethane	0.0428	0.0050	mg/kg wet	0.05000		86	70-130			
1,2-Dichlorobenzene	0.0446	0.0050	mg/kg wet	0.05000		89	70-130			
1,2-Dichloroethane	0.0482	0.0050	mg/kg wet	0.05000		96	70-130			
1,2-Dichloropropane	0.0455	0.0050	mg/kg wet	0.05000		91	70-130			
1,3,5-Trimethylbenzene	0.0484	0.0050	mg/kg wet	0.05000		97	70-130			
1,3-Dichlorobenzene	0.0441	0.0050	mg/kg wet	0.05000		88	70-130			
1,3-Dichloropropane	0.0436	0.0050	mg/kg wet	0.05000		87	70-130			
1,4-Dichlorobenzene	0.0490	0.0050	mg/kg wet	0.05000		98	70-130			
1,4-Dioxane	1.06	0.100	mg/kg wet	1.000		106	70-130			
1-Chlorohexane	0.0443	0.0050	mg/kg wet	0.05000		89	70-130			
2,2-Dichloropropane	0.0512	0.0050	mg/kg wet	0.05000		102	70-130			
2-Butanone	0.234	0.0500	mg/kg wet	0.2500		94	70-130			
2-Chlorotoluene	0.0451	0.0050	mg/kg wet	0.05000		90	70-130			
2-Hexanone	0.238	0.0500	mg/kg wet	0.2500		95	70-130			
4-Chlorotoluene	0.0459	0.0050	mg/kg wet	0.05000		92	70-130			
4-Isopropyltoluene	0.0464	0.0050	mg/kg wet	0.05000		93	70-130			
4-Methyl-2-Pentanone	0.252	0.0500	mg/kg wet	0.2500		101	70-130			
Acetone	0.252	0.0500	mg/kg wet	0.2500		101	70-130			
Benzene	0.0466	0.0050	mg/kg wet	0.05000		93	70-130			
Bromobenzene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130			
Bromochloromethane	0.0446	0.0050	mg/kg wet	0.05000		89	70-130			
Bromodichloromethane	0.0500	0.0050	mg/kg wet	0.05000		100	70-130			

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42626 - 5035										
Bromoform	0.0469	0.0050	mg/kg wet	0.05000		94	70-130			
Bromomethane	0.0505	0.0100	mg/kg wet	0.05000		101	70-130			
Carbon Disulfide	0.0480	0.0050	mg/kg wet	0.05000		96	70-130			
Carbon Tetrachloride	0.0508	0.0050	mg/kg wet	0.05000		102	70-130			
Chlorobenzene	0.0409	0.0050	mg/kg wet	0.05000		82	70-130			
Chloroethane	0.0456	0.0100	mg/kg wet	0.05000		91	70-130			
Chloroform	0.0473	0.0050	mg/kg wet	0.05000		95	70-130			
Chloromethane	0.0480	0.0100	mg/kg wet	0.05000		96	70-130			
cis-1,2-Dichloroethene	0.0462	0.0050	mg/kg wet	0.05000		92	70-130			
cis-1,3-Dichloropropene	0.0497	0.0050	mg/kg wet	0.05000		99	70-130			
Dibromochloromethane	0.0470	0.0050	mg/kg wet	0.05000		94	70-130			
Dibromomethane	0.0465	0.0050	mg/kg wet	0.05000		93	70-130			
Dichlorodifluoromethane	0.0470	0.0100	mg/kg wet	0.05000		94	70-130			
Diethyl Ether	0.0467	0.0050	mg/kg wet	0.05000		93	70-130			
Di-isopropyl ether	0.0468	0.0050	mg/kg wet	0.05000		94	70-130			
Ethyl tertiary-butyl ether	0.0483	0.0050	mg/kg wet	0.05000		97	70-130			
Ethylbenzene	0.0446	0.0050	mg/kg wet	0.05000		89	70-130			
Hexachlorobutadiene	0.0461	0.0050	mg/kg wet	0.05000		92	70-130			
Isopropylbenzene	0.0454	0.0050	mg/kg wet	0.05000		91	70-130			
Methyl tert-Butyl Ether	0.0493	0.0050	mg/kg wet	0.05000		99	70-130			
Methylene Chloride	0.0478	0.0250	mg/kg wet	0.05000		96	70-130			
Naphthalene	0.0449	0.0050	mg/kg wet	0.05000		90	70-130			
n-Butylbenzene	0.0486	0.0050	mg/kg wet	0.05000		97	70-130			
n-Propylbenzene	0.0454	0.0050	mg/kg wet	0.05000		91	70-130			
sec-Butylbenzene	0.0456	0.0050	mg/kg wet	0.05000		91	70-130			
Styrene	0.0451	0.0050	mg/kg wet	0.05000		90	70-130			
tert-Butylbenzene	0.0459	0.0050	mg/kg wet	0.05000		92	70-130			
Tertiary-amyl methyl ether	0.0491	0.0050	mg/kg wet	0.05000		98	70-130			
Tetrachloroethene	0.0420	0.0050	mg/kg wet	0.05000		84	70-130			
Tetrahydrofuran	0.0456	0.0050	mg/kg wet	0.05000		91	70-130			
Toluene	0.0475	0.0050	mg/kg wet	0.05000		95	70-130			
trans-1,2-Dichloroethene	0.0444	0.0050	mg/kg wet	0.05000		89	70-130			
trans-1,3-Dichloropropene	0.0491	0.0050	mg/kg wet	0.05000		98	70-130			
Trichloroethene	0.0461	0.0050	mg/kg wet	0.05000		92	70-130			
Trichlorofluoromethane	0.0440	0.0050	mg/kg wet	0.05000		88	70-130			
Vinyl Acetate	0.0508	0.0050	mg/kg wet	0.05000		102	70-130			
Vinyl Chloride	0.0508	0.0100	mg/kg wet	0.05000		102	70-130			
Xylene O	0.0427	0.0050	mg/kg wet	0.05000		85	70-130			
Xylene P,M	0.0866	0.0100	mg/kg wet	0.1000		87	70-130			
Xylenes (Total)	0.129	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0530*		mg/kg wet	*0.05000*		*106*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0496*		mg/kg wet	*0.05000*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0495*		mg/kg wet	*0.05000*		*99*	*70-130*			
Surrogate: Toluene-d8	*0.0496*		mg/kg wet	*0.05000*		*99*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

5035/8260B Volatile Organic Compounds / Low Level

Batch CL42626 - 5035

LCS Dup

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
1,1,1,2-Tetrachloroethane	0.0447	0.0050	mg/kg wet	0.05000		89	70-130	0.4	25	
1,1,1-Trichloroethane	0.0490	0.0050	mg/kg wet	0.05000		98	70-130	2	25	
1,1,2,2-Tetrachloroethane	0.0441	0.0050	mg/kg wet	0.05000		88	70-130	2	25	
1,1,2-Trichloroethane	0.0467	0.0050	mg/kg wet	0.05000		93	70-130	2	25	
1,1-Dichloroethane	0.0456	0.0050	mg/kg wet	0.05000		91	70-130	0.1	25	
1,1-Dichloroethene	0.0443	0.0050	mg/kg wet	0.05000		89	70-130	0.8	25	
1,1-Dichloropropene	0.0470	0.0050	mg/kg wet	0.05000		94	70-130	0.1	25	
1,2,3-Trichlorobenzene	0.0473	0.0050	mg/kg wet	0.05000		95	70-130	0.6	25	
1,2,3-Trichloropropane	0.0473	0.0050	mg/kg wet	0.05000		95	70-130	2	25	
1,2,4-Trichlorobenzene	0.0465	0.0050	mg/kg wet	0.05000		93	70-130	2	25	
1,2,4-Trimethylbenzene	0.0461	0.0050	mg/kg wet	0.05000		92	70-130	1	25	
1,2-Dibromo-3-Chloropropane	0.0493	0.0050	mg/kg wet	0.05000		99	70-130	4	25	
1,2-Dibromoethane	0.0438	0.0050	mg/kg wet	0.05000		88	70-130	2	25	
1,2-Dichlorobenzene	0.0436	0.0050	mg/kg wet	0.05000		87	70-130	2	25	
1,2-Dichloroethane	0.0482	0.0050	mg/kg wet	0.05000		96	70-130	0.08	25	
1,2-Dichloropropane	0.0456	0.0050	mg/kg wet	0.05000		91	70-130	0.3	25	
1,3,5-Trimethylbenzene	0.0477	0.0050	mg/kg wet	0.05000		95	70-130	1	25	
1,3-Dichlorobenzene	0.0442	0.0050	mg/kg wet	0.05000		88	70-130	0.2	25	
1,3-Dichloropropane	0.0447	0.0050	mg/kg wet	0.05000		89	70-130	3	25	
1,4-Dichlorobenzene	0.0481	0.0050	mg/kg wet	0.05000		96	70-130	2	25	
1,4-Dioxane	1.04	0.100	mg/kg wet	1.000		104	70-130	1	20	
1-Chlorohexane	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	2	25	
2,2-Dichloropropane	0.0501	0.0050	mg/kg wet	0.05000		100	70-130	2	25	
2-Butanone	0.246	0.0500	mg/kg wet	0.2500		98	70-130	5	25	
2-Chlorotoluene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	0.04	25	
2-Hexanone	0.252	0.0500	mg/kg wet	0.2500		101	70-130	6	25	
4-Chlorotoluene	0.0455	0.0050	mg/kg wet	0.05000		91	70-130	0.9	25	
4-Isopropyltoluene	0.0456	0.0050	mg/kg wet	0.05000		91	70-130	2	25	
4-Methyl-2-Pentanone	0.259	0.0500	mg/kg wet	0.2500		104	70-130	3	25	
Acetone	0.277	0.0500	mg/kg wet	0.2500		111	70-130	9	25	
Benzene	0.0465	0.0050	mg/kg wet	0.05000		93	70-130	0.3	25	
Bromobenzene	0.0444	0.0050	mg/kg wet	0.05000		89	70-130	2	25	
Bromochloromethane	0.0446	0.0050	mg/kg wet	0.05000		89	70-130	0.09	25	
Bromodichloromethane	0.0512	0.0050	mg/kg wet	0.05000		102	70-130	2	25	
Bromoform	0.0476	0.0050	mg/kg wet	0.05000		95	70-130	1	25	
Bromomethane	0.0499	0.0100	mg/kg wet	0.05000		100	70-130	1	25	
Carbon Disulfide	0.0481	0.0050	mg/kg wet	0.05000		96	70-130	0.2	25	
Carbon Tetrachloride	0.0498	0.0050	mg/kg wet	0.05000		100	70-130	2	25	
Chlorobenzene	0.0414	0.0050	mg/kg wet	0.05000		83	70-130	1	25	
Chloroethane	0.0467	0.0100	mg/kg wet	0.05000		93	70-130	2	25	
Chloroform	0.0469	0.0050	mg/kg wet	0.05000		94	70-130	0.7	25	
Chloromethane	0.0478	0.0100	mg/kg wet	0.05000		96	70-130	0.3	25	
cis-1,2-Dichloroethene	0.0453	0.0050	mg/kg wet	0.05000		91	70-130	2	25	

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CL42626 - 5035										
cis-1,3-Dichloropropene	0.0494	0.0050	mg/kg wet	0.05000		99	70-130	0.6	25	
Dibromochloromethane	0.0473	0.0050	mg/kg wet	0.05000		95	70-130	0.8	25	
Dibromomethane	0.0458	0.0050	mg/kg wet	0.05000		92	70-130	2	25	
Dichlorodifluoromethane	0.0456	0.0100	mg/kg wet	0.05000		91	70-130	3	25	
Diethyl Ether	0.0476	0.0050	mg/kg wet	0.05000		95	70-130	2	25	
Di-isopropyl ether	0.0471	0.0050	mg/kg wet	0.05000		94	70-130	0.6	25	
Ethyl tertiary-butyl ether	0.0490	0.0050	mg/kg wet	0.05000		98	70-130	1	25	
Ethylbenzene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	1	25	
Hexachlorobutadiene	0.0456	0.0050	mg/kg wet	0.05000		91	70-130	1	25	
Isopropylbenzene	0.0450	0.0050	mg/kg wet	0.05000		90	70-130	0.8	25	
Methyl tert-Butyl Ether	0.0495	0.0050	mg/kg wet	0.05000		99	70-130	0.3	25	
Methylene Chloride	0.0475	0.0250	mg/kg wet	0.05000		95	70-130	0.6	25	
Naphthalene	0.0453	0.0050	mg/kg wet	0.05000		91	70-130	0.9	25	
n-Butylbenzene	0.0482	0.0050	mg/kg wet	0.05000		96	70-130	0.9	25	
n-Propylbenzene	0.0453	0.0050	mg/kg wet	0.05000		91	70-130	0.3	25	
sec-Butylbenzene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	0.9	25	
Styrene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	0.2	25	
tert-Butylbenzene	0.0454	0.0050	mg/kg wet	0.05000		91	70-130	1	25	
Tertiary-amyl methyl ether	0.0496	0.0050	mg/kg wet	0.05000		99	70-130	1	25	
Tetrachloroethene	0.0419	0.0050	mg/kg wet	0.05000		84	70-130	0.2	25	
Tetrahydrofuran	0.0491	0.0050	mg/kg wet	0.05000		98	70-130	7	25	
Toluene	0.0471	0.0050	mg/kg wet	0.05000		94	70-130	0.9	25	
trans-1,2-Dichloroethene	0.0446	0.0050	mg/kg wet	0.05000		89	70-130	0.4	25	
trans-1,3-Dichloropropene	0.0492	0.0050	mg/kg wet	0.05000		98	70-130	0.2	25	
Trichloroethene	0.0451	0.0050	mg/kg wet	0.05000		90	70-130	2	25	
Trichlorofluoromethane	0.0428	0.0050	mg/kg wet	0.05000		86	70-130	3	25	
Vinyl Acetate	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	3	25	
Vinyl Chloride	0.0492	0.0100	mg/kg wet	0.05000		98	70-130	3	25	
Xylene O	0.0429	0.0050	mg/kg wet	0.05000		86	70-130	0.4	25	
Xylene P,M	0.0869	0.0100	mg/kg wet	0.1000		87	70-130	0.3	25	
Xylenes (Total)	0.130	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0528*		mg/kg wet	*0.05000*		*106*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0494*		mg/kg wet	*0.05000*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0485*		mg/kg wet	*0.05000*		*97*	*70-130*			
Surrogate: Toluene-d8	*0.0494*		mg/kg wet	*0.05000*		*99*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

Notes and Definitions

U	Analyte included in the analysis, but not detected
S+	Surrogate recovery(ies) above upper control limit (S+).
C+	Continuing Calibration recovery is above upper control limit (C+).
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: RI Analytical Laboratories, Inc.
Client Project ID: RIAL Sampling

ESS Laboratory Work Order: 1412500

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP)
A2LA Accredited: Testing Cert# 2864.01
http://www.a2la.org/scopepdf/2864-01.pdf

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

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI0002
http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/documents/AllLabs.xls

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

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.depweb.state.pa.us/portal/server.pt/community/labs/13780/laboratory_accreditation_program/590095

CHEMISTRY

A2LA Accredited: Testing Cert # 2864.01
Lead in Paint, Phthalates, Lead in Children's Metals Products (Including Jewelry)
http://www.A2LA.org/dirsearchnew/newsearch.cfm

CPSC ID# 1141
Lead Paint, Lead in Children's Metals Jewelry
http://www.cpsc.gov/cgi-bin/labapplist.aspx

CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

41 Illinois Avenue
Warwick, RI 02888
Tel: 800-937-2580
Fax: 401-738-1970

131 Coolidge St, Bldg. 2
Hudson, MA 01749
Tel: 888-228-3334
Fax: 978-568-0078

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type [T]	Preservation Code [P]	Matrix Code [M]	VOCs	RCRA 8 Metals	PCBs	Pesticides	PAHs	SVOCs	TPH
12/23/14	0650	HA-2 (0.5-1.5')	G	1G	NP	S		X				X	
12/23/14	0700	HA-1 (0.5-1.5')	G	3V/1G	M/NP	S	X	X			X		X
12/23/14	0715	HA-3 (0.5-1.5')	G	3V/1G	M/NP	S	X	X					X
12/23/14	0725	HA-4 (0.5-1.5')	G	1G	NP	S		X		X	X		
12/23/14	0750	HA-7 (0.5-1.5')	G	3V/2G	M/NP	S	X	X	X			X	
12/23/14	0800	HA-6 (0.5-1.5')	G	1G	NP	S		X		X			
12/23/14	0808	HA-5 (0.5-1.5')	G	1G	NP	S		X			X		X
		Trip Blank					X				X (8W)		X (8W)

Client Information

Company Name: Vanasse Hangen Brustlin, Inc.
Address: 10 Dorrance Street, Suite 400
City / State / Zip: Providence, RI 02903
Telephone: 272-8100 Fax: 273-9694
Contact Person: Shelby Miller

Project Information

Project Name: BRBW Segment 1A
P.O. Number: Project Number: 72017.01
Report To: Shelby Miller/Peter Crivas Phone: 272-8100 Fax: 273-9694
Sampled by: Shelby Miller
Quote No: Email address: samiller@vhb.com/pgrivers@vhb.com

Relinquished By	Date	Time	Received By	Date	Time
Shelby A Miller	12/23/14	1200	Carl Lacunic	12/23/14	1200

Turn Around Time

- [X] Normal — [X] EMAIL Report
- [ ] 5 Business days.
- [ ] Rush _____ (business days)

Project Comments

Circle if applicable: GW-1, GW-2, GW-3, S-1, S-2, S-3 MCP Data Enhancement QC Package? Yes No

RIDEM RDEC

28

Lab Use Only

- [ ] Sample Pick Up Only
- [ ] RIAL sampled; attach field hours
- [X] Shipped on ice

Workorder No: 1412-28533

Container Types: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile

Preservation Codes: NP=None, N=HNO_3, H=HCl, S=H_2SO_4, SH=NaOH, SB=$NaHSO_4$, M=MeOH, T=$Na_2S_2O_3$, Z=ZnOAc, I=Ice

Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, Sl=Sludge, A=Air, B=Bulk/Solid, O=_____

R.I. ANALYTICAL
Specialists in Environmental Services

CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.
Attn: Ms. Shelby Miller
10 Dorrance Street
Suite 400
Providence, RI 02903

Date Received: 1/12/15
Date Reported: 1/14/15
P.O. #:
Work Order #: 1501-00662

DESCRIPTION: PROJECT# 72017.01 BRBW SEGMENT 1A

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate Of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.

Certification #: RI LAI0033, MA M-RI015, CT PH-0508, ME-RI00015
NH-2537, NY 11726

This Certificate represents all data associated with the referenced work order and is paginated for completeness. The complete Certificate includes one attachment; the original Chain of Custody.

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:

Data Reporting
enc: Chain of Custody

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Vanasse Hangen Brustlin, Inc.

Date Received: 1/12/15

Work Order #: 1501-00662

PROJECT# 72017.01 BRBW SEGMENT 1A

Sample # 001
SAMPLE DESCRIPTION: HA-4 (1412-28533-004)
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 07:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED		ANALYST
TCLP Metals							
Lead	0.53	0.50	mg/l	SW-846 6010C	1/14/15	10:51	JRW
ICP Digestion				EPA 200.7	1/13/15	23:05	OMC
TCLP Extraction	Extracted			SW-846 1311	1/12/15	18:30	JPB

Sample # 002
SAMPLE DESCRIPTION: HA-6 (1412-28533-006)
SAMPLE TYPE: GRAB **SAMPLE DATE/TIME:** 12/23/2014 @ 08:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE ANALYZED		ANALYST
TCLP Metals							
Lead	3.8	0.50	mg/l	SW-846 6010C	1/14/15	10:56	JRW
ICP Digestion				EPA 200.7	1/13/15	23:05	OMC
TCLP Extraction	Extracted			SW-846 1311	1/12/15	18:30	JPB

QA/QC Report

Client: Vanasse Hangen Brustlin, Inc.
WO #: 1501-00662
Date: 1/14/2015

-Method Blanks Results-

Parameter	Units	Results	Date Analyzed
TCLP Metals			
TCLP Lead	mg/l	<0.50	1/14/2015

-Laboratory Control Standard-

Parameter	Units	Spike Conc.	Detected Conc.	% Rec.	Date Analyzed
TCLP Metals					
TCLP Lead	mg/l	1.00	1.02	102	1/14/2015
TCLP Lead	mg/l	1.00	0.999	100	1/14/2015

R.I. ANALYTICAL
Specialists in Environmental Services

CHAIN OF CUSTODY RECORD

41 Illinois Avenue
Warwick, RI 02888-3007
800-937-2580 • Fax: 401-738-1970

131 Coolidge St., Suite 105
Hudson, MA 01749-1331
800-937-2580 • Fax: 978-568-0078

Date Collected	Time Collected	Field Sample Identification	Grab or Composite (06-21-10)	# of Containers & Type [C]	Preservation Code [P]	Matrix Code [M]	
12/23/14	0725	HA-4 (1412-28533-004)	G	1G	UP	S	✓ TCLP
↓	0800	HA-Lo (1412-28533-006)	G	1G	NP	S	✓

Client Information

Company Name: Camasse Hangen Brustlin, Inc.
Address: 10 Dorrance Street
City / State / Zip: Suite 400 Prov. RI 02903
Telephone: 401 272-8100 Fax:
Contact Person: Shelby Miller

Project Information

Project Name: BRBW Segment 1A
P.O. Number: Project Number: 72017.01
Report To: Phone: Fax
Sampled By:
Quote No:
Email report to these addresses:

Relinquished By Signatures	Date	Time	Received By Signatures	Date	Time
Per attached email from Shelby Miller	1/2/15	1445	Christen Mello	1/2/15	1445

Turn Around Time

- [ ] Normal
- [x] EMAIL Report
- [x] 5 Business days. Possible surcharge
- [ ] Rush – Date Due: ___/___/___

Project Comments

Circle if applicable: GW-1, GW-2, GW-3, S-1, S-2, S-3 MCP Data Enhancement QC Package? Yes No

relog WO# 1412-28533-004 & -006

Temp. Upon Receipt °C

Lab Use Only

- [ ] Sample Pick-Up Only
- [ ] RIAL sampled; attach field hours
- [ ] Shipped on ice

Workorder No: 1501 - 662

Containers: P=Poly, G=Glass, AG=Amber Glass, V=Vial, St=Sterile Preservatives: A=Ascorbic Acid, NH4=NH_4Cl, H=HCl, M=MeOH, N=HNO_3, NP=None, S=H_2SO_4, SB=$NaHSO_4$, SH=NaOH, T=$Na_2S_2O_3$, Z=ZnOAc
Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SL=Sludge, A=Air, B=Bulk/Solid, WP=Wipe, O=_____