

GROUND IMPROVEMENT PACKAGE

Bid Package 2



PAWTUCKET UNIFIED HIGH SCHOOL

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GIP = Ground Improvement Package issued January 21, 2025 (Bid Package 2)

Section 01 00 01

SUMMARY

PART 1 – GENERAL

1.1 SUMMARY OF WORK – PROJECT IS TO INCLUDE, BUT NOT LIMITED TO, ALL LABOR AND MATERIALS TO COMPLETE THE WORK INDICATED ON THE DRAWINGS FOR THE FOLLOWING:

- A. Ground improvement as described in Appendix B Ground Improvement Work Plan, including:
 - 1. Site enabling work to prepare the site for excavation and replacement operations;
 - 2. Excavation of the urban fill and peat in-the-dry and in-the-wet;
 - 3. Localized dewatering (if necessary)
 - 4. Replacement of the urban fill and peat with structural fill consisting of “Crushed Stone” enveloped in filter fabric in the-wet, or replacement of the peat with “Granular Fill” in-the-dry. See Appendix C Structure Ground Improvement / Site Enabling Narrative for additional information;
 - 5. Placement and compaction of the “Crushed Stone” or “Granular Fill” up to elevation 65 feet; and
 - 6. Management and disposal of the excavated peat and solid waste culled from the urban fill.
- B. Install and test PVC gravity and pressure sewer pipe as described in Civil drawings and specification
- C. Cutting and capping of existing utilities.
- D. Protection of existing monitoring wells (See Phase II Geoenvironmental Site Assessment Report.)
- E. All work is to comply with all State and Federal regulations and CHPS as issued by the RI Department of Education.
- F. The Contractor will obtain and pay for all permits required, including, but not limited to: Building, Fire Plan Review Fees, State, ADA, etc.
- G. The project is not subject to RI State sales tax and an exemption for such will be issued to the contractor.
- H. The Contractor is responsible for providing secure temporary protection separating work area for areas of occupied space during construction.

1.2 RELATED DOCUMENTS:

- A. Drawings and general provisions of Division-1 Specification sections apply to work of this section.
- B. Section 018113 Sustainable Design Requirements: Special administrative and procedure requirements related to CHPS criteria.

1.3 CONTRACT METHOD:

- A. Construct the work under a single lump sum contract.

SUMMARY

1.4 EXISTING CONDITIONS:

- A. Existing conditions must be verified on site. Contractor is responsible for verifying existing conditions before commencement of work.

1.5 TEMPORARY FACILITIES:

- A. Contractor to provide trailers as indicated on plans.
- B. Electricity – The Contractor is to provide for temporary electrical service during the entire construction process.
- C. Water – The Contractor is responsible for providing all portable water and water required for the construction.
- D. Sanitary Facilities – The Contractor shall provide their own portable toilet facilities on site for its own personnel and sufficient quantity for clients of the facility when existing toilets are not accessible. Ensure regular pick-ups to keep the site sanitary.
- E. Other – Telephone, auxiliary heat, and other required facilities shall be provided by Contractor.

1.6 MEETINGS:

- A. Pre-Construction Meeting – After signing the Contract for Construction and before commencing construction, Contractor shall attend a Pre-construction Meeting to discuss the use of the site, progress of the Work, Equal Opportunity and Labor requirements, and other issues related to the Project.
- B. Progress Meetings – Progress meetings with the Contractor, Architect, and Owner shall occur at pre-designated dates and times which shall occur every two weeks and at points of the Project that are deemed critical. Any conflicts with these meetings to any events, such as federal holidays, must be submitted to the Owner in writing and shall be rescheduled at the Owner's convenience. The CM will record meeting minutes and distribute them to all attendees.

1.7 DEBRIS, CLEANING UP:

- A. The Contractor shall not permit the accumulation of debris, both exterior and interior, and the work area shall at all times be kept free of the accumulation of debris in accordance with the project safety plan. At completion of the work, the Contractor shall remove from and about the project, waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials. Immediately prior to the Designer's inspection for substantial completion, the Contractor shall completely clean the premises. Concrete and ceramic surfaces shall be cleaned and washed. Resilient coverings shall be cleaned, waxed, and buffed. Woodwork shall be dusted and cleaned. Sash fixtures and equipment shall be thoroughly cleaned. Stains, spots, dust, marks, and smears shall be removed from all surfaces. Hardware and all metal surfaces shall be cleaned and polished. Glass and plastic surfaces shall be thoroughly cleaned by professional window cleaners. All damaged, broken, or

scratched glass or plastic shall be replaced by the Contractor at the Contractor's expense. If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the cost thereof shall be charged to the Contractor.

1. The Contractor shall remove debris from the site of the work and dispose of it in compliance with the NE-CHPS requirements. The Contractor shall make all arrangements and obtain any approvals necessary from the waste handling facility / recycling facility and shall bear all cost, including fees resulting from such disposal. All construction debris shall be put in covered containers daily.
2. No open fire shall be permitted on site.
3. Chemical waste shall be stored in corrosion-resistant containers, removed from the Project Site, and disposed of not less frequently than monthly, unless directed otherwise. Disposal of chemical waste shall be in accordance with standard established practices and applicable environmental law. Fueling and lubricating of vehicles and equipment shall be conducted in a manner that affords the maximum protection against spills and evaporation. Lubricants to be discarded shall be disposed of in accordance with approved procedures meeting all applicable federal, state, and local regulations. In the event of an oil or hazardous materials release large enough to violate federal, state, or applicable local regulations, the Owner, PM, and Designer shall be notified immediately. The Contractor shall be responsible for immediately cleaning up any release resulting from its operations. Any costs incurred in cleaning up any release, shall be borne by the Contractor.

1.8 MINORITY BUSINESS ENTERPRISE (MBE) GOALS:

- A. Minority (MBE) and Women (WBE) Business Enterprises shall mean a small business concern, owned, and controlled by one or more minorities or women certified by the Rhode Island Department of Administration to meet the definition established by Chapter 37-14.1 of the General Laws of Rhode Island.
- B. The Contractor is required to demonstrate that fifteen percent (15%) of the dollar value of the work, performed against contracts for construction exceeding \$500,000 shall be performed by MBE or WBE where it has been determined that subcontract opportunities exist, and where certified Minority Business Enterprises are available.
- C. Compliance with 15% MBE participation is part of the selection criteria.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

End of Section

SUMMARY

Section 01 00 05
ADMINISTRATIVE PROCEDURES

PART 1 - GENERAL

1.1 GENERAL REFERENCE

- A. The General Conditions, Supplementary General Conditions and Division 1 of these specifications are hereby included as part of this section.

1.2 REQUIREMENTS INCLUDED

- A. Title of Work, and type of Contract.
- B. Contractor Use of Premises.
- C. Applications for Payment
- D. Reference Standards.
- E. Cutting and Patching
 - 1. Requirements and limitations for cutting and patching of Work
- F. Supervision
- G. Miscellaneous Administrative Items

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Work of this contract comprises general construction as indicated on the drawings.
- B. The contractor must provide all material, labor, tools, plant, supplies, equipment, transportation, superintendence, temporary construction of every nature and all other services and facilities necessary to complete the construction for the Owner, including all incidental work as required or described in the contract documents. Cost of parking is to be included in the cost of work.
- C. The following codes have been referenced for this project:

1. SBC-1, Rhode Island State Building Code, which adopts and amends the International Building Code, 2018 edition
2. SBC-1, Rhode Island State Plumbing Code, which adopts and amends the International Plumbing Code, 2015 edition
3. SBC-4, Rhode Island State Mechanical Code, which adopts and amends the International Mechanical Code, 2015 edition
4. SBC-5, Rhode Island State Electrical Code, which adopts and amends the national Electrical Code, 2017 edition
5. SBC-8,, Rhode Island State Energy Conservation Code, which adopts and amends the International Conservation Code, 2015 edition
6. SBC-19, Rhode Island State Fuel Gas Code, which adopts and amends the International Fuel Gas Code, 2015 edition
7. Rhode Island State Fire Code, which adopts and amends NFPA-1 - Uniform Fire Code, 2018 edition
8. Rhode Island Life Safety Code, which adopts and amends NFPA-101 - Life Safety Code, 2018 edition

1.4 CONTRACT METHOD

- A. Construction of the Work under single lump sum contract.
- B. Items noted "NIC" (Not In Contract) and other items as indicated will be furnished and installed by Owner.

1.5 APPLICATIONS FOR PAYMENT

- A. Submit five copies of each application on AIA G702 - Application and Certificate for Payment.
- B. Contractor shall refer to General Conditions for additional requirements.

1.6 CONTRACTOR USE OF PREMISES

- A. Limit use of premises for Work and for construction operations, to allow for work by other Contractors and the Owner.
- B. Limit access to and use of site as directed by Owner.
- C. The Contractor is responsible for maintaining emergency egress of the existing

buildings. All requirements for maintaining this egress as directed by the Architect, Building Inspector, Fire Chief and Owner are to be maintained.

- D. Contractor shall minimize interference with adjacent facilities & structures and to avoid damage to same, paying particular attention not to adversely affect access to and from or in any way interfere with the operation of Pawtucket Fire Station 3.
- E. Contractor's parking to be arranged and located as approved by the Owner.
- F. The Contractor is responsible for providing temporary office (Trailer), all utilities required for construction including temporary electrical, temporary heat, telephone, water and sanitary facilities. Arrange with the Owner and the Utility Company for a time when service is to be interrupted, where necessary, to make connections for temporary services. Provide adequate capacity for each stage of construction. Use charges for temporary facilities are not chargeable to the Owner or the Architect and will not be accepted as a basis of claims for a Change Order.
- G. The Owner will provide electrical power and water for the construction of the Project. The Contractor is responsible for all connections and metering of utility used for construction purposes.

1.7 JOB SAFETY AND ACCIDENT PREVENTION

- A. All construction work on this project must be performed in compliance with the Occupational Safety and Health Act of 1970 or with local or State occupational safety and health regulations enforced by an agency of the locality or State under a plan approved by the U.S. Department of Labor Occupational Safety and Health Administration (OSHA)
 - 1. All contractors and subcontractors shall comply with requirements of the Occupational Safety and Health Act of 1970 or revisions thereto, which are applicable during the term of this contract and hold the Owner and/or their agents harmless from any claim or loss that may result from violations of or claims under this act.

1.8 REFERENCE STANDARDS

- A. For products specified by association or trade standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. The date of the standard is that in effect as of date of Contract Documents, except when a specific date is specified. If governing codes reference standard date then code reference date shall be in effect.
- C. Obtain copies of standards when required by Contract Documents. Maintain copy

at job site during progress of the specific work.

1.9 EXISTING UTILITIES AND STRUCTURES

- A. Contractor shall be responsible for damages to any utility piping, drains, sewers, electrical wiring and conduits, buildings and other structures that may be met within the prosecution of the work. Contractor shall be liable for any damages to items resulting from work of this Contract. To include injury or damages caused by Subcontractors, sub-subcontractors and material manufacturers.
- B. Shore or sling in place and prevent any damage to above mentioned items.

1.10 SUPERINTENDENCE OF SUBCONTRACTORS

- A. The contractor must supervise his own work crews and subcontractors in accordance with the provisions of Contract.

1.11 COORDINATION

- A. Prior to commencement of subcontract work, a designated representative of each subcontractor shall meet with project superintendent and Owner at the site to discuss requirements and scope of Work.
- B. The Contractor and all subcontractors will be required to attend a preconstruction conference at a date and time set by the Owner.

1.12 BEHAVIOR OF PERSONNEL

- A. All personal in the construction must have BCI checks.
- B. If in the opinion of the Owner, any employee of the Contractor or his subcontractors is physically or mentally unfit for work or exhibits behavior incompatible with work site environment, including smoking, drinking, drugs or inappropriate clothing or language, said employee may be required to leave property and may be refused re-admittance.
- C. The Contractor is to enforce a "Smoke Free Policy" throughout the project and any employee violating this policy will be subject to immediate dismissal. The Contractor's employees are to be informed that loud noises and irritating odors will not be tolerated.

1.13 SUBSTITUTIONS

- A. In all cases where a proprietary designation is used in connection with materials or articles to be furnished under this contract and the phrase "or equal" is not used, the Contractor shall furnish the specified item, unless a written request for a substitute has been submitted by the Contractor and reviewed by the Owner to his satisfaction.

1.14 CODES, RULES AND REGULATIONS

- A. All work is to be in accord with the latest requirements of:
 - 1. Federal State and Municipal Laws
 - 2. Rhode Island Building and Fire Code
 - 3. National Plumbing Code
 - 4. Any prevailing rules, regulations pertaining to adequate protection and/or guarding of any moving parts or otherwise hazardous locations.
- B. Nothing in the Specification or Drawings is to be construed to allow work not in accord with the above requirements. When requirements shown or specified are less than those in the codes listed above, the Contractor is to furnish and/or install the larger size or higher standard without extra cost to the Owner.

1.15 DRAWINGS AND SPECIFICATIONS

- A. All work drawn on Plans and not specified or all work specified and not drawn are part of Contract Work required to be done and are to be executed as fully as if described in both of these ways. Only work specifically noted in the following manner shall be considered as not being in the contract:
 - ".....by Owner".
 - ".....NIC (Not In Contract)".
- B. If, after examination of Contract Drawings and Specifications, or after a visit to the premises, any discrepancies, omissions, ambiguities, or conflicts are found in contract documents or there is doubt as to their meaning, Owner is to be notified at the earliest possible date. Where information sought is not clearly indicated or specified, the Owner will issue addendum to the Contractor clarifying conditions. This addendum will become part of the Contract Documents. The Owner will not be responsible for any oral instructions.
- C. If there are two ways and/or instruction in drawings and/or specifications, it shall

be assumed that the Contractor has based his base bid price on the most expensive way.

- D. If duplication is shown on drawings and/or specifications of work by more than one trade, Owner shall determine which trade shall do work and rebate shall be due from the other trades to Owner.
- E. Drawings DO NOT include any necessary components for construction safety.
- F. In all work shown on Drawings, figured dimensions are to be followed in all cases, though they may differ from scaled measurements. Before beginning the work, Contractor is to check through and verify all dimensions and call to the attention of the Owner any apparent or manifest discrepancy.
 - 1. Contractor shall verify dimensions with existing and actual field conditions.

1.16 MANUFACTURER'S DIRECTIONS

- A. Manufactured articles, materials, equipment, applied, installed, connected, erected, used, cleaned, conditioned in accordance with manufacturer's printed directions unless specified to contrary.
- B. If there is a conflict between the Contract Documents and manufacturer's directions, the Contractor shall notify the Owner in writing. Contractor shall not proceed with work until Owner has reviewed the conflicting data and provide the Contractor with a decision on which specification to follow.

1.17 GENERAL SPECIFICATION NOTE

- A. The paragraph entitled "WORK INCLUDED" in each section of the technical section shall be considered general in nature and NOT all inclusive. The intent of the paragraph is to provide a general guide of what is included in the section.
- B. The paragraph entitled "RELATED WORK" in each section of the technical section shall be considered general in nature and NOT all inclusive. The intent of the paragraph is to provide a general guide of what work is related to work included in this section.

1.18 WORKING HOURS

- A. In no case shall Contractor or any Subcontractor perform any work on project, except those hours listed below without in each instance, notifying the Owner's Representative in order that he may be present to assist during work. This shall not be interpreted as a measure to prevent the Contractor from working "overtime" under any circumstances, but merely to insure that the Owner's

Representative may have the opportunity to be on hand to assist the Contractor, as may be required, to interpret Contract Documents, Plans or Specifications and to insure that construction operations will not interfere with Owner's Operations. Working Hours are 7:30am to 5:00pm Monday through Friday.

- B. If found necessary to reach a proper stopping place in any portion of the work, or to complete work within the Contract time limit, the Contractor shall work his forces and forces of his Subcontractors overtime without addition to the Contract Price. The Contractor shall insure that installation of Work under any subcontract does not interfere with nor delay progress of the building work, nor with progress of any independent contracts running concurrently.

1.19 PROJECT MEETINGS

- A. Preconstruction Conferences

1. Owner shall administer preconstruction conference for execution of Owner-Contractor Agreement and exchange of preliminary submittals.
2. Owner shall administer site mobilization conference at Project site for clarification of Owner and Contractor responsibilities in use of site and for review of administrative procedures.

- B. Progress Meetings

1. Contractor will schedule and administer project meetings throughout progress of the Work at weekly intervals or as may be required.
2. Contractor shall make physical arrangements for meetings. Contractor shall be responsible for recording meeting minutes and distribution to all concerned parties. Minutes shall be typed and distributed within two working days of the meeting.
3. Attendance: Contractor, job superintendent, major subcontractors and suppliers; Owner's Representative and others as appropriate to agenda topics for each meeting.

- C. Pre-Installation Conferences

1. When required in individual specification Section, Contractor shall convene a pre-installation conference prior to commencing work of the Section.

1.20 GENERAL SUBMITTAL PROCEDURES

- A. Transmit each submittal with AIA Form G810 or Owner accepted form.
- B. Contractor Review:

- A. Review submittals prior to transmittal; determine and verify field measurements, field construction criteria, manufacturer's catalog numbers, and conformance of submittal with requirements of Contract Documents. CONTRACTOR'S FAILURE TO REVIEW AND APPROVE SUBMITTALS PRIOR TO SUBMISSION TO THE OWNER WILL BE REASON FOR OWNER'S REJECTION OF SUBMITTAL.
- B. Coordinate submittals with requirements of Work and of Contract Documents.
- C. Apply Contractor's stamp, signed or initialed certifying that review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
- C. Schedule submittals to expedite the Project, and deliver to Owner at business address.
 - 1. Transmit submittals in accordance with approved Progress Schedule and in such sequence to avoid delay in the Work or work of other contracts. Failure to do so will not justify an extension in contract time.
 - 2. Coordinate submittals into logical groupings to facilitate interrelation of the several items.
- D. Revise and resubmit submittals as required, identify all changes made since previous submittal. Failure to do so will be reason to reject submittal.

1.21 CONTRACTOR QUALITY ASSURANCE/CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply fully with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Owner before proceeding.
- D. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform work by persons qualified to produce workmanship of specified quality.
- F. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.22 PROTECTION OF SALVAGED WORK

- A. Protect Salvaged Work and provide special protection where specified in individual specification Sections.

1.23 SECURITY

- A. Provide security and facilities to protect Work from unauthorized entry, vandalism, or theft.
- B. If requested by the Owner, the Contractor will furnish a written security plan for Owner's approval.
- C. Contractor shall keep all unauthorized visitors off construction site by such legal/approved means as he selects.

1.24 PROGRESS CLEANING AND JANITORIAL SERVICES

- A. The contractor must furnish daily cleaning services for the project site and must perform any required maintenance of facilities and grounds deemed necessary by the Owner's Representative during the entire term of the contract. Toilet facilities must be kept clean and sanitary at all times. Services must be performed at such a time and in such a manner as to least interfere with the operations. Services must be performed to the satisfaction of the Owner's Representative. The contractor must provide daily trash collection and cleanup of the buildings and adjacent outside areas, and disposal of all discarded debris in a manner approved by the Owner's Representative. No separate payment may be made for these contractor- furnished services; all costs are incidental to the contract.
- B. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- C. Maintain premises and properties free from accumulation of waste, debris and rubbish caused by operations.
- D. Remove all debris from the job site on a regular basis. Do not allow trash and debris to accumulate or remain on the site for longer than 48 hours.
- E. Prior to mobilization, the Contractor shall be required to submit a Work Plan to mitigate the effects and spread of the novel COVID-19 virus. This plan shall include, at a minimum:
 - 1. Procedures for worker health evaluation prior to entering and while on jobsite, including evaluation of symptoms and body temperature readings, and other

efforts as directed by the School Department.

2. Procedures to maintain a sanitary workplace, including the availability of handwashing and disinfecting stations, post-daily operations worksite sanitization, and other efforts as directed by the School Department.
3. Social distancing and other Federal CDC and State of RI guidelines for limiting the spread of COVID-19.

1.25 TEMPORARY FIRE PROTECTION

- A. The Contractor shall provide and maintain in good operating condition suitable and adequate fire protection equipment and services and shall comply with all reasonable recommendations regarding fire protection made by the Owner's Representatives or by the local fire chief or fire marshal.
- B. As a minimum temporary fire protection shall be IAW NFPA 241-1980, unless more stringent requirements are required by proceeding paragraphs.

1.26 TEMPORARY CONTROLS

- A. Dust Control:
 1. The contractor must keep permanent access roads, waste areas and all other work areas within or outside the project boundaries free from the dust that would cause the standards of air pollution to be exceeded or that would cause a hazard or nuisance to others. Dust must be controlled as the work proceeds and whenever a dust nuisance or hazard occurs. No separate or direct payment is made for dust control, and its cost is considered incidental to and included in the contract price.
- B. Hazards Control:
 1. Store volatile wastes in covered metal containers and remove from premises daily.
 2. Prevent accumulation of wastes which create hazardous conditions.
 3. Provide adequate ventilation during use of volatile or noxious substances.
- C. Cleaning and Disposal
 1. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
 2. Do not burn or bury rubbish and waste materials on project site.

3. Do not dispose of volatile wastes in storm or sanitary drain.
4. Do not dispose of wastes into streams or waterways.
5. Maintain cleaning until project, or portion thereof, is occupied by Owner.

1.27 ENVIRONMENTAL HAZARDS

- A. The Contractor will notify the Owner if any materials are suspected of containing hazardous materials such as lead or asbestos. The Owner will have the materials tested and an abatement plan will be developed by the Owner. All work must comply with Federal, State and local environmental regulations.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 EXAMINATION

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during excavation.
- B. Beginning of work means acceptance of existing conditions.

3.2 PREPARATION

- A. Provide all required temporary supports to ensure structural integrity of the Work. Provide devices and methods to protect other portions of Project from damage.
- B. Provide protection from elements for areas which may be exposed by uncovering work.

End of Section

Section 01 30 00
ALTERNATES, ALLOWANCES, AND UNIT PRICES

PART 1 - GENERAL

1.1 ALTERNATES

- A. Definition: An alternate is an amount proposed by Bidders and stated on the Bid Form that will be added or deleted to the Base Bid amount if the Owner decides to accept a corresponding change in either scope of work or in products, materials, equipment, systems or installation methods described in contract documents.
1. Owner acceptance of the change shall constitute the "exercise" of the alternate.
 2. The Owner shall have sole discretion as to whether to exercise the alternate or not and shall bear no liability to the bidder for the exercise or non-exercise of the alternate.
- B. Performance Period: Should the Owner exercise any or all of the alternates, the work included in each alternate shall be performed concurrently with the base contract work. There shall be no extension in contract performance time with the exercise of any or all alternates.
- C. Coordination:
1. Coordinate related work and modify or adjust adjacent work as required to ensure that work affected by each accepted alternate is complete and fully integrated into the project.
 2. Each alternate description may include certain work which must be included in the Base Bid to make the work complete IF the particular alternates are NOT exercised. The work shown on the drawings and described below as part of the alternate shall be priced separately and listed in the appropriate place on the Bid Form, and should NOT be included in the Base Bid. The option price is the difference between the work described in the alternate and the work included in the Base Bid.
 3. All bidders shall provide a price for each alternate in the place provided on the Bid Form.
- D. Notification: Immediately following award of contract, prepare and distribute to each party involved, notification of the status of each alternate. Indicate whether alternates have been accepted, or rejected.
- E. ALTERNATES:
- None

1.2 ALLOWANCES/UNIT PRICES

The following amounts will be included in the Bid:

- A. Definition: An allowance where stipulated on the Drawings or the Bid Form is a sum of money which is to be used on the project at the discretion of the Owner's Representative For purposes that are undefined due to unknown conditions at the time of the Contract date. At the completion of the project, the unused portion of the Allowance is to be deducted from the contract sum. LS costs for Allowances shall be included in the total bid LS price.
- B. Definition: A Unit Price where stipulated on the Bid Form is the cost of a particular material to be provided and installed on site and includes all costs of labor and material to be either added to or deducted from the Contract Sum. A summary of the material changes, their locations in sketch form will be submitted to the Architect for approval. Change Orders resulting from unit pricing will not be approved without the Owner's prior approval in written form.
- C. Bids are to include separate unit cost breakdowns for excavation of unsuitable materials and disposal of unsuitable materials.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

End of Section

Section 01 81 13
SUSTAINABLE DESIGN REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Construction Manager shall designate a "NE-CHPS Representative" who will assist the Owner and Architect with fulfilling CHPS construction documentation and submittals required by NE-CHPS.
- B. Coordinate the demolition, removal, and tracking of building debris.
- C. Coordinate a CHPS reuse/recycling strategy plan.
- D. Submittals: Confirm completeness of submittals using the CHPS Product Submittal Form, Document 00 62 12, prior to submittal. Extract all CHPS information from submittals and maintain a digital file on an accessible shared drive for the CHPS Construction Documentation submittal.
- E. Tracking logs:
 - 1. Maintain a Waste Diversion Log throughout the construction process that demonstrates the status of the total percentage and weight of Waste Diverted from the project.
- F. Conduct quarterly CHPS meetings to present a status update of the following:
 - 1. Waste Diversion log.
 - 2. SWPPP activities.
 - 3. All other CHPS construction credits.

1.3 RELATED REQUIREMENTS

- A. Section 01 25 13 - PRODUCT SUBSTITUTION PROCEDURES.
- B. Section 01 31 00 - PROJECT MANAGEMENT AND COORDINATION: Preconstruction, progress and special project meeting requirements regarding NE-CHPS Certification.
- C. Section 01 33 00 - SUBMITTAL PROCEDURES:
 - 1. NE-CHPS Verification Report.
 - 2. Environmental product certifications.
- D. Section 01 50 00 - TEMPORARY FACILITIES AND CONTROLS.
- E. Section 01 60 00 - PRODUCT REQUIREMENTS.

F. Section 01 74 19 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL.

G. Section 01 77 00 - CLOSEOUT PROCEDURES.

H. Division 31 - EARTHWORK: Erosion and sedimentation control.

1.4 DEFINITIONS

A. The term "NE-CHPS" as used herein and throughout the Project Manual refers to the *High Performance Schools Exchange, Northeast Energy Efficiency Partnerships NE-CHPS, New Construction and Major Renovations Version 3.1 Edition*.

B. Certificates of Chain-of-Custody: Certificates signed by manufacturers certifying that wood used to make products was obtained from forests certified by a Forest Stewardship Council (FSC)-Accredited certification body to comply with FSC 1.2, "Principles and Criteria." Certificates shall include evidence that mill is certified for chain-of-custody by an FSC-accredited certification body.

C. Rapidly Renewable Materials: Materials made from agricultural products that are typically harvested within a ten-year or shorter cycle. Rapidly renewable materials include products made from bamboo, cotton, flax, jute, straw, sunflower seed hulls, vegetable oils, or wool.

D. Regionally Manufactured Materials: Materials that are manufactured within a radius of 500 miles (800 km) from the project location. Manufacturing refers to the final assembly of components into the building product that is installed at the project site.

E. Recycled Content: The percentage of weight of constituents that have been recovered or otherwise diverted from the solid waste stream, either during the manufacturing process (pre-consumer), or after consumer use (post-consumer).

1. Spills and scraps from the original manufacturing process that are combined with other constituents after a minimal amount of reprocessing for use in further production or the same product are not recycled materials.
2. Discarded materials from one manufacturing process that are used as constituents in another manufacturing process are pre-consumer recycled materials.

F. Health Product Declaration (HPD): A standard format for reporting product content and associated health information of building products and materials. The three acceptable formats for HPDs are:

1. 1. Nested materials inventory with material-level threshold.
2. Nested materials inventory with product-level threshold.
3. Basic inventory with product-level threshold.

G. Environmental Product Declaration (EPD): classified as Type III, is defined by the International Standards Organization (ISO) 14025, as a declaration which "quantifies environmental information on the life cycle of a product to enable comparisons between products fulfilling the same function." EPDs must conform to the requirements of ISO 14025 on Type III environmental declarations and/or ISO 21930 on environmental declarations of building products. The Environmental Product Declaration must address the requirements found in Appendix A of the ISO

standards. The Declaration must justify the omission of any impact category in narrative form within the document.

1.5 CONSTRUCTION MANAGER'S NE-CHPS REPRESENTATIVE

- A. The Construction Manager shall designate a NE-CHPS Representative, acceptable to both the Owner and Architect, who is experienced in construction management and waste-recycling documentation. The Construction Manager's NE-CHPS Representative is responsible for implementation, coordination, and documentation of specified NE-CHPS Credit Requirements.
- B. The Construction Manager's NE-CHPS Representative is responsible for overseeing the Owner's environmental goals for this Project during construction.
- C. Construction Manager's NE-CHPS Representative shall attend all Environmental Quality Review Meetings, Project Progress Meetings (at least monthly), Pre-installation Meetings, Special Meetings regarding environmental issues and CHPS quarterly check-in meetings through-out the term of construction as specified in Section 01 31 00 - PROJECT MANAGEMENT AND COORDINATION.
- D. Prior to the start of on-site Work, the Construction Manager's NE-CHPS Representative shall distribute copies of the NE-CHPS certification requirements and credit goals to Construction Manager's Project Manager and Construction Manager's Project Superintendent, and each applicator, installer, and supplier involved with the Project.
 - 1. Copies of the distribution list shall be furnished to the Owner's on-site Representative (Clerk of the Works/Resident Engineer), the Owner's Project Manager, and the Architect. Update distribution list as additional applicators, installers, and suppliers are contracted, re-issue as distribution list is revise.

1.6 NE-CHPS VERIFICATION PLAN

- A. Submit to Architect a written plan for achieving the specified NE-CHPS Credit Certification requirements within 30 calendar days of Notice to Proceed. Plan shall include the following:
 - 1. A written narrative describing proposed procedures to be implemented for each CHPS credit.
- B. Construction Manager shall submit to the Architect two (2) copies of a NE-CHPS Certification Progress Report quarterly throughout the work. Include a written narrative describing progress to date.

1.7 GENERAL NE-CHPS CREDIT REQUIREMENTS

- A. General: Owner's goal NE-CHPS prerequisites and credit points are included in the NE-CHPS Project Checklist included in the Project Drawings. The following list is coordinated with the NE-CHPS Project Checklist and includes prerequisites and credits that require submittals from the Construction Manager.
 - 1. Additional NE-CHPS and sustainable design requirements are specified in individual Specification Sections.
- B. The Construction Manager shall submit NE-CHPS certification documentation

demonstrating compliance with the corresponding NE-CHPS Credit Requirements. Submit NE-CHPS documentation under provisions of Section 01 33 00 - SUBMITTAL PROCEDURES.

1. Submission of NE-CHPS documentation is separate and additional to, progress schedules, product literature submittals, samples, mock-ups, commissioning and all other project-related submittals required under other Division One Specification Sections and individual Specification Sections.

- C. The NE-CHPS Credit Requirements for NE-CHPS compliance are in addition to environmental quality requirements specified elsewhere in the Specifications.

1.8 SUBMITTAL SCHEDULE FOR NE-CHPS CREDIT REQUIREMENTS

- A. During Construction: Submit a completed CHPS Product Submittal Form, Document 00 62 12, for all submittals. Extract all CHPS information from submittals and maintain a digital file on an accessible shared drive for the CHPS Construction Documentation submittal. Sort the information by CHPS category. Use the information collected to complete the CHPS Verified Plan sheets.
- B. Construction Review Phase: At Substantial Completion, the Construction Manager shall prepare both the CHPS Verified Plan sheet as well as the CHPS backup documentation collection from the individuals for submittal, for CHPS review by CHPS Technical Committee or designated review board determined by the Owner. Construction Manager to provide all information in digital format to the location requested by the review body. Construction Manager to respond to all requests for additional information within 20 business days of notification request.
- C. Appeals: Any construction credits that require an appeal are the responsibility of the Construction Manager. Appeal fees for construction-related activities shall be paid for by the Construction team.
 1. Additional NE-CHPS and sustainable design requirements are specified in individual Specification Sections.
- D. Operations and Metrics (OM) Credits:
 1. Credit OM 9.0 – Anti-Idling Measures.
 - a. Submit Product Data and Shop Drawings for anti-idling signage.
- E. Site Credits (SS):
 1. Credit SS 4.1 – Construction Site Runoff Control/Sedimentation.
 - a. Provide the SWPPP and timestamped pictures identifying measures taken throughout construction.
 2. Credit SS 5.1 – Post Construction Stormwater Management.
 - a. Provide timestamped picture(s) of the primary trash storage areas showing appropriate draining from adjoining roofs, pavement diverting stormwater runoff and screen or wall preventing transport of trash.
 - b. Provide timestamped pictures of at least one implemented BMP.
- F. Materials & Waste Management Credits (MW):
 1. Prerequisite MW 2.0 – Construction Site Waste Management, divert 50% from

- disposal.
- a. General: Comply with requirements specified under Section 01 74 19 – CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL.
 - b. Submit a Waste Management Plan for the project. Identify recycling and salvage requirements of construction materials.
 - 1) Provide calculations on end-of-project recycling rates, salvage rates, and landfill rates demonstrating that 75% of construction wastes were recycled or salvaged.
 - 2) Update calculations monthly and submit with monthly request for Progress Payment.
 - c. Submit summary of all weight tickets collected for demolition and construction debris removal. The summary shall include the following information by line item (for material that is removed from site, and does not generate a waste ticket, provide a written estimate of weight and volume of materials removed).
 - 1) Date of load disposal.
 - 2) Name of facility to which debris was taken.
 - 3) Ticket number.
 - 4) Type of debris.
 - 5) Number of loads, yards and total pounds for each line item.
 - 6) Number of pounds recycled for each line item.
 - 7) Percentage of material recycled for each line item.
 - 8) Totals for each figure listed above.
2. Credit MW 2.1 – Construction Site Waste Management, divert 75% from disposal.
- a. General: Comply with requirements specified under Section 01 74 19 – CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL.
 - b. Submit a Waste Management Plan for the project. Identify recycling and salvage requirements of construction materials.
 - 1) Provide calculations on end-of-project recycling rates, salvage rates, and landfill rates demonstrating that 90% of construction wastes were recycled or salvaged.
 - 2) Update calculations monthly and submit with monthly request for Progress Payment.
 - c. Submit summary of all weight tickets collected for demolition and construction debris removal. The summary shall include the following information by line item (for material that is removed from site, and does not generate a waste ticket, provide a written estimate of weight and volume of materials removed).
 - 1) Date of load disposal.
 - 2) Name of facility to which debris was taken.
 - 3) Ticket number.
 - 4) Type of debris.
 - 5) Number of loads, yards and total pounds for each line item.
 - 6) Number of pounds recycled for each line item.

- 7) Percentage of material recycled for each line item.
- 8) Totals for each figure listed above.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

End of Section

SECTION 31 10 00
SITE CLEARING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods and services referenced in or related to this Section shall also be bound by the documents identified in Division 00 Procurement and Contracting Requirements and Division 01 General Requirements.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials, and equipment necessary to complete the work of this Section, including but not limited to the following:
 - 1. Protecting existing trees and vegetation to remain, including temporary fencing for trees in close proximity to construction operations.
 - 2. Removing existing trees and vegetation indicated to be removed.
 - 3. Clearing and grubbing.
 - 4. Stripping and stockpiling topsoil.
 - 5. Removing above and below grade site improvements.
 - 6. Disconnecting, capping, or sealing of utilities as required.
- B. Alternates: Not Applicable.
- C. Items To Be Installed Only: Not Applicable.
- D. Items To Be Furnished Only: Not Applicable.
- E. Related Work: The following items are not included in this Section and will be performed under the designated Sections:
 - 1. Section 31 20 00 - EARTH MOVING for soil materials, excavating, backfilling, for site grading and removal of site utilities.
 - 2. Section 31 25 00 - EROSION AND SEDIMENTATION CONTROLS for required erosion and sedimentation control measures.

1.3 DEFINITIONS

- A. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of subsoil and weeds, roots, toxic materials, or other nonsoil materials.
- B. Tree Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction and defined by the drip line of individual trees or the perimeter drip line of groups of trees, unless otherwise indicated.

1.4 MATERIAL OWNERSHIP

- A. Except for stripped topsoil or other materials indicated to remain the City of Pawtucket property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 SUBMITTALS

- A. Photographs sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.
- B. Record drawings, according to Section 01 77 00 - CONTRACT CLOSEOUT identifying and accurately locating capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.6 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from the Project Manager and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- B. Salvagable Improvements: Carefully remove items indicated to be salvaged and store on User Agency's premises where indicated.
- C. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.
- D. Do not commence site clearing operations until erosion and sedimentation control measures are in place.
- E. Protection of Existing Improvements: Provide protection necessary to prevent damage to existing improvements indicated to remain in place or outside of the limit of work. Protect improvements on adjoining properties and on User Agency's property.
 - 1. Restore improvements damaged by Contractor's clearing activities to their original condition, at no additional expense to the City of Pawtucket.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.

- B. Locate and clearly flag trees and vegetation to remain or to be relocated.
- C. Protect existing site improvements to remain from damage during construction.
 - 1. Restore damaged improvements to their original condition, as acceptable to the Architect.

3.2 TREE PROTECTION

- A. Erect and maintain temporary fencing around tree protection zones before starting site clearing. Remove fence when construction is complete.
 - 1. Do not store construction materials, debris, or excavated material within fenced area.
 - 2. Do not permit vehicles, equipment, or foot traffic within fenced area.
 - 3. Maintain fenced area free of weeds and trash.
 - 4. Except as otherwise directed, cutting, and trimming of existing trees will not be permitted.
- B. Do not excavate within tree protection zones, unless otherwise indicated.
- C. Where excavation for new construction is required within tree protection zones, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.
 - 1. Cover exposed roots with burlap and water regularly.
 - 2. Temporarily support and protect roots from damage until they are permanently redirected and covered with soil.
 - 3. Coat cut faces of roots more than 1-1/2 inches in diameter with an emulsified asphalt or other approved coating formulated for use on damaged plant tissues.
 - 4. Backfill with soil as soon as possible.
- D. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, in a manner approved by the Architect.
 - 1. Employ an arborist, licensed in jurisdiction where Project is located, to submit details of proposed repairs and to repair damage to trees and shrubs.
 - 2. Replace trees that cannot be repaired and restored to full-growth status, as determined by the Architect.

3.3 UTILITIES

- A. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed.
 - 1. Arrange with utility companies to shut off indicated utilities.
- B. Existing Utilities: Do not interrupt utilities serving facilities occupied by the City of Pawtucket Project Manager or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify the Architect not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without the City of Pawtucket 's written permission.
- C. Removal of underground utilities is included in Section 31 20 00 – EARTH MOVING.

3.4 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new construction.
 - 1. Prior to demolition of existing trees to be removed, contractor to coordinate with landscape architect the tagging and salvaging of tree trunks/branches for use as play features or seating in natural play areas and outdoor classrooms, refer to Landscaping Materials Plans and Details.
 - 2. Trunks are to be cut to size for specified site features at time of harvest and stored under cover, off the ground and treated to prevent insect infestation.
 - 3. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
 - 4. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
 - 5. Grind stumps and remove roots, obstructions, and debris extending to a depth of 18 inches below exposed subgrade.
 - 6. Use only hand methods for grubbing within tree protection zone.
 - 7. Chip removed tree branches and dispose of off-site.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
 - 1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches and compact each layer to a density equal to adjacent original ground.

3.5 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
 - 1. Remove subsoil and non-soil materials from topsoil, including trash, debris, weeds, roots, and other waste materials.
- C. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust or contamination by air-borne weed seed.
 - 1. Limit height of topsoil stockpiles to 72 inches.
 - 2. Do not stockpile topsoil within tree protection zones.

3.6 EXCESS TOPSOIL

- A. Topsoil that has been stripped and stockpiled, but is not needed after the completion of all final topsoil spreading and grassing, shall be stockpiled on site in a location to be approved by the User Agency and shall remain the property of the City of Pawtucket.

3.7 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction. Note all existing improvements that need to be removed may be

shown on the plans. It is hereby understood that the Contractor has carefully examined the site and all conditions affecting work under this Section. No claim for additional costs will be allowed because of lack of full knowledge of existing conditions as indicated in the Contract Documents, or obvious from observation at the Site

B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.

1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.
2. Paint cut ends of steel reinforcement in concrete to remain to prevent corrosion.

3.8 DISPOSAL

- A. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off the City of Pawtucket's property.
1. Burning on site is prohibited.
 2. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities.

END OF SECTION

SECTION 31 20 00
EARTH MOVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods and services referenced in or related to this Section shall also be bound by the documents identified in Division 00 Procurement and Contracting Requirements and Division 01 General Requirements.
- B. The entire property is a regulated site (sr-26-2077) under the RIDEM "rules and regulations for the investigation and remediation of hazardous material releases" ("remediation regulations"). All work shall be conducted in accordance with the RIDEM-approved remedial action work plan (RAWP), RIDEM Office of Land Revitalization and sustainable materials management requirements, and all applicable State and Federal laws regarding contaminated properties. All existing soil material is jurisdictional under the remediation regulations and shall be managed in accordance with the RAWP. Any soil imported and/or exported from the site shall be done so in accordance with the RAWP, including representative analytical characterization and approvals. Remedial actions, including soil capping, will be implemented in accordance with the site-specific RAWP. In case of any conflicts between these specifications and the RAWP prepared by others, the RAWP shall take precedence.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials, and equipment necessary to complete the work of this Section, including but not limited to the following.
 - 1. Excavating, backfilling and compacting the Site as required to complete the Work shown on the Drawings and as specified herein for utility structures and utility lines in trenches.
- B. Alternates: Not Applicable.
- C. Items To Be Installed Only: Not Applicable.
- D. Items To Be Furnished Only: Not Applicable.
- E. Related Work: The following items are not included in this Section and will be performed under the designated Sections.
 - 1. Section 31 10 00 - SITE CLEARING for site stripping, grubbing, stripping and stockpiling topsoil, and removal of above- and below-grade improvements.
 - 2. Section 31 25 00 - EROSION AND SEDIMENTATION CONTROLS for temporary erosion and sedimentation control measures.
 - 3. Division 02, 22, 23, and 26 Sections for installing underground mechanical and electrical utilities and buried mechanical and electrical structures.

1.3 DEFINITIONS

- A. Backfill: Soil material or controlled low-strength material used to fill an excavation.
 - 1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
 - 2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- B. Base Course: Course placed between the subbase course and hot-mix asphalt paving.
- C. Bedding Course: Course placed over the excavated subgrade in a trench before laying pipe.
- D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- E. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
 - 1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Designer. Authorized additional excavation and replacement material will be paid for according to Contract provisions for unit prices.
 - 2. Bulk Excavation: Excavation more than 10 feet in width and more than 30 feet in length.
 - 3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by the Architect. Unauthorized excavation, as well as remedial work directed by the Architect, shall be without additional compensation.
- F. Fill: Soil materials used to raise existing grades.
- G. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material that exceed 1 cu. yd. for bulk excavation or 3/4 cu. yd. for footing, trench, and pit excavation that cannot be removed by rock excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, ripping, or blasting, when permitted:
- H. Structures: Utility structures, such as sewer manhole, drainage manholes, and stormwater catch basins.
- I. Subbase Course: Course placed between the subgrade and base course for hot-mix asphalt pavement, or course placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.
- J. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.
- K. Utilities: On-site underground pipes, conduits, ducts, and cables.

1.4 SUBMITTALS

- A. Product Data: For the following:
 - 1. Each type of plastic warning tape.
 - 2. Geotextile.
 - 3. Controlled low-strength material, including design mixture.

4. A detailed construction sequence plan for project excavation indicating temporary stockpile areas, side slopes of excavations, limits of any required temporary excavation support and sequence and procedures for slope protection, subgrade protection, excavation, concrete placement, moisture conditioning of on-site excavated soils used as fill, filling, backfill and compaction.
- B. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:
1. Classification according to ASTM D 2487 of each on-site and borrow soil material proposed for fill and backfill.
 2. Laboratory compaction curve according to ASTM D 1557 for each onsite and borrow soil material proposed for fill and backfill.
 3. Test reports for compliance with ASTM D2940 requirements for subbase material.
 4. Particle size Analysis in accordance with ASTM D422.
- C. Pre-excavation Photographs and Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by earthwork operations. Submit before earthwork begins. Maintain catalog of up-to-date photographs at the site.
- D. Plan to Maintain Safe Path of Travel: Submit plans for maintaining safe paths of travel for the general public during the entire project, including requirement for police details of necessary.

1.5 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by the City of Pawtucket or others unless permitted in writing by Architect and then only after arranging to provide temporary utility services according to requirements indicated.
1. Notify the City of Pawtucket not less than two days in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without the City of Pawtucket's written permission.
 3. Contact utility-locator service for area where Project is located before excavating.
- B. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies to shut off services if lines are active.

1.6 EXAMINATION OF SITE CONDITIONS AND DOCUMENTS

- A. It is hereby understood that the Contractor has carefully examined the site and all conditions affecting work under this Section. No claim for additional costs will be allowed because of lack of full knowledge of existing conditions as indicated in the Contract Documents, or obvious from observation at the Site
- B. Plans, surveys, measurements, and dimensions under which the work is to be performed are believed to be correct, but the Contractor shall have examined them for himself during the bidding period, as no allowance will be made for any errors or inaccuracies that may be found except as otherwise provided herein.

1.7 COORDINATION

- A. Prior to start of earthwork, the Contractor shall arrange an onsite meeting with the Architect, the Geotechnical Engineer, and the testing agency for the purpose of establishing the Contractor's schedule of operations, and scheduling observation and testing procedures and requirements.
- B. As construction proceeds, the Contractor shall be responsible for notifying the Geotechnical Engineer and the testing agency prior to the start of earthwork operations requiring observation and/or testing.
- C. The work of this Section shall be coordinated with that of other trades affecting, or affected by, this work, as necessary to ensure the steady progress of all work of the Contract.

1.8 SUBSURFACE CONDITIONS

- A. Subsurface explorations have been performed at the site by the Geotechnical Engineer. The results of the explorations are included in the geotechnical report.
- B. The subsurface explorations and geotechnical report were performed primarily for use in preparing the foundation design. Use and interpretation of these data for purposes of the work shall be the responsibility of the Contractor. Subsurface conditions and groundwater levels are not considered as accurate for any times or locations other than the specific time and location of each of the explorations.
- C. Contractor may, at his own expense, conduct additional subsurface testing as required for his own information after approval by the Owner.
- D. The Contractor shall be responsible for determining the quantities of earth materials necessary to complete the work under this Section. All earth materials shall be included in the Contractor's base bid.
- E. Information on subsurface conditions is made available for the convenience of the Bidders. The Owner does not present the information to the Contractor as either an accurate or a comprehensive indication of subsurface conditions. Bidders are invited to review the information to apprise themselves of the information available, and also to make additional investigations at their own expense.
- F. No claim for extra cost or extension of time resulting from reliance by the Contractor on information presented herein shall be allowed, except as provided in the Contract Documents.

1.9 PERMITS, CODES AND SAFETY REQUIREMENTS

- A. Work shall conform to the Contract Drawings and Specifications and shall comply with applicable codes and regulations. Present in writing to the Architect, all conflicts between the Contract Drawings, Specifications, and applicable codes and regulations, for resolution before commencing the Work.
- B. Comply with all rules, regulations, laws and ordinances of the City of Pawtucket and the State of Rhode Island, and of all other authorities having jurisdiction. All labor, materials, equipment, and services necessary to make the work comply with such requirements, shall be provided without additional cost to the Owner.

- C. The Contractor shall not close any street, sidewalk, or passageway except as indicated on the Contract Drawings. The Contractor shall so conduct his operations as to interfere as little as possible with the use ordinarily made of roads, driveways, sidewalks, or other facilities near enough to the work to be affected thereby.
- D. The Contractor shall procure and pay for all permits and licenses required for the complete work specified herein and shown on the Contract Drawings at no additional cost to the Owner. Arrange and pay for legal off-site disposal of all excess excavated materials, obtain proper disposal receipts from the applicable disposal facility for verification.
- E. Notify "Dig Safe" and the Owner before starting work; comply fully with utility company requirements.

1.10 LAYOUT AND GRADES

- A. The Contractor shall maintain and/or re-establish benchmarks and survey monuments shown on the Contract Drawings or found to exist on the site to provide a base reference for the construction. Replace any that may become destroyed or disturbed. The Contractor shall employ and pay all costs for a registered Civil Engineer or Surveyor who is licensed within the jurisdiction of the project site to lay out all lines and grades in accordance with the Contract Drawings and Specifications, and as necessary or required for the construction.

1.11 DISPOSITION OF EXISTING UTILITIES

- A. Active utilities existing on the site shall be carefully protected from damage and relocated or removed by others as specified in the Contract Documents. When an active utility line is exposed during construction, its location and elevation shall be plotted on the record Contract Drawings and both the Architect and Utility Owner notified in writing.
- B. Inactive or abandoned utilities encountered within the new building area during construction operations shall be removed. The location of such utilities shall be noted on the record Contract Drawings and reported in writing to the Architect.
- C. In removing existing abandoned utilities within the new building area, the Contractor shall also excavate all associated backfill material and replace with compacted Structural Fill or as directed by the Geotech Engineering or the foundation designer.

1.12 DISPOSAL

- A. The Contractor shall re-use on-site excavated soils on-site as Ordinary Fill as indicated below and in section 2.2. Solid waste consisting of brick, concrete, asphalt, cobbles, and boulders that measure less than two cubic yards in volume shall become the property of the Contractor and be legally disposed of off-site at no additional cost to the Owner. Excavated on-site soils which are suitable for re-use at the time of excavation but become frozen or too wet for re-use due to poor material handling practices shall be disposed of off-site and replaced as necessary at no additional cost to the Owner.
- B. Solid waste resulting from screening or culling operations shall become the property of the Contractor and be legally disposed of off-site at no additional cost to the Owner.

1.13 MEASUREMENT AND PAYMENT

- A. The base bid lump sum price shall include all costs of whatever nature associated with the content of this specification section and earthwork shown on the Contract Drawings including, but not limited to: demolition and removal of existing abandoned utilities and associated structures and appurtenances as indicated on the Contract Drawings, excavation for site improvements, removal of existing subsurface obstructions, segregating and all screening operations, stockpiling, handling and re-use of excavated materials, earthwork for paved areas, utilities, and site improvements, construction dewatering, off-site disposal of all solid waste, placement and compaction of the specified fill materials in accordance with procedures documented herein, loading of all materials to be disposed of off-site and trucking and disposal of all Unregulated soil and solid waste.
- B. The Contractor shall include in his lump sum price all costs associated with excavating all existing fill, topsoil, subsoil and natural soil materials down to the surface of the design bearing strata consisting of the natural soil, followed by replacement with compacted fill as specified herein
- C. The Contractor shall include in his lump sum price all costs associated with segregating, culling, and screening operations required for rendering the on-site fill material suitable for reuse on this project as Ordinary Fill material as defined herein.
- D. If any part of the excavation is carried through error beyond the depth directed by the Architect and the dimensions indicated on the Contract Drawings, or called for in the Specifications, the Contractor, at his own expense, shall furnish and install compacted Gravel Borrow, Crushed Stone or lean concrete as directed by the Architect up to the required level and/or dimensions.
- E. Compensation for all work required under this Section and not specifically covered elsewhere, shall be included in the Contract Lump Sum Price for Earthwork. For purposes of adjusting the scope of construction see the Unit Price Schedule.

1.14 FIELD QUALITY CONTROL

- A. The Owner may retain and pay for the services of an independent testing agency to monitor backfill operations and to perform field density tests, and a Geotechnical Engineer to periodically observe the earthwork operations and observe the preparation of the subgrade for paved areas, equipment pads, and utility trenches and structures. The Geotechnical Engineer may from time to time request that the contractor excavate tests pits ahead of excavation to confirm subsurface conditions.
- B. The Contractor shall make provisions for allowing observations and testing of Contractor's Work by the Geotechnical Engineer and by the independent testing and inspection firm.
- C. Costs related to retesting due to unacceptable quality of work and failures discovered by testing shall be paid for by the Contractor at no additional expense to Owner, and the costs thereof will be deducted by the Owner from the Contract Sum.
- D. The Owner's Geotechnical Consultant's and/or Testing Agency's presence does not include supervision or direction of work by the Contractor, his/her employees, or agents. Neither the presence of the Owner's Geotechnical Consultant and/or Testing Agency nor any observations performed by him/her, or any notice or failure to give notice, shall excuse the Contractor from deficiencies in the work.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. General: Provide soil materials when sufficient satisfactory soil materials are not available from on-site excavations.
- B. Satisfactory Soils: ASTM D 2487 Soil Classification Groups GW, GP, GM, SW, SP, and SM or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
- C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487, or a combination of these groups.
 - 1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
 - 2. Onsite material for use in compacted fill shall be natural inorganic granular soil taken from areas of cut after removal of pavement, topsoil, or other unsuitable materials. Onsite materials should be tested for compliance with the specifications before placement. Onsite materials with less than 40 percent fines and with maximum particle size of 6 inches or less can be reused. Onsite materials that do not meet the gradation requirements of the specification should be used in landscaped areas, relocated onsite if directed by the Owner, or disposed of offsite.
- D. Ordinary Fill shall consist of inert, hard, durable sand and gravel, free from ice and snow, organic matter, clay, surface coatings, and deleterious materials, and shall have a plasticity index of less than 6. Ordinary fill shall be placed in 12-inch loose lifts and shall conform to the following gradation requirements:

Sieve Size	Percent Passing By Weight
6-inches	100
1-inch	50-100
No. 4	20-100
No. 20	10-70
No. 60	5-45
No. 200	0-20

- E. Crushed Stone shall consist of durable crushed rock or durable crushed gravel stone, free from ice and snow, sand, clay, loam, or other deleterious material, conforming to RIDOT, Section M.01.09, size as indicated on Drawings. stone shall be uniformly blended and conform to the following gradation requirements.

<u>Sieve Size</u>	<u>Percent Passing By Weight</u>		
	<u>1/2-Inch Stone</u>	<u>3/4-Inch Stone</u>	<u>1.5-Inch Stone</u>
2 inches	100	100	100
1-1/2 inch	100	100	95-100
1 inch	100	100	35-70
3/4 inch	100	90-100	0-25
5/8 inch	100	---	---
1/2 inch	85-100	10-50	---
3/8 inch	15-45	0-20	---
No. 4	0-15	0-5	---
No. 8	0-5	---	---

- F. Subbase Material: Processed Gravel for subbase shall be naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand, meeting the requirements of RIDOT Processed Gravel for Subbase, Section M.01.10.

<u>Sieve Size</u>	<u>Percent Passing By Weight</u>
3 inches	100
1-1/2 inches	70-100
3/4 inch	50-85
No. 4	30-60
No. 200	0-10

- G. Dense Graded Crushed Stone for base course shall be naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand, consisting of angular material, that is hard, durable and free from clay, loam or other plastic material. Gradation shall conform to RIDOT Specification Designation, M.01.09, and the following:

<u>Sieve Size</u>	<u>Percent Passing By Weight</u>
2 inches	100
1-1/2 inches	70-100
3/4 inch	50-85
No. 4	30-55
No. 50	8-24
No. 200	3-10

- H. Sand shall consist of clean inert, hard, durable grains of quartz or other hard durable rock, free from clay, organics, surface coatings or other deleterious material, confirming to RIDOT Section M.01.08. Sand shall conform to the following gradation:

<u>Sieve Size</u>	<u>Percent Passing by Weight</u>
1/2-inch	100
3/8-inch	85-100
No. 4	60-100
No. 16	35-80
No. 50	10-55
No. 100	2-10

- I. Rip Rap shall be sound, durable rock, which is angular in shape. Rounded stones, boulders, sandstone or similar stone or relatively thin slabs will not be acceptable. Each stone shall weigh not less than 50 pounds but not more than 125 pounds and at least 75 percent of the volume shall consist of stones weighing not less than 75 pounds each. The remainder of the stones shall be graded that when placed with the larger stones the entire mass will be compact.

2.2 GEOTEXTILES

- A. Separation Geotextile: Woven geotextile fabric, manufactured for separation applications, made from polyolefins or polyesters; with elongation less than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:

1. Survivability: Class 2; AASHTO M 288.
2. Grab Tensile Strength: 247 lbf; ASTM D 4632.
3. Sewn Seam Strength: 222 lbf; ASTM D 4632.
4. Tear Strength: 90 lbf; ASTM D 4533.

5. Puncture Strength: 90 lbf; ASTM D 4833.
6. Apparent Opening Size: No. 60 sieve, maximum; ASTM D 4751.
7. Permittivity: 0.02 per second, minimum; ASTM D 4491.
8. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

2.3 ACCESSORIES

- A. Detectable Warning Tape: Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored as follows:
1. Red: Electric.
 2. Yellow: Gas, oil, steam, and dangerous materials.
 3. Orange: Telephone and other communications.
 4. Blue: Water systems.
 5. Green: Sewer systems.

2.4 USE OF MATERIALS

- A. Use of materials shall be as described below and as shown in the Drawings.
- B. Ordinary Fill: Use Ordinary Fill as general site fill outside of the new building footprint area for embankments, landscaping, and beneath Processed Gravel for Subbase in paved areas where specified material such as Crushed Stone, Structural Fill, Crushed Stone and Sand are not indicated.
- C. Crushed Stone - Use crushed stone as indicated on the Drawings.
- D. Processed Gravel - Use for Subbase under paved areas.
- E. Dense Graded Crushed Stone - Use for base under paved areas.
- F. Sand – Use sand for bedding for utility bedding, setting bed for concrete block pavers, and as indicated elsewhere on the drawings
- G. Rip Rap – To be used at outlet pipes at flared end sections, emergency overflow at surface basin, and as indicated elsewhere on the drawings.
- H. Filter Fabric/Geotextiles- To be used as filter barriers at transition between soil and crushed stone, or other materials to assist in stabilizing soil subgrades, and as indicated elsewhere on the drawings. The edges of the fabric should be overlapped a minimum of one foot.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. Preparation of subgrade for earthwork operations including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface is specified in Section 31 10 00 - SITE CLEARING.
- C. Protect and maintain erosion and sedimentation controls, which are specified in Section 31 10 00 - SITE CLEARING, during earthwork operations.
- D. Provide protective insulating materials to protect subgrades and foundation soils against freezing temperatures or frost.

3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area. Dispose of contaminated water in accordance with regulations of authorities having jurisdiction.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
 - 2. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

3.3 EXPLOSIVES

- A. Explosives: Do not use explosives.

3.4 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
 - 1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
 - 2. Remove rock to lines and grades indicated to permit installation of permanent construction without exceeding the following dimensions:
 - a. 24 inches outside of concrete forms other than at footings.

- b. 12 inches outside of concrete forms at footings.
- c. 6 inches outside of minimum required dimensions of concrete cast against grade.
- d. Outside dimensions of concrete walls indicated to be cast against rock without forms or exterior waterproofing treatments.
- e. 6 inches beneath bottom of concrete slabs on grade.
- f. 6 inches beneath pipe in trenches, and the greater of 24 inches wider than pipe or 42 inches wide.

3.5 EXCAVATION FOR STRUCTURES

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch. If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
 - 1. Excavation for Underground Tanks, Basins, and Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1 inch. Do not disturb bottom of excavations intended as bearing surfaces.

3.6 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.7 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.
 - 1. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.
- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit, unless otherwise indicated.
 - 1. Clearance: 12 inches each side of pipe or conduit.
- C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.
 - 1. For pipes and conduit less than 6 inches in nominal diameter and flat-bottomed, multiple-duct conduit units, hand-excavate trench bottoms and support pipe and conduit on an undisturbed subgrade.
 - 2. For pipes and conduit 6 inches or larger in nominal diameter, shape bottom of trench to support bottom 90 degrees of pipe circumference. Fill depressions with tamped sand backfill.
 - 3. Excavate trenches 6 inches deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

3.8 SUBGRADE INSPECTION

- A. Notify Geotechnical Engineer when excavations have reached required subgrade.
- B. If Designer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Proof-roll subgrade below the building slabs and pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
 - 1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph.
 - 2. Proof-roll with a loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons.
 - 3. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Designer, and replace with compacted backfill or fill as directed.
- D. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Designer, without additional compensation.

3.9 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi may be used when approved by Designer.
 - 1. Fill unauthorized excavations under other construction or utility pipe as directed by Designer.

3.10 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.
 - 2. Stockpile soil materials in a location, acceptable to the City of Pawtucket Project Manager, that will preclude having to relocate stockpiled soil materials that would otherwise delay or impact the Work.

3.11 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
 - 1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
 - 2. Surveying locations of underground utilities for Record Documents.
 - 3. Testing and inspecting underground utilities.
 - 4. Removing concrete formwork.

5. Removing trash and debris.
6. Removing temporary shoring and bracing, and sheeting.
7. Installing permanent or temporary horizontal bracing on horizontally supported walls.

- B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.12 UTILITY TRENCH BACKFILL

- A. Place backfill on subgrades free of mud, frost, snow, or ice.
- B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
- C. Backfill trenches excavated under footings and within 18 inches of bottom of footings with satisfactory soil; fill with concrete to elevation of bottom of footings. Concrete is specified in Section 03 30 00 - CAST-IN-PLACE CONCRETE.
- D. Provide 4-inch- thick, concrete-base slab support for piping or conduit less than 30 inches below surface of roadways. After installing and testing, completely encase piping or conduit in a minimum of 4 inches of concrete before backfilling or placing roadway subbase.
- E. Place and compact initial backfill of subbase material free of particles larger than 1 inch in any dimension, to a height of 12 inches over the utility pipe or conduit.
1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of utility piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.
- F. Backfill voids with satisfactory soil while installing and removing shoring and bracing.
- G. Place and compact final backfill of satisfactory soil to final subgrade elevation.
- H. Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

3.13 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
1. Under grass and planted areas, use satisfactory soil material.
 2. Under walks and pavements, use satisfactory soil material.
 3. Under steps and ramps, use engineered fill.
 4. Under building slabs, use engineered fill.
 5. Under footings and foundations, use engineered fill.
- C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.14 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
 - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
 - 2. Remove and replace or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.15 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
- B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 1557:
 - 1. Under utility structures and pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent; and areas within 10 feet of structures, building slabs, steps, and pavements at 92 percent.
 - 2. Under walkways, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 92 percent.
 - 3. Under lawn or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 85 percent.
 - 4. For utility trenches, compact each layer of initial and final backfill soil material at 85 percent.

3.16 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 - 1. Provide a smooth transition between adjacent existing grades and new grades.
 - 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
 - 1. Lawn or Unpaved Areas: Plus or minus 1 inch.
 - 2. Walks: Plus or minus 1 inch.
 - 3. Pavements: Plus or minus 1/2 inch.
- C. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2 inch when tested with a 10-foot straightedge.

3.17 SUBBASE AND BASE COURSES

- A. Place subbase and base course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place subbase and base course under pavements and walks as follows:
 - 1. Install separation geotextile on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.
 - 2. Place base course material over subbase course under hot-mix asphalt pavement.
 - 3. Shape subbase and base course to required crown elevations and cross-slope grades.
 - 4. Place subbase and base course 6 inches or less in compacted thickness in a single layer.
 - 5. Place subbase and base course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
 - 6. Compact subbase and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.
- C. Pavement Shoulders: Place shoulders along edges of subbase and base course to prevent lateral movement. Construct shoulders, at least 12 inches wide, of satisfactory soil materials and compact simultaneously with each subbase and base layer to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.

3.18 DRAINAGE COURSE

- A. Place drainage course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place and compact drainage course under cast-in-place concrete slabs-on-grade as follows:
 - 1. Install subdrainage geotextile on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.
 - 2. Compact each layer of drainage course to required cross sections and thicknesses to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.

3.19 FIELD QUALITY CONTROL

- A. Independent Testing Agency: Cooperate with the Independent Testing Agency engaged by the City of Pawtucket for field quality control activities for the Work of this Section.
- B. Cooperate with field quality control personnel.
- C. Additional inspections and retesting of materials which fail to comply with specified material and installation requirements shall be performed at Contractor's expense.
- D. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.
- E. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing

subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Designer.

- F. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
 - 1. Paved and concrete equipment pad Areas: At subgrade and at each compacted fill and backfill layer, at least 1 test for every 2000 sq. ft. or less of paved area or building slab, but in no case fewer than 3 tests.
 - 2. Trench Backfill: At each compacted initial and final backfill layer, at least 1 test for each 150 feet or less of trench length, but no fewer than 2 tests.
- G. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify, and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.
- H. Notify the Independent Testing Agency a minimum of 72 hours prior to start of earthwork operations, to comply with Code requirement that a registered design professional be present at all times during backfill to assure adequate compaction with no bridging effects.

3.20 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 - 1. Scarify or remove and replace soil material to depth as directed by Designer; reshape and recompact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.21 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off the User Agency's property.

END OF SECTION

SECTION 31 25 00
EROSION AND SEDIMENTATION CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods and services referenced in or related to this Section shall also be bound by the documents identified in Division 00 Procurement and Contracting Requirements and Division 01 General Requirements.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials, and equipment necessary to complete the work of this Section, including but not limited to the following:
 - 1. The Contractor shall prepare and implement a Stormwater Pollution Prevention Plan (hereinafter called the SWPPP) to prevent storm water, soil erosion, and air pollution due to project construction activities. The SWPPP shall implement erosion and sedimentation control prevention and treatment procedures such that stormwater runoff discharged from the site shall meet the following general requirements:
 - a. The erosion control shown on the plans is a minimum requirement, additional erosion control measures are required based on the SWPPP prepared for this project, a Conservation Commission Order of Conditions (if applicable), or as changing site conditions warrant. The information shown on the plans is to supplement the developer or contractor's expertise and is not meant to circumvent logical decisions required by a variety of field conditions including weather and the type of equipment available to the contractor.
 - b. Best management practices (BMPs) shall be used to address storm water pollution prevention in accordance with the City of Pawtucket, RIDEM Stormwater Management Guidelines, Narragansett Bay Commission requirements, and EPA NPDES Regulations.
 - c. The SWPPP shall be implemented and installed prior to commencement of earthwork activities.
 - d. The SWPPP shall be kept on-site at all times and review / project inspections shall take place as specified therein. Control measures to prevent all erosion, siltation and sedimentation of wetlands, waterways, construction areas, adjacent areas, and off-site areas.
 - 2. Control measures shall be accomplished adjacent to or in the following work areas:
 - a. Soil stockpiles and on-site storage and staging areas.
 - b. Cut and fill slopes and other stripped and graded areas.
 - c. Constructed and existing swales and ditches.
 - d. Retention ponds.
 - e. At edge of wetlands areas, if applicable, as shown on Drawings.
 - 3. Additional means of protection shall be provided by the Contractor as required for continued or unforeseen erosion problems, at no additional cost to the City of Pawtucket.

4. Periodic maintenance of all sediment control structures shall be provided to ensure intended purpose is accomplished. Sediment control measures shall be in working condition at the end of each day.
 5. After any significant rainfall, sediment control structures shall be inspected for integrity. Any damaged device shall be corrected immediately.
- B. Alternates: Not Applicable.
- C. Items to Be Installed Only: Not Applicable.
- D. Items to Be Furnished Only: Not Applicable.
- E. Related Work: The following items are not included in this Section and will be performed under the designated Sections:
1. Section 31 10 00 - SITE CLEARING for protection of existing trees and other vegetation to remain.
 2. Section 31 20 00 - EARTH MOVING for soil materials, excavating, backfilling, for site grading and removal of site utilities.

1.3 QUALITY ASSURANCE

- A. When applicable, comply with the requirements of the Stormwater Pollution Prevention Plan (SWPPP) prepared for the NPDES permit, which are incorporated herein by reference, and all other applicable requirements of governing authorities having jurisdiction. The specifications and drawings are not represented as being comprehensive, but rather convey the intent to provide complete slope protection and erosion control for both the project site and adjacent property.
1. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to a sediment and erosion control plan specific to the site, that complies with EPA 832/R-92-005 or requirements of authorities having jurisdiction, whichever is more stringent.
 2. Regulatory Order of Conditions ((Attach to the end of this Section, if applicable))
- B. Erosion control measures shall be established at the beginning of construction and maintained during the entire period of construction. On-site areas which are subject to severe erosion, and off-site areas which are especially vulnerable to damage from erosion and/or sedimentation, are to be identified and receive special attention.
- C. All land-disturbing activities are to be planned and conducted to minimize the size of the area to be exposed at any one time, and the length of time of exposure.
- D. Surface water runoff originating upgrate of exposed areas should be controlled to reduce erosion and sediment loss during the period of exposure.
- E. When the increase in the peak rates and velocity of storm water runoff resulting from a land-disturbing activity is sufficient to cause accelerated erosion of the receiving stream bed, provide measures to control both the velocity and rate of release so as to minimize accelerated erosion and increased sedimentation of the stream.

- F. All land-disturbing activities are to be planned and conducted to minimize off-site sedimentation damage.
- G. The Contractor is responsible for cleaning out and disposing of all sediment once the storage capacity of the sediment facility is reduced by one-half.
- H. Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- I. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Straw Bales: Wire or nylon bound bales of straw, oriented around sides, rather than over and under.
- B. Straw wattles shall be made of straw of oats, wheat, barley, rye, or natural straw inside a flexible and durable tubular netting with metal clips or knotted ends and shall be utilized to control sediment runoff during construction activities. The minimum size for the straw wattles is 12-inch diameter. Furnish oak wood stakes 2-inch x 2-inch x 4 feet long or 1/2-inch x 4 feet long rebar with safety caps.
- C. Stakes: Stakes for bales shall be one of the following materials: Wood stakes of sound hardwood 2 by 2 inches in size or steel reinforcing bars of at least No. 4 size. Lengths shall be approximately three feet.
- D. Siltation Fence: Fabricated or prefabricated unit consisting of the following filter fabric properties:

1. Grab Tensile Strength	90	ASTM D1682
2. Elongation at Failure (%)	50	ASTM D1682
3. Mullen Burst Strength (PSI)	190	ASTM D3786
4. Puncture Strength (lbs)	70	ASTM D751 (modified)
5. Slurry Flow Rate (gal/min/sf)	0.5	Virginia DOT VTM-51
6. Equivalent Opening Size	40-80	US Std Sieve CW-02215
7. Ultraviolet Radiation Stability (%)	90	ASTM G26
- E. Fencing: Steel posts shall be standard 6-foot-long metal stamped drive stakes commonly used to support snow fences. Fencing shall be new four-foot height wood lath snow fencing. Provide suitable steel staples or heavy nylon cord for securing filter cloth to support system.
- F. Protective Measures: As temporary coverings on ground areas subject to erosion, provide one of the following protective measures, and as directed by the Architect with concurrence of the City of Pawtucket:
 - 1. Hay or straw temporary mulch, 100 pounds per 1,000 square feet.
 - 2. Wood fiber cellulose temporary mulch, 35 pounds per 1,000 square feet.
 - 3. Tackafier for anchoring mulch or straw shall be a non-petroleum based liquid bonding agent specifically made for anchoring hay or straw.

4. Provide natural (jute, wood excelsior) or man-made (glass fiber) covering with suitable staples or anchors to secure to ground surface. Note that wire staples and non-biodegradable coverings shall not be used for any area that will be mown turf.
5. Temporary vegetative cover for graded areas shall be undamaged, air dry threshed straw or hay free of undesirable weed seed.

PART 3 - EXECUTION

3.1 STRAW BALE BARRIERS

- A. Excavation shall be to the width of the bale and the length of the proposed barrier to a minimum depth of 4 inches.
- B. Bales shall be placed in a single row, lengthwise on proposed line, with ends of adjacent bales tightly abutting one another. In swales and ditches the barrier shall extend to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale.
- C. Staking shall be accomplished to securely anchor bales by driving at least two stakes or rebars through each bale to a minimum depth of 18 inches.
- D. The gaps between bales shall be filled by wedging straw in the gaps to prevent water from escaping between the bales.
- E. The excavated soil shall be backfilled against the barrier. Backfill shall conform to ground level on the downhill side and shall be built up to 4 inches on the uphill side. Loose straw shall then be scattered over the area immediately uphill from a straw barrier.
- F. Inspection shall be frequent, and repair or replacement shall be made promptly as needed.

3.2 STABILIZED CONSTRUCTION ENTRANCE AND STONE BERMES

- A. Stone size: Use ASTM designation C-33, size No. 2 (1-1/2" to 2-1/2"). Use crushed stone.
- B. Length: As effective, but not less than 50 feet.
- C. Thickness: Not less than eight inches.
- D. Width: Not less than full width of all points on ingress or egress, but not less than 25 feet.
- E. Washing: When necessary, wheels shall be cleaned to remove sediment prior to entrance onto public right-of-way. When washing is required, it shall be done on an area stabilized with crushed stone which drains into an approved sediment trap or sediment basin. All sediment shall be prevented from entering any storm drain, ditch, or watercourse with sandbags, gravel boards or other approved methods.
- F. Maintenance: The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spoiled, dropped, washed, or tracked onto public rights-of-way must be removed immediately.

- G. Place crushed stone berms in locations required and as directed. Berms shall have side slopes of 1:3 or less.
- H. Inspect stone berms periodically and replace and/or regrade crushed stone as required.

3.3 SILT FENCING

- A. Excavate a 6-inch trench along the upstream side of the desired fence location.
- B. Drive fence posts a minimum of 1'-6" into the ground. Install fence, well-staked at maximum eight-foot intervals in locations as shown on Drawings. Secure fabric to fence and bury fabric end within the six-inch-deep trench cut.
- C. Lay lower 12 inches of silt fence into the trench, 6 inches deep and 6 inches wide. Backfill trench and compact.
- D. Overlap joints in fabric at post to prevent leakage of silt at seam.

3.4 INLET PROTECTION

- A. Install silt fence or straw bales around inlet as specified herein.

3.5 DUST CONTROL

- A. Throughout the construction period the Contractor shall carry on an active program for the control of fugitive dust within all site construction zones, or areas disturbed due to construction. Control methods shall include the following: Apply calcium chloride at a uniform rate of one and one-half (1-1/2) pounds per square yard in areas subject to blowing. For emergency control of dust apply water to affected areas. The source of supply and the method of application for water are the responsibility of the contractor.
- B. The frequency and methods of application for fugitive dust control shall be as directed by the Architect with concurrence by the City of Pawtucket.

3.6 TEMPORARY PROTECTIVE COVERINGS (AFTER GROWING SEASON)

- A. Place temporary covering for erosion and sedimentation control on all areas that have been graded and left exposed after October 30. Contractor shall have the choice to use either or both of the methods described herein.
- B. Hay or straw shall be anchored in-place by one of the following methods and as approved by the Architect with concurrence by the City of Pawtucket. Mechanical "crimping" with a tractor drawn device specifically devised to cut mulch into top two inches of soil surface or application of non-petroleum based liquid tackifier, applied at a rate and in accordance with manufacturer's instructions for specific mulch material utilized.
- C. Placement of mesh or blanket matting and anchoring in place shall be in accordance with manufacturer's printed instructions.

- D. Inspect protective coverings periodically and reset or replace materials as required.

END OF SECTION

SECTION 33 05 13
MANHOLES AND STRUCTURES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods and services referenced in or related to this Section shall also be bound by the documents identified in Division 00 Procurement and Contracting Requirements and Division 01 General Requirements.
- B. The General Contractor shall either perform the work of this section with its own forces or shall subcontract such work to a subcontractor who will furnish a performance and payment bond for the complete scope of work and listing the City of Pawtucket as the co-obligee. Such bond shall be procured from a surety that is currently licensed to do business in Massachusetts and is currently listed on the United States Treasury Department circular 570. A copy of such bond shall be submitted to the Owner's Project Manager for approval and shall be in place prior to the subcontractor commencing any work on the project.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials, and equipment necessary to complete the work of this Section, including but not limited to the following:
 - 1. Install precast concrete manholes, catch basins, frames and covers, grates, manhole rungs, platforms, and appurtenances all as shown on the Drawings and as specified herein.
- B. Related Work: The following items are not included in this Section and will be performed under the designated Sections:
 - 1. Section 31 20 00 - EARTH MOVING
 - 2. Section 33 31 00 - SANITARY UTILITY SEWERAGE PIPING

1.3 REFERENCES

- A. American Concrete Institute:
 - 1. ACI 318 - Building Code Requirements for Structural Concrete.
 - 2. ACI 530/530.1 - Building Code Requirements for Masonry Structures and Specifications for Masonry Structures.
- B. ASTM International:
 - 1. ASTM A48/A48M - Standard Specification for Gray Iron Castings.
 - 2. ASTM A615 - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
 - 3. ASTM C32 - Standard Specification for Sewer and Manhole Brick

4. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
5. ASTM C55 - Standard Specification for Concrete Brick.
6. ASTM C62 - Standard Specification for Building Brick (Solid Masonry Units Made From Clay or Shale).
7. ASTM C150 - Standard Specification for Portland Cement
8. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes
9. ASTM C478 - Standard Specification for Precast Reinforced Concrete Manhole Sections.
10. ASTM C497 - Standard Test Methods for Concrete Pipe, Manhole Sections, or Tile.
11. ASTM C913 - Standard Specification for Precast Concrete Water and Wastewater Structures.
12. ASTM C923 - Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals.
13. ASTM D4097 - Contact Molded Glass Fiber Reinforced Chemical Resistant Tanks
14. ASTM D4101 - Standard Specification for Polypropylene Plastic Injection and Extrusion Materials

C. American Association of State Highway and Transportation Officials (AASHTO)

D. Occupational Safety and Health Administration (OSHA)

1.4 DESIGN REQUIREMENTS

- A. Equivalent strength: Based on structural design of reinforced concrete as outlined in ACI 318.
- B. Design of Lifting Devices for Precast Components: In accordance with ASTM C913.
- C. Design of Joints for Precast Components: In accordance with ASTM C913; maximum leakage of 0.025 gallons per hour per foot of joint at 3 ft. of head.

1.5 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Shop Drawings: Indicate manhole locations, elevations, and sizes and elevations of penetrations.
- C. Product Data: Submit cover and frame construction, features, configuration, dimensions.

1.6 QUALITY ASSURANCE

- A. The quality of all materials, the process of manufacture, and the finished sections shall be subject to inspection and approval by the Engineer or other representative of the Owner. Such inspection may be made at the place of manufacture, or on the work after delivery, or at both places and the materials shall be subject to rejection at any time on account of failure to meet any of the requirements specified herein; even though samples may have been accepted as satisfactory as the place of manufacture. Material reject after delivery to the job shall be marked for identification and shall be removed from the job at one. All materials that have been damaged after delivery shall be rejected, and if already installed, shall be acceptably repaired, if permitted, or removed and replaced, entirely at the Contractor's expense.

- B. At the time of inspection, the materials will be carefully examined for compliance with the applicable ASTM standard specification and this Section with the approved manufacturer's drawings. All manhole sections shall be inspected for general appearance, dimension, scratch strength, blisters, cracks, roughness, soundness, and other surface or structural imperfections. The surface shall be dense and close-textured.
- C. Imperfections in manhole sections may be repaired, subject to the approval of the Engineer, after demonstration by the manufacturer that strong and permanent repairs result. Repairs shall be carefully inspected before final approval. Cement mortar used for repairs shall have a minimum compressive strength of 4,000 psi at seven days and 5,000 psi at 28 days, when tested in 3-inch x 6-inch cylinders stored in the standard manner. Epoxy mortar may be utilized for repairs subject to the approval of the Engineer.

1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years documented experience.

1.8 DELIVERY, STORAGE AND HANDLING

- A. Section 01 60 00 - PRODUCT REQUIREMENTS: Product storage and handling requirements.
- B. Comply with precast concrete manufacturer's instructions for unloading, storing, and moving precast manholes.
- C. Store precast concrete manholes to prevent damage to Owner's property or other public or private property. Repair property damaged from materials storage.
- D. Mark each precast structure by indentation or waterproof paint showing date of manufacture, manufacturer, and identifying symbols and numbers shown on Drawings to indicate its intended use.

1.9 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 - PRODUCT REQUIREMENTS.
- B. Maintain materials and surrounding air temperature to minimum 50 degrees F prior to, during, and 48 hours after completion of masonry work.
- C. Cold Weather Requirements: ACI 530.

PART 2 – PRODUCTS

2.1 PRECAST CONCRETE MANHOLE SECTIONS

- A. Precast concrete barrel sections and transition top sections shall conform to ASTM C478 and meet the following requirements:

1. Manholes shall have a minimum 48-inch interior diameter with a wall thickness of not less than 5 inches.
2. Top sections shall be eccentric except that barrel sections shall be used where shallow pipe cover requires a top section less than 4 feet.
3. Barrel sections shall have tongue and groove joints. Manholes shall be manufactured in the configuration shown on the Drawings with the bell of the manhole section pointing down.
4. All sections shall be cured by an approved method and shall not be shipped or subjected to loading until the concrete compressive strength has attained 3,000 psi and not before five days after fabrication or repair, whichever is longer.
5. Precast concrete barrel sections with top slabs and precast concrete transition sections shall be designed for a minimum of HS-20 loading plus the weight of the soil above at 120 pcf.
6. The date of manufacture and the name and trademark of the manufacturer shall be clearly marked on the inside of each precast section.
7. Precast concrete bases shall be constructed of and installed as shown on the Drawings. The thickness of the bottom slab of precast bases shall not be less than the manhole barrel sections or top slab, whichever is greater.
8. Knockout panels shall not be permitted.

2.3 CATCH BASINS

- A. Precast reinforced concrete catch basin sections shall conform to the applicable requirements of ASTM C478, latest revision.
- B. Basin shall be precast reinforced concrete 4 feet in diameter with penetrations cast into the basin for pipe connection; knockout panels shall not be permitted. Basins shall have a minimum wall thickness of 5 inch and a minimum bottom thickness of 6 inches. Basins shall have a sump of 4 feet. Top sections shall be a flat slab and have a minimum of 8 inches for support of cast iron frame and grate. The hole in the top section shall be 24 inches square size to accommodate frame and cover and be eccentric. The hole in the top section shall be located over the side opposite to the hooded outlet to facilitate future cleaning operations.
- C. All concrete shall have a minimum compressive strength of 4,000 psi and a live load design base for all catch basins shall be HS-20 loading.
- D. All catch basins shall be fitted with a hooded outlet. The hoods are to be positioned so they will not interfere with future cleaning operations. The hooded outlet cover shall be fabricated from marine grade fiberglass, stainless steel (18-8) attachment hardware, pressure sensitive oil resistant foam rubber gasket, PVC Schedule 40 fittings, and pipe for anti-siphon device.
- E. Bedding material under catch basins and drain manholes shall conform to the requirements for of the Specifications for pipe bedding. A minimum of 12 inches of 3/4" crushed stone is required to provide a uniform base. If the material at the elevation that catch basins are to be set on is not suitable to support them, then this material shall be removed to a depth that will support the structure. The material approved by the Engineer shall be used to replace the removed material and be compacted before setting the base.
- F. Catch basin frames and grates/covers shall be set at a finished elevation 1 inch below finish pavement elevation.

- G. ADA compliant grates are required in pedestrian areas. If gratings have elongated openings, then they shall be placed so that the long dimension is perpendicular to the dominant direction of travel. Walking surfaces should be slip resistant.

2.4 BRICK MASONRY.

- A. The bricks shall be good, sound, hard and uniformly burned, regular and uniform in shape, of compact size and texture and satisfactory to the Engineer. Underburned or salmon brick will not be acceptable and only whole brick shall be used unless otherwise permitted. In case bricks are rejected by the Engineer, they shall be immediately removed from the site of the work and satisfactory bricks used thereafter.
 - 1. Bricks for the channels and sleeves shall comply with ASTM C32 for sewer brick; Grade SS (from clay or shale) except that the mean of five tests for absorption shall not exceed 8% and no individual brick shall exceed 11%.
 - 2. Bricks for building up and leveling the manhole frames shall comply with ASTM C62.
- B. Mortar used in the brickwork shall be composed of one part Type II Portland cement conforming to ASTM C150 and sand to which a small amount of hydrated lime not to exceed 10 lbs. to each bag of cement shall be added.
- C. The sand used shall be washed, cleaned, screened, sharp and well graded as to different sizes and with no grain larger than will pass a No. 4 sieve. It shall be free from vegetable matter, loam, organic or other materials of such nature or quantity to render it unsatisfactory.
- D. The hydrated lime shall also conform to ASTM C207.

2.5 FRAMES, COVERS AND GRATES

- A. Manufacturers: These are proprietary items as determined and formally approved by the City of Pawtucket Building Commission, Select Board, and School Committee.
 - 1. All manufacturers producing such products shall be considered.
 - 2. Substitutions: Section 016000 - PRODUCT REQUIREMENTS
- B. Manhole frames and covers shall be of good quality, strong, tough, even grained cast iron, smooth, free from scale, lumps, blisters, sand holes and defects of any kind that render them unfit for the service for which they are intended. Manhole covers and frame seats shall be machined to a true surface. Castings shall be thoroughly cleaned and subject to hammer inspection. Cast iron shall conform to ASTM A48, Class 35.
- C. Manhole covers shall have a diamond pattern, pick holes, and the word 'SEWER', 'DRAIN', or as appropriate, cast in 2 in. letters.
- D. Inlet frames and grates shall be of good quality, strong, tough, even grained cast iron, smooth, free from scale, lumps, blisters, sand holes and defects of any kind that render them unfit for the service for which they are intended. Catch basin grates and frame seats shall be machined to a true surface. Castings shall be thoroughly cleaned and subject to hammer inspection. Cast iron shall conform to ASTM A48, Class 35.

- E. Grates, if located in a walking area, shall have spaces no greater than 1/2-inch-wide in one direction. If gratings have elongated openings, then they shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

2.6 JOINTING PRECAST MANHOLE SECTIONS

- A. Tongue and groove joints shall be sealed with either a round rubber o-ring gasket or a preformed flexible joint sealant. The o-ring shall conform to ASTM C443.
- B. Joints shall be designed and manufactured so that the completed joint will withstand an internal water pressure of 15 psi without leakage or displacement of the gasket or sealant.

2.7 MANHOLE RUNGS

- A. Manhole rungs shall conform to the requirements of ASTM C478 and be of the following types:
 - 1. Manhole rungs shall be steel reinforced copolymer polypropylene plastic. Rungs shall be 14 inches wide. Copolymer polypropylene shall conform to ASTM D4101. Steel reinforcing shall be 1/2-inch diameter, grade 60 conforming to ASTM A615 and shall be continuous throughout the rung. The portion of the legs to be embedded in the precast section shall have fins and be tapered to insure a secure bond.

2.8 PIPE CONNECTION TO MANHOLE

- A. Manhole pipe connections may be accomplished in the following ways:
 - 1. The 'Lock Joint Flexible Manhole Sleeve' shall be cast in the precast manhole base. The steel strap shall be protected from corrosion with a bituminous coat.
 - 2. 'A-Lok' shall be a rubber like gasket cast in the precast manhole base. The rubber gasket shall be case into a formed opening in the manhole.
 - 3. 'Kor-N-Seal' joint shall be installed as recommended by the manufacturer. The stainless-steel clamp shall be protected from corrosion with a bituminous coat.
- B. Clear Cover Opening: 24-inch diameter, or as otherwise indicated on Drawings.
- C. Steps: 12-inch-wide, 16 inches on center vertically, set into manhole, or as otherwise indicated on Drawings.

2.9 DAMPPROOFING

- A. The dampproofing shall be Hydrocide 648 by Sonneborn Building Products, Dehydratine by A.C. Horn, Inc., Meadows Trowel Mastic, or approved equal.

2.10 CONFIGURATION

- A. Shaft Construction: Concentric with eccentric cone top section; lipped male/female joints; sleeved to receive pipe sections.

- B. Shape: Cylindrical.
- C. Clear Inside Dimensions: 48 inches, or as otherwise indicated on Drawings.
- D. Design Depth: As indicated on Drawings.
- E. Clear Cover Opening: 24-inch diameter, or as otherwise indicated on Drawings.
- F. Steps: 12-inch-wide, 16 inches on center vertically, set into manhole, or as otherwise indicated on Drawings.

2.11 BEDDING MATERIALS

- A. Bedding and Cover: 3/4-inch Crushed Stone in accordance with Section M2.01.4 of the MHD Standard Specifications.
- B. Soil Backfill from Around Manhole: In pavement areas where controlled density fill is not specified, provide Ordinary Fill to the sub-base of the pavement, and then provide the required sub-base material for the pavement section. In grassed areas where controlled density fill is not specified, provide Ordinary Fill to a point 6 inches below finished grade, then Manufactured Topsoil to finished grade.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify items provided by other sections of Work are properly sized and located.
- B. Verify built-in items are in proper location, and ready for roughing into Work.
- C. Verify correct size of manhole excavation.

3.2 PREPARATION

- A. Coordinate placement of inlet and outlet pipe or duct sleeves required by other sections.
- B. Do not install structures where site conditions induce loads exceeding structural capacity of structures.
- C. Inspect precast concrete structures immediately prior to placement in excavation to verify structures are internally clean and free from damage. Remove and replace damaged units.

3.3 INSTALLATION

- A. Excavation and Backfill:

1. Excavate for manholes to location and depth shown in accordance with Section 31 20 00 – EARTH MOVING and as otherwise specified herein. Provide clearance around sidewalls of structure for construction operations.
 2. When groundwater is encountered, prevent accumulation of water in excavations. Place manholes in dry trench.
 3. Where possibility exists of watertight structure becoming buoyant in flooded excavation, anchor structure to avoid flotation.
- B. Place base pad, trowel top surface level.
- C. Install manholes supported at proper grade and alignment on crushed stone bedding as shown on Drawings.
- D. Backfill and compact excavations for manholes in accordance with Section 31 20 00 – EARTH MOVING.
- E. Form and place manhole cylinder plumb and level, to correct dimensions and elevations.
- F. Cut and fit for sleeves.
- G. Grout base of shaft sections to achieve slope to exit piping. Trowel smooth. Contour to form continuous drainage channel, as indicated on Drawings.
- H. Set cover frames and covers level without tipping, to correct elevations.
- I. Coordinate with other sections of Work to provide correct size, shape, and location.

3.4 PRECAST CONCRETE INSTALLATION

- A. Lift precast components at lifting points designated by manufacturer.
- B. When lowering precast structures into excavations and joining pipe to units, take precautions to ensure interior of pipeline and structure remains clean.
- C. Set precast structures bearing firmly and fully on crushed stone bedding, compacted in accordance with State of MHD specifications.
- D. Assemble multi-section structures by lowering each section into excavation. Lower, set level, and firmly position base section before placing additional sections.
- E. Remove foreign materials from joint surfaces and verify sealing materials are placed properly. Maintain alignment between sections by using guide devices affixed to lower section.
- F. Joint sealing materials may be installed on site or at manufacturer's plant.
- G. Verify installations satisfy required alignment and grade.
- H. Cut structure to receive piping without creating openings larger than required to receive pipe. Fill annular space with mortar.
- I. Cut pipe to finish flush with interior of structure.

- J. Shape inverts through manhole as shown on Drawings.

3.5 FRAME AND COVER INSTALLATION

- A. Set frames using mortar and masonry. Install radially laid sewer brick with 1/4-inch-thick vertical joints at inside perimeter. Lay sewer brick in full bed of mortar and completely fill joints. Where more than one course of sewer brick is required, stagger vertical joints. No more than three courses of sewer brick shall be permitted.
- B. Set frame and cover 2 inches above finished grade for manholes with covers located within unpaved areas to allow area to be graded away from cover beginning 1 inch below top surface of frame.

3.6 FIELD QUALITY CONTROL

- A. Sections 01 40 00 - QUALITY REQUIREMENTS, 016000 - PRODUCT REQUIREMENTS and 01 77 00 - CLOSEOUT PROCEDURES.
- B. Vertical Adjustment of Existing Manholes:
1. Where required, adjust top elevation of existing manholes to finished grades shown on Drawings.
 2. Reset existing frames, grates and covers, carefully removed, cleaned of mortar fragments, to required elevation in accordance with requirements specified for installation of castings.
 3. Remove concrete without damaging existing vertical reinforcing bars when removal of existing concrete wall is required. Clean vertical bars of concrete and bend into new concrete top slab or splice to required vertical reinforcement, as indicated Drawings.

3.7 LEAKAGE TESTS

- A. Leakage tests shall be made and observed by the Engineer on each manhole. The test shall be as described below:
- B. Vacuum Test (required on all new manholes):
1. The test shall be made using an inflatable compression band, vacuum pump, and appurtenances specifically designed for testing manholes. Test procedures shall be in accordance with the equipment manufacturer's recommendations. Contactor shall be fully familiar with the vacuum testing equipment and provide a minimum of four hours of instruction by a factory authorized representative at the outset of the project.
 2. Each manhole shall be test immediately after assembly including the connection of pipes and prior to backfilling.
 3. All lift holes shall be plugged with non-shrink grout and all pipes entering the manhole shall be plugged and braced to prevent the plug from being drawn into the manhole.
 4. After test equipment is in place the test shall be run at the following rate and test times:
 - a. For 4-foot diameter manholes:
 - 1) Initial test pressure – 10 inches Hg

- 2) Test Time – 1-inch Hg drop to 9 inches Hg in one minute allowable for 0 feet to 10 feet deep manholes.

- b. If the pressure drop exceeds 1-inch Hg in the specified time the manhole shall be repaired in accordance with approved procedures and retested.
- c. If a manhole fails to meet a 1-inch Hg drop in the specified time after repairs the unit shall be water exfiltration tested as specified below and repaired, as necessary.

C. Exfiltration Test (required as described above):

1. Assemble manhole in place; fill and point all lifting holes and exterior joints within 6 feet of the ground surface with an approved non-shrinking mortar. Test prior to placing the shelf and invert before filling and pointing the horizontal joints below 6 feet of depth. Lower groundwater table below bottom of manhole for the duration of the test. Plug all pipes and other openings into the manhole and brace to prevent blowout.
2. Fill manhole with water to the top of the cone section. If the excavation has not been backfilled and no water is observed moving down the surface of the manhole, the manhole is satisfactorily watertight. If the test, as described above is unsatisfactory to the Engineer, or if the manhole excavation has been backfilled, continue the test. A period of time may be permitted to allow for absorption. Following this period, refill manhole to the top of the cone, if necessary, and allow at least eight hours to pass. At the end of the test period, refill the manhole to the top of the cone again, measuring the volume of water added. Extrapolate the refill amount to a 24-hour leakage rate. If the manhole fails this requirement, but the leakage does not exceed three gallons per vertical foot per day, repairs by approved methods may be as directed by the Engineer. If leakage due to a defective joint exceeds this amount, the manhole shall be rejected. Uncover the rejected manhole as necessary to disassemble, reconstruct, or replace it as directed by the Engineer. Retest the manhole, and if satisfactory, fill and point the interior joints.
3. No adjustment in the leakage allowance may be made for unknown causes such as leaking plugs, absorptions, or other. It will be assumed that all loss of water during the test is a result of leaks through the joints or through the entrance.
4. An infiltration test may not be substituted for an exfiltration test if the groundwater table is above the highest joint in the manhole. If there is no leakage into the manhole as determined by the Engineer, the manhole will be considered watertight. If the Engineer is not satisfied, testing shall be performed as described herein.

3.8 CLEANING

- A. All new manholes shall be thoroughly cleaned of all silt, debris, and foreign matter of any kind, prior to final inspection.

END OF SECTION

SECTION 33 31 00
SANITARY UTILITY SEWERAGE PIPING

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods and services referenced in or related to this Section shall also be bound by the documents identified in Division 00 Procurement and Contracting Requirements and Division 01 General Requirements.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials, and equipment necessary to complete the work of this Section, including but not limited to the following:
 - 1. Install and test polyvinyl chloride (PVC) sewer pipe, complete as shown on the Drawings and as specified herein.
 - 2. Pipe or piping refers to all pipe, fittings, material, and appurtenances required to construct PVC gravity and pressure sewer pipe complete, in place.
- B. Related Work: The following items are not included in this Section and will be performed under the designated Sections:
 - 1. Section 31 20 00 - EARTH MOVING: Soil for backfill in trenches.

1.3 REFERENCES

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 10 lb. Rammer and an 18 in. Drop.
- B. ASTM International:
 - 1. ASTM D1784 - Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Rigid Poly (Vinyl Chloride) (CPVC) Compounds
 - 2. ASTM D1785 - Standard Specification for Poly Vinyl Chloride (PVC) Plastic Pipe, Schedules 40, 80, and 120.
 - 3. ASTM D2241 - Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series)
 - 4. ASTM D2321 - Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
 - 5. ASTM D2466 - Standard Specification for Poly Vinyl Chloride (PVC) Plastic Pipe Fittings, Schedule 40.
 - 6. ASTM D2564 - Standard Specification for Solvent Cements for Poly Vinyl Chloride (PVC) Plastic Piping Systems.

7. ASTM D2729 - Standard Specification for Poly Vinyl Chloride (PVC) Sewer Pipe and Fittings.
8. ASTM D2855 - Standard Practice for Making Solvent-Cemented Joints with Poly Vinyl Chloride (PVC) Pipe and Fittings.
9. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
10. ASTM D3034 - Standard Specification for Type PSM Poly Vinyl Chloride (PVC) Sewer Pipe and Fittings.
11. ASTM D3139 - Standard Specification for Joints for Plastic Pressure Pipes using Flexible Elastomeric Seals
12. ASTM D3212 - Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
13. ASTM F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
14. ASTM F789 - Standard Specification of Type PS-46 Poly (Vinyl Chloride) (PVC) Plastic Gravity Flow Sewer Pipe and Fittings.

1.4 DEFINITIONS

- A. Bedding: Fill placed under, beside and directly over pipe, prior to subsequent backfill operations.

1.5 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit data indicating pipe material used, pipe accessories, and fittings.
- C. Manufacturer's Installation Instructions: Indicate special procedures required to install Products specified.
- D. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.6 CLOSEOUT SUBMITTALS

- A. Section 01 77 00 - CLOSEOUT PROCEDURES.
- B. Project Record Documents: Record location of pipe runs, connections, manholes, cleanouts, and invert in and invert out elevations.
- C. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

1.7 QUALITY ASSURANCE

- A. All PVC sewer pipe shall be from a single manufacturer. The supplier shall be responsible for the provision of all test requirements specified in ASTM D3034 or ASTM F789 as applicable. In addition, all PVC pipe to be installed under this Contract may be inspected at the plant for compliance with these Specifications by an independent testing laboratory provided by the

Owner. The Contractor shall require the manufacturer's cooperation in these inspections. The cost of plant inspection of all pipe approved for this Contractor, plus the cost of inspection of a reasonable amount of disapproved pipe, will be borne by the Owner.

- B. Inspections of the pipe may also be made by the Engineer or other representatives of the Owner after delivery. The pipe shall be subject to rejection at any time on account of failure to meet any of the Specification requirements, even though the sample pipes may have been accepted as satisfactory at the place of manufacture. Pipe rejected after delivery shall be marked for identification and shall be removed from the job at once.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. All items shall be bundled or packaged in such a manner as to provide adequate protection of the ends during transportation to the site. Any pipe damaged in shipment shall be replaced as directed by the Engineer.
- B. PVC items deteriorate in sunlight and are slightly brittle, especially at lower temperatures, so care shall be taken in loading, transporting, and unloading items to prevent damage to the items. All items shall be examined before installation and no piece shall be installed which is found to be defective. Handling and installation of pipe and fittings shall be in accordance with the manufacturer's instructions, references standards, and as specified herein.
- C. Any pipe or fitting showing a crack or which has received a blow that may have caused an incident fracture, even though no such fracture can be seen, shall be marked as rejected and removed at once from the work site.
- D. While stored, pipe shall be adequately supported from below at not more than 3-foot intervals to prevent deformation. The pipe shall not be stacked higher than 6 feet.
- E. Pipe and fittings shall be stored in a manner which will keep them at ambient outdoor temperatures and out of the sunlight. Temporary shading to meet this requirement shall be provided. Simple covering of the pipe and fittings which allows temperature buildup, or direct or indirect sunlight shall not be permitted.
- F. If any defective item is discovered after it has been installed, it shall be removed and replaced with an exact replacement item in a satisfactory manner by the Contractor, at the Contractor's own expense. All pipe and fittings shall be thoroughly cleaned before installation and the interior shall be kept clean until testing.
- G. In handling the items, use special devices and methods as to achieve the results specified herein. No un-cushioned devices shall be used in handling the item.

1.9 PRE-INSTALLATION MEETINGS

- A. Convene minimum one week prior to commencing work of this section.

1.10 FIELD MEASUREMENT

- A. Verify field measurements and elevations are as indicated.

1.11 COORDINATION

- A. Coordinate the Work with abandonment of existing septic tanks and associated piping, and abandonment of existing leaching fields.

PART 2 - PRODUCTS

2.1 SANITARY SEWAGE GRAVITY PIPE

- A. Plastic Pipe: ASTM D3034, Type PSM, SDR 35, Poly Vinyl Chloride (PVC) material; inside nominal diameter of 8 in., bell, and spigot style rubber ring sealed gasket joint.
 - 1. Fittings: PVC.
 - 2. Push On Joints: ASTM F477, elastomeric gaskets per ASTM D3212, securely locked into place to prevent displacement during assembly.
 - 3. All fittings and accessories for sewer shall have bell and/or spigot configurations compatible with the pipe.

2.3 UNDERGROUND PIPE MARKERS

- A. Manufacturers:
 - 1. Any manufacturers of such products shall be considered.
 - 2. Substitutions: Refer to Section 01 60 00 - PRODUCT REQUIREMENTS.
- B. Plastic Ribbon Tape: Bright colored, imprinted with "Sewer Line" in large letters, minimum 6 inches wide by 4 mil. thick, manufactured for direct burial service.

2.4 MANHOLES

- A. In accordance with Section 33 05 13 - MANHOLES AND STRUCTURES

2.5 BEDDING AND COVER MATERIALS

- A. Bedding and Cover: 3/4-inch crushed stone in accordance with Specification 31 20 00, and Section M.01.04 of the RIDOT Standard Specifications.
- B. Soil Backfill from Above Pipe: In pavement areas where controlled density fill is not specified, provide Ordinary Fill to the sub-base of the pavement, and then provide the required sub-base material for the pavement section. In grassed areas where controlled density fill is not specified, provide Ordinary Fill to a point 6 inches below finished grade, then Manufactured Topsoil to finished grade.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify trench cut is ready to receive work and excavations, dimensions, and elevations are as indicated on the Drawings.

3.2 PREPARATION

- A. Correct over excavation with coarse aggregate.
- B. Remove large stones or other hard matter which could damage pipe or impede consistent backfilling or compaction.

3.3 BEDDING

- A. Excavate pipe trench in accordance with Section 31 20 00 - EARTHWORK.
- B. Place bedding material at trench bottom, level materials in continuous layer not exceeding 6 inches.
- C. Maintain optimum moisture content of bedding material to attain required compaction density.

3.4 INSTALLATION OF PVC PIPE AND FITTINGS

- A. No single piece of pipe shall be laid unless it is straight. The centerline of the pipe shall not deviate from a straight line drawn between the centers of the opening at the ends of the pipe by more than 1/16 inch per foot of length. If a piece of pipe fails to meet this required check for straightness, it shall be rejected and removed from the site. Laying instructions of the pipe shall be explicitly followed.
- B. If any defective pipe is discovered after it has been installed, it shall be removed and replaced with a sound pipe in a satisfactory manner at no additional cost to the Owner. All pipe and fittings shall be thoroughly cleaned before installation, shall be kept clean until they are used in the work, and when laid shall conform to the lines and grades required. PVC pipe and fittings shall be installed in accordance with requirements of the manufacturer, ASTM D2321 or as otherwise provided herein.
- C. As soon as the excavation is complete to normal grade of the bottom of the trench, bedding shall be placed, compacted, and graded to provide firm, uniform, and continuous support for the pipe. Bell holes shall be excavated so that only the barrel of the pipe bears upon the bedding. The pipe shall be laid accurately to the lines and grades indicated on the Drawings. Blocking under the pipe shall not be permitted. Bedding shall be placed evenly on each side of the pipe to mid-diameter and hand tools shall be used to force the bedding under the haunches of the pipe and into the bell holes to give firm, continuous support for the pipe. The initial 3 feet of backfill above the bedding shall be placed in 1-foot layers and carefully compacted, where controlled density fill is not specified. Generally, the compaction shall be done evenly on each

side of the pipe and compaction equipment shall not be operated directly over the pipe until sufficient backfill has been placed to ensure that such compaction equipment will not have a damaging effect on the pipe. Equipment used in compacting the initial 3 feet of backfill shall be approved by the pipe manufacturer prior to use.

- D. All pipe shall be sound and clean before installation. When installation is not in progress, including lunchtime, the open ends of the pipe shall be closed by watertight plug or other approved means. Good alignment shall be preserved during installation. The deflection at joints shall not exceed that recommended by the manufacturer. Fittings, in addition to those shown on the plans, shall be provided, if required, in crossing utilities which may be encountered upon opening the trench.
- E. When cutting pipe is required, the cutting shall be done by machine, leaving a smooth cut at right angles to the axis of the pipe. Cut ends of the pipe to be used with a bell shall be beveled to the manufactured spigot end.
- F. The Engineer may examine each bell and spigot end to determine whether any preformed joint has been damaged prior to installation. Any pipe having defective joint surfaces shall be rejected, marked as such and immediately removed from the job site.
- G. Each length of the pipe shall have the assembly mark aligned with the pipe previously laid and held securely until enough backfill has been placed to hold the pipe in place. Joints shall not be 'pulled' or 'cramped.'
- H. Before any joint is made, the pipe shall be checked to assure that a close joint with the next adjoining pipe has been maintained and that the inverts are matched and conform to the required grade. The pipe shall not be driven down to grade by striking it.
- I. Precautions shall be taken to prevent flotation of the pipe in the trench.
- J. When moveable trench bracing such as trench boxes, moveable sheeting, shoring or plates are used to support the sides of the trench, care shall be taken in placing and moving the boxes or supporting bracing to prevent movement of the pipe bedding and the backfill. Trench boxes, moveable sheeting, shoring or plates shall not be allowed to extend below the top of the pipe. If trench boxes, moveable sheeting, shoring or plates have been installed below the top of the pipe, they shall be moved slowly taking care not to disturb pipe, bedding, or backfill. As trench boxes, moveable sheeting, shoring, or plates are moved, pipe bedding shall be placed to fill any voids created and the backfill shall be re-compacted to provide uniform side support for the pipe.

3.5 JOINTING PVC PIPE (PUSH ON TYPE)

- A. Joints shall be made in strict accordance with the manufacturer's instructions. Pipe shall be laid with bell ends looking ahead (upgradient of the spigot end). A rubber gasket shall be inserted in the groove of the belled end and the joint surfaces cleaned and lubricated. The plain edge of the pipe to be entered shall then be inserted in alignment with the bell of the pipe to which is it to be jointed and pushed home with a come-along or by other means. Check that the reference mark on the spigot is flush with the end of the bell.

3.6 JOINTING PVC SEWER PIPE AND FITTINGS

- A. PVC sewer pipe and fittings shall be jointed in accordance with the recommendations of the latest ASTM standards and detailed instructions of the manufacturer. The pipe manufacturer shall furnish information and supervise the installation of at least the first five joints.
- B. All manhole connections shall be as shown on the Drawings except that concrete and mortared connections shall be equipped with an integral o-ring or other sealant such that a positive watertight seal is established.

3.7 SERVICE CONNECTIONS

- A. Service connections shall be installed at a minimum slope of 2% at the locations and to the limits determined by the Engineer in the field. In each case the end shall be capped, backed with a #2 reinforcing rod welded to a 6-inch x 6-1/4-inch steel plate extending to 6 inches below the finished ground surface as shown on the Drawings.
- B. Service connections shall be 8 in. diameter PVC unless otherwise shown on the Drawings.
- C. Service connections shall be made at a point 10 feet outside the foundation of the building in accordance with the Uniform Plumbing Code. If the existing building surface is in structurally deficient condition or constructed of a material not approved by the plumbing inspector, the Contractor shall stop work immediately and contact the Engineer.

3.8 INSTALLATION - MANHOLES

- A. In accordance with Section 33 05 13 – MANHOLES AND STRUCTURES

3.9 FIELD QUALITY CONTROL

- A. Refer to Sections 01 40 00 - QUALITY REQUIREMENTS, 01 73 00 - EXECUTION REQUIREMENTS, and 01 77 00 - CLOSEOUT PROCEDURES.
- B. Perform test on site sanitary sewage system in accordance with municipal standards.
- C. Compaction Testing: In accordance with ASTM D1557.
- D. When tests indicate Work does not meet specified requirements, remove work, replace, and retest.

3.10 PROTECTION OF FINISHED WORK

- A. Protect pipe and aggregate cover from damage or displacement until backfilling operation is in progress.

3.11 TESTING (GRAVITY PIPELINES)

- A. Deflection testing of pipe shall be specified as follows:

1. Pipe deflection measured not less than 90 days after the backfill has been completed as specified shall not exceed 5%. Deflection shall be computed by multiplying the amount of deflection (nominal diameter less minimum diameter when measured) by 100 and dividing by the nominal diameter of the pipe.
2. Deflection shall be measured by a rigid mandrel (Go/No Go) device cylindrical in shape with a minimum of nine or ten evenly spaced arms or prongs. Drawings of the mandrel with complete dimensions shall be submitted to the Engineer for each diameter of pipe to be tested. The mandrel shall be hand pulled through all sewer lines.
3. Any section of sewer not passing the mandrel shall be uncovered at no additional cost to the Owner and the bedding and backfill replaced to prevent excessive deflection. Repaired pipe shall be retested at no additional cost to the Owner. Retested pipe shall not deflect more than 5%.

B. Low pressure air testing of pipe shall be specified as follows:

1. For making the low-pressure air tests, use equipment specifically designed and manufactured for the purpose of testing sewer pipelines using low-pressure air. The equipment shall be provided with an air regulator valve or air safety so set that the internal air pressure in the pipeline cannot exceed 8 psig.
2. The leakage test using low pressure air shall be made on each manhole-to-manhole section of pipelines after placement of the backfill.
3. Pneumatic plugs shall have a sealing length equal to or greater than the diameter of the pipe to be tested. Pneumatic plugs shall resist internal test pressures without requiring external bracing or blocking.
4. All air used shall pass through a single control panel.
5. Low-pressure air shall be introduced into the sealed line until the internal air pressure reaches 4 psig greater than the minimum pressure exerted by the groundwater that may be above the invert at the pipe at the time of the test. However, the internal air pressure in the sealed line shall not be allowed to exceed 8 psig. When the maximum pressure exerted by the groundwater is greater than 4 psig, conduct only an infiltration test, as specified below.
6. Testing shall be in accordance with the requirements of ASTM F1417-92. The following italicized text contains selected text from ASTM F1417 (Gravity Sewer Lines).
 - *The section of the line to be tested is plugged. Air, at low pressure, is introduced into the plugged line. The line passes the test if the rate of air loss, as measured by pressure drop, does not exceed a specified amount in a specified time.*
 - *Pressure drop may be determined by using Table 1 or calculated by use of the formulas below.*

TABLE 1: MINIMUM SPECIFIED TIME REQUIRED FOR A 0.5 PSIG PRESSURE DROP FOR SIZE AND LENGTH OF PIPE INDICATED FOR $Q = 0.0015$ (NOTE-CONSULT WITH PIPE AND APPURTENANCE MANUFACTURER FOR MAXIMUM TEST PRESSURE FOR PIPE SIZE GREATER THAN 30 IN. IN DIAMETER.)

Pipe Dia	Minimum Time, min:sec	Length for Min. Time, ft	Time for Longer Length, s	Specification Time for Length (L) Shown, min:s							
				100	150	200 ft	250 ft	300 ft	350 ft	400 ft	450 ft
4	1:53	597	0.190 L	1:53	1:53	1:53	1:53	1:53	1:53	1:53	1:53
6	2:50	398	0.427 L	2:50	2:50	2:50	2:50	2:50	2:50	2:51	3.12
8	3:47	298	0.760 L	3:47	3:47	3:47	3:47	3:48	4:26	5.04	5.42
10	4:43	239	1.187 L	4:43	4:43	4:43	4:57	5:56	6:55	7.54	8.54

12	5:40	199	1.709 L	5:40	5:40	5:42	7:08	8:33	9:58	11:24	12.50
15	7:05	159	2.671 L	7:05	7:05	8:54	11:08	13:21	15:35	17:48	20.02
18	8:30	133	3.846 L	8:30	9:37	12:49	16:01	19:14	22:26	25:38	28.51
21	9:55	114	5.235 L	9:55	13:0	17:27	21:49	28:11	30:32	34.54	39.16
24	11:20	99	6.837 L	11:2	17:5	22:48	28:30	34:11	39:53	45.35	51.17
27	12:45	88	8.653 L	14:2	21:3	28:51	36:04	43:18	50:30	57.42	64.54
30	14:10	80	10.683 L	17:4	26:4	35:37	44:31	53:25	62:19	71.13	80.07
33	15:35	72	12.926 L	21:3	32:1	43:56	53:52	64:38	75:24	86.10	96.57
36	17:00	66	15.384 L	25:3	38:2	51:17	64:06	76:55	89:44	102.3	115.2

- Calculate all test times by the following formula: $T = 0.085 DK/Q$, where: T = shortest time allowed for the air pressure to drop 1.0 psig, $K = 0.000419$ DL but not less than 1.0, Q = leak rate in cubic feet/minute/square feet of internal surface = 0.0015 CFM/SF, D = measured average inside diameter of sewer pipe (see Method D 2122 and Practice D 3567), in., and L = length of test section, ft.
- Table 1 contains the specified minimum times required for a 1.00 psig pressure drop from a starting pressure of 3.5 psig to a final pressure of 2.5 psig using a leakage rate of 0.0015 ft³/min/ft² of internal surface.

C. Infiltration testing of pipe shall only be carried out when the depth of groundwater is so great that low pressure air testing cannot be adequately performed; otherwise low-pressure air testing shall be performed as specified above. The procedure for infiltration testing of pipe is as follows:

1. For making the infiltration tests, underdrains, if used, shall be plugged and other groundwater drainage shall be stopped to permit groundwater to return to its normal level insofar as practicable.
2. Upon completion of a section of the sewer, dewater it and conduct a satisfactory test to measure the infiltration for at least 24 hours. The amount of infiltration, including manholes, tees, and connections, shall not exceed 200 gallons per inch diameter per mile of sewer per 24 hours.

END OF SECTION

APPENDIX A

CHPS SCORECARD

NE-CHPS v4.0 Verified

Updated December 2024

Project Summary & Status

CHPS Project Number:

Project Name:

Expected Construction Completion:

Project Type:

CHPS Certification Pursued:

Submission Type:

Required Point Threshold:

Total Points Verified:

All Prereqs Satisfied:

Project Status:

All electric design:

Zero Net Energy (ZNE):

ZNE Capable:

Major systems included in the CHPS scope (if renovation):

Building Envelope:

Interior Surfaces:

HVAC:

Lighting:

Site:

Please provide a brief project narrative highlighting any notable high performance features. If construction is phased, please explain the phasing and provide expected dates of completion. If there are multiple buildings in the project scope, please list them and indicate building type, size, number of classrooms, and student/staff occupancy.

The new high school will include a 427,000 square foot campus that would accommodate 2,100 students, which would combine the student populations from the city's two public high schools. To achieve LEA's High Performance Green Goals, the new high school will include the following High-Performance Schools policies:

Creation of an integrated design approach that ensures that the high-performance standards and the overall goals of Northeast-CHPS are met and that they are consistent with state policy. The LEA, School Board, Board of Trustees, or appropriate school leadership must pass a board level resolution that mandates compliance with NE-CHPS.

Implementation of the EPA's Tools for Schools program or an equivalent indoor environmental management program for the new or renovated school. Provide a resolution signed by the LEA requiring participation in Tools for Schools (or equivalent) for its schools.

Additional CHPS Reviewer Comments:

Project Scorecard

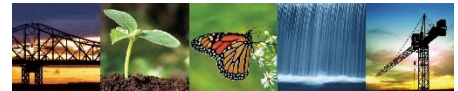
Credit	Prereq/ Subcredit	Title	Points Possible	Design Review Required	Construction Review Required	CHPS Worksheet Required	Points Targeted	Project Team Comments	Documentation Reference	Points Verified	Points Pending	Points Denied	CHPS Reviewer Comments
Integration & Innovation			Subtotal	26			25			0	0	0	
II P1.0	P	Integrated Design	4	*			4	<div>Below is an example of how team comments should be organized (please delete this when completing the scorecard): DR1: First pass team design review comment (if applicable). DR2: Second pass team design review comment (if applicable). CR1: First pass team construction review comment (if applicable). CR2: Second pass team construction review comment (if applicable).</div>	<div>Below is an example of how team documentation references should be organized (please delete this when completing the scorecard): DR1: First pass team design documentation reference (if applicable). DR2: Second pass team design documentation reference (if applicable). CR1: First pass team construction documentation reference (if applicable). CR2: Second pass team construction documentation reference (if applicable).</div>				<div>CHPS will respond to project team comments and documentation in this format: DR1: First pass CHPS design review comment (if applicable).Outstanding issues requiring further clarification will be in red for all review passes. DR2: Second pass CHPS design review comment (if applicable). CR1: First pass CHPS construction review comment (if applicable). CR2: Second pass CHPS construction review comment (if applicable).</div>
II 1.1		Enhanced Integrated Design	2	*	*		2 (DLR)						
II 2.1		District Level Commitment	1	*			1 (PSD)						
II 3.1		School Master Plan	1	*			1 (PSD)						
II 4.1		High Performance Transition Plan	1	*			1						
II 5.0	P	Educational Display	1	*	*		1 (DLR)						
II 5.1		Demonstration Area	1	*	*		1 (DLR)						
II 6.1		Educational Integration	2	*	*		2 (PSD)						
II 7.1		Design for Adaptation	3	*	-		2 (PSD)			0	0	0	
	II 7.1.1	Climate Vulnerability Assessment	1	*									
	II 7.1.2	Design for Climate Adaptation	1	*	*		1						
	II 7.1.3	Passive Habitability/Survivability	1	*	*		1						
II 8.0	P	Safer Schools By Design	3	*	*		3 (PSD)						
II 9.1		Innovation (CHPS Verified Projects only)	4	*	*		4 (DLR)						
II 10.1		Biophilic & Responsive Design	3	*			3 (DLR)			0	0	0	
	II 10.1.1	Biophilic Design	1	*			1						
	II 10.1.2	Responsive Design	1	*			1						
	II 10.1.3	Educational Materials	1	*			1						
Operations			Subtotal	24			14			0	0	0	
OM 1.0	P	Facility Staff and Occupant Training	4	*	*		4 (PSD)						
OM 2.1		Post-Occupancy Transition	2	*	*								
OM 3.0	P	Performance Benchmarking	3	*			3 (PSD)						
OM 4.0	P	Systems Maintenance Plan	1	*			1 (PSD)						
OM 4.1		High Performance Operations	3		*					0	0	0	
	OM 4.1.1	Monitoring & Benchmarking	1	*	*								
	OM 4.1.2	Designate Resource Manager	1	*									
	OM 4.1.3	Designate Advocate	1	*									
OM 5.0	P	Indoor Environmental Management Plan	2		*		2 (DLR)						
OM 6.1		Green Cleaning	2	*	*								
OM 7.0	P	Integrated Pest Management	1	*	*		1 (PSD)						
OM 8.0	P	Anti-Idling Measures	1	*	*		1 (PSD)						
OM 9.1		Green Power	2	*									
OM 10.0	P	ENERGY STAR Equipment and Appliances	2	*			2 (DLR)						
OM 11.1		Computerized Maintenance Management System	1	*	*								
Indoor Environmental Quality			Subtotal	70			65			0	0	0	
EQ 1.0	P	HVAC Design – ASHRAE 62.1	8	*	*		8 (G&V)						
EQ 1.1		Enhanced Filtration	2	*	*		2						
EQ 1.2		Dedicated Outdoor Air System	3	*	*		3						
EQ 2.0	P	Pollutant and Chemical Source Control	2	*	*		2 (DLR)						
EQ 3.0	P	Outdoor Moisture Management	1	*	*		1 (DLR)						
EQ 4.1		Ducted Returns	2	*	*		2						
EQ 5.1		Construction Indoor Air Quality Management	5	*	*		5			0	0	0	
	EQ 5.1.1	Occupied Buildings Under Construction	1	*	*		1						
	EQ 5.1.2	Duct Cleanliness	2	*	*		2						
	EQ 5.1.3	Building Flush Out	2	*	*		2						
EQ 5.2		Construction Moisture Management	1	*	*		1 (Shawmut)						
EQ 6.1		Post Construction Indoor Air Quality	1	*	*		1 (Shawmut)						
EQ 7.0	P	Low Emitting Materials	2	*	*	*	2 (Shawmut)						
EQ 7.1		Additional Low Emitting Materials	5	*	*	*	5 (Shawmut)			0	0	0	
	EQ 7.1.1	Adhesives & Sealants	1	*	*	*	1 (Shawmut)						
	EQ 7.1.2	Flooring Systems	1	*	*	*	1 (Shawmut)						
	EQ 7.1.3	Composite Wood and Agrifiber Products	1	*	*	*	1 (Shawmut)						
	EQ 7.1.4	Furniture & Furnishings	1	*	*	*							
	EQ 7.1.5	Paints & Coatings	1	*	*	*	1 (Shawmut)						
	EQ 7.1.6	Ceiling & Wall Systems	1	*	*	*	1 (Shawmut)						
EQ 8.1		Low Radon	1	*			1						
EQ 9.1		Thermal Comfort - ASHRAE 55	4	*			4 (G&V)						
EQ 10.1		Individual Controllability	1	*	*		1						
EQ 10.2		Controllability of Systems	1	*	*		1						
EQ 11.0	P	Daylighting: Glare Protection	4	*	*		4 (DLR)						
EQ 11.1		Daylight Availability	5	*	*	*	5 (DLR)			0	0	0	
	EQ 11.1.1	Classrooms	3	*	*	*	3 (DLR)						
	EQ 11.1.2	Support Spaces	2	*	*	*	2 (DLR)						
EQ 12.0	P	Views	1	*	*	*	1 (DLR)						
EQ 12.1		Additional Views	2	*	*	*	2 (DLR)						
EQ 13.1		Electric Lighting Performance	3	*	*		3 (G&V)			0	0	0	
	EQ 13.1.1	Fidelity and Gamut Area	2	*	*		2						
	EQ 13.1.2	RoHS		*	*								
	EQ 13.1.3	LED Performance	1	*	*		1 (G&V)						
EQ 13.2		Superior Electric Lighting Performance	5	*	*					0	0	0	
	EQ 13.2.1	Multi-scene Indirect/Direct Lighting Systems		*	*								
	EQ 13.2.2	General and Audio Visual Modes	2	*	*								
	EQ 13.2.3	A/V Mode Illumination		*	*								
	EQ 13.2.4	Whiteboard Illumination		*	*								
	EQ 13.2.6	Enhanced Teacher Controls	1	*	*								
	EQ 13.2.7	Advanced Classroom Controls		*	*								
	EQ 13.2.8	High Performance Lighting Systems	2	*	*								
EQ 14.0	P	Acoustical Performance	7	*	*		7						
EQ 15.1		Low-EMF Wiring	1	*	*		1						
EQ 15.2		Low-EMF Best Practices	2	*	*		2			0	0	0	
	EQ 15.2.1	Low EMF Best Practices for Computers	1	*	*		1						
	EQ 15.2.2	Wired local area network (LAN) to reduce RF EMF	1	*	*		1						
	EQ 15.2.3	Wired Phones to reduce RF EMF in classroom		*	*								
EQ 16.1		High Intensity Fluorescent Fixtures	1	*	*		1						
Energy			Subtotal	68			50			0	0	0	
EE 1.0	P	Energy Performance	6	*			6 (G&V)						
EE 1.1		Superior Energy Performance	40	*			30 (G&V)						
EE 2.1		Zero Net Energy Capable	3	*									
EE 3.0	P	Commissioning	4	*	*		4						
EE 3.1		Additional Commissioning Qualifications	1	*	*		1						
EE 3.2		Building Envelope Commissioning	1	*	*		1						
EE 3.3		Enhanced Commissioning	1	*	*								
EE 4.0	P	Environmentally Preferable Refrigerants	1	*			1 (G&V)						
EE 5.1		Energy Management System	2	*			2						
EE 5.2		Advanced Energy Management System and Submetering	2	*			2						
EE 6.1		Natural Ventilation & Energy Conservation Interlocks	2	*	*								
EE 7.0	P	Local Energy Efficiency Incentives and Assistance	2	*	*		2 (PSD)						
EE 8.1		Variable Air Volume Systems	1	*			1						
EE 9.1		Renewable Energy Performance Monitoring	1	*	*								
EE 10.1		Electric Vehicle Charging	1	*	*								
Water			Subtotal	21			16			0	0	0	
WE 1.0	P	Minimum Reduction in Indoor Potable Water Use	5	*	*		5 (AKAL)						
WE 2.1		Reduce Potable Water Use for Sewage Conveyance	4	*	*	*	2 (AKAL)						
WE 3.0	P	Irrigation and Exterior Water Budget- Use Reduction	4	*	*		4 (Halvorson)						
WE 4.1		Reduce Potable Water Use for Non-Recreational Landscaping	2	*	*		1 (Halvorson)						
WE 5.1		Reduce Potable Water Use for Recreational Landscaping	1	*	*		1 (Halvorson)						
WE 6.0	P	Irrigation Systems Commissioning	1	*	*		1 (Halvorson)						
WE 7.1		Rainwater Collection and Storage	2	*			2 (Halvorson)						
WE 8.1		Water Management System	2	*	*								
Site			Subtotal	22			17			0	0	0	
SS 1.0	P	Site Selection	2	*			2 (DLR)						
SS 2.1		Environmentally Sensitive Land	3	*			1 (DLR)						

SS 3.1		Minimize Site Disturbance	1	*		*	1	(DLR)					
SS 4.1		Construction Site Runoff Control and Sedimentation	1	*	*		1						
SS 5.1		Post Construction Stormwater Management	1	*	*		1						
SS 6.1		Central Location	2	*		*	2	(DLR)					
SS 7.1		Located Near Public Transportation	1	*			1	(DLR)					
SS 8.1		Joint-Use of Facilities	1	*			1						
SS 9.1		Human-Powered Transportation	2					(DLR)					
	SS 9.1.1	Safe Access to School	1	*	*	*			0	0	0		
	SS 9.1.2	Safe Bike Lanes		*									
	SS 9.1.3	Safe Routes to School	1		*								
SS 10.1		Reduce Heat Islands - Landscaping and Sites	1	*			1	(DLR)					
SS 11.1		Reduce Heat Islands - Cool Roofs and Green Roofs/Walls	1	*	*		1	(DLR)					
SS 12.1		Avoid Light Pollution and Unnecessary Lighting	2	*	*		2	(G&V)	0	0	0		
	SS 12.1.1	Outdoor Lighting Controls	1	*	*		1	(G&V)					
	SS 12.1.2	Outdoor Lighting Fixtures	1	*	*		1	(G&V)					
SS 13.1		School Gardens	1	*	*			(Halvorson)					
SS 14.1		Use Locally Native Plants for Landscape	1	*			1	(Halvorson)					
SS 15.0	P	Site and Building Best Practices	2	*			2	(DLR)					
Materials & Waste Management Subtotal			19				11		0	0	0		
MW 1.0	P	Storage and Collection of Recyclables	2	*	*		2	(DLR)					
MW 2.0	P	Minimum Construction Site Waste Management	2	*	*	*	2	(Shawmut)					
MW 2.1		Construction Site Waste Management	2	*	*	*	2	(Shawmut)					
MW 3.1		Single Attribute - Recycled Content	2	*	*	*	2	(Shawmut)					
MW 4.1		Single Attribute - Rapidly Renewable Materials	1	*	*		1	(Shawmut)					
MW 5.1		Single Attribute - Certified Wood	1	*	*	*	1	(Shawmut)					
MW 6.1		Single Attribute - Materials Reuse	1	*	*	*							
MW 7.1		Multi-Attribute Materials Selection	2	*	*								
MW 8.1		Building Reuse - Exterior	2	*	*	*							
MW 9.1		Building Reuse - Interior	1	*	*								
MW 10.1		Health Product Related Information Reporting	1	*	*	*	1	(Shawmut)					
MW 11.1		Locally Produced Materials	2	*	*	*							
Total			250				198		0	0	0		

12/12/2024
IN PROGRESS

APPENDIX B

GROUND IMPROVEMENT WORK PLAN



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ENVIRONMENTAL

ECOLOGICAL

WATER

CONSTRUCTION
MANAGEMENT

188 Valley Street

Suite 300

Providence, RI 02909

T: 401.421.4140

F: 401.751.8613

www.gza.com

January 10, 2025
File No. 03.0035453.00

Mr. Philip Gray
Jonathan Levi Architects
266 Beacon Street
Boston, MA 02116

Re: Ground Improvement Work Plan
Unified Pawtucket High School
1 Columbus Avenue
Pawtucket, Rhode Island 02860

Dear Mr. Gray:

GZA GeoEnvironmental, Inc. (GZA) has been contracted by Jonathan Levi Architects (JLA) to provide geotechnical design services for the proposed Unified Pawtucket High School at 1 Columbus Avenue in Pawtucket, Rhode Island. The new school site is at the location of the still existing, but former, Pawtucket Red Sox baseball stadium. This work plan outlines GZA's recommended approach to improving the site prior to the construction of the school and is subject to the Limitations in **Appendix A**.

BACKGROUND

The Pawtucket School Department will build a new Unified High School at the former McCoy Stadium site (refer to Figure 1, **Locus Plan** for the approximate location of the site). The project team is currently in the design phase. The existing stadium will be demolished in early 2025 in preparation for start of construction in the spring. The proposed 3- to 4-story school will be approximately 405,000 GSF.

The stadium site was developed sometime between 1900 and 1940 by filling the former Hammond Pond. Several rounds of subsurface explorations and associated geotechnical and environmental testing have been performed by both GZA and others. GZA's recent subsurface explorations are presented in our January 2025 Geotechnical Report. Subsurface information obtained by GZA and others is referenced herein and in our Geotechnical Report. Current and previous exploration locations are shown on Figure 2, **Exploration Location Plan** and logs of the previous explorations are included in **Appendix B**, except for logs of MW-18 and MW-17, which are not available at this time. Logs of the recent test borings and recent test pits are included in **Appendices C and D**, respectively. Photos of the test pits are included in **Appendix E**. GZA's recent explorations were relied on as the primary source of information to develop this work plan, with additional groundwater information provided by Fuss & O'Neill.

SUBSURFACE CONDITIONS

Based on GZA's recent explorations completed in October and November of 2024, the generalized subsurface profile at the site consists of either asphalt, concrete, or topsoil, underlain by urban fill, organic material (peat), and naturally deposited soil. The urban fill consisted of sand with varying amounts of gravel and silt, and also contained varying amounts of miscellaneous debris such as ash, metal, wood, brick, boulders, concrete, etc.



Generally, the fill was underlain by fine-grained peat and/or fibrous peat. This material was encountered at all exploration locations except test borings GZ-2, GZ-7, GZ-9, GZ-12, and GZ-17 and test pits TP-3, TP-13, and TP-15. Where encountered, the peat was underlain by naturally deposited soils consisting of inorganic silt or sand with varying amounts gravel and silt.

The peat layer was approximately 0.5 feet to 4.2 feet thick and extended to depths ranging from 4.6 to 12 feet below existing ground surface. The bottom of peat was encountered between approximate elevations 60.4 and 53 feet. It should be noted that test pit TP-06 was terminated in the peat layer due to the sidewalls of the excavation collapsing at a depth of 11 feet below ground surface corresponding to an approximate elevation of 54.9 feet.

RMA submitted two samples of organic material encountered at the site to Thielsch Engineering Inc. of Cranston, Rhode Island for determination of organic content and as received moisture content in general accordance with ASTM D2974 and ASTM D2216. The results of the analysis are summarized below.

Boring	Sample	Depth (ft)	Stratum	Organic Content (%)	Water Content (%)
RMA22-1	S-4	8-10	PEAT	83.7	518.5
RMA22-5	S-2	5-7	PEAT	59.8	290.0

Measurements of groundwater depth were made in the boreholes at the time of drilling, at the test pits at the time of excavating, and in the observation well installed at boring GZ-04 (OW) on the dates indicated. The observation well readings are more representative of the stabilized groundwater levels at the site.

During F&O's Phase II Environmental Site Assessment, monitoring wells were installed to depths between 15 and 16 feet below ground surface. Stabilized groundwater readings were observed on January 27 and January 28, 2022 by F&O personnel. Groundwater elevations near the proposed building footprint ranged from approximate elevations 56 to 59.5 feet. The following table summarizes groundwater measurements located on the property.

EXPLORATION NAME	DATE OBSERVED	APPROXIMATE GROUND SURFACE ELEVATION (ft.)	STABILIZED GROUNDWATER DEPTH (ft.)	APPROXIMATE GROUNDWATER ELEVATION (ft.)
GZ-4 (OW)	1/10/2024	65.25	6.45	58.50
MW-2	1/28/2022	64.0	7.61	56.39
MW-5	1/28/2022	65.5	4.43	61.07
MW-6	1/28/2022	66	6.10	59.90
MW-7	1/27/2022	65.5	5.92	59.58
MW-8	1/27/2022	66.0	7.25	58.75
MW-9	1/28/2022	66.0	7.52	58.48
MW-10	1/27/2022	65.0	7.80	57.20
MW-11	1/27/2022	65.5	7.07	58.43
MW-12	1/28/2022	66.5	10.7	55.80
MW-13	1/28/2022	65.0	7.48	57.52
MW-15	1/27/2022	65.0	5.77	59.23
MW-17	1/28/2022	66.0	7.32	58.68



GROUND IMPROVEMENT WORK PLAN

Peat is a low-strength and highly compressible organic soil that is not suitable for the support of building foundations and slabs. The existing urban fill is also not considered suitable for the support of building foundations and slabs in its current condition due to the undocumented placement history and variable in-situ density. GZA recommended excavation and replacement of the urban fill and peat within the Building Area, defined as the zone starting two feet from the edge of the exterior foundation and sloping down to naturally deposited sand on a 1H:1V slope. The objective of this ground improvement plan is to establish requirements for the excavation, replacement, and management of excavated urban fill and peat from within the Building Area. This plan has been developed using recent subsurface information obtained by GZA, previous subsurface information obtained by others, and current design information. The work will generally consist of the following:

- Site enabling work to prepare the site for excavation and replacement operations;
- Excavation of the urban fill and peat in-the-dry and in-the-wet;
- Localized dewatering (if necessary)
- Replacement of the urban fill and peat with structural fill consisting of “Crushed Stone” enveloped in filter fabric in-the-wet, or replacement of the peat with “Granular Fill” in-the-dry;
- Placement and compaction of the “Crushed Stone” or “Granular Fill” up to elevation 65 feet; and
- Management and disposal of the excavated peat and solid waste culled from the urban fill.

It should be noted that excavation and replacement operations will extend below the water table in portions of the building footprint. GZA anticipates that working below the water table will be possible with conventional earthwork operations and that large-scale dewatering will not be required. Should the required excavation depth below groundwater preclude conventional earthwork methods for the placement and compaction of “Crushed Stone” enveloped in filter fabric, localized dewatering by sumping could be attempted, or an alternate means of compaction, such as Vibratory Probe Compaction (VPC), could be implemented. The following sections discuss this process in further detail. GZA will provide a full-time Geotechnical Field Engineer for quality control purposes during the work to document the execution of the ground improvement program.

Site Preparation

The existing stadium will be demolished in early 2025. Any remnants of the stadium, including topsoil, sidewalks, slabs, asphalt, etc. should be removed from the proposed working area, exposing the urban fill layer. Existing utilities to be demolished or relocated should also be addressed prior to the start of large-scale excavation and replacement operations.

Excavation and Replacement of the Peat

Removal and replacement of the peat and other unsuitable soils will be completed by systematically excavating and simultaneously placing structural fill in-the-dry or in-the-wet (below groundwater). The operation will be tracked by both horizontal and vertical survey in an attempt to provide uniform coverage and avoid excavating the same areas twice. The excavation and replacement work will be continuous and will not break or “skip around” to other work areas to prevent missing areas underlain by peat. Excavation and removal of peat will be continued to a depth until natural sand/silt is observed in the excavation spoils.

Figure 3, **Peat Volume Estimate** shows the estimated bottom of peat elevation, relative thickness of the peat layer, and quantity of peat to be removed. Figure 4, **Limit of Excavation** shows approximate limits of the peat removal area, along with the current proposed building footprint.



Excavation and Replacement In-the-Dry

In areas where the peat can be excavated and replaced in-the-dry, the peat should be removed down to an undisturbed subgrade consisting of naturally deposited sand, sand and gravel, or silt. The exposed subgrade should be surface compacted with a minimum of six passes of a vibratory roller having a drum weight of at least 10,000 pounds and a dynamic force of at least 20,000 pounds. Care must be taken if the soils are wet so as not to cause weaving and softening of the subgrade. If subgrade soils are saturated, static rolling may be more appropriate. If the subgrade becomes disturbed and cannot be dried and re-compacted, the subgrade should be over-excavated by 6 to 12 inches and replaced by "Sand-Gravel Fill" or "3/4-Inch Crushed Stone" enveloped in a layer of filter fabric (Mirafi 140N or equivalent), as described below.

The excavation will then be backfilled with structural fill consisting of "Granular Fill", "Sand-Gravel Fill", or "Crushed Stone" enveloped in filter fabric. The excavated urban fill material can also be reused as structural fill, provided it is culled of oversized debris and can be properly placed and compacted. Structural fill should be placed up to elevation 65 feet across the site. The in-the-dry fill shall be placed in horizontal lifts with a maximum loose thickness of 12 inches, and each lift shall be compacted with vibratory compaction equipment to 95% of the maximum dry density as determined by the modified Proctor test (ASTM D1557).

Excavation and Replacement In-the-Wet

Similar to above, the peat should be removed down to an undisturbed subgrade consisting of naturally deposited sand, sand and gravel, or silt. However, in some areas of the site, removal of the peat will require excavation below groundwater. It is anticipated that the work can be completed by excavating below the groundwater table without the need for large-scale dewatering. However, localized dewatering using sump pumps is anticipated to partially lower the groundwater elevation while working in-the-wet. Removal of the peat should be confirmed by observation of the excavation spoils to confirm that natural sands or silts have been encountered and peat is no longer being removed from the excavation.

Once the peat is removed, "Crushed Stone" enveloped in filter fabric, such as Mirafi 180N, should be placed in-the-wet by pushing the "Crushed Stone" down into the excavation along the trailing side slope as the excavation continues forward. This may generate a "mud wave" which will continually push loose peat and muck on the bottom of the excavation forward with the intent of preventing the unsuitable soils from being trapped beneath the recently placed "Crushed Stone". "Crushed Stone" will not be allowed to fall freely through the water column. "Crushed Stone" should be placed to 1-foot above the water table and then heavily surface compacted with a vibratory roller having a drum weight of at least 10,000 pounds and a dynamic force of at least 20,000 pounds until a non-yielding surface is observed. Additional stone may be required to maintain grade at least 1-foot above the water table. Upon completion of the placement and compaction of "Crushed Stone" in-the-wet, filter fabric should be placed over the crushed stone and the in-the-dry placement and compaction methods described above should be followed for the remaining portion of the backfilling.

Vibratory Probe Compaction (VPC) (Optional)

Should excavation and replacement of the peat below groundwater preclude conventional earthwork methods for compaction of structural fill below water as described above, a potential alternate means of compaction involves deep densification with Vibratory Probe Compaction (VPC). It is not anticipated that VPC will be required, and the following sections are provided for information only. Other similar deep densification methods could also be used. If an alternate means of deep densification is required, the program will need to be designed by a Professional Engineer registered in Rhode Island that is familiar with this type of work.

If "Crushed Stone" cannot be compacted below water due to excessive excavation depths below water, the "Crushed Stone" should be replaced with "Granular Fill" and no filter fabric should be used. The "Granular Fill" should be placed in-the-wet up to



elevation 65 feet. This will result in loosely placed granular material above and below the water table. The fill material could then be densified and homogenized with VPC after the excavation of the peat.

VPC consists of the repeated installation and extraction of a "spud" (typically a 30-inch diameter steel pipe pile using a crane mounted hydraulic vibratory hammer. As the spud travels through the soil, it transmits the energy of the hammer to the surrounding soils, thus densifying the surrounding granular soils. VPC production points are established over a site in a square grid, typically 6-feet x 6-feet, and the number of drops (1 drop is a single drive and extract of the spud) per grid point typically ranges between 2 and 6. Generally, a single pass of VPC points across a site is adequate.

A testing program will be required for any deep densification method. The test program would be executed at the start of the deep densification program to determine the most efficient grid spacing and number of drops per compaction grid point.

Management and Disposal of Excess Excavated Materials

The site soils are environmentally impacted and will be regulated under the Rhode Island Department of Environmental Management's (RIDEM's) Office of Land Revitalization and Sustainable Materials Management. The sitework will also be performed under and Remedial Action Work Plan (RAWP) and Soil Management Plan (SMP) to be prepared by Fuss & O'Neill. Although these documents are not available at this time, general requirements for soil management include:

- Soil stockpiles will be placed on polyethylene sheeting and covered with polyethylene sheeting each day;
- No soil can be removed from the site unless transported to a licensed disposal facility; and
- The entire site will be capped with a 2-foot equivalent clean soil barrier upon completion of the work.

Excavated peat material must be stockpiled on site and allowed to drain/dewater prior to disposal off-site. Once ready for transportation, the excavated peat will be disposed of at a licensed receiving facility (landfill). The estimated volume of peat to be disposed by the Contractor is 12,000 cubic yards. The Contractor will be responsible for securing all necessary approvals and associated testing required for disposal of the peat. Limited environmental characterization of the peat was completed during the recent subsurface explorations and results are included in **Appendix F**. It is anticipated that additional sampling and testing of excavated peat will be required and that the sampling frequency and testing requirements will be specified by the selected receiving facility. The Contractor will be responsible to track and document the disposal of on-site soils. It is anticipated that excavated urban fill will remain on-site and will be reused as structural fill as described herein.

Solid waste culled from the on-site soils, including oversized debris such as metal, concrete, wood, etc. will be culled from the on-site soils prior to reuse. All loose soil should be segregated from solid waste. Solid waste shall be disposed of in accordance with all State, local, and federal regulations. The Contractor shall also be responsible for tracking and documenting disposal of solid waste culled from on-site soil.



CLOSURE


GZA appreciates the opportunity to have been of service to you and we look forward to working with you as the project progresses. Please contact Jim Marsland at (401) 255-1845 or james.marsland@gza.com if there are any questions.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.


Andrew J. Pariseault
Geotechnical Engineer


James J. Marsland, P.E.
Consultant Reviewer

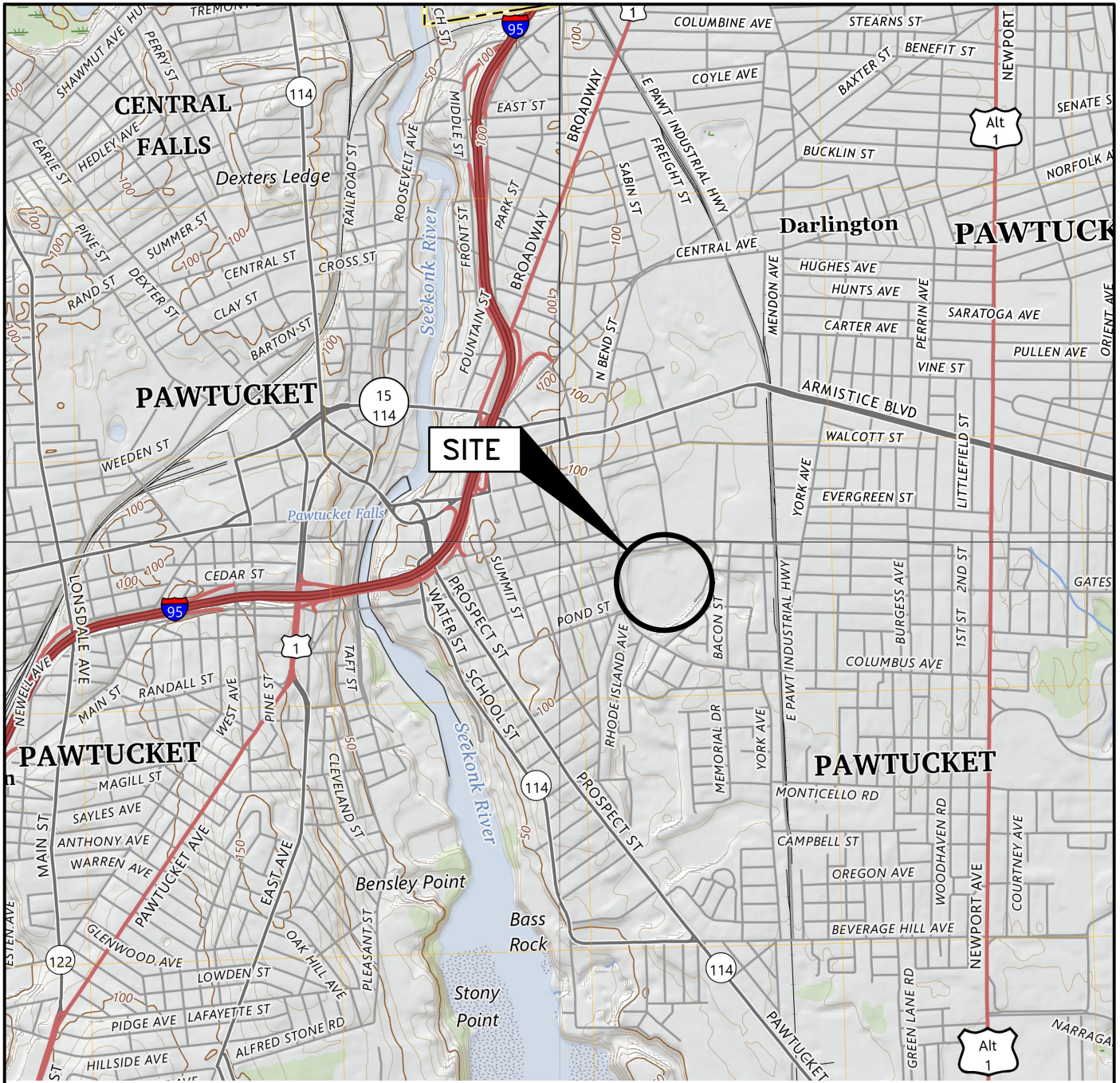

David R. Carchedi, Ph.D., P.E.
Principal-in-Charge

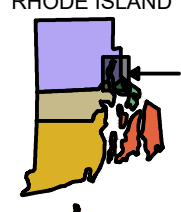

Attachments: Figure 1: Locus Plan
 Figure 2: Exploration Location Plan
 Figure 3: Peat Thickness Plan
 Figure 4: Excavation and Replacement Plan
 Appendix A: Limitations
 Appendix B: Previous Exploration Logs
 Appendix C: Recent Boring Logs
 Appendix D: Recent Test Pit Logs
 Appendix E: Test Pit Photo Log
 Appendix F: Environmental Laboratory Test Results

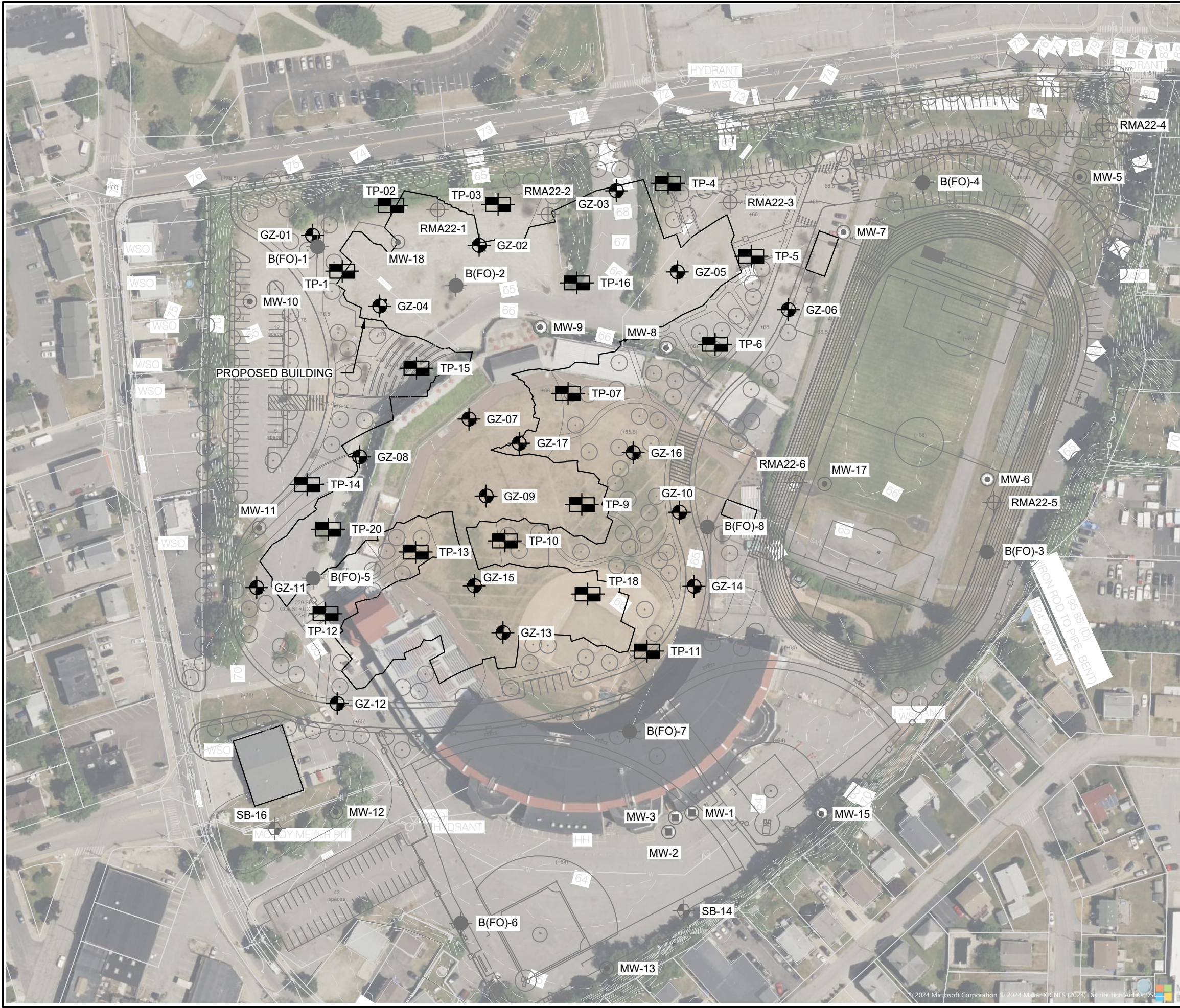


FIGURES

© 2022 - GZA GeoEnvironmental, Inc.
GZA-J:\GEO\35453.JJM\FIGURES\CAD\DWGS\35453.00_RO_PWT_HS_LOCUS_01-03-2025.DWG 8.5X11-QUAD January 10, 2025 VANESSA MALLOY



 <p>QUADRANGLE LOCATION</p>	<p>SOURCE: <u>BASE MAP FROM THE FOLLOWING USGS QUADRANGLE MAP:</u> <u>PROVIDENCE, RI (2024)</u></p> <p>DIGITAL TOPOGRAPHIC MAPS PROVIDED BY USGSSTORE.GOV.</p> <p>CONTOUR ELEVATIONS REFERENCE NAVD 88, CONTOURS ARE SHOWN IN FEET AT 10' INTERVALS</p> <p>UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.</p>	
<p>PAWTUCKET UNIFIED HIGH SCHOOL 1 COLUMBUS AVE, PAWTUCKET RI</p> <p>LOCUS</p>	<p>PREPARED BY:  GZA GeoEnvironmental, Inc. www.gza.com</p> <p>PROJ MGR: JJM DESIGNED BY: AJP DATE: JANUARY 2025</p> <p>REVIEWED BY: JJM DRAWN BY: VJM PROJECT NO. 35453.00</p>	<p>PREPARED FOR: JONATHAN LEVI ARCHITECTS 266 BEACON ST, BOSTON MA</p> <p>CHECKED BY: DRC SCALE: AS NOTED REVISION NO. 0</p> <p>FIGURE 1</p>

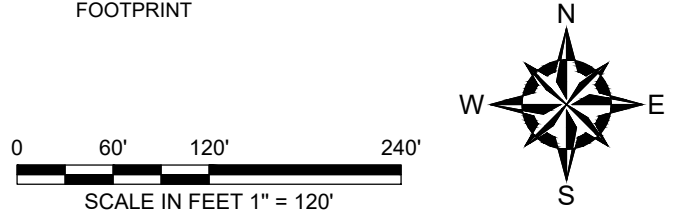


GENERAL NOTES:

1. BASE MAP DEVELOPED FROM THE AUTOCAD DRAWING FILE TITLED "SURVEY W CURRENT BUILDING FOOTPRINT.DWG" PREPARED BY JONATHAN LEVI ARCHITECT AND TRANSMITTED TO GZA ON 10-08-2024.
2. PROPOSED CONDITIONS DEVELOPED FROM THE AUTOCAD DRAWING FILE TITLED "HALV. BASE - PAWTUCKET HS.DWG" PREPARED BY HALVORSON AND TRANSMITTED TO GZA ON 01-07-2025.
3. THE LOCATION OF THE RECENT EXPLORATIONS WERE APPROXIMATELY DETERMINED BY LINE OF SITE AND/OR TAPE MEASUREMENTS FROM EXISTING TOPOGRAPHIC FEATURES AND GPS. THESE LOCATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

LEGEND:

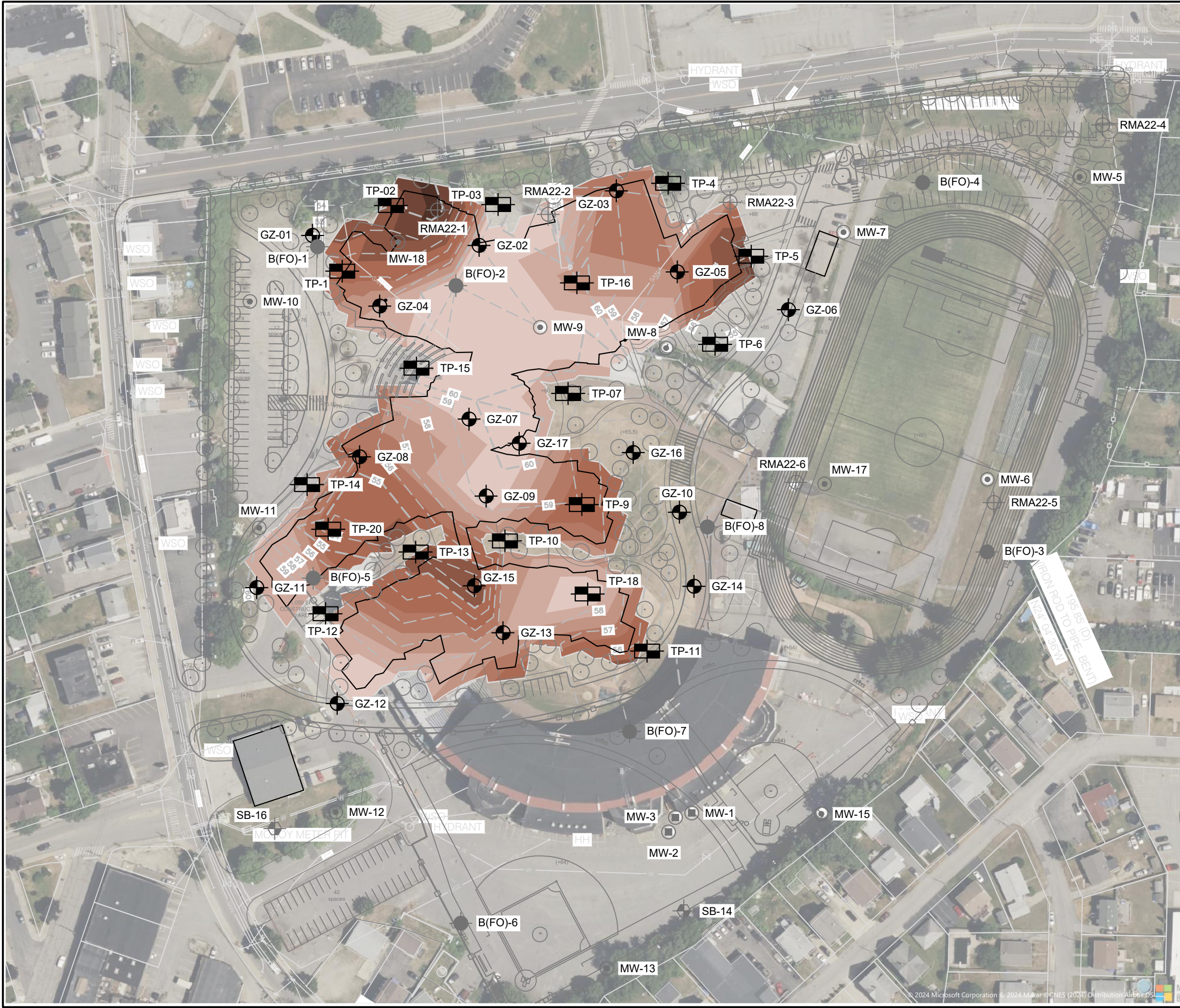
- INDICATES TEST BORINGS PERFORMED BY "NEW ENGLAND BORING CONTRACTORS" FROM NOVEMBER 4 TO NOVEMBER 8, 2024. OBSERVED BY GZA PERSONNEL.
- INDICATES TEST PIT PERFORMED BY "CATALANO CONSTRUCTION" FROM OCTOBER 31 TO NOVEMBER 1, 2024. OBSERVED BY GZA PERSONNEL.
- INDICATES APPROXIMATE BORING LOCATION PERFORMED BY "SUBSURFACE SOLUTIONS" FROM JANUARY 20 TO JANUARY 25, 2022. OBSERVED BY RMA ENVIRONMENTAL PERSONNEL.
- INDICATES APPROXIMATE BORING LOCATION PERFORMED BY "NEW ENGLAND BORING CONTRACTORS" FROM JULY 20 TO JULY 23, 2020. OBSERVED BY FUSS & O'NEILL PERSONNEL.
- INDICATES APPROXIMATE MONITORING WELL LOCATION PERFORMED BY "GEOLOGIC" FROM JANUARY 3 TO JANUARY 4, 2022. OBSERVED BY FUSS & O'NEILL PERSONNEL.
- INDICATES APPROXIMATE SOIL BORING LOCATION PERFORMED BY "GEOLOGIC" ON JANUARY 4, 2022. OBSERVED BY FUSS & O'NEILL PERSONNEL.
- INDICATES APPROXIMATE MONITORING WELL LOCATION DRILLED ON APRIL 20, 2000. OBSERVED BY SAGE ENVIRONMENTAL PERSONNEL.
- INDICATES APPROXIMATE MONITORING WELL LOCATION. OBSERVED BY RMA PERSONNEL.
- INDICATES PROPOSED BUILDING FOOTPRINT



NO.	ISSUE/DESCRIPTION	BY	DATE

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PAWTUCKET UNIFIED HIGH SCHOOL 1 COLUMBUS AVENUE PAWTUCKET, RHODE ISLAND			
EXPLORATION LOCATION PLAN			
PREPARED BY: GZA GeoEnvironmental, Inc. www.gza.com		PREPARED FOR: JONATHAN LEVI ARCHITECTS 266 BEACON ST, BOSTON MA	
PROJ MGR: JJM	REVIEWED BY: JJM	CHECKED BY: DRC	FIGURE 1
DESIGNED BY: AJP	DRAWN BY: VJM	SCALE: 1" = 120'	
DATE: JANUARY, 2025	PROJECT NO. 35453.00	REVISION NO.	



GENERAL NOTES:

1. BASE MAP DEVELOPED FROM THE AUTOCAD DRAWING FILE TITLED "SURVEY W CURRENT BUILDING FOOTPRINT.DWG" PREPARED BY JONATHAN LEVI ARCHITECT AND TRANSMITTED TO GZA ON 10-08-2024.
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4. THE CONTOURS SHOWN REPRESENT THE APPROXIMATE BOTTOM OF PEAT ELEVATION THAT HAS BEEN ESTIMATED BY INTERPOLATING BETWEEN SUBSURFACE EXPLORATION LOCATIONS. THE SURFACE BANDING INDICATES THE THICKNESS OF THE PEAT LAYER AS DETERMINED BY INTERPOLATING BETWEEN SUBSURFACE EXPLORATION LOCATIONS. THE ACTUAL TOP AND BOTTOM ELEVATION OF THE PEAT LAYER MAY VARY BETWEEN EXPLORATION LOCATIONS.

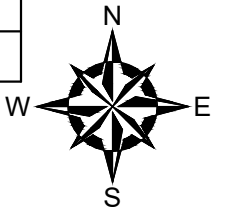
LEGEND:

- INDICATES APPROXIMATE 15FT LIMIT OF OVEREXCAVATION AND REPLACEMENT
- INDICATES PROPOSED BUILDING FOOTPRINT
- 60- INDICATES MAJOR CONTOUR OF BOTTOM OF PEAT
- 59- INDICATES MINOR CONTOUR OF BOTTOM OF PEAT

PEAT THICKNESS TABLE

THICKNESS	AREA	COLOR
0.50	51562.18	
1.00	42568.92	
1.50	37831.42	
2.00	32320.66	
3.00	36620.66	
4.00	13515.22	
5.00	3876.69	
6.00	903.00	

0 60' 120' 240'
SCALE IN FEET 1" = 120'




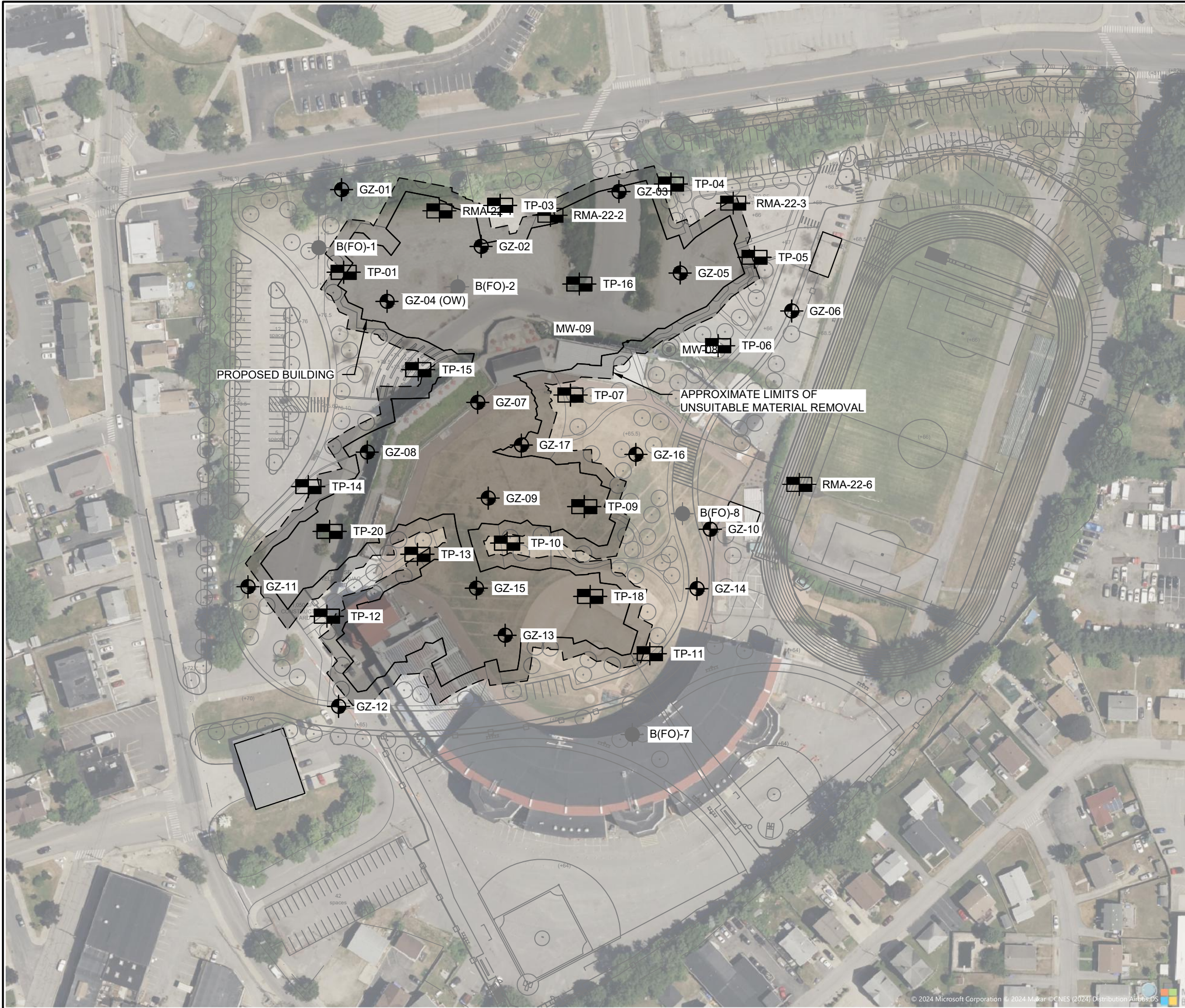
NO.	ISSUE/DESCRIPTION	BY	DATE
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PAWTUCKET UNIFIED HIGH SCHOOL
1 COLUMBUS AVENUE PAWTUCKET, RHODE ISLAND

PEAT VOLUME ESTIMATE

PREPARED BY:  GZA GeoEnvironmental, Inc. www.gza.com		PREPARED FOR: JONATHAN LEVI ARCHITECTS 266 BEACON ST, BOSTON MA	
PROJ MGR: JJM	REVIEWED BY: JJM	CHECKED BY: DRC	FIGURE 3
DESIGNED BY: AJP	DRAWN BY: VJM	SCALE: 1" = 120'	
DATE: JANUARY, 2025	PROJECT NO. 35453.00	REVISION NO.	



GENERAL NOTES:

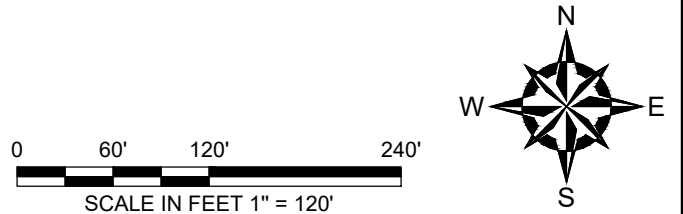
1. BASE MAP DEVELOPED FROM THE AUTOCAD DRAWING FILE TITLED "SURVEY W CURRENT BUILDING FOOTPRINT.DWG" PREPARED BY JONATHAN LEVI ARCHITECTS TRANSMITTED TO GZA ON 10-08-2024.
2. THE LOCATION OF THE RECENT EXPLORATIONS WERE APPROXIMATELY DETERMINED BY LINE OF SITE AND/OR TAPE MEASUREMENTS FROM EXISTING TOPOGRAPHIC FEATURES AND GPS. THESE LOCATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

CONSTRUCTION SEQUENCE NOTES:

1. IN ZONES OF OVER EXCAVATION AND REPLACEMENT OF UNSUITABLE MATERIAL (FILL, PEAT, AND ORGANIC SOILS) EXCAVATE TO FIRM NATURAL SANDY SOILS, AND REPLACE WITH COMPACTED "GRANULAR FILL" OR "SAND-GRAVEL FILL".
2. EXCAVATE UNSUITABLE MATERIALS THAT ARE BELOW THE WATER TABLE "IN-THE-WET" WITH LOCALIZED DEWATERING. REPLACE UNSUITABLE MATERIALS BELOW THE WATER TABLE BY PLACING CRUSHED STONE ENVELOPED IN A LAYER OF FILTER FABRIC, SUCH AS MIRAFI 180N, AND COMPACTING. UNSUITABLE MATERIALS ABOVE THE WATER TABLE MAY BE REPLACED WITH COMPACTED "GRANULAR FILL" OR "SAND-GRAVEL FILL" USING CONVENTIONAL METHODS.
3. BACKFILL AFTER EXCAVATION OF PEAT IN SUCH A MANNER AS TO DISPLACE ANY LOOSE MUCK FORWARD SO IT CAN BE EXCAVATED AND NOT TRAPPED BELOW NEW "GRANULAR FILL", "SAND-GRAVEL FILL" OR "CRUSHED STONE".
4. PLACE COMPACTED "GRANULAR FILL" OR "SAND-GRAVEL FILL" UP TO ELEVATION 65 FEET.
5. EXCAVATED EXISTING FILL MAY BE REUSED AS COMPACTED "GRANULAR FILL" AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER.
6. IF PEAT IS STOCKPILED PRIOR TO LOADING OFF-SITE, HAY BALES AND SILT FENCE OR OTHER APPROPRIATE MEANS SHALL BE USED TO FILTER RUN-OFF.


LEGEND:

- INDICATES PROPOSED BUILDING FOOTPRINT
- INDICATES APPROXIMATE 15FT LIMIT OF OVER-EXCAVATION AND REPLACEMENT
- INDICATES APPROXIMATE AREA OF OVER-EXCAVATION AND REPLACEMENT



NO.	ISSUE/DESCRIPTION	BY	DATE

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

PAWTUCKET UNIFIED HIGH SCHOOL 1 COLUMBUS AVENUE PAWTUCKET, RHODE ISLAND			
OVER-EXCAVATION AND REPLACEMENT PLAN			
PREPARED BY:  GZA GeoEnvironmental, Inc. www.gza.com		PREPARED FOR: JONATHAN LEVI ARCHITECTS 266 BEACON ST, BOSTON MA	
PROJ MGR: JJM	REVIEWED BY: JJM	CHECKED BY: DRC	FIGURE 4
DESIGNED BY: AJP	DRAWN BY: VJM	SCALE: 1" = 120'	
DATE: JANUARY, 2025	PROJECT NO. 35453.00	REVISION NO.	



APPENDIX A

LIMITATIONS



USE OF REPORT

1. GZA GeoEnvironmental, Inc. (GZA) prepared this report on behalf of, and for the exclusive use of our 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 expressly identified in the contract documents, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to GZA.

STANDARD OF CARE

2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in Proposal for Services and/or Report, 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 data gathered during the course of our work. If conditions other than those described in this report are found at the subject location(s), or the design has been altered in any way, GZA shall be so notified and afforded the opportunity to revise the report, as appropriate, to reflect the unanticipated changed conditions .
3. GZA's 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.
4. In conducting our work, GZA relied upon certain information made available by public agencies, Client and/or others. 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.

SUBSURFACE CONDITIONS

5. The generalized soil profile(s) provided in our Report are based on widely-spaced subsurface explorations and are intended only to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and were based on our assessment of subsurface conditions. The composition of strata, and the transitions between strata, may be more variable and more complex than indicated. For more specific information on soil conditions at a specific location refer to the exploration logs. The nature and extent of variations between these explorations may not become evident until further exploration or construction. If variations or other latent conditions then become evident, it will be necessary to reevaluate the conclusions and recommendations of this report.
6. In preparing this report, GZA relied on certain information provided by the Client, state and local officials, and other parties referenced therein which were made available to GZA at the time of our evaluation. GZA did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this evaluation.
7. Water level readings have been made in test holes (as described in this Report) and monitoring wells at the specified times and under the stated conditions. These data have been reviewed and interpretations have been made in this Report. Fluctuations in the level of the groundwater however occur due to temporal or spatial variations in areal recharge rates, soil heterogeneities, the presence of subsurface utilities, and/or natural or artificially induced perturbations. The water table encountered in the course of the work may differ from that indicated in the Report.
8. GZA's services did not include an assessment of the presence of oil or hazardous materials at the property. Consequently, we did not consider the potential impacts (if any) that contaminants in soil or groundwater may have on construction activities, or the use of structures on the property.



9. Recommendations for foundation drainage, waterproofing, and moisture control address the conventional geotechnical engineering aspects of seepage control. These recommendations may not preclude an environment that allows the infestation of mold or other biological pollutants.

COMPLIANCE WITH CODES AND REGULATIONS

10. We used reasonable care in identifying and interpreting applicable codes and regulations. These codes and regulations are subject to various, and possibly contradictory, interpretations. Compliance with codes and regulations by other parties is beyond our control.

COST ESTIMATES

11. Unless otherwise stated, our cost estimates are only for comparative and general planning purposes. These estimates may involve approximate quantity evaluations. Note that these quantity estimates are not intended to be sufficiently accurate to develop construction bids, or to predict the actual cost of work addressed in this Report. Further, since we have no control over either when the work will take place or the labor and material costs required to plan and execute the anticipated work, our cost estimates were made by relying on our experience, the experience of others, and other sources of readily available information. Actual costs may vary over time and could be significantly more, or less, than stated in the Report.

ADDITIONAL SERVICES

12. 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: i) observe conditions and compliance with our design concepts and opinions; ii) allow for changes in the event that conditions are other than anticipated; iii) provide modifications to our design; and iv) assess the consequences of changes in technologies and/or regulations.



APPENDIX B

PREVIOUS EXPLORATION LOGS

SOIL BORING LOG

BORING NO.:

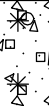







B(FO)-1

Page 1 of 2

Project: McCoy Stadium Subsurface Investigation
Location: Pawtucket, RI
Client: City of Pawtucket
Drilling Co.: New England Boring Contractors
Driller: Matt Ferriera

Project No.: 20190825A10
Project Mgr: Andrea Judge
Field Eng. Staff: Ken Berchielli
Date Started: July 20, 2020
Date Finished: July 20, 2020

Elevation: 65' ft.	Vertical Datum: WGS 1984	Boring Location: See Plan	Coord.: See Plan
Item	Casing	Sampler	Core Barrel
Type	HW	SS	-
Length (ft)	5	2	-
Inside Dia. (in.)	4	1.375	-
Hammer Wt. (lb.)	140	140	-
Hammer Fall (in.)	30	30	-

Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec / Pen. (in)	Sample Blows per 6"	Stratum Graphic	USCS Symbol Group	Visual - Manual Identification & Description* (density/consistency, color, Group Name & Symbol, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Field Tests				Remarks
							Dilatancy	Toughness	Plasticity	Dry Strength	
5	S-1 0.0'- 2.0'	13/24	10 17 24 29		FILL	Dense, dark brown, coarse SAND, some Gravel, trace Silt, dry - Granular Fill	-	-	-	-	First 6" included gravel parking lot
	S-2A 2.0'- 3.0'	9/12	19 19		FILL	Medium dense, dark brown, fine GRAVEL, little fine-coarse Sand, trace Silt, dry - Granular fill	-	-	-	-	Inconsistent Composition of Organics
	S-2B 3.0'- 4.0'	9/12	10 7		FILL	Medium dense, dark brown, medium SAND, little Gravel, trace Silt, trace Organics, dry, - Granular Fill	-	-	-	-	
	S-3 4.0'- 6.0'	2/24	4 3 14 21		FILL	Medium dense, dark brown, fine-coarse SAND, little fine Gravel, trace Silt, dry, - Granular Fill	-	-	-	-	
	S-4 6.0'- 8.0'	9/24	15 28 43 44		FILL	Very dense, dark brown, fine GRAVEL, little fine to coarse Sand, trace Silt, trace Organics, wet, - Granular Fill	-	-	-	-	
	S-5 9.0'- 11.0'	11/24	4 1 1 3		ML	Very loose, dark brown to gray, fine SILT, little fine Sand, trace Gravel, wet - Outwash	-	-	-	-	
15	S-6 14.0'- 16.0'	7/23	6 5 5 4		GW	Loose, gray, fine GRAVEL and fine to coarse Sand, trace Silt, wet - Outwash	-	-	-	-	
	S-7	9/24	5 6		GW	Medium dense, gray, fine GRAVEL and fine to coarse Sand, trace Silt, wet - Outwash	-	-	-	-	

Water Level Data					Minor Constituent Proportions		Soil Density		Soil Consistency		Sample Type		Notes:
------------------	--	--	--	--	-------------------------------	--	--------------	--	------------------	--	-------------	--	--

Boring No.: **B(FO)-1**


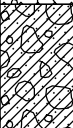
Field Test Legend: Dilatancy: N - None S - Slow R - Rapid Plasticity: NP - Non-Plastic L - Low M - Medium H - High
 Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High VH - Very High

NOTES: Soil identifications and field tests based on visual-manual methods per ASTM D2488 and using the modified Burnister System

SOIL BORING LOG

(continued)

BORING NO.:
B(FO)-1
Page 2 of 2

Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec / Pen. (in)	Sample Blows per 6"	Stratum Graphic	USCS Symbol Group	Visual - Manual Identification & Description* (density/consistency, color, Group Name & Symbol, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Field Tests				Remarks*
							Dilatancy	Toughness	Plasticity	Dry Strength	
	19.0'- 21.0'		6 7		GW	Medium dense, gray, fine GRAVEL, and fine to coarse Sand, trace Silt, wet - Outwash	-	-	-	-	
25	S-8 24.0'- 26.0'	4/24	7 9 7 8								
					SP-SM	Medium dense, brown-gray, fine-coarse SAND, little Silt, little Gravel, wet - Glacial Till	-	-	-	-	
30	S-9 29.0'- 31.0'	7/24	9 7 11 15								
						31.0 Boring Terminated at 31', no refusal					
35											
40											
45											

NOTES:

PROJECT NO.:
20190825A10

BORING NO.:
B(FO)-1

NOTES: Soil identifications and field tests based on visual-manual methods per ASTM D2488 and using the modified Burmister System

SOIL BORING LOG

BORING NO.:

B(FO)-2

Page 1 of 2

Project: McCoy Stadium Subsurface Investigation
Location: Pawtucket, RI
Client: City of Pawtucket
Drilling Co.: New England Boring Contractors
Driller: Matt Ferriera

Project No.: 20190825A10
Project Mgr: Andrea Judge
Field Eng. Staff: Ken Berchielli
Date Started: July 20, 2020
Date Finished: July 21, 2020

Elevation: 65' ft.		Vertical Datum: WGS 1984			Boring Location: See Plan				Coord.: See Plan		
Item		Casing	Sampler	Core Barrel	Rig Make & Model: Diedrich D-120				Horizontal Datum: NAD 1983		
Type		HW	SS	-	Hammer Type				Drilling Fluid		
Length (ft)		5	2	-	<input type="checkbox"/> Truck <input type="checkbox"/> Tripod <input type="checkbox"/> Cat-Head <input type="checkbox"/> Safety				<input type="checkbox"/> Bentonite		
Inside Dia. (in.)		4	1.375	-	<input checked="" type="checkbox"/> Rubber Tire <input type="checkbox"/> Geoprobe <input type="checkbox"/> Winch				<input type="checkbox"/> Polymer		
Hammer Wt. (lb.)		140	140	-	<input checked="" type="checkbox"/> Track <input type="checkbox"/> Air Track <input checked="" type="checkbox"/> Roller Bit <input checked="" type="checkbox"/> Automatic				<input checked="" type="checkbox"/> Water		
Hammer Fall (in.)		30	30	-	<input type="checkbox"/> Skid <input type="checkbox"/> Cutting Head <input type="checkbox"/>				<input type="checkbox"/> None		
Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec / Pen. (in)	Sample Blows per 6"	Stratum Graphic	USCS Symbol Group	Visual - Manual Identification & Description* (density/consistency, color, Group Name & Symbol, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Field Tests				Remarks
							Dilatancy	Toughness	Plasticity	Dry Strength	
5	S-1 0.0'- 2.0'	18/24	10 21 17 3		FILL	Dense, brown, fine to medium SAND, little fine Gravel, trace Silt, dry, - Granular fill	-	-	-	-	first 6" included gravel parking lot
	S-2 2.0'- 4.0'	18/24	7 5 4 5		FILL	Loose, brown, fine to medium SAND, little fine Gravel, trace Silt, trace Organics, dry - Granular fill	-	-	-	-	
	S-3 4.0'- 6.0'	17/24	5 7 20 25		FILL	Medium dense, gray to yellow/brown, medium SAND, some fine Sand, trace Gravel, dry - Granular fill	-	-	-	-	
10	S-4 6.0'- 8.0'	15/24	11 11 12 15		SP	Medium dense, gray, fine SAND, little fine Gravel, little fine Silt, moist - Outwash	-	-	-	-	
	S-5 9.0'- 11.0'	12/24	14 17 15 9		SP	Dense, gray, fine to medium SAND, some fine-medium Gravel, trace Silt, wet - Outwash	-	-	-	-	
	S-6 14.0'- 16.0'	7/24	6 9 13 9		SP	Medium dense, gray, coarse SAND and medium Gravel, trace Silt, wet - Outwash	-	-	-	-	
15	S-7 16.0'- 18.0'	0/24	8 10		SP	No Recovery	-	-	-	-	

Water Level Data					Minor Constituent Proportions		Soil Density		Soil Consistency		Sample Type		Notes:
Date	Time	Elapsed Time (hr)	Depth in feet										
			Bottom of Hole	Water	And	35 - 50%	Very Loose	0 - 4	Very Soft	0 - 2	SS	Split Spoon	Water Level Measurement: 7' from ground level
					Some	20 - 35%	Loose	4 - 10	Soft	2 - 4	ST	Shelby Tube	
					Little	10 - 20%	Medium Dense	10 - 30	Medium Stiff	4 - 8	GS	Grab Sample	
							Dense	30 - 50	Stiff	8 - 15	ET	Extruded Tube	
					Trace	<10%	Very Dense	>50	Very Stiff	15 - 30			
									Hard	>30			
Field Test Legend:					Dilatancy: N - None S - Slow R - Rapid		Plasticity: NP - Non-Plastic L - Low M - Medium H - High						
					Toughness: L - Low M - Medium H - High		Dry Strength: N - None L - Low M - Medium H - High		VH - Very High				
NOTES: Soil identifications and field tests based on visual-manual methods per ASTM D2488 and using the modified Burmister System													

Boring No.: **B(FO)-2**



SOIL BORING LOG

(continued)

BORING NO.:

B(FO)-2

Page 2 of 2

Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec / Pen. (in)	Sample Blows per 6"	Stratum Graphic	USCS Symbol Group	Visual - Manual Identification & Description* (density/consistency, color, Group Name & Symbol, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Field Tests				Remarks*
							Dilatancy	Toughness	Plasticity	Dry Strength	
	19.0'- 21.0'		10 8								
						24.0					
25	S-8 24.0'- 26.0'	14/24	14 18 20 28		SM	Dense, light gray, fine SAND, some Silt, little fine Gravel, Wet - Glacial Till	-	-	-	-	
						26.0					
						Boring Terminated at 26', no refusal					
30											
35											
40											
45											

NOTES:

PROJECT NO.:

20190825A10

BORING NO.:

B(FO)-2

NOTES: Soil identifications and field tests based on visual-manual methods per ASTM D2488 and using the modified Burmister System

NOTES: Soil identifications and field tests based on visual-manual methods per ASTM D2488 and using the modified Burmister System



(continued)

B(FO)-3

Page 2 of 2

NOTES:	PROJECT NO.: 20190825A10	BORING NO.: B(FO)-3
NOTES: Soil identifications and field tests based on visual-manual methods per ASTM D2488 and using the modified Burmister System		

Project:	McCoy Stadium Subsurface Investigation
Location:	Pawtucket, RI
Client:	City of Pawtucket
Drilling Co.:	New England Boring Contractors
Driller:	Matt Ferriera

Project No.:	<u>20190825A10</u>
Project Mgr:	<u>Andrea Judge</u>
Field Eng. Staff:	<u>Ken Berchielli</u>
Date Started:	<u>July 21, 2020</u>
Date Finished:	<u>July 21, 2020</u>

Elevation: 66' ft.		Vertical Datum: WGS 1984		Boring Location: See Plan				Coord.: See Plan	
Item	Casing	Sampler	Core Barrel	Horizontal Datum: NAD 1983					
Type	HW	SS	-	Rig Make & Model: Diedrich D-120				Hammer Type	Drilling Fluid
Length (ft)	5	2	-	<input type="checkbox"/> Truck	<input type="checkbox"/> Tripod	<input type="checkbox"/> Cat-Head	<input type="checkbox"/> Safety	<input type="checkbox"/> Bentonite	Casing Advance
Inside Dia. (in.)	4	1.375	-	<input checked="" type="checkbox"/> Rubber Tire	<input type="checkbox"/> Geoprobe	<input type="checkbox"/> Winch	<input type="checkbox"/> Doughnut	<input type="checkbox"/> Polymer	
Hammer Wt. (lb.)	140	140	-	<input checked="" type="checkbox"/> Track	<input type="checkbox"/> Air Track	<input type="checkbox"/> Roller Bit	<input checked="" type="checkbox"/> Automatic	<input checked="" type="checkbox"/> Water	
Hammer Fall (in.)	30	30	-	<input type="checkbox"/> Skid	<input type="checkbox"/>	<input type="checkbox"/> Cutting Head	<input type="checkbox"/>	<input type="checkbox"/> None	

Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec / Pen. (in)	Sample Blows per 6"	Stratum Graphic	USCS Symbol Group	Visual - Manual Identification & Description* (density/consistency, color, Group Name & Symbol, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Field Tests				Remarks
							Dilatancy	Toughness	Plasticity	Dry Strength	
5	S-1 0.0'- 2.0'	12/24	7 8 9 12		FILL	Medium dense, light brown, coarse SAND, some Gravel, trace Silt, dry - Granular Fill	-	-	-	-	First 3" included grass and top soil Inconsistent composition of organics Inconsistent composition of organics
	S-2 2.0'- 4.0'	17/24	7 6 10 9		FILL	Medium dense, brown with white and black, fine GRAVEL, some coarse Sand, trace Organics, moist, - Granular Fill	-	-	-	-	
	S-3 4.0'- 6.0'	8/34	3 4 12 13		FILL	Medium dense, black, medium SAND and Organics, trace fine Gravel, trace Silt, moist - Granular Fill	-	-	-	-	
10	S-4 9.0'- 11.0'	18/24	8 8 10 14		SP-SM	Medium dense, brown fine-medium SAND, little Silt, wet - Outwash	-	-	-	-	
15	S-5 14.0'- 16.0'	15/24	5 6 10 11		SP-SM	Medium dense, brown fine-medium SAND, little Silt, wet - Outwash	-	-	-	-	
	S-6	15/24	7 6		SP	Medium dense, brown fine-medium SAND, trace Silt, trace fine Gravel, wet - Outwash	-	-	-	-	

Water Level Data					Minor Constituent Proportions		Soil Density		Soil Consistency		Sample Type		Notes:
Date	Time	Elapsed Time (hr)	Depth in feet	Bottom of Hole			Water						
						And 35 - 50%	Very Loose	0 - 4	Very Soft	0 - 2	SS	Split Spoon	Water Level Measurement: 6.5' from ground level
						Some 20 - 35%	Loose	4 - 10	Soft	2 - 4	ST	Shelby Tube	
						Little 10 - 20%	Medium Dense	10 - 30	Medium Stiff	4 - 8	GS	Grab Sample	
						Trace <10%	Dense	30 - 50	Stiff	8 - 15	ET	Extruded Tube	
							Very Dense	>50	Very Stiff	15 - 30			
									Hard	>30			
Boring No.: B(FO)-4													

Field Test Legend:	Dilatancy: N - None S - Slow R - Rapid	Plasticity: NP - Non-Plastic L - Low M - Medium H - High
	Toughness: L - Low M - Medium H - High	Dry Strength: N - None L - Low M - Medium H - High VH - Very High

NOTES: Soil identifications and field tests based on visual-manual methods per ASTM D2488 and using the modified Burmister System


SOIL BORING LOG

(continued)

BORING NO.:

B(FO)-4

Page 2 of 2

Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec / Pen. (in)	Sample Blows per 6"	Stratum Graphic	USCS Symbol Group	Visual - Manual Identification & Description* (density/consistency, color, Group Name & Symbol, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Field Tests				Remarks*
							Dilatancy	Toughness	Plasticity	Dry Strength	
	19.0'- 21.0'		10 11		SP	Medium dense, brown, fine-medium SAND, trace Silt, wet - Outwash	-	-	-	-	
25	S-7 24.0'- 26.0'	14/24	5 6 9 9								
						26.0 Boring terminated at 26', no refusal					
30											
35											
40											
45											

NOTES:

PROJECT NO.:

20190825A10

BORING NO.:

B(FO)-4

NOTES: Soil identifications and field tests based on visual-manual methods per ASTM D2488 and using the modified Burmister System

SOIL BORING LOG

BORING NO.:

B(FO)-5

Page 1 of 2

Project: McCoy Stadium Subsurface Investigation
Location: Pawtucket, RI
Client: City of Pawtucket
Drilling Co.: New England Boring Contractors
Driller: Matt Ferriera

Project No.: 20190825A10
Project Mgr: Andrea Judge
Field Eng. Staff: Ken Berchielli
Date Started: July 22, 2020
Date Finished: July 22, 2020

Elevation: 64' ft.	Vertical Datum: WGS 1984	Boring Location: See Plan	Coord.: See Plan
Item	Casing	Sampler	Core Barrel
Type	HW	SS	-
Length (ft)	5	2	-
Inside Dia. (in.)	4	1.375	-
Hammer Wt. (lb.)	140	140	-
Hammer Fall (in.)	30	30	-

Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec / Pen. (in)	Sample Blows per 6"	Stratum Graphic	USCS Symbol Group	Visual - Manual Identification & Description* (density/consistency, color, Group Name & Symbol, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Field Tests				Remarks
							Dilatancy	Toughness	Plasticity	Dry Strength	
		NA/12				Asphalt	-	-	-	-	
	S-1 1.0'- 3.0'	16/24	6 8 8 7		FILL	Medium dense, dark brown to black, fine GRAVEL and medium to coarse Sand, moist - Urban Fill	-	-	-	-	Sampling started at 1-3' because the contractor had to drill through 6" of asphalt
	S-2 3.0'- 5.0'	11/24	2 3 4 3		FILL	Loose, black to brown, fine GRAVEL, some coarse Sand, trace Silt, moist - Urban Fill	-	-	-	-	
5	S-3 5.0'- 7.0'	12/24	6 4 5 8		FILL	Loose, brown and gray, fine-coarse GRAVEL, trace coarse Sand, trace Silt, wet - Urban Fill	-	-	-	-	
10	S-4 9.0'- 11.0'	18/24	9 7 7 10		SP-SM	Medium dense, red/gray, fine SAND, trace Silt, trace Gravel, wet - Outwash	-	-	-	-	
15	S-5 14.0'- 16.0'	17/24	4 5 7 8		SP	Medium dense, light brown to gray, fine-medium SAND, trace Silt, wet - Outwash	-	-	-	-	
	S-6	16/24	6 5		SP	Medium dense, gray, fine-medium SAND, little fine Gravel, little Silt, wet - Outwash	-	-	-	-	

Water Level Data					Minor Constituent Proportions		Soil Density		Soil Consistency		Sample Type		Notes:
Date	Time	Elapsed Time (hr)	Depth in feet										
			Bottom of Hole	Water	And	35 - 50%	Very Loose	0 - 4	Very Soft	0 - 2	SS	Split Spoon	Water Level Measurement: 8 .5' from ground level
					Some	20 - 35%	Loose	4 - 10	Soft	2 - 4	ST	Shelby Tube	
					Little	10 - 20%	Medium Dense	10 - 30	Medium Stiff	4 - 8	GS	Grab Sample	
					Trace	<10%	Dense	30 - 50	Stiff	8 - 15	ET	Extruded Tube	
							Very Dense	>50	Very Stiff	15 - 30			
									Hard	>30			Boring No.: B(FO)-5

Boring No.: **B(FO)-5**

Field Test Legend: Dilatancy: N - None S - Slow R - Rapid Plasticity: NP - Non-Plastic L - Low M - Medium H - High
 Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High VH - Very High

NOTES: Soil identifications and field tests based on visual-manual methods per ASTM D2488 and using the modified Burmister System



(continued)

B(FO)-5

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NOTES:	PROJECT NO.: 20190825A10	BORING NO.: B(FO)-5
NOTES: Soil identifications and field tests based on visual-manual methods per ASTM D2488 and using the modified Burmister System		

Project: McCoy Stadium Subsurface Investigation

Location: Pawtucket, RI

Client: City of Pawtucket

Drilling Co.: New England Boring Contractors

Driller: Matt FerrieraProject No.: 20190825A10

Project Mgr: Andrea Judge

Field Eng. Staff: Ken Berchielli

Date Started: July 22, 2020

Date Finished: July 22, 2020

Elevation: 64' ft.

Vertical Datum: WGS 1984

Boring Location: See Plan

Coord.:	See Plan
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Item	Casing	Sampler	Core Barrel
------	--------	---------	-------------

Horizontal Datum: NAD 1983

Type	HW	SS	-
------	----	----	---

Length (ft)	5	2	-
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Inside Dia. (in.)	4	1.375	-
Hammer Wt. (lb.)	140	140	

Hammer Wt. (lb.)	140	140	-
Hammer Fall (in.)	30	30	-

Rig Make & Model: Diedrich D-120

<input type="checkbox"/> Truck	<input type="checkbox"/> Tripod	<input type="checkbox"/> Cat-Head
--------------------------------	---------------------------------	-----------------------------------

<input checked="" type="checkbox"/> Rubber Tire	<input type="checkbox"/> Geoprobe	<input type="checkbox"/> Winch
<input checked="" type="checkbox"/> Track	<input type="checkbox"/> Air Track	<input checked="" type="checkbox"/> Roller Bit

<input checked="" type="checkbox"/> Track	<input type="checkbox"/> Air Track	<input checked="" type="checkbox"/> Roller Bit
<input type="checkbox"/> Skid	<input type="checkbox"/>	<input type="checkbox"/> Cutting Head

Hammer Type

☐ Safety☐ Doughnut
☒ Automatic☒ Automatic

Drilling Fluid

☐ Bentonite☐ Polymer
☒ Water☒ Water
☐ None

Drill Rod Size:

Casing

Ca

Hammer Elev. (ft.)	Sample No. / Interval (ft)	Rec / Pen. (in)	Sample Blows per 6"	Stratum Graphic	USCS Symbol Group	Visual - Manual Identification & Description* (density/consistency, color, Group Name & Symbol, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Field Tests				Remarks
							Dilatancy	Toughness	Plasticity	Dry Strength	
	S	NA/-				1.0	-	-	-	-	Sampling started at 1-3' because the contractor had to drill through 6" of asphalt
	S-1 1.0'- 3.0'	16/24	7 8 8 10		FILL	Medium dense, brown and black, fine GRAVEL and coarse Sand, trace silt, dry - Granular Fill	-	-	-	-	
	S-2A 3.0'- 4.0'	17/24	6 5 15		FILL	Medium dense, brown and black, coarse SAND and fine Gravel, moist - Granular Fill	-	-	-	-	
	S-2B 4.0'- 5.0'	17/24	23		FILL	Medium dense, gray and brown, coarse SAND and fine Gravel, moist - Granular Fill	-	-	-	-	
	S-3 5.0'- 7.0'	16/24	5 15 23		FILL	Medium dense, gray and brown, fine-medium GRAVEL, some fine-coarse Sand, moist - Granular Fill	-	-	-	-	
			15 17 13 17								
	S-4 9.0'- 11.0'	18/24	14 9 7 7		ML	Medium dense, gray, fine SILT, little fine Sand, wet - Outwash	-	-	-	-	
	S-5 14.0'- 16.0'	15/24	7 8 10 12		ML	Medium dense, gray, fine SILT, little fine Sand, wet - Outwash	-	-	-	-	
	S-6	18/24	6 6		SP	Medium dense, gray and brown, fine SAND, trace fine Silt, wet - Outwash	-	-	-	-	

Water Level Data					Minor Constituent Proportions		Soil Density		Soil Consistency		Sample Type		Notes:
Date	Time	Elapsed Time (hr)	Depth in feet	Bottom of Hole			Water						
					And	35 - 50%	Very Loose	0 - 4	Very Soft	0 - 2	SS	Split Spoon	Water Level Measurement: 9 ' from ground level
							Loose	4 - 10	Soft	2 - 4	ST	Shelby Tube	
					Some	20 - 35%	Medium Dense	10 - 30	Medium Stiff	4 - 8	GS	Grab Sample	
					Little	10 - 20%	Dense	30 - 50	Stiff	8 - 15	ET	Extruded Tube	
					Trace	<10%	Very Dense	>50	Very Stiff	15 - 30			
									Hard	>30			Boring No.: B(FO)-6

Field Test Legend:	Dilatancy: N - None S - Slow R - Rapid	Plasticity: NP - Non-Plastic L - Low M - Medium H - High
	Toughness: L - Low M - Medium H - High	Dry Strength: N - None L - Low M - Medium H - High VH - Very High

NOTES: Soil identifications and field tests based on visual-manual methods per ASTM D2488 and using the modified Burmister System



(continued)

B(FO)-6

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NOTES:	PROJECT NO.: 20190825A10	BORING NO.: B(FO)-6
NOTES: Soil identifications and field tests based on visual-manual methods per ASTM D2488 and using the modified Burmister System		

SOIL BORING LOG

BORING NO.:

B(FO)-7

Page 1 of 1

Project: McCoy Stadium Subsurface Investigation
Location: Pawtucket, RI
Client: City of Pawtucket
Drilling Co.: New England Boring Contractors
Driller: Matt Ferriera

Project No.: 20190825A10
Project Mgr: Andrea Judge
Field Eng. Staff: Ken Berchielli
Date Started: July 23, 2020
Date Finished: July 23, 2020

Elevation: 66' ft.		Vertical Datum: WGS 1984			Boring Location: See Plan				Coord.: See Plan					
Item		Casing	Sampler	Core Barrel	Rig Make & Model: Diedrich D-120				Hammer Type		Horizontal Datum: NAD 1983			
Type		HW	SS	-							Drilling Fluid			
Length (ft)		5	2	-	<input type="checkbox"/> Truck <input type="checkbox"/> Tripod <input type="checkbox"/> Cat-Head <input type="checkbox"/> Safety				<input type="checkbox"/> Bentonite		Casing Advance			
Inside Dia. (in.)		4	1.375	-	<input checked="" type="checkbox"/> Rubber Tire <input type="checkbox"/> Geoprobe <input type="checkbox"/> Winch				<input type="checkbox"/> Polymer					
Hammer Wt. (lb.)		140	140	-	<input checked="" type="checkbox"/> Track <input type="checkbox"/> Air Track <input checked="" type="checkbox"/> Roller Bit				<input checked="" type="checkbox"/> Automatic		Casing			
Hammer Fall (in.)		30	30	-	<input type="checkbox"/> Skid <input type="checkbox"/> Cutting Head <input type="checkbox"/>				<input type="checkbox"/> None					
Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec / Pen. (in)	Sample Blows per 6"	Stratum Graphic	USCS Symbol Group	Visual - Manual Identification & Description* (density/consistency, color, Group Name & Symbol, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)				Field Tests				Remarks
										Dilatancy	Toughness	Plasticity	Dry Strength	
5	S-1A	8/24	9		FILL	Medium dense, brown, medium-coarse SAND, dry - Urban Fill	-	-	-	-	Top 6" included test track clay			
	0.0'- 2.0'	9/24	12		FILL	Medium dense, dark brown, fine to medium SAND and fine Gravel, dry - Urban Fill	-	-	-	-				
	1.0'- 2.0'	16/24	12		FILL	Medium dense, brown, fine to medium SAND, some fine Gravel, Brick fragments - Urban Fill	-	-	-	-				
	S-2		14				-	-	-	-				
	2.0'- 3.0'		9				-	-	-	-				
			13				-	-	-	-				
	10	3	24/24	4		PT	Loose, black, ORGANICS, little coarse Sand, moist	-	-	-	-	Continous sampling through organic layer		
		4.0'- 6.0'		5				-	-	-	-			
				4				-	-	-	-			
				2				-	-	-	-			
S-4		21/24	3		PT	Loose, black, ORGANICS, trace fine to medium Gravel, trace Sand, wet, roots present	-	-	-	-				
6.0'- 8.0'			2				-	-	-	-				
			1				-	-	-	-				
S-5		20/24	4		PT	Medium dense, black, ORGANICS, some fine Gravel, trace fine Sand, wet, roots present	-	-	-	-				
8.0'- 10.0'			7				-	-	-	-				
			6				-	-	-	-				
15			10		SP-SM	Medium dense, dark gray, medium-coarse SAND, little coarse Gravel, little Silt, wet - Outwash	-	-	-	-	Boring terminated at 16', no refusal			
	S-6	13/24	13						-	-		-	-	
	14.0'- 16.0'		6						-	-		-	-	
			6			-	-	-	-					

Water Level Data					Minor Constituent Proportions		Soil Density		Soil Consistency		Sample Type		Notes:
Date	Time	Elapsed Time (hr)	Depth in feet										
			Bottom of Hole	Water	And	35 - 50%	Loose	4 - 10	Soft	2 - 4	SS	Split Spoon	Water Level Measurement: 7' from ground level
					Some	20 - 35%	Medium Dense	10 - 30	Medium Stiff	4 - 8	GS	Grab Sample	
					Little	10 - 20%	Dense	30 - 50	Stiff	8 - 15	ET	Extruded Tube	
					Trace	<10%	Very Dense	>50	Very Stiff	15 - 30			
									Hard	>30			
Field Test Legend:					Dilatancy: N - None S - Slow R - Rapid		Plasticity: NP - Non-Plastic		L - Low M - Medium H - High				
					Toughness: L - Low M - Medium H - High		Dry Strength: N - None L - Low		M - Medium H - High		VH - Very High		
NOTES: Soil identifications and field tests based on visual-manual methods per ASTM D2488 and using the modified Burmister System													

Boring No.: **B(FO)-7**

Project:	<u>McCoy Stadium Subsurface Investigation</u>
Location:	<u>Pawtucket, RI</u>
Client:	<u>City of Pawtucket</u>
Drilling Co.:	<u>New England Boring Contractors</u>
Driller:	<u>Matt Ferriera</u>

Project No.:	<u>20190825A10</u>
Project Mgr:	<u>Andrea Judge</u>
Field Eng. Staff:	<u>Ken Berchielli</u>
Date Started:	<u>July 23, 2020</u>
Date Finished:	<u>July 23, 2020</u>

Elevation: 66' ft.		Vertical Datum: WGS 1984		Boring Location: See Plan				Coord.: See Plan	
Item	Casing	Sampler	Core Barrel	Horizontal Datum: NAD 1983					
Type	HW	SS	-	Rig Make & Model:		Hammer Type		Drilling Fluid	Drill Rod Size:
Length (ft)	5	2	-	<input type="checkbox"/> Truck	<input type="checkbox"/> Tripod	<input type="checkbox"/> Cat-Head	<input type="checkbox"/> Safety	<input type="checkbox"/> Bentonite	Casing Advance Casing
Inside Dia. (in.)	4	1.375	-	<input checked="" type="checkbox"/> Rubber Tire	<input type="checkbox"/> Geoprobe	<input type="checkbox"/> Winch	<input type="checkbox"/> Doughnut	<input type="checkbox"/> Polymer	
Hammer Wt. (lb.)	140	140	-	<input checked="" type="checkbox"/> Track	<input type="checkbox"/> Air Track	<input checked="" type="checkbox"/> Roller Bit	<input checked="" type="checkbox"/> Automatic	<input checked="" type="checkbox"/> Water	
Hammer Fall (in.)	30	30	-	<input type="checkbox"/> Skid	<input type="checkbox"/>	<input type="checkbox"/> Cutting Head	<input type="checkbox"/>	<input type="checkbox"/> None	

Depth/ Elev. (ft)	Sample No. / Interval (ft)	Rec / Pen. (in)	Sample Blows per 6"	Stratum Graphic	USCS Symbol Group	Visual - Manual Identification & Description* (density/consistency, color, Group Name & Symbol, maximum particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	Field Tests				Remarks	
							Dilatancy	Toughness	Plasticity	Dry Strength		
5	S-1 0.0'- 2.0'	18/24	8 10 8 7		FILL	Medium dense, light brown, fine-medium SAND, trace fine gravel, dry - Granular fill	-	-	-	-	Top 6" included test track clay	
	S-2 2.0'- 4.0'	20/24	9 6 10 13		FILL	Medium dense, brown and black, fine-medium SAND, some gravel, dry - Granular Fill	-	-	-	-		
	S-3 4.0'- 6.0'	13/24	13 13 12 5		FILL	Medium dense, brown, medium SAND and coarse to fine gravel, little organics, moist - Granular Fill	-	-	-	-		Organics present on bottom of the spoon
	S-4 6.0'- 8.0'	0/24	10 3 3 2		FILL	No recovery	-	-	-	-		Rock in tip of the spoon, no sample collected
	S-5 8.0'- 10.0'	3/24	2 1 1 1		FILL	Very loose, black, fine-medium GRAVEL and coarse sand, little silt, little organic, wet	-	-	-	-		Inconsistent composition of organics
15						12.0	-	-	-	-	Driller noted organics when using rotary bit in casing	
	S-6 14.0'- 16.0'	5/24	7 3 9 7	ML	Medium dense, gray, fine-medium SILT, little fine Sand, trace Gravel, Broken cobble pieces, wet - Outwash	-	-	-	-			
						16.0	Boring terminated at 16', no refusal					

Water Level Data					Minor Constituent Proportions		Soil Density		Soil Consistency		Sample Type		Notes:
Date	Time	Elapsed Time (hr)	Depth in feet	Bottom of Hole			Water						
					And	35 - 50%	Very Loose	0 - 4	Very Soft	0 - 2	SS	Split Spoon	Water Level Measurement: 8' from ground level
					Some	20 - 35%	Loose	4 - 10	Soft	2 - 4	ST	Shelby Tube	
					Little	10 - 20%	Medium Dense	10 - 30	Medium Stiff	4 - 8	GS	Grab Sample	
					Trace	<10%	Dense	30 - 50	Stiff	8 - 15	ET	Extruded Tube	
							Very Dense	>50	Very Stiff	15 - 30			
									Hard	>30			Boring No.: B(FO)-8

Field Test Legend:	Dilatancy: N - None S - Slow R - Rapid	Plasticity: NP - Non-Plastic L - Low M - Medium H - High
	Toughness: L - Low M - Medium H - High	Dry Strength: N - None L - Low M - Medium H - High VH - Very High

NOTES: Soil identifications and field tests based on visual-manual methods per ASTM D2488 and using the modified Burmister System

PROJECT NUMBER 20160501.B10	DATE STARTED 1/3/22
PROJECT NAME McCoy Stadium	DATE COMPLETED 1/3/22
LOCATION 2 Columbus Avenue, Pawtucket, RI	CASING TYPE/DIAMETER PVC / 1"
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner	SCREEN TYPE/SLOT/INTERVAL Slotted/PVC / 0.010" / 5-15
HAMMER WEIGHT/FALL --	GRAVEL PACK TYPE Silica Sand
ELEVATION (FT) ---	GROUT TYPE/QUANTITY Bentonite / 1
TOP OF CASING ----	DEPTH TO WATER (FT) 7.0
LOGGED BY Madelyn Sampson	GROUND WATER ELEVATION ---
REMARKS No refusal encountered.	

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\IDRAFT\MHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		52	GB 0103-02					SAND, fine to medium; little gravel; little silt; trace brick; light brown; dry. No odor.		
0.0		58			5	FILL		SAND, fine to medium; little gravel; little silt; trace brick; light brown; wet at 7 feet. No odor.		
0.0		60			10	FILL		SAND, fine to medium, and SILT; trace wood, trace brick; black; wet. No odor.		
						SP		SAND, fine to coarse, and SILT; gray; wet. No odor.		

Bottom of borehole at 15.0 feet.

PROJECT NUMBER 20160501.B10 **DATE STARTED** 1/3/22
PROJECT NAME McCoy Stadium **DATE COMPLETED** 1/3/22
LOCATION 2 Columbus Avenue, Pawtucket, RI **CASING TYPE/DIAMETER** PVC / 1"
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner **SCREEN TYPE/SLOT/INTERVAL** Slotted/PVC / 0.010" / 5-15
HAMMER WEIGHT/FALL -- **GRAVEL PACK TYPE** Silica Sand
ELEVATION (FT) --- **GROUT TYPE/QUANTITY** Bentonite / 1
TOP OF CASING ---- **DEPTH TO WATER (FT)** 7.0
LOGGED BY Madelyn Sampson **GROUND WATER ELEVATION** ---
REMARKS No refusal encountered.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		38						SAND, fine to medium; trace gravel; trace silt; trace brick; trace ash; trace wood; light brown; dry. No odor.		
						FILL				
22.4		56	GB 0103-03	5				SAND, fine to medium; some silt; trace wood; black; moist. No odor.		
						FILL				
								SAND, fine to medium; some silt; trace brick; gray; wet at 7 feet. No odor.	▼	
						FILL				
5.0		60		10				SAND, fine to coarse; some silt; little gravel; gray; wet. No odor.		
						SP				

Bottom of borehole at 15.0 feet.

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\IDRAFT\MHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

PROJECT NUMBER 20160501.B10 DATE STARTED 1/3/22
PROJECT NAME McCoy Stadium DATE COMPLETED 1/3/22
LOCATION 2 Columbus Avenue, Pawtucket, RI CASING TYPE/DIAMETER PVC / 1"
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner SCREEN TYPE/SLOT/INTERVAL Slotted/PVC / 0.010" / 5-15
HAMMER WEIGHT/FALL -- GRAVEL PACK TYPE Silica Sand
ELEVATION (FT) --- GROUT TYPE/QUANTITY Bentonite / 1
TOP OF CASING ---- DEPTH TO WATER (FT) 8.0
LOGGED BY Madelyn Sampson GROUND WATER ELEVATION ---
REMARKS No refusal encountered.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		32	GB 0103-04					SAND, fine to medium; little gravel; trace silt; trace brick; light brown; dry. No odor.		
0.0		48			5	FILL		SAND, fine to medium; and SILT; trace wood; black; moist. No odor.		
0.0		53			10	FILL		SAND, fine to coarse; some silt; gray; wet at 8 feet. No odor.		
						SP		SAND, fine to coarse; some silt; gray; wet. No odor.		
						SP		SAND, fine to medium; some silt; light brown; wet. No odor.		

Bottom of borehole at 15.0 feet.

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\IDRAFT\MHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

PROJECT NUMBER 20160501.B10	DATE STARTED 1/3/22
PROJECT NAME McCoy Stadium	DATE COMPLETED 1/3/22
LOCATION 2 Columbus Avenue, Pawtucket, RI	CASING TYPE/DIAMETER PVC / 1"
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner	SCREEN TYPE/SLOT/INTERVAL Slotted/PVC / 0.010" / 5-15
HAMMER WEIGHT/FALL --	GRAVEL PACK TYPE Silica Sand
ELEVATION (FT) ---	GROUT TYPE/QUANTITY Bentonite / 1
TOP OF CASING ----	DEPTH TO WATER (FT) 7.0
LOGGED BY Madelyn Sampson	GROUND WATER ELEVATION ---
REMARKS No refusal encountered.	

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		46	GB 0103-05					SAND, fine to medium; little gravel; trace silt; trace brick; trace ash; trace glass; light brown; dry. No odor.		
0.0		22			5		FILL	SAND, fine to medium; little gravel; trace silt; trace brick; wet at 7 feet. No odor.		
0.0		48			10	SP		SAND, fine to coarse; some silt; gray; wet. No odor.		
						SP		SAND, medium to coarse; some silt; some gravel; gray; wet. No odor.		

Bottom of borehole at 15.0 feet.

PROJECT NUMBER 20160501.B10
PROJECT NAME McCoy Stadium
LOCATION 2 Columbus Avenue, Pawtucket, RI
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner
HAMMER WEIGHT/FALL --
ELEVATION (FT) ---
TOP OF CASING ----
LOGGED BY Madelyn Sampson
REMARKS No refusal encountered.

DATE STARTED 1/3/22
DATE COMPLETED 1/3/22
CASING TYPE/DIAMETER PVC / 1"
SCREEN TYPE/SLOT/INTERVAL Slotted/PVC / 0.010" / 5-15
GRAVEL PACK TYPE Silica Sand
GROUT TYPE/QUANTITY Bentonite / 1
DEPTH TO WATER (FT) 8.0
GROUND WATER ELEVATION ---

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		38	GB 0103-06					SAND, fine to medium; trace gravel; trace silt; trace brick; trace glass; trace ash; dry. No odor.		
0.0		48			5		FILL	SAND, fine to medium; some gravel; trace silt; trace brick; trace ash; trace wood; trace plastic; wet at 8 feet. No odor.		
0.0		46			10		SP	SAND, medium to coarse; little gravel; gray; wet. No odor.		

Bottom of borehole at 15.0 feet.

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\IDRAFT\MHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

PROJECT NUMBER 20160501.B10
PROJECT NAME McCoy Stadium
LOCATION 2 Columbus Avenue, Pawtucket, RI
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner
HAMMER WEIGHT/FALL --
ELEVATION (FT) ---
TOP OF CASING ----
LOGGED BY Madelyn Sampson
REMARKS No refusal encountered.

DATE STARTED 1/3/22
DATE COMPLETED 1/3/22
CASING TYPE/DIAMETER PVC / 1"
SCREEN TYPE/SLOT/INTERVAL Slotted/PVC / 0.010" / 5-15
GRAVEL PACK TYPE Silica Sand
GROUT TYPE/QUANTITY Bentonite / 1
DEPTH TO WATER (FT) 7.0
GROUND WATER ELEVATION ---

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		52	GB 0103-07					SAND, fine to medium; some gravel; trace silt; trace brick; light brown; dry. No odor.		
0.0		36			5			SAND, fine to coarse; some silt; little gravel; wet at 7 feet. No odor.		
0.0		54			10			SAND, fine to coarse; some gravel; trace brick; trace wood; wet. No odor.		

Bottom of borehole at 15.0 feet.

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\IDRAFT\MHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

PROJECT NUMBER	20160501.B10	DATE STARTED	1/4/22
PROJECT NAME	McCoy Stadium	DATE COMPLETED	1/4/22
LOCATION	2 Columbus Avenue, Pawtucket, RI	CASING TYPE/DIAMETER	PVC / 1"
DRILLING METHOD	Geologic/Geoprobe/Mc5 60" Liner	SCREEN TYPE/SLOT/INTERVAL	Slotted/PVC / 0.010" / 5-15
HAMMER WEIGHT/FALL	--	GRAVEL PACK TYPE	Silica Sand
ELEVATION (FT)	---	GROUT TYPE/QUANTITY	Bentonite / 1
TOP OF CASING	----	DEPTH TO WATER (FT)	6.0
LOGGED BY	Madelyn Sampson	GROUND WATER ELEVATION	---
REMARKS	No refusal encountered.		

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		32	GB 0104-09					SAND, fine to medium; little gravel; trace silt; trace brick; trace wood; brown; dry. No odor.		
0.0		46			5		FILL	SAND, medium to coarse; some gravel; wet at 6 feet. No odor.		
0.0		60			10		SP	SAND, medium to coarse; some gravel; wet. No odor.		
							SP			

Bottom of borehole at 15.0 feet.

LOG A EWNN01 - ESDAT_LOG1.GDT - 3/7/22 12:55 - \\PRIVATE\DFS\PROJECTDATA\2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES\A - SOIL BORING LOGS\DRIFT\MHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

PROJECT NUMBER 20160501.B10
PROJECT NAME McCoy Stadium
LOCATION 2 Columbus Avenue, Pawtucket, RI
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner
HAMMER WEIGHT/FALL --
ELEVATION (FT) ---
TOP OF CASING ----
LOGGED BY Madelyn Sampson
REMARKS No refusal encountered.

DATE STARTED 1/4/22
DATE COMPLETED 1/4/22
CASING TYPE/DIAMETER PVC / 1"
SCREEN TYPE/SLOT/INTERVAL Slotted/PVC / 0.010" / 5-15
GRAVEL PACK TYPE Silica Sand
GROUT TYPE/QUANTITY Bentonite / 1
DEPTH TO WATER (FT) 8.0
GROUND WATER ELEVATION ---

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		42	GB 0104-10					SAND, fine to medium; little gravel; trace silt; trace brick; light brown; dry. No odor.		
0.0		48			5	FILL		SAND, fine to medium; little gravel; trace silt; trace brick; light brown; dry. No odor.		
0.0		60			10	SP		SAND, fine to medium, and SILT; gray; wet at 8 feet. No odor.		
						SP		SAND, fine to medium; some silt; black; wet. No odor.		
						SP		SAND, medium to coarse; and SILT; gray; wet; No odor.		

Bottom of borehole at 15.0 feet.

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\IDRAFT\MHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

PROJECT NUMBER 20160501.B10	DATE STARTED 1/4/22
PROJECT NAME McCoy Stadium	DATE COMPLETED 1/4/22
LOCATION 2 Columbus Avenue, Pawtucket, RI	CASING TYPE/DIAMETER PVC / 1"
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner	SCREEN TYPE/SLOT/INTERVAL Slotted/PVC / 0.010" / 5-15
HAMMER WEIGHT/FALL --	GRAVEL PACK TYPE Silica Sand
ELEVATION (FT) ---	GROUT TYPE/QUANTITY Bentonite / 1
TOP OF CASING ----	DEPTH TO WATER (FT) 7.0
LOGGED BY Madelyn Sampson	GROUND WATER ELEVATION ---
REMARKS No refusal encountered.	

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\IDRAFT\MHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		38	GB 0104-11					SAND, fine to medium; some gravel; trace silt; light brown; dry. No odor.		
0.0		60			5		FILL	SAND, fine to coarse; some silt; little gravel; wet at 7 feet. No odor.		
0.0		60			10		SP	SAND, fine to medium, and SILT; gray; wet at 8 feet. No odor.		

Bottom of borehole at 15.0 feet.

PROJECT NUMBER 20160501.B10 **DATE STARTED** 1/4/22
PROJECT NAME McCoy Stadium **DATE COMPLETED** 1/4/22
LOCATION 2 Columbus Avenue, Pawtucket, RI **CASING TYPE/DIAMETER** ----
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner **SCREEN TYPE/SLOT/INTERVAL** ----
HAMMER WEIGHT/FALL -- **GRAVEL PACK TYPE** ----
ELEVATION (FT) --- **GROUT TYPE/QUANTITY** ----
TOP OF CASING ---- **DEPTH TO WATER (FT)** 6.0
LOGGED BY Madelyn Sampson **GROUND WATER ELEVATION** ---
REMARKS No refusal encountered.

PID (ppm)	BLOW COUNTS	RECOVERY (Inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH
0.0		52	GB 0104-12					SAND, fine to medium; little silt; light brown; dry. No odor.	
						FILL			
0.0		60			5			SAND, fine to coarse; some silt; brown; wet at 6 feet. No odor.	
						SP			
0.0		60			10			SAND, fine to coarse; some silt; brown; wet. No odor.	
						SP			
0.0		60			15			SAND, fine to coarse; some silt; brown; wet. No odor.	
						SP			

Bottom of borehole at 20.0 feet.

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\IDRAFT\MHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

PROJECT NUMBER 20160501.B10 **DATE STARTED** 1/4/22
PROJECT NAME McCoy Stadium **DATE COMPLETED** 1/4/22
LOCATION 2 Columbus Avenue, Pawtucket, RI **CASING TYPE/DIAMETER** PVC / 1"
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner **SCREEN TYPE/SLOT/INTERVAL** Slotted/PVC / 0.010" / 5-15
HAMMER WEIGHT/FALL -- **GRAVEL PACK TYPE** Silica Sand
ELEVATION (FT) --- **GROUT TYPE/QUANTITY** Bentonite / 1
TOP OF CASING ---- **DEPTH TO WATER (FT)** 7.0
LOGGED BY Madelyn Sampson **GROUND WATER ELEVATION** ---
REMARKS No refusal encountered.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		42	GB 0104-13					SAND, fine to medium; little gravel; trace silt; light brown; dry. No odor.		
						FILL				
						SP		SAND, fine to coarse; little gravel; brown; dry. No odor.		
0.0		60			5			SAND, fine to coarse; little gravel; brown; wet at 7 feet. No odor.		
						SP				
0.0		60			10			SAND, fine to coarse; little gravel; brown; wet. No odor.		
						SP				

Bottom of borehole at 15.0 feet.

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\IDRAFT\MHS_MCCOY STADIUM BORING LOGS_20220113.GPJ


PROJECT NUMBER 20160501.B10 **DATE STARTED** 1/4/22
PROJECT NAME McCoy Stadium **DATE COMPLETED** 1/4/22
LOCATION 2 Columbus Avenue, Pawtucket, RI **CASING TYPE/DIAMETER** ----
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner **SCREEN TYPE/SLOT/INTERVAL** ----
HAMMER WEIGHT/FALL -- **GRAVEL PACK TYPE** ----
ELEVATION (FT) --- **GROUT TYPE/QUANTITY** ----
TOP OF CASING ---- **DEPTH TO WATER (FT)** 8.0
LOGGED BY Madelyn Sampson **GROUND WATER ELEVATION** ---
REMARKS No refusal encountered.


PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH
0.0		40	GB 0104-14					SAND, fine to medium; some gravel; trace silt; trace brick; light brown; dry. No odor.	
0.0		40			5			SAND, fine to medium; some gravel; trace silt; trace brick; trace ash; trace glass; light brown; wet at 8 feet. No odor.	
0.0		60			10			SAND, fine to coarse; trace gravel; light brown; wet. No odor.	

Bottom of borehole at 15.0 feet.

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\DRIFTMHS_MCCOY STADIUM BORING LOGS_20220113.GPJ


Draft - For Review


		RMA ENVIRONMENTAL LLC 20 MAIN STREET, WICKFORD, RHODE ISLAND 02852 ENGINEERS *** SCIENTISTS *** GIS SPECIALISTS				BORING NO. RMA22-1																					
						SHEET <u>1</u> OF <u>2</u> 1																					
PROJECT		McCoy Stadium Geotechnical Assessment 2 Columbus Avenue, Pawtucket, RI				PROJECT NO. 21225.00 CHKD. BY draft																					
BORING CO.		Subsurface Solutions, LLC		BORING LOCATION		SEE EXPLORATION LOCATION PLAN																					
FOREMAN		Tyler Perry		GROUND SURFACE ELEVATION		64 DATUM NAVD88																					
ENGINEER		Brandon Follansbee		DATE START		1/20/2022 DATE END 1/20/2022																					
SAMPLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 2" SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 in. CASING: UNLESS OTHERWISE NOTED, CASING DRIVEN USING 300 lb. HAMMER FALLING 24 IN. CASING SIZE: 3.25" OTHER:				GROUNDWATER READINGS <table border="1"> <tr> <th>DATE</th> <th>TIME</th> <th>WATER AT</th> <th>CASING AT</th> <th>STABILIZATION TIME</th> </tr> <tr> <td>1/21/22</td> <td>4pm</td> <td>5.5'</td> <td></td> <td>24 hr</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME	1/21/22	4pm	5.5'		24 hr										
DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME																							
1/21/22	4pm	5.5'		24 hr																							
DEPTH (ft)	CASING (lb/ft)	SAMPLE						SAMPLE DESCRIPTION	REMARKS	STRATUM DESCRIPTION																	
		NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"						TONS/FT ² OR KG/CM ²																
1		S-1	24 16	0-2	9	12	12	11		M. Dense, wet, grey to tan, F/C SAND, some Silt, little Gravel. Black silty F/C Sand lense then well-graded F/C Sand																	
2																											
3		S-2	24 12	2-4	7	5	3	2		Loose, wet, black to tan, F/C SAND, some Silt and Gravel, trace urban debris (coal ash)	2	Granular Fill 2															
4																											
5		S-3	24 0	4-6	woh					No sample - spoon fell to 7 feet, then WOH to 8 feet		Urban Fill 4															
6																											
7																											
8																											
9		S-4	24 24	8-10	1	0	1	11		V. Loose, wet, brown, Organic SILT, then grey, F/M SAND, trace Gravel at bottom	3	Organics / Peat 9.5															
10																											
11		S-5	24 9	10-12	7	13	8	7		M. Dense, wet, grey, F/C SAND and Gravel, some Silt																	
12																											
13																											
14																											
15																											
16		S-6	24 14	15-17	5	6	5	8		M. Dense, wet, tan, F/C SAND and Gravel, some Silt		Outwash															
17																											
18																											
19																											
20																											
21		S-7	24 6	20-22	34	14	7	7		M. Dense, wet, tan, F/C SAND and Gravel, some Silt	4																
22																											
23																											
24																											
25																											
26		S-8	4 2	25-27	100/4"					V. Dense, wet, grey/tan, F/C SAND and Gravel, trace Clay. Bottom of sample fractured grey rock	5	Till 25															
27												27															
28																											
29																											
30												Weathered Rock 30															
31		S-9	3 3	30-32	100/3"					V. Dense, wet, grey, weathered grey rock	6	Refusal															
32																											
GRANULAR SOILS				COHESIVE SOILS				REMARKS:				BURMISTER CLASSIFICATION															
BLOWS/FT		DENSITY		BLOWS/FT		DENSITY		1. Automatic Hammer / Geoprobe Hammer for Casing 2. Orange mottling observed at 3.5' 3. Peat is fibrous and rooty - Trans to outwash below is clayey 4. First 6" still in casing - Next 6" likely influenced by casing / wash friction 5. Boulder refusal at 25 feet - roller bit popped through at 28', refused at 30' on bedrock 6. NX Rock Core advanced from 30 to 38.5 feet. See next page				TRACE		0 - 10%													
0 - 4		V. LOOSE																									

 RMA ENVIRONMENTAL LLC 20 MAIN STREET, WICKFORD, RHODE ISLAND 02852 ENGINEERS *** SCIENTISTS *** GIS SPECIALISTS										BORING NO. <u>RMA22-1</u> SHEET <u>2</u> OF <u>3</u> 2	
PROJECT <u>McCoy Stadium Geotechnical Assessment</u> <u>2 Columbus Avenue, Pawtucket, RI</u>										PROJECT NO. <u>21230.00</u> CHKD. BY <u>draft</u>	
DEPTH (ft)	CASING (b/ft)	SAMPLE						SAMPLE DESCRIPTION	REMARKS	STRATUM DESCRIPTION	
		NO.	PEN. (in.)/ REC.	DEPTH (FT)	BLOWS/6"	TONS/FT ² OR KG/CM ²	Burmister CLASSIFICATION				
33											
34											
35											
36											
37											
38											
39											
40											
41											
42											
43											
44											
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72											
73											
74											
GRANULAR SOILS		COHESIVE SOILS		REMARKS:							
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY	1. Automatic Hammer / Geoprobe Hammer for Casing							
0 - 4	V. LOOSE	<2	V. SOFT	Burmister CLASSIFICATION TRACE 0 - 10% LITTLE 10 - 20% SOME 20 - 35% AND 35 - 50% PERCENT BY WEIGHT							
4 - 10	LOOSE	2 - 4	SOFT								
10 - 30	M. DENSE	4 - 8	M. STIFF								
30 - 50	DENSE	8 - 15	STIFF								
>50	V. DENSE	15 - 30	V. STIFF								
		>30	HARD								
NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE. 3) THE GROUND SURFACE ELEVATION WAS INTERPOLATED TO THE NEAREST 1/2 FOOT BASED ON CONTOURS DERIVED FROM 2011 RIGIS LIDAR										Fine F Medium M Coarse C	
BORING NO. <u>RMA22-1</u>											

RMA ENVIRONMENTAL LLC 20 MAIN STREET, WICKFORD, RHODE ISLAND 02852 ENGINEERS *** SCIENTISTS *** GIS SPECIALISTS															BORING NO. RMA22-2 SHEET <u>1</u> OF <u>2</u> 1																																																																																																																																																																																																																																																																																																																																																																																																																																			
PROJECT <u>McCoy Stadium Geotechnical Assessment</u> <u>2 Columbus Avenue, Pawtucket, RI</u>										PROJECT NO. <u>21225.00</u> CHKD. BY <u>draft</u>																																																																																																																																																																																																																																																																																																																																																																																																																																								
BORING CO. <u>Subsurface Solutions, LLC</u> FOREMAN <u>Tyler Perry</u> ENGINEER <u>Brandon Follansbee</u>					BORING LOCATION <u>SEE EXPLORATION LOCATION PLAN</u> GROUND SURFACE ELEVATION <u>64</u> DATUM <u>NAVD88</u> DATE START <u>1/21/2022</u> DATE END <u>1/21/2022</u>																																																																																																																																																																																																																																																																																																																																																																																																																																													
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Dense, moist, tan, SILT and F Sand, trace Gravel, then grey, moist, F/C SAND, little to some Silt and Gravel</td> <td></td> <td rowspan="5">Urban Fill</td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td>S-3</td> <td>24 16</td> <td>4-6</td> <td>11</td> <td>17</td> <td>17</td> <td>29</td> <td></td> <td>Dense, moist, tan, F/C SAND, some Silt, little Gravel (cobbles at bottom)</td> <td></td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>7</td> <td></td> <td>S-4</td> <td>24 16</td> <td>6-8</td> <td>10</td> <td>16</td> <td>14</td> <td>17</td> <td></td> <td>Dense, wet, tan, F/C SAND and Gravel, little to some Silt</td> <td></td> </tr> <tr> <td>8</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>9</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>10</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>10.5'</td> </tr> <tr> <td>11</td> <td></td> <td>S-5</td> <td>24 13</td> <td>10-12</td> <td>12</td> <td>6</td> <td>6</td> <td>8</td> <td></td> <td>M. 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RMA ENVIRONMENTAL LLC 20 MAIN STREET, WICKFORD, RHODE ISLAND 02852 ENGINEERS *** SCIENTISTS *** GIS SPECIALISTS															BORING NO. RMA22-3 SHEET <u>1</u> OF <u>2</u> 1																			
PROJECT <u>McCoy Stadium Geotechnical Assessment</u> <u>2 Columbus Avenue, Pawtucket, RI</u>										PROJECT NO. <u>21225.00</u> CHKD. BY <u>draft</u>																								
BORING CO. <u>Subsurface Solutions, LLC</u> FOREMAN <u>Tyler Perry</u> ENGINEER <u>Brandon Follansbee</u>					BORING LOCATION <u>SEE EXPLORATION LOCATION PLAN</u> GROUND SURFACE ELEVATION <u>64</u> DATUM <u>NAVD88</u> DATE START <u>1/21/2022</u> DATE END <u>1/21/2022</u>																													
SAMPLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 2" SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 in. CASING: UNLESS OTHERWISE NOTED, CASING DRIVEN USING 300 lb. HAMMER FALLING 24 IN. CASING SIZE: <u>3.25"</u> OTHER:										GROUNDWATER READINGS <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>DATE</th> <th>TIME</th> <th>WATER AT</th> <th>CASING AT</th> <th>STABILIZATION TIME</th> </tr> <tr> <td>1/21/2022</td> <td>4pm</td> <td>5.1'</td> <td></td> <td>EOB</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>					DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME	1/21/2022	4pm	5.1'		EOB										
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3		S-2	24 14	2-4	10	8	12	5		M. Dense, moist, brown to black, F/C SAND, some Silt, trace Gravel, trace urban debris		Urban Fill	4'																					
4																																		
5																																		
6		S-3	24 20	5.5-7.5	9	9	10	11		M. Dense, moist to wet, grey, F/M SAND, little Silt		Peat	5.5'																					
7																																		
8		S-4	30 26	7.5-10	8	9	11	11		M. Dense, wet, tan to grey, F/M SAND, some Silt, trace Gravel																								
9																																		
10																																		
11		S-5	24 20	10-12	5	9	11	8		M. Dense, wet, tan, F/M SAND, little to some Silt, trace to little Gravel																								
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14																																		
15																																		
16		S-6	24 14	15-17	5	4	6	9		M. Dense, wet, tan, F/C SAND, little Silt and Gravel		Outwash																						
17																																		
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19																																		
20																																		
21		S-7	24 10	20-22	7	7	10	10		M. Dense, wet, tan, F SAND and Gravel, little to some M/C Sand, little Silt																								
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25																																		
26		S-8	24 10	25-27	11	9	10	21		M. Dense, wet, tan, F/C SAND and Gravel, some Silt																								
27																																		
28										macro: trans to Till - compact F/C SAND, Silt, and Gravel																								
29																																		
30																																		
31		S-9	20 16	30-32	13	14	18	100/2"		Dense, wet, grey to brown, F/C SAND, Gravel and Silt, trace Clay																								
32												Refusal End of Boring																						
GRANULAR SOILS			COHESIVE SOILS			REMARKS: 1. Automatic Hammer / Geoprobe Hammer for Casing 2. Spoon sank to 5.5' during 4-6 ft sample interval. Approx. 18" of peat observed in macro sampler. Sample S-3 had little to no organics present 3. Drove spoon additional 6" to 10 feet (13 blows) 4. Drove 1" point for 30 seconds with direct push hammer for 2" of pen.					BURMISTER CLASSIFICATION																							
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY	TRACE							0 - 10%																							
0 - 4	V. LOOSE	<2	V.SOFT	LITTLE							10 - 20%																							
4 - 10	LOOSE	2 - 4	SOFT	SOME							20 - 35%																							
10 - 30	M.DENSE	4 - 8	M.STIFF	AND							35 - 50%																							
30 - 50	DENSE	8 - 15	STIFF	PERCENT BY WEIGHT																														
>50	V.DENSE	15 - 30	V.STIFF																															
		>30	HARD																															
NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE. 3) THE GROUND SURFACE ELEVATION WAS INTERPOLATED TO THE NEAREST 1/2 FOOT BASED ON CONTOURS DERIVED FROM 2011 RIGIS LIDAR										Fine		F																						
										Medium		M																						
										Coarse		C																						
										BORING NO.		RMA22-3																						

 RMA ENVIRONMENTAL LLC 20 MAIN STREET, WICKFORD, RHODE ISLAND 02852 ENGINEERS *** SCIENTISTS *** GIS SPECIALISTS		BORING NO. RMA22-4																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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PROJECT <u>McCoy Stadium Geotechnical Assessment</u>		PROJECT NO. <u>21225.00</u>																																																																																																																																																																																																																																																																																																																																																																																																																																																					
<u>2 Columbus Avenue, Pawtucket, RI</u>		CHKD. BY <u>draft</u>																																																																																																																																																																																																																																																																																																																																																																																																																																																					
BORING CO. <u>Subsurface Solutions, LLC</u>		BORING LOCATION <u>SEE EXPLORATION LOCATION PLAN</u>																																																																																																																																																																																																																																																																																																																																																																																																																																																					
FOREMAN <u>Tyler Perry</u>		GROUND SURFACE ELEVATION <u>67</u> DATUM <u>NAVD88</u>																																																																																																																																																																																																																																																																																																																																																																																																																																																					
ENGINEER <u>Brandon Follansbee</u>		DATE START <u>1/24/2022</u> DATE END <u>1/24/2022</u>																																																																																																																																																																																																																																																																																																																																																																																																																																																					
SAMPLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 2" SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 in. CASING: UNLESS OTHERWISE NOTED, CASING DRIVEN USING 300 lb. HAMMER FALLING 24 IN. CASING SIZE: <u>3.25"</u> OTHER:		GROUNDWATER READINGS <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>DATE</th> <th>TIME</th> <th>WATER AT</th> <th>CASING AT</th> <th>STABILIZATION TIME</th> </tr> <tr> <td>1/24/2022</td> <td>3pm</td> <td>4.2'</td> <td></td> <td>EOB</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>		DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME	1/24/2022	3pm	4.2'		EOB																																																																																																																																																																																																																																																																																																																																																																																																																																										
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Dense, wet, tan, F/C SAND, little Gravel and Silt</td> <td></td> <td>Outwash</td> </tr> <tr> <td>17</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>18</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>19</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>20</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>21</td> <td></td> <td>S-8</td> <td>24 0</td> <td>20-22</td> <td>22</td> <td>25</td> <td>23</td> <td>6</td> <td></td> <td>Dense, no recovery</td> <td></td> <td></td> </tr> <tr> <td>22</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>23</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>macro: wet, tan, F/C SAND and Gravel, little Silt, then trans to a loose F/M SAND and Silt. 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PEN. (in./REC.)	DEPTH (FT)	BLOWS/6"				1		S-1	24 20	0-2	3	4	8	7		M. Dense, moist, brown, F SAND and Silt, trace Gravel, then F/C SAND, some Gravel and Silt	2	Topsoil	2													3		S-2	24 20	2-4	6	16	31	24		Dense, moist, brown, F/C SAND and Silt, little to some Gravel, trace urban debris	3	Urban Fill	4													5		S-3	24 15	4-6	7	7	6	4		M. Dense, moist to wet, brown to black, F/C SAND, some Silt, little to some Gravel, trace urban debris			6												6.5'	7		S-4	24 19	6-8	2	1	0	1		V. Loose, wet, black, top same as S-3, then organic Silt, and to some F Sand, trace roots		Peat	8													9		S-5	24 16	8-10	7	8	9	11		M. Dense, wet, grey to tan, F/C SAND, some Gravel, little Silt			10													11		S-6	24 15	10-12	11	17	18	16		Dense, wet, tan, F/C SAND, little Gravel and Silt			12													13													14													15													16		S-7	24 10	15-17	11	9	8	19		M. Dense, wet, tan, F/C SAND, little Gravel and Silt		Outwash	17													18													19													20													21		S-8	24 0	20-22	22	25	23	6		Dense, no recovery			22													23										macro: wet, tan, F/C SAND and Gravel, little Silt, then trans to a loose F/M SAND and Silt. Casing drove final 2' quickly	3		24													25													26		S-9	24 0	25-27	1	0	2	4		V. Loose, no recovery			27													28										macro: same as sample S-10			29													30													31		S-10	24 20	30-32	3	3	4	5		Loose, wet, tan, F/M to F/C SAND, little Silt, trace Gravel			32													REMARKS: 1. Automatic Hammer / Geoprobe Hammer for Casing 2. 12" frost 3. Hammer was poorly positioned on anvil influencing high blows		BURMISTER CLASSIFICATION TRACE 0 - 10% LITTLE 10 - 20% SOME 20 - 35% AND 35 - 50% PERCENT BY WEIGHT
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23										macro: wet, tan, F/C SAND and Gravel, little Silt, then trans to a loose F/M SAND and Silt. Casing drove final 2' quickly	3																																																																																																																																																																																																																																																																																																																																																																																																																																												
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26		S-9	24 0	25-27	1	0	2	4		V. Loose, no recovery																																																																																																																																																																																																																																																																																																																																																																																																																																													
27																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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31		S-10	24 20	30-32	3	3	4	5		Loose, wet, tan, F/M to F/C SAND, little Silt, trace Gravel																																																																																																																																																																																																																																																																																																																																																																																																																																													
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NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE. 3) THE GROUND SURFACE ELEVATION WAS INTERPOLATED TO THE NEAREST 1/2 FOOT BASED ON CONTOURS DERIVED FROM 2011 RIGIS LIDAR											Fine F Medium M Coarse C																																																																																																																																																																																																																																																																																																																																																																																																																																												
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 RMA ENVIRONMENTAL LLC 20 MAIN STREET, WICKFORD, RHODE ISLAND 02852 ENGINEERS *** SCIENTISTS *** GIS SPECIALISTS															BORING NO. <u>RMA22-4</u>	
PROJECT <u>McCoy Stadium Geotechnical Assessment</u>															PROJECT NO. <u>21225.00</u>	
<u>2 Columbus Avenue, Pawtucket, RI</u>															CHKD. BY <u>draft</u>	
DEPTH (ft)	CASING (b/ft)	SAMPLE							SAMPLE DESCRIPTION	REMARKS	STRATUM DESCRIPTION					
		NO.	PEN. (in.)/ REC. 3 Solu	DEPTH (FT)	BLOWS/6"			TONS/FT ² OR KG/CM ²								
33																
34																
35																
36		S-11	24 12	35-37	3	3	3	4	Loose, wet, tan, F/M SAND, some to little Silt. Lens of F SAND (1")		Outwash					
37																
38																
39									macro: F/M SAND, some to little Silt							
40																
41		S-12	24 18	40-42	4	3	6	9	M. Dense, wet, tan, F/C SAND, little Silt, trace Gravel							
42										2	42'					
43		S-13	24 -	42-44	95	46	80	160	V. Dense, wet, grey, F/C SAND and Silt, little to some Silt, little to some fractured rock, trace clay	3						
44																
45		S-14	18 -	44-46					Wet, grey, weathered rock and F/C SAND and Silt, trace Clay	4	Till & Weathered Rock 45.5'					
46																
47											Refusal					
48											End of Boring					
49																
50																
51																
52																
53																
54																
55																
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70																
71																
72																
73																
74																
GRANULAR SOILS				COHESIVE SOILS				REMARKS:								
BLOWS/FT		DENSITY		BLOWS/FT		DENSITY		1. Automatic Hammer / Geoprobe Hammer for Casing 2. Casing stopped advancing at 42' - sent spoon 3. Spoon damaged - sample tapped out of spoon to observe 4. Direct pushed 5' spoon to 45.5' - recovered weathered grey sandstone				BURMISTER CLASSIFICATION				
0 - 4		V. LOOSE		<2		V.SOFT						TRACE		0 - 10%		
4 - 10		LOOSE		2 - 4		SOFT						LITTLE		10 - 20%		
10 - 30		M.DENSE		4 - 8		M.STIFF						SOME		20 - 35%		
30 - 50		DENSE		8 - 15		STIFF						AND		35 - 50%		
>50		V.DENSE		15 - 30		V.STIFF						PERCENT BY WEIGHT				
>30		HARD														
NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE. 3) THE GROUND SURFACE ELEVATION WAS INTERPOLATED TO THE NEAREST 1/2 FOOT BASED ON CONTOURS DERIVED FROM 2011 RIGIS LIDAR												Fine F Medium M Coarse C				
BORING NO. <u>RMA22-4</u>																

RMA ENVIRONMENTAL LLC 20 MAIN STREET, WICKFORD, RHODE ISLAND 02852 ENGINEERS *** SCIENTISTS *** GIS SPECIALISTS										BORING NO. RMA22-5 SHEET <u>1</u> OF <u>2</u> 1				
PROJECT <u>McCoy Stadium Geotechnical Assessment</u>										PROJECT NO. <u>21225.00</u>				
<u>2 Columbus Avenue, Pawtucket, RI</u>										CHKD. BY <u>draft</u>				
BORING CO. <u>Subsurface Solutions, LLC</u>				BORING LOCATION <u>SEE EXPLORATION LOCATION PLAN</u>										
FOREMAN <u>Tyler Perry</u>				GROUND SURFACE ELEVATION <u>66.5</u> DATUM <u>NAVD88</u>										
ENGINEER <u>Brandon Follansbee</u>				DATE START <u>1/24/2022</u> DATE END <u>1/25/2022</u>										
SAMPLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 2" SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 in.										GROUNDWATER READINGS				
CASING: UNLESS OTHERWISE NOTED, CASING DRIVEN USING 300 lb. HAMMER FALLING 24 IN.										DATE 1/25/2022	TIME 8am	WATER AT 5.2	CASING AT 	STABILIZATION TIME 14 hrs
CASING SIZE: <u>3.25"</u> OTHER:														
DEPTH (ft)	CASING (bit)	SAMPLE							SAMPLE DESCRIPTION		REMARKS	STRATUM DESCRIPTION		
		NO.	PEN. (in./REC.)	DEPTH (FT)	BLOWS/6"				TONS/FT ² OR KG/CM ²	Burmister			CLASSIFICATION	
1		S-1	24 19	0-2	8	9	9	11		M. Dense, moist, brown, Silt and F SAND, then F/C SAND, little Gravel, some Silt		2	Topsoil	1'
2										macro: significant VOC odor				
3														
4														
5														
6		S-2	24 21	5-7	1	0	0	1		V. Loose, wet, brown to black, Organic Silt, trace Roots, fibers. Trans to S-3 material at 7', VOC odor			Peat	5'
7														
8														
9														
10														
11		S-3	24 16	10-12	7	8	8	11		M. Dense, wet, grey, F/M SAND, little Silt, trace Gravel, VOC odor				
12														
13														
14														
15														
16		S-4	24 17	15-17	6	8	8	9		M. Dense, wet, grey, F SAND and Silt, trace Clay (embedded)			Outwash (SP-SM)	
17														
18														
19										macro: F SAND, some Silt, VOC odor				
20														
21		S-5	24 18	20-22	4	5	5	7		M. Dense, wet, grey, F SAND, some Silt, VOC odor				
22														
23										macro: trans to tan, F SAND, little Silt, VOC odor				
24														
25														
26		S-6	24 10	25-27	1	3	4	5		Loose, wet, tan, F SAND, little Silt, VOC odor				
27														
28														
29														
30														
31		S-7	24 16	30-32	4	6	9	10		M. Dense, wet, tan, F SAND and Silt, interbedded with Silt - varved, VOC odor				
32														
GRANULAR SOILS				COHESIVE SOILS				REMARKS:				BURMISTER CLASSIFICATION		
BLOWS/FT		DENSITY		BLOWS/FT		DENSITY						TRACE		0 - 10%
0 - 4		V. LOOSE		<2		V.SOFT		LITTLE		10 - 20%				
4 - 10		LOOSE		2 - 4		SOFT		SOME		20 - 35%				
10 - 30		M.DENSE		4 - 8		M.STIFF		AND		35 - 50%				
30 - 50		DENSE		8 - 15		STIFF		PERCENT BY WEIGHT						
>50		V.DENSE		15 - 30		V.STIFF								
				>30		HARD								
NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE. 3) THE GROUND SURFACE ELEVATION WAS INTERPOLATED TO THE NEAREST 1/2 FOOT BASED ON CONTOURS DERIVED FROM 2011 RIGIS LIDAR												Fine	F	
												Medium	M	
												Coarse	C	
												BORING NO. RMA22-5		

RMA ENVIRONMENTAL LLC 20 MAIN STREET, WICKFORD, RHODE ISLAND 02852 ENGINEERS *** SCIENTISTS *** GIS SPECIALISTS															BORING NO. RMA22-5 SHEET <u>2</u> OF <u>2</u> 2	
PROJECT <u>McCoy Stadium Geotechnical Assessment</u> <u>2 Columbus Avenue, Pawtucket, RI</u>										PROJECT NO. <u>21225.00</u> CHKD. BY <u>draft</u>						
DEPTH (ft)	CASING (b/ft)	SAMPLE							SAMPLE DESCRIPTION	REMARKS	STRATUM DESCRIPTION					
		NO.	PEN. (in.)/ REC. 3 Solu	DEPTH (FT)	BLOWS/6"							TONS/FT ² OR KG/CM ²				
33										macro: wet, tan, F SAND and Silt, alternating layers trace clay	2	(SP-SM)				
34																
35										M. Dense, wet, tan, F/C SAND, some Gravel and Silt		Outwash				
36		S-8	24 12	35-37	13	11	8	8								
37										macro: no change		(SM)				
38																
39										M. Dense, wet, tan, F/C SAND, some to little Gravel, little Silt						
40																
41		S-9	24 10	40-42	3	5	4	5								
42																
43																
44																
45																
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GRANULAR SOILS		COHESIVE SOILS		REMARKS:		BURMISTER CLASSIFICATION	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY	1. Automatic Hammer / Geoprobe Hammer for Casing 2. Material courses significantly at 35' to F/C SAND and Gravels		TRACE	0 - 10%
0 - 4	V. LOOSE	<2	V. SOFT			LITTLE	10 - 20%
4 - 10	LOOSE	2 - 4	SOFT			SOME	20 - 35%
10 - 30	M. DENSE	4 - 8	M. STIFF			AND	35 - 50%
30 - 50	DENSE	8 - 15	STIFF			PERCENT BY WEIGHT	
>50	V. DENSE	15 - 30	V. STIFF				
				NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE. 3) THE GROUND SURFACE ELEVATION WAS INTERPOLATED TO THE NEAREST 1/2 FOOT BASED ON CONTOURS DERIVED FROM 2011 RIGIS LIDAR		Fine	F
						Medium	M
						Coarse	C
						BORING NO. RMA22-5	

RMA ENVIRONMENTAL LLC 20 MAIN STREET, WICKFORD, RHODE ISLAND 02852 ENGINEERS *** SCIENTISTS *** GIS SPECIALISTS										BORING NO. RMA22-6 SHEET <u>1</u> OF <u>2</u> 1																
PROJECT <u>McCoy Stadium Geotechnical Assessment</u> <u>2 Columbus Avenue, Pawtucket, RI</u>								PROJECT NO. <u>21225.00</u> CHKD. BY <u>draft</u>																		
BORING CO. <u>Subsurface Solutions, LLC</u> FOREMAN <u>Tyler Perry</u> ENGINEER <u>Brandon Follansbee</u>				BORING LOCATION <u>SEE EXPLORATION LOCATION PLAN</u> GROUND SURFACE ELEVATION <u>66.5</u> DATUM <u>NAVD88</u> DATE START <u>1/25/2022</u> DATE END <u>1/25/2022</u>																						
SAMPLER: UNLESS OTHERWISE NOTED, SAMPLER CONSISTS OF A 2" SPLIT SPOON DRIVEN USING A 140 lb. HAMMER FALLING 30 in.										GROUNDWATER READINGS <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>DATE</th> <th>TIME</th> <th>WATER AT</th> <th>CASING AT</th> <th>STABILIZATION TIME</th> </tr> <tr> <td>1/25/2022</td> <td>3 pm</td> <td>5.6</td> <td></td> <td>EOB</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>		DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME	1/25/2022	3 pm	5.6		EOB					
DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME																						
1/25/2022	3 pm	5.6		EOB																						
CASING: UNLESS OTHERWISE NOTED, CASING DRIVEN USING 300 lb. HAMMER FALLING 24 IN.																										
CASING SIZE: <u>3.25"</u> OTHER:																										
DEPTH (ft)	CASING (bit)	SAMPLE							SAMPLE DESCRIPTION	REMARKS	STRATUM DESCRIPTION															
		NO.	PEN. (in./REC.)	DEPTH (FT)	BLOWS/6"							TONS/FT ² OR KG/CM ²														
1		S-1	24 20	0-2	5	3	1	1		V. Loose, moist, brown, F/C SAND, some Silt and Gravel, trace urban debris	2	Topsoil 1'														
2																										
3																										
4																										
5																										
6		S-2	24 20	5-7	5	6	2	2		Loose, moist to wet, brown to tan, F/C SAND, some Silt, Gravel and urban debris		Urban Fill														
7																										
8																										
9												9'														
10																										
11		S-3	24 20	10-12	1	0	0	1		V. Loose, wet, brown to grey, Organic SILT, trace roots, then grey, F SAND and Silt, trace roots		Peat 11'														
12																										
13																										
14										macro: F SAND and Silt																
15																										
16		S-4	24 12	15-17	2	3	2	4		Loose, wet, grey, F SAND and Silt		Outwash (SP-SM)														
17																										
18										macro: F/M SAND, trans to tan 19'																
19																										
20																										
21		S-5	24 14	20-22	3	3	4	3		Loose, wet, tan, F/C SAND, some to little Silt, little Gravel		(SM)														
22																										
23										macro: F/C SAND, little Gravel and Silt																
24																										
25																										
26		S-6	24 14	25-27	4	9	11	10		M. Dense, wet, tan, F/C SAND, some Gravel, little Silt																
27																										
28																										
29																										
30																										
31		S-7	24 1	30-32	6	8	8	6		M. Dense, wet, tan to grey, same as S-6																
32																										
GRANULAR SOILS BLOWS/FT DENSITY 0 - 4 V. LOOSE 4 - 10 LOOSE 10 - 30 M.DENSE 30 - 50 DENSE >50 V.DENSE				COHESIVE SOILS BLOWS/FT DENSITY <2 V.SOFT 2 - 4 SOFT 4 - 8 M.STIFF 8 - 15 STIFF 15 - 30 V.STIFF >30 HARD				REMARKS: 1. Automatic Hammer / Geoprobe Hammer for Casing 2. Frost 12"		BURMISTER CLASSIFICATION																
										TRACE 0 - 10% LITTLE 10 - 20% SOME 20 - 35% AND 35 - 50% PERCENT BY WEIGHT																
NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE. 3) THE GROUND SURFACE ELEVATION WAS INTERPOLATED TO THE NEAREST 1/2 FOOT BASED ON CONTOURS DERIVED FROM 2011 RIGIS LIDAR										Fine F Medium M Coarse C																
										BORING NO. RMA22-6																

 RMA ENVIRONMENTAL LLC 20 MAIN STREET, WICKFORD, RHODE ISLAND 02852 ENGINEERS *** SCIENTISTS *** GIS SPECIALISTS															BORING NO. RMA22-6 SHEET <u>2</u> OF <u>2</u> 2		
PROJECT <u>McCoy Stadium Geotechnical Assessment</u> <u>2 Columbus Avenue, Pawtucket, RI</u>										PROJECT NO. <u>21225.00</u> CHKD. BY <u>draft</u>							
DEPTH (ft)	CASING (b/ft)	SAMPLE							SAMPLE DESCRIPTION	REMARKS	STRATUM DESCRIPTION						
		NO.	PEN. (in.)/ REC. 3 Solu	DEPTH (FT)	BLOWS/6"			TONS/FT ² OR KG/CM ²									
33																	
34																	
35																	
36		S-8	24 8	35-37	7	21	10	9	M. Dense, wet, grey, F/C SAND and Silt, some Gravel, trace Clay	2	Outwash (SM) 35'						
37																	
38																	
39									macro: same as S-8								
40																	
41		S-9	24 12	40-42	26	29	11	102	Dense, wet, grey, weathered grey rock		40'						
42																	
43																	
44																	
45									Monitoring Well Construction Notes								
46																	
47									1" PVC SCH 40								
48									Bottom of Well: 15'								
49									Screen: 15' to 5' (0.0012" slots)								
50									Bentonite Seal: 5' to 4'								
51									Riser: 4' to grade								
52									Filter sand used from bottom of well to top of screen								
53									Tailings backfilled boring above seal to grade								
54																	
55																	
56																	
57																	
58																	
59																	
60																	
61																	
62																	
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72																	
73																	
74																	
GRANULAR SOILS				COHESIVE SOILS				REMARKS:									
BLOWS/FT		DENSITY		BLOWS/FT		DENSITY		1. Automatic Hammer / Geoprobe Hammer for Casing									
0 - 4		V. LOOSE		<2		V.SOFT		BURMISTER CLASSIFICATION TRACE 0 - 10% LITTLE 10 - 20% SOME 20 - 35% AND 35 - 50% PERCENT BY WEIGHT									
4 - 10		LOOSE		2 - 4		SOFT											
10 - 30		M.DENSE		4 - 8		M.STIFF											
30 - 50		DENSE		8 - 15		STIFF											
>50		V.DENSE		15 - 30		V.STIFF											
				>30		HARD											
NOTES: 1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THE BORING LOGS. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE. 3) THE GROUND SURFACE ELEVATION WAS INTERPOLATED TO THE NEAREST 1/2 FOOT BASED ON CONTOURS DERIVED FROM 2011 RIGIS LIDAR																	
										Fine F Medium M Coarse C							
BORING NO.										RMA22-6							

SOIL BORING/MONITOR WELL CONSTRUCTION LOG

SAGE ENVIRONMENTAL, INC.

DRILLED
BY: BSI/ADHWELL
NUMBER: MW-1DRILLING
METHOD: VACUUM/GEOPROBEPROJECT
NUMBER: S1239SAMPLING HAND AUGER/
METHOD: MACRO-CORE

LOCATION: MCCOY STADIUM

SCREENING
INSTRUMENT: HNU HW-101

DATE: 4/20/00

DEPTH
TO WATER: 8.5LOGGED
BY: TCS

RISER: PVC TYPE SCH 40

DIAMETER 1.25" LENGTH 6'

WELL
SEAL: 4' - 5' BENTONITEHOLE
DIA.: 2"

SCREEN: PVC TYPE SCH 40 SLOT 10

DIAMETER 1.25" LENGTH 10'

SAND
PACK: 5' - 16' FILTER SANDTOTAL
DEPTH: 16'

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
						CONCRETE ROAD BOX LOCKING CAP	
	0						
	1			DRY	NS		Dark brown loam, some coarse SAND, some small gravel, some shells, some organics and bricks, loose
HS-1	2				0		Sample interval 2' - 2.5'
	3			DRY	NS		Same as above
HS-2	4				2.5		Sample interval 4' - 4.5'
	5			DRY	NS		Same as above, some small cobbles, wood debris
HS-3	6			MOIST	0		Sample interval 6' - 6.5'
	7			MOIST	NS		Same as above, soil wet, Vacuum drilling ceased @ 7'
S-1A	8	100%			0		Same as above not sampled
S-1B	9			WET	0		Medium to coarse SAND, dark brown, loose
	10						Fine SAND, silty, grey
S-1C	11			WET	0		Fine SAND, silty, reddish tint
	12						
S-2	13			WET	0		
	14	100%					Fine SAND, silt, grey, loose, tan
	15						
	16						END OF BORING @ 16'
	17						
	18						4' - 4.5' sample interval submitted for analysis
	19						
	20						

SOIL BORING/MONITOR WELL CONSTRUCTION LOG

SAGE ENVIRONMENTAL, INC.

						DRILLED BY: BSI/ADH		WELL NUMBER: MW-2					
						DRILLING METHOD: VACUUM/GEOPROBE		PROJECT NUMBER: S1239					
						SAMPLING METHOD: HAND AUGER/MACRO-CORE		LOCATION: MCCOY STADIUM					
						SCREENING INSTRUMENT: HNU HW-101		DATE: 4/20/00					
						DEPTH TO WATER: 8'		LOGGED BY: TCS					
RISER: PVC		TYPE: SCH 40		DIAMETER: 1.25"		LENGTH: 6'		WELL SEAL: 4' - 5' BENTONITE		HOLE DIA.: 2"			
SCREEN: PVC		TYPE: SCH 40		SLOT: 10		DIAMETER: 1.25"		LENGTH: 10'		SAND PACK: 5' - 16' FILTER SAND		TOTAL DEPTH: 16'	
SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION		SOILS DESCRIPTION					
	0					CONCRETE ROAD BOX LOCKING CAP							
	1			DRY	NS	CUTTINGS RISER CUTTINGS		Light brown, medium to coarse SAND, large % small to medium gravel					
HS-1	2				0			Sample interval 2' - 2.5'					
	3			DRY	NS			Same as above					
HS-2	4				2	BENTONITE		Sample interval 4' - 4.5'					
	5			DRY	NS	BENTONITE		Fine to medium SAND, organics, trace small gravel					
HS-3	6				0			Sample interval 6' - 6.5'					
	7			MOIST	NS			Same as above Vacuum drilling ceased @ 7.5'					
S-1	8	100%			0	FILTER SAND SCREEN FILTER SAND		Dark brown, loam with organics, dense					
S-2A	9			WET	0			Fine to medium SAND, grey, loose, trace silt, well sorted					
S-2B	10	100%		WET	0			Fine SAND and silt, grey, dense					
	11					FILTER SAND SCREEN FILTER SAND							
S-3	12			WET	0								
	13												
	14	100%				FILTER SAND SCREEN FILTER SAND		Grey, grey red, fine SAND, loose					
	15												
	16							END OF BORING @ 16'					
	17							8' - 11' sample interval submitted for analysis					
	18												
	19												
	20												

SOIL BORING/MONITOR WELL CONSTRUCTION LOG

SAGE ENVIRONMENTAL, INC.

DRILLED BY: BSI/ADH		WELL NUMBER: MW-3	
DRILLING METHOD: VACUUM/GEOPROBE		PROJECT NUMBER: S1239	
SAMPLING METHOD: HAND AUGER/MACRO-CORE		LOCATION: MCCOY STADIUM	
SCREENING INSTRUMENT: HNU HW-101		DATE: 4/20/00	
DEPTH TO WATER: 8'		LOGGED BY: TCS	
RISER: PVC TYPE SCH 40 DIAMETER 1.25" LENGTH 6'		WELL SEAL: 4' - 5' BENTONITE	HOLE DIA.: 2"
SCREEN: PVC TYPE SCH 40 SLOT 10 DIAMETER 1.25" LENGTH 10'		SAND PACK: 5' - 16' FILTER SAND	TOTAL DEPTH: 16'

SAMPLE NO.	DEPTH	SAMPLE RECOVERY	BLOW COUNT PER 6"	MOISTURE CONTENT	SCREENING RESULTS (ppm)	WELL CONSTRUCTION	SOILS DESCRIPTION
						CONCRETE ROAD BOX LOCKING CAP	
	0						
	1			DRY	NS		Dark brown loam with medium to coarse SAND, some small gravel, loose
HS-1	2				0	CUTTINGS	2 x 4 board encountered at approximately 2'
	3			DRY	NS		Sample interval 2' - 2.5'
	4						Same as above
HS-2	5				0	BENTONITE	Sample interval 4' - 4.5'
	6			DRY	NS		Same as above
HS-3	7				0		Sample interval 6' - 6.5'
	8			MOIST	NS	FILTER SAND	Same as above
S-1A	9				0	SCREEN	Vacuum drilling ceased @ 8'
S-1B	10	75%		WET	0		Same as above, wet
	11						Grey fine sand and silt, dense
S-1C	12			WET	0		Fine silty SAND, grey with redish tint, loose
	13						
S-2	14	50%		WET	0		Fine to medium SAND, some silt, loose
	15						
	16						END OF BORING @ 16'
	17						
	18						8.5' - 10' sample interval submitted for analysis
	19						
	20						



APPENDIX C

RECENT BORING LOGS



EXPLORATION NO.: GZ-01
SHEET: 1 of 1
PROJECT NO: 35453.00
REVIEWED BY: James Marsland


H. Datum:

V. Datum: NAVD 88


Date	Time	Stab. Time	Water	Casing
11/6/24	8:40	0 Hours	8.0	

Depth (ft.)	Casing Blows/ (Core Rate)	Sample						Sample Description (Modified Burmister Classification)	Remark	Stratum	
		No.	Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	SPT Value			Depth (ft.)	Description Elev. (ft.)
5		S-1	0.0-2.0	24	18	12 26 27 32	53	S-1: Very dense, dark brown, fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Cinders		FILL	7 ----- 58.0
		S-2	2.0-4.0	24	13	19 24 16 18	40	S-2: Dense, dark brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, trace Cinders			
		S-3	4.0-6.0	24	10	6 13 14 13	27	S-3: Medium dense, brown, fine to coarse SAND, some Silt, little fine Gravel, trace Cinders			
		S-4	6.0-8.0	24	6	5 4 1 2	5	S-4: Loose, dark brown/black, fine to coarse SAND, some Silt, trace Organic Silt, trace Cinders			
		S-5	8.0-10.0	24	19	2 2 2 2	4	S-5: Loose, dark brown, ORGANIC SILT, trace fine to medium Sand, trace Roots			
		S-6	10.0-12.0	24	19	3 2 3 21	5	S-6: Top 6": Dark brown, FINE GRAINED PEAT, trace Roots Bottom 13": Dark brown, ORGANIC SILT, little fine to medium Sand, trace Roots			
		S-7	12.0-14.0	24	16	30 40 48 32	88	S-7: Very dense, gray, SILT, some fine Sand, trace fine Gravel			
		S-8	14.0-16.0	24	9	18 18 17 20	35	S-8: Dense, gray, fine to medium SAND and SILT, trace fine Gravel			
10										10 ----- 55.0	
										11 ----- 54.0	
15										12 ----- 53.0	
20											
25											
End of exploration at 16 feet											16 ----- 49.0

GZA TEMPLATE TEST BORING - GZA GINT DATA TEMPLATE 10-27-20.GDT - 1/10/25 09:03 - J:\GINT PROJECT DATABASES\35453.00 - UNIFIED PAWTUCKET HIGH SCHOOL - FENCES 11-20-24.GPJ

TEST BORING LOG															
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>					Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island					EXPLORATION NO.: GZ-02 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland					
Logged By: A. Amador Drilling Co.: New England Boring Contractors Foreman: Norm Stuttard					Type of Rig: GEFCO Rig Model: S-15 Drilling Method: Drive and Wash			Boring Location: See Plan Ground Surface Elev. (ft.): 65 Final Boring Depth (ft.): 10 Date Start - Finish: 11/4/2024 - 11/4/2024				H. Datum: V. Datum: NAVD 88			
Hammer Type: Automatic Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.5/4					Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: N/A			Groundwater Depth (ft.)							
								Date	Time	Stab. Time	Water	Casing			
								11/4/24	1:30	0 Hours	6.0				
Depth (ft)	Casing Blows/ (Core Rate)	No.	Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	SPT Value	Sample Description (Modified Burmister Classification)				Remark	Depth (ft.)	Stratum Description	Elev. (ft.)
5		S-1	0.0-2.0	24	12	15 20 14 8	34	S-1: Dense, dark brown, fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Brick fragments.					8	FILL	57.0
		S-2	2.0-4.0	24	9	4 4 4 6	8	S-2: Loose, dark brown, fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Brick fragments.							
		S-3	4.0-6.0	24	11	4 4 11 15	15	S-3: Medium dense, brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, trace Brick fragments.							
		S-4	6.0-8.0	24	12	12 20 17 20	37	S-4: Dense, brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, trace Brick fragments.							
		S-5	8.0-10.0	24	12	13 12 10 11	22	S-5: Medium dense, brown, fine to coarse SAND, some Gravel, some Silt							
10								End of exploration at 10 feet					10	SILTY SAND	55.0
15															
20															
25															
REMARKS															
See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.															
													Exploration No.: GZ-02		

GZA TEMPLATE TEST BORING - GZA GINT DATA TEMPLATE 10-27-20.GDT - 1/10/25 09:03 - J:\GINT PROJECT DATABASES\35453.00 - UNIFIED PAWTUCKET HIGH SCHOOL - FENCES 11-20-24.GPJ

TEST BORING LOG																											
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>				Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island				EXPLORATION NO.: GZ-03 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland																			
Logged By: A. Amador Drilling Co.: New England Boring Contractors Foreman: Norm Stuttard				Type of Rig: GEFCO Rig Model: S-15 Drilling Method: Drive and Wash		Boring Location: See Plan Ground Surface Elev. (ft.): 69 Final Boring Depth (ft.): 14 Date Start - Finish: 11/4/2024 - 11/4/2024				H. Datum: V. Datum: NAVD 88																	
Hammer Type: Automatic Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.5/4				Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: N/A				<table><tr><th colspan="5">Groundwater Depth (ft.)</th></tr><tr><th>Date</th><th>Time</th><th>Stab. Time</th><th>Water</th><th>Casing</th></tr><tr><td>11/4/24</td><td>12:30</td><td>0 Hours</td><td>10</td><td></td></tr></table>					Groundwater Depth (ft.)					Date	Time	Stab. Time	Water	Casing	11/4/24	12:30	0 Hours	10	
Groundwater Depth (ft.)																											
Date	Time	Stab. Time	Water	Casing																							
11/4/24	12:30	0 Hours	10																								
Depth (ft)	Casing Blows/ (Core Rate)	Sample						Sample Description (Modified Burmister Classification)	Remark	Depth (ft.)	Stratum Description	Elev. (ft.)															
		No.	Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	SPT Value																				
5		S-1	0.5-2.0	18	10	16 20 24	44	S-1: Dense, dark brown, fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Brick fragments, Cinders	1	0.3	ASPHALT	-68.7															
		S-2	2.0-4.0	24	16	21 27 42 29	69	S-2: Very dense, dark gray, fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Coal fragments, trace Wood																			
		S-3	4.0-6.0	24	12	15 28 28 28	56	S-3: Very dense, dark brown, fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Brick fragments																			
		S-4	6.0-8.0	24	7	23 48 30 24	78	S-4: Very dense, dark brown, fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Cinders																			
		S-5	8.0-10.0	24	9	1 2 1 16	3	S-5: Very loose, black, FIBROUS PEAT, trace fine Gravel, trace Roots		8		61.0															
		S-6	10.0-12.0	24	9	16 14 12 14	26	S-6: Medium dense, gray, fine to medium SAND, some Silt, trace fine Gravel, trace Roots		10		59.0															
		S-7	12.0-14.0	24	11	6 8 10 12	18	S-7: Medium dense, gray, fine to coarse SAND and fine to coarse GRAVEL, little Silt		12		57.0															
10										14	SAND AND GRAVEL	55.0															
								End of exploration at 14 feet																			
15																											
20																											
25																											
<div>REMARKS</div> <div>1 - Approximately 4" of asphalt encountered at the ground surface.</div>																											
See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.										Exploration No.: GZ-03																	

TEST BORING LOG



GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Jonathan Levi Architects
Pawtucket Unified High School
Pawtucket, Rhode Island

EXPLORATION NO.: GZ-04 (OW)
SHEET: 1 of 1
PROJECT NO: 35453.00
REVIEWED BY: James Marsland

Logged By: A. Amador
Drilling Co.: New England Boring Contractors
Foreman: Norm Stuttard

Type of Rig: GEFCO
Rig Model: S-15
Drilling Method:
Drive and Wash

Boring Location: See Plan
Ground Surface Elev. (ft.): 65
Final Boring Depth (ft.): 14
Date Start - Finish: 11/5/2024 - 11/5/2024

H. Datum:
V. Datum: NAVD 88

Hammer Type: Automatic Hammer
Hammer Weight (lb.): 140
Hammer Fall (in.): 30
Auger or Casing O.D./I.D Dia (in.): 4.5/4

Sampler Type: SS
Sampler O.D. (in.): 2.0
Sampler Length (in.): 24
Rock Core Size: N/A

Groundwater Depth (ft.)

Date	Time	Stab. Time	Water	Casing
1/10/2025	3:30	66 Days	6.5	Well

Depth (ft)	Casing Blows/ (Core Rate)	Sample No.	Depth (ft.)	Pen. (in)	Rec. (in)	Blows (RQD)	SPT Value	Sample Description Modified Burmister	Remark	Field Test Data	Depth (ft.)	Stratum Description Elev. (ft.)	Equipment Installed
5		S-1	0.0-2.0	24	15	10 11 10 16	21	S-1: Medium dense, brown, fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Cinders					
		S-2	2.0-4.0	24	11	17 13 8 6	21	S-2: Medium dense, dark brown, fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Cinders, trace Glass					
		S-3	4.0-6.0	24	13	4 3 3 3	6	S-3: Top 7": Loose, brown, fine to coarse SAND, some Silt, trace fine Gravel, trace Cinders			5	60.0	
		S-4	6.0-8.0	24	7	2 4 6 8	10	Bottom 6": Loose, black, FINE GRAINED PEAT, trace Roots			6	59.0	
10		S-5	8.0-10.0	24	9	10 11 10 7	21	S-4: Medium dense, gray, fine to coarse SAND, little Silt, trace fine Gravel, trace Roots					
		S-6	10.0-12.0	24	7	9 8 7 9	15	S-5: Medium dense, gray, fine to coarse SAND, little Silt, trace fine Gravel					
		S-7	12.0-14.0	24	9	11 15 13 13	28	S-6: Medium dense, gray, fine to coarse SAND, little Silt, trace fine Gravel			12	53.0	
15								S-7: Medium dense, gray, fine to coarse GRAVEL and fine to coarse SAND, little Silt	1		14	51.0	
20								End of Exploration at 14 feet.					
25													


REMARKS

1 - An observation well was installed (10 ft PVC-slotted) to 10 ft bgs., and a protective cover was installed and flushed with ground surface.


See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.:
GZ-04 (OW)


GZA TEMPLATE TEST BORING - GZA GINT DATA TEMPLATE 10-27-20.GDT - 1/10/25 09:03 - J:\GINT PROJECT DATABASES\35453.00 - UNIFIED PAWTUCKET HIGH SCHOOL - FENCES 11-20-24.GPJ

TEST BORING LOG												
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>				Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island				EXPLORATION NO.: GZ-05 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland				
Logged By: A. Amador Drilling Co.: New England Boring Contractors Foreman: Norm Stuttard				Type of Rig: GEFCO Rig Model: S-15 Drilling Method: Drive and Wash			Boring Location: See Plan Ground Surface Elev. (ft.): 65 Final Boring Depth (ft.): 12 Date Start - Finish: 11/4/2024 - 11/4/2024				H. Datum: V. Datum: NAVD 88	
Hammer Type: Automatic Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.5/4				Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: N/A				Groundwater Depth (ft.)				
								Date	Time	Stab. Time	Water	Casing
								11/4/24	9:20	0 Hours	6.0	
Depth (ft)	Casing Blows/ (Core Rate)	Sample						Sample Description (Modified Burmister Classification)	Remark	Depth (ft.)	Stratum Description	Elev. (ft.)
		No.	Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	SPT Value					
5		S-1	0.0-2.0	24	16	12 12 10 10	22	S-1: Medium dense, dark brown to black, fine to coarse SAND, little fine to coarse Gravel, little Silt, Brick fragments				
		S-2	2.0-4.0	24	18	20 21 16 17	37	S-2: Dense, dark brown to black, fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Cinders				
		S-3	4.0-6.0	24	8	4 6 6 6	12	S-3: Medium dense, dark brown to dark, fine to coarse SAND, little Silt, little fine Gravel, trace Cinders				
		S-4	6.0-8.0	24	21	1 1 7 14	8	S-4: Top 15": Dark brown, FIBROUS PEAT Bottom 6": Gray, fine SAND, little Silt, trace fine Gravel, trace Roots		6	59.0	
		S-5	8.0-10.0	24	8	14 10 14 16	24	S-5: Medium dense, gray, fine to coarse SAND, little fine to coarse Gravel, little Silt		7.5	57.5	
		S-6	10.0-12.0	24	9	7 10 14 16	24	S-6: Medium dense, gray, fine to coarse SAND, some fine to coarse Gravel, little Silt				
								End of exploration at 12 feet		12	53.0	
15												
20												
25												
REMARKS												
See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.											Exploration No.: GZ-05	

GZA TEMPLATE TEST BORING - GZA GINT DATA TEMPLATE 10-27-20.GDT - 1/10/25 09:03 - J:\GINT PROJECT DATABASES\35453.00 - UNIFIED PAWTUCKET HIGH SCHOOL - FENCES 11-20-24.GPJ

TEST BORING LOG													
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>				Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island				EXPLORATION NO.: GZ-06 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland					
Logged By: A. Amador Drilling Co.: New England Boring Contractors Foreman: Norm Stuttard				Type of Rig: GEFCO Rig Model: S-15 Drilling Method: Drive and Wash		Boring Location: See Plan Ground Surface Elev. (ft.): 65 Final Boring Depth (ft.): 14 Date Start - Finish: 11/4/2024 - 11/4/2024				H. Datum: V. Datum: NAVD 88			
Hammer Type: Automatic Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.5/4				Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: N/A				Groundwater Depth (ft.)					
								Date	Time	Stab. Time	Water	Casing	
								11/4/24	10:30	0 Hours	6.0		
Depth (ft)	Casing Blows/ (Core Rate)	No.	Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	SPT Value	Sample Description (Modified Burmister Classification)		Remark	Depth (ft.)	Stratum Description	Elev. (ft.)
5		S-1	0.0-2.0	24	16	14 17 19 14	36	S-1: Dense, brown, fine to coarse SAND, some fine Gravel, some Silt, trace Cinders and Brick fragments		6 8 10 14		FILL FINE GRAINED PEAT FIBROUS PEAT SILTY SAND	
		S-2	2.0-4.0	24	15	12 17 25 27	42	S-2: Dense, brown/gray, fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Cinders					
		S-3	4.0-6.0	24	11	16 16 9 8	25	S-3: Medium dense, brown, fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Cinders					
		S-4	6.0-8.0	24	13	1 1 1 1	2	S-4: Very loose, black, FINE GRAINED PEAT, trace Cinders, trace Roots			59.0		
		S-5	8.0-10.0	24	12	2 1 2 2	3	S-5: Very loose, gray/brown, FIBROUS PEAT, some Silt, trace Roots			57.0		
		S-6	10.0-12.0	24	14	9 10 10 11	20	S-6: Medium dense, gray, fine to medium SAND, some Silt, trace Roots			55.0		
		S-7	12.0-14.0	24	13	7 7 10 10	17	S-7: Medium dense, gray, fine to medium SAND, some Silt			51.0		
15								End of exploration at 14 feet					
20													
25													
REMARKS													
See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.											Exploration No.: GZ-06		

GZA TEMPLATE TEST BORING - GZA GINT DATA TEMPLATE 10-27-20.GDT - 1/10/25 09:03 - J:\GINT PROJECT DATABASES\35453.00 - UNIFIED PAWTUCKET HIGH SCHOOL - FENCES 11-20-24.GPJ

TEST BORING LOG														
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>				Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island				EXPLORATION NO.: GZ-07 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland						
Logged By: A. Amador Drilling Co.: New England Boring Contractors Foreman: Norm Stuttard				Type of Rig: GEFCO Rig Model: S-15 Drilling Method: Drive and Wash			Boring Location: See Plan Ground Surface Elev. (ft.): 65 Final Boring Depth (ft.): 12 Date Start - Finish: 11/6/2024 - 11/6/2024				H. Datum: V. Datum: NAVD 88			
Hammer Type: Automatic Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.5/4				Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: N/A				Groundwater Depth (ft.)						
								Date	Time	Stab. Time	Water	Casing		
								11/6/24	1:55	0 Hours	8.0			
Depth (ft)	Casing Blows/ (Core Rate)	No.	Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	SPT Value	Sample Description (Modified Burmister Classification)			Remark	Depth (ft.)	Stratum Description	Elev. (ft.)
5		S-1	0.0-2.0	24	16	6 13 8 10	21	S-1: Medium dense, red brown/brown, fine to coarse SAND, some Silt, little fine to coarse Gravel				6	FILL	59.0
		S-2	2.0-4.0	24	8	6 10 9 11	19	S-2: Medium dense, light brown, fine to coarse SAND, little fine Gravel, little Silt						
		S-3	4.0-6.0	24	15	4 10 9 12	19	S-3: Medium dense, light brown, fine to coarse SAND, little Silt, trace fine Gravel						
		S-4	6.0-8.0	24	16	7 8 9 11	17	S-4: Medium dense, gray, fine to medium SAND, little Silt, trace fine Gravel						
		S-5	8.0-10.0	24	16	12 11 10 13	21	S-5: Medium dense, gray, fine to medium SAND, little Silt, trace fine Gravel						
		S-6	10.0-12.0	24	16	7 9 10 16	19	S-6: Medium dense, gray, fine to medium SAND, little Silt, trace fine Gravel						
10								End of exploration at 12 feet			12		53.0	
15														
20														
25														
REMARKS														
See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.													Exploration No.: GZ-07	



**Jonathan Levi Architects
Pawtucket Unified High School
Pawtucket, Rhode Island**

EXPLORATION NO.: GZ-08
SHEET: 1 of 1
PROJECT NO: 35453.00
REVIEWED BY: James Marsland

Logged By: A. Amador
Drilling Co.: New England Boring Contractors
Foreman: Norm Stuttard

Type of Rig: GEFCO
Rig Model: S-15
Drilling Method:
Drive and Wash

Boring Location: See Plan
Ground Surface Elev. (ft.): 65.5
Final Boring Depth (ft.): 14
Date Start - Finish: 11/5/2024 - 11/5/2024

H. Datum:

V. Datum: NAVD 88

Hammer Type: Automatic Hammer
Hammer Weight (lb.): 140
Hammer Fall (in.): 30
Auger or Casing O.D./I.D Dia (in.): 4.5/4

Sampler Type: SS
Sampler O.D. (in.): 2.0
Sampler Length (in.): 24
Rock Core Size: N/A

Groundwater Depth (ft.)

Date	Time	Stab. Time	Water	Casing
11/5/24	10:40	0 Hours	8.0	

[illegible]


1 - 5" of concrete encountered at the ground surface.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.:
GZ-08

GZA TEMPLATE TEST BORING - GZA GINT DATA TEMPLATE 10-27-20.GDT - 1/10/25 09:03 - J:\GINT PROJECT DATABASES\35453.00 UNIFIED PAWTUCKET HIGH SCHOOL - FENCES 11-20-24.GPJ

GZA TEMPLATE TEST BORING - GZA GINT DATA TEMPLATE 10-27-20.GDT - 1/10/25 09:03 - J:\GINT PROJECT DATABASES\35453.00 - UNIFIED PAWTUCKET HIGH SCHOOL - FENCES 11-20-24.GPJ

TEST BORING LOG														
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>					Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island					EXPLORATION NO.: GZ-09 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland				
Logged By: A. Amador Drilling Co.: New England Boring Contractors Foreman: Norm Stuttard					Type of Rig: GEFCO Rig Model: S-15 Drilling Method: Drive and Wash			Boring Location: See Plan Ground Surface Elev. (ft.): 65 Final Boring Depth (ft.): 30.1 Date Start - Finish: 11/6/2024 - 11/6/2024				H. Datum: V. Datum: NAVD 88		
Hammer Type: Automatic Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.5/4					Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: N/A			Groundwater Depth (ft.)						
								Date	Time	Stab. Time	Water	Casing		
								11/6/24	10:30	0 Hours	8.0			
Depth (ft)	Casing Blows/ (Core Rate)	Sample						Sample Description (Modified Burmister Classification)	Remark	Depth (ft.)	Stratum Description	Elev. (ft.)		
		No.	Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	SPT Value							
5		S-1	0.0-2.0	24	16	3 9 9 10	18	S-1: Top 6": Dark brown, fine to medium SAND, some Silt, trace Roots Bottom 10": Brown, fine to coarse SAND, little fine Gravel, little Silt, trace Cinders, trace Roots		0.5	TOP SOIL	64.5		
		S-2	2.0-4.0	24	15	5 5 6 7	11	S-2: Medium dense, brown, fine to coarse SAND, little fine Gravel, little Silt, trace Cinders		FILL				
		S-3	4.0-6.0	24	9	4 5 4 3	9	S-3: Loose, gray/brown, fine to coarse SAND, little fine Gravel, little trace Cinders and Brick fragments						
		S-4	6.0-8.0	24	14	2 3 7 11	10	S-4: Top 8": Dark brown, fine to coarse SAND, some Silt, trace fine Gravel, trace Roots			7.5		57.5	
	10		S-5	8.0-10.0	24	12	5 8 9 10	17		Bottom 6": Gray, fine to medium SAND, little Silt, trace Roots S-5: Medium dense, gray, fine to medium SAND, little Silt	SAND			
		S-6	10.0-12.0	24	7	8 9 12 15	21	S-6: Medium dense, light brown, fine to medium SAND, little Silt, trace fine to coarse Gravel						
		S-7	15.0-17.0	24	13	7 10 11 13	21	S-7: Medium dense, light brown, fine to coarse SAND, some fine Gravel, little Silt	1					
20		S-8	20.0-22.0	24	7	8 8 9 6	17	S-8: Medium dense, brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt		20		45.0		
25		S-9	25.0-27.0	24	13	8 9 10 48	19	S-9: Medium dense, brown, fine to coarse SAND and fine to coarse GRAVEL, little Silt	2		SAND AND GRAVEL			
30		S-10	30.0-30.1	1	0	50 /1"	R	S-10: NO RECOVERY End of exploration at 30.1 feet		30.1		34.9		

REMARKS

1 - No recovery with 2-inch split spoon. Drillers used the 3-inch split spoon to recover sample.
2 - Drill chatter observed between approximately 28.5 to 30.0 feet below ground surface.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.:
GZ-09



**Jonathan Levi Architects
Pawtucket Unified High School
Pawtucket, Rhode Island**

EXPLORATION NO.: GZ-10
SHEET: 1 of 1
PROJECT NO: 35453.00
REVIEWED BY: James Marsland

Logged By: A. Amador
Drilling Co.: New England Boring Contractors
Foreman: Norm Stuttard

Type of Rig: GEFCO
Rig Model: S-15
Drilling Method:
Drive and Wash

Boring Location: See Plan
Ground Surface Elev. (ft.): 65
Final Boring Depth (ft.): 14
Date Start - Finish: 11/7/2024 - 11/7/2024

H. Datum:

V. Datum: NAVD 88

Hammer Type: Automatic Hammer
Hammer Weight (lb.): 140
Hammer Fall (in.): 30
Auger or Casing O.D./I.D Dia (in.): 4.5/4

Sampler Type: SS
Sampler O.D. (in.): 2.0
Sampler Length (in.): 24
Rock Core Size: N/A

Groundwater Depth (ft.)

Date	Time	Stab. Time	Water	Casing
11/7/24	12:30	0 Hours	8.0	

Depth (ft)	Casing Blows/ (Core Rate)	Sample						Sample Description (Modified Burmister Classification)	Remark
		No.	Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	SPT Value		
5 10 15		S-1	0.0-2.0	24	13	4 5 10 9	15	S-1: Top 6": Dark brown, fine to medium SAND, some Silt, trace Roots Bottom 7": Brown, fine to medium SAND, little Silt, little fine to coarse Gravel	0.5 — TOPSOIL — 64.5
		S-2	2.0-4.0	24	14	6 8 11 13	19	S-2: Medium dense, dark brown/brown, fine to coarse SAND, little fine to coarse Gravel, little Silt, trace Glass and Coal fragments	FILL
		S-3	4.0-6.0	24	13	8 10 8 9	18	S-3: Medium dense, dark brown, fine to coarse SAND, little fine to coarse Gravel, little Silt, trace Cinders	FIBROUS PEAT
		S-4	6.0-8.0	24	7	5 4 3 2	7	S-4: Loose, black/dark brown, fine to coarse SAND, little fine to coarse Gravel, little Silt, trace Cinders and Brick fragments	8 ————— 57.0
		S-5	8.0-10.0	24	16	1 1 1 1	2	S-5: Top 8": Dark brown, FIBROUS PEAT, trace Roots Bottom 8": Gray, SILT, trace fine Sand, trace Roots	9.7 ————— 55.3
		S-6	10.0-12.0	24	13	4 5 10 13	15	S-6: Top 7": Gray, Silt, little fine Sand Bottom 6":Brown, fine to coarse SAND, some Silt, little fine Gravel	11 ———— SILT ———— 54.0
		S-7	12.0-14.0	24	9	9 9 8 9	17	S-7: Medium dense, brown, fine to coarse SAND, some fine to coarse Gravel, little Silt	SAND
15 20 25								End of exploration at 14 feet	14 ————— 51.0

REMARKS

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.


Exploration No.:
GZ-10

GZA TEMPLATE TEST BORING - GZA GINT DATA TEMPLATE 10-27-20.GDT - 1/10/25 09:03 - J:\GINT PROJECT DATABASES\35453.00 UNIFIED PAWTUCKET HIGH SCHOOL - FENCES 11-20-24.GPJ

GZA TEMPLATE TEST BORING - GZA GINT DATA TEMPLATE 10-27-20.GDT - 1/10/25 09:03 - J:\GINT PROJECT DATABASES\35453.00 - UNIFIED PAWTUCKET HIGH SCHOOL - FENCES 11-20-24.GPJ

TEST BORING LOG												
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>				Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island				EXPLORATION NO.: GZ-11 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland				
Logged By: A. Amador Drilling Co.: New England Boring Contractors Foreman: Norm Stuttard				Type of Rig: GEFCO Rig Model: S-15 Drilling Method: Drive and Wash		Boring Location: See Plan Ground Surface Elev. (ft.): 66 Final Boring Depth (ft.): 12 Date Start - Finish: 11/5/2024 - 11/5/2024				H. Datum: V. Datum: NAVD 88		
Hammer Type: Automatic Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.5/4				Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: N/A				Groundwater Depth (ft.)				
								Date	Time	Stab. Time	Water	Casing
								11/5/24	12:20	0 Hours	8.0	
Depth (ft)	Casing Blows/ (Core Rate)	No.	Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	SPT Value	Sample Description (Modified Burmister Classification)	Remark	Depth (ft.)	Stratum Description	Elev. (ft.)
5		S-1	0.5-2.0	18	10	9 7 12	19	S-1: Medium dense, dark brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, trace Cinders	1	0.3	ASPHALT	-65.7
		S-2	2.0-4.0	24	15	9 15 17 13	32	S-2: Dense, dark brown, fine to coarse SAND, some Silt, little fine Gravel, trace Cinders		FILL		
		S-3	4.0-6.0	24	12	6 9 5 2	14	S-3: Top 6": Dark brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, trace Cinders Bottom 6": Black, FINE GRAINED PEAT, trace Roots		5.5		60.5
		S-4	6.0-8.0	24	9	2 5 6 7	11	S-4: Medium dense, gray, fine to coarse SAND, little Silt, little fine Gravel, trace Roots		6	FINE GRAINED PEAT	60.0
		S-5	8.0-10.0	24	16	6 7 8 8	15	S-5: Medium dense, gray, fine to coarse SAND, little Silt, little fine Gravel, trace Roots		SAND		
		S-6	10.0-12.0	24	15	6 9 8 8	17	S-6: Medium dense, gray, fine to coarse SAND, little fine Gravel, little Silt				
10										12		54.0
								End of exploration at 12 feet				
15												
20												
25												
REMARKS 1 - Approximately 4" of asphalt encountered at the ground surface.												
See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.										Exploration No.: GZ-11		

GZA TEMPLATE TEST BORING - GZA GINT DATA TEMPLATE 10-27-20.GDT - 1/10/25 09:03 - J:\GINT PROJECT DATABASES\35453.00 - UNIFIED PAWTUCKET HIGH SCHOOL - FENCES 11-20-24.GPJ

TEST BORING LOG																						
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>				Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island				EXPLORATION NO.: GZ-12 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland														
Logged By: A. Amador Drilling Co.: New England Boring Contractors Foreman: Norm Stuttard				Type of Rig: GEFCO Rig Model: S-15 Drilling Method: Drive and Wash		Boring Location: See Plan Ground Surface Elev. (ft.): 65 Final Boring Depth (ft.): 12 Date Start - Finish: 11/5/2024 - 11/5/2024				H. Datum: V. Datum: NAVD 88												
Hammer Type: Automatic Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.5/4				Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: N/A				Groundwater Depth (ft.) <table><tr><th>Date</th><th>Time</th><th>Stab. Time</th><th>Water</th><th>Casing</th></tr><tr><td>11/5/24</td><td>1:30</td><td>0 Hours</td><td>8.0</td><td></td></tr></table>					Date	Time	Stab. Time	Water	Casing	11/5/24	1:30	0 Hours	8.0	
Date	Time	Stab. Time	Water	Casing																		
11/5/24	1:30	0 Hours	8.0																			
Depth (ft)	Casing Blows/ (Core Rate)	Sample						Sample Description (Modified Burmister Classification)	Remark	Depth (ft.)	Stratum Description	Elev. (ft.)										
		No.	Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	SPT Value															
5		S-1	0.5-2.0	18	12	7 9 7	16	S-1: Medium dense, black/brown fine to coarse SAND, some Silt, trace fine to coarse Gravel, trace Brick	1	0.3	ASPHALT	64.7										
		S-2	2.0-4.0	24	9	6 6 5 4	11	S-2: Medium dense, brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, trace Cinders		FILL												
		S-3	4.0-6.0	24	8	2 3 5 3	8	S-3: Loose, dark brown, fine to coarse SAND and SILT, trace fine to coarse Gravel, trace Cinders														
		S-4	6.0-8.0	24	12	5 8 10 11	18	S-4: Medium dense, gray, fine to medium SAND, some Silt, trace Roots														
	10		S-5	8.0-10.0	24	9	8 8 9 10	17			S-5: Medium dense, gray, fine to medium SAND, some Silt, trace Roots	SILTY SAND										
			S-6	10.0-12.0	24	13	8 9 11 12	20		S-6: Medium dense, gray, fine to medium SAND and SILT, trace Roots												
								End of exploration at 12 feet		12		53.0										
25																						
REMARKS 1 - Approximately 4" of asphalt encountered at the ground surface.																						
See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.										Exploration No.: GZ-12												



**Jonathan Levi Architects
Pawtucket Unified High School
Pawtucket, Rhode Island**

EXPLORATION NO.: GZ-13
SHEET: 1 of 1
PROJECT NO: 35453.00
REVIEWED BY: James Marsland

Logged By: A. Amador
Drilling Co.: New England Boring Contractors
Foreman: Norm Stuttard

Type of Rig: GEFCO
Rig Model: S-15
Drilling Method:
Drive and Wash

Boring Location: See Plan
Ground Surface Elev. (ft.): 65
Final Boring Depth (ft.): 14
Date Start - Finish: 11/7/2024 - 11/7/2024

H. Datum:

V. Datum: NAVD 88

Hammer Type: Automatic Hammer
Hammer Weight (lb.): 140
Hammer Fall (in.): 30
Auger or Casing O.D./I.D Dia (in.): 4.5/4

Sampler Type: SS
Sampler O.D. (in.): 2.0
Sampler Length (in.): 24
Rock Core Size: N/A

Groundwater Depth (ft.)


Date	Time	Stab. Time	Water	Casing
11/7/24	8:30	0 Hours	8.0	

GZA TEMPLATE TEST BORING - GZA GINT DATA TEMPLATE 10-27-20.GDT - 1/10/25 09:03 - J:\GINT PROJECT DATABASES\35453.00 UNIFIED PAWTUCKET HIGH SCHOOL - FENCES 11-20-24.GPJ


GZA TEMPLATE TEST BORING - GZA GINT DATA TEMPLATE 10-27-20.GDT - 1/10/25 09:03 - J:\GINT PROJECT DATABASES\35453.00 - UNIFIED PAWTUCKET HIGH SCHOOL - FENCES 11-20-24.GPJ

TEST BORING LOG																												
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>				Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island				EXPLORATION NO.: GZ-14 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland																				
Logged By: A. Amador Drilling Co.: New England Boring Contractors Foreman: Norm Stuttard				Type of Rig: GEFCO Rig Model: S-15 Drilling Method: Drive and Wash				Boring Location: See Plan Ground Surface Elev. (ft.): 65 Final Boring Depth (ft.): 20 Date Start - Finish: 11/7/2024 - 11/7/2024				H. Datum: V. Datum: NAVD 88																
Hammer Type: Automatic Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.5/4				Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: N/A				<table><tr><th colspan="5">Groundwater Depth (ft.)</th></tr><tr><th>Date</th><th>Time</th><th>Stab. Time</th><th>Water</th><th>Casing</th></tr><tr><td>11/7/24</td><td>10:03</td><td>0 Hours</td><td>8.0</td><td></td></tr></table>						Groundwater Depth (ft.)					Date	Time	Stab. Time	Water	Casing	11/7/24	10:03	0 Hours	8.0	
Groundwater Depth (ft.)																												
Date	Time	Stab. Time	Water	Casing																								
11/7/24	10:03	0 Hours	8.0																									
<div>Depth (ft)</div> <div>5</div> <div>10</div> <div>15</div> <div>20</div> <div>25</div>	<div>Casing Blows/ (Core Rate)</div>	Sample						Sample Description (Modified Burmister Classification)	Remark	Depth (ft.)	Stratum Description	Elev. (ft.)																
		No.	Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	SPT Value																					
		S-1	0.0-2.0	24	19	5 8 6 8	14						S-1: Top 6": Brown, fine to medium SAND, some Silt, little fine Gravel, trace Roots Bottom 13": Dark brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, trace Glass fragments S-2: Medium dense, dark brown, fine to coarse SAND, some fine to coarse Gravel, some Silt, trace Cinders	0.5	TOPSOIL	64.5												
		S-2	2.0-4.0	24	8	11 11 10 12	21						S-3: Medium dense, dark brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, trace Cinders															
		S-3	4.0-6.0	24	13	7 7 7 8	14						S-4: Loose, dark brown, fine to coarse SAND, little fine to coarse Gravel, trace Roots, trace Cinders	1	FILL													
		S-4	6.0-8.0	24	11	5 6 4 4	10						S-5: Very loose, dark brown, FIBROUS PEAT, trace Roots	8		57.0												
		S-5	8.0-10.0	24	14	1 1 2 3	3						S-6: Top 6": Brown, FIBROUS PEAT, trace Roots Bottom 6": Gray, Silt, trace fine to medium Sand, trace Roots		FIBROUS PEAT													
		S-6	10.0-12.0	24	12	1 2 1 3	3						S-7: Loose, gray, SILT, trace fine Sand	11.5		53.5												
		S-7	12.0-14.0	24	12	3 3 3 4	6						S-8: Medium dense, gray/light brown, fine to coarse SAND, little fine Gravel, little Silt	14	SILT AND SAND	51.0												
		S-8	14.0-16.0	24	11	7 6 7 8	13						S-9: Medium dense, gray/light brown, fine to coarse SAND, little fine Gravel, little Silt		SAND													
		S-9	16.0-18.0	24	14	8 7 8 11	15						S-10: Medium dense, brown, fine to coarse SAND, little fine to coarse Gravel, little Silt	20		45.0												
		S-10	18.0-20.0	24	6	7 7 8 9	15						End of exploration at 20 feet															
1 - No recovery with 2-inch split spoon. Drillers used the 3-inch split spoon to recover sample.																												
See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.											Exploration No.: GZ-14																	

GZA TEMPLATE TEST BORING - GZA GINT DATA TEMPLATE 10-27-20.GDT - 1/10/25 09:03 - J:\GINT PROJECT DATABASES\35453.00 - UNIFIED PAWTUCKET HIGH SCHOOL - FENCES 11-20-24.GPJ

TEST BORING LOG																												
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>				Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island				EXPLORATION NO.: GZ-15 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland																				
Logged By: A. Amador Drilling Co.: New England Boring Contractors Foreman: Norm Stuttard				Type of Rig: GEFCO Rig Model: S-15 Drilling Method: Drive and Wash				Boring Location: See Plan Ground Surface Elev. (ft.): 65 Final Boring Depth (ft.): 16 Date Start - Finish: 11/7/2024 - 11/7/2024				H. Datum: V. Datum: NAVD 88																
Hammer Type: Automatic Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.5/4				Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: N/A				<table><tr><th colspan="5">Groundwater Depth (ft.)</th></tr><tr><th>Date</th><th>Time</th><th>Stab. Time</th><th>Water</th><th>Casing</th></tr><tr><td>11/7/24</td><td>1:10</td><td>0 Hours</td><td>8.0</td><td></td></tr></table>						Groundwater Depth (ft.)					Date	Time	Stab. Time	Water	Casing	11/7/24	1:10	0 Hours	8.0	
Groundwater Depth (ft.)																												
Date	Time	Stab. Time	Water	Casing																								
11/7/24	1:10	0 Hours	8.0																									
<div>Depth (ft)</div> <div>5</div> <div>10</div> <div>15</div> <div>20</div> <div>25</div>	<div>Casing Blows/ (Core Rate)</div>	Sample						Sample Description (Modified Burmister Classification)	Remark	Depth (ft.)	Stratum Description	Elev. (ft.)																
		No.	Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	SPT Value																					
		S-1	0.0-2.0	24	16	2 5 6 5	11						S-1: Top 6": Dark brown, fine to medium SAND, some Silt, trace fine Gravel, trace Roots Bottom 10": Tan, fine to medium SAND, little Silt, trace fine Gravel	0.5	TOPSOIL	64.5												
		S-2	2.0-4.0	24	9	2 3 2 4	5						S-2: Loose, tan, fine to medium SAND, little Silt, trace fine Gravel															
		S-3	4.0-6.0	24	14	6 6 13 7	19						S-3: Medium dense, black, fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Cinders		FILL													
		S-4	6.0-8.0	24	5	3 4 3 5	7						S-4: Loose, black, fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Cinders, trace Glass fragments	8		57.0												
		S-5	8.0-10.0	24	4	2 2 1 2	3						S-5: Very loose, black, fine to coarse SAND, trace fine Gravel, trace Fine Grained Peat, trace Cinders, trace Roots		FINE GRAINED PEAT													
		S-6	10.0-12.0	24	10	2 4 3 4	7						S-6: Loose, black, FINE GRAINED PEAT	12		53.0												
		S-7	12.0-14.0	24	20	3 11 12 24	23						S-7: Medium dense, gray, SILT, little fine to medium Sand, trace fine Gravel		SILTY SAND													
		S-8	14.0-16.0	24	7	6 18 13 13	31						S-8: Dense, gray, SILT, little fine Sand, trace fine Gravel	16		49.0												
End of exploration at 16 feet																												
REMARKS																												
See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.											Exploration No.: GZ-15																	

GZA TEMPLATE TEST BORING - GZA GINT DATA TEMPLATE 10-27-20.GDT - 1/10/25 09:03 - J:\GINT PROJECT DATABASES\35453.00 - UNIFIED PAWTUCKET HIGH SCHOOL - FENCES 11-20-24.GPJ

TEST BORING LOG														
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>					Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island					EXPLORATION NO.: GZ-16 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland				
Logged By: A. Amador Drilling Co.: New England Boring Contractors Foreman: Norm Stuttard					Type of Rig: GEFCO Rig Model: S-15 Drilling Method: Drive and Wash			Boring Location: See Plan Ground Surface Elev. (ft.): 65 Final Boring Depth (ft.): 14 Date Start - Finish: 11/8/2024 - 11/8/2024				H. Datum: V. Datum: NAVD 88		
Hammer Type: Automatic Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.5/4					Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: N/A			Groundwater Depth (ft.)						
								Date	Time	Stab. Time	Water	Casing		
								11/8/24	8:40	0 Hours	8.0			
Depth (ft)	Casing Blows/ (Core Rate)	No.	Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	SPT Value	Sample Description (Modified Burmister Classification)			Remark	Depth (ft.)	Stratum Description	Elev. (ft.)
5		S-1	0.0-2.0	24	12	2 4 8 8	12	S-1: Top 6": Dark brown, fine to medium SAND, some Silt, little fine Gravel, trace Roots Bottom 6": Brown, fine to coarse SAND, little fine to coarse Gravel, little Silt, trace Coal fragments, trace Roots				0.5	TOPSOIL	64.5
		S-2	2.0-4.0	24	10	12 23 26 17	49	S-2: Dense, brown, fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Cinders				FILL		
		S-3	4.0-6.0	24	10	6 7 7 6	14	S-3: Medium dense, dark brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, trace Cinders						
		S-4	6.0-8.0	24	16	2 2 3 7	5	S-4: Medium stiff, black/dark brown, FIBROUS PEAT				6		59.0
		S-5	8.0-10.0	24	18	4 15 14 13	29	S-5: Top 6": Black/dark brown, FIBROUS PEAT Bottom 12": Gray, fine to coarse SAND, some Silt, trace fine to coarse Gravel				8.5		56.5
		S-6	10.0-12.0	24	13	13 17 14 19	31	S-6: Dense, gray, fine to coarse SAND, some fine to coarse Gravel, little Silt					SAND	
		S-7	12.0-14.0	24	16	7 16 24 26	40	S-7: Dense, gray, fine to coarse SAND, some fine to coarse Gravel, little Silt						
14								End of exploration at 14 feet					51.0	
15														
20														
25														
REMARKS														
See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.												Exploration No.: GZ-16		



EXPLORATION NO.: GZ-17
SHEET: 1 of 1
PROJECT NO: 35453.00
REVIEWED BY: James Marsland

H. Datum:

V. Datum: NAVD 88

Date	Time	Stab. Time	Water	Casing
11/8/24	9:35	0 Hours	8.0	

GZA TEMPLATE TEST BORING - GZA GINT DATA TEMPLATE 10-27-20 GDT - 1/10/25 09:03 - J:\GINT PROJECT DATABASES\35453.00 UNIFIED PAWTUCKET HIGH SCHOOL - FENCES 11-20-24 GP

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.


Exploration No.:
GZ-17





APPENDIX D

RECENT TEST PIT LOGS

GZA TEMPLATE TEST PIT: 1/9/2025; 8:18:28 AM




TEST PIT LOG									
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>			Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island			EXPLORATION NO.: TP-01 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland			
Logged By: Tucker Murphy Contractor: Catalano Foreman: John Cerce			Test Pit Location: See Plan Ground Surface Elev. (ft.): 64.27 Date Start: 10/31/2024 Date Finish: 10/31/2024			H. Datum: V. Datum: NAVD 88			
Equipment: John Deere Model: 210CW Reach (ft.): 21 Capacity (cu.yd.): 0.2			Weather: 60s, Cloudy Time Start: 9:30 Time Finish: 9:45			Groundwater Depth (ft.)			
						Date	Time	Depth (ft.)	Symbol
						10/31/24	9:40	9.5	▼ ▼ ▼
Depth (ft)	Stratum Description (Modified Burmister Classification)	Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark				
1	Dark brown, fine to medium SAND, some Silt, some fine to coarse Gravel, trace Roots (Fill)	63.3	E						
2	Light brown, fine to coarse SAND, some Silt, little Gravel (Fill)		E						
3			E						
4	Dark brown, fine to coarse SAND, some Silt, some fine to coarse Gravel, trace metal, Brick, Glass, Ash (Fill)	61.3	M						
5	Black/dark brown, FINE GRAINED PEAT	60.3	M						
6			M						
7			M						
8			E						
9	Gray, fine SAND and SILT (Sand and Silt)	57.8	E						
10			E						
11		54.8			1				
12	▼								
13	End of exploration at 9.5 feet.								
14									
15									

Test Pit Plan: 10 ft.  4 ft. Volume = 14 ± cu.yd.	North 	LEGEND: ▼ Observed Water Level	Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50%	Excavation Effort: Easy E Moderate M Difficult D	Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C
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REMARKS	1 - Groundwater seepage observed at approximately 9.5' below ground surface.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.	Exploration No.: TP-01
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GZA TEMPLATE TEST PIT; 1/10/2025; 11:58:51 AM

TEST PIT LOG										
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>			Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island			EXPLORATION NO.: TP-02 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland				
Logged By: Tucker Murphy Contractor: Catalano Foreman: John Cerce			Test Pit Location: See Plan Ground Surface Elev. (ft.): 65 Date Start: 10/31/2024 Date Finish: 10/31/2024			H. Datum: V. Datum: NAVD 88				
Equipment: John Deere Model: 210CW Reach (ft.): 21 Capacity (cu.yd.): 0.2			Weather: P. Cloudy, 50s Time Start: 09:52 Time Finish: 13:00			Groundwater Depth (ft.)				
						Date	Time	Depth (ft.)	Symbol	
						Not Measured			▽ ▽ ▽	
Depth (ft)	Stratum Description (Modified Burmister Classification)					Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark	
1	Dark brown, fine to coarse SAND, some Silt, some fine to coarse Gravel, trace Roots (Fill)					64.0	E			
2	Brown fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Brick (Fill)					63.0	E	A		
3	Brown/gray, fine to coarse SAND, some Silt, some fine to coarse Gravel, trace Ash (Fill)						E	A		
4							E	A		
5							E		1	
	End of exploration at 5 feet.					60.0	E		2	
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
Test Pit Plan: 15 ft.  10 ft. Volume = 28 ± cu.yd.			LEGEND:  Observed Water Level			Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50%		Excavation Effort: Easy E Moderate M Difficult D		Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C
REMARKS	1 - Utility pipe encountered approximatley 4.5' below ground surface. Test pit terminated.									
	2 - Groundwater not encountered.									
See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.								Exploration No.: TP-02		

GZA TEMPLATE TEST PIT; 1/9/2025; 8:18:29 AM



TEST PIT LOG										
<div><div>GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i></div></div>			<div>Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island</div>			<div>EXPLORATION NO.: TP-03 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland</div>				
<div>Logged By: Tucker Murphy Contractor: Catalano Foreman: John Cerce</div>			<div>Test Pit Location: See Plan Ground Surface Elev. (ft.): 65 Date Start: 10/31/2024 Date Finish: 10/31/2024</div>			<div>H. Datum: V. Datum: NAVD 88</div>				
<div>Equipment: John Deere Model: 210CW Reach (ft.): 21 Capacity (cu.yd.): 0.2</div>			<div>Weather: P. Cloudy, 70s Time Start: 14:00 Time Finish: 14:16</div>			Groundwater Depth (ft.)				
						Date	Time	Depth (ft.)	Symbol	
						Not Measured			▽ ▽ ▽	
Depth (ft.)	Stratum Description (Modified Burmister Classification)					Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark	
1	Brown, fine to coarse SAND, some fine to coarse Gravel, some Silt, trace Roots (Fill)					64.4	M	A		
2	Dark brown, fine to coarse SAND, some Silt, some fine to coarse Gravel, trace Glass, Metal, Roots (FILL)					63.5	M	A		
3	Brown, fine to medium SAND and SILT, little fine to coarse Gravel, trace Glass (Fill)					62.7	E			
4	Tan, fine to medium SAND and SILT, trace fine Gravel (Fill)						E			
5						61.0	E			
6	Gray, SILT, some fine Sand, trace fine Gravel (Sandy Silt)						D	A & B		
6	End of exploration at 6 feet.					59.0			1	
7										
8										
9										
10										
11										
12										
13										
14										
15										
<div>Test Pit Plan: 10 ft.  9 ft. Volume = 20 ± cu.yd.</div>			<div>LEGEND:  Observed Water Level</div>			<div>Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50%</div>		<div>Excavation Effort: Easy E Moderate M Difficult D</div>		<div>Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C</div>
<div>REMARKS 1 - Groundwater not encountered.</div>										
<div>See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.</div>								<div>Exploration No.: TP-03</div>		

GZA TEMPLATE TEST PIT; 1/9/2025; 8:18:29 AM




TEST PIT LOG									
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>			Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island			EXPLORATION NO.: TP-04 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland			
Logged By: Tucker Murphy Contractor: Catalano Foreman: John Cerce			Test Pit Location: See Plan Ground Surface Elev. (ft.): 64.294 Date Start: 11/1/2024 Date Finish: 11/1/2024			H. Datum: V. Datum: NAVD 88			
Equipment: John Deere Model: 210CW Reach (ft.): 21 Capacity (cu.yd.): 0.2			Weather: P. Cloudy, 60s Time Start: 10:00 Time Finish: 10:30			Groundwater Depth (ft.)			
						Date	Time	Depth (ft.)	Symbol
						11/1/24	10:25	7.0	▼
Depth (ft)	Stratum Description (Modified Burmister Classification)					Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark
1	Dark brown, fine to medium SAND and SILT, trace Roots, (Topsoil)					63.3	M	A	
2	Brown, fine to medium SAND, some Silt, some Gravel, trace Roots (Fill)					62.3	M	A	
3	Dark brown, fine to coarse SAND, some Silt, some fine to coarse Gravel, trace Ash (Fill)					61.7	E		
4	Brown/orange, fine to coarse SAND, some fine to coarse Gravel, some Silt, trace Metal, Brick, Glass, Plastic, Ash (Fill)					60.3	D		
5	Dark brown, FINE GRAINED PEAT					59.8	E		
6	Dark brown, FIBROUS PEAT					59.3	E		
7	Gray, fine Sand, little Silt (Sand)					57.3	E		
8	▼								1
9	End of exploration at 7 feet.								
10									
11									
12									
13									
14									
15									
Test Pit Plan: 10 ft.  4 ft. Volume = 10 ± cu.yd.			LEGEND: ▼ Observed Water Level			Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50%		Excavation Effort: Easy E Moderate M Difficult D	
						Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C			
REMARKS	1 - Groundwater seepage observed at approximately 7' below ground surface.								
See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.								Exploration No.: TP-04	

TEST PIT LOG									
GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>			Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island			EXPLORATION NO.: TP-05 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland			
Logged By: Tucker Murphy Contractor: Catalano Foreman: John Cerce			Test Pit Location: See Plan Ground Surface Elev. (ft.): 64.971 Date Start: 11/1/2024 Date Finish: 11/1/2024			H. Datum: V. Datum: NAVD 88			
Equipment: John Deere Model: 210CW Reach (ft.): 21 Capacity (cu.yd.): 0.2			Weather: P. Cloudy, 60s Time Start: 7:00 Time Finish: 7:45			Groundwater Depth (ft.)			
						Date	Time	Depth (ft.)	Symbol
						Not Measured			
Depth (ft)	Stratum Description (Modified Burmister Classification)					Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark
1	Brown, fine to coarse SAND, some fine to coarse Gravel, some Silt (Fill)					64.0	M	A	1
2	Brown/gray, fine to coarse SAND and fine to coarse GRAVEL, some Silt, trace Brick, Plastic, Glass (Fill)					62.3	M	A	
3	Brown, fine to coarse SAND, some fine to coarse Gravel, some Silt, trace, Brick, Glass, Ash (Fill)					61.2	E		
4	Black, FINE GRAINED PEAT						E		
5							E		
6							E		
7	Dark brown, FIBROUS PEAT					58.7	E		
8	Gray, fine SAND, some Silt (Silty Sand)						E		
9							E		
10							E		
11	End of exploration at 10 feet.								
12									
13									
14									
15									
Test Pit Plan: 10 ft. 4 ft. Volume = 15 ± cu.yd.			LEGEND: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="text-align: center;"> Observed Water Level </div> <div style="text-align: center;"> Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50% </div> <div style="text-align: center;"> Excavation Effort: Easy E Moderate M Difficult D </div> <div style="text-align: center;"> Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C </div> </div>						
REMARKS	1 - Groundwater not encountered.								
See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.								Exploration No.: TP-05	




GZA TEMPLATE TEST PIT; 1/9/2025; 8:18:30 AM

TEST PIT LOG																											
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>		Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island		EXPLORATION NO.: TP-06 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland																							
Logged By: Tucker Murphy Contractor: Catalano Foreman: John Cerce		Test Pit Location: See Plan Ground Surface Elev. (ft.): 65.931 Date Start: 11/1/2024 Date Finish: 11/1/2024		H. Datum: V. Datum: NAVD 88																							
Equipment: John Deere Model: 210CW Reach (ft.): 21 Capacity (cu.yd.): 0.2		Weather: P. Cloudy, 50s Time Start: 8:00 Time Finish: 8:25		<table><thead><tr><th colspan="4">Groundwater Depth (ft.)</th></tr><tr><th>Date</th><th>Time</th><th>Depth (ft.)</th><th>Symbol</th></tr></thead><tbody><tr><td>11/1/24</td><td>8:20</td><td>7.0</td><td>▼</td></tr><tr><td></td><td></td><td></td><td>▼</td></tr><tr><td></td><td></td><td></td><td>▼</td></tr></tbody></table>				Groundwater Depth (ft.)				Date	Time	Depth (ft.)	Symbol	11/1/24	8:20	7.0	▼				▼				▼
Groundwater Depth (ft.)																											
Date	Time	Depth (ft.)	Symbol																								
11/1/24	8:20	7.0	▼																								
			▼																								
			▼																								
Depth (ft)	Stratum Description (Modified Burmister Classification)			Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark																				
1	ASPHALT			65.6	D																						
1	Brown, fine to coarse SAND, some Silt, some fine Gravel (Fill)			64.9	M		1																				
2	Dark brown, fine to coarse SAND and fine to coarse GRAVEL, some Silt, trace Brick, Glass, Ash (Fill)				M	A																					
3				62.9	M	A																					
4					M																						
5	Brown/gray, fine to coarse SAND, some Silt, trace fine to coarse Gravel, trace Glass, Plastic, Ash (Fill)				E																						
6				59.9	E																						
7	▼ Black, fine to coarse SAND, some Silt, some fine to coarse Gravel (Fill)				E		2																				
8				57.9	E																						
9					E																						
10	Black/brown, FINE GRAINED PEAT																										
11				54.9			3																				
End of exploration at 11 feet.																											
12																											
13																											
14																											
15																											
Test Pit Plan: 10 ft.  4 ft. Volume = 16 ± cu.yd.		LEGEND: ▼ Observed Water Level		Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50%	Excavation Effort: Easy E Moderate M Difficult D	Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C																					
REMARKS	1 - Approximately 4" of asphalt encountered at the ground surface.																										
	2 - Groundwater seepage observed at approximately 7' below ground surface.																										
	3 - Excavation terminated due to sidewall collapse.																										
See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.						Exploration No.: TP-06																					




GZA TEMPLATE TEST PIT: 1/9/2025; 8:18:31 AM

TEST PIT LOG										
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>			Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island			EXPLORATION NO.: TP-07 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland				
Logged By: Tucker Murphy Contractor: Catalano Foreman: John Cerce			Test Pit Location: See Plan Ground Surface Elev. (ft.): 65 Date Start: 11/1/2024 Date Finish: 11/1/2024			H. Datum: V. Datum: NAVD 88				
Equipment: John Deere Model: 210CW Reach (ft.): 21 Capacity (cu.yd.): 0.2			Weather: Sunny, 70s Time Start: 13:10 Time Finish: 13:30			Groundwater Depth (ft.)				
						Date	Time	Depth (ft.)	Symbol	
						Not Measured			▽ ▽ ▽	
Depth (ft)	Stratum Description (Modified Burmister Classification)					Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark	
1	Dark brown, fine to coarse SAND, some Silt, trace fine Gravel, trace Roots (Topsoil)					64.2	M		2	
2	Brown, fine to coarse SAND, some Silt, some fine to coarse Gravel, trace plastic pipe (Fill)					63.5	M			
3	Dark brown, fine to coarse SAND, some Silt, some fine to coarse Gravel, trace Brick, Glass, Plastic, Shells, Ash (Fill)						M	A		
4							M	A		
5						60.5	E			
6	Black/dark brown, FINE GRAINED PEAT					59.5	E			
7	Brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, trace Roots (Silty Sand)						E			
8						57.5	M			
9	Brown, fine to coarse SAND and fine to coarse GRAVEL, little Silt (Sand and Gravel)					56.5	M		1	
10	End of exploration at 8.5 feet.									
11										
12										
13										
14										
15										
Test Pit Plan: 10 ft.  4 ft. Volume = 13 ± cu.yd.			LEGEND:  Observed Water Level			Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50%		Excavation Effort: Easy E Moderate M Difficult D		Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C
REMARKS	1 - Groundwater not encountered. 2 - Utilities observed in the northern and southern portions of the test pit approximately 1.5' below ground surface.									
	See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.							Exploration No.: TP-07		


GZA TEMPLATE TEST PIT: 1/9/2025; 8:18:31 AM

TEST PIT LOG										
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>			Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island			EXPLORATION NO.: TP-09 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland				
Logged By: Tucker Murphy Contractor: Catalano Foreman: John Cerce			Test Pit Location: See Plan Ground Surface Elev. (ft.): 65.399 Date Start: 11/1/2024 Date Finish: 11/1/2024			H. Datum: V. Datum: NAVD 88				
Equipment: John Deere Model: 210CW Reach (ft.): 21 Capacity (cu.yd.): 0.2			Weather: Sunny, 70s Time Start: 16:03 Time Finish: 16:15			Groundwater Depth (ft.)				
						Date	Time	Depth (ft.)	Symbol	
						Not Measured			▽ ▼ ▼	
Depth (ft)	Stratum Description (Modified Burmister Classification)					Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark	
1	Brown, fine to medium SAND and SILT, little fine Gravel, trace Roots (Topsoil)					64.4	E			
2	Brown, fine to coarse SAND, some Silt, little fine to coarse Gravel (Fill)					62.9	E			
3	Dark brown, fine to coarse SAND, some fine to coarse Gravel, some Silt, trace, Metal, Glass, Plastic, Shells, Roots, Ash (Fill)					61.4	M	A		
4							D	A		
5	Black, FINE GRAINED PEAT						M			
6						58.9	E			
7	Gray, fine SAND, little Silt (Sand)					57.9	E		1	
8	End of exploration at 7.5 feet.						E			
9										
10										
11										
12										
13										
14										
15										
Test Pit Plan: 14 ft.  4 ft. Volume = 16 ± cu.yd.			LEGEND:  Observed Water Level			Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50%		Excavation Effort: Easy E Moderate M Difficult D		Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C
REMARKS 1 - Groundwater not encountered.										
See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.								Exploration No.: TP-09		




GZA TEMPLATE TEST PIT; 1/9/2025; 8:18:32 AM

TEST PIT LOG										
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>			Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island			EXPLORATION NO.: TP-10 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland				
Logged By: Tucker Murphy Contractor: Catalano Foreman: John Cerce			Test Pit Location: See Plan Ground Surface Elev. (ft.): 65 Date Start: 11/1/2024 Date Finish: 11/1/2024			H. Datum: V. Datum: NAVD 88				
Equipment: John Deere Model: 210CW Reach (ft.): 21 Capacity (cu.yd.): 0.2			Weather: Sunny, 70s Time Start: 13:50 Time Finish: 14:02			Groundwater Depth (ft.)				
						Date	Time	Depth (ft.)	Symbol	
						Not Measured			▽ ▽ ▽	
Depth (ft)	Stratum Description (Modified Burmister Classification)					Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark	
1	Brown, fine to coarse SAND and SILT, trace fine Gravel, trace Roots (Topsoil)					64.2	E	A		
2	Brown, fine to coarse SAND, some Silt, some fine to coarse Gravel, trace Roots (Fill)					63.0	E			
3	Dark brown, fine to coarse SAND, some fine to coarse Gravel, some Silt, trace Brick, Glass, Shells, Ash (Fill)					61.5	E			
4							E			
5	Brown, fine to coarse SAND, some fine to coarse Gravel, some Silt (Fill)					59.5	E			
6							E			
7	Black, FINE GRAINED PEAT					58.0	E			
8	Gray, fine SAND, little Silt (Sand)					57.0			1	
9	End of exploration at 8 feet.									
10										
11										
12										
13										
14										
15										
Test Pit Plan: 10 ft.  4 ft. Volume = 12 ± cu.yd.			LEGEND:  Observed Water Level			Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50%		Excavation Effort: Easy E Moderate M Difficult D		Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C
REMARKS	1 - Groundwater not encountered.									
	See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.							Exploration No.: TP-10		




GZA TEMPLATE TEST PIT, 1/9/2025, 8:18:32 AM

TEST PIT LOG									
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>			Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island			EXPLORATION NO.: TP-11 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland			
Logged By: Tucker Murphy Contractor: Catalano Foreman: John Cerce			Test Pit Location: See Plan Ground Surface Elev. (ft.): 65.51 Date Start: 11/1/2024 Date Finish: 11/1/2024			H. Datum: V. Datum: NAVD 88			
Equipment: John Deere Model: 210CW Reach (ft.): 21 Capacity (cu.yd.): 0.2			Weather: Sunny, 60s Time Start: 11:45 Time Finish: 12:46			Groundwater Depth (ft.)			
						Date	Time	Depth (ft.)	Symbol
						Not Measured			▽ ▽ ▽
Depth (ft)	Stratum Description (Modified Burmister Classification)	Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark				
1	Brown, fine to medium SAND, some Silt, trace fine Gravel, trace Roots (Topsoil)	64.7	E						
2	Brown, fine to coarse SAND, some Silt, some fine to coarse Gravel, trace Roots (Fill)	63.5	E	A					
3			E	A					
4	Dark brown, fine to coarse SAND, some fine to coarse Gravel, some Silt (Fill)	61.5	E						
5			E						
6	Dark brown, fine to coarse SAND, some fine to coarse Gravel, some Silt, trace Brick, Glass, Plastic, Shells (Fill)		E						
7		58.5	E						
8			E						
9	Black, FINE GRAINED PEAT, odorous		E						
10		55.5			1				
11	Gray, fine SAND, little Silt (Sand)	55.3							
12	End of exploration at 10.2 feet.								
13									
14									
15									



GZA TEMPLATE TEST PIT, 1/9/2025, 8:18:33 AM

TEST PIT LOG										
<div><div>GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i></div></div>			<div>Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island</div>			<div>EXPLORATION NO.: TP-12 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland</div>				
<div>Logged By: Tucker Murphy Contractor: Catalano Foreman: John Cerce</div>			<div>Test Pit Location: See Plan Ground Surface Elev. (ft.): 65.058 Date Start: 10/31/2024 Date Finish: 10/31/2024</div>			<div>H. Datum: V. Datum: NAVD 88</div>				
<div>Equipment: John Deere Model: 210CW Reach (ft.): 21 Capacity (cu.yd.): 0.2</div>			<div>Weather: Cloudy, 50s Time Start: 07:30 Time Finish: 08:00</div>			Groundwater Depth (ft.)				
						Date	Time	Depth (ft.)	Symbol	
						Not Measured			▽ ▼ ▼	
Depth (ft)	Stratum Description (Modified Burmister Classification)					Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark	
1	CONCRETE					64.5	D			
2	Brown, fine to coarse, SAND, some Silt, some fine to coarse Gravel (Fill)					63.1	E	A		
3	Dark brown, SILT, little fine to medium Sand, trace Roots, odorous (Fill)					62.1	E	A		
4	Dark brown, fine to coarse SAND, some Silt, some fine Gravel (Fill)						E			
5						60.1	E			
6	Dark brown, FINE GRAINED PEAT					59.1	E			
7							E			
8	Gray fine to medium SAND, some silt (Silty Sand)						E			
9							E			
10	End of exploration at 10 feet.					55.1	E		1	
11										
12										
13										
14										
15										
<div>Test Pit Plan: 10 ft.  4 ft. Volume = 15 ± cu.yd.</div>			<div>LEGEND:  Observed Water Level</div>			<div>Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50%</div>		<div>Excavation Effort: Easy E Moderate M Difficult D</div>		<div>Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C</div>
<div>REMARKS 1 - Groundwater not encountered.</div>										
<div>See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.</div>								<div>Exploration No.: TP-12</div>		

GZA TEMPLATE TEST PIT: 1/9/2025; 8:18:33 AM





TEST PIT LOG									
<div><div>GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i></div></div>			<div>Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island</div>			<div>EXPLORATION NO.: TP-13 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland</div>			
<div>Logged By: Tucker Murphy Contractor: Catalano Foreman: John Cerce</div>			<div>Test Pit Location: See Plan Ground Surface Elev. (ft.): 64.944 Date Start: 11/1/2024 Date Finish: 11/1/2014</div>			<div>H. Datum: V. Datum: NAVD 88</div>			
<div>Equipment: John Deere Model: 210CW Reach (ft.): 21 Capacity (cu.yd.): 0.2</div>			<div>Weather: Sunny, 60s Time Start: 13:33 Time Finish: 13:45</div>			Groundwater Depth (ft.)			
						Date	Time	Depth (ft.)	Symbol
						Not Measured			▽ ▽ ▽
Depth (ft)	Stratum Description (Modified Burmister Classification)					Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark
1	Brown, fine to medium SAND, some Silt, trace fine Gravel, trace Roots (Topsoil)					63.9	E		
2	Tan, fine to medium SAND, some Silt, trace fine Gravel (Fill)					62.9	E		
3	Brown, fine to coarse SAND, some fine to coarse Gravel, some Silt (Fill)					61.4	D	A	
4							D	A	
5							M		
6	Dark brown, fine to coarse SAND, some fine to coarse Gravel, some Silt, trace, Metal, Brick, Glass, Plastic, Shells, Ash (Fill)						M		
7							M		
8						57.4	E		
9	Black, FINE GRAINED PEAT						E		
10						55.9	E		
11	Brown, FIBROUS PEAT						E		
12	Gray, fine SAND, little Silt (Sand)					53.9			1
13	End of exploration at 11.2 feet.					53.7			
14									
15									
<div>Test Pit Plan: 10 ft. 4 ft.  Volume = 17 ± cu.yd.</div> <div><div>LEGEND:  Observed Water Level</div><div>Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50%</div><div>Excavation Effort: Easy E Moderate M Difficult D</div><div>Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C</div></div>									
<div>REMARKS</div> <div>1 - Groundwater not encountered.</div>									
<div>See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.</div>								<div>Exploration No.: TP-13</div>	

GZA TEMPLATE TEST PIT: 1/9/2025; 8:18:33 AM




TEST PIT LOG																										
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>		Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island		EXPLORATION NO.: TP-14 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland																						
Logged By: Tucker Murphy Contractor: Catalano Foreman: John Cerce		Test Pit Location: See Plan Ground Surface Elev. (ft.): 64.5 Date Start: 11/1/2024 Date Finish: 11/1/2014		H. Datum: V. Datum: NAVD 88																						
Equipment: John Deere Model: 210CW Reach (ft.): 21 Capacity (cu.yd.): 0.2		Weather: P. Cloudy, 60s Time Start: 8:45 Time Finish: 9:30		<table><thead><tr><th colspan="4">Groundwater Depth (ft.)</th></tr><tr><th>Date</th><th>Time</th><th>Depth (ft.)</th><th>Symbol</th></tr></thead><tbody><tr><td>11/1/24</td><td>9:20</td><td>7.5</td><td>▼</td></tr><tr><td></td><td></td><td></td><td>▼</td></tr><tr><td></td><td></td><td></td><td>▼</td></tr></tbody></table>			Groundwater Depth (ft.)				Date	Time	Depth (ft.)	Symbol	11/1/24	9:20	7.5	▼				▼				▼
Groundwater Depth (ft.)																										
Date	Time	Depth (ft.)	Symbol																							
11/1/24	9:20	7.5	▼																							
			▼																							
			▼																							
Depth (ft)	Stratum Description (Modified Burmister Classification)			Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark																			
	ASPHALT			64.0	D																					
1	Dark brown, fine to coarse SAND, some fine to coarse Gravel, some Silt (Fill)			63.3	M	A																				
2	Brown, fine to coarse SAND, some fine to coarse Gravel, some Silt, trace Shells and Ash (Fill)			62.5	M	A																				
3	Brown, fine to coarse SAND and fine to coarse GRAVEL, some Silt, trace Shells and Ash (Fill)				E																					
4				60.7	E																					
5	Black, FINE GRAINED PEAT			59.9	E																					
6	Brown/gray, fine to medium SAND, little Silt, trace fine to coarse Gravel (Sand)				M	B																				
7				57.5	M																					
8	▼ Gray, fine to coarse SAND, some Silt, some fine to coarse Gravel (Silty Sand)				D																					
9				55.5			1																			
End of exploration at 9 feet.																										
10																										
11																										
12																										
13																										
14																										
15																										
Test Pit Plan: 10 ft.  4 ft. Volume = 13 ± cu.yd.		LEGEND: ▼ Observed Water Level		Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50%		Excavation Effort: Easy E Moderate M Difficult D																				
				Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C																						
REMARKS	1 - Groundwater seepage observed at approximately 7.5' below ground surface.																									
	See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.																									
						Exploration No.: TP-14																				

TEST PIT LOG																			
GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>		Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island		EXPLORATION NO.: TP-15 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland															
Logged By: Tucker Murphy Contractor: Catalano Foreman: John Cerce		Test Pit Location: See Plan Ground Surface Elev. (ft.): 65.629 Date Start: 11/1/2024 Date Finish: 11/1/2014		H. Datum: V. Datum: NAVD 88															
Equipment: John Deere Model: 210CW Reach (ft.): 21 Capacity (cu.yd.): 0.2		Weather: P. Cloudy, 60s Time Start: 10:45 Time Finish: 11:06		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center; padding: 2px;">Groundwater Depth (ft.)</th> </tr> <tr> <th style="width: 15%;">Date</th> <th style="width: 15%;">Time</th> <th style="width: 15%;">Depth (ft.)</th> <th style="width: 15%;">Symbol</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Not Measured</td> <td></td> <td></td> <td style="text-align: center;"> </td> </tr> </tbody> </table>				Groundwater Depth (ft.)				Date	Time	Depth (ft.)	Symbol	Not Measured			
Groundwater Depth (ft.)																			
Date	Time	Depth (ft.)	Symbol																
Not Measured			 																
<div style="display: flex; align-items: center;"> <div style="width: 20px; text-align: center;">Depth (ft)</div> <div style="width: 10px; border-left: 1px solid black; margin-left: 5px;"></div> </div>	<div style="display: flex; justify-content: space-between;"> <div>Stratum Description (Modified Burmister Classification)</div> <div style="text-align: right;">Elev. (ft.)</div> </div>			<div style="display: flex; justify-content: space-between;"> <div>Excavation Effort</div> <div style="text-align: right;">Boulder Count Qty./Class</div> </div>	<div style="display: flex; justify-content: space-between;"> <div></div> <div style="text-align: right;">Remark</div> </div>														
1	Brown, fine to medium SAND, some Silt, little fine to coarse Gravel (Fill)			65.1	E														
2	Brown, fine to coarse SAND, some Silt, some fine to coarse Gravel (Fill)			64.1	M	A													
3	Dark brown, fine to medium SAND, some fine to coarse Gravel, some Silt, trace, Shells and Ash (Fill)			62.9	M	A													
4	Dark brown, fine SAND, some Silt, little fine Gravel (Fill)			62.1	M	A													
5	Light brown/tan, fine to coarse SAND, some Silt, little fine to coarse Gravel (Fill)			60.1	E														
6					E														
7	Gray, fine SAND, trace Silt (Sand)				E														
8	End of exploration at 8 feet.			57.6			1												
9																			
10																			
11																			
12																			
13																			
14																			
15																			
<table style="width: 100%; border: none;"> <tr> <td style="width: 30%; vertical-align: top;"> Test Pit Plan: <div style="display: flex; align-items: center;"> <div style="width: 40px; height: 40px; border: 1px solid black; margin-right: 10px;"></div> <div> 10 ft. 4 ft. Volume = 12 ± cu.yd. </div> </div> </td> <td style="width: 10%; text-align: center; vertical-align: middle;"> North </td> <td style="width: 30%; vertical-align: top;"> LEGEND: Observed Water Level </td> <td style="width: 20%; vertical-align: top;"> Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50% </td> <td style="width: 10%; vertical-align: top;"> Excavation Effort: Easy E Moderate M Difficult D </td> <td style="width: 20%; vertical-align: top;"> Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C </td> </tr> </table>								Test Pit Plan: <div style="display: flex; align-items: center;"> <div style="width: 40px; height: 40px; border: 1px solid black; margin-right: 10px;"></div> <div> 10 ft. 4 ft. Volume = 12 ± cu.yd. </div> </div>	North 	LEGEND: Observed Water Level	Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50%	Excavation Effort: Easy E Moderate M Difficult D	Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C						
Test Pit Plan: <div style="display: flex; align-items: center;"> <div style="width: 40px; height: 40px; border: 1px solid black; margin-right: 10px;"></div> <div> 10 ft. 4 ft. Volume = 12 ± cu.yd. </div> </div>	North 	LEGEND: Observed Water Level	Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50%	Excavation Effort: Easy E Moderate M Difficult D	Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C														
REMARKS	1 - Groundwater not encountered.																		
See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.						Exploration No.: TP-15													








GZA TEMPLATE TEST PIT: 1/9/2025; 8:18:34 AM

TEST PIT LOG															
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>		Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island		EXPLORATION NO.: TP-16 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland											
Logged By: Tucker Murphy Contractor: Catalano Foreman: John Cerce		Test Pit Location: See Plan Ground Surface Elev. (ft.): 65.123 Date Start: 10/31/2024 Date Finish: 10/31/2024		H. Datum: V. Datum: NAVD 88											
Equipment: John Deere Model: 210CW Reach (ft.): 21 Capacity (cu.yd.): 0.2		Weather: P. Cloudy, 70s Time Start: 14:24 Time Finish: 14:45		Groundwater Depth (ft.)											
				Date	Time	Depth (ft.)	Symbol								
				Not Measured			▽ ▽ ▽								
Depth (ft)	Stratum Description (Modified Burmister Classification)			Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark								
1	Brown, fine to coarse SAND, some fine to coarse Gravel, little Silt (Fill)			64.3	E										
	Light brown, fine to medium SAND, some Silt, some fine to coarse Gravel, trace Bricks (Fill)			63.6	M	A									
2	Brown, fine to coarse SAND, some Silt, some fine to coarse Gravel, little Glass, trace Roots (Fill)				M										
3					M										
					M										
4	Dark brown, FINE GRAINED PEAT			61.6	E										
5				60.4	E										
6	Brown, fine to coarse SAND and fine to coarse GRAVEL, little Silt (Sand and Gravel)				D	A, B									
7				58.1			1								
End of exploration at 7 feet.															
8															
9															
10															
11															
12															
13															
14															
15															
Test Pit Plan: 10 ft.  4 ft. Volume = 10 ± cu.yd.		North 		LEGEND:  Observed Water Level						Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50%		Excavation Effort: Easy E Moderate M Difficult D		Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C	
REMARKS 1 - Groundwater not encountered.										Exploration No.: TP-16					
See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.															

GZA TEMPLATE TEST PIT: 1/9/2025; 8:41:04 AM

TEST PIT LOG										
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>			Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island			EXPLORATION NO.: TP-18 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland				
Logged By: Tucker Murphy Contractor: Catalano Foreman: John Cerce			Test Pit Location: See Plan Ground Surface Elev. (ft.): 65.857 Date Start: 11/1/2024 Date Finish: 11/1/2014			H. Datum: V. Datum: NAVD 88				
Equipment: John Deere Model: 210CW Reach (ft.): 21 Capacity (cu.yd.): 0.2			Weather: Sunny, 70s Time Start: 12:49 Time Finish: 13:04			Groundwater Depth (ft.)				
						Date	Time	Depth (ft.)	Symbol	
						Not Measured			▽ ▽ ▽	
Depth (ft)	Stratum Description (Modified Burmister Classification)					Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class	Remark	
1	Reddish brown, fine to coarse SAND, some Silt (Fill)					65.1	E	A	1	
2	Light brown, fine to medium SAND, little Silt (Fill)					63.9	E			
3	Dark brown, fine to coarse SAND, some Silt, some fine to coarse Gravel, trace Brick, Glass, Plastic (Fill)					61.9	E			
4	Brown, fine to coarse SAND, some Silt, trace Gravel						E			
5	Brown, fine to coarse SAND, little fine to coarse Gravel, little Silt (Fill)						E			
6	Brown, fine to coarse SAND and fine to coarse GRAVEL, little Silt (Sand and Gravel)					60.4	E			
7	End of exploration at 7 feet.					58.9				
8										
9										
10										
11										
12										
13										
14										
15										
Test Pit Plan: 10 ft.  4 ft. Volume = 10 ± cu.yd.			LEGEND:  Observed Water Level			Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50%		Excavation Effort: Easy E Moderate M Difficult D		Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C
REMARKS	1 - Groundwater not encountered.									
	See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.							Exploration No.: TP-18		

GZA TEMPLATE TEST PIT; 1/9/2025; 8:18:35 AM

TEST PIT LOG															
 GZA GeoEnvironmental, Inc. <i>Engineers and Scientists</i>		Jonathan Levi Architects Pawtucket Unified High School Pawtucket, Rhode Island		EXPLORATION NO.: TP-20 SHEET: 1 of 1 PROJECT NO: 35453.00 REVIEWED BY: James Marsland											
Logged By: Tucker Murphy Contractor: Catalano Foreman: John Cerce		Test Pit Location: See Plan Ground Surface Elev. (ft.): 64.672 Date Start: 10/31/2024 Date Finish: 10/31/2024		H. Datum: V. Datum: NAVD 88											
Equipment: John Deere Model: 210CW Reach (ft.): 21 Capacity (cu.yd.): 0.2		Weather: P. Cloudy, 50s Time Start: 08:16 Time Finish: 08:48		Groundwater Depth (ft.)											
				Date		Time		Depth (ft.)		Symbol					
				10/31/24		8:45		8.5		▼ ▼ ▼					
Depth (ft)	Stratum Description (Modified Burmister Classification)			Elev. (ft.)	Excavation Effort	Boulder Count Qty./Class		Remark							
	CONCRETE			64.2	D	A									
1	Brown, fine to coarse SAND, some fine to coarse Gravel, some Silt, trace Roots (Fill)			63.2	M	A									
2	Brown, fine to coarse SAND and GRAVEL, some Silt,				M	A									
3	BURIED ASPHALT trace Asphalt, Bricks, Roots (Fill)			61.7	M										
4					M										
5					M										
6	Gray, fine to coarse SAND, some fine to coarse Gravel, some Silt, trace Brick, Glass, Shells, Ash (Fill)				M										
7					M										
8					M										
9	▼			56.2	M										
10	Black, FINE GRAINED PEAT			54.7	M										
11	Dark brown, FIBROUS PEAT			53.7	M										
12					M										
13	Gray, SILT, trace fine Sand, wet (Silt)				E										
14					E										
15				49.7				1							
16	End of exploration at 15 feet.														
17															
18															
<table><tr><td>Test Pit Plan: 10 ft.  4 ft. Volume = 22 ± cu.yd.</td><td>North </td><td>LEGEND: ▼ Observed Water Level</td><td>Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50%</td><td>Excavation Effort: Easy E Moderate M Difficult D</td><td>Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C</td></tr></table>										Test Pit Plan: 10 ft.  4 ft. Volume = 22 ± cu.yd.	North 	LEGEND: ▼ Observed Water Level	Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50%	Excavation Effort: Easy E Moderate M Difficult D	Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C
Test Pit Plan: 10 ft.  4 ft. Volume = 22 ± cu.yd.	North 	LEGEND: ▼ Observed Water Level	Proportions Used: Trace (Tr) 0-10% Little (Li) 10-20% Some (So) 20-35% And 35-50%	Excavation Effort: Easy E Moderate M Difficult D	Boulder Size Range Designation: Diameter Letter Designation 6 to 16 in. A 16 to 36 in. B > 36 in. C										
REMARKS	1 - Groundwater seepage was not observed, however the peat and naturally deposited silt were saturated indicating groundwater at approximately 8.5' below ground surface.														
See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.						Exploration No.: TP-20									



APPENDIX E

TEST PIT PHOTO LOG



Client Name: Jonathan Levi Architects		Site Location: 1 Columbus Avenue Pawtucket, RI 02860	Project No. 03.0035453.00
Photo 1			
			
Description: Test Pit 1			
Photo 2			
			
Description: Test Pit 1 Soils			



Client Name: Jonathan Levi Architects	Site Location: 1 Columbus Avenue Pawtucket, RI 02860	Project No. 03.0035453.00
Photo 3		
		
Description: Tset Pit 3		
Photo 4		
		
Description: Test Pit 4		



Client Name: Jonathan Levi Architects	Site Location: 1 Columbus Avenue Pawtucket, RI 02860	Project No. 03.0035453.00
--	---	----------------------------------

Photo 5



Description: Test Pit 5

Photo 6



Description: Test Pit 6



Client Name: Jonathan Levi Architects	Site Location: 1 Columbus Avenue Pawtucket, RI 02860	Project No. 03.0035453.00
--	---	----------------------------------

Photo 7



Description: Test Pit 7

Photo 8



Description: Test Pit 9



Client Name: Jonathan Levi Architects	Site Location: 1 Columbus Avenue Pawtucket, RI 02860	Project No. 03.0035453.00
--	---	----------------------------------

Photo 9



Description: Test Pit 9 Spoils

Photo 10



Description: Test Pit 10



Client Name: Jonathan Levi Architects	Site Location: 1 Columbus Avenue Pawtucket, RI 02860	Project No. 03.0035453.00
--	---	----------------------------------

Photo 11



Description: Test Pit 10 Spoils

Photo 12



Description: Test Pit 11



Client Name: Jonathan Levi Architects	Site Location: 1 Columbus Avenue Pawtucket, RI 02860	Project No. 03.0035453.00
--	---	----------------------------------

Photo 13



Description: Test Pit 12

Photo 14



Description: Test Pit 12 Spoils



Client Name: Jonathan Levi Architects	Site Location: 1 Columbus Avenue Pawtucket, RI 02860	Project No. 03.0035453.00
--	---	----------------------------------

Photo 15





Description: Test Pit 13

Photo 16



Description: Test Pit 13 Spoils



Client Name: Jonathan Levi Architects		Site Location: 1 Columbus Avenue Pawtucket, RI 02860	Project No. 03.0035453.00
Photo 17			
			
Description: Test Pit 14			
Photo 18			
			
Description: Test Pit 14 Spoils			



Client Name: Jonathan Levi Architects	Site Location: 1 Columbus Avenue Pawtucket, RI 02860	Project No. 03.0035453.00
--	---	----------------------------------

Photo 19



Description: Test Pit 15

Photo 20



Description: Test Pit 15 Spoils



Client Name: Jonathan Levi Architects	Site Location: 1 Columbus Avenue Pawtucket, RI 02860	Project No. 03.0035453.00
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Photo 21



Description: Test Pit 16

Photo 22




Description: Test Pit 16 Spoils



Client Name: Jonathan Levi Architects	Site Location: 1 Columbus Avenue Pawtucket, RI 02860	Project No. 03.0035453.00
Photo 23		
 A photograph of a test pit (Test Pit 18) showing a deep excavation in the ground. The pit is filled with dark, moist soil and some roots. A shovel is visible on the right side of the pit, and a person's leg and foot are partially visible on the right edge. The surrounding ground is dry and sandy.		
Description: Test Pit 18		
Photo 24		
 A photograph of a test pit (Test Pit 20) showing a deep excavation in the ground. The pit is filled with dark, moist soil and some roots. The walls of the pit are steep and show some horizontal layering. The bottom of the pit is dark and appears to be filled with water or very wet soil.		
Description: Test Pit 20		



Photographic Log

Client Name: Jonathan Levi Architects	Site Location: 1 Columbus Avenue Pawtucket, RI 02860	Project No. 03.0035453.00
Photo 25		
 A photograph showing a large pile of dark, moist soil and debris, likely from a test pit. A yellow excavator is visible in the background, and a person in a red shirt is partially visible on the left. The soil appears to be a mix of clay and silt, with some larger clumps and roots visible.		
Description: Test Pit 20 Spoils		
Client Name: Jonathan Levi Architects	Site Location: 1 Columbus Avenue Pawtucket, RI 02860	Project No. 03.0035453.00



APPENDIX F

ENVIORNMENTAL LABORATORY RESULTS

CERTIFICATE OF ANALYSIS

Joe Unsworth
GZA GeoEnvironmental, Inc.
188 Valley Street
Providence, RI 02909

RE: Pawtucket High School (03.0035453.00)
ESS Laboratory Work Order Number: 24K0082

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 1:29 pm, Nov 12, 2024

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 TNI and relative state standards, 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: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

SAMPLE RECEIPT

The following samples were received on November 04, 2024 for the analyses specified on the enclosed Chain of Custody Record.

Low Level VOA vials were frozen by the client on November 01, 2024.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
24K0082-01	TP-13 S-1	Soil	6010D, 7471B, 8082A, 8100M, 8260D Low, 8270E
24K0082-02	TP-11 S-1	Soil	1311, 1311/6010D, 6010D, 7471B, 8082A, 8100M, 8260D Low, 8270E
24K0082-03	TP-4 S-1	Soil	6010D, 7471B, 8082A, 8100M, 8260D Low, 8270E
24K0082-04	TP-10 S-1	Soil	6010D, 7471B, 8082A, 8100M, 8260D Low, 8270E
24K0082-05	TP-9 S-1	Soil	1311, 1311/6010D, 6010D, 7471B, 8082A, 8100M, 8260D Low, 8270E
24K0082-06	TP-14 S-1	Soil	6010D, 6020B, 7471B, 8082A, 8100M, 8260D Low, 8270E

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

PROJECT NARRATIVE

8100M Total Petroleum Hydrocarbons

24K0082-01 Surrogate recovery(ies) outside of criteria. Reextraction/Reanalysis confirms results (SC).

O-Terphenyl (24% @ 40-140%)

24K0082-01RE1 Surrogate recovery(ies) outside of criteria. Reextraction/Reanalysis confirms results (SC).

O-Terphenyl (34% @ 40-140%)

Semi-Volatile Organic Compounds

D4K0078-CCV1 Calibration required quadratic regression (Q).

2,4-Dinitrophenol (114% @ 40-160%), 4,6-Dinitro-2-Methylphenol (106% @ 80-120%), Benzidine (112% @ 80-120%), Benzoic Acid (96% @ 80-120%), Pentachlorophenol (100% @ 40-160%)

D4K0078-CCV1 Initial Calibration Verification recovery is above upper control limit (ICV+).

Pyridine

D4K0078-CCV1 Initial Calibration Verification recovery is below lower control limit (ICV-).

Benzidine

DK40452-BS1 Blank Spike recovery is below lower control limit (B-).

Benzidine (15% @ 40-140%)

DK40452-BSD1 Blank Spike recovery is below lower control limit (B-).

Benzidine (14% @ 40-140%)

Total Metals

24K0082-06 Elevated Method Reporting Limits due to sample matrix (EL).

Arsenic , Cadmium , Chromium , Copper , Lead , Nickel , Silver

Volatile Organics Low Level

24K0082-03 Internal Standard(s) outside of criteria. Sample was reanalyzed to confirm (IC).

1,4-Dichlorobenzene-D4 (29% @ 50-200%), Chlorobenzene-d5 (49% @ 50-200%)

24K0082-03 Surrogate recovery(ies) below lower control limit (S-).

4-Bromofluorobenzene (67% @ 70-130%)

24K0082-05 Surrogate recovery(ies) outside of criteria. Reextraction/Reanalysis confirms results (SC).

1,2-Dichloroethane-d4 (142% @ 70-130%)

24K0082-06 Surrogate recovery(ies) outside of criteria. Reextraction/Reanalysis confirms results (SC).

1,2-Dichloroethane-d4 (149% @ 70-130%), Dibromofluoromethane (131% @ 70-130%)

D4K0107-CCV1 Continuing Calibration %Diff/Drift is above control limit (CD+).

Isopropylbenzene (21% @ 20%)

D4K0135-CCV1 Continuing Calibration %Diff/Drift is above control limit (CD+).

Isopropylbenzene (23% @ 20%), n-Butylbenzene (22% @ 20%), tert-Butylbenzene (22% @ 20%)

DK40517-BS1 Blank Spike recovery is above upper control limit (B+).

Isopropylbenzene (146% @ 70-130%)

DK40517-BSD1 Blank Spike recovery is above upper control limit (B+).

1,1-Dichloroethene (132% @ 70-130%), 1,4-Dioxane (132% @ 70-130%), Ethyl tertiary-butyl ether (131% @ 70-130%), Isopropylbenzene (149% @ 70-130%), tert-Butylbenzene (131% @ 70-130%)

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

DK40615-BS1 Blank Spike recovery is above upper control limit (B+).

1,2,3-Trichlorobenzene (132% @ 70-130%), Isopropylbenzene (141% @ 70-130%)

DK40615-BSD1 Blank Spike recovery is above upper control limit (B+).

1,2,3-Trichlorobenzene (135% @ 70-130%), Isopropylbenzene (151% @ 70-130%), tert-Butylbenzene (132% @ 70-130%)

DK40721-BS1 Blank Spike recovery is above upper control limit (B+).

1,2,3-Trichlorobenzene (132% @ 70-130%), Isopropylbenzene (147% @ 70-130%), tert-Butylbenzene (131% @ 70-130%)

DK40721-BSD1 Blank Spike recovery is above upper control limit (B+).

1,2,3-Trichlorobenzene (135% @ 70-130%), Ethyl tertiary-butyl ether (132% @ 70-130%), Isopropylbenzene (150% @ 70-130%), tert-Butylbenzene (131% @ 70-130%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[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: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E 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 19-2.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / 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
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-13 S-1
Date Sampled: 11/01/24 13:40
Percent Solids: 22

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	IV / FV	Batch
Antimony	ND (21.3)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Arsenic	ND (10.7)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Beryllium	2.17 (0.43)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Cadmium	ND (2.13)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Chromium	5.49 (4.26)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Copper	15.3 (10.7)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Lead	ND (21.3)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Mercury	0.189 (0.148)	---	7471B	---	1	AFV	11/04/24 18:50	0.61 40	DK40403
Nickel	ND (10.7)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Selenium	ND (21.3)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Silver	ND (2.13)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Thallium	ND (21.3)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Zinc	ND (10.7)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-13 S-1
Date Sampled: 11/01/24 13:40
Percent Solids: 22
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,1,1-Trichloroethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,1,2,2-Tetrachloroethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,1,2-Trichloroethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,1-Dichloroethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,1-Dichloroethene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,1-Dichloropropene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,2,3-Trichlorobenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,2,3-Trichloropropane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,2,4-Trichlorobenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,2,4-Trimethylbenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,2-Dibromo-3-Chloropropane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,2-Dibromoethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,2-Dichlorobenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,2-Dichloroethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,2-Dichloropropane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,3,5-Trimethylbenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,3-Dichlorobenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,3-Dichloropropane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,4-Dichlorobenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,4-Dioxane	ND (0.400)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1-Chlorohexane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
2,2-Dichloropropane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
2-Butanone	ND (0.200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
2-Chlorotoluene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
2-Hexanone	ND (0.200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
4-Chlorotoluene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-13 S-1
Date Sampled: 11/01/24 13:40
Percent Solids: 22
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Isopropyltoluene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
4-Methyl-2-Pentanone	ND (0.200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Acetone	0.637 (0.200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Benzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Bromobenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Bromochloromethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Bromodichloromethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Bromoform	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Bromomethane	ND (0.0400)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Carbon Disulfide	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Carbon Tetrachloride	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Chlorobenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Chloroethane	ND (0.0400)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Chloroform	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Chloromethane	ND (0.0400)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
cis-1,2-Dichloroethene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
cis-1,3-Dichloropropene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Dibromochloromethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Dibromomethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Dichlorodifluoromethane	ND (0.0400)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Diethyl Ether	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Di-isopropyl ether	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Ethyl tertiary-butyl ether	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Ethylbenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Hexachlorobutadiene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Isopropylbenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Methyl tert-Butyl Ether	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-13 S-1
Date Sampled: 11/01/24 13:40
Percent Solids: 22
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Methylene Chloride	ND (0.100)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Naphthalene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
n-Butylbenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
n-Propylbenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
sec-Butylbenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Styrene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
tert-Butylbenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Tertiary-amyl methyl ether	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Tetrachloroethene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Tetrahydrofuran	ND (0.0800)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Toluene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
trans-1,2-Dichloroethene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
trans-1,3-Dichloropropene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Trichloroethene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Trichlorofluoromethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Vinyl Acetate	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Vinyl Chloride	ND (0.0400)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Xylene O	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Xylene P,M	ND (0.0400)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Xylenes (Total)	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	107 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	84 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	99 %		70-130
<i>Surrogate: Toluene-d8</i>	107 %		70-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-13 S-1
Date Sampled: 11/01/24 13:40
Percent Solids: 22
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1-Biphenyl	ND (0.119)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
1,2,4-Trichlorobenzene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
1,2-Dichlorobenzene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
1,3-Dichlorobenzene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
1,4-Dichlorobenzene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2,3,4,6-Tetrachlorophenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2,4,5-Trichlorophenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2,4,6-Trichlorophenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2,4-Dichlorophenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2,4-Dimethylphenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2,4-Dinitrophenol	ND (4.78)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2,4-Dinitrotoluene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2,6-Dinitrotoluene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2-Chloronaphthalene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2-Chlorophenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2-Methylnaphthalene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2-Methylphenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2-Nitroaniline	ND (2.39)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2-Nitrophenol	ND (2.39)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
3,3'-Dichlorobenzidine	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
3+4-Methylphenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
3-Nitroaniline	ND (2.39)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
4,6-Dinitro-2-Methylphenol	ND (4.78)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
4-Bromophenyl-phenylether	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
4-Chloro-3-Methylphenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
4-Chloroaniline	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
4-Chloro-phenyl-phenyl ether	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-13 S-1
Date Sampled: 11/01/24 13:40
Percent Solids: 22
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Nitroaniline	ND (2.39)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
4-Nitrophenol	ND (4.78)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Acenaphthene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Acenaphthylene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Acetophenone	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Aniline	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Anthracene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Azobenzene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Benzo(a)anthracene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Benzo(a)pyrene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Benzo(b)fluoranthene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Benzo(g,h,i)perylene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Benzo(k)fluoranthene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Benzoic Acid	ND (11.9)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Benzyl Alcohol	ND (2.39)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
bis(2-Chloroethoxy)methane	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
bis(2-Chloroethyl)ether	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
bis(2-chloroisopropyl)Ether	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
bis(2-Ethylhexyl)phthalate	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Butylbenzylphthalate	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Carbazole	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Chrysene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Dibenzo(a,h)Anthracene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Dibenzofuran	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Diethylphthalate	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Dimethylphthalate	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Di-n-butylphthalate	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-13 S-1
 Date Sampled: 11/01/24 13:40
 Percent Solids: 22
 Initial Volume: 19.1g
 Final Volume: 1ml
 Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-01
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: TJ
 Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Di-n-octylphthalate	ND (2.39)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Fluoranthene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Fluorene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Hexachlorobenzene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Hexachlorobutadiene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Hexachlorocyclopentadiene	ND (2.39)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Hexachloroethane	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Indeno(1,2,3-cd)Pyrene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Isophorone	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Naphthalene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Nitrobenzene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
N-Nitrosodimethylamine	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
N-Nitroso-Di-n-Propylamine	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
N-nitrosodiphenylamine	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Pentachlorophenol	ND (4.78)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Phenanthrene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Phenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Pyrene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Pyridine	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	40 %		30-130
Surrogate: 2,4,6-Tribromophenol	66 %		30-130
Surrogate: 2-Chlorophenol-d4	47 %		30-130
Surrogate: 2-Fluorobiphenyl	54 %		30-130
Surrogate: 2-Fluorophenol	40 %		30-130
Surrogate: Nitrobenzene-d5	44 %		30-130
Surrogate: Phenol-d6	42 %		30-130
Surrogate: p-Terphenyl-d14	63 %		30-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-13 S-1
 Date Sampled: 11/01/24 13:40
 Percent Solids: 22
 Initial Volume: 19.9g
 Final Volume: 10ml
 Extraction Method: 3540C

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-01
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: JLG
 Prepared: 11/4/24 17:03

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.2)	---	8082A	---	1	11/05/24 20:49	---	DK40408
Aroclor 1221	ND (0.2)	---	8082A	---	1	11/05/24 20:49	---	DK40408
Aroclor 1232	ND (0.2)	---	8082A	---	1	11/05/24 20:49	---	DK40408
Aroclor 1242	ND (0.2)	---	8082A	---	1	11/05/24 20:49	---	DK40408
Aroclor 1248	ND (0.2)	---	8082A	---	1	11/05/24 20:49	---	DK40408
Aroclor 1254	ND (0.2)	---	8082A	---	1	11/05/24 20:49	---	DK40408
Aroclor 1260	ND (0.2)	---	8082A	---	1	11/05/24 20:49	---	DK40408
Aroclor 1262	ND (0.2)	---	8082A	---	1	11/05/24 20:49	---	DK40408
Aroclor 1268	ND (0.2)	---	8082A	---	1	11/05/24 20:49	---	DK40408

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	61 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	67 %		30-150

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-13 S-1
Date Sampled: 11/01/24 13:40
Percent Solids: 22
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 11/5/24 10:40

8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Total Petroleum Hydrocarbons (C9-C36)	316 (180)	---	8100M	---	1	11/07/24 20:16	---	DK40506

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: O-Terphenyl	24 %	SC	40-140

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-13 S-1
Date Sampled: 11/01/24 13:40
Percent Solids: 22
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-01RE1
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 11/8/24 17:23

8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Total Petroleum Hydrocarbons (C9-C36)	706 (177)	---	8100M	---	1	11/09/24 0:20	---	DK40842

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: O-Terphenyl	34 %	SC	40-140

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-11 S-1
 Date Sampled: 11/01/24 12:41
 Percent Solids: 41

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-02
 Sample Matrix: Soil
 Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>IV / FV</u>	<u>Batch</u>
Antimony	ND (10.7)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Arsenic	12.1 (5.34)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Beryllium	0.51 (0.21)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Cadmium	ND (1.07)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Chromium	48.4 (2.13)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Copper	183 (5.34)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Lead	172 (10.7)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Mercury	0.503 (0.075)	---	7471B	---	1	AFV	11/04/24 18:52	0.64 40	DK40403
Nickel	25.5 (5.34)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Selenium	ND (10.7)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Silver	ND (1.07)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Thallium	ND (10.7)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Zinc	115 (5.34)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-11 S-1
Date Sampled: 11/01/24 12:41
Percent Solids: 41

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-02
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>IV / FV</u>	<u>Batch</u>
Lead	0.05 (0.05)	---	1311/6010D	5	1	KJB	11/11/24 13:48	50 50	DK40851

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-11 S-1
Date Sampled: 11/01/24 12:41
Percent Solids: 41
Initial Volume: 7.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,1,1-Trichloroethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,1,2,2-Tetrachloroethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,1,2-Trichloroethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,1-Dichloroethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,1-Dichloroethene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,1-Dichloropropene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,2,3-Trichlorobenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,2,3-Trichloropropane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,2,4-Trichlorobenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,2,4-Trimethylbenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,2-Dibromo-3-Chloropropane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,2-Dibromoethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,2-Dichlorobenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,2-Dichloroethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,2-Dichloropropane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,3,5-Trimethylbenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,3-Dichlorobenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,3-Dichloropropane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,4-Dichlorobenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,4-Dioxane	ND (0.171)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1-Chlorohexane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
2,2-Dichloropropane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
2-Butanone	ND (0.0853)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
2-Chlorotoluene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
2-Hexanone	ND (0.0853)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
4-Chlorotoluene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-11 S-1
Date Sampled: 11/01/24 12:41
Percent Solids: 41
Initial Volume: 7.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Isopropyltoluene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
4-Methyl-2-Pentanone	ND (0.0853)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Acetone	0.340 (0.0853)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Benzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Bromobenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Bromochloromethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Bromodichloromethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Bromoform	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Bromomethane	ND (0.0171)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Carbon Disulfide	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Carbon Tetrachloride	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Chlorobenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Chloroethane	ND (0.0171)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Chloroform	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Chloromethane	ND (0.0171)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
cis-1,2-Dichloroethene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
cis-1,3-Dichloropropene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Dibromochloromethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Dibromomethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Dichlorodifluoromethane	ND (0.0171)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Diethyl Ether	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Di-isopropyl ether	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Ethyl tertiary-butyl ether	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Ethylbenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Hexachlorobutadiene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Isopropylbenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Methyl tert-Butyl Ether	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-11 S-1
Date Sampled: 11/01/24 12:41
Percent Solids: 41
Initial Volume: 7.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Methylene Chloride	ND (0.0427)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Naphthalene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
n-Butylbenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
n-Propylbenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
sec-Butylbenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Styrene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
tert-Butylbenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Tertiary-amyl methyl ether	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Tetrachloroethene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Tetrahydrofuran	ND (0.0341)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Toluene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
trans-1,2-Dichloroethene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
trans-1,3-Dichloropropene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Trichloroethene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Trichlorofluoromethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Vinyl Acetate	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Vinyl Chloride	ND (0.0171)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Xylene O	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Xylene P,M	ND (0.0171)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Xylenes (Total)	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	99 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	90 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	98 %		70-130
<i>Surrogate: Toluene-d8</i>	106 %		70-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-11 S-1
Date Sampled: 11/01/24 12:41
Percent Solids: 41
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1-Biphenyl	ND (0.060)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
1,2,4-Trichlorobenzene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
1,2-Dichlorobenzene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
1,3-Dichlorobenzene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
1,4-Dichlorobenzene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2,3,4,6-Tetrachlorophenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2,4,5-Trichlorophenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2,4,6-Trichlorophenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2,4-Dichlorophenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2,4-Dimethylphenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2,4-Dinitrophenol	ND (2.40)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2,4-Dinitrotoluene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2,6-Dinitrotoluene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2-Chloronaphthalene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2-Chlorophenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2-Methylnaphthalene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2-Methylphenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2-Nitroaniline	ND (1.20)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2-Nitrophenol	ND (1.20)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
3,3'-Dichlorobenzidine	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
3+4-Methylphenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
3-Nitroaniline	ND (1.20)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
4,6-Dinitro-2-Methylphenol	ND (2.40)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
4-Bromophenyl-phenylether	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
4-Chloro-3-Methylphenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
4-Chloroaniline	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
4-Chloro-phenyl-phenyl ether	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-11 S-1
Date Sampled: 11/01/24 12:41
Percent Solids: 41
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Nitroaniline	ND (1.20)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
4-Nitrophenol	ND (2.40)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Acenaphthene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Acenaphthylene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Acetophenone	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Aniline	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Anthracene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Azobenzene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Benzo(a)anthracene	0.833 (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Benzo(a)pyrene	0.873 (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Benzo(b)fluoranthene	1.34 (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Benzo(g,h,i)perylene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Benzo(k)fluoranthene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Benzoic Acid	ND (6.00)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Benzyl Alcohol	ND (1.20)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
bis(2-Chloroethoxy)methane	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
bis(2-Chloroethyl)ether	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
bis(2-chloroisopropyl)Ether	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
bis(2-Ethylhexyl)phthalate	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Butylbenzylphthalate	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Carbazole	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Chrysene	1.15 (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Dibenzo(a,h)Anthracene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Dibenzofuran	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Diethylphthalate	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Dimethylphthalate	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Di-n-butylphthalate	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-11 S-1
 Date Sampled: 11/01/24 12:41
 Percent Solids: 41
 Initial Volume: 20.2g
 Final Volume: 1ml
 Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-02
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: TJ
 Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Di-n-octylphthalate	ND (1.20)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Fluoranthene	2.08 (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Fluorene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Hexachlorobenzene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Hexachlorobutadiene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Hexachlorocyclopentadiene	ND (1.20)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Hexachloroethane	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Indeno(1,2,3-cd)Pyrene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Isophorone	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Naphthalene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Nitrobenzene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
N-Nitrosodimethylamine	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
N-Nitroso-Di-n-Propylamine	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
N-nitrosodiphenylamine	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Pentachlorophenol	ND (2.40)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Phenanthrene	1.10 (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Phenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Pyrene	1.86 (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Pyridine	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	78 %		30-130
Surrogate: 2,4,6-Tribromophenol	107 %		30-130
Surrogate: 2-Chlorophenol-d4	89 %		30-130
Surrogate: 2-Fluorobiphenyl	83 %		30-130
Surrogate: 2-Fluorophenol	82 %		30-130
Surrogate: Nitrobenzene-d5	80 %		30-130
Surrogate: Phenol-d6	82 %		30-130
Surrogate: p-Terphenyl-d14	103 %		30-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-11 S-1
 Date Sampled: 11/01/24 12:41
 Percent Solids: 41
 Initial Volume: 19.9g
 Final Volume: 10ml
 Extraction Method: 3540C

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-02
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: JLG
 Prepared: 11/4/24 17:03

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.1)	---	8082A	---	1	11/05/24 21:09	---	DK40408
Aroclor 1221	ND (0.1)	---	8082A	---	1	11/05/24 21:09	---	DK40408
Aroclor 1232	ND (0.1)	---	8082A	---	1	11/05/24 21:09	---	DK40408
Aroclor 1242	ND (0.1)	---	8082A	---	1	11/05/24 21:09	---	DK40408
Aroclor 1248	ND (0.1)	---	8082A	---	1	11/05/24 21:09	---	DK40408
Aroclor 1254	ND (0.1)	---	8082A	---	1	11/05/24 21:09	---	DK40408
Aroclor 1260	ND (0.1)	---	8082A	---	1	11/05/24 21:09	---	DK40408
Aroclor 1262	0.3 (0.1)	---	8082A	---	1	11/05/24 21:09	---	DK40408
Aroclor 1268	ND (0.1)	---	8082A	---	1	11/05/24 21:09	---	DK40408

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	71 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	75 %		30-150

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-11 S-1
Date Sampled: 11/01/24 12:41
Percent Solids: 41
Initial Volume: 19g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 11/5/24 10:40

8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Total Petroleum Hydrocarbons (C9-C36)	275 (95.6)	---	8100M	---	1	11/07/24 20:48	---	DK40506

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: O-Terphenyl	66 %		40-140

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-11 S-1
Date Sampled: 11/01/24 12:41
Percent Solids: 41

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-02
Sample Matrix: Soil
Units: °C

Extraction Method: 1311

TCLP Extraction by 1311 - Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>IV / FV</u>	<u>Batch</u>
Temperature (Min C)	19.0 (N/A)	---	1311	---	1	JEB	11/08/24 13:00		DK40728
Temperature (Max C)	21.7 (N/A)	---	1311	---	1	JEB	11/08/24 13:00		DK40728
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)								

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-4 S-1
 Date Sampled: 11/01/24 10:30
 Percent Solids: 30

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-03
 Sample Matrix: Soil
 Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>IV / FV</u>	<u>Batch</u>
Antimony	ND (15.5)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Arsenic	ND (7.75)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Beryllium	3.10 (0.31)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Cadmium	ND (1.55)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Chromium	13.0 (3.10)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Copper	10.1 (7.75)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Lead	ND (15.5)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Mercury	0.253 (0.102)	---	7471B	---	1	AFV	11/04/24 18:54	0.65 40	DK40403
Nickel	8.16 (7.75)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Selenium	ND (15.5)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Silver	ND (1.55)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Thallium	ND (15.5)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Zinc	244 (7.75)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-4 S-1
Date Sampled: 11/01/24 10:30
Percent Solids: 30
Initial Volume: 7.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,1,1-Trichloroethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,1,2,2-Tetrachloroethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,1,2-Trichloroethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,1-Dichloroethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,1-Dichloroethene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,1-Dichloropropene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,2,3-Trichlorobenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,2,3-Trichloropropane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,2,4-Trichlorobenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,2,4-Trimethylbenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,2-Dibromo-3-Chloropropane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,2-Dibromoethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,2-Dichlorobenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,2-Dichloroethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,2-Dichloropropane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,3,5-Trimethylbenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,3-Dichlorobenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,3-Dichloropropane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,4-Dichlorobenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,4-Dioxane	ND (0.228)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1-Chlorohexane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
2,2-Dichloropropane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
2-Butanone	ND (0.114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
2-Chlorotoluene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
2-Hexanone	ND (0.114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
4-Chlorotoluene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-4 S-1
Date Sampled: 11/01/24 10:30
Percent Solids: 30
Initial Volume: 7.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Isopropyltoluene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
4-Methyl-2-Pentanone	ND (0.114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Acetone	0.421 (0.114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Benzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Bromobenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Bromochloromethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Bromodichloromethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Bromoform	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Bromomethane	ND (0.0228)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Carbon Disulfide	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Carbon Tetrachloride	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Chlorobenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Chloroethane	ND (0.0228)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Chloroform	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Chloromethane	ND (0.0228)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
cis-1,2-Dichloroethene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
cis-1,3-Dichloropropene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Dibromochloromethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Dibromomethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Dichlorodifluoromethane	ND (0.0228)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Diethyl Ether	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Di-isopropyl ether	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Ethyl tertiary-butyl ether	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Ethylbenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Hexachlorobutadiene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Isopropylbenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Methyl tert-Butyl Ether	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-4 S-1
 Date Sampled: 11/01/24 10:30
 Percent Solids: 30
 Initial Volume: 7.3g
 Final Volume: 10ml
 Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-03
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: MEK
 Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Methylene Chloride	ND (0.0571)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Naphthalene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
n-Butylbenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
n-Propylbenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
sec-Butylbenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Styrene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
tert-Butylbenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Tertiary-amyl methyl ether	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Tetrachloroethene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Tetrahydrofuran	ND (0.0457)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Toluene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
trans-1,2-Dichloroethene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
trans-1,3-Dichloropropene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Trichloroethene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Trichlorofluoromethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Vinyl Acetate	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Vinyl Chloride	ND (0.0228)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Xylene O	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Xylene P,M	ND (0.0228)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Xylenes (Total)	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	111 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	67 %	S-	70-130
<i>Surrogate: Dibromofluoromethane</i>	107 %		70-130
<i>Surrogate: Toluene-d8</i>	130 %		70-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-4 S-1
Date Sampled: 11/01/24 10:30
Percent Solids: 30
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1-Biphenyl	ND (0.085)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
1,2,4-Trichlorobenzene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
1,2-Dichlorobenzene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
1,3-Dichlorobenzene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
1,4-Dichlorobenzene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2,3,4,6-Tetrachlorophenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2,4,5-Trichlorophenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2,4,6-Trichlorophenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2,4-Dichlorophenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2,4-Dimethylphenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2,4-Dinitrophenol	ND (3.42)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2,4-Dinitrotoluene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2,6-Dinitrotoluene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2-Chloronaphthalene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2-Chlorophenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2-Methylnaphthalene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2-Methylphenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2-Nitroaniline	ND (1.71)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2-Nitrophenol	ND (1.71)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
3,3'-Dichlorobenzidine	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
3+4-Methylphenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
3-Nitroaniline	ND (1.71)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
4,6-Dinitro-2-Methylphenol	ND (3.42)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
4-Bromophenyl-phenylether	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
4-Chloro-3-Methylphenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
4-Chloroaniline	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
4-Chloro-phenyl-phenyl ether	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-4 S-1
Date Sampled: 11/01/24 10:30
Percent Solids: 30
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Nitroaniline	ND (1.71)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
4-Nitrophenol	ND (3.42)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Acenaphthene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Acenaphthylene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Acetophenone	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Aniline	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Anthracene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Azobenzene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Benzo(a)anthracene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Benzo(a)pyrene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Benzo(b)fluoranthene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Benzo(g,h,i)perylene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Benzo(k)fluoranthene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Benzoic Acid	ND (8.55)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Benzyl Alcohol	ND (1.71)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
bis(2-Chloroethoxy)methane	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
bis(2-Chloroethyl)ether	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
bis(2-chloroisopropyl)Ether	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
bis(2-Ethylhexyl)phthalate	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Butylbenzylphthalate	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Carbazole	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Chrysene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Dibenzo(a,h)Anthracene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Dibenzofuran	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Diethylphthalate	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Dimethylphthalate	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Di-n-butylphthalate	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-4 S-1
Date Sampled: 11/01/24 10:30
Percent Solids: 30
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Di-n-octylphthalate	ND (1.71)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Fluoranthene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Fluorene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Hexachlorobenzene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Hexachlorobutadiene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Hexachlorocyclopentadiene	ND (1.71)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Hexachloroethane	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Indeno(1,2,3-cd)Pyrene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Isophorone	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Naphthalene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Nitrobenzene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
N-Nitrosodimethylamine	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
N-Nitroso-Di-n-Propylamine	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
N-nitrosodiphenylamine	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Pentachlorophenol	ND (3.42)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Phenanthrene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Phenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Pyrene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Pyridine	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	52 %		30-130
<i>Surrogate: 2,4,6-Tribromophenol</i>	71 %		30-130
<i>Surrogate: 2-Chlorophenol-d4</i>	60 %		30-130
<i>Surrogate: 2-Fluorobiphenyl</i>	64 %		30-130
<i>Surrogate: 2-Fluorophenol</i>	51 %		30-130
<i>Surrogate: Nitrobenzene-d5</i>	56 %		30-130
<i>Surrogate: Phenol-d6</i>	51 %		30-130
<i>Surrogate: p-Terphenyl-d14</i>	79 %		30-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-4 S-1
 Date Sampled: 11/01/24 10:30
 Percent Solids: 30
 Initial Volume: 20.3g
 Final Volume: 10ml
 Extraction Method: 3540C

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-03
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: JLG
 Prepared: 11/4/24 17:03

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.2)	---	8082A	---	1	11/05/24 21:29	---	DK40408
Aroclor 1221	ND (0.2)	---	8082A	---	1	11/05/24 21:29	---	DK40408
Aroclor 1232	ND (0.2)	---	8082A	---	1	11/05/24 21:29	---	DK40408
Aroclor 1242	ND (0.2)	---	8082A	---	1	11/05/24 21:29	---	DK40408
Aroclor 1248	ND (0.2)	---	8082A	---	1	11/05/24 21:29	---	DK40408
Aroclor 1254	ND (0.2)	---	8082A	---	1	11/05/24 21:29	---	DK40408
Aroclor 1260	ND (0.2)	---	8082A	---	1	11/05/24 21:29	---	DK40408
Aroclor 1262	ND (0.2)	---	8082A	---	1	11/05/24 21:29	---	DK40408
Aroclor 1268	ND (0.2)	---	8082A	---	1	11/05/24 21:29	---	DK40408

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	69 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	75 %		30-150

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-4 S-1
Date Sampled: 11/01/24 10:30
Percent Solids: 30
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 11/5/24 10:40

8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Total Petroleum Hydrocarbons (C9-C36)	331 (131)	---	8100M	---	1	11/07/24 21:21	---	DK40506

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: O-Terphenyl	41 %		40-140

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-10 S-1
Date Sampled: 11/01/24 13:57
Percent Solids: 42

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	IV / FV	Batch
Antimony	ND (10.1)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Arsenic	ND (5.05)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Beryllium	4.03 (0.20)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Cadmium	ND (1.01)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Chromium	8.41 (2.02)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Copper	5.09 (5.05)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Lead	11.1 (10.1)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Mercury	0.160 (0.069)	---	7471B	---	1	AFV	11/04/24 19:01	0.69 40	DK40403
Nickel	ND (5.05)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Selenium	ND (10.1)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Silver	ND (1.01)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Thallium	ND (10.1)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Zinc	ND (5.05)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-10 S-1
Date Sampled: 11/01/24 13:57
Percent Solids: 42
Initial Volume: 7.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,1,1-Trichloroethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,1,2,2-Tetrachloroethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,1,2-Trichloroethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,1-Dichloroethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,1-Dichloroethene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,1-Dichloropropene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,2,3-Trichlorobenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,2,3-Trichloropropane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,2,4-Trichlorobenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,2,4-Trimethylbenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,2-Dibromo-3-Chloropropane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,2-Dibromoethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,2-Dichlorobenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,2-Dichloroethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,2-Dichloropropane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,3,5-Trimethylbenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,3-Dichlorobenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,3-Dichloropropane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,4-Dichlorobenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,4-Dioxane	ND (0.154)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1-Chlorohexane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
2,2-Dichloropropane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
2-Butanone	ND (0.0768)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
2-Chlorotoluene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
2-Hexanone	ND (0.0768)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
4-Chlorotoluene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-10 S-1
Date Sampled: 11/01/24 13:57
Percent Solids: 42
Initial Volume: 7.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Isopropyltoluene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
4-Methyl-2-Pentanone	ND (0.0768)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Acetone	ND (0.0768)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Benzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Bromobenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Bromochloromethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Bromodichloromethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Bromoform	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Bromomethane	ND (0.0154)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Carbon Disulfide	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Carbon Tetrachloride	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Chlorobenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Chloroethane	ND (0.0154)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Chloroform	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Chloromethane	ND (0.0154)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
cis-1,2-Dichloroethene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
cis-1,3-Dichloropropene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Dibromochloromethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Dibromomethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Dichlorodifluoromethane	ND (0.0154)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Diethyl Ether	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Di-isopropyl ether	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Ethyl tertiary-butyl ether	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Ethylbenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Hexachlorobutadiene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Isopropylbenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Methyl tert-Butyl Ether	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-10 S-1
 Date Sampled: 11/01/24 13:57
 Percent Solids: 42
 Initial Volume: 7.8g
 Final Volume: 10ml
 Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-04
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: MEK
 Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Methylene Chloride	ND (0.0384)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Naphthalene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
n-Butylbenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
n-Propylbenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
sec-Butylbenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Styrene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
tert-Butylbenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Tertiary-amyl methyl ether	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Tetrachloroethene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Tetrahydrofuran	ND (0.0307)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Toluene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
trans-1,2-Dichloroethene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
trans-1,3-Dichloropropene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Trichloroethene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Trichlorofluoromethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Vinyl Acetate	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Vinyl Chloride	ND (0.0154)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Xylene O	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Xylene P,M	ND (0.0154)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Xylenes (Total)	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>113 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>78 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>107 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>106 %</i>		<i>70-130</i>

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-10 S-1
Date Sampled: 11/01/24 13:57
Percent Solids: 42
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1-Biphenyl	ND (0.060)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
1,2,4-Trichlorobenzene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
1,2-Dichlorobenzene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
1,3-Dichlorobenzene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
1,4-Dichlorobenzene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2,3,4,6-Tetrachlorophenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2,4,5-Trichlorophenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2,4,6-Trichlorophenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2,4-Dichlorophenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2,4-Dimethylphenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2,4-Dinitrophenol	ND (2.42)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2,4-Dinitrotoluene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2,6-Dinitrotoluene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2-Chloronaphthalene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2-Chlorophenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2-Methylnaphthalene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2-Methylphenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2-Nitroaniline	ND (1.21)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2-Nitrophenol	ND (1.21)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
3,3'-Dichlorobenzidine	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
3+4-Methylphenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
3-Nitroaniline	ND (1.21)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
4,6-Dinitro-2-Methylphenol	ND (2.42)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
4-Bromophenyl-phenylether	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
4-Chloro-3-Methylphenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
4-Chloroaniline	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
4-Chloro-phenyl-phenyl ether	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-10 S-1
Date Sampled: 11/01/24 13:57
Percent Solids: 42
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Nitroaniline	ND (1.21)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
4-Nitrophenol	ND (2.42)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Acenaphthene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Acenaphthylene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Acetophenone	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Aniline	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Anthracene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Azobenzene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Benzo(a)anthracene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Benzo(a)pyrene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Benzo(b)fluoranthene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Benzo(g,h,i)perylene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Benzo(k)fluoranthene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Benzoic Acid	ND (6.05)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Benzyl Alcohol	ND (1.21)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
bis(2-Chloroethoxy)methane	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
bis(2-Chloroethyl)ether	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
bis(2-chloroisopropyl)Ether	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
bis(2-Ethylhexyl)phthalate	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Butylbenzylphthalate	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Carbazole	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Chrysene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Dibenzo(a,h)Anthracene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Dibenzofuran	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Diethylphthalate	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Dimethylphthalate	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Di-n-butylphthalate	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-10 S-1
 Date Sampled: 11/01/24 13:57
 Percent Solids: 42
 Initial Volume: 19.8g
 Final Volume: 1ml
 Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-04
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: TJ
 Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Di-n-octylphthalate	ND (1.21)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Fluoranthene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Fluorene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Hexachlorobenzene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Hexachlorobutadiene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Hexachlorocyclopentadiene	ND (1.21)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Hexachloroethane	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Indeno(1,2,3-cd)Pyrene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Isophorone	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Naphthalene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Nitrobenzene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
N-Nitrosodimethylamine	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
N-Nitroso-Di-n-Propylamine	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
N-nitrosodiphenylamine	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Pentachlorophenol	ND (2.42)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Phenanthrene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Phenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Pyrene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Pyridine	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	83 %		30-130
Surrogate: 2,4,6-Tribromophenol	112 %		30-130
Surrogate: 2-Chlorophenol-d4	92 %		30-130
Surrogate: 2-Fluorobiphenyl	92 %		30-130
Surrogate: 2-Fluorophenol	84 %		30-130
Surrogate: Nitrobenzene-d5	84 %		30-130
Surrogate: Phenol-d6	83 %		30-130
Surrogate: p-Terphenyl-d14	107 %		30-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-10 S-1
Date Sampled: 11/01/24 13:57
Percent Solids: 42
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/4/24 17:03

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.1)	---	8082A	---	1	11/05/24 21:49	---	DK40408
Aroclor 1221	ND (0.1)	---	8082A	---	1	11/05/24 21:49	---	DK40408
Aroclor 1232	ND (0.1)	---	8082A	---	1	11/05/24 21:49	---	DK40408
Aroclor 1242	ND (0.1)	---	8082A	---	1	11/05/24 21:49	---	DK40408
Aroclor 1248	ND (0.1)	---	8082A	---	1	11/05/24 21:49	---	DK40408
Aroclor 1254	ND (0.1)	---	8082A	---	1	11/05/24 21:49	---	DK40408
Aroclor 1260	ND (0.1)	---	8082A	---	1	11/05/24 21:49	---	DK40408
Aroclor 1262	ND (0.1)	---	8082A	---	1	11/05/24 21:49	---	DK40408
Aroclor 1268	ND (0.1)	---	8082A	---	1	11/05/24 21:49	---	DK40408

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	68 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	64 %		30-150

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-10 S-1
Date Sampled: 11/01/24 13:57
Percent Solids: 42
Initial Volume: 19.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 11/5/24 10:40

8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Total Petroleum Hydrocarbons (C9-C36)	167 (93.5)	---	8100M	---	1	11/07/24 21:53	---	DK40506

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: O-Terphenyl	74 %		40-140

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-9 S-1
Date Sampled: 11/01/24 14:07
Percent Solids: 41

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-05
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	IV / FV	Batch
Antimony	ND (10.6)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Arsenic	6.94 (5.28)	---	6010D	---	1	KJB	11/05/24 15:02	2.31 100	DK40402
Beryllium	1.33 (0.21)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Cadmium	ND (1.06)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Chromium	21.8 (2.11)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Copper	61.4 (5.28)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Lead	179 (10.6)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Mercury	0.684 (0.073)	---	7471B	---	1	AFV	11/04/24 19:03	0.66 40	DK40403
Nickel	19.0 (5.28)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Selenium	ND (10.6)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Silver	ND (1.06)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Thallium	ND (10.6)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Zinc	122 (5.28)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-9 S-1
Date Sampled: 11/01/24 14:07
Percent Solids: 41

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-05
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>IV / FV</u>	<u>Batch</u>
Lead	ND (0.05)	---	1311/6010D	5	1	KJB	11/11/24 13:51	50 50	DK40851

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-9 S-1
Date Sampled: 11/01/24 14:07
Percent Solids: 41
Initial Volume: 7.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/6/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,1,1-Trichloroethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,1,2,2-Tetrachloroethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,1,2-Trichloroethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,1-Dichloroethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,1-Dichloroethene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,1-Dichloropropene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,2,3-Trichlorobenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,2,3-Trichloropropane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,2,4-Trichlorobenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,2,4-Trimethylbenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,2-Dibromo-3-Chloropropane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,2-Dibromoethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,2-Dichlorobenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,2-Dichloroethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,2-Dichloropropane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,3,5-Trimethylbenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,3-Dichlorobenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,3-Dichloropropane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,4-Dichlorobenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,4-Dioxane	ND (0.161)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1-Chlorohexane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
2,2-Dichloropropane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
2-Butanone	ND (0.0803)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
2-Chlorotoluene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
2-Hexanone	ND (0.0803)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
4-Chlorotoluene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-9 S-1
Date Sampled: 11/01/24 14:07
Percent Solids: 41
Initial Volume: 7.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/6/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Isopropyltoluene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
4-Methyl-2-Pentanone	ND (0.0803)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Acetone	0.229 (0.0803)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Benzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Bromobenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Bromochloromethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Bromodichloromethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Bromoform	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Bromomethane	ND (0.0161)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Carbon Disulfide	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Carbon Tetrachloride	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Chlorobenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Chloroethane	ND (0.0161)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Chloroform	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Chloromethane	ND (0.0161)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
cis-1,2-Dichloroethene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
cis-1,3-Dichloropropene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Dibromochloromethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Dibromomethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Dichlorodifluoromethane	ND (0.0161)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Diethyl Ether	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Di-isopropyl ether	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Ethyl tertiary-butyl ether	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Ethylbenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Hexachlorobutadiene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Isopropylbenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Methyl tert-Butyl Ether	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-9 S-1
Date Sampled: 11/01/24 14:07
Percent Solids: 41
Initial Volume: 7.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/6/24 8:00

Volatile Organics Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Methylene Chloride	ND (0.0401)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Naphthalene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
n-Butylbenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
n-Propylbenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
sec-Butylbenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Styrene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
tert-Butylbenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Tertiary-amyl methyl ether	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Tetrachloroethene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Tetrahydrofuran	ND (0.0321)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Toluene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
trans-1,2-Dichloroethene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
trans-1,3-Dichloropropene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Trichloroethene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Trichlorofluoromethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Vinyl Acetate	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Vinyl Chloride	ND (0.0161)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Xylene O	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Xylene P,M	ND (0.0161)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Xylenes (Total)	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	142 %	SC	70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	81 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	124 %		70-130
<i>Surrogate: Toluene-d8</i>	100 %		70-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-9 S-1
Date Sampled: 11/01/24 14:07
Percent Solids: 41
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1-Biphenyl	ND (0.062)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
1,2,4-Trichlorobenzene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
1,2-Dichlorobenzene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
1,3-Dichlorobenzene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
1,4-Dichlorobenzene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2,3,4,6-Tetrachlorophenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2,4,5-Trichlorophenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2,4,6-Trichlorophenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2,4-Dichlorophenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2,4-Dimethylphenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2,4-Dinitrophenol	ND (2.46)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2,4-Dinitrotoluene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2,6-Dinitrotoluene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2-Chloronaphthalene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2-Chlorophenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2-Methylnaphthalene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2-Methylphenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2-Nitroaniline	ND (1.23)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2-Nitrophenol	ND (1.23)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
3,3'-Dichlorobenzidine	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
3+4-Methylphenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
3-Nitroaniline	ND (1.23)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
4,6-Dinitro-2-Methylphenol	ND (2.46)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
4-Bromophenyl-phenylether	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
4-Chloro-3-Methylphenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
4-Chloroaniline	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
4-Chloro-phenyl-phenyl ether	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-9 S-1
Date Sampled: 11/01/24 14:07
Percent Solids: 41
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Nitroaniline	ND (1.23)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
4-Nitrophenol	ND (2.46)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Acenaphthene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Acenaphthylene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Acetophenone	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Aniline	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Anthracene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Azobenzene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Benzo(a)anthracene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Benzo(a)pyrene	0.670 (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Benzo(b)fluoranthene	0.939 (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Benzo(g,h,i)perylene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Benzo(k)fluoranthene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Benzoic Acid	ND (6.16)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Benzyl Alcohol	ND (1.23)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
bis(2-Chloroethoxy)methane	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
bis(2-Chloroethyl)ether	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
bis(2-chloroisopropyl)Ether	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
bis(2-Ethylhexyl)phthalate	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Butylbenzylphthalate	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Carbazole	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Chrysene	0.764 (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Dibenzo(a,h)Anthracene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Dibenzofuran	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Diethylphthalate	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Dimethylphthalate	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Di-n-butylphthalate	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-9 S-1
 Date Sampled: 11/01/24 14:07
 Percent Solids: 41
 Initial Volume: 19.8g
 Final Volume: 1ml
 Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-05
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: TJ
 Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Di-n-octylphthalate	ND (1.23)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Fluoranthene	1.60 (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Fluorene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Hexachlorobenzene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Hexachlorobutadiene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Hexachlorocyclopentadiene	ND (1.23)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Hexachloroethane	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Indeno(1,2,3-cd)Pyrene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Isophorone	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Naphthalene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Nitrobenzene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
N-Nitrosodimethylamine	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
N-Nitroso-Di-n-Propylamine	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
N-nitrosodiphenylamine	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Pentachlorophenol	ND (2.46)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Phenanthrene	0.864 (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Phenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Pyrene	1.41 (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Pyridine	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	81 %		30-130
Surrogate: 2,4,6-Tribromophenol	113 %		30-130
Surrogate: 2-Chlorophenol-d4	92 %		30-130
Surrogate: 2-Fluorobiphenyl	86 %		30-130
Surrogate: 2-Fluorophenol	85 %		30-130
Surrogate: Nitrobenzene-d5	83 %		30-130
Surrogate: Phenol-d6	86 %		30-130
Surrogate: p-Terphenyl-d14	107 %		30-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-9 S-1
Date Sampled: 11/01/24 14:07
Percent Solids: 41
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/4/24 17:03

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.1)	---	8082A	---	1	11/05/24 22:08	---	DK40408
Aroclor 1221	ND (0.1)	---	8082A	---	1	11/05/24 22:08	---	DK40408
Aroclor 1232	ND (0.1)	---	8082A	---	1	11/05/24 22:08	---	DK40408
Aroclor 1242	ND (0.1)	---	8082A	---	1	11/05/24 22:08	---	DK40408
Aroclor 1248	ND (0.1)	---	8082A	---	1	11/05/24 22:08	---	DK40408
Aroclor 1254	ND (0.1)	---	8082A	---	1	11/05/24 22:08	---	DK40408
Aroclor 1260	ND (0.1)	---	8082A	---	1	11/05/24 22:08	---	DK40408
Aroclor 1262	0.1 (0.1)	---	8082A	---	1	11/05/24 22:08	---	DK40408
Aroclor 1268	ND (0.1)	---	8082A	---	1	11/05/24 22:08	---	DK40408

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	64 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	61 %		30-150

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-9 S-1
Date Sampled: 11/01/24 14:07
Percent Solids: 41
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 11/5/24 10:40

8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Total Petroleum Hydrocarbons (C9-C36)	347 (95.8)	---	8100M	---	1	11/07/24 22:26	---	DK40506

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: O-Terphenyl	73 %		40-140

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-9 S-1
Date Sampled: 11/01/24 14:07
Percent Solids: 41

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-05
Sample Matrix: Soil
Units: °C

Extraction Method: 1311

TCLP Extraction by 1311 - Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>IV / FV</u>	<u>Batch</u>
Temperature (Min C)	19.0 (N/A)	---	1311	---	1	JEB	11/08/24 13:00		DK40728
Temperature (Max C)	21.7 (N/A)	---	1311	---	1	JEB	11/08/24 13:00		DK40728
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)								

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-14 S-1
 Date Sampled: 11/01/24 09:46
 Percent Solids: 38

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-06
 Sample Matrix: Soil
 Units: mg/kg dry

Extraction Method: 3050B

Total Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>IV / FV</u>	<u>Batch</u>
Antimony	ND (4.33)	---	6020B	---	20	BJV	11/06/24 11:44	2.41 100	DK40402
Arsenic	EL ND (27.0)	---	6010D	---	5	KJB	11/05/24 15:04	2.41 100	DK40402
Beryllium	13.6 (1.08)	---	6010D	---	5	KJB	11/05/24 15:04	2.41 100	DK40402
Cadmium	EL ND (5.41)	---	6010D	---	5	KJB	11/05/24 15:04	2.41 100	DK40402
Chromium	EL ND (10.8)	---	6010D	---	5	KJB	11/05/24 15:04	2.41 100	DK40402
Copper	EL ND (27.0)	---	6010D	---	5	KJB	11/05/24 15:04	2.41 100	DK40402
Lead	EL ND (54.1)	---	6010D	---	5	KJB	11/05/24 15:04	2.41 100	DK40402
Mercury	0.151 (0.086)	---	7471B	---	1	AFV	11/04/24 19:05	0.6 40	DK40403
Nickel	EL ND (27.0)	---	6010D	---	5	KJB	11/05/24 15:04	2.41 100	DK40402
Selenium	7.96 (4.33)	---	6020B	---	20	BJV	11/06/24 11:44	2.41 100	DK40402
Silver	EL ND (10.8)	---	6010D	---	10	KJB	11/06/24 10:30	2.41 100	DK40402
Thallium	ND (4.33)	---	6020B	---	20	BJV	11/06/24 11:44	2.41 100	DK40402
Zinc	ND (27.0)	---	6010D	---	5	KJB	11/05/24 15:04	2.41 100	DK40402

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-14 S-1
Date Sampled: 11/01/24 09:46
Percent Solids: 38
Initial Volume: 6.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/7/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,1,1-Trichloroethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,1,2,2-Tetrachloroethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,1,2-Trichloroethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,1-Dichloroethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,1-Dichloroethene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,1-Dichloropropene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,2,3-Trichlorobenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,2,3-Trichloropropane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,2,4-Trichlorobenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,2,4-Trimethylbenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,2-Dibromo-3-Chloropropane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,2-Dibromoethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,2-Dichlorobenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,2-Dichloroethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,2-Dichloropropane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,3,5-Trimethylbenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,3-Dichlorobenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,3-Dichloropropane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,4-Dichlorobenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,4-Dioxane	ND (0.204)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1-Chlorohexane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
2,2-Dichloropropane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
2-Butanone	ND (0.102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
2-Chlorotoluene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
2-Hexanone	ND (0.102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
4-Chlorotoluene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-14 S-1
Date Sampled: 11/01/24 09:46
Percent Solids: 38
Initial Volume: 6.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/7/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Isopropyltoluene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
4-Methyl-2-Pentanone	ND (0.102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Acetone	0.117 (0.102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Benzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Bromobenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Bromochloromethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Bromodichloromethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Bromoform	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Bromomethane	ND (0.0204)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Carbon Disulfide	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Carbon Tetrachloride	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Chlorobenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Chloroethane	ND (0.0204)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Chloroform	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Chloromethane	ND (0.0204)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
cis-1,2-Dichloroethene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
cis-1,3-Dichloropropene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Dibromochloromethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Dibromomethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Dichlorodifluoromethane	ND (0.0204)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Diethyl Ether	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Di-isopropyl ether	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Ethyl tertiary-butyl ether	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Ethylbenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Hexachlorobutadiene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Isopropylbenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Methyl tert-Butyl Ether	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-14 S-1
Date Sampled: 11/01/24 09:46
Percent Solids: 38
Initial Volume: 6.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/7/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Methylene Chloride	ND (0.0509)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Naphthalene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
n-Butylbenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
n-Propylbenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
sec-Butylbenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Styrene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
tert-Butylbenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Tertiary-amyl methyl ether	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Tetrachloroethene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Tetrahydrofuran	ND (0.0407)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Toluene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
trans-1,2-Dichloroethene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
trans-1,3-Dichloropropene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Trichloroethene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Trichlorofluoromethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Vinyl Acetate	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Vinyl Chloride	ND (0.0204)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Xylene O	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Xylene P,M	ND (0.0204)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Xylenes (Total)	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	149 %	SC	70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	77 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	131 %	SC	70-130
<i>Surrogate: Toluene-d8</i>	105 %		70-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-14 S-1
Date Sampled: 11/01/24 09:46
Percent Solids: 38
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1-Biphenyl	ND (0.068)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
1,2,4-Trichlorobenzene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
1,2-Dichlorobenzene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
1,3-Dichlorobenzene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
1,4-Dichlorobenzene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2,3,4,6-Tetrachlorophenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2,4,5-Trichlorophenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2,4,6-Trichlorophenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2,4-Dichlorophenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2,4-Dimethylphenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2,4-Dinitrophenol	ND (2.70)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2,4-Dinitrotoluene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2,6-Dinitrotoluene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2-Chloronaphthalene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2-Chlorophenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2-Methylnaphthalene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2-Methylphenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2-Nitroaniline	ND (1.35)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2-Nitrophenol	ND (1.35)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
3,3'-Dichlorobenzidine	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
3+4-Methylphenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
3-Nitroaniline	ND (1.35)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
4,6-Dinitro-2-Methylphenol	ND (2.70)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
4-Bromophenyl-phenylether	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
4-Chloro-3-Methylphenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
4-Chloroaniline	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
4-Chloro-phenyl-phenyl ether	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-14 S-1
Date Sampled: 11/01/24 09:46
Percent Solids: 38
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Nitroaniline	ND (1.35)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
4-Nitrophenol	ND (2.70)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Acenaphthene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Acenaphthylene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Acetophenone	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Aniline	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Anthracene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Azobenzene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Benzo(a)anthracene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Benzo(a)pyrene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Benzo(b)fluoranthene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Benzo(g,h,i)perylene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Benzo(k)fluoranthene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Benzoic Acid	ND (6.75)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Benzyl Alcohol	ND (1.35)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
bis(2-Chloroethoxy)methane	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
bis(2-Chloroethyl)ether	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
bis(2-chloroisopropyl)Ether	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
bis(2-Ethylhexyl)phthalate	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Butylbenzylphthalate	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Carbazole	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Chrysene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Dibenzo(a,h)Anthracene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Dibenzofuran	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Diethylphthalate	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Dimethylphthalate	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Di-n-butylphthalate	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-14 S-1
Date Sampled: 11/01/24 09:46
Percent Solids: 38
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Di-n-octylphthalate	ND (1.35)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Fluoranthene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Fluorene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Hexachlorobenzene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Hexachlorobutadiene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Hexachlorocyclopentadiene	ND (1.35)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Hexachloroethane	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Indeno(1,2,3-cd)Pyrene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Isophorone	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Naphthalene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Nitrobenzene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
N-Nitrosodimethylamine	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
N-Nitroso-Di-n-Propylamine	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
N-nitrosodiphenylamine	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Pentachlorophenol	ND (2.70)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Phenanthrene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Phenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Pyrene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Pyridine	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	73 %		30-130
<i>Surrogate: 2,4,6-Tribromophenol</i>	75 %		30-130
<i>Surrogate: 2-Chlorophenol-d4</i>	78 %		30-130
<i>Surrogate: 2-Fluorobiphenyl</i>	69 %		30-130
<i>Surrogate: 2-Fluorophenol</i>	74 %		30-130
<i>Surrogate: Nitrobenzene-d5</i>	71 %		30-130
<i>Surrogate: Phenol-d6</i>	71 %		30-130
<i>Surrogate: p-Terphenyl-d14</i>	62 %		30-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-14 S-1
 Date Sampled: 11/01/24 09:46
 Percent Solids: 38
 Initial Volume: 19.5g
 Final Volume: 10ml
 Extraction Method: 3540C

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-06
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: JLG
 Prepared: 11/4/24 17:03

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.1)	---	8082A	---	1	11/05/24 22:28	---	DK40408
Aroclor 1221	ND (0.1)	---	8082A	---	1	11/05/24 22:28	---	DK40408
Aroclor 1232	ND (0.1)	---	8082A	---	1	11/05/24 22:28	---	DK40408
Aroclor 1242	ND (0.1)	---	8082A	---	1	11/05/24 22:28	---	DK40408
Aroclor 1248	ND (0.1)	---	8082A	---	1	11/05/24 22:28	---	DK40408
Aroclor 1254	ND (0.1)	---	8082A	---	1	11/05/24 22:28	---	DK40408
Aroclor 1260	ND (0.1)	---	8082A	---	1	11/05/24 22:28	---	DK40408
Aroclor 1262	ND (0.1)	---	8082A	---	1	11/05/24 22:28	---	DK40408
Aroclor 1268	ND (0.1)	---	8082A	---	1	11/05/24 22:28	---	DK40408

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	78 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	76 %		30-150

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-14 S-1
Date Sampled: 11/01/24 09:46
Percent Solids: 38
Initial Volume: 19.4g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JDN
Prepared: 11/5/24 10:40

8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Total Petroleum Hydrocarbons (C9-C36)	154 (101)	---	8100M	---	1	11/07/24 22:58	---	DK40506

<i>Surrogate: O-Terphenyl</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
	69 %		40-140

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Total Metals

Batch DK40402 - 3050B

Blank

Antimony	ND	4.22	mg/kg wet
Arsenic	ND	2.11	mg/kg wet
Beryllium	ND	0.08	mg/kg wet
Cadmium	ND	0.42	mg/kg wet
Chromium	ND	0.84	mg/kg wet
Copper	ND	2.11	mg/kg wet
Lead	ND	4.22	mg/kg wet
Nickel	ND	2.11	mg/kg wet
Selenium	ND	4.22	mg/kg wet
Silver	ND	0.42	mg/kg wet
Thallium	ND	4.22	mg/kg wet
Zinc	ND	2.11	mg/kg wet

Blank

Antimony	ND	2.00	mg/kg wet
Selenium	ND	2.00	mg/kg wet
Thallium	ND	2.00	mg/kg wet

LCS

Antimony	78.2	15.9	mg/kg wet	245.0	32	10-110
Arsenic	126	7.94	mg/kg wet	280.0	45	32-110
Beryllium	48.5	0.32	mg/kg wet	105.0	46	32-110
Cadmium	90.9	1.59	mg/kg wet	210.0	43	33-110
Chromium	146	3.17	mg/kg wet	225.0	65	50-110
Copper	134	7.94	mg/kg wet	290.0	46	33-110
Lead	157	15.9	mg/kg wet	350.0	45	31-110
Nickel	61.6	7.94	mg/kg wet	95.00	65	48-111
Selenium	144	15.9	mg/kg wet	320.0	45	29-110
Silver	41.5	1.59	mg/kg wet	95.00	44	30-111
Thallium	111	15.9	mg/kg wet	250.0	44	28-110
Zinc	222	7.94	mg/kg wet	500.0	44	30-110

LCS

Antimony	78.7	31.7	mg/kg wet	245.0	32	10-110
Selenium	155	31.7	mg/kg wet	320.0	48	29-110
Thallium	87.4	31.7	mg/kg wet	250.0	35	28-110

LCS Dup

Antimony	79.6	15.6	mg/kg wet	245.0	33	10-110	2	30
Arsenic	126	7.81	mg/kg wet	280.0	45	32-110	0.005	30
Beryllium	48.0	0.31	mg/kg wet	105.0	46	32-110	1	30
Cadmium	89.2	1.56	mg/kg wet	210.0	42	33-110	2	30
Chromium	150	3.12	mg/kg wet	225.0	67	50-110	3	30
Copper	133	7.81	mg/kg wet	290.0	46	33-110	1	30
Lead	156	15.6	mg/kg wet	350.0	45	31-110	0.5	30
Nickel	62.9	7.81	mg/kg wet	95.00	66	48-111	2	30

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Total Metals

Batch DK40402 - 3050B

Selenium	145	15.6	mg/kg wet	320.0		45	29-110	0.7	30	
Silver	41.3	1.56	mg/kg wet	95.00		44	30-111	0.4	30	
Thallium	108	15.6	mg/kg wet	250.0		43	28-110	2	30	
Zinc	219	7.81	mg/kg wet	500.0		44	30-110	1	30	

LCS Dup

Antimony	79.8	31.2	mg/kg wet	245.0		33	10-110	1	30	
Selenium	156	31.2	mg/kg wet	320.0		49	29-110	1	30	
Thallium	81.6	31.2	mg/kg wet	250.0		33	28-110	7	30	

Batch DK40403 - 7471B

Blank

Mercury	ND	0.032	mg/kg wet							
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LCS

Mercury	12.5	3.05	mg/kg wet	14.40		87	80-120			
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LCS Dup

Mercury	13.2	3.14	mg/kg wet	14.40		92	80-120	5	30	
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1311 TCLP Metals

Batch DK40851 - 3005A_TCLP

Blank

Lead	ND	0.05	mg/L							
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LCS

Lead	0.46	0.05	mg/L	0.5000		92	80-120			
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LCS Dup

Lead	0.46	0.05	mg/L	0.5000		92	80-120	0.4	20	
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Volatile Organics Low Level

Batch DK40517 - 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							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40517 - 5035

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
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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40517 - 5035

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	0.0200	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							

Surrogate: 1,2-Dichloroethane-d4	0.0644		mg/kg wet	0.05000		129	70-130
Surrogate: 4-Bromofluorobenzene	0.0466		mg/kg wet	0.05000		93	70-130
Surrogate: Dibromofluoromethane	0.0593		mg/kg wet	0.05000		119	70-130
Surrogate: Toluene-d8	0.0493		mg/kg wet	0.05000		99	70-130

LCS

1,1,1,2-Tetrachloroethane	0.0540	0.0050	mg/kg wet	0.05000		108	70-130
1,1,1-Trichloroethane	0.0578	0.0050	mg/kg wet	0.05000		116	70-130
1,1,2,2-Tetrachloroethane	0.0569	0.0050	mg/kg wet	0.05000		114	40-160
1,1,2-Trichloroethane	0.0551	0.0050	mg/kg wet	0.05000		110	70-130
1,1-Dichloroethane	0.0580	0.0050	mg/kg wet	0.05000		116	70-130
1,1-Dichloroethene	0.0625	0.0050	mg/kg wet	0.05000		125	70-130
1,1-Dichloropropene	0.0583	0.0050	mg/kg wet	0.05000		117	70-130
1,2,3-Trichlorobenzene	0.0619	0.0050	mg/kg wet	0.05000		124	70-130
1,2,3-Trichloropropane	0.0528	0.0050	mg/kg wet	0.05000		106	70-130
1,2,4-Trichlorobenzene	0.0539	0.0050	mg/kg wet	0.05000		108	70-130
1,2,4-Trimethylbenzene	0.0634	0.0050	mg/kg wet	0.05000		127	70-130
1,2-Dibromo-3-Chloropropane	0.0538	0.0050	mg/kg wet	0.05000		108	70-130
1,2-Dibromoethane	0.0519	0.0050	mg/kg wet	0.05000		104	70-130
1,2-Dichlorobenzene	0.0578	0.0050	mg/kg wet	0.05000		116	70-130
1,2-Dichloroethane	0.0541	0.0050	mg/kg wet	0.05000		108	70-130
1,2-Dichloropropane	0.0567	0.0050	mg/kg wet	0.05000		113	70-130
1,3,5-Trimethylbenzene	0.0635	0.0050	mg/kg wet	0.05000		127	70-130
1,3-Dichlorobenzene	0.0568	0.0050	mg/kg wet	0.05000		114	70-130
1,3-Dichloropropane	0.0525	0.0050	mg/kg wet	0.05000		105	70-130
1,4-Dichlorobenzene	0.0569	0.0050	mg/kg wet	0.05000		114	70-130
1,4-Dioxane	1.11	0.100	mg/kg wet	1.000		111	70-130
1-Chlorohexane	0.0496	0.0050	mg/kg wet	0.05000		99	70-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40517 - 5035

2,2-Dichloropropane	0.0592	0.0050	mg/kg wet	0.05000		118	70-130			
2-Butanone	0.312	0.0500	mg/kg wet	0.2500		125	40-160			
2-Chlorotoluene	0.0600	0.0050	mg/kg wet	0.05000		120	70-130			
2-Hexanone	0.242	0.0500	mg/kg wet	0.2500		97	40-160			
4-Chlorotoluene	0.0606	0.0050	mg/kg wet	0.05000		121	70-130			
4-Isopropyltoluene	0.0591	0.0050	mg/kg wet	0.05000		118	70-130			
4-Methyl-2-Pentanone	0.240	0.0500	mg/kg wet	0.2500		96	40-160			
Acetone	0.321	0.0500	mg/kg wet	0.2500		128	40-160			
Benzene	0.0569	0.0050	mg/kg wet	0.05000		114	70-130			
Bromobenzene	0.0583	0.0050	mg/kg wet	0.05000		117	70-130			
Bromochloromethane	0.0543	0.0050	mg/kg wet	0.05000		109	70-130			
Bromodichloromethane	0.0566	0.0050	mg/kg wet	0.05000		113	70-130			
Bromoform	0.0519	0.0050	mg/kg wet	0.05000		104	40-160			
Bromomethane	0.0610	0.0100	mg/kg wet	0.05000		122	40-160			
Carbon Disulfide	0.0607	0.0050	mg/kg wet	0.05000		121	70-130			
Carbon Tetrachloride	0.0579	0.0050	mg/kg wet	0.05000		116	70-130			
Chlorobenzene	0.0525	0.0050	mg/kg wet	0.05000		105	70-130			
Chloroethane	0.0571	0.0100	mg/kg wet	0.05000		114	40-160			
Chloroform	0.0551	0.0050	mg/kg wet	0.05000		110	70-130			
Chloromethane	0.0465	0.0100	mg/kg wet	0.05000		93	40-160			
cis-1,2-Dichloroethene	0.0573	0.0050	mg/kg wet	0.05000		115	70-130			
cis-1,3-Dichloropropene	0.0592	0.0050	mg/kg wet	0.05000		118	40-160			
Dibromochloromethane	0.0541	0.0050	mg/kg wet	0.05000		108	40-160			
Dibromomethane	0.0534	0.0050	mg/kg wet	0.05000		107	70-130			
Dichlorodifluoromethane	0.0401	0.0100	mg/kg wet	0.05000		80	40-160			
Diethyl Ether	0.0607	0.0050	mg/kg wet	0.05000		121	70-130			
Di-isopropyl ether	0.0613	0.0050	mg/kg wet	0.05000		123	70-130			
Ethyl tertiary-butyl ether	0.0610	0.0050	mg/kg wet	0.05000		122	70-130			
Ethylbenzene	0.0575	0.0050	mg/kg wet	0.05000		115	70-130			
Hexachlorobutadiene	0.0593	0.0050	mg/kg wet	0.05000		119	40-160			
Isopropylbenzene	0.0731	0.0050	mg/kg wet	0.05000		146	70-130			B+
Methyl tert-Butyl Ether	0.0586	0.0050	mg/kg wet	0.05000		117	70-130			
Methylene Chloride	0.0553	0.0250	mg/kg wet	0.05000		111	70-130			
Naphthalene	0.0581	0.0050	mg/kg wet	0.05000		116	40-160			
n-Butylbenzene	0.0643	0.0050	mg/kg wet	0.05000		129	70-130			
n-Propylbenzene	0.0637	0.0050	mg/kg wet	0.05000		127	70-130			
sec-Butylbenzene	0.0589	0.0050	mg/kg wet	0.05000		118	70-130			
Styrene	0.0507	0.0050	mg/kg wet	0.05000		101	40-160			
tert-Butylbenzene	0.0641	0.0050	mg/kg wet	0.05000		128	70-130			
Tertiary-amyl methyl ether	0.0518	0.0050	mg/kg wet	0.05000		104	70-130			
Tetrachloroethene	0.0486	0.0050	mg/kg wet	0.05000		97	70-130			
Tetrahydrofuran	0.0492	0.0200	mg/kg wet	0.05000		98	70-130			
Toluene	0.0574	0.0050	mg/kg wet	0.05000		115	70-130			
trans-1,2-Dichloroethene	0.0597	0.0050	mg/kg wet	0.05000		119	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40517 - 5035

trans-1,3-Dichloropropene	0.0498	0.0050	mg/kg wet	0.05000		100	70-130			
Trichloroethene	0.0574	0.0050	mg/kg wet	0.05000		115	70-130			
Trichlorofluoromethane	0.0548	0.0050	mg/kg wet	0.05000		110	40-160			
Vinyl Acetate	0.0548	0.0050	mg/kg wet	0.05000		110	70-130			
Vinyl Chloride	0.0504	0.0100	mg/kg wet	0.05000		101	70-130			
Xylene O	0.0530	0.0050	mg/kg wet	0.05000		106	70-130			
Xylene P,M	0.109	0.0100	mg/kg wet	0.1000		109	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0489		mg/kg wet	0.05000		98	70-130			
Surrogate: 4-Bromofluorobenzene	0.0468		mg/kg wet	0.05000		94	70-130			
Surrogate: Dibromofluoromethane	0.0499		mg/kg wet	0.05000		100	70-130			
Surrogate: Toluene-d8	0.0474		mg/kg wet	0.05000		95	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	0.0570	0.0050	mg/kg wet	0.05000		114	70-130	5	20	
1,1,1-Trichloroethane	0.0610	0.0050	mg/kg wet	0.05000		122	70-130	5	20	
1,1,2,2-Tetrachloroethane	0.0610	0.0050	mg/kg wet	0.05000		122	40-160	7	20	
1,1,2-Trichloroethane	0.0580	0.0050	mg/kg wet	0.05000		116	70-130	5	20	
1,1-Dichloroethane	0.0608	0.0050	mg/kg wet	0.05000		122	70-130	5	20	
1,1-Dichloroethene	0.0658	0.0050	mg/kg wet	0.05000		132	70-130	5	20	B+
1,1-Dichloropropene	0.0612	0.0050	mg/kg wet	0.05000		122	70-130	5	20	
1,2,3-Trichlorobenzene	0.0642	0.0050	mg/kg wet	0.05000		128	70-130	4	20	
1,2,3-Trichloropropane	0.0579	0.0050	mg/kg wet	0.05000		116	70-130	9	20	
1,2,4-Trichlorobenzene	0.0552	0.0050	mg/kg wet	0.05000		110	70-130	2	20	
1,2,4-Trimethylbenzene	0.0645	0.0050	mg/kg wet	0.05000		129	70-130	2	20	
1,2-Dibromo-3-Chloropropane	0.0614	0.0050	mg/kg wet	0.05000		123	70-130	13	20	
1,2-Dibromoethane	0.0579	0.0050	mg/kg wet	0.05000		116	70-130	11	20	
1,2-Dichlorobenzene	0.0585	0.0050	mg/kg wet	0.05000		117	70-130	1	20	
1,2-Dichloroethane	0.0572	0.0050	mg/kg wet	0.05000		114	70-130	6	20	
1,2-Dichloropropane	0.0598	0.0050	mg/kg wet	0.05000		120	70-130	5	20	
1,3,5-Trimethylbenzene	0.0649	0.0050	mg/kg wet	0.05000		130	70-130	2	20	
1,3-Dichlorobenzene	0.0589	0.0050	mg/kg wet	0.05000		118	70-130	4	20	
1,3-Dichloropropane	0.0575	0.0050	mg/kg wet	0.05000		115	70-130	9	20	
1,4-Dichlorobenzene	0.0568	0.0050	mg/kg wet	0.05000		114	70-130	0.1	20	
1,4-Dioxane	1.32	0.100	mg/kg wet	1.000		132	70-130	17	20	B+
1-Chlorohexane	0.0536	0.0050	mg/kg wet	0.05000		107	70-130	8	20	
2,2-Dichloropropane	0.0623	0.0050	mg/kg wet	0.05000		125	70-130	5	20	
2-Butanone	0.344	0.0500	mg/kg wet	0.2500		138	40-160	10	20	
2-Chlorotoluene	0.0608	0.0050	mg/kg wet	0.05000		122	70-130	1	20	
2-Hexanone	0.283	0.0500	mg/kg wet	0.2500		113	40-160	16	20	
4-Chlorotoluene	0.0610	0.0050	mg/kg wet	0.05000		122	70-130	0.8	20	
4-Isopropyltoluene	0.0600	0.0050	mg/kg wet	0.05000		120	70-130	2	20	
4-Methyl-2-Pentanone	0.279	0.0500	mg/kg wet	0.2500		111	40-160	15	20	
Acetone	0.358	0.0500	mg/kg wet	0.2500		143	40-160	11	20	
Benzene	0.0592	0.0050	mg/kg wet	0.05000		118	70-130	4	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40517 - 5035

Bromobenzene	0.0597	0.0050	mg/kg wet	0.05000		119	70-130	2	20	
Bromochloromethane	0.0573	0.0050	mg/kg wet	0.05000		115	70-130	6	20	
Bromodichloromethane	0.0592	0.0050	mg/kg wet	0.05000		118	70-130	4	20	
Bromoform	0.0575	0.0050	mg/kg wet	0.05000		115	40-160	10	20	
Bromomethane	0.0616	0.0100	mg/kg wet	0.05000		123	40-160	0.9	20	
Carbon Disulfide	0.0639	0.0050	mg/kg wet	0.05000		128	70-130	5	20	
Carbon Tetrachloride	0.0606	0.0050	mg/kg wet	0.05000		121	70-130	5	20	
Chlorobenzene	0.0559	0.0050	mg/kg wet	0.05000		112	70-130	6	20	
Chloroethane	0.0594	0.0100	mg/kg wet	0.05000		119	40-160	4	20	
Chloroform	0.0572	0.0050	mg/kg wet	0.05000		114	70-130	4	20	
Chloromethane	0.0478	0.0100	mg/kg wet	0.05000		96	40-160	3	20	
cis-1,2-Dichloroethene	0.0597	0.0050	mg/kg wet	0.05000		119	70-130	4	20	
cis-1,3-Dichloropropene	0.0625	0.0050	mg/kg wet	0.05000		125	40-160	5	20	
Dibromochloromethane	0.0587	0.0050	mg/kg wet	0.05000		117	40-160	8	20	
Dibromomethane	0.0572	0.0050	mg/kg wet	0.05000		114	70-130	7	20	
Dichlorodifluoromethane	0.0409	0.0100	mg/kg wet	0.05000		82	40-160	2	20	
Diethyl Ether	0.0651	0.0050	mg/kg wet	0.05000		130	70-130	7	20	
Di-isopropyl ether	0.0641	0.0050	mg/kg wet	0.05000		128	70-130	4	20	
Ethyl tertiary-butyl ether	0.0655	0.0050	mg/kg wet	0.05000		131	70-130	7	20	B+
Ethylbenzene	0.0613	0.0050	mg/kg wet	0.05000		123	70-130	6	20	
Hexachlorobutadiene	0.0608	0.0050	mg/kg wet	0.05000		122	40-160	2	20	
Isopropylbenzene	0.0746	0.0050	mg/kg wet	0.05000		149	70-130	2	20	B+
Methyl tert-Butyl Ether	0.0639	0.0050	mg/kg wet	0.05000		128	70-130	9	20	
Methylene Chloride	0.0578	0.0250	mg/kg wet	0.05000		116	70-130	4	20	
Naphthalene	0.0627	0.0050	mg/kg wet	0.05000		125	40-160	8	20	
n-Butylbenzene	0.0652	0.0050	mg/kg wet	0.05000		130	70-130	1	20	
n-Propylbenzene	0.0649	0.0050	mg/kg wet	0.05000		130	70-130	2	20	
sec-Butylbenzene	0.0599	0.0050	mg/kg wet	0.05000		120	70-130	2	20	
Styrene	0.0535	0.0050	mg/kg wet	0.05000		107	40-160	5	20	
tert-Butylbenzene	0.0654	0.0050	mg/kg wet	0.05000		131	70-130	2	20	B+
Tertiary-amyl methyl ether	0.0565	0.0050	mg/kg wet	0.05000		113	70-130	9	20	
Tetrachloroethene	0.0532	0.0050	mg/kg wet	0.05000		106	70-130	9	20	
Tetrahydrofuran	0.0595	0.0200	mg/kg wet	0.05000		119	70-130	19	20	
Toluene	0.0600	0.0050	mg/kg wet	0.05000		120	70-130	4	20	
trans-1,2-Dichloroethene	0.0629	0.0050	mg/kg wet	0.05000		126	70-130	5	20	
trans-1,3-Dichloropropene	0.0533	0.0050	mg/kg wet	0.05000		107	70-130	7	20	
Trichloroethene	0.0593	0.0050	mg/kg wet	0.05000		119	70-130	3	20	
Trichlorofluoromethane	0.0575	0.0050	mg/kg wet	0.05000		115	40-160	5	20	
Vinyl Acetate	0.0608	0.0050	mg/kg wet	0.05000		122	70-130	10	20	
Vinyl Chloride	0.0522	0.0100	mg/kg wet	0.05000		104	70-130	4	20	
Xylene O	0.0562	0.0050	mg/kg wet	0.05000		112	70-130	6	20	
Xylene P,M	0.116	0.0100	mg/kg wet	0.1000		116	70-130	7	20	

Surrogate: 1,2-Dichloroethane-d4

0.0511

mg/kg wet

0.05000

102

70-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40517 - 5035

Surrogate: 4-Bromofluorobenzene	0.0485		mg/kg wet	0.05000		97	70-130			
Surrogate: Dibromofluoromethane	0.0507		mg/kg wet	0.05000		101	70-130			
Surrogate: Toluene-d8	0.0485		mg/kg wet	0.05000		97	70-130			

Batch DK40615 - 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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40615 - 5035

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	0.0200	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							

Surrogate: 1,2-Dichloroethane-d4	0.0573		mg/kg wet	0.05000	115	70-130
Surrogate: 4-Bromofluorobenzene	0.0443		mg/kg wet	0.05000	89	70-130
Surrogate: Dibromofluoromethane	0.0561		mg/kg wet	0.05000	112	70-130
Surrogate: Toluene-d8	0.0488		mg/kg wet	0.05000	98	70-130

LCS

1,1,1,2-Tetrachloroethane	0.0557	0.0050	mg/kg wet	0.05000	111	70-130
1,1,1-Trichloroethane	0.0533	0.0050	mg/kg wet	0.05000	107	70-130
1,1,2,2-Tetrachloroethane	0.0549	0.0050	mg/kg wet	0.05000	110	40-160

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40615 - 5035

1,1,2-Trichloroethane	0.0535	0.0050	mg/kg wet	0.05000		107	70-130			
1,1-Dichloroethane	0.0539	0.0050	mg/kg wet	0.05000		108	70-130			
1,1-Dichloroethene	0.0601	0.0050	mg/kg wet	0.05000		120	70-130			
1,1-Dichloropropene	0.0544	0.0050	mg/kg wet	0.05000		109	70-130			
1,2,3-Trichlorobenzene	0.0658	0.0050	mg/kg wet	0.05000		132	70-130			B+
1,2,3-Trichloropropane	0.0521	0.0050	mg/kg wet	0.05000		104	70-130			
1,2,4-Trichlorobenzene	0.0572	0.0050	mg/kg wet	0.05000		114	70-130			
1,2,4-Trimethylbenzene	0.0618	0.0050	mg/kg wet	0.05000		124	70-130			
1,2-Dibromo-3-Chloropropane	0.0529	0.0050	mg/kg wet	0.05000		106	70-130			
1,2-Dibromoethane	0.0551	0.0050	mg/kg wet	0.05000		110	70-130			
1,2-Dichlorobenzene	0.0581	0.0050	mg/kg wet	0.05000		116	70-130			
1,2-Dichloroethane	0.0496	0.0050	mg/kg wet	0.05000		99	70-130			
1,2-Dichloropropane	0.0547	0.0050	mg/kg wet	0.05000		109	70-130			
1,3,5-Trimethylbenzene	0.0613	0.0050	mg/kg wet	0.05000		123	70-130			
1,3-Dichlorobenzene	0.0562	0.0050	mg/kg wet	0.05000		112	70-130			
1,3-Dichloropropane	0.0539	0.0050	mg/kg wet	0.05000		108	70-130			
1,4-Dichlorobenzene	0.0558	0.0050	mg/kg wet	0.05000		112	70-130			
1,4-Dioxane	1.07	0.100	mg/kg wet	1.000		107	70-130			
1-Chlorohexane	0.0526	0.0050	mg/kg wet	0.05000		105	70-130			
2,2-Dichloropropane	0.0547	0.0050	mg/kg wet	0.05000		109	70-130			
2-Butanone	0.292	0.0500	mg/kg wet	0.2500		117	40-160			
2-Chlorotoluene	0.0580	0.0050	mg/kg wet	0.05000		116	70-130			
2-Hexanone	0.251	0.0500	mg/kg wet	0.2500		100	40-160			
4-Chlorotoluene	0.0584	0.0050	mg/kg wet	0.05000		117	70-130			
4-Isopropyltoluene	0.0571	0.0050	mg/kg wet	0.05000		114	70-130			
4-Methyl-2-Pentanone	0.240	0.0500	mg/kg wet	0.2500		96	40-160			
Acetone	0.298	0.0500	mg/kg wet	0.2500		119	40-160			
Benzene	0.0535	0.0050	mg/kg wet	0.05000		107	70-130			
Bromobenzene	0.0594	0.0050	mg/kg wet	0.05000		119	70-130			
Bromochloromethane	0.0532	0.0050	mg/kg wet	0.05000		106	70-130			
Bromodichloromethane	0.0535	0.0050	mg/kg wet	0.05000		107	70-130			
Bromoform	0.0547	0.0050	mg/kg wet	0.05000		109	40-160			
Bromomethane	0.0569	0.0100	mg/kg wet	0.05000		114	40-160			
Carbon Disulfide	0.0553	0.0050	mg/kg wet	0.05000		111	70-130			
Carbon Tetrachloride	0.0526	0.0050	mg/kg wet	0.05000		105	70-130			
Chlorobenzene	0.0535	0.0050	mg/kg wet	0.05000		107	70-130			
Chloroethane	0.0545	0.0100	mg/kg wet	0.05000		109	40-160			
Chloroform	0.0514	0.0050	mg/kg wet	0.05000		103	70-130			
Chloromethane	0.0430	0.0100	mg/kg wet	0.05000		86	40-160			
cis-1,2-Dichloroethene	0.0549	0.0050	mg/kg wet	0.05000		110	70-130			
cis-1,3-Dichloropropene	0.0583	0.0050	mg/kg wet	0.05000		117	40-160			
Dibromochloromethane	0.0565	0.0050	mg/kg wet	0.05000		113	40-160			
Dibromomethane	0.0516	0.0050	mg/kg wet	0.05000		103	70-130			
Dichlorodifluoromethane	0.0352	0.0100	mg/kg wet	0.05000		70	40-160			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40615 - 5035

Diethyl Ether	0.0607	0.0050	mg/kg wet	0.05000		121	70-130			
Di-isopropyl ether	0.0591	0.0050	mg/kg wet	0.05000		118	70-130			
Ethyl tertiary-butyl ether	0.0610	0.0050	mg/kg wet	0.05000		122	70-130			
Ethylbenzene	0.0585	0.0050	mg/kg wet	0.05000		117	70-130			
Hexachlorobutadiene	0.0592	0.0050	mg/kg wet	0.05000		118	40-160			
Isopropylbenzene	0.0704	0.0050	mg/kg wet	0.05000		141	70-130			B+
Methyl tert-Butyl Ether	0.0601	0.0050	mg/kg wet	0.05000		120	70-130			
Methylene Chloride	0.0523	0.0250	mg/kg wet	0.05000		105	70-130			
Naphthalene	0.0624	0.0050	mg/kg wet	0.05000		125	40-160			
n-Butylbenzene	0.0610	0.0050	mg/kg wet	0.05000		122	70-130			
n-Propylbenzene	0.0612	0.0050	mg/kg wet	0.05000		122	70-130			
sec-Butylbenzene	0.0567	0.0050	mg/kg wet	0.05000		113	70-130			
Styrene	0.0555	0.0050	mg/kg wet	0.05000		111	40-160			
tert-Butylbenzene	0.0622	0.0050	mg/kg wet	0.05000		124	70-130			
Tertiary-amyl methyl ether	0.0530	0.0050	mg/kg wet	0.05000		106	70-130			
Tetrachloroethene	0.0511	0.0050	mg/kg wet	0.05000		102	70-130			
Tetrahydrofuran	0.0485	0.0200	mg/kg wet	0.05000		97	70-130			
Toluene	0.0542	0.0050	mg/kg wet	0.05000		108	70-130			
trans-1,2-Dichloroethene	0.0576	0.0050	mg/kg wet	0.05000		115	70-130			
trans-1,3-Dichloropropene	0.0494	0.0050	mg/kg wet	0.05000		99	70-130			
Trichloroethene	0.0527	0.0050	mg/kg wet	0.05000		105	70-130			
Trichlorofluoromethane	0.0493	0.0050	mg/kg wet	0.05000		99	40-160			
Vinyl Acetate	0.0551	0.0050	mg/kg wet	0.05000		110	70-130			
Vinyl Chloride	0.0466	0.0100	mg/kg wet	0.05000		93	70-130			
Xylene O	0.0533	0.0050	mg/kg wet	0.05000		107	70-130			
Xylene P,M	0.110	0.0100	mg/kg wet	0.1000		110	70-130			

Surrogate: 1,2-Dichloroethane-d4	0.0440		mg/kg wet	0.05000		88	70-130			
Surrogate: 4-Bromofluorobenzene	0.0481		mg/kg wet	0.05000		96	70-130			
Surrogate: Dibromofluoromethane	0.0472		mg/kg wet	0.05000		94	70-130			
Surrogate: Toluene-d8	0.0487		mg/kg wet	0.05000		97	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	0.0588	0.0050	mg/kg wet	0.05000		118	70-130	5	20	
1,1,1-Trichloroethane	0.0549	0.0050	mg/kg wet	0.05000		110	70-130	3	20	
1,1,2,2-Tetrachloroethane	0.0601	0.0050	mg/kg wet	0.05000		120	40-160	9	20	
1,1,2-Trichloroethane	0.0563	0.0050	mg/kg wet	0.05000		113	70-130	5	20	
1,1-Dichloroethane	0.0562	0.0050	mg/kg wet	0.05000		112	70-130	4	20	
1,1-Dichloroethene	0.0625	0.0050	mg/kg wet	0.05000		125	70-130	4	20	
1,1-Dichloropropene	0.0562	0.0050	mg/kg wet	0.05000		112	70-130	3	20	
1,2,3-Trichlorobenzene	0.0674	0.0050	mg/kg wet	0.05000		135	70-130	2	20	B+
1,2,3-Trichloropropane	0.0571	0.0050	mg/kg wet	0.05000		114	70-130	9	20	
1,2,4-Trichlorobenzene	0.0591	0.0050	mg/kg wet	0.05000		118	70-130	3	20	
1,2,4-Trimethylbenzene	0.0647	0.0050	mg/kg wet	0.05000		129	70-130	5	20	
1,2-Dibromo-3-Chloropropane	0.0584	0.0050	mg/kg wet	0.05000		117	70-130	10	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40615 - 5035

1,2-Dibromoethane	0.0598	0.0050	mg/kg wet	0.05000		120	70-130	8	20	
1,2-Dichlorobenzene	0.0606	0.0050	mg/kg wet	0.05000		121	70-130	4	20	
1,2-Dichloroethane	0.0515	0.0050	mg/kg wet	0.05000		103	70-130	4	20	
1,2-Dichloropropane	0.0564	0.0050	mg/kg wet	0.05000		113	70-130	3	20	
1,3,5-Trimethylbenzene	0.0648	0.0050	mg/kg wet	0.05000		130	70-130	6	20	
1,3-Dichlorobenzene	0.0594	0.0050	mg/kg wet	0.05000		119	70-130	5	20	
1,3-Dichloropropane	0.0574	0.0050	mg/kg wet	0.05000		115	70-130	6	20	
1,4-Dichlorobenzene	0.0580	0.0050	mg/kg wet	0.05000		116	70-130	4	20	
1,4-Dioxane	1.21	0.100	mg/kg wet	1.000		121	70-130	12	20	
1-Chlorohexane	0.0554	0.0050	mg/kg wet	0.05000		111	70-130	5	20	
2,2-Dichloropropane	0.0559	0.0050	mg/kg wet	0.05000		112	70-130	2	20	
2-Butanone	0.316	0.0500	mg/kg wet	0.2500		126	40-160	8	20	
2-Chlorotoluene	0.0612	0.0050	mg/kg wet	0.05000		122	70-130	5	20	
2-Hexanone	0.286	0.0500	mg/kg wet	0.2500		114	40-160	13	20	
4-Chlorotoluene	0.0611	0.0050	mg/kg wet	0.05000		122	70-130	5	20	
4-Isopropyltoluene	0.0598	0.0050	mg/kg wet	0.05000		120	70-130	5	20	
4-Methyl-2-Pentanone	0.261	0.0500	mg/kg wet	0.2500		104	40-160	9	20	
Acetone	0.335	0.0500	mg/kg wet	0.2500		134	40-160	11	20	
Benzene	0.0552	0.0050	mg/kg wet	0.05000		110	70-130	3	20	
Bromobenzene	0.0626	0.0050	mg/kg wet	0.05000		125	70-130	5	20	
Bromochloromethane	0.0556	0.0050	mg/kg wet	0.05000		111	70-130	4	20	
Bromodichloromethane	0.0551	0.0050	mg/kg wet	0.05000		110	70-130	3	20	
Bromoform	0.0593	0.0050	mg/kg wet	0.05000		119	40-160	8	20	
Bromomethane	0.0572	0.0100	mg/kg wet	0.05000		114	40-160	0.6	20	
Carbon Disulfide	0.0575	0.0050	mg/kg wet	0.05000		115	70-130	4	20	
Carbon Tetrachloride	0.0540	0.0050	mg/kg wet	0.05000		108	70-130	3	20	
Chlorobenzene	0.0566	0.0050	mg/kg wet	0.05000		113	70-130	6	20	
Chloroethane	0.0565	0.0100	mg/kg wet	0.05000		113	40-160	3	20	
Chloroform	0.0527	0.0050	mg/kg wet	0.05000		105	70-130	3	20	
Chloromethane	0.0435	0.0100	mg/kg wet	0.05000		87	40-160	1	20	
cis-1,2-Dichloroethene	0.0568	0.0050	mg/kg wet	0.05000		114	70-130	3	20	
cis-1,3-Dichloropropene	0.0600	0.0050	mg/kg wet	0.05000		120	40-160	3	20	
Dibromochloromethane	0.0604	0.0050	mg/kg wet	0.05000		121	40-160	7	20	
Dibromomethane	0.0541	0.0050	mg/kg wet	0.05000		108	70-130	5	20	
Dichlorodifluoromethane	0.0341	0.0100	mg/kg wet	0.05000		68	40-160	3	20	
Diethyl Ether	0.0637	0.0050	mg/kg wet	0.05000		127	70-130	5	20	
Di-isopropyl ether	0.0611	0.0050	mg/kg wet	0.05000		122	70-130	3	20	
Ethyl tertiary-butyl ether	0.0630	0.0050	mg/kg wet	0.05000		126	70-130	3	20	
Ethylbenzene	0.0615	0.0050	mg/kg wet	0.05000		123	70-130	5	20	
Hexachlorobutadiene	0.0621	0.0050	mg/kg wet	0.05000		124	40-160	5	20	
Isopropylbenzene	0.0753	0.0050	mg/kg wet	0.05000		151	70-130	7	20	B+
Methyl tert-Butyl Ether	0.0634	0.0050	mg/kg wet	0.05000		127	70-130	5	20	
Methylene Chloride	0.0542	0.0250	mg/kg wet	0.05000		108	70-130	4	20	
Naphthalene	0.0649	0.0050	mg/kg wet	0.05000		130	40-160	4	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40615 - 5035

n-Butylbenzene	0.0635	0.0050	mg/kg wet	0.05000		127	70-130	4	20	
n-Propylbenzene	0.0642	0.0050	mg/kg wet	0.05000		128	70-130	5	20	
sec-Butylbenzene	0.0593	0.0050	mg/kg wet	0.05000		119	70-130	5	20	
Styrene	0.0578	0.0050	mg/kg wet	0.05000		116	40-160	4	20	
tert-Butylbenzene	0.0658	0.0050	mg/kg wet	0.05000		132	70-130	6	20	B+
Tertiary-amyl methyl ether	0.0551	0.0050	mg/kg wet	0.05000		110	70-130	4	20	
Tetrachloroethene	0.0547	0.0050	mg/kg wet	0.05000		109	70-130	7	20	
Tetrahydrofuran	0.0545	0.0200	mg/kg wet	0.05000		109	70-130	12	20	
Toluene	0.0558	0.0050	mg/kg wet	0.05000		112	70-130	3	20	
trans-1,2-Dichloroethene	0.0597	0.0050	mg/kg wet	0.05000		119	70-130	4	20	
trans-1,3-Dichloropropene	0.0509	0.0050	mg/kg wet	0.05000		102	70-130	3	20	
Trichloroethene	0.0554	0.0050	mg/kg wet	0.05000		111	70-130	5	20	
Trichlorofluoromethane	0.0508	0.0050	mg/kg wet	0.05000		102	40-160	3	20	
Vinyl Acetate	0.0582	0.0050	mg/kg wet	0.05000		116	70-130	6	20	
Vinyl Chloride	0.0469	0.0100	mg/kg wet	0.05000		94	70-130	0.6	20	
Xylene O	0.0564	0.0050	mg/kg wet	0.05000		113	70-130	6	20	
Xylene P,M	0.116	0.0100	mg/kg wet	0.1000		116	70-130	5	20	

Surrogate: 1,2-Dichloroethane-d4	0.0454		mg/kg wet	0.05000		91	70-130			
Surrogate: 4-Bromofluorobenzene	0.0462		mg/kg wet	0.05000		92	70-130			
Surrogate: Dibromofluoromethane	0.0482		mg/kg wet	0.05000		96	70-130			
Surrogate: Toluene-d8	0.0502		mg/kg wet	0.05000		100	70-130			

Batch DK40721 - 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							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40721 - 5035

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
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	0.0200	mg/kg wet

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40721 - 5035

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							

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0633</i>		mg/kg wet	<i>0.05000</i>		<i>127</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0452</i>		mg/kg wet	<i>0.05000</i>		<i>90</i>	<i>70-130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>0.0593</i>		mg/kg wet	<i>0.05000</i>		<i>119</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0477</i>		mg/kg wet	<i>0.05000</i>		<i>95</i>	<i>70-130</i>			

LCS

1,1,1,2-Tetrachloroethane	0.0559	0.0050	mg/kg wet	0.05000		112	70-130			
1,1,1-Trichloroethane	0.0597	0.0050	mg/kg wet	0.05000		119	70-130			
1,1,2,2-Tetrachloroethane	0.0568	0.0050	mg/kg wet	0.05000		114	40-160			
1,1,2-Trichloroethane	0.0565	0.0050	mg/kg wet	0.05000		113	70-130			
1,1-Dichloroethane	0.0587	0.0050	mg/kg wet	0.05000		117	70-130			
1,1-Dichloroethene	0.0634	0.0050	mg/kg wet	0.05000		127	70-130			
1,1-Dichloropropene	0.0588	0.0050	mg/kg wet	0.05000		118	70-130			
1,2,3-Trichlorobenzene	0.0658	0.0050	mg/kg wet	0.05000		132	70-130			B+
1,2,3-Trichloropropane	0.0542	0.0050	mg/kg wet	0.05000		108	70-130			
1,2,4-Trichlorobenzene	0.0573	0.0050	mg/kg wet	0.05000		115	70-130			
1,2,4-Trimethylbenzene	0.0646	0.0050	mg/kg wet	0.05000		129	70-130			
1,2-Dibromo-3-Chloropropane	0.0557	0.0050	mg/kg wet	0.05000		111	70-130			
1,2-Dibromoethane	0.0551	0.0050	mg/kg wet	0.05000		110	70-130			
1,2-Dichlorobenzene	0.0593	0.0050	mg/kg wet	0.05000		119	70-130			
1,2-Dichloroethane	0.0564	0.0050	mg/kg wet	0.05000		113	70-130			
1,2-Dichloropropane	0.0585	0.0050	mg/kg wet	0.05000		117	70-130			
1,3,5-Trimethylbenzene	0.0645	0.0050	mg/kg wet	0.05000		129	70-130			
1,3-Dichlorobenzene	0.0576	0.0050	mg/kg wet	0.05000		115	70-130			
1,3-Dichloropropane	0.0537	0.0050	mg/kg wet	0.05000		107	70-130			
1,4-Dichlorobenzene	0.0580	0.0050	mg/kg wet	0.05000		116	70-130			
1,4-Dioxane	1.10	0.100	mg/kg wet	1.000		110	70-130			
1-Chlorohexane	0.0517	0.0050	mg/kg wet	0.05000		103	70-130			
2,2-Dichloropropane	0.0606	0.0050	mg/kg wet	0.05000		121	70-130			
2-Butanone	0.310	0.0500	mg/kg wet	0.2500		124	40-160			
2-Chlorotoluene	0.0611	0.0050	mg/kg wet	0.05000		122	70-130			
2-Hexanone	0.241	0.0500	mg/kg wet	0.2500		96	40-160			
4-Chlorotoluene	0.0611	0.0050	mg/kg wet	0.05000		122	70-130			
4-Isopropyltoluene	0.0595	0.0050	mg/kg wet	0.05000		119	70-130			
4-Methyl-2-Pentanone	0.246	0.0500	mg/kg wet	0.2500		99	40-160			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40721 - 5035

Acetone	0.303	0.0500	mg/kg wet	0.2500		121	40-160			
Benzene	0.0566	0.0050	mg/kg wet	0.05000		113	70-130			
Bromobenzene	0.0606	0.0050	mg/kg wet	0.05000		121	70-130			
Bromochloromethane	0.0568	0.0050	mg/kg wet	0.05000		114	70-130			
Bromodichloromethane	0.0589	0.0050	mg/kg wet	0.05000		118	70-130			
Bromoform	0.0547	0.0050	mg/kg wet	0.05000		109	40-160			
Bromomethane	0.0608	0.0100	mg/kg wet	0.05000		122	40-160			
Carbon Disulfide	0.0601	0.0050	mg/kg wet	0.05000		120	70-130			
Carbon Tetrachloride	0.0593	0.0050	mg/kg wet	0.05000		119	70-130			
Chlorobenzene	0.0536	0.0050	mg/kg wet	0.05000		107	70-130			
Chloroethane	0.0578	0.0100	mg/kg wet	0.05000		116	40-160			
Chloroform	0.0564	0.0050	mg/kg wet	0.05000		113	70-130			
Chloromethane	0.0473	0.0100	mg/kg wet	0.05000		95	40-160			
cis-1,2-Dichloroethene	0.0583	0.0050	mg/kg wet	0.05000		117	70-130			
cis-1,3-Dichloropropene	0.0619	0.0050	mg/kg wet	0.05000		124	40-160			
Dibromochloromethane	0.0567	0.0050	mg/kg wet	0.05000		113	40-160			
Dibromomethane	0.0555	0.0050	mg/kg wet	0.05000		111	70-130			
Dichlorodifluoromethane	0.0409	0.0100	mg/kg wet	0.05000		82	40-160			
Diethyl Ether	0.0638	0.0050	mg/kg wet	0.05000		128	70-130			
Di-isopropyl ether	0.0630	0.0050	mg/kg wet	0.05000		126	70-130			
Ethyl tertiary-butyl ether	0.0644	0.0050	mg/kg wet	0.05000		129	70-130			
Ethylbenzene	0.0589	0.0050	mg/kg wet	0.05000		118	70-130			
Hexachlorobutadiene	0.0626	0.0050	mg/kg wet	0.05000		125	40-160			
Isopropylbenzene	0.0736	0.0050	mg/kg wet	0.05000		147	70-130			B+
Methyl tert-Butyl Ether	0.0632	0.0050	mg/kg wet	0.05000		126	70-130			
Methylene Chloride	0.0560	0.0250	mg/kg wet	0.05000		112	70-130			
Naphthalene	0.0611	0.0050	mg/kg wet	0.05000		122	40-160			
n-Butylbenzene	0.0648	0.0050	mg/kg wet	0.05000		130	70-130			
n-Propylbenzene	0.0638	0.0050	mg/kg wet	0.05000		128	70-130			
sec-Butylbenzene	0.0591	0.0050	mg/kg wet	0.05000		118	70-130			
Styrene	0.0523	0.0050	mg/kg wet	0.05000		105	40-160			
tert-Butylbenzene	0.0655	0.0050	mg/kg wet	0.05000		131	70-130			B+
Tertiary-amyl methyl ether	0.0557	0.0050	mg/kg wet	0.05000		111	70-130			
Tetrachloroethene	0.0495	0.0050	mg/kg wet	0.05000		99	70-130			
Tetrahydrofuran	0.0504	0.0200	mg/kg wet	0.05000		101	70-130			
Toluene	0.0579	0.0050	mg/kg wet	0.05000		116	70-130			
trans-1,2-Dichloroethene	0.0606	0.0050	mg/kg wet	0.05000		121	70-130			
trans-1,3-Dichloropropene	0.0525	0.0050	mg/kg wet	0.05000		105	70-130			
Trichloroethene	0.0580	0.0050	mg/kg wet	0.05000		116	70-130			
Trichlorofluoromethane	0.0560	0.0050	mg/kg wet	0.05000		112	40-160			
Vinyl Acetate	0.0577	0.0050	mg/kg wet	0.05000		115	70-130			
Vinyl Chloride	0.0512	0.0100	mg/kg wet	0.05000		102	70-130			
Xylene O	0.0533	0.0050	mg/kg wet	0.05000		107	70-130			
Xylene P,M	0.110	0.0100	mg/kg wet	0.1000		110	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40721 - 5035

Surrogate: 1,2-Dichloroethane-d4	0.0504		mg/kg wet	0.05000		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.0480		mg/kg wet	0.05000		96	70-130			
Surrogate: Dibromofluoromethane	0.0514		mg/kg wet	0.05000		103	70-130			
Surrogate: Toluene-d8	0.0474		mg/kg wet	0.05000		95	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	0.0571	0.0050	mg/kg wet	0.05000		114	70-130	2	20	
1,1,1-Trichloroethane	0.0610	0.0050	mg/kg wet	0.05000		122	70-130	2	20	
1,1,2,2-Tetrachloroethane	0.0571	0.0050	mg/kg wet	0.05000		114	40-160	0.6	20	
1,1,2-Trichloroethane	0.0572	0.0050	mg/kg wet	0.05000		114	70-130	1	20	
1,1-Dichloroethane	0.0602	0.0050	mg/kg wet	0.05000		120	70-130	2	20	
1,1-Dichloroethene	0.0646	0.0050	mg/kg wet	0.05000		129	70-130	2	20	
1,1-Dichloropropene	0.0604	0.0050	mg/kg wet	0.05000		121	70-130	3	20	
1,2,3-Trichlorobenzene	0.0673	0.0050	mg/kg wet	0.05000		135	70-130	2	20	B+
1,2,3-Trichloropropane	0.0545	0.0050	mg/kg wet	0.05000		109	70-130	0.6	20	
1,2,4-Trichlorobenzene	0.0579	0.0050	mg/kg wet	0.05000		116	70-130	1	20	
1,2,4-Trimethylbenzene	0.0650	0.0050	mg/kg wet	0.05000		130	70-130	0.5	20	
1,2-Dibromo-3-Chloropropane	0.0565	0.0050	mg/kg wet	0.05000		113	70-130	1	20	
1,2-Dibromoethane	0.0554	0.0050	mg/kg wet	0.05000		111	70-130	0.5	20	
1,2-Dichlorobenzene	0.0598	0.0050	mg/kg wet	0.05000		120	70-130	0.8	20	
1,2-Dichloroethane	0.0573	0.0050	mg/kg wet	0.05000		115	70-130	2	20	
1,2-Dichloropropane	0.0595	0.0050	mg/kg wet	0.05000		119	70-130	2	20	
1,3,5-Trimethylbenzene	0.0647	0.0050	mg/kg wet	0.05000		129	70-130	0.2	20	
1,3-Dichlorobenzene	0.0586	0.0050	mg/kg wet	0.05000		117	70-130	2	20	
1,3-Dichloropropane	0.0551	0.0050	mg/kg wet	0.05000		110	70-130	2	20	
1,4-Dichlorobenzene	0.0573	0.0050	mg/kg wet	0.05000		115	70-130	1	20	
1,4-Dioxane	1.07	0.100	mg/kg wet	1.000		107	70-130	2	20	
1-Chlorohexane	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	1	20	
2,2-Dichloropropane	0.0615	0.0050	mg/kg wet	0.05000		123	70-130	2	20	
2-Butanone	0.309	0.0500	mg/kg wet	0.2500		124	40-160	0.3	20	
2-Chlorotoluene	0.0611	0.0050	mg/kg wet	0.05000		122	70-130	0	20	
2-Hexanone	0.239	0.0500	mg/kg wet	0.2500		96	40-160	0.7	20	
4-Chlorotoluene	0.0618	0.0050	mg/kg wet	0.05000		124	70-130	1	20	
4-Isopropyltoluene	0.0594	0.0050	mg/kg wet	0.05000		119	70-130	0.2	20	
4-Methyl-2-Pentanone	0.246	0.0500	mg/kg wet	0.2500		98	40-160	0.3	20	
Acetone	0.300	0.0500	mg/kg wet	0.2500		120	40-160	1	20	
Benzene	0.0580	0.0050	mg/kg wet	0.05000		116	70-130	2	20	
Bromobenzene	0.0610	0.0050	mg/kg wet	0.05000		122	70-130	0.8	20	
Bromochloromethane	0.0567	0.0050	mg/kg wet	0.05000		113	70-130	0.04	20	
Bromodichloromethane	0.0602	0.0050	mg/kg wet	0.05000		120	70-130	2	20	
Bromoform	0.0547	0.0050	mg/kg wet	0.05000		109	40-160	0.1	20	
Bromomethane	0.0613	0.0100	mg/kg wet	0.05000		123	40-160	0.9	20	
Carbon Disulfide	0.0613	0.0050	mg/kg wet	0.05000		123	70-130	2	20	
Carbon Tetrachloride	0.0606	0.0050	mg/kg wet	0.05000		121	70-130	2	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40721 - 5035

Chlorobenzene	0.0546	0.0050	mg/kg wet	0.05000		109	70-130	2	20	
Chloroethane	0.0593	0.0100	mg/kg wet	0.05000		119	40-160	3	20	
Chloroform	0.0577	0.0050	mg/kg wet	0.05000		115	70-130	2	20	
Chloromethane	0.0472	0.0100	mg/kg wet	0.05000		94	40-160	0.4	20	
cis-1,2-Dichloroethene	0.0592	0.0050	mg/kg wet	0.05000		118	70-130	2	20	
cis-1,3-Dichloropropene	0.0625	0.0050	mg/kg wet	0.05000		125	40-160	1	20	
Dibromochloromethane	0.0578	0.0050	mg/kg wet	0.05000		116	40-160	2	20	
Dibromomethane	0.0564	0.0050	mg/kg wet	0.05000		113	70-130	2	20	
Dichlorodifluoromethane	0.0396	0.0100	mg/kg wet	0.05000		79	40-160	3	20	
Diethyl Ether	0.0647	0.0050	mg/kg wet	0.05000		129	70-130	1	20	
Di-isopropyl ether	0.0640	0.0050	mg/kg wet	0.05000		128	70-130	2	20	
Ethyl tertiary-butyl ether	0.0658	0.0050	mg/kg wet	0.05000		132	70-130	2	20	B+
Ethylbenzene	0.0601	0.0050	mg/kg wet	0.05000		120	70-130	2	20	
Hexachlorobutadiene	0.0631	0.0050	mg/kg wet	0.05000		126	40-160	0.9	20	
Isopropylbenzene	0.0752	0.0050	mg/kg wet	0.05000		150	70-130	2	20	B+
Methyl tert-Butyl Ether	0.0646	0.0050	mg/kg wet	0.05000		129	70-130	2	20	
Methylene Chloride	0.0572	0.0250	mg/kg wet	0.05000		114	70-130	2	20	
Naphthalene	0.0630	0.0050	mg/kg wet	0.05000		126	40-160	3	20	
n-Butylbenzene	0.0652	0.0050	mg/kg wet	0.05000		130	70-130	0.5	20	
n-Propylbenzene	0.0647	0.0050	mg/kg wet	0.05000		129	70-130	1	20	
sec-Butylbenzene	0.0593	0.0050	mg/kg wet	0.05000		119	70-130	0.4	20	
Styrene	0.0548	0.0050	mg/kg wet	0.05000		110	40-160	5	20	
tert-Butylbenzene	0.0657	0.0050	mg/kg wet	0.05000		131	70-130	0.4	20	B+
Tertiary-amyl methyl ether	0.0567	0.0050	mg/kg wet	0.05000		113	70-130	2	20	
Tetrachloroethene	0.0507	0.0050	mg/kg wet	0.05000		101	70-130	2	20	
Tetrahydrofuran	0.0511	0.0200	mg/kg wet	0.05000		102	70-130	1	20	
Toluene	0.0588	0.0050	mg/kg wet	0.05000		118	70-130	1	20	
trans-1,2-Dichloroethene	0.0621	0.0050	mg/kg wet	0.05000		124	70-130	3	20	
trans-1,3-Dichloropropene	0.0529	0.0050	mg/kg wet	0.05000		106	70-130	0.7	20	
Trichloroethene	0.0592	0.0050	mg/kg wet	0.05000		118	70-130	2	20	
Trichlorofluoromethane	0.0571	0.0050	mg/kg wet	0.05000		114	40-160	2	20	
Vinyl Acetate	0.0592	0.0050	mg/kg wet	0.05000		118	70-130	3	20	
Vinyl Chloride	0.0513	0.0100	mg/kg wet	0.05000		103	70-130	0.1	20	
Xylene O	0.0541	0.0050	mg/kg wet	0.05000		108	70-130	1	20	
Xylene P,M	0.111	0.0100	mg/kg wet	0.1000		111	70-130	1	20	

Surrogate: 1,2-Dichloroethane-d4	0.0501		mg/kg wet	0.05000		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.0474		mg/kg wet	0.05000		95	70-130			
Surrogate: Dibromofluoromethane	0.0514		mg/kg wet	0.05000		103	70-130			
Surrogate: Toluene-d8	0.0477		mg/kg wet	0.05000		95	70-130			

Semi-Volatile Organic Compounds

Batch DK40452 - 3546

Blank

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Semi-Volatile Organic Compounds

Batch DK40452 - 3546

1,1-Biphenyl	ND	0.025	mg/kg wet
1,2,4-Trichlorobenzene	ND	0.250	mg/kg wet
1,2-Dichlorobenzene	ND	0.250	mg/kg wet
1,3-Dichlorobenzene	ND	0.250	mg/kg wet
1,4-Dichlorobenzene	ND	0.250	mg/kg wet
2,3,4,6-Tetrachlorophenol	ND	0.250	mg/kg wet
2,4,5-Trichlorophenol	ND	0.250	mg/kg wet
2,4,6-Trichlorophenol	ND	0.250	mg/kg wet
2,4-Dichlorophenol	ND	0.250	mg/kg wet
2,4-Dimethylphenol	ND	0.250	mg/kg wet
2,4-Dinitrophenol	ND	1.00	mg/kg wet
2,4-Dinitrotoluene	ND	0.250	mg/kg wet
2,6-Dinitrotoluene	ND	0.250	mg/kg wet
2-Chloronaphthalene	ND	0.250	mg/kg wet
2-Chlorophenol	ND	0.250	mg/kg wet
2-Methylnaphthalene	ND	0.250	mg/kg wet
2-Methylphenol	ND	0.250	mg/kg wet
2-Nitroaniline	ND	0.500	mg/kg wet
2-Nitrophenol	ND	0.500	mg/kg wet
3,3'-Dichlorobenzidine	ND	0.250	mg/kg wet
3+4-Methylphenol	ND	0.250	mg/kg wet
3-Nitroaniline	ND	0.500	mg/kg wet
4,6-Dinitro-2-Methylphenol	ND	1.00	mg/kg wet
4-Bromophenyl-phenylether	ND	0.250	mg/kg wet
4-Chloro-3-Methylphenol	ND	0.250	mg/kg wet
4-Chloroaniline	ND	0.250	mg/kg wet
4-Chloro-phenyl-phenyl ether	ND	0.250	mg/kg wet
4-Nitroaniline	ND	0.500	mg/kg wet
4-Nitrophenol	ND	1.00	mg/kg wet
Acenaphthene	ND	0.250	mg/kg wet
Acenaphthylene	ND	0.250	mg/kg wet
Acetophenone	ND	0.250	mg/kg wet
Aniline	ND	0.250	mg/kg wet
Anthracene	ND	0.250	mg/kg wet
Azobenzene	ND	0.250	mg/kg wet
Benzo(a)anthracene	ND	0.250	mg/kg wet
Benzo(a)pyrene	ND	0.250	mg/kg wet
Benzo(b)fluoranthene	ND	0.250	mg/kg wet
Benzo(g,h,i)perylene	ND	0.250	mg/kg wet
Benzo(k)fluoranthene	ND	0.250	mg/kg wet
Benzoic Acid	ND	2.50	mg/kg wet
Benzyl Alcohol	ND	0.500	mg/kg wet
bis(2-Chloroethoxy)methane	ND	0.250	mg/kg wet
bis(2-Chloroethyl)ether	ND	0.250	mg/kg wet

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

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ESS Laboratory Work Order: 24K0082

Quality Control Data

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Semi-Volatile Organic Compounds

Batch DK40452 - 3546

bis(2-chloroisopropyl)Ether	ND	0.250	mg/kg wet
bis(2-Ethylhexyl)phthalate	ND	0.250	mg/kg wet
Butylbenzylphthalate	ND	0.250	mg/kg wet
Carbazole	ND	0.250	mg/kg wet
Chrysene	ND	0.250	mg/kg wet
Dibenzo(a,h)Anthracene	ND	0.250	mg/kg wet
Dibenzofuran	ND	0.250	mg/kg wet
Diethylphthalate	ND	0.250	mg/kg wet
Dimethylphthalate	ND	0.250	mg/kg wet
Di-n-butylphthalate	ND	0.250	mg/kg wet
Di-n-octylphthalate	ND	0.500	mg/kg wet
Fluoranthene	ND	0.250	mg/kg wet
Fluorene	ND	0.250	mg/kg wet
Hexachlorobenzene	ND	0.250	mg/kg wet
Hexachlorobutadiene	ND	0.250	mg/kg wet
Hexachlorocyclopentadiene	ND	0.500	mg/kg wet
Hexachloroethane	ND	0.250	mg/kg wet
Indeno(1,2,3-cd)Pyrene	ND	0.250	mg/kg wet
Isophorone	ND	0.250	mg/kg wet
Naphthalene	ND	0.250	mg/kg wet
Nitrobenzene	ND	0.250	mg/kg wet
N-Nitrosodimethylamine	ND	0.250	mg/kg wet
N-Nitroso-Di-n-Propylamine	ND	0.250	mg/kg wet
N-nitrosodiphenylamine	ND	0.250	mg/kg wet
Pentachlorophenol	ND	1.00	mg/kg wet
Phenanthrene	ND	0.250	mg/kg wet
Phenol	ND	0.250	mg/kg wet
Pyrene	ND	0.250	mg/kg wet
Pyridine	ND	0.250	mg/kg wet

Surrogate: 1,2-Dichlorobenzene-d4	2.52		mg/kg wet	2.500	101	30-130
Surrogate: 2,4,6-Tribromophenol	4.43		mg/kg wet	3.750	118	30-130
Surrogate: 2-Chlorophenol-d4	4.15		mg/kg wet	3.750	111	30-130
Surrogate: 2-Fluorobiphenyl	2.65		mg/kg wet	2.500	106	30-130
Surrogate: 2-Fluorophenol	4.16		mg/kg wet	3.750	111	30-130
Surrogate: Nitrobenzene-d5	2.58		mg/kg wet	2.500	103	30-130
Surrogate: Phenol-d6	4.12		mg/kg wet	3.750	110	30-130
Surrogate: p-Terphenyl-d14	2.78		mg/kg wet	2.500	111	30-130

LCS

1,1-Biphenyl	2.47	0.025	mg/kg wet	2.500	99	40-140
1,2,4-Trichlorobenzene	2.09	0.250	mg/kg wet	2.500	84	40-140
1,2-Dichlorobenzene	2.38	0.250	mg/kg wet	2.500	95	40-140
1,3-Dichlorobenzene	2.37	0.250	mg/kg wet	2.500	95	40-140
1,4-Dichlorobenzene	2.36	0.250	mg/kg wet	2.500	94	40-140

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Semi-Volatile Organic Compounds

Batch DK40452 - 3546

2,3,4,6-Tetrachlorophenol	2.58	0.250	mg/kg wet	2.500		103	30-130			
2,4,5-Trichlorophenol	2.54	0.250	mg/kg wet	2.500		101	30-130			
2,4,6-Trichlorophenol	2.49	0.250	mg/kg wet	2.500		100	30-130			
2,4-Dichlorophenol	2.16	0.250	mg/kg wet	2.500		86	30-130			
2,4-Dimethylphenol	2.13	0.250	mg/kg wet	2.500		85	30-130			
2,4-Dinitrophenol	2.83	1.00	mg/kg wet	2.500		113	15-140			
2,4-Dinitrotoluene	2.64	0.250	mg/kg wet	2.500		105	40-140			
2,6-Dinitrotoluene	2.62	0.250	mg/kg wet	2.500		105	40-140			
2-Chloronaphthalene	2.37	0.250	mg/kg wet	2.500		95	40-140			
2-Chlorophenol	2.45	0.250	mg/kg wet	2.500		98	30-130			
2-Methylnaphthalene	2.36	0.250	mg/kg wet	2.500		94	40-140			
2-Methylphenol	2.49	0.250	mg/kg wet	2.500		100	15-140			
2-Nitroaniline	2.15	0.500	mg/kg wet	2.500		86	40-140			
2-Nitrophenol	2.14	0.500	mg/kg wet	2.500		86	30-130			
3,3'-Dichlorobenzidine	2.34	0.250	mg/kg wet	2.500		94	40-140			
3+4-Methylphenol	5.18	0.250	mg/kg wet	5.000		104	15-140			
3-Nitroaniline	2.26	0.500	mg/kg wet	2.500		90	40-140			
4,6-Dinitro-2-Methylphenol	2.73	1.00	mg/kg wet	2.500		109	30-130			
4-Bromophenyl-phenylether	2.57	0.250	mg/kg wet	2.500		103	40-140			
4-Chloro-3-Methylphenol	2.29	0.250	mg/kg wet	2.500		91	30-130			
4-Chloroaniline	1.59	0.250	mg/kg wet	2.500		64	15-140			
4-Chloro-phenyl-phenyl ether	2.59	0.250	mg/kg wet	2.500		104	40-140			
4-Nitroaniline	2.48	0.500	mg/kg wet	2.500		99	40-140			
4-Nitrophenol	2.68	1.00	mg/kg wet	2.500		107	15-140			
Acenaphthene	2.55	0.250	mg/kg wet	2.500		102	40-140			
Acenaphthylene	2.47	0.250	mg/kg wet	2.500		99	40-140			
Acetophenone	2.46	0.250	mg/kg wet	2.500		98	40-140			
Aniline	1.36	0.250	mg/kg wet	2.500		54	40-140			
Anthracene	2.49	0.250	mg/kg wet	2.500		99	40-140			
Azobenzene	2.28	0.250	mg/kg wet	2.500		91	40-140			
Benzidine	0.378	1.00	mg/kg wet	2.500		15	40-140			B-
Benzo(a)anthracene	2.44	0.250	mg/kg wet	2.500		98	40-140			
Benzo(a)pyrene	2.61	0.250	mg/kg wet	2.500		104	40-140			
Benzo(b)fluoranthene	2.37	0.250	mg/kg wet	2.500		95	40-140			
Benzo(g,h,i)perylene	2.36	0.250	mg/kg wet	2.500		94	40-140			
Benzo(k)fluoranthene	2.52	0.250	mg/kg wet	2.500		101	40-140			
Benzoic Acid	2.20	2.50	mg/kg wet	2.500		88	30-130			
Benzyl Alcohol	2.30	0.500	mg/kg wet	2.500		92	40-140			
bis(2-Chloroethoxy)methane	2.12	0.250	mg/kg wet	2.500		85	40-140			
bis(2-Chloroethyl)ether	2.19	0.250	mg/kg wet	2.500		87	40-140			
bis(2-chloroisopropyl)Ether	2.19	0.250	mg/kg wet	2.500		88	40-140			
bis(2-Ethylhexyl)phthalate	2.55	0.250	mg/kg wet	2.500		102	40-140			
Butylbenzylphthalate	2.48	0.250	mg/kg wet	2.500		99	40-140			
Carbazole	2.57	0.250	mg/kg wet	2.500		103	40-140			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

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ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Semi-Volatile Organic Compounds

Batch DK40452 - 3546

Chrysene	2.52	0.250	mg/kg wet	2.500		101	40-140			
Dibenzo(a,h)Anthracene	2.58	0.250	mg/kg wet	2.500		103	40-140			
Dibenzofuran	2.50	0.250	mg/kg wet	2.500		100	40-140			
Diethylphthalate	2.67	0.250	mg/kg wet	2.500		107	40-140			
Dimethylphthalate	2.61	0.250	mg/kg wet	2.500		104	15-140			
Di-n-butylphthalate	2.74	0.250	mg/kg wet	2.500		110	40-140			
Di-n-octylphthalate	2.52	0.500	mg/kg wet	2.500		101	40-140			
Fluoranthene	2.71	0.250	mg/kg wet	2.500		108	40-140			
Fluorene	2.60	0.250	mg/kg wet	2.500		104	40-140			
Hexachlorobenzene	2.46	0.250	mg/kg wet	2.500		98	40-140			
Hexachlorobutadiene	2.11	0.250	mg/kg wet	2.500		84	40-140			
Hexachlorocyclopentadiene	2.31	0.500	mg/kg wet	2.500		92	40-140			
Hexachloroethane	2.31	0.250	mg/kg wet	2.500		92	40-140			
Indeno(1,2,3-cd)Pyrene	2.40	0.250	mg/kg wet	2.500		96	40-140			
Isophorone	2.01	0.250	mg/kg wet	2.500		81	40-140			
Naphthalene	2.01	0.250	mg/kg wet	2.500		80	40-140			
Nitrobenzene	2.02	0.250	mg/kg wet	2.500		81	40-140			
N-Nitrosodimethylamine	2.57	0.250	mg/kg wet	2.500		103	40-140			
N-Nitroso-Di-n-Propylamine	2.49	0.250	mg/kg wet	2.500		100	40-140			
N-nitrosodiphenylamine	2.14	0.250	mg/kg wet	2.500		85	40-140			
Pentachlorophenol	2.25	1.00	mg/kg wet	2.500		90	15-140			
Phenanthrene	2.45	0.250	mg/kg wet	2.500		98	40-140			
Phenol	2.48	0.250	mg/kg wet	2.500		99	15-140			
Pyrene	2.34	0.250	mg/kg wet	2.500		93	40-140			
Pyridine	2.99	0.250	mg/kg wet	2.500		120	40-140			

Surrogate: 1,2-Dichlorobenzene-d4	2.50		mg/kg wet	2.500		100	30-130			
Surrogate: 2,4,6-Tribromophenol	4.78		mg/kg wet	3.750		127	30-130			
Surrogate: 2-Chlorophenol-d4	4.19		mg/kg wet	3.750		112	30-130			
Surrogate: 2-Fluorobiphenyl	2.75		mg/kg wet	2.500		110	30-130			
Surrogate: 2-Fluorophenol	4.20		mg/kg wet	3.750		112	30-130			
Surrogate: Nitrobenzene-d5	2.29		mg/kg wet	2.500		92	30-130			
Surrogate: Phenol-d6	4.24		mg/kg wet	3.750		113	30-130			
Surrogate: p-Terphenyl-d14	2.73		mg/kg wet	2.500		109	30-130			

LCS Dup

1,1-Biphenyl	2.16	0.025	mg/kg wet	2.500		86	40-140	14	30	
1,2,4-Trichlorobenzene	1.90	0.250	mg/kg wet	2.500		76	40-140	10	30	
1,2-Dichlorobenzene	2.09	0.250	mg/kg wet	2.500		83	40-140	13	30	
1,3-Dichlorobenzene	2.08	0.250	mg/kg wet	2.500		83	40-140	13	30	
1,4-Dichlorobenzene	2.07	0.250	mg/kg wet	2.500		83	40-140	13	30	
2,3,4,6-Tetrachlorophenol	2.29	0.250	mg/kg wet	2.500		91	30-130	12	30	
2,4,5-Trichlorophenol	2.22	0.250	mg/kg wet	2.500		89	30-130	13	30	
2,4,6-Trichlorophenol	2.18	0.250	mg/kg wet	2.500		87	30-130	14	30	
2,4-Dichlorophenol	1.92	0.250	mg/kg wet	2.500		77	30-130	12	30	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

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ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Semi-Volatile Organic Compounds

Batch DK40452 - 3546

2,4-Dimethylphenol	1.92	0.250	mg/kg wet	2.500		77	30-130	10	30	
2,4-Dinitrophenol	2.55	1.00	mg/kg wet	2.500		102	15-140	10	30	
2,4-Dinitrotoluene	2.31	0.250	mg/kg wet	2.500		92	40-140	13	30	
2,6-Dinitrotoluene	2.26	0.250	mg/kg wet	2.500		91	40-140	15	30	
2-Chloronaphthalene	2.07	0.250	mg/kg wet	2.500		83	40-140	14	30	
2-Chlorophenol	2.14	0.250	mg/kg wet	2.500		86	30-130	14	30	
2-Methylnaphthalene	2.14	0.250	mg/kg wet	2.500		86	40-140	10	30	
2-Methylphenol	2.19	0.250	mg/kg wet	2.500		87	15-140	13	30	
2-Nitroaniline	1.85	0.500	mg/kg wet	2.500		74	40-140	15	30	
2-Nitrophenol	1.94	0.500	mg/kg wet	2.500		77	30-130	10	30	
3,3'-Dichlorobenzidine	2.09	0.250	mg/kg wet	2.500		83	40-140	12	30	
3+4-Methylphenol	4.53	0.250	mg/kg wet	5.000		91	15-140	13	30	
3-Nitroaniline	2.02	0.500	mg/kg wet	2.500		81	40-140	11	30	
4,6-Dinitro-2-Methylphenol	2.52	1.00	mg/kg wet	2.500		101	30-130	8	30	
4-Bromophenyl-phenylether	2.32	0.250	mg/kg wet	2.500		93	40-140	10	30	
4-Chloro-3-Methylphenol	2.05	0.250	mg/kg wet	2.500		82	30-130	11	30	
4-Chloroaniline	1.49	0.250	mg/kg wet	2.500		60	15-140	7	30	
4-Chloro-phenyl-phenyl ether	2.28	0.250	mg/kg wet	2.500		91	40-140	13	30	
4-Nitroaniline	2.20	0.500	mg/kg wet	2.500		88	40-140	12	30	
4-Nitrophenol	2.31	1.00	mg/kg wet	2.500		92	15-140	15	30	
Acenaphthene	2.20	0.250	mg/kg wet	2.500		88	40-140	15	30	
Acenaphthylene	2.15	0.250	mg/kg wet	2.500		86	40-140	14	30	
Acetophenone	2.13	0.250	mg/kg wet	2.500		85	40-140	14	30	
Aniline	1.17	0.250	mg/kg wet	2.500		47	40-140	15	30	
Anthracene	2.24	0.250	mg/kg wet	2.500		90	40-140	10	30	
Azobenzene	2.05	0.250	mg/kg wet	2.500		82	40-140	11	30	
Benzidine	0.341	1.00	mg/kg wet	2.500		14	40-140	10	30	B-
Benzo(a)anthracene	2.16	0.250	mg/kg wet	2.500		86	40-140	13	30	
Benzo(a)pyrene	2.27	0.250	mg/kg wet	2.500		91	40-140	14	30	
Benzo(b)fluoranthene	2.02	0.250	mg/kg wet	2.500		81	40-140	16	30	
Benzo(g,h,i)perylene	2.15	0.250	mg/kg wet	2.500		86	40-140	9	30	
Benzo(k)fluoranthene	2.22	0.250	mg/kg wet	2.500		89	40-140	13	30	
Benzoic Acid	2.07	2.50	mg/kg wet	2.500		83	30-130	6	30	
Benzyl Alcohol	2.02	0.500	mg/kg wet	2.500		81	40-140	13	30	
bis(2-Chloroethoxy)methane	1.94	0.250	mg/kg wet	2.500		77	40-140	9	30	
bis(2-Chloroethyl)ether	1.89	0.250	mg/kg wet	2.500		76	40-140	15	30	
bis(2-chloroisopropyl)Ether	1.92	0.250	mg/kg wet	2.500		77	40-140	13	30	
bis(2-Ethylhexyl)phthalate	2.21	0.250	mg/kg wet	2.500		88	40-140	14	30	
Butylbenzylphthalate	2.16	0.250	mg/kg wet	2.500		87	40-140	14	30	
Carbazole	2.27	0.250	mg/kg wet	2.500		91	40-140	12	30	
Chrysene	2.20	0.250	mg/kg wet	2.500		88	40-140	13	30	
Dibenzo(a,h)Anthracene	2.30	0.250	mg/kg wet	2.500		92	40-140	12	30	
Dibenzofuran	2.18	0.250	mg/kg wet	2.500		87	40-140	13	30	
Diethylphthalate	2.34	0.250	mg/kg wet	2.500		94	40-140	13	30	

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Quality Control Data

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Semi-Volatile Organic Compounds

Batch DK40452 - 3546

Dimethylphthalate	2.28	0.250	mg/kg wet	2.500		91	15-140	14	30	
Di-n-butylphthalate	2.42	0.250	mg/kg wet	2.500		97	40-140	12	30	
Di-n-octylphthalate	2.17	0.500	mg/kg wet	2.500		87	40-140	15	30	
Fluoranthene	2.43	0.250	mg/kg wet	2.500		97	40-140	11	30	
Fluorene	2.31	0.250	mg/kg wet	2.500		92	40-140	12	30	
Hexachlorobenzene	2.25	0.250	mg/kg wet	2.500		90	40-140	9	30	
Hexachlorobutadiene	1.93	0.250	mg/kg wet	2.500		77	40-140	9	30	
Hexachlorocyclopentadiene	2.01	0.500	mg/kg wet	2.500		80	40-140	14	30	
Hexachloroethane	1.97	0.250	mg/kg wet	2.500		79	40-140	16	30	
Indeno(1,2,3-cd)Pyrene	2.15	0.250	mg/kg wet	2.500		86	40-140	11	30	
Isophorone	1.79	0.250	mg/kg wet	2.500		72	40-140	12	30	
Naphthalene	1.82	0.250	mg/kg wet	2.500		73	40-140	10	30	
Nitrobenzene	1.82	0.250	mg/kg wet	2.500		73	40-140	11	30	
N-Nitrosodimethylamine	2.23	0.250	mg/kg wet	2.500		89	40-140	14	30	
N-Nitroso-Di-n-Propylamine	2.19	0.250	mg/kg wet	2.500		87	40-140	13	30	
N-nitrosodiphenylamine	1.92	0.250	mg/kg wet	2.500		77	40-140	11	30	
Pentachlorophenol	1.99	1.00	mg/kg wet	2.500		80	15-140	12	30	
Phenanthrene	2.18	0.250	mg/kg wet	2.500		87	40-140	12	30	
Phenol	2.19	0.250	mg/kg wet	2.500		87	15-140	13	30	
Pyrene	2.03	0.250	mg/kg wet	2.500		81	40-140	14	30	
Pyridine	2.63	0.250	mg/kg wet	2.500		105	40-140	13	30	

Surrogate: 1,2-Dichlorobenzene-d4	2.17		mg/kg wet	2.500		87	30-130			
Surrogate: 2,4,6-Tribromophenol	4.06		mg/kg wet	3.750		108	30-130			
Surrogate: 2-Chlorophenol-d4	3.56		mg/kg wet	3.750		95	30-130			
Surrogate: 2-Fluorobiphenyl	2.32		mg/kg wet	2.500		93	30-130			
Surrogate: 2-Fluorophenol	3.58		mg/kg wet	3.750		96	30-130			
Surrogate: Nitrobenzene-d5	2.00		mg/kg wet	2.500		80	30-130			
Surrogate: Phenol-d6	3.57		mg/kg wet	3.750		95	30-130			
Surrogate: p-Terphenyl-d14	2.31		mg/kg wet	2.500		93	30-130			

8082A Polychlorinated Biphenyls (PCB)

Batch DK40408 - 3540C

Blank										
Aroclor 1016	ND	0.02	mg/kg wet							
Aroclor 1016 [2C]	ND	0.02	mg/kg wet							
Aroclor 1221	ND	0.02	mg/kg wet							
Aroclor 1221 [2C]	ND	0.02	mg/kg wet							
Aroclor 1232	ND	0.02	mg/kg wet							
Aroclor 1232 [2C]	ND	0.02	mg/kg wet							
Aroclor 1242	ND	0.02	mg/kg wet							
Aroclor 1242 [2C]	ND	0.02	mg/kg wet							
Aroclor 1248	ND	0.02	mg/kg wet							
Aroclor 1248 [2C]	ND	0.02	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8082A Polychlorinated Biphenyls (PCB)

Batch DK40408 - 3540C

Aroclor 1254	ND	0.02	mg/kg wet							
Aroclor 1254 [2C]	ND	0.02	mg/kg wet							
Aroclor 1260	ND	0.02	mg/kg wet							
Aroclor 1260 [2C]	ND	0.02	mg/kg wet							
Aroclor 1262	ND	0.02	mg/kg wet							
Aroclor 1262 [2C]	ND	0.02	mg/kg wet							
Aroclor 1268	ND	0.02	mg/kg wet							
Aroclor 1268 [2C]	ND	0.02	mg/kg wet							

Surrogate: Decachlorobiphenyl	0.0215		mg/kg wet	0.02500		86	30-150
Surrogate: Decachlorobiphenyl [2C]	0.0202		mg/kg wet	0.02500		81	30-150
Surrogate: Tetrachloro-m-xylene	0.0202		mg/kg wet	0.02500		81	30-150
Surrogate: Tetrachloro-m-xylene [2C]	0.0211		mg/kg wet	0.02500		85	30-150

LCS

Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		85	40-140
Aroclor 1016 [2C]	0.4	0.05	mg/kg wet	0.5000		82	40-140
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		86	40-140
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		82	40-140

Surrogate: Decachlorobiphenyl	0.0214		mg/kg wet	0.02500		86	30-150
Surrogate: Decachlorobiphenyl [2C]	0.0198		mg/kg wet	0.02500		79	30-150
Surrogate: Tetrachloro-m-xylene	0.0202		mg/kg wet	0.02500		81	30-150
Surrogate: Tetrachloro-m-xylene [2C]	0.0199		mg/kg wet	0.02500		80	30-150

LCS Dup

Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		87	40-140	2	30
Aroclor 1016 [2C]	0.4	0.05	mg/kg wet	0.5000		87	40-140	6	30
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		87	40-140	1	30
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		87	40-140	5	30

Surrogate: Decachlorobiphenyl	0.0215		mg/kg wet	0.02500		86	30-150
Surrogate: Decachlorobiphenyl [2C]	0.0197		mg/kg wet	0.02500		79	30-150
Surrogate: Tetrachloro-m-xylene	0.0209		mg/kg wet	0.02500		84	30-150
Surrogate: Tetrachloro-m-xylene [2C]	0.0207		mg/kg wet	0.02500		83	30-150

8100M Total Petroleum Hydrocarbons

Batch DK40506 - 3546

Blank

Decane (C10)	ND	0.2	mg/kg wet
Docosane (C22)	ND	0.2	mg/kg wet
Dodecane (C12)	ND	0.2	mg/kg wet
Eicosane (C20)	ND	0.2	mg/kg wet
Hexacosane (C26)	ND	0.2	mg/kg wet
Hexadecane (C16)	ND	0.2	mg/kg wet
Nonadecane (C19)	ND	0.2	mg/kg wet

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8100M Total Petroleum Hydrocarbons

Batch DK40506 - 3546

Nonane (C9)	ND	0.2	mg/kg wet							
Octacosane (C28)	ND	0.2	mg/kg wet							
Octadecane (C18)	ND	0.2	mg/kg wet							
Tetracosane (C24)	ND	0.2	mg/kg wet							
Tetradecane (C14)	ND	0.2	mg/kg wet							
Total Petroleum Hydrocarbons (C9-C36)	ND	37.5	mg/kg wet							
Triacontane (C30)	ND	0.2	mg/kg wet							

Surrogate: O-Terphenyl	4.12		mg/kg wet	5.000		82	40-140			
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LCS

Decane (C10)	1.6	0.2	mg/kg wet	2.500		62	40-140			
Docosane (C22)	1.9	0.2	mg/kg wet	2.500		76	40-140			
Dodecane (C12)	1.8	0.2	mg/kg wet	2.500		71	40-140			
Eicosane (C20)	1.9	0.2	mg/kg wet	2.500		77	40-140			
Hexacosane (C26)	1.9	0.2	mg/kg wet	2.500		76	40-140			
Hexadecane (C16)	1.9	0.2	mg/kg wet	2.500		75	40-140			
Nonadecane (C19)	1.9	0.2	mg/kg wet	2.500		77	40-140			
Nonane (C9)	1.4	0.2	mg/kg wet	2.500		58	30-140			
Octacosane (C28)	1.8	0.2	mg/kg wet	2.500		73	40-140			
Octadecane (C18)	1.9	0.2	mg/kg wet	2.500		76	40-140			
Tetracosane (C24)	1.8	0.2	mg/kg wet	2.500		72	40-140			
Tetradecane (C14)	1.8	0.2	mg/kg wet	2.500		73	40-140			
Total Petroleum Hydrocarbons (C9-C36)	26.1	37.5	mg/kg wet	35.00		75	40-140			
Triacontane (C30)	1.8	0.2	mg/kg wet	2.500		74	40-140			

Surrogate: O-Terphenyl	3.99		mg/kg wet	5.000		80	40-140			
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LCS Dup

Decane (C10)	1.5	0.2	mg/kg wet	2.500		61	40-140	2	25	
Docosane (C22)	1.9	0.2	mg/kg wet	2.500		78	40-140	2	25	
Dodecane (C12)	1.8	0.2	mg/kg wet	2.500		71	40-140	0.8	25	
Eicosane (C20)	2.0	0.2	mg/kg wet	2.500		78	40-140	2	25	
Hexacosane (C26)	2.0	0.2	mg/kg wet	2.500		78	40-140	2	25	
Hexadecane (C16)	2.0	0.2	mg/kg wet	2.500		78	40-140	4	25	
Nonadecane (C19)	2.0	0.2	mg/kg wet	2.500		80	40-140	3	25	
Nonane (C9)	1.4	0.2	mg/kg wet	2.500		57	30-140	1	25	
Octacosane (C28)	1.9	0.2	mg/kg wet	2.500		75	40-140	2	25	
Octadecane (C18)	2.0	0.2	mg/kg wet	2.500		78	40-140	3	25	
Tetracosane (C24)	1.8	0.2	mg/kg wet	2.500		73	40-140	2	25	
Tetradecane (C14)	1.9	0.2	mg/kg wet	2.500		75	40-140	2	25	
Total Petroleum Hydrocarbons (C9-C36)	26.8	37.5	mg/kg wet	35.00		76	40-140	2	25	
Triacontane (C30)	1.9	0.2	mg/kg wet	2.500		75	40-140	2	25	

Surrogate: O-Terphenyl	4.02		mg/kg wet	5.000		80	40-140			
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Batch DK40842 - 3546

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8100M Total Petroleum Hydrocarbons

Batch DK40842 - 3546

Blank

Decane (C10)	ND	0.2	mg/kg wet
Docosane (C22)	ND	0.2	mg/kg wet
Dodecane (C12)	ND	0.2	mg/kg wet
Eicosane (C20)	ND	0.2	mg/kg wet
Hexacosane (C26)	ND	0.2	mg/kg wet
Hexadecane (C16)	ND	0.2	mg/kg wet
Nonadecane (C19)	ND	0.2	mg/kg wet
Nonane (C9)	ND	0.2	mg/kg wet
Octacosane (C28)	ND	0.2	mg/kg wet
Octadecane (C18)	ND	0.2	mg/kg wet
Tetracosane (C24)	ND	0.2	mg/kg wet
Tetradecane (C14)	ND	0.2	mg/kg wet
Total Petroleum Hydrocarbons (C9-C36)	ND	37.5	mg/kg wet
Triacontane (C30)	ND	0.2	mg/kg wet

Surrogate: O-Terphenyl 4.51 mg/kg wet 5.000 90 40-140

LCS

Decane (C10)	2.0	0.2	mg/kg wet	2.500	80	40-140
Docosane (C22)	2.3	0.2	mg/kg wet	2.500	94	40-140
Dodecane (C12)	2.2	0.2	mg/kg wet	2.500	86	40-140
Eicosane (C20)	2.4	0.2	mg/kg wet	2.500	94	40-140
Hexacosane (C26)	2.3	0.2	mg/kg wet	2.500	92	40-140
Hexadecane (C16)	2.3	0.2	mg/kg wet	2.500	92	40-140
Nonadecane (C19)	2.4	0.2	mg/kg wet	2.500	95	40-140
Nonane (C9)	1.7	0.2	mg/kg wet	2.500	69	30-140
Octacosane (C28)	2.2	0.2	mg/kg wet	2.500	87	40-140
Octadecane (C18)	2.3	0.2	mg/kg wet	2.500	92	40-140
Tetracosane (C24)	2.2	0.2	mg/kg wet	2.500	88	40-140
Tetradecane (C14)	2.3	0.2	mg/kg wet	2.500	91	40-140
Total Petroleum Hydrocarbons (C9-C36)	30.2	37.5	mg/kg wet	35.00	86	40-140
Triacontane (C30)	2.1	0.2	mg/kg wet	2.500	83	40-140

Surrogate: O-Terphenyl 4.75 mg/kg wet 5.000 95 40-140

LCS Dup

Decane (C10)	1.9	0.2	mg/kg wet	2.500	74	40-140	7	25
Docosane (C22)	2.2	0.2	mg/kg wet	2.500	90	40-140	4	25
Dodecane (C12)	2.1	0.2	mg/kg wet	2.500	83	40-140	3	25
Eicosane (C20)	2.2	0.2	mg/kg wet	2.500	90	40-140	5	25
Hexacosane (C26)	2.2	0.2	mg/kg wet	2.500	89	40-140	4	25
Hexadecane (C16)	2.2	0.2	mg/kg wet	2.500	89	40-140	3	25
Nonadecane (C19)	2.3	0.2	mg/kg wet	2.500	90	40-140	5	25
Nonane (C9)	1.7	0.2	mg/kg wet	2.500	67	30-140	3	25
Octacosane (C28)	2.1	0.2	mg/kg wet	2.500	84	40-140	3	25

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8100M Total Petroleum Hydrocarbons

Batch DK40842 - 3546

Octadecane (C18)	2.2	0.2	mg/kg wet	2.500		89	40-140	3	25	
Tetracosane (C24)	2.1	0.2	mg/kg wet	2.500		85	40-140	4	25	
Tetradecane (C14)	2.2	0.2	mg/kg wet	2.500		88	40-140	4	25	
Total Petroleum Hydrocarbons (C9-C36)	29.0	37.5	mg/kg wet	35.00		83	40-140	4	25	
Triacotane (C30)	2.0	0.2	mg/kg wet	2.500		82	40-140	2	25	

Surrogate: O-Terphenyl	4.63		mg/kg wet	5.000		93	40-140			
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CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Notes and Definitions

Z18	Temperature is not within 23 +/-2 °C.
U	Analyte included in the analysis, but not detected
SC	Surrogate recovery(ies) outside of criteria. Reextraction/Reanalysis confirms results (SC).
S-	Surrogate recovery(ies) below lower control limit (S-).
Q	Calibration required quadratic regression (Q).
ICV+	Initial Calibration Verification recovery is above upper control limit (ICV+).
ICV-	Initial Calibration Verification recovery is below lower control limit (ICV-).
IC	Internal Standard(s) outside of criteria. Sample was reanalyzed to confirm (IC).
EL	Elevated Method Reporting Limits due to sample matrix (EL).
D	Diluted.
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
B+	Blank Spike recovery is above upper control limit (B+).
B-	Blank Spike recovery is below lower control limit (B-).
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
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probable Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

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: RI00002

<http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml>

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

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/ML

ESS Project ID: 24K0082

Date Received: 11/4/2024

Project Due Date: 11/11/2024

Days for Project: 5 Day

Shipped/Delivered Via: Client

1. Air bill manifest present? ☐ No
Air No.: NA

6. Does COC match bottles? ☒ Yes ☐ No ^{11/4/24}

2. Were custody seals present? ☐ No

7. Is COC complete and correct? ☐ Yes

3. Is radiation count <100 CPM? ☐ Yes

8. Were samples received intact? ☐ Yes

4. Is a Cooler Present? ☐ Yes

9. Were labs informed about short holds & rushes? Yes / No ☒ NA

Temp: 5.7 Iced with: ice

10. Were any analyses received outside of hold time? Yes ☒ No

5. Was COC signed and dated by client? ☐ Yes

11. Any Subcontracting needed? Yes ☒ No

12. Were VOAs received? ☒ Yes / No

ESS Sample IDs:

a. Air bubbles in aqueous VOAs?

Analysis:

b. Does methanol cover soil completely?

TAT:

Yes ☒ No

13. Are the samples properly preserved? ☒ Yes / No

a. If metals preserved upon receipt:

Date:

Time:

By/Acid Lot#:

b. If dissolved metals are requested, are they:

Yes / No Field Filtered

Yes / No To Be Lab Filtered

c. Low Level VOA vials frozen:

Date: 11/4/24

Time: nk

By: client

Sample Receiving Notes:

Only sample 6 MeOH covers sample.

COC = TP-3 S-1 @ 1340; Labels = TP13 S-1 @ 1340

14. Was there a need to contact Project Manager?

☒ Yes / No

a. Was there a need to contact the client?

☒ Yes / No

Who was contacted?

Date:

Time:

By:

Resolution:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	609815	Yes	N/A	Yes	VOA Vial	DI Water	
1	609816	Yes	N/A	Yes	VOA Vial	DI Water	
1	609827	Yes	N/A	Yes	VOA Vial	MeOH	
1	609833	Yes	N/A	Yes	8 oz jar	NP	
1	609834	Yes	N/A	Yes	8 oz jar	NP	
1	609845	Yes	N/A	Yes	4 oz. Jar	NP	
2	609817	Yes	N/A	Yes	VOA Vial	DI Water	
2	609818	Yes	N/A	Yes	VOA Vial	DI Water	
2	609828	Yes	N/A	Yes	VOA Vial	MeOH	
2	609835	Yes	N/A	Yes	8 oz jar	NP	
2	609836	Yes	N/A	Yes	8 oz jar	NP	
2	609846	Yes	N/A	Yes	4 oz. Jar	NP	
3	609819	Yes	N/A	Yes	VOA Vial	DI Water	
3	609820	Yes	N/A	Yes	VOA Vial	DI Water	
3	609829	Yes	N/A	Yes	VOA Vial	MeOH	
3	609837	Yes	N/A	Yes	8 oz jar	NP	
3	609838	Yes	N/A	Yes	8 oz jar	NP	
3	609847	Yes	N/A	Yes	4 oz. Jar	NP	
4	609821	Yes	N/A	Yes	VOA Vial	DI Water	
4	609822	Yes	N/A	Yes	VOA Vial	DI Water	

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/ML

ESS Project ID: 24K0082

Date Received: 11/4/2024

4	609830	Yes	N/A	Yes	VOA Vial	MeOH
4	609839	Yes	N/A	Yes	8 oz jar	NP
4	609840	Yes	N/A	Yes	8 oz jar	NP
4	609848	Yes	N/A	Yes	4 oz. Jar	NP
5	609823	Yes	N/A	Yes	VOA Vial	DI Water
5	609824	Yes	N/A	Yes	VOA Vial	DI Water
5	609831	Yes	N/A	Yes	VOA Vial	MeOH
5	609841	Yes	N/A	Yes	8 oz jar	NP
5	609842	Yes	N/A	Yes	8 oz jar	NP
5	609849	Yes	N/A	Yes	4 oz. Jar	NP
6	609825	Yes	N/A	Yes	VOA Vial	DI Water
6	609826	Yes	N/A	Yes	VOA Vial	DI Water
6	609832	Yes	N/A	Yes	VOA Vial	MeOH
6	609843	Yes	N/A	Yes	8 oz jar	NP
6	609844	Yes	N/A	Yes	8 oz jar	NP
6	609850	Yes	N/A	Yes	4 oz. Jar	NP

2nd Review

Were all containers scanned into storage/lab?

Are barcode labels on correct containers?

Are all Flashpoint stickers attached/container ID # circled?

Are all Hex Chrome stickers attached?

Are all QC stickers attached?

Are VOA stickers attached if bubbles noted?

Initials TD

☒ Yes ☐ No
 Yes / No / NA
 Yes / No / NA
 Yes / No / NA
 Yes / No / NA

Completed

By: [Signature]

Reviewed

By: [Signature]

Date & Time:

11/4/24 1244

Date & Time:

11/4/24 1257

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab #	24K0082
Reporting Limits	RIDEM ICDEC/RDEC
Electronic Deliverables	<input checked="" type="checkbox"/> Limit Checker <input type="checkbox"/> Standard Excel <input type="checkbox"/> Other (Please Specify →)

Company Name GZA		Project # 35453.00	Project Name Pawtucket High School	
Contact Person Joseph Unsworth		Address 188 Valley St, Suite 300		
City Providence	State RI	Zip Code 02909	PO #	
Telephone Number 401-556-0305	FAX Number	Email Address joseph.unsworth@gza.com		

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	VOCs	SVOCs	PCBs	Metals - PP13	TPH	TCLP Metals (20x Rule)								
01	11/1/2024	1340	Grab	Soil	TP-13 S-1 TP-3, S-1 ML 11/7/24	X	X	X	X	X	X								
02	11/1/2024	1241	Grab	Soil	TP-11, S-1	X	X	X	X	X	X								
03	11/1/2024	1030	Grab	Soil	TP-4, S-1	X	X	X	X	X	X								
04	11/1/2024	1357	Grab	Soil	TP-10, S-1	X	X	X	X	X	X								
05	11/1/2024	1407	Grab	Soil	TP-9, S-1	X	X	X	X	X	X								
06	11/1/2024	0946	Grab	Soil	TP-14, S-1	X	X	X	X	X	X								

Container Type:	AC-Air Cassette	AG-Amber Glass	B-BOD Bottle	C-Cubitainer	G - Glass	O-Other	P-Poly	S-Sterile	V-Vial	V	G	G	G	G	G						
Container Volume:	1-100 mL	2-2.5 gal	3-250 mL	4-300 mL	5-500 mL	6-1L	7-VOA	8-2 oz	9-4 oz	10-8 oz	11-Other*	7	3	3	3	3	3				
Preservation Code:	1-Non Preserved	2-HCl	3-H2SO4	4-HNO3	5-NaOH	6-Methanol	7-Na2S2O3	8-ZnAce, NaOH	9-NH4Cl	10-DI H2O	11-Other*	6/10	1	1	1	1	1				
Number of Containers per Sample:											3	3	3	3	3	3					

Laboratory Use Only Cooler Present: _____ Seals Intact: _____ Cooler Temperature: 5.7°C ice		Sampled by: T. Murphy Comments: Please specify "Other" preservative and containers types in this space 1. Low level VOC vials frozen on collection date. 2. All samples are peat (organic soil).	
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
<i>Joseph Unsworth</i> 11/4/24 1130	<i>T. Murphy</i> 11/4/24 1130		
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)

APPENDIX C

STRUCTURE GROUND IMPROVEMENT/ SITE ENABLING NARRATIVE



January 10, 2024

Philip Gray, NCARB
Jonathan Levi Architects
266 Beacon Street
Boston, Massachusetts 02116

RE: Pawtucket Unified High School
RIDE Stage III Structure Ground Improvement/Site Enabling Narrative

Transmitted via email (pgray@leviarc.com)

Dear Philip:

Per your request, we have prepared this ground improvement/site enabling narrative for the proposed new Pawtucket Unified High School proposed for the city of Pawtucket, Rhode Island.

Standard of Care and Use of Report

Please note that the schematic framing and recommendations herein are based on our review of the schematic renderings and layout plans and Schematic Design-level Revit BIM provided to us to date by Jonathan Levi Architects. The recommendations in this narrative represent our best professional opinion based on the information available to us at this time. This narrative is for preliminary pricing and budgeting purposes of the site enabling work as it pertains to the building structure only. At this stage of design, the design team is continuing to coordinate a proposed structural framing scheme. Further, a detailed grading plan of proposed new grades around the perimeter of the building has not been made available.

WSP USA Buildings Inc.

1223 Mineral Spring Ave
North Providence, RI 02904

100 Summer Street, 13th Floor
Boston, MA 02110

Tel.: +1 401.724.1771
wsp.com

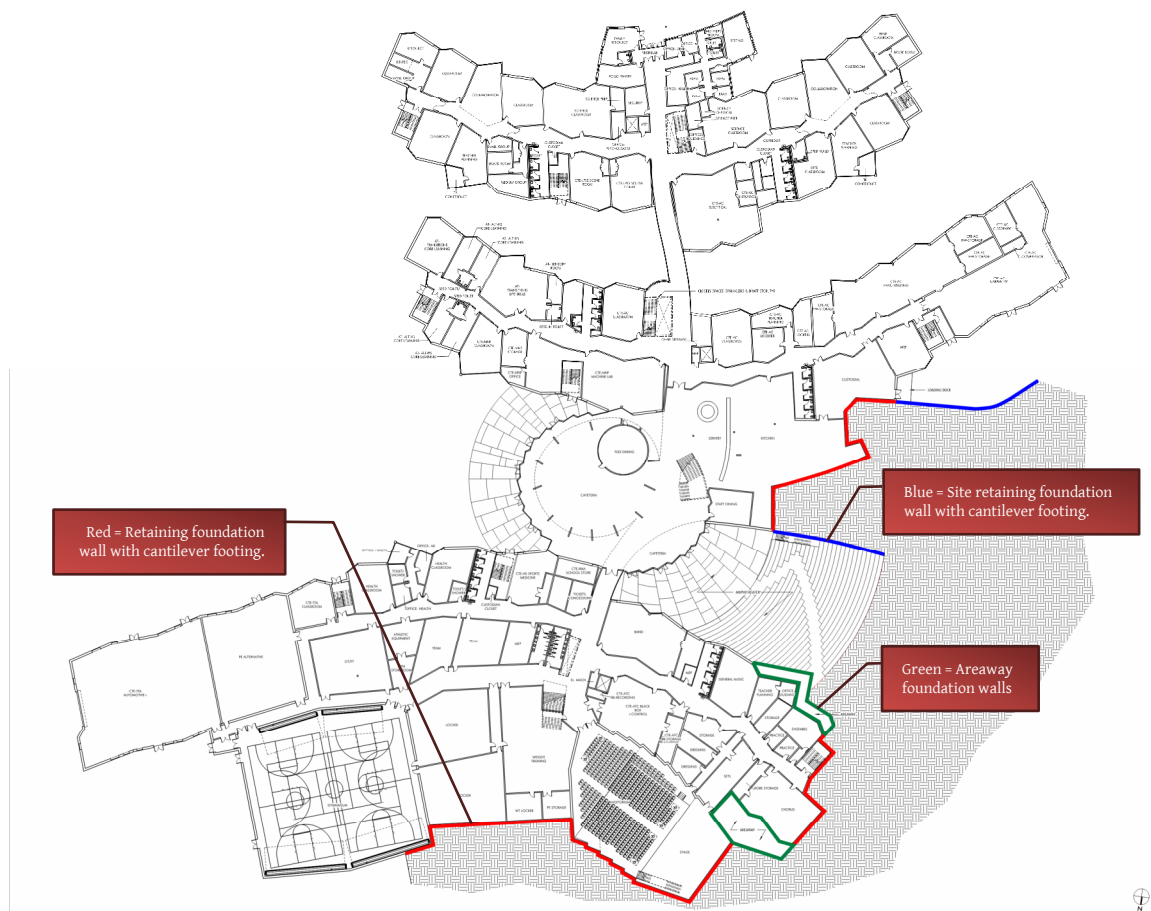


Figure 1 - Building Layout

Foundation and slab on grade systems are discussed at length in the Schematic Design structural narrative and will not be repeated in detail herein, reference that document for all relevant systems pertaining to the foundation.

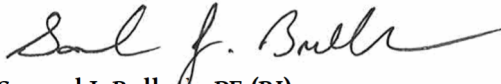
In coordination with the project geotechnical engineer, GZA GeoEnvironmental, Inc., the team is proceeding with a foundation design utilizing concrete spread footings, frost walls, and slabs on grade bearing on improved soil, utilizing a “cut and replace” method of ground improvement. Below is a list bulleted list of relevant foundation parameters for site enabling estimation:

- Frost depth in Pawtucket, RI = 4'-0"
 - Min bottom of footing depth below new grade will be 4'-0"
- Assume 12" thick layer of crushed stone below all continuous walls footings and spread footings.
- Consult geotechnical engineer's recommendations regarding below slab materials and preparation
- Perimeter foundation walls:
 - Typical frost wall – Top of footing a minimum of 3'-0" below grade and shall be assumed to be 12" thick.
 - Retaining Walls (red in image above) – Top of footing shall be set 16" below top of low slab on grade and shall be assumed to be 24" thick.
 - Site Retaining Walls attached to building (blue in image above) – Top of footing shall be set a minimum of 2'-0" below grade at toe of footing and cantilever footing shall be assumed to be 24" thick.
 - Areaway Foundation Walls (green in image above) – Bottom of footing shall be set at 4'-0" below grade within areaway.
- Spread footings at columns:

- Exterior (along perimeter foundation wall) – Top of footing shall be set at a min of 3'-0" below grade and shall be assumed to be 24" thick.
 - Interior – Top of footing shall be set at a min of 1'-0" below top of slab on grade and shall be assumed to be 24" thick.
- Elevator pits – pit depth shall be assumed to be 5'-0" below top of slab on grade with a 24" thick mat slab.
- MEP Coordination with Foundations – Coordination with MEP design team is ongoing and subject to change as the building design evolves. Exterior foundations will need to be locally dropped where services enter the building.
 - Electrical Coordination - At electrical service entry, it should be understood that exterior foundations will need to drop below any duct banks and all adjacent interior footings will need to be lowered to an assumed minimum bottom of footing depth = 4'-0" below top of slab on grade between service entry and the electrical room.
 - Plumbing Coordination – At rain leader drops on columns, it shall be assumed that the top of footing will drop to -18" below top of slab on grade. It shall be assumed that this occurs on approximately 20% of interior footings.

Should you have any questions or require additional information, please do not hesitate to contact this office at 401/724-1771.

Sincerely,



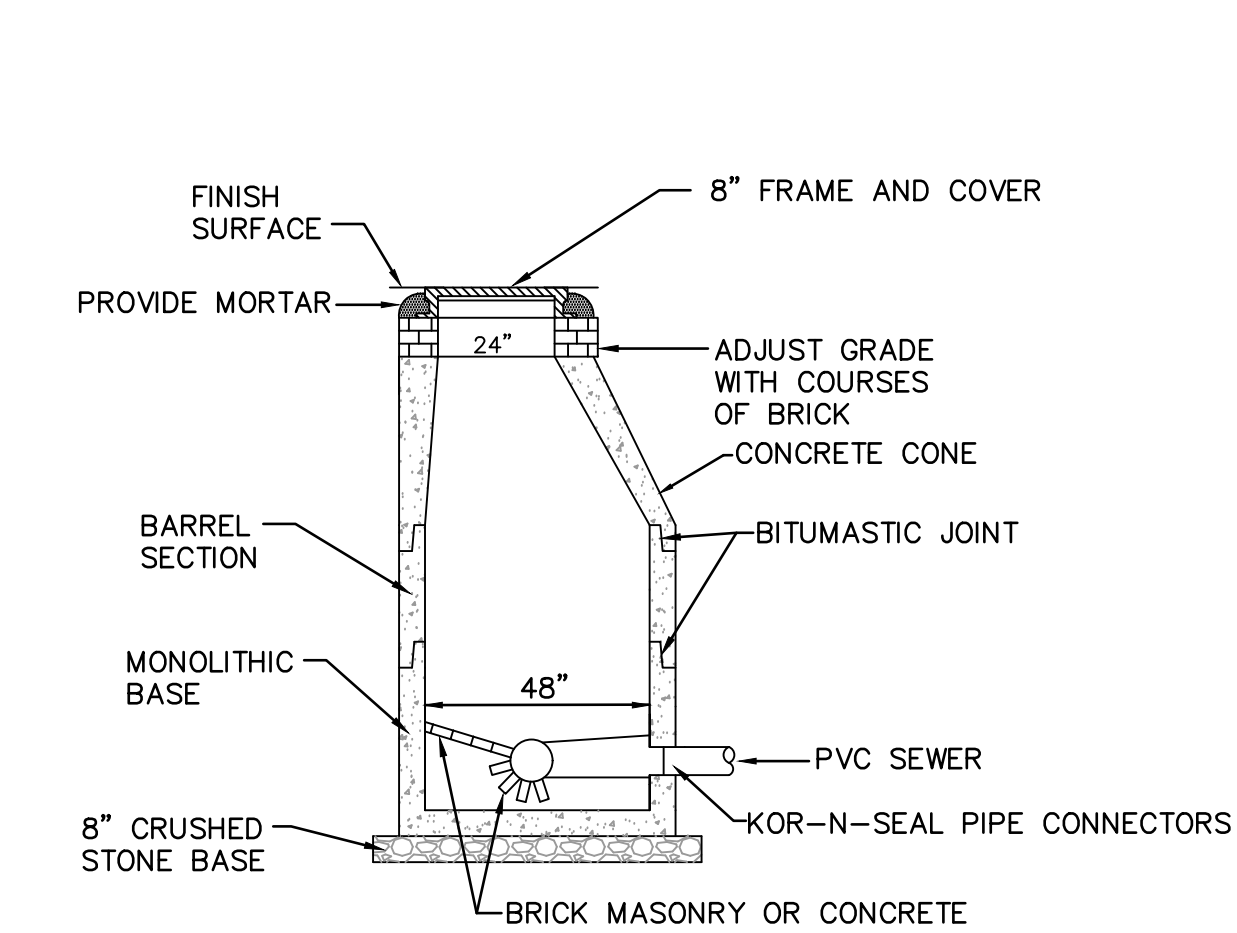
Samuel J. Bullock, PE (RI)
Assistant Vice President



Paul Kuehnel, PE (MA)
Assistant Vice President

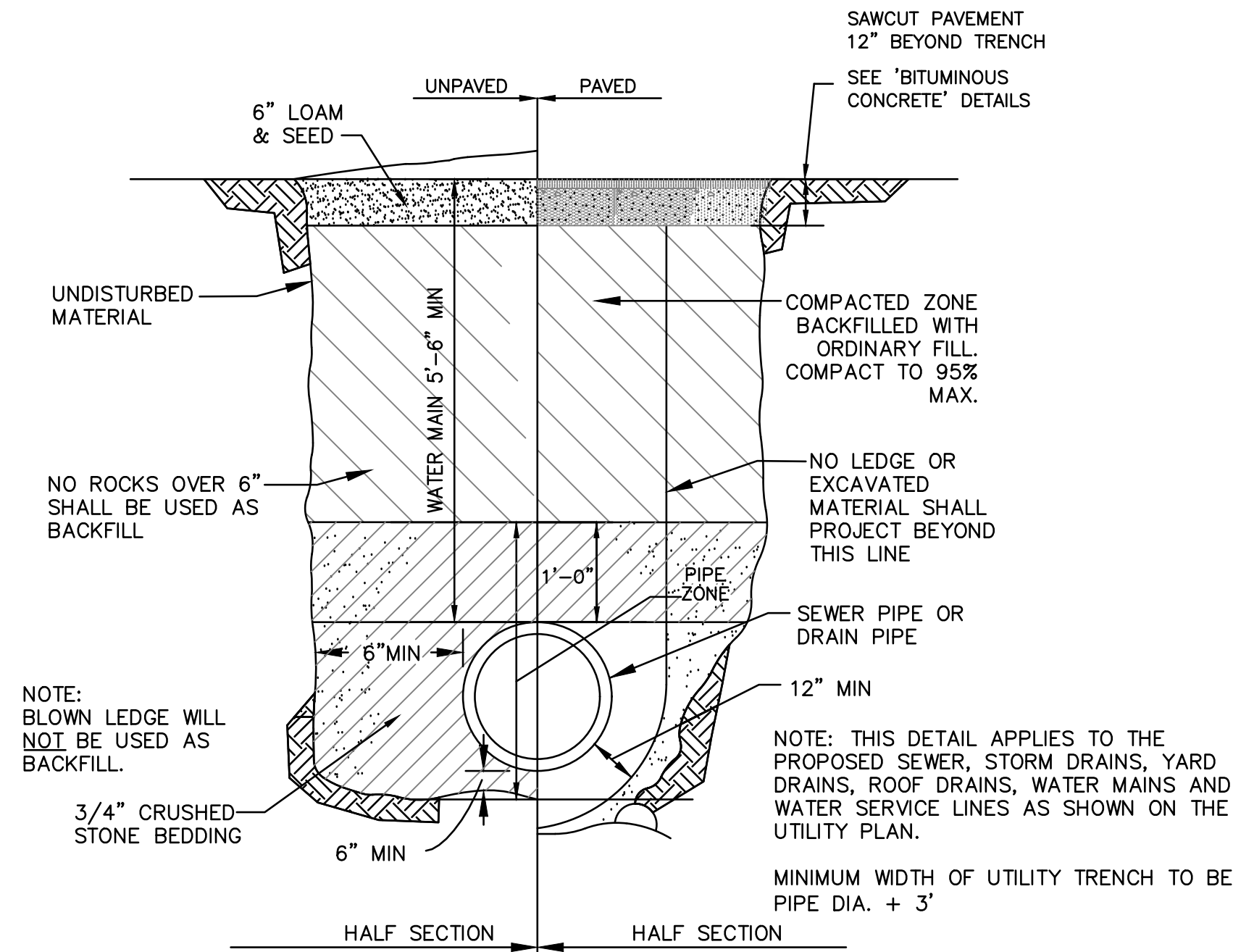
APPENDIX D

CIVIL DRAWINGS C-4.1 & C-5.1

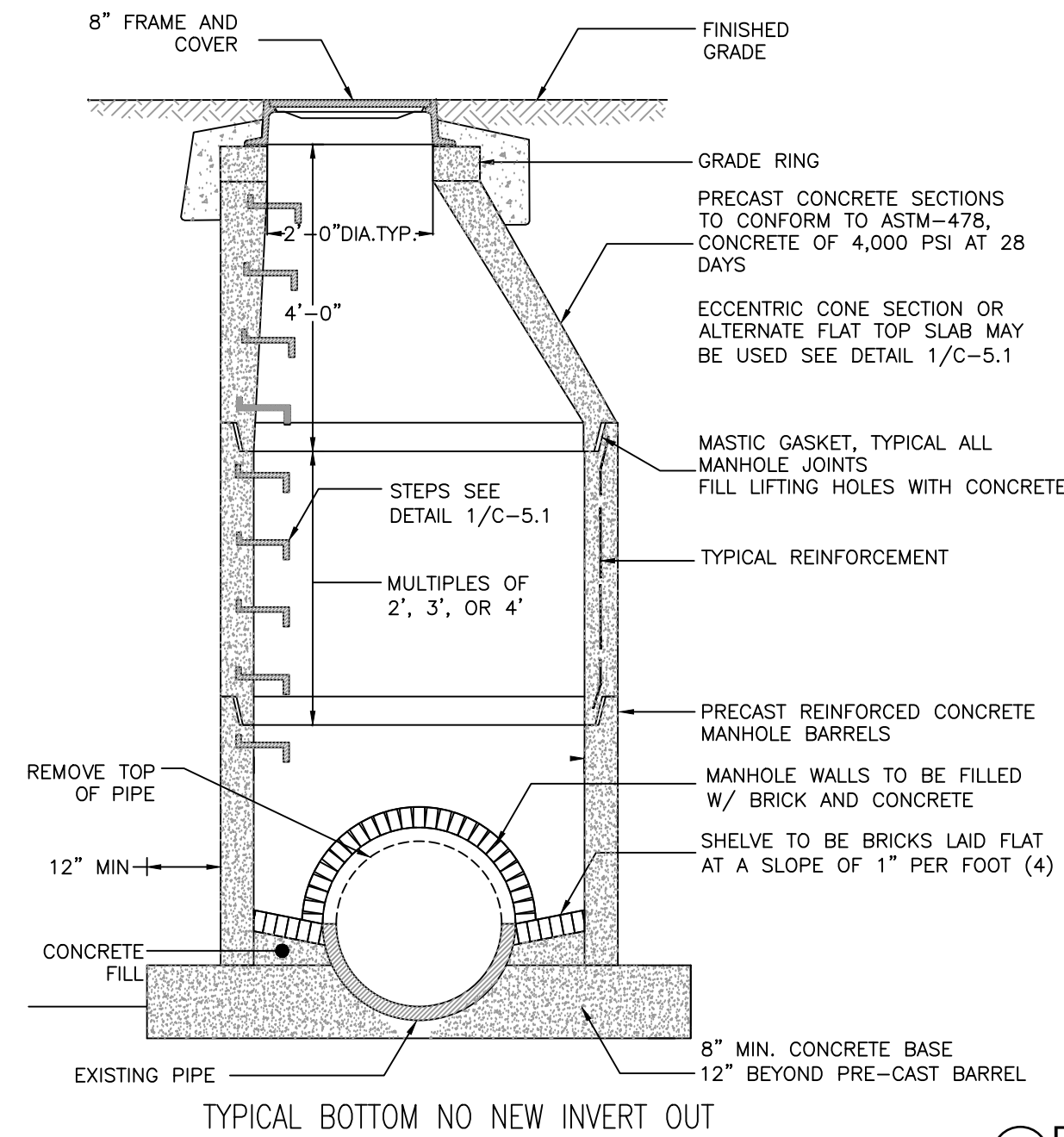


- NOTES:
1. MANHOLE DESIGN SHALL CONFORM TO LATEST ASTM C478.
 2. REINFORCING STEEL SHALL CONFORM TO LATEST ASTM A 185.
 3. CONCRETE COMPRESSIVE STRENGTH-4,000 PSI @ 28 DAYS.
 4. ONE POUR MONOLITHIC BASE.
 5. STEPS-STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC (PS2-PFSL M.A. INDUSTRIES, INC.) CONFORMING TO LATEST ASTM C478 PARA-12.
 6. KOR-N-SEAL FLEXIBLE PIPE CONNECTORS SHALL CONFORM TO LATEST ASTM C923, A167.
 7. A PRECAST DOG HOUSE MANHOLE MAY BE USED FOR NEW MANHOLES OVER EXISTING LINES, WHERE STOPPING OR DIVERTING THE EXISTING FLOW IS NOT PRACTICABLE, SEE DOG HOUSE MANHOLE DETAIL.
 8. FRAME AND COVER TO CONFORM TO CITY OF PAWTUCKET REQUIREMENTS..

① **SEWER MANHOLE (SMH)**
(NOT TO SCALE)

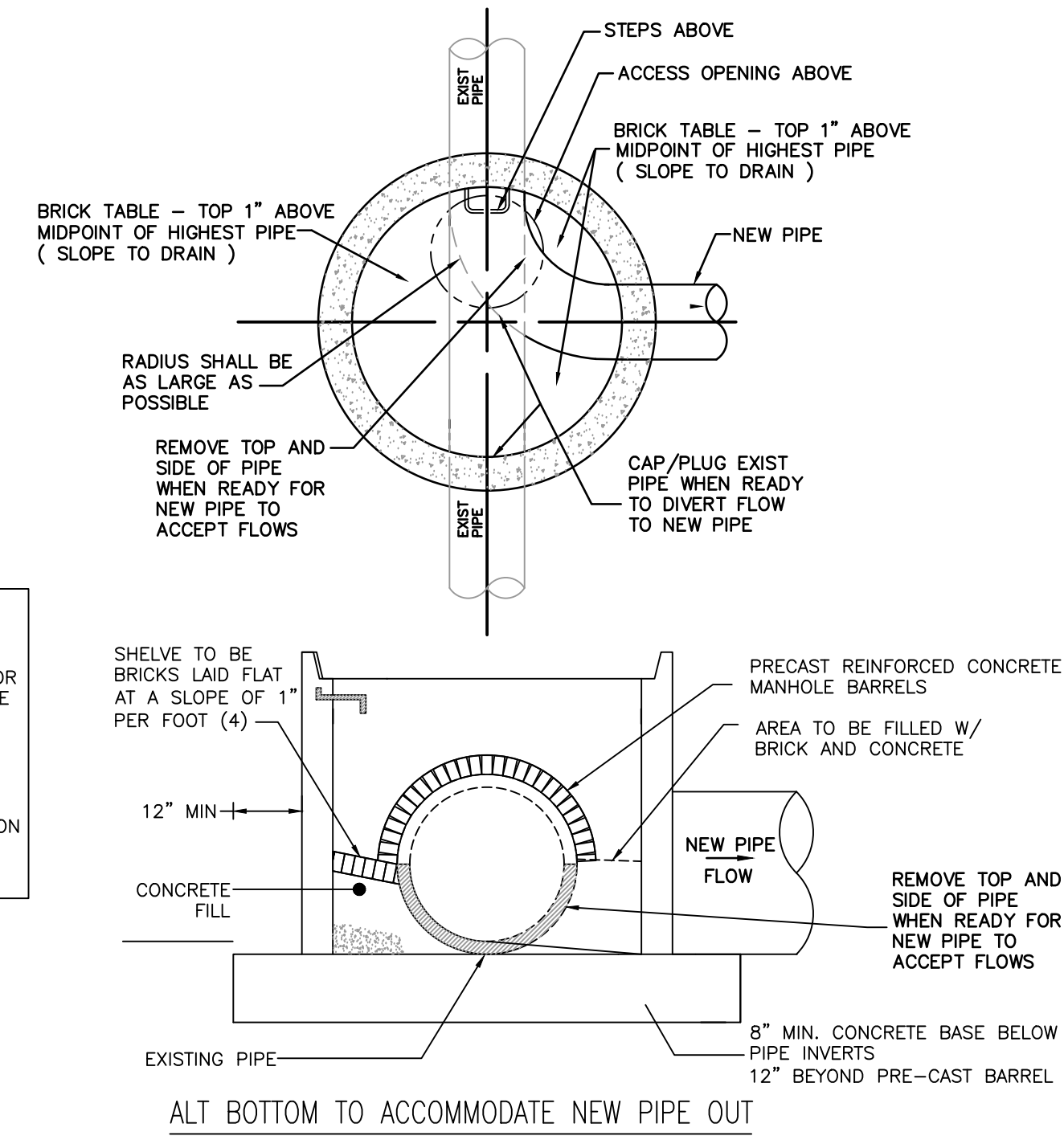


② **TYPICAL PIPE IN TRENCH**
(NOT TO SCALE)



- NOTES:
1. 5'-0" OR 6'-0" DIAMETER WHEN DEPTHS GREATER THAN 20 FEET OR WHEN REQUIRED BY THE PIPE SIZE
 2. 6" MIN. WALL THICKNESS, 5'-0" DIAMETER MANHOLES
 3. SEE SMH DETAIL 1/C-5.1 FOR ADDITIONAL NOTES AND INFORMATION AS APPLICABLE.

③ **PRECAST DOG HOUSE MANHOLE**
(NOT TO SCALE)



REVISIONS		
No.	Date	Description

APPENDIX E

STAGE III SCHEMATIC DESIGN STRUCTURAL NARRATIVE



November 22, 2024

Philip Gray, NCARB
Jonathan Levi Architects
266 Beacon Street
Boston, Massachusetts 02116

RE: Pawtucket Unified High School
RIDE Stage III SD Pricing Structural Design Narrative

Transmitted via email (pgray@leviarc.com)

Dear Philip:

Per your request, we have prepared this structural design narrative for the proposed new Pawtucket Unified High School proposed for the city of Pawtucket, Rhode Island.

Standard of Care and Use of Report

Please note that the schematic framing and recommendations herein are based on our review of the schematic renderings and layout plans and Schematic Design-level Revit BIM provided to us to date by Jonathan Levi Architects. The recommendations in this narrative represent our best professional opinion based on the information available to us at this time. This report is for preliminary pricing and budgeting purposes only.

1 GENERAL STRUCTURAL CRITERIA

1.1 Building Description

Based on the information shared with us noted above, we understand that the project will be a completely new 400,000± square-foot (s.f.) high school building located at the current McCoy Stadium site, comprised the following key components:

- Three (3) three- and four-story classroom “modules” that are connected by glazed corridors.
- Three (3) story cafeteria and media center bound by classroom modules and outdoor amphitheater
- Large-volume auditorium and support spaces.
- Large-volume gymnasium and athletics support spaces.

Please refer to Figure 1, below, for the building layout referenced herein.

WSP USA Buildings Inc.

1223 Mineral Spring Ave
North Providence, RI 02904

100 Summer Street, 13th Floor
Boston, MA 02110

Tel.: +1 401.724.1771
wsp.com

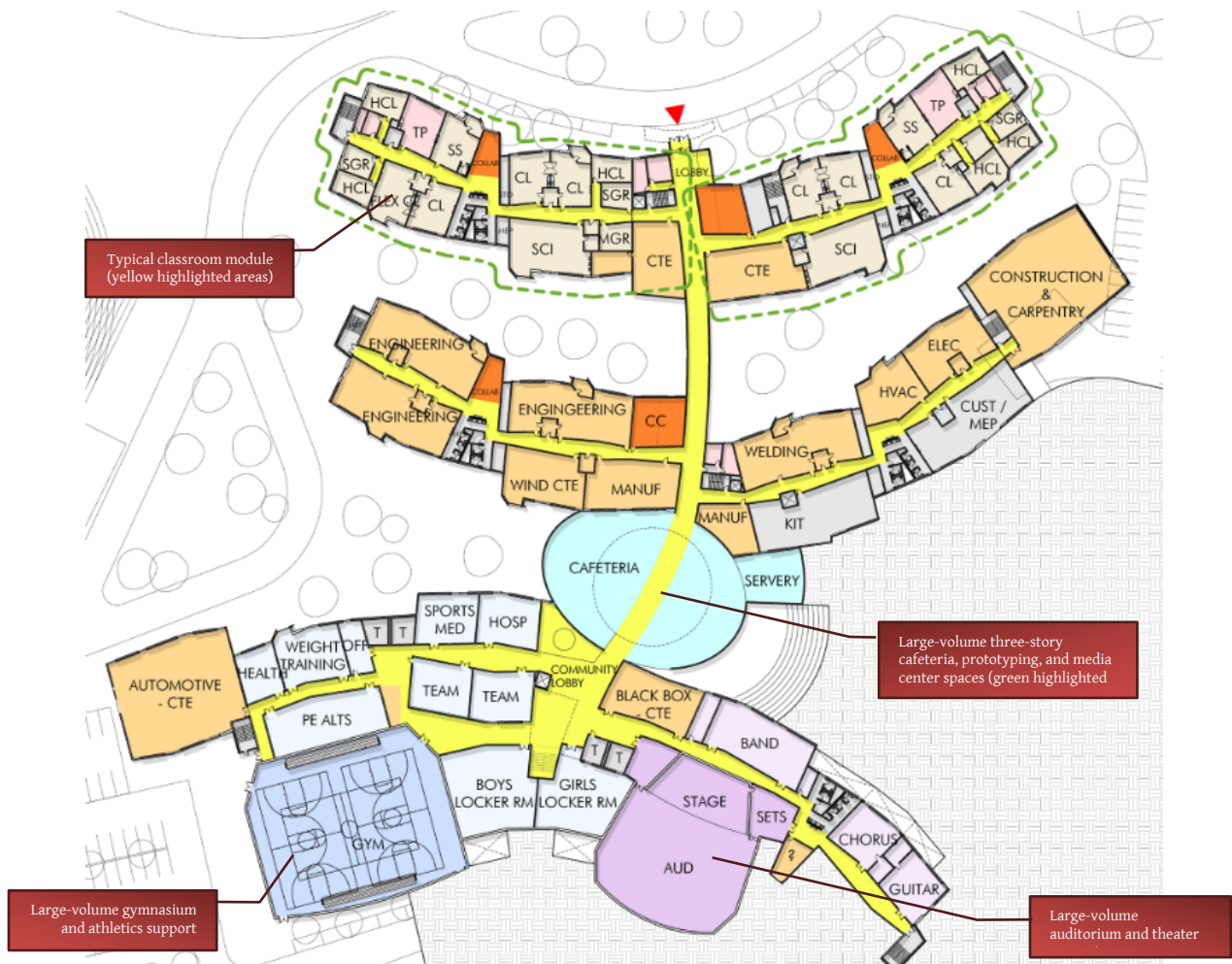


Figure 1 - Building Layout

All structural design criteria for the building will be based on the building codes and standards listed below, and by criteria specified by the owner and architect.

1.2 Building Codes and Standards

1.2.1 Building Code

- All designs shall conform to the 2021 Rhode Island State Building Code – SBC-1 (IBC 2018 with State-specific Amendments) and its referenced standards.

1.2.2 Industry Reference Standards (applicable versions as referenced in IBC)

- American Concrete Institute, “Manual of Concrete Practice”
- American Concrete Institute, “ACI 318 Building Code Requirements for Reinforced Concrete”
- The Masonry Society, “TMS 402/602 Building Code Requirements for Masonry Structures” (formerly ACI 530)
- American Institute of Steel Construction, “Steel Construction Manual”
- American Institute of Steel Construction, “Design Guide 11 - Floor Vibrations Due to Human Activity”
- American Society of Civil Engineers, “ASCE 7 Minimum Design Loads for Buildings and Other Structures”
- American Iron and Steel Institute, “D100 Cold-Formed Steel Design Manual”

- American Iron and Steel Institute, “S100 North American Specification for the Design of Cold-Formed Steel Structural Members”

1.3 Design Loads

The building will be designed to support all applicable loads and loading conditions prescribed by the governing Building Code as well as specific loading conditions provided by the Owner, including:

- 1.3.1 General Design Requirements
 - MunicipalityPawtucket
 - Risk Category.....III
- 1.3.2 Floor Live Loads (Per IBC 2018, Section 1607)
 - Classrooms40 psf
 - Corridors – First Floor100 psf
 - Corridors – Second Floor.....80 psf
 - Storage & Mechanical125 psf
 - Offices50 psf
 - Public Assembly Areas – Fixed Seats60 psf
 - Public Assembly Areas – Moveable Sets100 psf
 - Projection and Control Rooms150 psf
 - Stage Floors150 psf
 - Stairs & Lobby Areas100 psf
- 1.3.3 Roof Snow Loads (Per IBC 2018, Section 1608 & SBC-1 Table 1608.1)
 - Ground Snow Load, Pg35 psf
 - Minimum Flat Roof Snow Load, Pf.....30 psf
 - Surface Roughness CategoryC
 - Exposure of Roof.....Partially Exposed
 - Snow Exposure Factor, Ce1.00
 - Thermal Factor, Ct.....1.00
 - Snow Load Importance Factor, Is.....1.10
 - Additional snow loading as required for drift.
 - Roof ponding loads will be evaluated based on the roof drainage system(s) selected by the Architect and M/E/P Engineer.
- 1.3.4 Wind Loads (Per IBC 2018, Section 1609 & SBC-1 Table 1608.1)
 - Ultimate Wind Speed, V_{ult} 133 MPH
 - Nominal Wind Speed, V_{asd} 104 MPH
 - Wind Exposure Category.....C
 - MWFRS Design MethodDirectional Procedure (ASCE 7-16)
 - Components & Cladding Loads.....Chapter 30 (ASCE7-16)
- 1.3.5 Earthquake Loads (Per IBC 2018 Section 1613 & SBC-1 Table 1608.1)
 - Site Class.....D (to be verified by Geotechnical Engineer)
 - Spectral Response Accelerations
 - S_s0.201
 - S_1 0.056
 - Spectral Response Coefficients
 - S_{ds} 0.215

- Sd10.089
 - Seismic Design CategoryB
 - Seismic Importance Factor, Ie1.25
 - Seismic Force Resisting System
 - Steel Systems Not Specifically Detailed for Seismic Resistance
(R = 3.0, Wo = 3.0, Cd = 3.0)
 - Ordinary Reinforced Masonry Shear Walls
(R = 2.0, Wo = 2.5, Cd = 2.0)
 - Analysis Procedure.....ELFP
 - Seismic Analysis will consider the total seismic mass of the building including self-weight of all significant equipment.
- 1.3.6 Flood Loads (Per IBC 2018 Section 1612)
- A preliminary review of the FEMA national flood hazard layer FIRMet for Pawtucket, RI indicates that the project site location is not within a currently documented AE or VE flood zone.

2 STRUCTURAL SYSTEMS

2.1 Foundations

Foundation design will be based on a formal geotechnical report prepared by the owner's geotechnical engineer. Recommendations herein are based on the Geotechnical Feasibility Report prepared by RMA GeoEnvironmental of Wickford, RI, dated March 2022 and current ongoing discussions with GZA GeoEnvironmental, Inc. – we understand that additional exploration will be performed as part of the next phase of this project and a new preliminary geotechnical report will be issued in the near future. Therefore, these recommendations are subject to revision based on the findings in the final geotechnical report. Based on our review of the project documents available to us at this time, we have the following recommendations for foundation systems for the building:

- **All areas – Basis of Design**
 - Recommended Foundations: Concrete spread footings, frost walls, and slabs-on-grade bearing on improved soil. While the original geotechnical feasibility report outlined an approach utilizing rigid inclusions as a means of ground improvement, it is our understanding through conversations between GZA and the design team, that it will be feasible to improve the soil via over-excavation and replacement with structural fill.
 - Comments: Based on preliminary feedback from GZA it is our understanding that the soil improvement plan will yield an approximate allowable soil bearing pressure of 4ksf.

Subsurface preparation (improved soil) beneath all slabs on grade and foundations shall be per the geotechnical report. All topsoil, existing fill, and other unsuitable materials must be removed and replaced with a minimum of 12" compacted granular structural fill or prepared per the geotechnical engineer's requirements.

If ledge or boulders are encountered, they must be removed to a minimum depth of 12" below all slabs and foundations and replaced with a layer compacted crushed stone.

Groundwater may be encountered and must be considered in the design and construction of the foundations and slabs on grade. An adequate drainage system and waterproofing system must be provided for all foundations (and under the slabs where recommended by the geotechnical engineer). Note that the structural drawings may indicate but will not include design of the drainage and waterproofing system – this must be coordinated with the geotechnical engineer, plumbing engineer, and civil engineer for the project. Slabs and foundation walls will be designed assuming no hydrostatic pressure or uplift on slabs.

2.2 Slabs on Grade

The typical slabs on grade for the building will consist of 4" thick cast-in-place concrete (reinforced with 6x6-W1.4xW1.4 WWF), with the exception of the gymnasium, cafeteria, and auditorium, which will have a 6" thick slab on grade (reinforced with 6x6-W2.9xW2.9). Additionally, CTE spaces will have an 8" cast-in-place concrete slab on grade reinforce with #5@12" O.C. E.W. mid-depth. Sawcut joints, made with an early-entry saw within four hours of concrete placement, will be required at 10'-0"± o.c. maximum spacing. At all 6" and 8" thick slab on grade construction joints, provide ¾" smooth dowels @ 18" O.C.

In locations that require an underslab drainage system (designed by the geotechnical engineer), 18" of compacted crushed stone must be provided below slabs on grade.

2.3 Floor Structure – Elevated Levels

Elevated floor structures will consist of composite steel beams and slab on metal deck construction. Perimeter beams at the classroom wings will be HSS members installed flush with the top of slab to provide a minimal structural profile that accommodates the architectural façade system. Floor slab systems throughout will be comprised of ¾" lightweight (115 pcf) concrete slab poured atop a 3" 16-gauge composite metal deck (total thickness 6¼"). Beams will be located at approximately 8 to 10 feet on center where the framing is concealed and will be located at approximately 12 to 14 feet on center where the framing is exposed (anticipated to be in classroom spaces). Shear studs will be welded on top flanges of all beams supporting slab on metal deck at a spacing not to exceed 12 inches on center. Girders and beams will frame to steel columns (HSS tubes at the classroom structures and wide flange members at adjacent large-volume spaces, to be determined based on coordination with architect).

At this stage of the design, we suggest a steel weight of 14 pounds per square foot of floor area at level 2 and 12 pounds per square foot of floor area at all other levels for preliminary budgeting purposes. It is anticipated that the level 2 floor structure will be utilized to transfer vertical column loads from levels above where necessary to create large volume CTE and performance spaces. It is for this reason that average steel tonnage of level 2 is distributed over the full floor plate. All steel weights are subject to revision based on final building design.

Estimating and budgeting shall include provisions for additional steel framing for mechanical openings, chases, and risers (not necessarily indicated on the structural framing plans, but shown in typical details), miscellaneous steel for support of mechanical equipment/piping/ductwork, and support angles for brick relief.

2.4 Roof Structure

Roof framing over the classrooms and other areas will be wide-flange steel beams supporting 3" 16-gauge Grade 80 metal roof deck with no concrete topping slab, unless required by the architect for sound isolation purposes or by design in areas of heavy mechanical or snow drift loads. Beams will be located at 8 to 10 feet on center where the framing is concealed and will be located at 12 to 14 feet on center where the framing is exposed (anticipated to be in classroom spaces). Girders and beams will frame into steel columns (HSS sections, to be determined based on coordination with architect).

Roof framing over the gymnasium and auditorium spaces will be deep long-span (DLH) steel joists supporting 3" 18-gauge acoustic metal roof deck. Joists and deck will bear on 12" reinforced CMU walls. Portions of the CMU walls at the Auditorium space will be constructed using acoustic CMU block to meet the acoustical requirements for the space.

Where mechanical equipment yards are proposed atop the roofs, a slab system comprised of 7½" normal weight concrete slab poured atop a 3" 16-gauge composite metal deck (total thickness 6¼") will be provided to allow for flexibility and adequate support of the equipment proposed to be in those areas. In addition, a

roof screen comprised of HSS steel posts, kickers, and horizontal girts will be provided around the mechanical yards to obscure the equipment. For budgeting purposes, assume a tonnage estimate of 200 lbs/ft for galvanized steel at all roof screens.

At this stage of the design, we suggest a steel weight of 12 pounds per square foot of roof area for preliminary budgeting purposes. All steel weights are subject to revision based on final building design.

Estimating and budgeting shall include provisions for additional steel framing for mechanical openings, chases, and risers (not necessarily indicated on the structural framing plans, but shown in typical details), miscellaneous steel for support of mechanical equipment/piping/ductwork, and support angles for brick relief.

2.5 Cafeteria and Media Center

The cafeteria and media center consists of an ellipse shaped structure with an off-center atrium skylight at the roof. The structure is three stories tall with two floors set in from the glazed exterior wall. The central structure of the media center will be composed of a series of wide flange or HSS columns and wide flange floor beams supporting a lightweight (115 pcf) concrete slab poured atop a 3" 16-gauge composite metal deck (total thickness 6¼") at two levels. A central braced tower of steel braced frames will extend from foundation to roof to provide lateral stability for the structure. As a basis of design the roof will be composed of bent glulam timber roof beams extending out radially from the central core to the outer roof perimeter. These bent glulam timber beams will form the shape of the skylight and greater plane of the media center roof. The roof deck will be composed of 4" nominal tongue and groove wood decking (thickness subject to change based on final beam spacing). A series of exposed HSS columns will be set in from the outer perimeter approximately 10 feet from the exterior wall to support these roof members. At this stage of the design, we suggest a steel weight of 14 pounds per square foot of floor area for preliminary budgeting purposes. All steel weights are subject to revision based on final building design.

The exterior wall system will be composed primarily of curtain wall spanning three stories, from roof to foundation. The exterior glazing system will be designed by a specialty curtain wall designer familiar with the design of long spanning curtain wall structures.

2.6 Lateral Force Resisting System

The lateral force resisting system will be composed primarily of steel braced frames (tubular steel columns and braces with wide flange horizontal members) in classroom areas. In some areas, such as those where extensive glazing does not allow introduction of braces, steel moment frames will be required for lateral stability and stiffness of the frame.

The CMU walls will function as the lateral force-resisting system for the gymnasium and auditorium spaces.

Due to the size and geometry of the proposed school, seismic joints will need to be introduced at strategic locations that will separate the structures into discrete isolated structural systems (minimum of four structures) while seamlessly integrating with the architectural layout. No structural components shall cross the seismic joints. Nonstructural components (such as piping and MEP ductwork) must be fitted with flexible couplings capable of withstanding the differential lateral translation on each side of the joint.

2.7 Exterior Wall Construction

It is assumed that the new exterior wall construction will consist of brick veneer and wood/metal panels, with curtain wall systems provided at corridors and at the large-volume spaces. Where brick veneer is used, relieving angles shall be provided at each floor level, attached to steel spandrel girders. Brick veneer will have metal stud backup wall system, designed for maximum out-of-plane deflections of span/900 or 0.3"

maximum. Metal stud backup wall systems that do not support brick veneer shall be designed for maximum out-of-plane deflections of $\text{span}/360$. All exposed steel at curtain wall locations shall be Architecturally Exposed Structural Steel (AESS).

2.8 Exterior Canopies

Exterior canopies will be comprised of cantilevered tapered wide-flange or WT beam sections supported on a custom steel plate spine beam that spans between cantilevered wide-flange columns. Subframing between cantilevered beams to support the roof panels (assumed to be phenolic or similar material not included as part of WSP's scope) will be provided at the spacing dictated by the roof panel manufacturer. Footings for canopies shall be designed to resist the overturning forces acting on them at the base of the cantilevered columns. Cantilevered columns will be anchored to the footings below grade and have reinforced concrete piers cast around them up to grade to provide restraint at the base of the steel column member. All steel at the proposed canopies will be AESS.

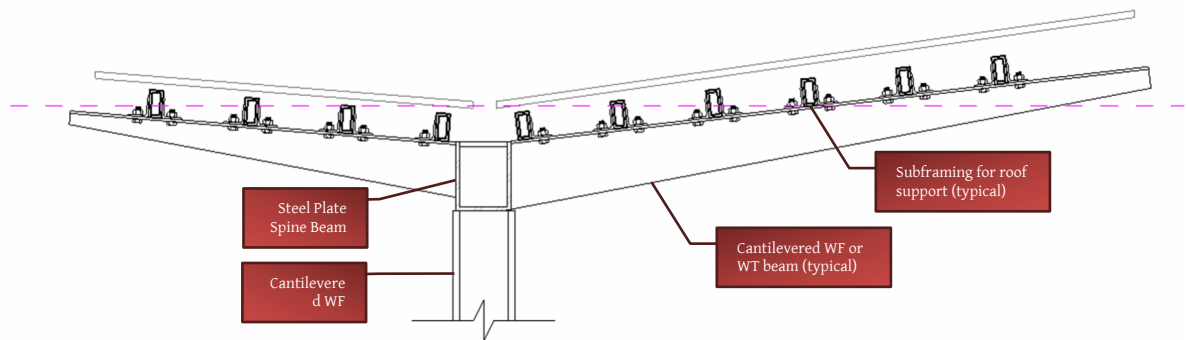


Figure 2 - Schematic Canopy Section

2.9 Additional Design Considerations

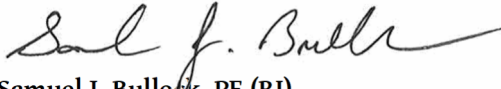
Steel columns and beams that are exposed to view at curtain wall locations, within the Gymnasium, the Cafeteria, and other isolated areas identified in the architectural drawings will be specified as Architectural Exposed Structural Steel (AESS) and will be required to adhere to more stringent fabrication, erection, and finishing criteria. Refer to the architectural drawings for identification of any areas of AESS framing.

Slab depressions will be constructed at select locations within the Kitchen, the Performance/Theater space, and other locations throughout the building to support specialty floor finishes or post-installed equipment assemblies. Additional reinforcement will be provided within the slabs on grade at these locations to accommodate the steps in slab elevation and additional loading if applicable. Refer to the other trade documents for additional information on these locations, systems, and equipment.

The building design is assumed to be Risk Category III construction to support the proposed academic use and the assembly spaces that will be included within the building based upon the current planned program. The information included in this narrative does not include provisions for designating this facility an emergency shelter. If this building is designated as an emergency shelter, then it will be a Risk Category IV structure which we believe will result in a 15% increase in steel tonnage for roof framing members, a 25% premium for steel framing (steel weight and connection detailing) for lateral force resisting system elements, and a 25% premium for foundation elements supporting the lateral force resisting system. Other aspects of the building design may also require upgrade should there be a requirement to design for RC IV construction.

Should you have any questions or require additional information, please do not hesitate to contact this office at 401/724-1771.

Sincerely,



Samuel J. Bullock, PE (RI)
Assistant Vice President



Paul Kuehnel, PE (MA)
Assistant Vice President



David J. Odeh, PE (24 states), SE (IL, CA)
Senior Vice President - Principal



M. David Odeh, PE
Senior Vice President - Principal

APPENDIX F

MCCOY PHASE II GEOENVIRONMENTAL SITE
ASSESSMENT

**Phase II Environmental
Site Assessment
City of Pawtucket Assessor's
Plat 26 Lot 630**

**2 Columbus Avenue
Pawtucket, Rhode Island**

**The S/L/A/M Collaborative
Providence, RI**

March 2022



317 Iron Horse Way, Suite 204
Providence, RI 02908



March 07, 2022

Mr. Catherine Ellithorpe, AIA
Principal / Architect
The S/L/A/M Collaborative
1 Davol Square, Suite 200
Providence, RI 02903

RE: Phase II Environmental Site Assessment Results
McCoy Stadium Property
2 Columbus Avenue, Assessor's Plat 26, Lot 630, Pawtucket, Rhode Island
Fuss & O'Neill Reference No. 20160501.B10

Dear Ms. Ellithorpe,

Fuss & O'Neill, Inc. (Fuss & O'Neill) has prepared this report to document the results of a Phase II Environmental Site Assessment (ESA) conducted at the above-referenced property (the Site). The S/L/A/M Collaborative retained Fuss & O'Neill to complete these activities to aid the City of Pawtucket in evaluating the site as a potential unified high school campus.

If you have any questions or require additional information, please contact the undersigned.

Sincerely,

Patrick J. Dowling, CPG
Associate | Department Manager

/rlz

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2 Columbus Avenue, Pawtucket, Rhode Island
The S/L/A/M Collaborative

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1 Introduction

The overall objective of the Phase II Environmental Site Assessment (ESA) documented herein was to compile environmental information regarding the site through field investigations and laboratory analyses. The primary purpose of the Phase II ESA was to identify environmental conditions in soil, groundwater, and soil gas which may warrant response actions under the Rhode Island Department of Environmental Management (RIDEM) *Rules and Regulations for the Investigation and Remediation of Hazardous Materials Releases (Remediation Regulations)*. Additionally, the Phase II ESA was intended to determine, to the extent possible, the absence or presence and, where applicable, the nature and extent of contaminants in environmental media, to aid in the evaluation of the redevelopment of the Site as a high school campus.

2 Site Description and Background

The “Site” or “subject site,” the McCoy Stadium property, is identified as the City of Pawtucket (the City) Tax Assessor’s Plat 26, Lot 630 and is located on the south side of Division Street in a Public Open zone of Pawtucket, Rhode Island (Providence County). A map consisting of a portion of a United States Geological Survey (USGS) topographic map showing the Site location is provided as *Figure 1*, and a Site plan is provided as *Figure 2*.

According to City records, the Site is an approximate 23-acre parcel owned by the City of Pawtucket since the 1940s. The Site was previously the location of Hammond Pond, as depicted in the portion of the 1894 USGS map included below. Hammond Pond was filled in the late 1930s to facilitate construction of the stadium. Structures located on the subject site include a 46,521 square foot baseball stadium constructed in 1942 with associated parking to the north, west and south. Additionally, a 9,986 square foot fire station with associated parking was located on the southwest portion of the Site. Pariseau Field, consisting of a football field, concession stand and bleachers, is located on the northeast portion of the Site.

According to Rhode Island Department of Environmental Management (RIDEM) Environmental Resource mapping, the subject site is not located within an Environmental Justice Zone. However, whenever a site is known to be or suspected of being contaminated and is being considered for possible reuse as the location of a school, RIDEM requires public involvement, including public notice letters, public meetings, and posted signage.



1894 USGS topographic map.

2.1 Groundwater

The groundwater beneath the Site was classified by RIDEM as GB (RIDEM, 2019). GB groundwater is designated to be not suitable for public or private drinking water use. GB groundwater areas are typically located beneath highly urbanized areas, permanent waste disposal areas, and the area immediately surrounding the permanent waste disposal areas.

Based on USGS topographic mapping and field observations, the groundwater flow direction was initially inferred to be generally to the southwest toward the Seekonk River. Groundwater depths observed in 12 monitoring wells both recently installed as part of this assessment and pre-existing, ranged from approximately 4 to 11 feet below grade (fbg). A groundwater elevation survey conducted as part of this assessment confirmed the inferred direction of groundwater flow to the southwest. Further details regarding the results of the groundwater investigation are contained in subsequent portions of this report.

2.2 Potable Water

According to the RIDEM Office of Water Resources Wellhead Protection Area Map of the Pawtucket, Rhode Island Quadrangle, no wellhead protection areas (WHPAs) are located within a one-half mile radius of the subject site.

2.3 Surface Water

The nearest surface water body, Seekonk River, is located approximately 3,000 feet west of the subject site (USGS, 1987). The Seekonk River is classified by RIDEM as Class SB1(a) (RIDEM, 2010c).

Class SB1(a) waters are class SB1 waters with usage restrictions due to impacts by combined sewer overflows. Class SB1 waters are designated for primary and secondary contact recreational activities and fish and wildlife habitat. Class SB1 waters should be suitable for aquacultural uses, navigation, and industrial cooling and should have good aesthetic value. However, class SB1(a) waters will likely be impacted by combined sewer overflows. Therefore, primary contact recreational activities; shell fishing uses; and fish and wildlife habitat will likely be restricted.

Additionally, the Seekonk River is identified in the State of Rhode Island 2018-2020 303(d) List of Impaired Waters (RIDEM, 2021) as having been impacted due to dissolved oxygen, total nitrogen, and fecal coliform.

2.4 Topography and Geology

The topography of the Site slopes downward to the southwest. The regional topography gradually slopes downward to the southwest, toward the Seekonk River (USGS, 1987).

Surficial material at the McCoy Stadium and Pariseau Field is mapped as Merrimac-Urban land complex, which is described sandy loam with areas of human transported materials. The remainder of the Site is mapped as Urban Land, which is described as human transported materials (USDA, 2020).

Bedrock beneath the Site is mapped as Rhode Island Formation, which is described as fine- to coarse-grained quartz, arenite, litharenite, shale, and conglomerate (Hermes, et al, 1994). Bedrock was not encountered during field operations described in *Section 3.0* and bedrock outcrops were not observed in the vicinity of the subject site.

3 Previous Environmental Investigations

November 1998 Underground Storage Tank Assessment

Kenyon Environmental Inc. (KEI) prepared an *Underground Storage Tank (UST) Assessment* in November 1998 for the removal of a 3,000-gallon No. 4 fuel oil UST located on the southern portion of the Site. During removal of the tank, a 2-inch hole and large gash was observed in the tank, which was caused by construction activities (pile driving) associated with a stadium renovation project happening at that time. Petroleum impacted soil and groundwater was observed upon removal of the UST. Approximately 2,250 gallons of impacted groundwater and 300 cubic yards of impacted soil were removed from the Site. KEI recommended a *Site Investigation Report (SIR)* be completed due to the observation of free product in soil and groundwater following the removal of the UST.

September 2000 SIR

Sage Environmental LLC (SAGE) prepared an SIR in September 2000 to determine if an impact to soil and groundwater existed at the Site after the removal of the 3,000-gallon UST in November 1998 in the southern portion of the Site. The investigation consisted of the advancement of three soil borings completed as monitoring wells (MW-1, MW-2, and MW-3). Confirmatory soil sampling did not find Total Petroleum Hydrocarbons (TPH) above the RIDEM Industrial/Commercial Direct Exposure (I/C-DEC). No Volatile Organic Compounds (VOC) were detected in groundwater samples exceeding the RIDEM GB Groundwater Objectives (GB-GO). SAGE recommended that a status of No Further Action be assigned to the Site by RIDEM.

March 2022 Phase I ESA

In March 2022, Fuss & O'Neill conducted a *Phase I ESA* at the subject site on behalf of The S/L/A/M Collaborative (SLAM). The objective of the *Phase I ESA* was to identify potential Recognized Environmental Conditions (RECs) at the Site. During the Phase I investigation, of the following RECs were identified:

- **Former 2,000 UST** (South of Fire Station) – No soil sampling was conducted when a 2,000-gallon No. 2 fuel oil UST was removed from Site in 1996. As with any underground storage tank system, there is potential for subsurface releases to have occurred due to leaks in the tank or piping. No records of post-confirmatory soil sampling or closure assessment reporting were identified.
- **Presence of Urban Fill** – Soil on the Site is listed by the USDA as Urban Land. Furthermore, the Site was previously the location of Hammonds Pond, which was filled in in the 1930s to facilitate the construction of McCoy Stadium. Fill material in urbanized settings can contain coal, ash, debris, or other anthropogenic materials which contain hazardous materials. The nature and source of the material utilized to fill the Site is unknown and may impact the environmental quality of the Site.

In addition to the RECs described above, Fuss & O'Neill identified the following historical REC:

- **Former 3,000 Gallon UST:** A leaking 3,000-gallon No.4 fuel oil UST was removed from the southern portion of the Site in November 1998. According to the *Underground Storage Tank Assessment*, prepared by Kenyon Environmental, Inc., in November 1998, approximately 2,250-gallons of impacted groundwater and 300 cubic yards of impacted soil were removed from the Site. In September 2000, SAGE prepared a SIR for further investigation of the leaking UST. SAGE concluded no contaminants of concern were identified in the groundwater or soil surrounding the former tank. RIDEM issued a *No Further Action* letter after review of the SIR prepared by SAGE in September 2000, indicating that, at that time, no further investigation or remediation was deemed necessary by RIDEM.

4 January 2022 Phase II ESA

Fuss & O'Neill implemented a Phase II ESA in January 2022 to collect environmental data to evaluate soil and groundwater conditions at select locations proximal to the REC identified in the January 2022 *Phase I ESA*, as well as a site wide evaluation of environmental conditions to facilitate potential redevelopment of the property. The following activities were conducted.

4.1 Subsurface Soil Investigation

On January 3 and 4, 2021, Fuss & O'Neill performed a subsurface soil boring, sampling, and characterization program. The investigation consisted of the advancement of twelve (12) soil borings identified as MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, SB-14, MW-15, and SB-16 which were advanced to a maximum depth of approximately 15 to 20 feet below grade. The soil boring advancement was performed via Geoprobe® techniques by GeoLogic Earth Exploration Inc., (GeoLogic) of Norfolk, Massachusetts. Soil boring locations are depicted on *Figure 2* and boring logs are included in *Appendix A*.

Soil was recovered in five-foot dedicated Macro Core liners and logs documenting soil conditions were recorded by Fuss & O'Neill personnel. The recovered soil at each boring was characterized for texture, color, grain type, and moisture, and was field screened for VOC using an ION Science Tiger® photoionization detector (PID). The PID was calibrated prior to use with 100 parts per million (ppm) Isobutylene calibration gas.

Twelve (12) soil samples collected from the soil borings plus one trip blank, collected for quality control purposes, were collected with dedicated sampling equipment, and were submitted for laboratory analysis. Soil samples were submitted to Phoenix Environmental Laboratories, Inc. (Phoenix) of Manchester, Connecticut. The samples were submitted for analysis of a subset of the following parameters:

- VOC by USEPA Method 8260
- Polycyclic aromatic hydrocarbons (PAH) by USEPA Method 8270
- Priority Pollutant 13 (PP13) Metals by USEPA Method 6010/7471

- TPH by USEPA Method 8100
- Polychlorinated Biphenyls (PCB) by USEPA Method 8082

A summary of subsurface soil samples submitted for laboratory analysis is included in *Table 1* below:

Table 1
Summary of Soil Boring Sampling Activities – January 2022

Location	Date	Sample Depth (fbgs)	Sample Number	Analyses
MW-5	1/3/2022	0.5-2.0	0103-02	VOCs, PAH, TPH, PP13 Metals, and PCBs
MW-6		5.0-6.5	0103-03	
MW-7		0.5-2.0	0103-04	
MW-8		0.5-2.0	0103-05	
MW-9		0.5-2.0	0103-06	
MW-10		0.5-2.0	0104-07	
MW-11	1/4/2022	0.5-2.0	0104-9	
MW-12		0.5-2.0	0104-10	
MW-13		0.5-2.0	0104-11	
SB-14		0.5-2.0	0104-12	
MW-15		0.5-2.0	0104-13	
SB-16		0.5-2.0	0104-14	

Notes: Only the last six digits of the sample identification number are listed.
fbgs: feet below ground surface

4.2 Geotechnical Investigation

Concurrently with the soil boring program outlined above, RMA Environmental (RMA) was subcontracted by Fuss & O'Neill to conduct geotechnical investigations associated with the future construction and design of the McCoy Stadium site. RMA subcontracted a drilling company to advance soil borings within the vicinity of the proposed high school building to approximately 50 feet fbgs. Soil borings were advanced using a track-mounted drill rig with dual tube sampling technology and drive and wash techniques. RMA used the information collected during their subsurface investigation to prepare a Geotechnical Feasibility Report for the proposed high school building.

4.3 Soil Boring Field Observations

Soil was observed to generally consist of fill material extending to depths ranging from approximately ten to fifteen feet below ground surface (fbgs). The fill generally consisted of fine- to medium-sand with lesser amounts of fine gravel and silt. Anthropogenic materials observed in the fill included brick, wood, glass, plastic, and ash. Deeper soil generally consisted of medium- to coarse-sand with gravel. Refusal was not encountered at any of the soil borings.

Field screening with the PID reported relatively low total VOC concentrations ranging between 0 and 22.4 parts per million volume (ppmv). The highest PID reading of 22.4 was recorded at soil boring MW-6 at approximately 5 fbgs. With the exception of the observed fill material, no staining, odors, or other evidence of a release was observed in any of the soil borings. Groundwater, inferred by the presence of saturated soil, was encountered at depths of approximately 5 to 8 feet below grade during drilling. Soil boring logs depicting Fuss & O'Neill's observations are included in *Appendix A*.

4.4 Monitoring Well Installation and Development

During the January 2022 drilling event, ten two-inch diameter polyvinyl chloride (PVC) groundwater monitoring wells were installed by GeoLogic at soil borings MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, and MW-15. Two additional monitoring wells were installed by a drilling company subcontracted by RMA after the installation of the initial aforementioned ten monitoring wells (MW-17 and MW-18). These two monitoring wells are two-inch diameter and are approximately 16 fbg.

On January 26 and 27, 2022, the newly installed monitoring wells were developed by Fuss & O'Neill personnel by vigorously agitating the water in the well to mobilize and remove fine particulate materials (i.e. silt, clay, and organic material) from the well and surrounding sand filter. A peristaltic pump was then used to purge approximately two to three well volumes of groundwater and sediment from each well. The objective of the development process was to improve the hydraulic connection between the monitoring well and surrounding aquifer, remove fine grained material, and reduce the turbidity of subsequent groundwater samples.

4.5 Groundwater Sampling

On January 27 and 28, 2022, Fuss & O'Neill mobilized to the Site and collected groundwater samples from 10 of the newly installing monitoring wells in addition to monitoring well MW-2, which was previously installed during the September 2000 SIR, and MW-17, which was installed several weeks after the newly installed 10 monitoring wells. The sampling procedure consisted of purging one well volume of water followed by slowly purging groundwater from the well using a peristaltic pump until physical and chemical groundwater parameters (temperature, pH, dissolved oxygen, specific conductivity, and oxidation-reduction potential) stabilized. Twelve groundwater samples were submitted to Phoenix Lab for analysis of VOC. Two trip blanks were also analyzed for VOC quality control purposes.

Table 2
Summary of Monitoring Well and Groundwater Sampling Activities – January 2022

Location	Screened Interval (fbg)	Date Sampled	Sample Number	Analysis	Depth to Groundwater (fbg) ^[1]
MW-2	5-15	1/28/2022	0128-10	VOCs	7.61
MW-5	5-15	1/28/2022	0128-09		4.43
MW-6	5-15	1/28/2022	0128-12		6.10
MW-7	5-15	1/27/2022	0127-05		5.92
MW-8	5-15	1/27/2022	0127-04		7.25
MW-9	5-15	1/28/2022	0128-06		7.52
MW-10	5-15	1/27/2022	0127-01		7.80
MW-11	5-15	1/27/2022	0127-02		7.07
MW-12	5-15	1/28/2022	0128-08		10.70
MW-13	5-15	1/28/2022	0128-07		7.48
MW-15	5-15	1/27/2022	0127-03		5.77
MW-17	5-15	1/28/2022	0128-11		7.32

Notes: Sample ID: Only the last six digits of the sample identification number are listed.

[1]: Measured from the PVC well casing

4.6 Soil Gas Sampling

On January 5 and 6, 2022, Fuss & O'Neill collected twelve soil gas samples throughout the Site. The sampling procedure consisted of advancing soil gas rods to approximately 2 feet below grade using a hammer drill. Prior to sampling, each soil gas rod was purged for 10 minutes with a sampling pump, then screened with a PID. Field screening with the PID reported relatively low total VOC concentrations ranging between 0 and 0.5 ppmv. Gas samples were then collected into six-liter Summa canisters equipped with one-hour regulators. Soil gas samples were submitted Phoenix Lab for analysis of VOC by USEPA Method TO-15. Soil gas sampling locations are depicted on *Figure 2*.

5 Investigation Results

5.1 Soil Analytical Results

Laboratory analytical results for the soil samples collected from the soil borings are summarized in the attached *Table 3*, and copies of the full laboratory analytical reports are included in *Appendix B*.

The numerical analytical results provided by the laboratory were compared against the following applicable RIDEM Method 1 Criteria as promulgated in the *RIDEM Remediation Regulations*:

- Residential Direct Exposure Criteria (R-DEC)
- Industrial/Commercial Direct Exposure Criteria (I/C-DEC)
- GB Leachability Criteria (GB-LC)

Fifteen PAHs were detected above the laboratory detection limits in the soil samples within the fill layer collected from soil borings MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-15, and MW-16.

Seven PAH compounds were detected above the R-DEC and one PAH compound was detected above the I/C-DEC in the soil samples collected from four soil borings. One or more PAH compound was detected above the R-DEC in the soil samples collected from soil boring MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, and MW-15. Benzo(a)pyrene was detected above the I/C-DEC in the soil samples collected from soil borings MW-8, MW-9, MW-10, and MW-12.

TPH were detected above the R-DEC in the soil sample collected from soil boring MW-10. Petroleum, in the form of TPH was not detected above the I/C-DEC or GB-LC in any of the soil samples.

No VOC were detected above the laboratory detection limits in any of the soil samples.

Nine metals were detected above the laboratory detection limits in the soil samples collected from the fill materials at the Site. Arsenic was detected above the R-DEC and I/C-DEC in the soil samples collected from soil borings MW-5, MW-6, MW-7, MW-8 and SB-16. Lead was detected above the R-DEC in the soil samples collected from soil borings MW-8 and MW-9.

PCBs were not detected above the laboratory reporting limits in any of the soil samples.

5.2 Groundwater Analytical Results

Groundwater well elevations were measured during the groundwater sampling event from monitoring wells MW-2, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-15, and MW-17, which occurred on January 27 and 28, 2022. Groundwater elevation measurements, calculated by measuring depth to water in each well, are included in *Table 4*. Groundwater equipotential contours generated from field data collected on January 27 and 28, 2022 are depicted on *Figure 3*, and indicate the direction of groundwater flow at the Site is towards the southwest towards the Seekonk River.

Laboratory analytical results for the twelve groundwater samples are summarized in the attached *Table 5*, and copies of the full laboratory analytical report are included in *Appendix C*.

The numerical analytical results provided by the laboratory were compared against the RIDEM Method 1 GB Groundwater Objectives (GB-GO) as promulgated in the RIDEM *Remediation Regulations*.

Six VOCs were detected above laboratory reporting limits in at least one groundwater sample collected from monitoring wells MW-5 and MW-6. All other VOCs in monitoring wells MW-2, MW-7, MW-8, MW-9, MW10, MW-11, MW-12, MW-13, MW-15, and MW-17 were below laboratory reporting limits.

No compounds were detected above GB-GO in the groundwater samples collected from the Site.

5.3 Soil Gas Sampling Analytical Results

Laboratory analytical results for the Soil gas samples collected from the Site are summarized in the attached *Table 6*, and copies of the full laboratory analytical reports are included in *Appendix D*. Soil gas sampling locations are depicted on *Figure 2*.

RIDEM has not established default Method 1 soil gas standards. Therefore, for reference purposes, analytical data for indoor air was compared to the residential and industrial/commercial soil vapor volatilization criteria (SVVC) as promulgated by the Connecticut Department of Energy and Environmental Protection (CTDEEP) *Remediation Standard Regulations*. In the past, RIDEM has suggested that soil gas results be compared to the CTDEEP standards as a screening tool to evaluate whether a soil gas condition that warrants further investigation is present.

Thirteen VOC were detected above the laboratory detection limits in at least one of the soil gas samples. Acetone, ethanol, and propylene were detected above laboratory detection limits in all twelve soil gas samples. However, no VOC were detected at concentrations greater than the residential or industrial/commercial SVVC established by CTDEEP.

5.4 School Siting Guidance Evaluation

As previously discussed, the proposed redevelopment of the Site is as a high school campus. Under the RIDEM *School Siting Guidance For The Evaluation of Vapor Intrusion Potential In Proposed Rhode Island School Sites* (School Siting Guidance), potential Rhode Island school sites are required to be evaluated for the potential of vapor intrusion, which is the process by which chemicals in soil and/or groundwater migrate into the indoor air above a contaminated site. The *School Siting Guidance* includes a four-step flow chart for evaluating the potential for vapor intrusion to migrate from the subsurface into an existing or proposed structure. Should the answer to any of the four-step flow chart questions be “YES”, the rest of the steps in the flow chart are skipped and the Performing Party shall be required to complete a Site Investigation Report which shall include a Conceptual Site Model to further evaluate the vapor intrusion pathway. Additionally, the SIR shall also propose the elimination of the source via physical removal and/or in-situ technologies to eradicate the potential for vapor intrusion.

Fuss & O'Neill evaluated the potential for vapor intrusion via the *School Siting Guidance* four-step flow chart. Fuss & O'Neill determined the following:

1. Although similar VOCs were detected in soil gas and groundwater samples collected from the Site, the VOC detections were not co-located between soil gas and groundwater sample location. For example, the VOC benzene was detected in soil gas samples SG-6, SG-10, SG-11, and SG-12 and in the groundwater sample collected from monitoring well MW-6, which is not located near the aforementioned soil gas sampling locations. However, benzene was not detected in soil gas sampling location SG-2, which was collected directly adjacent to monitoring well MW-6.
2. No VOC contamination was detected at concentrations greater than the Residential Direct Exposure Criteria in the vadose zone soil.
3. No VOC contamination was detected in groundwater above 50% of the GB standards at the Site.

4. Non-aqueous phase liquids (NAPL) were not identified in groundwater samples collected during this Phase II ESA. Additionally, VOCs were not detected in groundwater samples collected from the Site at concentrations exceeding RIDEM's Upper Concentrations Limits or GB Groundwater Objectives.

Based on the analytical data reviewed as part of this Phase II ESA, a significant risk for vapor intrusion into a future development was not identified.

6 Conclusions and Recommendations

Based on the Phase II ESA activities documented herein, we have identified the conclusions and recommendations outlined below:

- **Groundwater:** Groundwater samples were collected from eleven newly installed monitoring wells installed in January 2022 in addition to one previously existing monitoring well. Laboratory results indicated no VOCs were reported above the applicable RIDEM GB Groundwater Objective. Only six VOCs were detected above laboratory detection limits in groundwater samples collected from two monitoring wells located in the northeast portion of site. No evidence of petroleum (i.e. – a sheen or separate phase liquid) was observed in any of the groundwater wells.
- **Soil Conditions and Analytical Results:** Soil borings advanced through the Site generally indicated the presence of upwards of ten feet of fill, some containing evidence of anthropogenic material including brick, ash, and concrete. Twelve soil samples were collected of fill material from the twelve new soil borings advanced at the Site. No VOC were detected above the laboratory reporting limits in any of the twelve soil samples. Concentrations of arsenic, lead, and/or PAH exceeded the RIDEM Method 1 R-DEC and/or I/C-DEC in ten of the twelve soil samples. TPH was detected in the sample collected from soil boring, MW-10, above the RIDEM Method 1 R-DEC. No soil samples collected from the Site contained petroleum at concentrations above the GB Leachability criteria of 2,500 mg/kg. RIDEM has not established GB Leachability Criteria for any of the other detected compounds.
- **School Vapor Intrusion Evaluation:** Fuss & O'Neill evaluated the potential for vapor intrusion via the RIDEM *School Sitting Guidance For The Evaluation of Vapor Intrusion Potential In Proposed Rhode Island School Sites* four-step flow chart. Based on the analytical data reviewed as part of this Phase II ESA, the answers to each of the four-step questions are “NO” suggesting that the potential for vapor intrusion risk into a future development was not present.

In accordance with Section 1.06 of the *Remediation Regulations*, a reportable condition exists at the subject site, and warrants RIDEM notification. Notification to the RIDEM Office of Land Revitalization and Sustainable Materials Management is the responsibility of the Site owner, who should submit a Notification of Release Form to RIDEM within 15 days of receipt of knowledge of the reportable condition. In response to the receipt of a Notification of Release, RIDEM may require additional investigation and/or remedial response actions be conducted to bring the Site into compliance with the *Remediation Regulations*.

Additionally, whenever a site is known to be or suspected of being contaminated and is being considered for possible reuse as the location of a school, RIDEM requires public involvement. Prior to the establishment of a final scope of investigation for the site, the Performing Party must hold a public meeting and conduct public notification activities. The Performing Party is also required to post a sign at the Site. Public notification and outreach activities shall be conducted in accordance with Section 1.8.7, including 1.8.7(3) of the RIDEM *Remediation Regulations*.

Fuss & O'Neill recommends that the City of Pawtucket considers the scope and costs of any additional regulatory response actions and remediation that may be warranted as a result of the observed site conditions prior to redevelopment of the Site.

7 References

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RIGIS, 2008. Soil Survey Geographic (SSURGO) soil polygons for State of Rhode Island, Environmental Data Center, University of Rhode Island, Kingston, Rhode Island; via <http://www.edc.uri.edu/rigis>, accessed December 2021.

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Tables

Table 3
Summary of Soil Analytical Data and Objectives
Samples Collected January 3 and 4, 2022

McCoy Stadium
Pawtucket, RI

Prepared for the S/L/A/M Collaborative

February 2022

	Location ID	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15	SB-16	RIDEM Regulatory Criteria**		
	Sample Number	0103-02	0103-03	0103-04	0103-05	0103-06	0103-07	0104-09	0104-10	0104-11	0104-12	0104-13	0104-14			
	Sample Date	1/3/2022	1/3/2022	1/3/2022	1/3/2022	1/3/2022	1/3/2022	1/4/2022	1/4/2022	1/4/2022	1/4/2022	1/4/2022	1/4/2022			
	Depth Interval (fbg)	0.5-2.0	5.0-6.5	0.5-2.0	0.5-2.0	0.5-2.0	0.5-2.0	0.5-2.0	0.5-2.0	0.5-2.0	0.5-2.0	0.5-2.0	0.5-2.0			
	Headspace (ppmv)	0.0	22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
VOC (USEPA METHOD 8260)	Units													R-DEC	I/C-DEC	GB-LC
Various	mg/kg	ND < Various	ND < Various	ND < Various	ND < Various	ND < Various	ND < Various	ND < Various	ND < Various	ND < Various	ND < Various	ND < Various	ND < Various			
Metals (USEPA Method 6010D)																
Antimony	mg/kg	ND < 3.6	ND < 3.5	ND < 3.9	ND < 3.5	ND < 3.9	ND < 3.9	ND < 3.4	ND < 3.6	ND < 4.0	ND < 3.8	ND < 3.5	ND < 3.9	10	820	----
Arsenic	mg/kg	12.1	8.89	8.41	7.04	5.27	6.14	5.27	4.77	1.57	1.51	4.90	13.4	7.0	7.0	----
Beryllium	mg/kg	0.43	0.50	0.46	0.61	0.56	0.46	0.57	0.30	ND < 0.32	ND < 0.30	0.32	0.42	1.5	1.5	----
Cadmium	mg/kg	0.56	0.89	0.60	0.90	0.81	0.54	0.82	ND < 0.36	ND < 0.40	ND < 0.38	0.48	0.60	39	1,000	----
Chromium	mg/kg	13.7	17.1	14.6	32.9	12.4	12.1	12.1	16.2	6.85	7.33	12.3	15.3	390*	10,000*	----
Copper	mg/kg	43	28.6	38.9	70.4	91.7	43.9	67.7	11	2.0	2.7	17.7	21.8	3,100	10,000	----
Lead	mg/kg	56.2	81.5	82.6	157	245	82.3	94.3	23.8	4.57	4.52	141	48.3	150	500	----
Nickel	mg/kg	15.6	19.2	16	20	13.1	12.3	17.6	9.34	5.41	5.27	9.88	12.5	1,000	10,000	----
Silver	mg/kg	ND < 0.36	ND < 0.35	ND < 0.39	ND < 0.35	ND < 0.39	ND < 0.39	ND < 0.34	ND < 0.36	ND < 0.40	ND < 0.38	ND < 0.35	ND < 0.39	200	10,000	----
Zinc	mg/kg	62.7	73.4	78.5	184	190	73.7	110	22.3	22.9	95.9	85.6	64.7	6,000	10,000	----
Mercury (USEPA METHOD 7471B)																
Mercury	mg/kg	0.11	0.05	0.13	0.19	0.23	0.11	0.09	ND < 0.03	ND < 0.03	ND < 0.03	0.18	0.08	23	610	----
PAHs (USEPA METHOD 8270D)																
Acenaphthene	mg/kg	ND < 0.26	ND < 0.25	ND < 0.26	ND < 0.25	0.39	ND < 0.25	ND < 0.25	ND < 0.24	ND < 0.26	ND < 0.26	ND < 0.25	ND < 0.28	43	10,000	
Acenaphthylene	mg/kg	ND < 0.26	ND < 0.25	0.28	0.61	0.31	0.46	ND < 0.25	0.50	ND < 0.26	ND < 0.26	0.25	ND < 0.28	23	10,000	----
Anthracene	mg/kg	ND < 0.26	ND < 0.25	ND < 0.26	0.43	0.95	0.40	0.62	0.50	ND < 0.26	ND < 0.26	ND < 0.25	ND < 0.28	35	10,000	----
Benzo[a]anthracene	mg/kg	ND < 0.26	0.31	0.66	1.1	1.8	1.3	0.92	1.1	ND < 0.26	ND < 0.26	0.49	0.34	0.9	7.8	----
Benzo[a]pyrene	mg/kg	ND < 0.26	0.38	0.67	1.2	1.5	1.2	0.78	1.3	ND < 0.26	ND < 0.26	0.57	0.32	0.4	0.8	----
Benzo[b]fluoranthene	mg/kg	ND < 0.26	0.32	0.60	1.2	1.3	1.2	0.65	1.3	ND < 0.26	ND < 0.26	0.56	0.30	0.9	7.8	----
Benzo[g,h,i]perylene	mg/kg	ND < 0.26	0.27	0.42	0.77	0.90	0.91	0.50	0.96	ND < 0.26	ND < 0.26	0.45	ND < 0.28	0.8	10,000	----
Benzo[k]fluoranthene	mg/kg	ND < 0.26	0.32	0.66	1.0	1.4	1.3	0.77	1.2	ND < 0.26	ND < 0.26	0.54	0.33	0.9	78	----
Chrysene	mg/kg	ND < 0.26	0.34	0.66	1.2	1.8	1.4	0.86	1.2	ND < 0.26	ND < 0.26	0.56	0.38	0.4	780	----
Dibenz[a,h]anthracene	mg/kg	ND < 0.26	ND < 0.25	ND < 0.26	ND < 0.25	0.28	0.27	ND < 0.25	0.30	ND < 0.26	ND < 0.26	ND < 0.25	ND < 0.28	0.4	0.8	----
Fluoranthene	mg/kg	ND < 0.26	0.31	0.67	1.2	2.4	1.7	1.4	1.2	ND < 0.26	ND < 0.26	0.62	0.39	20	10,000	----
Fluorene	mg/kg	ND < 0.26	ND < 0.25	ND < 0.26	ND < 0.25	0.51	ND < 0.25	ND < 0.25	ND < 0.24	ND < 0.26	ND < 0.26	ND < 0.25	ND < 0.28	28	10,000	
Indeno[1,2,3-cd]pyrene	mg/kg	ND < 0.26	0.30	0.48	0.88	1.0	0.87	0.61	1.1	ND < 0.26	ND < 0.26	0.49	ND < 0.28	0.9	7.8	----
Phenanthrene	mg/kg	ND < 0.26	ND < 0.25	0.47	1.1	3.3	1.1	2.2	1.3	ND < 0.26	ND < 0.26	0.36	0.41	40	10,000	----
Pyrene	mg/kg	ND < 0.26	0.28	0.55	1.1	1.8	1.4	1.0	0.97	ND < 0.26	ND < 0.26	0.46	0.30	13	10,000	----
TPH (USEPA METHOD 8100 Modified/SW8015D DRO)																
TPH, Total	mg/kg	ND < 56	ND < 54	ND<270	ND < 280	ND < 280	500	ND < 270	ND < 54	ND < 56	ND < 55	ND < 54	ND < 60	500	2,500	2,500
PCBS																
Various	mg/kg	ND < 0.37	ND < 0.35	ND < 0.36	ND < 0.36	ND < 0.37	ND < 0.36	ND < 0.35	ND < 0.35	ND < 0.37	ND < 0.36	ND < 0.35	ND < 0.41	10	10	10

NOTES:
Only the last six digits of the sample numbers are given.
Only target analytes detected in at least one sample are listed.
Headspace measured using a photoionization detector.
MW: soil boring with monitoring well
PAH: polycyclic aromatic hyrdocarbons
TPH: total petroleum hydrocarbons
VOC: volatile organic compounds
RIDEM: Rhode Island Department of Environmental Management
USEPA: United States Environmental Protection Agency

fbg: feet below grade
mg/kg: milligrams per kilogram
NA: Not analyzed
ND<X: compound not detected above laboratory reporting limit
ppmv: part per million by volume
*Conservatively assumes that all chromium is in hexavalent form.
**RIDEM Remediation Regulations 250-RICR-140-30-1, last amended April 2020
----: not established

R-DEC: Residential direct exposure criteria
I/C-DEC: Industrial/Commercial direct exposure criteria
GB/LC: GB leachability criteria
Bold values exceed one or more regulatory criteria
= Values exceed the R-DEC
= Values exceed the R-DEC and I/C-DEC
= Values exceed the R-DEC, I/C-DEC & GB/LC

Created by: MHS
Checked by: APT



Table 4
Summary of Groundwater Elevations
Measurements Collected January 27 and 28, 2022

McCoy Stadium
Pawtucket, RI

Prepared for the S/L/A/M Collaborative

February 2022

Well Number	Relative Elevation TPS (feet)	DTW - TPS	Relative Groundwater Elevation
MW-5	100.15	4.43	95.72
MW-6	100.06	6.10	93.96
MW-7	99.94	5.92	94.02
MW-8	100.33	7.25	93.08
MW-9	100.23	7.52	92.71
MW-10	100.31	7.80	92.51
MW-11	99.48	7.07	92.41
MW-12	100.50	10.70	89.80
MW-13	100.45	7.48	92.97
MW-15	99.18	5.77	93.41
MW-17*	99.89	7.32	92.57

NOTES:

DTW: depth to water

TPS: top of steel

Shallow wells with screens that intersect the water table were used to develop the groundwater contour map.

Wells were surveyed on January 26, 2022 using an assumed 100.00-foot benchmark. All groundwater and well elevations are relative to that assumed benchmark.

* - Monitoring well installed by RMA Environmental, LLC as part of an supplemental geotechnical assessment

Created by: MHS/EFK

Checked by: APT

Table 5
Summary of Groundwater Analytical Data and Objectives
Samples Collected January 27 and 28, 2022

McCoy Stadium
Pawtucket, RI

Prepared for the S/L/A/M Collaborative

February 2022

	Sample Location	MW-10	MW-11	MW-15	MW-8	MW-7	MW-9	MW-13	MW-12	MW-5	MW-2	MW-17	MW-6	RIDEM Regulatory Criteria*		
	Sample Number	0127-01	0127-02	0127-03	0127-04	0127-05	0128-06	0128-07	0128-08	0128-09	0128-10	0128-11	0128-12			
	Sample Date	1/27/2022	1/27/2022	1/27/2022	1/27/2022	1/27/2022	1/28/2022	1/28/2022	1/28/2022	1/28/2022	1/28/2022	1/28/2022	1/28/2022			
	Screen Interval (fbg)	5-15'	5-15'	5-15'	5-15'	5-15'	5-15'	5-15'	5-15'	5-15'	5-15'	5-15'	5-15'			
	Sample Depth (fbg)	14'	14'	14'	14'	14'	14'	14'	14'	14'	14'	14'	14'			
Field Measurements	Units															
pH	pH units	5.88	6.09	5.93	6.38	6.82	6.13	6.86	6.42	5.57	6.40	6.81	5.55	---	---	---
Specific Conductance	µS/cm	809.0	218.0	308.9	802.0	744.0	622.2	218.0	1345.0	814.0	618.1	485.1	247.9	---	---	---
Temperature	C deg	11.9	11.7	10.8	12.0	8.0	12.6	9.9	13.7	13.9	13.3	8.9	12.0	---	---	---
Dissolved Oxygen	mg/L	1.40	4.23	4.11	0.83	3.64	0.39	3.01	49.50	2.56	0.45	0.54	0.37	---	---	---
ORP	mV	151.00	193.30	152.90	31.10	155.00	12.60	119.60	85.60	173.30	-90.30	-140.80	-226.80	---	---	---
Turbidity	ntu	3.16	3.83	37.90	14.90	15.90	10.60	5.18	69.90	23.60	2.97	10.29	12.50	---	---	---
VOC (USEPA METHOD 8260C-D)																
Benzene	ug/L	ND < 0.70	ND < 0.70	ND < 0.70	ND < 0.70	ND < 0.70	ND < 0.70	ND < 0.70	ND < 0.70	ND < 0.70	ND < 0.70	ND < 0.70	1.5	5	140	18000
Carbon Disulfide	ug/L	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	24	-	-	-
Ethylbenzene	ug/L	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	5.6	700	1,600	16000
Naphthalene	ug/L	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	1.8	100	-	-
Tetrachloroethene	ug/L	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	2.1	ND < 1.0	ND < 1.0	ND < 1.0	5	150	-
Trichloroethene	ug/L	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	2.0	ND < 1.0	ND < 1.0	ND < 1.0	5	540	87000

Created by: EFK

Checked by: ΔPT

NOTES:

Only target analytes detected in at least one sample are listed

GA-GO: GA groundwater objectives

GB-GO: GB Groundwater Objectives

MW: monitoring well

ND<X: compound not detected above laboratory reporting limit

ORP: oxidation-reduction potential

RIDEM: Rhode Island Department of Environmental Management

USEPA: United States Environmental Protection Agency

VOC: volatile organic compounds

µg/L: micrograms per liter

µS/cm: microsiemens per centimeter

C deg: degrees Celsius

fbg: feet below grade

mg/L: milligrams per liter

mV: millivolts

ntu: nephelometric turbidity units

---: criteria not established

*RIDEM Remediation Regulations 250-RICR-140-30-1, last amended April 2020

Table 6
Summary of Soil Gas Analytical Data and Objectives
Samples Collected January 5 and 6, 2022

McCoy Stadium
Pawtucket, RI

Prepared for the S/L/A/M Collaborative

February 2022

	Location ID	SG-1	SG-2	SG-3	SG-4	SG-5	SG-6	SG-7	SG-8	SG-9	SG-10	SG-11	SG-12	Regulatory Criteria	
	Sample Number	0105-01	0105-02	0105-03	0105-4	0105-5	0105-6	0106-07	0106-08	0106-09	0106-10	0106-11	0106-12	CTDEEP**	
	Sample Depth (ftg)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	Residential - SVVC	Industrial/Commerical - SVVC
	Headspace (ppmv)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.2	0.0		
	Date Sampled	1/5/2022	1/5/2022	1/5/2022	1/5/2022	1/5/2022	1/5/2022	1/6/2022	1/6/2022	1/6/2022	1/6/2022	1/6/2022	1/6/2022		
VOC (USEPA Methods TO-15)															
Acetone	µg/m3	82.6	95.4	131	205	94.2	86.4	45.8	36.1	59.8	42.3	43.2	32.5	140,000	690,000
Benzene	µg/m3	ND < 3.19	ND < 3.19	ND < 3.19	ND ND < 6.39	4.37	ND < 3.19	ND < 3.19	ND < 3.19	ND < 3.19	3.7	7.41	5.36	2,500	4,600
1,3-Butadiene	µg/m3	ND < 5.53	ND < 5.53	ND < 5.53	ND < 11.1	15.4	ND < 5.53	ND < 5.53	8.16	ND < 5.53	ND < 5.53	ND < 5.53	ND < 5.53	---	---
Carbon Disulfide	µg/m3	ND < 7.78	ND < 7.78	ND < 7.78	ND < 15.6	7.84	ND < 7.78	ND < 7.78	ND < 7.78	ND < 7.78	ND < 7.78	9.77	ND < 7.78	---	---
Ethanol	µg/m ³	109	87.4	167	305	186	178	275	162	264	139	207	185	---	---
Ethylbenzene	µg/m3	ND < 10.8	ND < 10.8	ND < 10.8	ND < 21.7	ND < 10.8	ND < 10.8	ND < 10.8	ND < 10.8	ND < 10.8	ND < 10.8	14.3	ND < 10.8	40,000	400,000
Heptane	µg/m3	ND < 10.2	ND < 10.2	ND < 10.2	ND < 20.5	ND < 10.2	ND < 10.2	ND < 10.2	ND < 10.2	ND < 10.2	ND < 10.2	17.6	10.4	---	---
Hexane	µg/m3	20.4	19.9	35.6	54.6	35.6	31.5	ND < 7.93	ND < 7.93	ND < 7.93	ND < 7.93	19.8	13.9	---	---
Methyl Ethyl Ketone	µg/m3	ND < 6.63	ND < 6.63	ND < 6.63	13.9	10.9	ND < 6.63	ND < 6.63	ND < 6.63	ND < 6.63	ND < 6.63	6.69	ND < 6.63	376,000	690,000
Propylene	µg/m3	4.64	6.71	5.97	49.5	56.8	9.27	36.1	28.2	13.7	8.0	31.1	22.7	---	---
Toluene	µg/m3	ND < 9.42	ND < 9.42	ND < 9.42	ND < 18.8	15.3	15.9	ND < 9.42	ND < 9.42	ND < 9.42	ND < 9.42	102	46.7	160,000	690,000
m,p-Xylene	µg/m3	ND < 21.7	ND < 21.7	ND < 21.7	ND < 43.4	ND < 21.7	ND < 21.7	ND < 21.7	ND < 21.7	ND < 21.7	ND < 21.7	45.1	ND < 21.7	---	---
o-Xylene	µg/m3	ND < 10.8	ND < 10.8	ND < 10.8	ND < 21.7	ND < 10.8	ND < 10.8	ND < 10.8	ND < 10.8	ND < 10.8	ND < 10.8	13.4	ND < 10.8	---	---
Total Xylenes	µg/m3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	58.5	ND	170,000	690,000

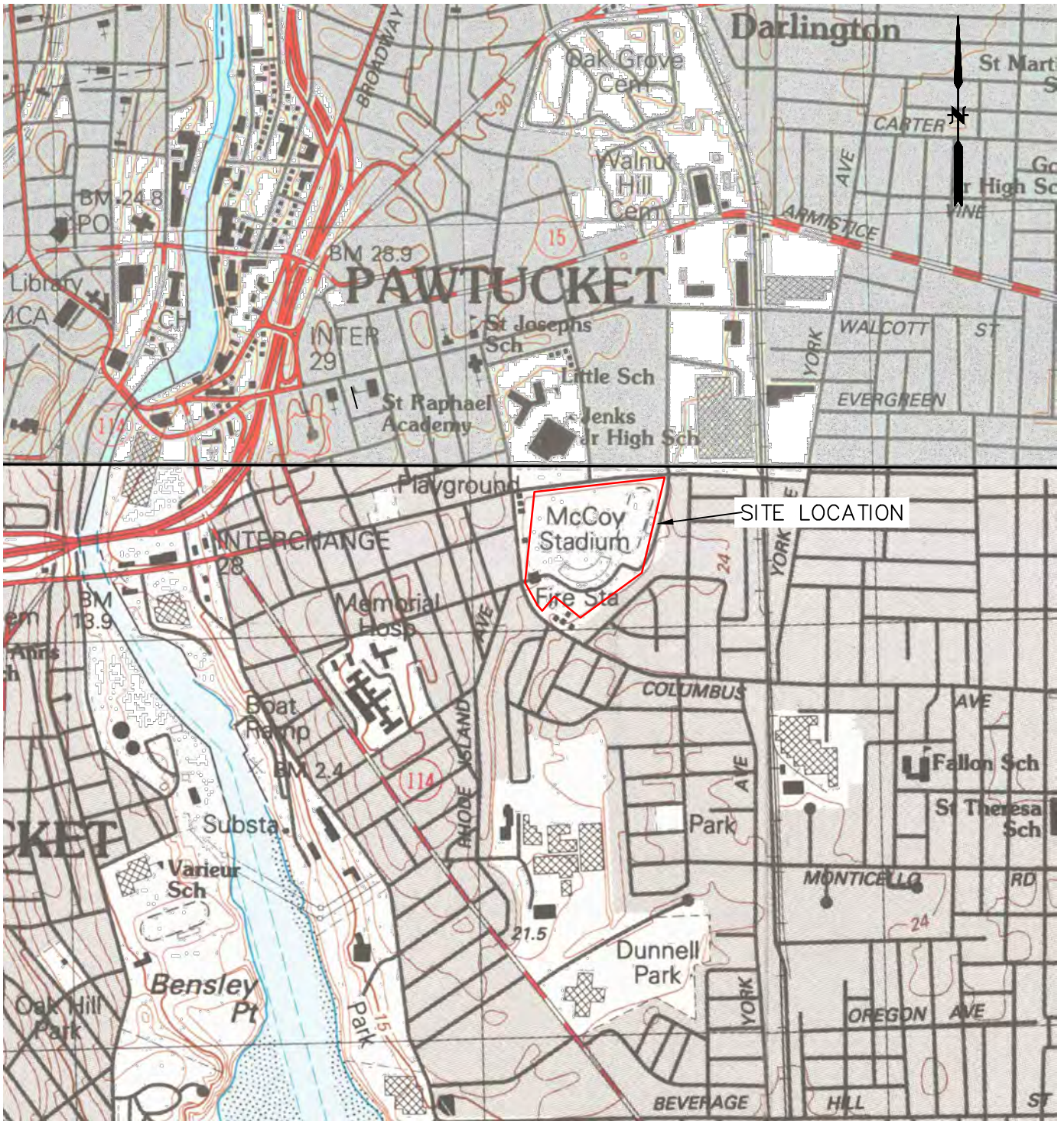
Notes:

Only the last six digits of the sample numbers are given.
Only target analytes detected in at least one sample are listed.
RIDEM: Rhode Island Department of Environmental Management
CTDEEP: Connecticut Department of Energy & Environmental Protection
USEPA: United States Environmental Protection Agency
VOC: volatile organic compounds
µg/m3: micrograms per cubic meter
SVVC Soil Vapor Volatilization Criteria
ND: Not detected

Created by: MHS
Checked by: APT

ND<X: compound not detected above laboratory reporting limit
**RIDEM has not promulgated criteria for indoor air. CTDEEP criteria provided for reference purposes.
**CTDEEP, 2019. Remediation Standard Regulations, State of Connecticut
Environmental Protection, 22a-133k of the Regulations of Connecticut State
----: not established
Bold and shaded values exceed one or more reference criteria

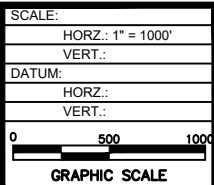
Figures



MAP REFERENCE:

THIS MAP WAS PREPARED FROM THE FOLLOWING
 7.5 x 15 MINUTE USGS TOPOGRAPHIC QUADRANGLES:
 PROVIDENCE, RI (1987).
 ATTLEBORO, MA (1987).

SOURCE: RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM (RIGIS).



FUSS & O'NEILL

317 IRON HORSE WAY, SUITE 204
 PROVIDENCE, RI 02908
 401.861.3070
 www.fando.com

THE S/L/A/M COLLABORATIVE

SITE LOCATION PLAN

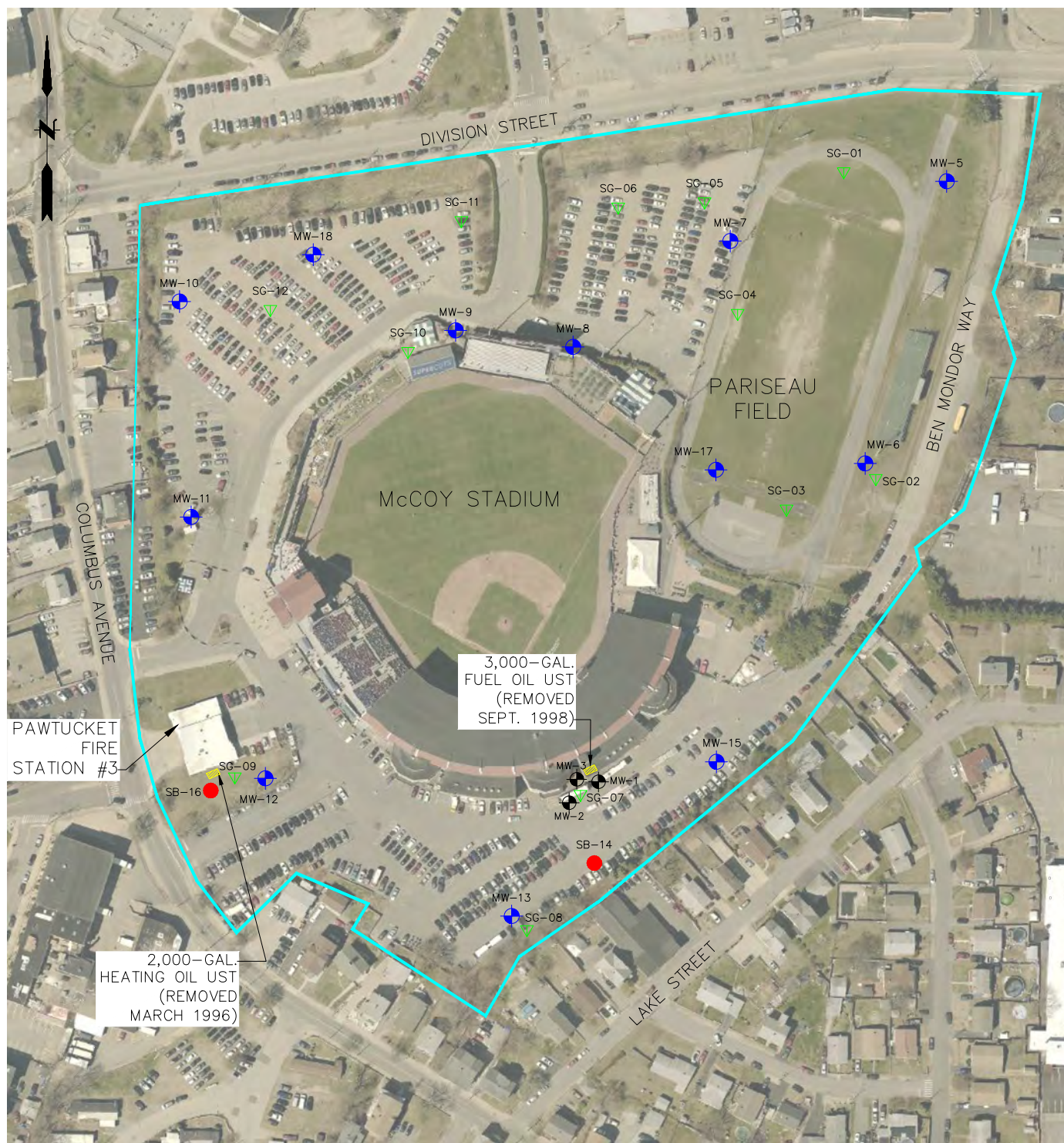
2 COLUMBUS AVENUE

PAWTUCKET

RHODE ISLAND

PROJ. No.: 20160501.B10
 DATE: JANUARY 2022

FIGURE 1



LEGEND

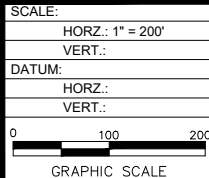
- SITE BOUNDARY
- MW-XX MONITORING WELL
- MW-1 MONITORING WELL INSTALLED BY SAGE ENVIRONMENTAL, LLC.
- SB-XX SOIL BORING
- SG-XX SOIL GAS SAMPLE
- FORMER UNDERGROUND STORAGE TANK

MAP REFERENCES AND NOTES

THIS MAP WAS PREPARED FROM RIGIS COLOR ORTHO IMAGERY (2019).

SOURCE: THE RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM (RIGIS).

SITE FEATURES ARE APPROXIMATE.



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SITE PLAN

2 COLUMBUS AVENUE

PAWTUCKET

RHODE ISLAND

PROJ. No.: 20160501.B10
DATE: FEBRUARY 2022

FIGURE 2

Appendix A

Soil Boring Logs

PROJECT NUMBER 20160501.B10	DATE STARTED 1/3/22
PROJECT NAME McCoy Stadium	DATE COMPLETED 1/3/22
LOCATION 2 Columbus Avenue, Pawtucket, RI	CASING TYPE/DIAMETER PVC / 1"
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner	SCREEN TYPE/SLOT/INTERVAL Slotted/PVC / 0.010" / 5-15
HAMMER WEIGHT/FALL --	GRAVEL PACK TYPE Silica Sand
ELEVATION (FT) ---	GROUT TYPE/QUANTITY Bentonite / 1
TOP OF CASING ----	DEPTH TO WATER (FT) 7.0
LOGGED BY Madelyn Sampson	GROUND WATER ELEVATION ---
REMARKS No refusal encountered.	

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\IDRAFT\MHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		52	GB 0103-02					SAND, fine to medium; little gravel; little silt; trace brick; light brown; dry. No odor.		
0.0		58			5	FILL		SAND, fine to medium; little gravel; little silt; trace brick; light brown; wet at 7 feet. No odor.		
						FILL		SAND, fine to medium, and SILT; trace wood, trace brick; black; wet. No odor.		
0.0		60			10	FILL		SAND, fine to medium, and SILT; trace wood, trace brick; black; wet. No odor.		
						SP		SAND, fine to coarse, and SILT; gray; wet. No odor.		

Bottom of borehole at 15.0 feet.

PROJECT NUMBER 20160501.B10 **DATE STARTED** 1/3/22
PROJECT NAME McCoy Stadium **DATE COMPLETED** 1/3/22
LOCATION 2 Columbus Avenue, Pawtucket, RI **CASING TYPE/DIAMETER** PVC / 1"
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner **SCREEN TYPE/SLOT/INTERVAL** Slotted/PVC / 0.010" / 5-15
HAMMER WEIGHT/FALL -- **GRAVEL PACK TYPE** Silica Sand
ELEVATION (FT) --- **GROUT TYPE/QUANTITY** Bentonite / 1
TOP OF CASING ---- **DEPTH TO WATER (FT)** 7.0
LOGGED BY Madelyn Sampson **GROUND WATER ELEVATION** ---
REMARKS No refusal encountered.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		38						SAND, fine to medium; trace gravel; trace silt; trace brick; trace ash; trace wood; light brown; dry. No odor.		
						FILL				
22.4		56	GB 0103-03	5				SAND, fine to medium; some silt; trace wood; black; moist. No odor.		
						FILL				
								SAND, fine to medium; some silt; trace brick; gray; wet at 7 feet. No odor.	▼	
						FILL				
5.0		60		10				SAND, fine to coarse; some silt; little gravel; gray; wet. No odor.		
						SP				

Bottom of borehole at 15.0 feet.

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\IDRAFT\MHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

PROJECT NUMBER 20160501.B10 **DATE STARTED** 1/3/22
PROJECT NAME McCoy Stadium **DATE COMPLETED** 1/3/22
LOCATION 2 Columbus Avenue, Pawtucket, RI **CASING TYPE/DIAMETER** PVC / 1"
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner **SCREEN TYPE/SLOT/INTERVAL** Slotted/PVC / 0.010" / 5-15
HAMMER WEIGHT/FALL -- **GRAVEL PACK TYPE** Silica Sand
ELEVATION (FT) --- **GROUT TYPE/QUANTITY** Bentonite / 1
TOP OF CASING ---- **DEPTH TO WATER (FT)** 8.0
LOGGED BY Madelyn Sampson **GROUND WATER ELEVATION** ---
REMARKS No refusal encountered.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		32	GB 0103-04					SAND, fine to medium; little gravel; trace silt; trace brick; light brown; dry. No odor.		
0.0		48			5	FILL		SAND, fine to medium; and SILT; trace wood; black; moist. No odor.		
0.0		53			10	FILL		SAND, fine to coarse; some silt; gray; wet at 8 feet. No odor.		
						SP		SAND, fine to coarse; some silt; gray; wet. No odor.		
						SP		SAND, fine to medium; some silt; light brown; wet. No odor.		

Bottom of borehole at 15.0 feet.

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\IDRAFT\MHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

PROJECT NUMBER 20160501.B10 **DATE STARTED** 1/3/22
PROJECT NAME McCoy Stadium **DATE COMPLETED** 1/3/22
LOCATION 2 Columbus Avenue, Pawtucket, RI **CASING TYPE/DIAMETER** PVC / 1"
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner **SCREEN TYPE/SLOT/INTERVAL** Slotted/PVC / 0.010" / 5-15
HAMMER WEIGHT/FALL -- **GRAVEL PACK TYPE** Silica Sand
ELEVATION (FT) --- **GROUT TYPE/QUANTITY** Bentonite / 1
TOP OF CASING ---- **DEPTH TO WATER (FT)** 7.0
LOGGED BY Madelyn Sampson **GROUND WATER ELEVATION** ---
REMARKS No refusal encountered.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		46	GB 0103-05					SAND, fine to medium; little gravel; trace silt; trace brick; trace ash; trace glass; light brown; dry. No odor.		
0.0		22			5		FILL	SAND, fine to medium; little gravel; trace silt; trace brick; wet at 7 feet. No odor.		
0.0		48			10	SP		SAND, fine to coarse; some silt; gray; wet. No odor.		
						SP		SAND, medium to coarse; some silt; some gravel; gray; wet. No odor.		

Bottom of borehole at 15.0 feet.

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\IDRAFT\MHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

PROJECT NUMBER 20160501.B10 **DATE STARTED** 1/3/22
PROJECT NAME McCoy Stadium **DATE COMPLETED** 1/3/22
LOCATION 2 Columbus Avenue, Pawtucket, RI **CASING TYPE/DIAMETER** PVC / 1"
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner **SCREEN TYPE/SLOT/INTERVAL** Slotted/PVC / 0.010" / 5-15
HAMMER WEIGHT/FALL -- **GRAVEL PACK TYPE** Silica Sand
ELEVATION (FT) --- **GROUT TYPE/QUANTITY** Bentonite / 1
TOP OF CASING ---- **DEPTH TO WATER (FT)** 8.0
LOGGED BY Madelyn Sampson **GROUND WATER ELEVATION** ---
REMARKS No refusal encountered.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		38	GB 0103-06					SAND, fine to medium; trace gravel; trace silt; trace brick; trace glass; trace ash; dry. No odor.		
0.0		48			5		FILL	SAND, fine to medium; some gravel; trace silt; trace brick; trace ash; trace wood; trace plastic; wet at 8 feet. No odor.		
0.0		46			10		SP	SAND, medium to coarse; little gravel; gray; wet. No odor.		

Bottom of borehole at 15.0 feet.

PROJECT NUMBER 20160501.B10
PROJECT NAME McCoy Stadium
LOCATION 2 Columbus Avenue, Pawtucket, RI
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner
HAMMER WEIGHT/FALL --
ELEVATION (FT) ---
TOP OF CASING ----
LOGGED BY Madelyn Sampson
REMARKS No refusal encountered.

DATE STARTED 1/3/22
DATE COMPLETED 1/3/22
CASING TYPE/DIAMETER PVC / 1"
SCREEN TYPE/SLOT/INTERVAL Slotted/PVC / 0.010" / 5-15
GRAVEL PACK TYPE Silica Sand
GROUT TYPE/QUANTITY Bentonite / 1
DEPTH TO WATER (FT) 7.0
GROUND WATER ELEVATION ---

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		52	GB 0103-07					SAND, fine to medium; some gravel; trace silt; trace brick; light brown; dry. No odor.		
0.0		36			5			SAND, fine to coarse; some silt; little gravel; wet at 7 feet. No odor.		
0.0		54			10			SAND, fine to coarse; some gravel; trace brick; trace wood; wet. No odor.		

Bottom of borehole at 15.0 feet.

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\IDRAFT\MHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

PROJECT NUMBER	20160501.B10	DATE STARTED	1/4/22
PROJECT NAME	McCoy Stadium	DATE COMPLETED	1/4/22
LOCATION	2 Columbus Avenue, Pawtucket, RI	CASING TYPE/DIAMETER	PVC / 1"
DRILLING METHOD	Geologic/Geoprobe/Mc5 60" Liner	SCREEN TYPE/SLOT/INTERVAL	Slotted/PVC / 0.010" / 5-15
HAMMER WEIGHT/FALL	--	GRAVEL PACK TYPE	Silica Sand
ELEVATION (FT)	---	GROUT TYPE/QUANTITY	Bentonite / 1
TOP OF CASING	----	DEPTH TO WATER (FT)	6.0
LOGGED BY	Madelyn Sampson	GROUND WATER ELEVATION	---
REMARKS	No refusal encountered.		

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		32	GB 0104-09					SAND, fine to medium; little gravel; trace silt; trace brick; trace wood; brown; dry. No odor.		
0.0		46			5		FILL	SAND, medium to coarse; some gravel; wet at 6 feet. No odor.		
0.0		60			10		SP	SAND, medium to coarse; some gravel; wet. No odor.		
							SP			

Bottom of borehole at 15.0 feet.

LOG A EWNN01 - ESDAT_LOG1.GDT - 3/7/22 12:55 - \\PRIVATE\DFS\PROJECTDATA\2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES\A - SOIL BORING LOGS\DRIFT\MHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

PROJECT NUMBER 20160501.B10
PROJECT NAME McCoy Stadium
LOCATION 2 Columbus Avenue, Pawtucket, RI
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner
HAMMER WEIGHT/FALL --
ELEVATION (FT) ---
TOP OF CASING ----
LOGGED BY Madelyn Sampson
REMARKS No refusal encountered.

DATE STARTED 1/4/22
DATE COMPLETED 1/4/22
CASING TYPE/DIAMETER PVC / 1"
SCREEN TYPE/SLOT/INTERVAL Slotted/PVC / 0.010" / 5-15
GRAVEL PACK TYPE Silica Sand
GROUT TYPE/QUANTITY Bentonite / 1
DEPTH TO WATER (FT) 8.0
GROUND WATER ELEVATION ---

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		42	GB 0104-10					SAND, fine to medium; little gravel; trace silt; trace brick; light brown; dry. No odor.		
0.0		48			5	FILL		SAND, fine to medium; little gravel; trace silt; trace brick; light brown; dry. No odor.		
0.0		60			10	SP		SAND, fine to medium, and SILT; gray; wet at 8 feet. No odor.		
						SP		SAND, fine to medium; some silt; black; wet. No odor.		
						SP		SAND, medium to coarse; and SILT; gray; wet; No odor.		

Bottom of borehole at 15.0 feet.

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\DRIFTMHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

PROJECT NUMBER 20160501.B10 **DATE STARTED** 1/4/22
PROJECT NAME McCoy Stadium **DATE COMPLETED** 1/4/22
LOCATION 2 Columbus Avenue, Pawtucket, RI **CASING TYPE/DIAMETER** PVC / 1"
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner **SCREEN TYPE/SLOT/INTERVAL** Slotted/PVC / 0.010" / 5-15
HAMMER WEIGHT/FALL -- **GRAVEL PACK TYPE** Silica Sand
ELEVATION (FT) --- **GROUT TYPE/QUANTITY** Bentonite / 1
TOP OF CASING --- **DEPTH TO WATER (FT)** 7.0
LOGGED BY Madelyn Sampson **GROUND WATER ELEVATION** ---
REMARKS No refusal encountered.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		38	GB 0104-11					SAND, fine to medium; some gravel; trace silt; light brown; dry. No odor.		
0.0		60			5		FILL	SAND, fine to coarse; some silt; little gravel; wet at 7 feet. No odor.		
0.0		60			10		SP	SAND, fine to medium, and SILT; gray; wet at 8 feet. No odor.		

Bottom of borehole at 15.0 feet.

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\IDRAFT\MHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

PROJECT NUMBER 20160501.B10 **DATE STARTED** 1/4/22
PROJECT NAME McCoy Stadium **DATE COMPLETED** 1/4/22
LOCATION 2 Columbus Avenue, Pawtucket, RI **CASING TYPE/DIAMETER** ----
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner **SCREEN TYPE/SLOT/INTERVAL** ----
HAMMER WEIGHT/FALL -- **GRAVEL PACK TYPE** ----
ELEVATION (FT) --- **GROUT TYPE/QUANTITY** ----
TOP OF CASING ---- **DEPTH TO WATER (FT)** 6.0
LOGGED BY Madelyn Sampson **GROUND WATER ELEVATION** ---
REMARKS No refusal encountered.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH
0.0		52	GB 0104-12					SAND, fine to medium; little silt; light brown; dry. No odor.	
						FILL			
0.0		60			5			SAND, fine to coarse; some silt; brown; wet at 6 feet. No odor.	
						SP			
0.0		60			10			SAND, fine to coarse; some silt; brown; wet. No odor.	
						SP			
0.0		60			15			SAND, fine to coarse; some silt; brown; wet. No odor.	
						SP			

Bottom of borehole at 20.0 feet.

PROJECT NUMBER 20160501.B10 **DATE STARTED** 1/4/22
PROJECT NAME McCoy Stadium **DATE COMPLETED** 1/4/22
LOCATION 2 Columbus Avenue, Pawtucket, RI **CASING TYPE/DIAMETER** PVC / 1"
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner **SCREEN TYPE/SLOT/INTERVAL** Slotted/PVC / 0.010" / 5-15
HAMMER WEIGHT/FALL -- **GRAVEL PACK TYPE** Silica Sand
ELEVATION (FT) --- **GROUT TYPE/QUANTITY** Bentonite / 1
TOP OF CASING ---- **DEPTH TO WATER (FT)** 7.0
LOGGED BY Madelyn Sampson **GROUND WATER ELEVATION** ---
REMARKS No refusal encountered.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH	WELL DIAGRAM
0.0		42	GB 0104-13					SAND, fine to medium; little gravel; trace silt; light brown; dry. No odor.		
						FILL				
						SP		SAND, fine to coarse; little gravel; brown; dry. No odor.		
0.0		60			5			SAND, fine to coarse; little gravel; brown; wet at 7 feet. No odor.		
						SP				
0.0		60			10			SAND, fine to coarse; little gravel; brown; wet. No odor.		
						SP				

Bottom of borehole at 15.0 feet.

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\IDRAFT\MHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

PROJECT NUMBER 20160501.B10 **DATE STARTED** 1/4/22
PROJECT NAME McCoy Stadium **DATE COMPLETED** 1/4/22
LOCATION 2 Columbus Avenue, Pawtucket, RI **CASING TYPE/DIAMETER** ----
DRILLING METHOD Geologic/Geoprobe/Mc5 60" Liner **SCREEN TYPE/SLOT/INTERVAL** ----
HAMMER WEIGHT/FALL -- **GRAVEL PACK TYPE** ----
ELEVATION (FT) --- **GROUT TYPE/QUANTITY** ----
TOP OF CASING ---- **DEPTH TO WATER (FT)** 8.0
LOGGED BY Madelyn Sampson **GROUND WATER ELEVATION** ---
REMARKS No refusal encountered.

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	WATER DEPTH
0.0		40	GB 0104-14					SAND, fine to medium; some gravel; trace silt; trace brick; light brown; dry. No odor.	
0.0		40			5			SAND, fine to medium; some gravel; trace silt; trace brick; trace ash; trace glass; light brown; wet at 8 feet. No odor.	
0.0		60			10			SAND, fine to coarse; trace gravel; light brown; wet. No odor.	

Bottom of borehole at 15.0 feet.

LOG A EVNN01 - ESDAT_LOG1.GDT - 1/13/22 13:37 - F:\P2016\0501\B10\DELIVERABLES\REPORT\PHASE II ESA\APPENDICES A - SOIL BORING LOGS\DRIFTMHS_MCCOY STADIUM BORING LOGS_20220113.GPJ

Appendix B

Phoenix Laboratory Analytical Report – Soil Borings



Tuesday, January 11, 2022

Attn: Madelyn Sampson
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Project ID: MCCOY STADIUM
SDG ID: GCK09788
Sample ID#s: CK09788 - CK09801

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis Shiller

Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

January 11, 2022

SDG I.D.: GCK09788

Project ID: MCCOY STADIUM

Client Id	Lab Id	Matrix
1603220103-01	CK09788	SOIL
1603220103-02	CK09789	SOIL
1603220103-03	CK09790	SOIL
1603220103-04	CK09791	SOIL
1603220103-05	CK09792	SOIL
1603220103-06	CK09793	SOIL
1603220103-07	CK09794	SOIL
1603220103-08	CK09795	SOIL
1603220103-09	CK09796	SOIL
1603220103-10	CK09797	SOIL
1603220103-11	CK09798	SOIL
1603220103-12	CK09799	SOIL
1603220103-13	CK09800	SOIL
1603220103-14	CK09801	SOIL



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 11, 2022

FOR: Attn: Madelyn Sampson
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: SOIL
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by: MS
Received by: CP
Analyzed by: see "By" below

Date

01/03/22
01/05/22

Time

7:30
12:42

Laboratory Data

SDG ID: GCK09788
Phoenix ID: CK09788

Project ID: MCCOY STADIUM
Client ID: 1603220103-01

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Field Extraction	Completed				01/03/22		SW5035A
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
1,1,1-Trichloroethane	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2,2-Tetrachloroethane	ND	3.0	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2-Trichloroethane	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethane	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloropropene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichlorobenzene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichloropropane	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trichlorobenzene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trimethylbenzene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromo-3-chloropropane	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromoethane	ND	0.50	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichlorobenzene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloroethane	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloropropane	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
1,3,5-Trimethylbenzene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichlorobenzene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichloropropane	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
1,4-Dichlorobenzene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
2,2-Dichloropropane	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
2-Chlorotoluene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
2-Hexanone	ND	25	ug/Kg	1	01/06/22	JLI	SW8260
2-Isopropyltoluene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Chlorotoluene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
4-Methyl-2-pentanone	ND	25	ug/Kg	1	01/06/22	JLI	SW8260
Acetone	ND	250	ug/Kg	1	01/06/22	JLI	SW8260
Acrylonitrile	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Benzene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Bromobenzene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Bromochloromethane	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Bromodichloromethane	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Bromoform	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Bromomethane	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Carbon Disulfide	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Carbon tetrachloride	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Chlorobenzene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Chloroethane	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Chloroform	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Chloromethane	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,2-Dichloroethene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,3-Dichloropropene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Dibromochloromethane	ND	3.0	ug/Kg	1	01/06/22	JLI	SW8260
Dibromomethane	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Dichlorodifluoromethane	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Ethylbenzene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Hexachlorobutadiene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Isopropylbenzene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
m&p-Xylene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Methyl Ethyl Ketone	ND	30	ug/Kg	1	01/06/22	JLI	SW8260
Methyl t-butyl ether (MTBE)	ND	10	ug/Kg	1	01/06/22	JLI	SW8260
Methylene chloride	ND	10	ug/Kg	1	01/06/22	JLI	SW8260
Naphthalene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
n-Butylbenzene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
n-Propylbenzene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
o-Xylene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
p-Isopropyltoluene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
sec-Butylbenzene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Styrene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
tert-Butylbenzene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Tetrachloroethene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Tetrahydrofuran (THF)	ND	10	ug/Kg	1	01/06/22	JLI	SW8260
Toluene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Total Xylenes	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,2-Dichloroethene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,3-Dichloropropene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,4-dichloro-2-butene	ND	10	ug/Kg	1	01/06/22	JLI	SW8260
Trichloroethene	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorofluoromethane	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorotrifluoroethane	ND	10	ug/Kg	1	01/06/22	JLI	SW8260
Vinyl chloride	ND	5.0	ug/Kg	1	01/06/22	JLI	SW8260
<u>QA/QC Surrogates</u>							
% 1,2-dichlorobenzene-d4	99		%	1	01/06/22	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Bromofluorobenzene	96		%	1	01/06/22	JLI	70 - 130 %
% Dibromofluoromethane	102		%	1	01/06/22	JLI	70 - 130 %
% Toluene-d8	100		%	1	01/06/22	JLI	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 11, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 11, 2022

FOR: Attn: Madelyn Sampson
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: SOIL
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by: MS
Received by: CP
Analyzed by: see "By" below

Date

01/03/22
01/05/22

Time

8:00
12:42

Laboratory Data

SDG ID: GCK09788
Phoenix ID: CK09789

Project ID: MCCOY STADIUM
Client ID: 1603220103-02

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.36	0.36	mg/Kg	1	01/06/22	CPP	SW6010D
Arsenic	12.1	0.73	mg/Kg	1	01/06/22	CPP	SW6010D
Beryllium	0.43	0.29	mg/Kg	1	01/06/22	CPP	SW6010D
Cadmium	0.56	0.36	mg/Kg	1	01/06/22	CPP	SW6010D
Chromium	13.7	0.36	mg/Kg	1	01/06/22	CPP	SW6010D
Copper	43.0	0.7	mg/kg	1	01/06/22	CPP	SW6010D
Mercury	0.11	0.03	mg/Kg	2	01/06/22	AP	SW7471B
Nickel	15.6	0.36	mg/Kg	1	01/06/22	CPP	SW6010D
Lead	56.2	0.36	mg/Kg	1	01/06/22	CPP	SW6010D
Antimony	< 3.6	3.6	mg/Kg	1	01/06/22	CPP	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	01/06/22	CPP	SW6010D
Thallium	< 3.3	3.3	mg/Kg	1	01/06/22	CPP	SW6010D
Zinc	62.7	0.7	mg/Kg	1	01/06/22	CPP	SW6010D
Percent Solid	88		%		01/05/22	JS	SW846-%Solid
Soil Extraction for PCB	Completed				01/05/22	O/L	SW3545A
Field Extraction	Completed				01/03/22		SW5035A
Mercury Digestion	Completed				01/06/22	AB/AB	SW7471B
Extraction of ETPH	Completed				01/05/22	I/E	SW3545A
Soil Extraction for SVOA PAH	Completed				01/05/22	I/Y	SW3545A
Total Metals Digest	Completed				01/05/22	M/AG	SW3050B

Polychlorinated Biphenyls

PCB-1016	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1221	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1232	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1242	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1248	ND	370	ug/Kg	10	01/06/22	SC	SW8082A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
PCB-1254	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1260	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1262	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1268	ND	370	ug/Kg	10	01/06/22	SC	SW8082A

QA/QC Surrogates

% DCBP	90		%	10	01/06/22	SC	30 - 150 %
% DCBP (Confirmation)	89		%	10	01/06/22	SC	30 - 150 %
% TCMX	79		%	10	01/06/22	SC	30 - 150 %
% TCMX (Confirmation)	88		%	10	01/06/22	SC	30 - 150 %

TPH by GC (Extractable (C9-C36))

Fuel Oil #2 / Diesel Fuel	ND	56	mg/kg	1	01/06/22	JRB	SW8015D DRO
Fuel Oil #4	ND	56	mg/kg	1	01/06/22	JRB	SW8015D DRO
Fuel Oil #6	ND	56	mg/kg	1	01/06/22	JRB	SW8015D DRO
Kerosene	ND	56	mg/kg	1	01/06/22	JRB	SW8015D DRO
Motor Oil	ND	56	mg/kg	1	01/06/22	JRB	SW8015D DRO
Total TPH	ND	56	mg/kg	1	01/06/22	JRB	SW8015D DRO
Unidentified	ND	56	mg/kg	1	01/06/22	JRB	SW8015D DRO

QA/QC Surrogates

% COD (surr)	77		%	1	01/06/22	JRB	50 - 150 %
% Terphenyl (surr)	75		%	1	01/06/22	JRB	50 - 150 %

Volatiles

1,1,1,2-Tetrachloroethane	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
1,1,1-Trichloroethane	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2,2-Tetrachloroethane	ND	3.8	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2-Trichloroethane	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethane	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloropropene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichlorobenzene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichloropropane	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trichlorobenzene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trimethylbenzene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromo-3-chloropropane	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromoethane	ND	0.63	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichlorobenzene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloroethane	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloropropane	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
1,3,5-Trimethylbenzene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichlorobenzene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichloropropane	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
1,4-Dichlorobenzene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
2,2-Dichloropropane	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
2-Chlorotoluene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
2-Hexanone	ND	31	ug/Kg	1	01/06/22	JLI	SW8260
2-Isopropyltoluene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
4-Chlorotoluene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
4-Methyl-2-pentanone	ND	31	ug/Kg	1	01/06/22	JLI	SW8260
Acetone	ND	310	ug/Kg	1	01/06/22	JLI	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acrylonitrile	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Benzene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Bromobenzene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Bromochloromethane	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Bromodichloromethane	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Bromoform	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Bromomethane	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Carbon Disulfide	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Carbon tetrachloride	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Chlorobenzene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Chloroethane	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Chloroform	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Chloromethane	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,2-Dichloroethene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,3-Dichloropropene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Dibromochloromethane	ND	3.8	ug/Kg	1	01/06/22	JLI	SW8260
Dibromomethane	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Dichlorodifluoromethane	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Ethylbenzene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Hexachlorobutadiene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Isopropylbenzene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
m&p-Xylene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Methyl Ethyl Ketone	ND	38	ug/Kg	1	01/06/22	JLI	SW8260
Methyl t-butyl ether (MTBE)	ND	13	ug/Kg	1	01/06/22	JLI	SW8260
Methylene chloride	ND	13	ug/Kg	1	01/06/22	JLI	SW8260
Naphthalene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
n-Butylbenzene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
n-Propylbenzene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
o-Xylene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
p-Isopropyltoluene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
sec-Butylbenzene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Styrene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
tert-Butylbenzene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Tetrachloroethene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Tetrahydrofuran (THF)	ND	13	ug/Kg	1	01/06/22	JLI	SW8260
Toluene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Total Xylenes	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,2-Dichloroethene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,3-Dichloropropene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,4-dichloro-2-butene	ND	13	ug/Kg	1	01/06/22	JLI	SW8260
Trichloroethene	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorofluoromethane	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorotrifluoroethane	ND	13	ug/Kg	1	01/06/22	JLI	SW8260
Vinyl chloride	ND	6.3	ug/Kg	1	01/06/22	JLI	SW8260
<u>QA/QC Surrogates</u>							
% 1,2-dichlorobenzene-d4	101		%	1	01/06/22	JLI	70 - 130 %
% Bromofluorobenzene	95		%	1	01/06/22	JLI	70 - 130 %
% Dibromofluoromethane	100		%	1	01/06/22	JLI	70 - 130 %
% Toluene-d8	98		%	1	01/06/22	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Polynuclear Aromatic HC</u>							
2-Methylnaphthalene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Benz(a)anthracene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Chrysene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Fluoranthene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Phenanthrene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Pyrene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
<u>QA/QC Surrogates</u>							
% 2-Fluorobiphenyl	79		%	1	01/06/22	WB	30 - 130 %
% Nitrobenzene-d5	85		%	1	01/06/22	WB	30 - 130 %
% Terphenyl-d14	100		%	1	01/06/22	WB	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 11, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 11, 2022

FOR: Attn: Madelyn Sampson
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: SOIL
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by: MS
Received by: CP
Analyzed by: see "By" below

Date

01/03/22
01/05/22

Time

9:30
12:42

Laboratory Data

SDG ID: GCK09788
Phoenix ID: CK09790

Project ID: MCCOY STADIUM
Client ID: 1603220103-03

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.35	0.35	mg/Kg	1	01/06/22	CPP	SW6010D
Arsenic	8.89	0.71	mg/Kg	1	01/06/22	CPP	SW6010D
Beryllium	0.50	0.28	mg/Kg	1	01/06/22	CPP	SW6010D
Cadmium	0.89	0.35	mg/Kg	1	01/06/22	CPP	SW6010D
Chromium	17.1	0.35	mg/Kg	1	01/06/22	CPP	SW6010D
Copper	28.6	0.7	mg/kg	1	01/06/22	CPP	SW6010D
Mercury	0.05	0.03	mg/Kg	2	01/06/22	AP	SW7471B
Nickel	19.2	0.35	mg/Kg	1	01/06/22	CPP	SW6010D
Lead	81.5	0.35	mg/Kg	1	01/06/22	CPP	SW6010D
Antimony	< 3.5	3.5	mg/Kg	1	01/06/22	CPP	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	01/06/22	CPP	SW6010D
Thallium	< 3.2	3.2	mg/Kg	1	01/06/22	CPP	SW6010D
Zinc	73.4	0.7	mg/Kg	1	01/06/22	CPP	SW6010D
Percent Solid	92		%		01/05/22	JS	SW846-%Solid
Soil Extraction for PCB	Completed				01/05/22	O/E	SW3545A
Field Extraction	Completed				01/03/22		SW5035A
Mercury Digestion	Completed				01/06/22	AB/AB	SW7471B
Extraction of ETPH	Completed				01/05/22	I/E	SW3545A
Soil Extraction for SVOA PAH	Completed				01/05/22	I/L	SW3545A
Total Metals Digest	Completed				01/05/22	M/AG	SW3050B

Polychlorinated Biphenyls

PCB-1016	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1221	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1232	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1242	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1248	ND	350	ug/Kg	10	01/06/22	SC	SW8082A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
PCB-1254	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1260	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1262	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1268	ND	350	ug/Kg	10	01/06/22	SC	SW8082A

QA/QC Surrogates

% DCBP	85		%	10	01/06/22	SC	30 - 150 %
% DCBP (Confirmation)	84		%	10	01/06/22	SC	30 - 150 %
% TCMX	70		%	10	01/06/22	SC	30 - 150 %
% TCMX (Confirmation)	71		%	10	01/06/22	SC	30 - 150 %

TPH by GC (Extractable (C9-C36))

Fuel Oil #2 / Diesel Fuel	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO
Fuel Oil #4	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO
Fuel Oil #6	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO
Kerosene	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO
Motor Oil	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO
Total TPH	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO
Unidentified	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO

QA/QC Surrogates

% COD (surr)	88		%	1	01/06/22	JRB	50 - 150 %
% Terphenyl (surr)	94		%	1	01/06/22	JRB	50 - 150 %

Volatiles

1,1,1,2-Tetrachloroethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,1,1-Trichloroethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2,2-Tetrachloroethane	ND	3.7	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2-Trichloroethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloropropene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichlorobenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichloropropane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trichlorobenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trimethylbenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromo-3-chloropropane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromoethane	ND	0.62	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichlorobenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloroethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloropropane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,3,5-Trimethylbenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichlorobenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichloropropane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,4-Dichlorobenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
2,2-Dichloropropane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
2-Chlorotoluene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
2-Hexanone	ND	31	ug/Kg	1	01/06/22	JLI	SW8260
2-Isopropyltoluene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
4-Chlorotoluene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
4-Methyl-2-pentanone	ND	31	ug/Kg	1	01/06/22	JLI	SW8260
Acetone	ND	310	ug/Kg	1	01/06/22	JLI	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acrylonitrile	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Benzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Bromobenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Bromochloromethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Bromodichloromethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Bromoform	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Bromomethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Carbon Disulfide	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Carbon tetrachloride	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Chlorobenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Chloroethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Chloroform	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Chloromethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,2-Dichloroethene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,3-Dichloropropene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Dibromochloromethane	ND	3.7	ug/Kg	1	01/06/22	JLI	SW8260
Dibromomethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Dichlorodifluoromethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Ethylbenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Hexachlorobutadiene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Isopropylbenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
m&p-Xylene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Methyl Ethyl Ketone	ND	37	ug/Kg	1	01/06/22	JLI	SW8260
Methyl t-butyl ether (MTBE)	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Methylene chloride	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Naphthalene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
n-Butylbenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
n-Propylbenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
o-Xylene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
p-Isopropyltoluene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
sec-Butylbenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Styrene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
tert-Butylbenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Tetrachloroethene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Tetrahydrofuran (THF)	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Toluene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Total Xylenes	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,2-Dichloroethene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,3-Dichloropropene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,4-dichloro-2-butene	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Trichloroethene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorofluoromethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorotrifluoroethane	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Vinyl chloride	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
<u>QA/QC Surrogates</u>							
% 1,2-dichlorobenzene-d4	101		%	1	01/06/22	JLI	70 - 130 %
% Bromofluorobenzene	95		%	1	01/06/22	JLI	70 - 130 %
% Dibromofluoromethane	100		%	1	01/06/22	JLI	70 - 130 %
% Toluene-d8	99		%	1	01/06/22	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Polynuclear Aromatic HC</u>							
2-Methylnaphthalene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthylene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Anthracene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Benz(a)anthracene	310	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(a)pyrene	380	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(b)fluoranthene	320	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(ghi)perylene	270	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(k)fluoranthene	320	250	ug/Kg	1	01/06/22	WB	SW8270D
Chrysene	340	250	ug/Kg	1	01/06/22	WB	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Fluoranthene	310	250	ug/Kg	1	01/06/22	WB	SW8270D
Fluorene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Indeno(1,2,3-cd)pyrene	300	250	ug/Kg	1	01/06/22	WB	SW8270D
Naphthalene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Phenanthrene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Pyrene	280	250	ug/Kg	1	01/06/22	WB	SW8270D
<u>QA/QC Surrogates</u>							
% 2-Fluorobiphenyl	76		%	1	01/06/22	WB	30 - 130 %
% Nitrobenzene-d5	76		%	1	01/06/22	WB	30 - 130 %
% Terphenyl-d14	50		%	1	01/06/22	WB	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 11, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 11, 2022

FOR: Attn: Madelyn Sampson
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: SOIL
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by: MS
Received by: CP
Analyzed by: see "By" below

Date

01/03/22
01/05/22

Time

11:19
12:42

Laboratory Data

SDG ID: GCK09788
Phoenix ID: CK09791

Project ID: MCCOY STADIUM
Client ID: 1603220103-04

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.39	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Arsenic	8.41	0.78	mg/Kg	1	01/06/22	CPP	SW6010D
Beryllium	0.46	0.31	mg/Kg	1	01/06/22	CPP	SW6010D
Cadmium	0.60	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Chromium	14.6	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Copper	38.9	0.8	mg/kg	1	01/06/22	CPP	SW6010D
Mercury	0.13	0.03	mg/Kg	2	01/06/22	AP	SW7471B
Nickel	16.0	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Lead	82.6	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Antimony	< 3.9	3.9	mg/Kg	1	01/06/22	CPP	SW6010D
Selenium	< 1.6	1.6	mg/Kg	1	01/06/22	CPP	SW6010D
Thallium	< 3.5	3.5	mg/Kg	1	01/06/22	CPP	SW6010D
Zinc	78.5	0.8	mg/Kg	1	01/06/22	CPP	SW6010D
Percent Solid	90		%		01/05/22	JS	SW846-%Solid
Soil Extraction for PCB	Completed				01/05/22	O/E	SW3545A
Field Extraction	Completed				01/03/22		SW5035A
Mercury Digestion	Completed				01/06/22	AB/AB	SW7471B
Soil Extraction for SVOA PAH	Completed				01/05/22	I/L	SW3545A
Total Metals Digest	Completed				01/05/22	M/AG	SW3050B

Polychlorinated Biphenyls

PCB-1016	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1221	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1232	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1242	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1248	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1254	ND	360	ug/Kg	10	01/06/22	SC	SW8082A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
PCB-1260	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1262	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1268	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
<u>QA/QC Surrogates</u>							
% DCBP	78		%	10	01/06/22	SC	30 - 150 %
% DCBP (Confirmation)	77		%	10	01/06/22	SC	30 - 150 %
% TCMX	65		%	10	01/06/22	SC	30 - 150 %
% TCMX (Confirmation)	65		%	10	01/06/22	SC	30 - 150 %
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
1,1,1-Trichloroethane	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2,2-Tetrachloroethane	ND	3.6	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2-Trichloroethane	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethane	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloropropene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichlorobenzene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichloropropane	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trichlorobenzene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trimethylbenzene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromo-3-chloropropane	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromoethane	ND	0.59	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichlorobenzene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloroethane	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloropropane	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
1,3,5-Trimethylbenzene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichlorobenzene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichloropropane	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
1,4-Dichlorobenzene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
2,2-Dichloropropane	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
2-Chlorotoluene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
2-Hexanone	ND	30	ug/Kg	1	01/06/22	JLI	SW8260
2-Isopropyltoluene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
4-Chlorotoluene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
4-Methyl-2-pentanone	ND	30	ug/Kg	1	01/06/22	JLI	SW8260
Acetone	ND	300	ug/Kg	1	01/06/22	JLI	SW8260
Acrylonitrile	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Benzene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Bromobenzene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Bromochloromethane	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Bromodichloromethane	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Bromoform	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Bromomethane	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Carbon Disulfide	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Carbon tetrachloride	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Chlorobenzene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Chloroethane	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Chloroform	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Chloromethane	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
cis-1,2-Dichloroethene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,3-Dichloropropene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Dibromochloromethane	ND	3.6	ug/Kg	1	01/06/22	JLI	SW8260
Dibromomethane	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Dichlorodifluoromethane	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Ethylbenzene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Hexachlorobutadiene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Isopropylbenzene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
m&p-Xylene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Methyl Ethyl Ketone	ND	36	ug/Kg	1	01/06/22	JLI	SW8260
Methyl t-butyl ether (MTBE)	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Methylene chloride	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Naphthalene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
n-Butylbenzene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
n-Propylbenzene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
o-Xylene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
p-Isopropyltoluene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
sec-Butylbenzene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Styrene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
tert-Butylbenzene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Tetrachloroethene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Tetrahydrofuran (THF)	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Toluene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Total Xylenes	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,2-Dichloroethene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,3-Dichloropropene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,4-dichloro-2-butene	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Trichloroethene	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorofluoromethane	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorotrifluoroethane	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Vinyl chloride	ND	5.9	ug/Kg	1	01/06/22	JLI	SW8260
<u>QA/QC Surrogates</u>							
% 1,2-dichlorobenzene-d4	100		%	1	01/06/22	JLI	70 - 130 %
% Bromofluorobenzene	96		%	1	01/06/22	JLI	70 - 130 %
% Dibromofluoromethane	116		%	1	01/06/22	JLI	70 - 130 %
% Toluene-d8	101		%	1	01/06/22	JLI	70 - 130 %
<u>Polynuclear Aromatic HC</u>							
2-Methylnaphthalene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthylene	280	260	ug/Kg	1	01/06/22	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Benz(a)anthracene	660	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(a)pyrene	670	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(b)fluoranthene	600	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(ghi)perylene	420	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(k)fluoranthene	660	260	ug/Kg	1	01/06/22	WB	SW8270D
Chrysene	660	260	ug/Kg	1	01/06/22	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Fluoranthene	670	260	ug/Kg	1	01/06/22	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Fluorene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Indeno(1,2,3-cd)pyrene	480	260	ug/Kg	1	01/06/22	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Phenanthrene	470	260	ug/Kg	1	01/06/22	WB	SW8270D
Pyrene	550	260	ug/Kg	1	01/06/22	WB	SW8270D
<u>QA/QC Surrogates</u>							
% 2-Fluorobiphenyl	84		%	1	01/06/22	WB	30 - 130 %
% Nitrobenzene-d5	70		%	1	01/06/22	WB	30 - 130 %
% Terphenyl-d14	54		%	1	01/06/22	WB	30 - 130 %

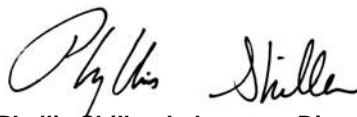
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 11, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
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Analysis Report

January 11, 2022

FOR: Attn: Madelyn Sampson
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: SOIL
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by: MS
Received by: CP
Analyzed by: see "By" below

Date

01/03/22 12:21
01/05/22 12:42

Time

Laboratory Data

SDG ID: GCK09788
Phoenix ID: CK09792

Project ID: MCCOY STADIUM
Client ID: 1603220103-05

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.35	0.35	mg/Kg	1	01/06/22	CPP	SW6010D
Arsenic	7.04	0.70	mg/Kg	1	01/06/22	CPP	SW6010D
Beryllium	0.61	0.28	mg/Kg	1	01/06/22	CPP	SW6010D
Cadmium	0.90	0.35	mg/Kg	1	01/06/22	CPP	SW6010D
Chromium	32.9	0.35	mg/Kg	1	01/06/22	CPP	SW6010D
Copper	70.4	0.7	mg/kg	1	01/06/22	CPP	SW6010D
Mercury	0.19	0.03	mg/Kg	2	01/06/22	AP	SW7471B
Nickel	20.0	0.35	mg/Kg	1	01/06/22	CPP	SW6010D
Lead	157	0.35	mg/Kg	1	01/06/22	CPP	SW6010D
Antimony	< 3.5	3.5	mg/Kg	1	01/06/22	CPP	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	01/06/22	CPP	SW6010D
Thallium	< 3.2	3.2	mg/Kg	1	01/06/22	CPP	SW6010D
Zinc	184	0.7	mg/Kg	1	01/06/22	CPP	SW6010D
Percent Solid	90		%		01/05/22	JS	SW846-%Solid
Soil Extraction for PCB	Completed				01/05/22	O/E	SW3545A
Field Extraction	Completed				01/03/22		SW5035A
Mercury Digestion	Completed				01/06/22	AB/AB	SW7471B
Extraction of ETPH	Completed				01/05/22	I/E	SW3545A
Soil Extraction for SVOA PAH	Completed				01/05/22	I/L	SW3545A
Total Metals Digest	Completed				01/05/22	M/AG	SW3050B

Polychlorinated Biphenyls

PCB-1016	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1221	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1232	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1242	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1248	ND	360	ug/Kg	10	01/06/22	SC	SW8082A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
PCB-1254	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1260	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1262	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1268	ND	360	ug/Kg	10	01/06/22	SC	SW8082A

QA/QC Surrogates

% DCBP	82		%	10	01/06/22	SC	30 - 150 %
% DCBP (Confirmation)	83		%	10	01/06/22	SC	30 - 150 %
% TCMX	71		%	10	01/06/22	SC	30 - 150 %
% TCMX (Confirmation)	71		%	10	01/06/22	SC	30 - 150 %

TPH by GC (Extractable (C9-C36))

Fuel Oil #2 / Diesel Fuel	ND	280	mg/kg	5	01/06/22	JRB	SW8015D DRO
Fuel Oil #4	ND	280	mg/kg	5	01/06/22	JRB	SW8015D DRO
Fuel Oil #6	ND	280	mg/kg	5	01/06/22	JRB	SW8015D DRO
Kerosene	ND	280	mg/kg	5	01/06/22	JRB	SW8015D DRO
Motor Oil	ND	280	mg/kg	5	01/06/22	JRB	SW8015D DRO
Total TPH	ND	280	mg/kg	5	01/06/22	JRB	SW8015D DRO
Unidentified	ND	280	mg/kg	5	01/06/22	JRB	SW8015D DRO

QA/QC Surrogates

% COD (surr)	159		%	5	01/06/22	JRB	50 - 150 %
% Terphenyl (surr)	83		%	5	01/06/22	JRB	50 - 150 %

3

Volatiles

1,1,1,2-Tetrachloroethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,1,1-Trichloroethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2,2-Tetrachloroethane	ND	3.7	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2-Trichloroethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloropropene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichlorobenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichloropropane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trichlorobenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trimethylbenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromo-3-chloropropane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromoethane	ND	0.62	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichlorobenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloroethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloropropane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,3,5-Trimethylbenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichlorobenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichloropropane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
1,4-Dichlorobenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
2,2-Dichloropropane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
2-Chlorotoluene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
2-Hexanone	ND	31	ug/Kg	1	01/06/22	JLI	SW8260
2-Isopropyltoluene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
4-Chlorotoluene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
4-Methyl-2-pentanone	ND	31	ug/Kg	1	01/06/22	JLI	SW8260
Acetone	ND	310	ug/Kg	1	01/06/22	JLI	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acrylonitrile	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Benzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Bromobenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Bromochloromethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Bromodichloromethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Bromoform	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Bromomethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Carbon Disulfide	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Carbon tetrachloride	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Chlorobenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Chloroethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Chloroform	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Chloromethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,2-Dichloroethene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,3-Dichloropropene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Dibromochloromethane	ND	3.7	ug/Kg	1	01/06/22	JLI	SW8260
Dibromomethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Dichlorodifluoromethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Ethylbenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Hexachlorobutadiene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Isopropylbenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
m&p-Xylene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Methyl Ethyl Ketone	ND	37	ug/Kg	1	01/06/22	JLI	SW8260
Methyl t-butyl ether (MTBE)	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Methylene chloride	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Naphthalene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
n-Butylbenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
n-Propylbenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
o-Xylene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
p-Isopropyltoluene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
sec-Butylbenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Styrene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
tert-Butylbenzene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Tetrachloroethene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Tetrahydrofuran (THF)	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Toluene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Total Xylenes	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,2-Dichloroethene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,3-Dichloropropene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,4-dichloro-2-butene	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Trichloroethene	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorofluoromethane	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorotrifluoroethane	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Vinyl chloride	ND	6.2	ug/Kg	1	01/06/22	JLI	SW8260
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	01/06/22	JLI	70 - 130 %
% Bromofluorobenzene	96		%	1	01/06/22	JLI	70 - 130 %
% Dibromofluoromethane	105		%	1	01/06/22	JLI	70 - 130 %
% Toluene-d8	99		%	1	01/06/22	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Polynuclear Aromatic HC</u>							
2-Methylnaphthalene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthylene	610	250	ug/Kg	1	01/06/22	WB	SW8270D
Anthracene	430	250	ug/Kg	1	01/06/22	WB	SW8270D
Benz(a)anthracene	1100	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(a)pyrene	1200	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(b)fluoranthene	1200	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(ghi)perylene	770	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(k)fluoranthene	1000	250	ug/Kg	1	01/06/22	WB	SW8270D
Chrysene	1200	250	ug/Kg	1	01/06/22	WB	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Fluoranthene	1200	250	ug/Kg	1	01/06/22	WB	SW8270D
Fluorene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Indeno(1,2,3-cd)pyrene	880	250	ug/Kg	1	01/06/22	WB	SW8270D
Naphthalene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Phenanthrene	1100	250	ug/Kg	1	01/06/22	WB	SW8270D
Pyrene	1100	250	ug/Kg	1	01/06/22	WB	SW8270D
<u>QA/QC Surrogates</u>							
% 2-Fluorobiphenyl	77		%	1	01/06/22	WB	30 - 130 %
% Nitrobenzene-d5	63		%	1	01/06/22	WB	30 - 130 %
% Terphenyl-d14	49		%	1	01/06/22	WB	30 - 130 %

3 = This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 11, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
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Analysis Report

January 11, 2022

FOR: Attn: Madelyn Sampson
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: SOIL
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by: MS
Received by: CP
Analyzed by: see "By" below

Date

01/03/22
01/05/22

Time

14:00
12:42

Laboratory Data

SDG ID: GCK09788
Phoenix ID: CK09793

Project ID: MCCOY STADIUM
Client ID: 1603220103-06

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.39	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Arsenic	5.27	0.78	mg/Kg	1	01/06/22	CPP	SW6010D
Beryllium	0.56	0.31	mg/Kg	1	01/06/22	CPP	SW6010D
Cadmium	0.81	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Chromium	12.4	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Copper	91.7	0.8	mg/kg	1	01/06/22	CPP	SW6010D
Mercury	0.23	0.03	mg/Kg	2	01/06/22	AP	SW7471B
Nickel	13.1	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Lead	245	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Antimony	< 3.9	3.9	mg/Kg	1	01/06/22	CPP	SW6010D
Selenium	< 1.6	1.6	mg/Kg	1	01/06/22	CPP	SW6010D
Thallium	< 3.5	3.5	mg/Kg	1	01/06/22	CPP	SW6010D
Zinc	190	0.8	mg/Kg	1	01/06/22	CPP	SW6010D
Percent Solid	89		%		01/05/22	JS	SW846-%Solid
Soil Extraction for PCB	Completed				01/05/22	O/E	SW3545A
Field Extraction	Completed				01/03/22		SW5035A
Mercury Digestion	Completed				01/06/22	AB/AB	SW7471B
Extraction of ETPH	Completed				01/05/22	I/E	SW3545A
Soil Extraction for SVOA PAH	Completed				01/05/22	I/L	SW3545A
Total Metals Digest	Completed				01/05/22	M/AG	SW3050B

Polychlorinated Biphenyls

PCB-1016	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1221	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1232	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1242	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1248	ND	370	ug/Kg	10	01/06/22	SC	SW8082A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
PCB-1254	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1260	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1262	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1268	ND	370	ug/Kg	10	01/06/22	SC	SW8082A

QA/QC Surrogates

% DCBP	80		%	10	01/06/22	SC	30 - 150 %
% DCBP (Confirmation)	75		%	10	01/06/22	SC	30 - 150 %
% TCMX	68		%	10	01/06/22	SC	30 - 150 %
% TCMX (Confirmation)	68		%	10	01/06/22	SC	30 - 150 %

TPH by GC (Extractable (C9-C36))

Fuel Oil #2 / Diesel Fuel	ND	280	mg/kg	5	01/06/22	JRB	SW8015D DRO
Fuel Oil #4	ND	280	mg/kg	5	01/06/22	JRB	SW8015D DRO
Fuel Oil #6	ND	280	mg/kg	5	01/06/22	JRB	SW8015D DRO
Kerosene	ND	280	mg/kg	5	01/06/22	JRB	SW8015D DRO
Motor Oil	ND	280	mg/kg	5	01/06/22	JRB	SW8015D DRO
Total TPH	ND	280	mg/kg	5	01/06/22	JRB	SW8015D DRO
Unidentified	ND	280	mg/kg	5	01/06/22	JRB	SW8015D DRO

QA/QC Surrogates

% COD (surr)	106		%	5	01/06/22	JRB	50 - 150 %
% Terphenyl (surr)	91		%	5	01/06/22	JRB	50 - 150 %

Volatiles

1,1,1,2-Tetrachloroethane	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
1,1,1-Trichloroethane	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2,2-Tetrachloroethane	ND	5.8	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2-Trichloroethane	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethane	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloropropene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichlorobenzene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichloropropane	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trichlorobenzene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trimethylbenzene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromo-3-chloropropane	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromoethane	ND	0.97	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichlorobenzene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloroethane	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloropropane	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
1,3,5-Trimethylbenzene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichlorobenzene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichloropropane	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
1,4-Dichlorobenzene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
2,2-Dichloropropane	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
2-Chlorotoluene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
2-Hexanone	ND	48	ug/Kg	1	01/06/22	JLI	SW8260
2-Isopropyltoluene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
4-Chlorotoluene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
4-Methyl-2-pentanone	ND	48	ug/Kg	1	01/06/22	JLI	SW8260
Acetone	ND	480	ug/Kg	1	01/06/22	JLI	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acrylonitrile	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Benzene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Bromobenzene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Bromochloromethane	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Bromodichloromethane	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Bromoform	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Bromomethane	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Carbon Disulfide	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Carbon tetrachloride	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Chlorobenzene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Chloroethane	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Chloroform	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Chloromethane	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,2-Dichloroethene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,3-Dichloropropene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Dibromochloromethane	ND	5.8	ug/Kg	1	01/06/22	JLI	SW8260
Dibromomethane	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Dichlorodifluoromethane	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Ethylbenzene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Hexachlorobutadiene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Isopropylbenzene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
m&p-Xylene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Methyl Ethyl Ketone	ND	58	ug/Kg	1	01/06/22	JLI	SW8260
Methyl t-butyl ether (MTBE)	ND	19	ug/Kg	1	01/06/22	JLI	SW8260
Methylene chloride	ND	19	ug/Kg	1	01/06/22	JLI	SW8260
Naphthalene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
n-Butylbenzene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
n-Propylbenzene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
o-Xylene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
p-Isopropyltoluene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
sec-Butylbenzene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Styrene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
tert-Butylbenzene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Tetrachloroethene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Tetrahydrofuran (THF)	ND	19	ug/Kg	1	01/06/22	JLI	SW8260
Toluene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Total Xylenes	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,2-Dichloroethene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,3-Dichloropropene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,4-dichloro-2-butene	ND	19	ug/Kg	1	01/06/22	JLI	SW8260
Trichloroethene	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorofluoromethane	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorotrifluoroethane	ND	19	ug/Kg	1	01/06/22	JLI	SW8260
Vinyl chloride	ND	9.7	ug/Kg	1	01/06/22	JLI	SW8260
<u>QA/QC Surrogates</u>							
% 1,2-dichlorobenzene-d4	100		%	1	01/06/22	JLI	70 - 130 %
% Bromofluorobenzene	96		%	1	01/06/22	JLI	70 - 130 %
% Dibromofluoromethane	105		%	1	01/06/22	JLI	70 - 130 %
% Toluene-d8	100		%	1	01/06/22	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Polynuclear Aromatic HC</u>							
2-Methylnaphthalene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthene	390	260	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthylene	310	260	ug/Kg	1	01/06/22	WB	SW8270D
Anthracene	950	260	ug/Kg	1	01/06/22	WB	SW8270D
Benz(a)anthracene	1800	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(a)pyrene	1500	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(b)fluoranthene	1300	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(ghi)perylene	900	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(k)fluoranthene	1400	260	ug/Kg	1	01/06/22	WB	SW8270D
Chrysene	1800	260	ug/Kg	1	01/06/22	WB	SW8270D
Dibenz(a,h)anthracene	280	260	ug/Kg	1	01/06/22	WB	SW8270D
Fluoranthene	2400	260	ug/Kg	1	01/06/22	WB	SW8270D
Fluorene	510	260	ug/Kg	1	01/06/22	WB	SW8270D
Indeno(1,2,3-cd)pyrene	1000	260	ug/Kg	1	01/06/22	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Phenanthrene	3300	260	ug/Kg	1	01/06/22	WB	SW8270D
Pyrene	1800	260	ug/Kg	1	01/06/22	WB	SW8270D
<u>QA/QC Surrogates</u>							
% 2-Fluorobiphenyl	79		%	1	01/06/22	WB	30 - 130 %
% Nitrobenzene-d5	66		%	1	01/06/22	WB	30 - 130 %
% Terphenyl-d14	49		%	1	01/06/22	WB	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 11, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 11, 2022

FOR: Attn: Madelyn Sampson
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: SOIL
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by: MS
Received by: CP
Analyzed by: see "By" below

Date

01/03/22 14:48
01/05/22 12:42

Time

Laboratory Data

SDG ID: GCK09788
Phoenix ID: CK09794

Project ID: MCCOY STADIUM
Client ID: 1603220103-07

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.39	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Arsenic	6.14	0.78	mg/Kg	1	01/06/22	CPP	SW6010D
Beryllium	0.46	0.31	mg/Kg	1	01/06/22	CPP	SW6010D
Cadmium	0.54	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Chromium	12.1	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Copper	43.9	0.8	mg/kg	1	01/06/22	CPP	SW6010D
Mercury	0.11	0.03	mg/Kg	1.8	01/06/22	AP	SW7471B
Nickel	12.3	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Lead	82.3	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Antimony	< 3.9	3.9	mg/Kg	1	01/06/22	CPP	SW6010D
Selenium	< 1.6	1.6	mg/Kg	1	01/06/22	CPP	SW6010D
Thallium	< 3.5	3.5	mg/Kg	1	01/06/22	CPP	SW6010D
Zinc	73.7	0.8	mg/Kg	1	01/06/22	CPP	SW6010D
Percent Solid	92		%		01/05/22	JS	SW846-%Solid
Soil Extraction for PCB	Completed				01/05/22	O/E	SW3545A
Field Extraction	Completed				01/03/22		SW5035A
Mercury Digestion	Completed				01/06/22	AB/AB	SW7471B
Extraction of ETPH	Completed				01/05/22	I/E	SW3545A
Soil Extraction for SVOA PAH	Completed				01/05/22	I/L	SW3545A
Total Metals Digest	Completed				01/05/22	M/AG	SW3050B

Polychlorinated Biphenyls

PCB-1016	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1221	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1232	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1242	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1248	ND	360	ug/Kg	10	01/06/22	SC	SW8082A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
PCB-1254	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1260	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1262	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1268	ND	360	ug/Kg	10	01/06/22	SC	SW8082A

QA/QC Surrogates

% DCBP	78		%	10	01/06/22	SC	30 - 150 %
% DCBP (Confirmation)	78		%	10	01/06/22	SC	30 - 150 %
% TCMX	68		%	10	01/06/22	SC	30 - 150 %
% TCMX (Confirmation)	69		%	10	01/06/22	SC	30 - 150 %

TPH by GC (Extractable (C9-C36))

Fuel Oil #2 / Diesel Fuel	ND	270	mg/kg	5	01/07/22	JRB	SW8015D DRO
Fuel Oil #4	ND	270	mg/kg	5	01/07/22	JRB	SW8015D DRO
Fuel Oil #6	ND	270	mg/kg	5	01/07/22	JRB	SW8015D DRO
Kerosene	ND	270	mg/kg	5	01/07/22	JRB	SW8015D DRO
Motor Oil	ND	270	mg/kg	5	01/07/22	JRB	SW8015D DRO
Total TPH	500	270	mg/kg	5	01/07/22	JRB	SW8015D DRO
Unidentified	**	270	mg/kg	5	01/07/22	JRB	SW8015D DRO

QA/QC Surrogates

% COD (surr)	48		%	5	01/07/22	JRB	50 - 150 %
% Terphenyl (surr)	71		%	5	01/07/22	JRB	50 - 150 %

3

Volatiles

1,1,1,2-Tetrachloroethane	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
1,1,1-Trichloroethane	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2,2-Tetrachloroethane	ND	3.2	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2-Trichloroethane	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethane	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloropropene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichlorobenzene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichloropropane	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trichlorobenzene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trimethylbenzene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromo-3-chloropropane	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromoethane	ND	0.54	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichlorobenzene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloroethane	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloropropane	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
1,3,5-Trimethylbenzene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichlorobenzene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichloropropane	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
1,4-Dichlorobenzene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
2,2-Dichloropropane	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
2-Chlorotoluene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
2-Hexanone	ND	27	ug/Kg	1	01/06/22	JLI	SW8260
2-Isopropyltoluene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
4-Chlorotoluene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
4-Methyl-2-pentanone	ND	27	ug/Kg	1	01/06/22	JLI	SW8260
Acetone	ND	270	ug/Kg	1	01/06/22	JLI	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acrylonitrile	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Benzene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Bromobenzene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Bromochloromethane	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Bromodichloromethane	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Bromoform	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Bromomethane	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Carbon Disulfide	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Carbon tetrachloride	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Chlorobenzene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Chloroethane	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Chloroform	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Chloromethane	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,2-Dichloroethene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,3-Dichloropropene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Dibromochloromethane	ND	3.2	ug/Kg	1	01/06/22	JLI	SW8260
Dibromomethane	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Dichlorodifluoromethane	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Ethylbenzene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Hexachlorobutadiene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Isopropylbenzene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
m&p-Xylene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Methyl Ethyl Ketone	ND	32	ug/Kg	1	01/06/22	JLI	SW8260
Methyl t-butyl ether (MTBE)	ND	11	ug/Kg	1	01/06/22	JLI	SW8260
Methylene chloride	ND	11	ug/Kg	1	01/06/22	JLI	SW8260
Naphthalene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
n-Butylbenzene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
n-Propylbenzene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
o-Xylene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
p-Isopropyltoluene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
sec-Butylbenzene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Styrene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
tert-Butylbenzene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Tetrachloroethene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Tetrahydrofuran (THF)	ND	11	ug/Kg	1	01/06/22	JLI	SW8260
Toluene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Total Xylenes	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,2-Dichloroethene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,3-Dichloropropene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,4-dichloro-2-butene	ND	11	ug/Kg	1	01/06/22	JLI	SW8260
Trichloroethene	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorofluoromethane	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorotrifluoroethane	ND	11	ug/Kg	1	01/06/22	JLI	SW8260
Vinyl chloride	ND	5.4	ug/Kg	1	01/06/22	JLI	SW8260
<u>QA/QC Surrogates</u>							
% 1,2-dichlorobenzene-d4	100		%	1	01/06/22	JLI	70 - 130 %
% Bromofluorobenzene	97		%	1	01/06/22	JLI	70 - 130 %
% Dibromofluoromethane	117		%	1	01/06/22	JLI	70 - 130 %
% Toluene-d8	100		%	1	01/06/22	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Polynuclear Aromatic HC</u>							
2-Methylnaphthalene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthylene	460	250	ug/Kg	1	01/06/22	WB	SW8270D
Anthracene	400	250	ug/Kg	1	01/06/22	WB	SW8270D
Benz(a)anthracene	1300	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(a)pyrene	1200	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(b)fluoranthene	1200	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(ghi)perylene	910	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(k)fluoranthene	1300	250	ug/Kg	1	01/06/22	WB	SW8270D
Chrysene	1400	250	ug/Kg	1	01/06/22	WB	SW8270D
Dibenz(a,h)anthracene	270	250	ug/Kg	1	01/06/22	WB	SW8270D
Fluoranthene	1700	250	ug/Kg	1	01/06/22	WB	SW8270D
Fluorene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Indeno(1,2,3-cd)pyrene	870	250	ug/Kg	1	01/06/22	WB	SW8270D
Naphthalene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Phenanthrene	1100	250	ug/Kg	1	01/06/22	WB	SW8270D
Pyrene	1400	250	ug/Kg	1	01/06/22	WB	SW8270D
<u>QA/QC Surrogates</u>							
% 2-Fluorobiphenyl	65		%	1	01/06/22	WB	30 - 130 %
% Nitrobenzene-d5	70		%	1	01/06/22	WB	30 - 130 %
% Terphenyl-d14	49		%	1	01/06/22	WB	30 - 130 %

3 = This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TPH Comment:

**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C22 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 11, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 11, 2022

FOR: Attn: Madelyn Sampson
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: SOIL
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by: MS
Received by: CP
Analyzed by: see "By" below

Date

01/04/22
01/05/22

Time

7:30
12:42

Laboratory Data

SDG ID: GCK09788
Phoenix ID: CK09795

Project ID: MCCOY STADIUM
Client ID: 1603220103-08

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Field Extraction	Completed				01/04/22		SW5035A
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
1,1,1-Trichloroethane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
1,1,2,2-Tetrachloroethane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
1,1,2-Trichloroethane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
1,1-Dichloroethane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
1,1-Dichloroethene	ND	200	ug/Kg	50	01/06/22	JLI	SW8260
1,1-Dichloropropene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
1,2,3-Trichlorobenzene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
1,2,3-Trichloropropane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
1,2,4-Trichlorobenzene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
1,2,4-Trimethylbenzene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
1,2-Dibromo-3-chloropropane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
1,2-Dibromoethane	ND	100	ug/Kg	50	01/06/22	JLI	SW8260
1,2-Dichlorobenzene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
1,2-Dichloroethane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
1,2-Dichloropropane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
1,3,5-Trimethylbenzene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
1,3-Dichlorobenzene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
1,3-Dichloropropane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
1,4-Dichlorobenzene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
2,2-Dichloropropane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
2-Chlorotoluene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
2-Hexanone	ND	1300	ug/Kg	50	01/06/22	JLI	SW8260
2-Isopropyltoluene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Chlorotoluene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
4-Methyl-2-pentanone	ND	1300	ug/Kg	50	01/06/22	JLI	SW8260
Acetone	ND	5000	ug/Kg	50	01/06/22	JLI	SW8260
Acrylonitrile	ND	500	ug/Kg	50	01/06/22	JLI	SW8260
Benzene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Bromobenzene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Bromochloromethane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Bromodichloromethane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Bromoform	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Bromomethane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Carbon Disulfide	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Carbon tetrachloride	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Chlorobenzene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Chloroethane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Chloroform	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Chloromethane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
cis-1,2-Dichloroethene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
cis-1,3-Dichloropropene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Dibromochloromethane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Dibromomethane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Dichlorodifluoromethane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Ethylbenzene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Hexachlorobutadiene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Isopropylbenzene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
m&p-Xylene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Methyl Ethyl Ketone	ND	3000	ug/Kg	50	01/06/22	JLI	SW8260
Methyl t-butyl ether (MTBE)	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Methylene chloride	ND	500	ug/Kg	50	01/06/22	JLI	SW8260
Naphthalene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
n-Butylbenzene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
n-Propylbenzene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
o-Xylene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
p-Isopropyltoluene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
sec-Butylbenzene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Styrene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
tert-Butylbenzene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Tetrachloroethene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Tetrahydrofuran (THF)	ND	500	ug/Kg	50	01/06/22	JLI	SW8260
Toluene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Total Xylenes	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
trans-1,2-Dichloroethene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
trans-1,3-Dichloropropene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
trans-1,4-dichloro-2-butene	ND	500	ug/Kg	50	01/06/22	JLI	SW8260
Trichloroethene	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Trichlorofluoromethane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Trichlorotrifluoroethane	ND	250	ug/Kg	50	01/06/22	JLI	SW8260
Vinyl chloride	ND	100	ug/Kg	50	01/06/22	JLI	SW8260
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4 (50x)	102		%	50	01/06/22	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Bromofluorobenzene (50x)	98		%	50	01/06/22	JLI	70 - 130 %
% Dibromofluoromethane (50x)	100		%	50	01/06/22	JLI	70 - 130 %
% Toluene-d8 (50x)	98		%	50	01/06/22	JLI	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 11, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 11, 2022

FOR: Attn: Madelyn Sampson
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: SOIL
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by: MS
Received by: CP
Analyzed by: see "By" below

Date

01/04/22
01/05/22

Time

8:02
12:42

Laboratory Data

SDG ID: GCK09788
Phoenix ID: CK09796

Project ID: MCCOY STADIUM
Client ID: 1603220103-09

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.34	0.34	mg/Kg	1	01/06/22	CPP	SW6010D
Arsenic	5.27	0.68	mg/Kg	1	01/06/22	CPP	SW6010D
Beryllium	0.57	0.27	mg/Kg	1	01/06/22	CPP	SW6010D
Cadmium	0.82	0.34	mg/Kg	1	01/06/22	CPP	SW6010D
Chromium	12.1	0.34	mg/Kg	1	01/06/22	CPP	SW6010D
Copper	67.7	0.7	mg/kg	1	01/06/22	CPP	SW6010D
Mercury	0.09	0.03	mg/Kg	2	01/06/22	AP	SW7471B
Nickel	17.6	0.34	mg/Kg	1	01/06/22	CPP	SW6010D
Lead	94.3	0.34	mg/Kg	1	01/06/22	CPP	SW6010D
Antimony	< 3.4	3.4	mg/Kg	1	01/06/22	CPP	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	01/06/22	CPP	SW6010D
Thallium	< 3.1	3.1	mg/Kg	1	01/06/22	CPP	SW6010D
Zinc	110	0.7	mg/Kg	1	01/06/22	CPP	SW6010D
Percent Solid	93		%		01/05/22	JS	SW846-%Solid
Soil Extraction for PCB	Completed				01/05/22	O/E	SW3545A
Field Extraction	Completed				01/04/22		SW5035A
Mercury Digestion	Completed				01/06/22	AB/AB	SW7471B
Extraction of ETPH	Completed				01/05/22	I/E	SW3545A
Soil Extraction for SVOA PAH	Completed				01/05/22	I/L	SW3545A
Total Metals Digest	Completed				01/05/22	M/AG	SW3050B

Polychlorinated Biphenyls

PCB-1016	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1221	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1232	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1242	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1248	ND	350	ug/Kg	10	01/06/22	SC	SW8082A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
PCB-1254	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1260	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1262	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1268	ND	350	ug/Kg	10	01/06/22	SC	SW8082A

QA/QC Surrogates

% DCBP	86		%	10	01/06/22	SC	30 - 150 %
% DCBP (Confirmation)	85		%	10	01/06/22	SC	30 - 150 %
% TCMX	73		%	10	01/06/22	SC	30 - 150 %
% TCMX (Confirmation)	73		%	10	01/06/22	SC	30 - 150 %

TPH by GC (Extractable (C9-C36))

Fuel Oil #2 / Diesel Fuel	ND	270	mg/kg	5	01/06/22	JRB	SW8015D DRO
Fuel Oil #4	ND	270	mg/kg	5	01/06/22	JRB	SW8015D DRO
Fuel Oil #6	ND	270	mg/kg	5	01/06/22	JRB	SW8015D DRO
Kerosene	ND	270	mg/kg	5	01/06/22	JRB	SW8015D DRO
Motor Oil	ND	270	mg/kg	5	01/06/22	JRB	SW8015D DRO
Total TPH	ND	270	mg/kg	5	01/06/22	JRB	SW8015D DRO
Unidentified	ND	270	mg/kg	5	01/06/22	JRB	SW8015D DRO

QA/QC Surrogates

% COD (surr)	160		%	5	01/06/22	JRB	50 - 150 %
% Terphenyl (surr)	72		%	5	01/06/22	JRB	50 - 150 %

3

Volatiles

1,1,1,2-Tetrachloroethane	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
1,1,1-Trichloroethane	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2,2-Tetrachloroethane	ND	3.6	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2-Trichloroethane	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethane	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloropropene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichlorobenzene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichloropropane	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trichlorobenzene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trimethylbenzene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromo-3-chloropropane	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromoethane	ND	0.60	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichlorobenzene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloroethane	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloropropane	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
1,3,5-Trimethylbenzene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichlorobenzene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichloropropane	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
1,4-Dichlorobenzene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
2,2-Dichloropropane	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
2-Chlorotoluene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
2-Hexanone	ND	30	ug/Kg	1	01/06/22	JLI	SW8260
2-Isopropyltoluene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
4-Chlorotoluene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
4-Methyl-2-pentanone	ND	30	ug/Kg	1	01/06/22	JLI	SW8260
Acetone	ND	300	ug/Kg	1	01/06/22	JLI	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acrylonitrile	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Benzene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Bromobenzene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Bromochloromethane	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Bromodichloromethane	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Bromoform	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Bromomethane	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Carbon Disulfide	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Carbon tetrachloride	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Chlorobenzene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Chloroethane	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Chloroform	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Chloromethane	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,2-Dichloroethene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,3-Dichloropropene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Dibromochloromethane	ND	3.6	ug/Kg	1	01/06/22	JLI	SW8260
Dibromomethane	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Dichlorodifluoromethane	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Ethylbenzene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Hexachlorobutadiene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Isopropylbenzene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
m&p-Xylene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Methyl Ethyl Ketone	ND	36	ug/Kg	1	01/06/22	JLI	SW8260
Methyl t-butyl ether (MTBE)	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Methylene chloride	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Naphthalene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
n-Butylbenzene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
n-Propylbenzene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
o-Xylene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
p-Isopropyltoluene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
sec-Butylbenzene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Styrene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
tert-Butylbenzene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Tetrachloroethene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Tetrahydrofuran (THF)	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Toluene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Total Xylenes	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,2-Dichloroethene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,3-Dichloropropene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,4-dichloro-2-butene	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Trichloroethene	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorofluoromethane	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorotrifluoroethane	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Vinyl chloride	ND	6.0	ug/Kg	1	01/06/22	JLI	SW8260
<u>QA/QC Surrogates</u>							
% 1,2-dichlorobenzene-d4	100		%	1	01/06/22	JLI	70 - 130 %
% Bromofluorobenzene	96		%	1	01/06/22	JLI	70 - 130 %
% Dibromofluoromethane	105		%	1	01/06/22	JLI	70 - 130 %
% Toluene-d8	99		%	1	01/06/22	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Polynuclear Aromatic HC</u>							
2-Methylnaphthalene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthylene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Anthracene	620	250	ug/Kg	1	01/06/22	WB	SW8270D
Benz(a)anthracene	920	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(a)pyrene	780	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(b)fluoranthene	650	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(ghi)perylene	500	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(k)fluoranthene	770	250	ug/Kg	1	01/06/22	WB	SW8270D
Chrysene	860	250	ug/Kg	1	01/06/22	WB	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Fluoranthene	1400	250	ug/Kg	1	01/06/22	WB	SW8270D
Fluorene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Indeno(1,2,3-cd)pyrene	610	250	ug/Kg	1	01/06/22	WB	SW8270D
Naphthalene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Phenanthrene	2200	250	ug/Kg	1	01/06/22	WB	SW8270D
Pyrene	1000	250	ug/Kg	1	01/06/22	WB	SW8270D
<u>QA/QC Surrogates</u>							
% 2-Fluorobiphenyl	76		%	1	01/06/22	WB	30 - 130 %
% Nitrobenzene-d5	75		%	1	01/06/22	WB	30 - 130 %
% Terphenyl-d14	53		%	1	01/06/22	WB	30 - 130 %

3 = This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 11, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 11, 2022

FOR: Attn: Madelyn Sampson
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: SOIL
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by: MS
Received by: CP
Analyzed by: see "By" below

Date

01/04/22
01/05/22

Time

8:52
12:42

Laboratory Data

SDG ID: GCK09788
Phoenix ID: CK09797

Project ID: MCCOY STADIUM
Client ID: 1603220103-10

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.36	0.36	mg/Kg	1	01/06/22	CPP	SW6010D
Arsenic	4.77	0.72	mg/Kg	1	01/06/22	CPP	SW6010D
Beryllium	0.30	0.29	mg/Kg	1	01/06/22	CPP	SW6010D
Cadmium	< 0.36	0.36	mg/Kg	1	01/06/22	CPP	SW6010D
Chromium	16.2	0.36	mg/Kg	1	01/06/22	CPP	SW6010D
Copper	11.0	0.7	mg/kg	1	01/06/22	CPP	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	01/06/22	AP	SW7471B
Nickel	9.34	0.36	mg/Kg	1	01/06/22	CPP	SW6010D
Lead	23.8	0.36	mg/Kg	1	01/06/22	CPP	SW6010D
Antimony	< 3.6	3.6	mg/Kg	1	01/06/22	CPP	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	01/06/22	CPP	SW6010D
Thallium	< 3.2	3.2	mg/Kg	1	01/06/22	CPP	SW6010D
Zinc	22.3	0.7	mg/Kg	1	01/06/22	CPP	SW6010D
Percent Solid	93		%		01/05/22	JS	SW846-%Solid
Soil Extraction for PCB	Completed				01/05/22	O/E	SW3545A
Field Extraction	Completed				01/04/22		SW5035A
Mercury Digestion	Completed				01/06/22	AB/AB	SW7471B
Extraction of ETPH	Completed				01/05/22	I/E	SW3545A
Soil Extraction for SVOA PAH	Completed				01/05/22	I/L	SW3545A
Total Metals Digest	Completed				01/05/22	M/AG	SW3050B

Polychlorinated Biphenyls

PCB-1016	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1221	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1232	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1242	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1248	ND	350	ug/Kg	10	01/06/22	SC	SW8082A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
PCB-1254	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1260	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1262	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1268	ND	350	ug/Kg	10	01/06/22	SC	SW8082A

QA/QC Surrogates

% DCBP	79		%	10	01/06/22	SC	30 - 150 %
% DCBP (Confirmation)	77		%	10	01/06/22	SC	30 - 150 %
% TCMX	64		%	10	01/06/22	SC	30 - 150 %
% TCMX (Confirmation)	64		%	10	01/06/22	SC	30 - 150 %

TPH by GC (Extractable (C9-C36))

Fuel Oil #2 / Diesel Fuel	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO
Fuel Oil #4	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO
Fuel Oil #6	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO
Kerosene	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO
Motor Oil	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO
Total TPH	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO
Unidentified	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO

QA/QC Surrogates

% COD (surr)	60		%	1	01/06/22	JRB	50 - 150 %
% Terphenyl (surr)	57		%	1	01/06/22	JRB	50 - 150 %

Volatiles

1,1,1,2-Tetrachloroethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,1,1-Trichloroethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2,2-Tetrachloroethane	ND	3.6	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2-Trichloroethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloropropene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichlorobenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichloropropane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trichlorobenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trimethylbenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromo-3-chloropropane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromoethane	ND	0.61	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichlorobenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloroethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloropropane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,3,5-Trimethylbenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichlorobenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichloropropane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,4-Dichlorobenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
2,2-Dichloropropane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
2-Chlorotoluene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
2-Hexanone	ND	30	ug/Kg	1	01/06/22	JLI	SW8260
2-Isopropyltoluene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
4-Chlorotoluene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
4-Methyl-2-pentanone	ND	30	ug/Kg	1	01/06/22	JLI	SW8260
Acetone	ND	300	ug/Kg	1	01/06/22	JLI	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acrylonitrile	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Benzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Bromobenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Bromochloromethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Bromodichloromethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Bromoform	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Bromomethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Carbon Disulfide	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Carbon tetrachloride	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Chlorobenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Chloroethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Chloroform	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Chloromethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,2-Dichloroethene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,3-Dichloropropene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Dibromochloromethane	ND	3.6	ug/Kg	1	01/06/22	JLI	SW8260
Dibromomethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Dichlorodifluoromethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Ethylbenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Hexachlorobutadiene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Isopropylbenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
m&p-Xylene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Methyl Ethyl Ketone	ND	36	ug/Kg	1	01/06/22	JLI	SW8260
Methyl t-butyl ether (MTBE)	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Methylene chloride	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Naphthalene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
n-Butylbenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
n-Propylbenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
o-Xylene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
p-Isopropyltoluene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
sec-Butylbenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Styrene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
tert-Butylbenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Tetrachloroethene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Tetrahydrofuran (THF)	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Toluene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Total Xylenes	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,2-Dichloroethene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,3-Dichloropropene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,4-dichloro-2-butene	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Trichloroethene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorofluoromethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorotrifluoroethane	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Vinyl chloride	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
<u>QA/QC Surrogates</u>							
% 1,2-dichlorobenzene-d4	100		%	1	01/06/22	JLI	70 - 130 %
% Bromofluorobenzene	96		%	1	01/06/22	JLI	70 - 130 %
% Dibromofluoromethane	107		%	1	01/06/22	JLI	70 - 130 %
% Toluene-d8	99		%	1	01/06/22	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Polynuclear Aromatic HC</u>							
2-Methylnaphthalene	ND	240	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthene	ND	240	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthylene	500	240	ug/Kg	1	01/06/22	WB	SW8270D
Anthracene	500	240	ug/Kg	1	01/06/22	WB	SW8270D
Benz(a)anthracene	1100	240	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(a)pyrene	1300	240	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(b)fluoranthene	1300	240	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(ghi)perylene	960	240	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(k)fluoranthene	1200	240	ug/Kg	1	01/06/22	WB	SW8270D
Chrysene	1200	240	ug/Kg	1	01/06/22	WB	SW8270D
Dibenz(a,h)anthracene	300	240	ug/Kg	1	01/06/22	WB	SW8270D
Fluoranthene	1200	240	ug/Kg	1	01/06/22	WB	SW8270D
Fluorene	ND	240	ug/Kg	1	01/06/22	WB	SW8270D
Indeno(1,2,3-cd)pyrene	1100	240	ug/Kg	1	01/06/22	WB	SW8270D
Naphthalene	ND	240	ug/Kg	1	01/06/22	WB	SW8270D
Phenanthrene	1300	240	ug/Kg	1	01/06/22	WB	SW8270D
Pyrene	970	240	ug/Kg	1	01/06/22	WB	SW8270D
<u>QA/QC Surrogates</u>							
% 2-Fluorobiphenyl	75		%	1	01/06/22	WB	30 - 130 %
% Nitrobenzene-d5	74		%	1	01/06/22	WB	30 - 130 %
% Terphenyl-d14	50		%	1	01/06/22	WB	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 11, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 11, 2022

FOR: Attn: Madelyn Sampson
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: SOIL
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by: MS
Received by: CP
Analyzed by: see "By" below

Date

01/04/22 9:50
01/05/22 12:42

Time

Laboratory Data

SDG ID: GCK09788
Phoenix ID: CK09798

Project ID: MCCOY STADIUM
Client ID: 1603220103-11

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.40	0.40	mg/Kg	1	01/06/22	CPP	SW6010D
Arsenic	1.57	0.79	mg/Kg	1	01/06/22	CPP	SW6010D
Beryllium	< 0.32	0.32	mg/Kg	1	01/06/22	CPP	SW6010D
Cadmium	< 0.40	0.40	mg/Kg	1	01/06/22	CPP	SW6010D
Chromium	6.85	0.40	mg/Kg	1	01/06/22	CPP	SW6010D
Copper	2.0	0.8	mg/kg	1	01/06/22	CPP	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	01/06/22	AP	SW7471B
Nickel	5.41	0.40	mg/Kg	1	01/06/22	CPP	SW6010D
Lead	4.57	0.40	mg/Kg	1	01/06/22	CPP	SW6010D
Antimony	< 4.0	4.0	mg/Kg	1	01/06/22	CPP	SW6010D
Selenium	< 1.6	1.6	mg/Kg	1	01/06/22	CPP	SW6010D
Thallium	< 3.6	3.6	mg/Kg	1	01/06/22	CPP	SW6010D
Zinc	22.9	0.8	mg/Kg	1	01/06/22	CPP	SW6010D
Percent Solid	89		%		01/05/22	JS	SW846-%Solid
Soil Extraction for PCB	Completed				01/05/22	O/E	SW3545A
Field Extraction	Completed				01/04/22		SW5035A
Mercury Digestion	Completed				01/06/22	AB/AB	SW7471B
Extraction of ETPH	Completed				01/05/22	I/E	SW3545A
Soil Extraction for SVOA PAH	Completed				01/05/22	I/L	SW3545A
Total Metals Digest	Completed				01/05/22	M/AG	SW3050B

Polychlorinated Biphenyls

PCB-1016	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1221	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1232	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1242	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1248	ND	370	ug/Kg	10	01/06/22	SC	SW8082A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
PCB-1254	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1260	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1262	ND	370	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1268	ND	370	ug/Kg	10	01/06/22	SC	SW8082A

QA/QC Surrogates

% DCBP	80		%	10	01/06/22	SC	30 - 150 %
% DCBP (Confirmation)	79		%	10	01/06/22	SC	30 - 150 %
% TCMX	68		%	10	01/06/22	SC	30 - 150 %
% TCMX (Confirmation)	68		%	10	01/06/22	SC	30 - 150 %

TPH by GC (Extractable (C9-C36))

Fuel Oil #2 / Diesel Fuel	ND	56	mg/kg	1	01/06/22	JRB	SW8015D DRO
Fuel Oil #4	ND	56	mg/kg	1	01/06/22	JRB	SW8015D DRO
Fuel Oil #6	ND	56	mg/kg	1	01/06/22	JRB	SW8015D DRO
Kerosene	ND	56	mg/kg	1	01/06/22	JRB	SW8015D DRO
Motor Oil	ND	56	mg/kg	1	01/06/22	JRB	SW8015D DRO
Total TPH	ND	56	mg/kg	1	01/06/22	JRB	SW8015D DRO
Unidentified	ND	56	mg/kg	1	01/06/22	JRB	SW8015D DRO

QA/QC Surrogates

% COD (surr)	74		%	1	01/06/22	JRB	50 - 150 %
% Terphenyl (surr)	91		%	1	01/06/22	JRB	50 - 150 %

Volatiles

1,1,1,2-Tetrachloroethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,1,1-Trichloroethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2,2-Tetrachloroethane	ND	3.7	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2-Trichloroethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloropropene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichlorobenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichloropropane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trichlorobenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trimethylbenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromo-3-chloropropane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromoethane	ND	0.61	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichlorobenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloroethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloropropane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,3,5-Trimethylbenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichlorobenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichloropropane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
1,4-Dichlorobenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
2,2-Dichloropropane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
2-Chlorotoluene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
2-Hexanone	ND	31	ug/Kg	1	01/06/22	JLI	SW8260
2-Isopropyltoluene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
4-Chlorotoluene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
4-Methyl-2-pentanone	ND	31	ug/Kg	1	01/06/22	JLI	SW8260
Acetone	ND	310	ug/Kg	1	01/06/22	JLI	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acrylonitrile	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Benzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Bromobenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Bromochloromethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Bromodichloromethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Bromoform	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Bromomethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Carbon Disulfide	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Carbon tetrachloride	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Chlorobenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Chloroethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Chloroform	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Chloromethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,2-Dichloroethene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,3-Dichloropropene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Dibromochloromethane	ND	3.7	ug/Kg	1	01/06/22	JLI	SW8260
Dibromomethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Dichlorodifluoromethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Ethylbenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Hexachlorobutadiene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Isopropylbenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
m&p-Xylene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Methyl Ethyl Ketone	ND	37	ug/Kg	1	01/06/22	JLI	SW8260
Methyl t-butyl ether (MTBE)	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Methylene chloride	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Naphthalene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
n-Butylbenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
n-Propylbenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
o-Xylene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
p-Isopropyltoluene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
sec-Butylbenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Styrene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
tert-Butylbenzene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Tetrachloroethene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Tetrahydrofuran (THF)	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Toluene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Total Xylenes	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,2-Dichloroethene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,3-Dichloropropene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,4-dichloro-2-butene	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Trichloroethene	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorofluoromethane	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorotrifluoroethane	ND	12	ug/Kg	1	01/06/22	JLI	SW8260
Vinyl chloride	ND	6.1	ug/Kg	1	01/06/22	JLI	SW8260
<u>QA/QC Surrogates</u>							
% 1,2-dichlorobenzene-d4	100		%	1	01/06/22	JLI	70 - 130 %
% Bromofluorobenzene	96		%	1	01/06/22	JLI	70 - 130 %
% Dibromofluoromethane	104		%	1	01/06/22	JLI	70 - 130 %
% Toluene-d8	100		%	1	01/06/22	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Polynuclear Aromatic HC</u>							
2-Methylnaphthalene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Benz(a)anthracene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Chrysene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Fluoranthene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Phenanthrene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Pyrene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
<u>QA/QC Surrogates</u>							
% 2-Fluorobiphenyl	70		%	1	01/06/22	WB	30 - 130 %
% Nitrobenzene-d5	75		%	1	01/06/22	WB	30 - 130 %
% Terphenyl-d14	43		%	1	01/06/22	WB	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 11, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 11, 2022

FOR: Attn: Madelyn Sampson
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: SOIL
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by: MS
Received by: CP
Analyzed by: see "By" below

Date

01/04/22
01/05/22

Time

11:15
12:42

Laboratory Data

SDG ID: GCK09788
Phoenix ID: CK09799

Project ID: MCCOY STADIUM
Client ID: 1603220103-12

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.38	0.38	mg/Kg	1	01/06/22	CPP	SW6010D
Arsenic	1.51	0.75	mg/Kg	1	01/06/22	CPP	SW6010D
Beryllium	< 0.30	0.30	mg/Kg	1	01/06/22	CPP	SW6010D
Cadmium	< 0.38	0.38	mg/Kg	1	01/06/22	CPP	SW6010D
Chromium	7.33	0.38	mg/Kg	1	01/06/22	CPP	SW6010D
Copper	2.7	0.8	mg/kg	1	01/06/22	CPP	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	01/06/22	AP	SW7471B
Nickel	5.27	0.38	mg/Kg	1	01/06/22	CPP	SW6010D
Lead	4.52	0.38	mg/Kg	1	01/06/22	CPP	SW6010D
Antimony	< 3.8	3.8	mg/Kg	1	01/06/22	CPP	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	01/06/22	CPP	SW6010D
Thallium	< 3.4	3.4	mg/Kg	1	01/06/22	CPP	SW6010D
Zinc	95.9	0.8	mg/Kg	1	01/06/22	CPP	SW6010D
Percent Solid	91		%		01/05/22	JS	SW846-%Solid
Soil Extraction for PCB	Completed				01/05/22	O/E	SW3545A
Field Extraction	Completed				01/04/22		SW5035A
Mercury Digestion	Completed				01/06/22	AB/AB	SW7471B
Extraction of ETPH	Completed				01/05/22	I/E	SW3545A
Soil Extraction for SVOA PAH	Completed				01/05/22	I/L	SW3545A
Total Metals Digest	Completed				01/05/22	M/AG	SW3050B

Polychlorinated Biphenyls

PCB-1016	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1221	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1232	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1242	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1248	ND	360	ug/Kg	10	01/06/22	SC	SW8082A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
PCB-1254	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1260	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1262	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1268	ND	360	ug/Kg	10	01/06/22	SC	SW8082A
<u>QA/QC Surrogates</u>							
% DCBP	84		%	10	01/06/22	SC	30 - 150 %
% DCBP (Confirmation)	83		%	10	01/06/22	SC	30 - 150 %
% TCMX	70		%	10	01/06/22	SC	30 - 150 %
% TCMX (Confirmation)	71		%	10	01/06/22	SC	30 - 150 %

TPH by GC (Extractable (C9-C36))

Fuel Oil #2 / Diesel Fuel	ND	55	mg/kg	1	01/06/22	JRB	SW8015D DRO
Fuel Oil #4	ND	55	mg/kg	1	01/06/22	JRB	SW8015D DRO
Fuel Oil #6	ND	55	mg/kg	1	01/06/22	JRB	SW8015D DRO
Kerosene	ND	55	mg/kg	1	01/06/22	JRB	SW8015D DRO
Motor Oil	ND	55	mg/kg	1	01/06/22	JRB	SW8015D DRO
Total TPH	ND	55	mg/kg	1	01/06/22	JRB	SW8015D DRO
Unidentified	ND	55	mg/kg	1	01/06/22	JRB	SW8015D DRO

QA/QC Surrogates

% COD (surr)	82		%	1	01/06/22	JRB	50 - 150 %
% Terphenyl (surr)	92		%	1	01/06/22	JRB	50 - 150 %

Volatiles

1,1,1,2-Tetrachloroethane	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
1,1,1-Trichloroethane	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2,2-Tetrachloroethane	ND	4.9	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2-Trichloroethane	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethane	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloropropene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichlorobenzene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichloropropane	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trichlorobenzene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trimethylbenzene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromo-3-chloropropane	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromoethane	ND	0.81	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichlorobenzene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloroethane	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloropropane	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
1,3,5-Trimethylbenzene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichlorobenzene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichloropropane	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
1,4-Dichlorobenzene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
2,2-Dichloropropane	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
2-Chlorotoluene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
2-Hexanone	ND	41	ug/Kg	1	01/06/22	JLI	SW8260
2-Isopropyltoluene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
4-Chlorotoluene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
4-Methyl-2-pentanone	ND	41	ug/Kg	1	01/06/22	JLI	SW8260
Acetone	ND	410	ug/Kg	1	01/06/22	JLI	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acrylonitrile	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Benzene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Bromobenzene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Bromochloromethane	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Bromodichloromethane	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Bromoform	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Bromomethane	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Carbon Disulfide	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Carbon tetrachloride	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Chlorobenzene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Chloroethane	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Chloroform	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Chloromethane	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,2-Dichloroethene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,3-Dichloropropene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Dibromochloromethane	ND	4.9	ug/Kg	1	01/06/22	JLI	SW8260
Dibromomethane	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Dichlorodifluoromethane	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Ethylbenzene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Hexachlorobutadiene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Isopropylbenzene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
m&p-Xylene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Methyl Ethyl Ketone	ND	49	ug/Kg	1	01/06/22	JLI	SW8260
Methyl t-butyl ether (MTBE)	ND	16	ug/Kg	1	01/06/22	JLI	SW8260
Methylene chloride	ND	16	ug/Kg	1	01/06/22	JLI	SW8260
Naphthalene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
n-Butylbenzene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
n-Propylbenzene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
o-Xylene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
p-Isopropyltoluene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
sec-Butylbenzene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Styrene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
tert-Butylbenzene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Tetrachloroethene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Tetrahydrofuran (THF)	ND	16	ug/Kg	1	01/06/22	JLI	SW8260
Toluene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Total Xylenes	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,2-Dichloroethene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,3-Dichloropropene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,4-dichloro-2-butene	ND	16	ug/Kg	1	01/06/22	JLI	SW8260
Trichloroethene	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorofluoromethane	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorotrifluoroethane	ND	16	ug/Kg	1	01/06/22	JLI	SW8260
Vinyl chloride	ND	8.1	ug/Kg	1	01/06/22	JLI	SW8260
<u>QA/QC Surrogates</u>							
% 1,2-dichlorobenzene-d4	104		%	1	01/06/22	JLI	70 - 130 %
% Bromofluorobenzene	96		%	1	01/06/22	JLI	70 - 130 %
% Dibromofluoromethane	103		%	1	01/06/22	JLI	70 - 130 %
% Toluene-d8	98		%	1	01/06/22	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Polynuclear Aromatic HC</u>							
2-Methylnaphthalene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Benz(a)anthracene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Chrysene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Fluoranthene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Phenanthrene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
Pyrene	ND	260	ug/Kg	1	01/06/22	WB	SW8270D
<u>QA/QC Surrogates</u>							
% 2-Fluorobiphenyl	74		%	1	01/06/22	WB	30 - 130 %
% Nitrobenzene-d5	78		%	1	01/06/22	WB	30 - 130 %
% Terphenyl-d14	49		%	1	01/06/22	WB	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 11, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 11, 2022

FOR: Attn: Madelyn Sampson
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: SOIL
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by: MS
Received by: CP
Analyzed by: see "By" below

Date

01/04/22 12:26
01/05/22 12:42

Time

Laboratory Data

SDG ID: GCK09788
Phoenix ID: CK09800

Project ID: MCCOY STADIUM
Client ID: 1603220103-13

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.35	0.35	mg/Kg	1	01/06/22	CPP	SW6010D
Arsenic	4.90	0.71	mg/Kg	1	01/06/22	CPP	SW6010D
Beryllium	0.32	0.28	mg/Kg	1	01/06/22	CPP	SW6010D
Cadmium	0.48	0.35	mg/Kg	1	01/06/22	CPP	SW6010D
Chromium	12.3	0.35	mg/Kg	1	01/06/22	CPP	SW6010D
Copper	17.7	0.7	mg/kg	1	01/06/22	CPP	SW6010D
Mercury	0.18	0.03	mg/Kg	2	01/06/22	AP	SW7471B
Nickel	9.88	0.35	mg/Kg	1	01/06/22	CPP	SW6010D
Lead	141	0.35	mg/Kg	1	01/06/22	CPP	SW6010D
Antimony	< 3.5	3.5	mg/Kg	1	01/06/22	CPP	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	01/06/22	CPP	SW6010D
Thallium	< 3.2	3.2	mg/Kg	1	01/06/22	CPP	SW6010D
Zinc	85.6	0.7	mg/Kg	1	01/06/22	CPP	SW6010D
Percent Solid	93		%		01/05/22	JS	SW846-%Solid
Soil Extraction for PCB	Completed				01/05/22	O/E	SW3545A
Field Extraction	Completed				01/04/22		SW5035A
Mercury Digestion	Completed				01/06/22	AB/AB	SW7471B
Extraction of ETPH	Completed				01/05/22	I/E	SW3545A
Soil Extraction for SVOA PAH	Completed				01/05/22	I/L	SW3545A
Total Metals Digest	Completed				01/05/22	M/AG	SW3050B

Polychlorinated Biphenyls

PCB-1016	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1221	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1232	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1242	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1248	ND	350	ug/Kg	10	01/06/22	SC	SW8082A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
PCB-1254	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1260	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1262	ND	350	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1268	ND	350	ug/Kg	10	01/06/22	SC	SW8082A

QA/QC Surrogates

% DCBP	79		%	10	01/06/22	SC	30 - 150 %
% DCBP (Confirmation)	78		%	10	01/06/22	SC	30 - 150 %
% TCMX	67		%	10	01/06/22	SC	30 - 150 %
% TCMX (Confirmation)	68		%	10	01/06/22	SC	30 - 150 %

TPH by GC (Extractable (C9-C36))

Fuel Oil #2 / Diesel Fuel	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO
Fuel Oil #4	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO
Fuel Oil #6	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO
Kerosene	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO
Motor Oil	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO
Total TPH	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO
Unidentified	ND	54	mg/kg	1	01/06/22	JRB	SW8015D DRO

QA/QC Surrogates

% COD (surr)	108		%	1	01/06/22	JRB	50 - 150 %
% Terphenyl (surr)	94		%	1	01/06/22	JRB	50 - 150 %

Volatiles

1,1,1,2-Tetrachloroethane	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
1,1,1-Trichloroethane	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2,2-Tetrachloroethane	ND	3.4	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2-Trichloroethane	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethane	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloropropene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichlorobenzene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichloropropane	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trichlorobenzene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trimethylbenzene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromo-3-chloropropane	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromoethane	ND	0.57	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichlorobenzene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloroethane	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloropropane	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
1,3,5-Trimethylbenzene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichlorobenzene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichloropropane	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
1,4-Dichlorobenzene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
2,2-Dichloropropane	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
2-Chlorotoluene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
2-Hexanone	ND	28	ug/Kg	1	01/06/22	JLI	SW8260
2-Isopropyltoluene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
4-Chlorotoluene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
4-Methyl-2-pentanone	ND	28	ug/Kg	1	01/06/22	JLI	SW8260
Acetone	ND	280	ug/Kg	1	01/06/22	JLI	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acrylonitrile	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Benzene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Bromobenzene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Bromochloromethane	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Bromodichloromethane	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Bromoform	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Bromomethane	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Carbon Disulfide	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Carbon tetrachloride	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Chlorobenzene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Chloroethane	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Chloroform	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Chloromethane	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,2-Dichloroethene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,3-Dichloropropene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Dibromochloromethane	ND	3.4	ug/Kg	1	01/06/22	JLI	SW8260
Dibromomethane	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Dichlorodifluoromethane	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Ethylbenzene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Hexachlorobutadiene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Isopropylbenzene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
m&p-Xylene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Methyl Ethyl Ketone	ND	34	ug/Kg	1	01/06/22	JLI	SW8260
Methyl t-butyl ether (MTBE)	ND	11	ug/Kg	1	01/06/22	JLI	SW8260
Methylene chloride	ND	11	ug/Kg	1	01/06/22	JLI	SW8260
Naphthalene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
n-Butylbenzene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
n-Propylbenzene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
o-Xylene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
p-Isopropyltoluene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
sec-Butylbenzene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Styrene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
tert-Butylbenzene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Tetrachloroethene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Tetrahydrofuran (THF)	ND	11	ug/Kg	1	01/06/22	JLI	SW8260
Toluene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Total Xylenes	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,2-Dichloroethene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,3-Dichloropropene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,4-dichloro-2-butene	ND	11	ug/Kg	1	01/06/22	JLI	SW8260
Trichloroethene	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorofluoromethane	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorotrifluoroethane	ND	11	ug/Kg	1	01/06/22	JLI	SW8260
Vinyl chloride	ND	5.7	ug/Kg	1	01/06/22	JLI	SW8260
<u>QA/QC Surrogates</u>							
% 1,2-dichlorobenzene-d4	101		%	1	01/06/22	JLI	70 - 130 %
% Bromofluorobenzene	89		%	1	01/06/22	JLI	70 - 130 %
% Dibromofluoromethane	116		%	1	01/06/22	JLI	70 - 130 %
% Toluene-d8	99		%	1	01/06/22	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Polynuclear Aromatic HC</u>							
2-Methylnaphthalene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthylene	250	250	ug/Kg	1	01/06/22	WB	SW8270D
Anthracene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Benz(a)anthracene	490	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(a)pyrene	570	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(b)fluoranthene	560	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(ghi)perylene	450	250	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(k)fluoranthene	540	250	ug/Kg	1	01/06/22	WB	SW8270D
Chrysene	560	250	ug/Kg	1	01/06/22	WB	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Fluoranthene	620	250	ug/Kg	1	01/06/22	WB	SW8270D
Fluorene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Indeno(1,2,3-cd)pyrene	490	250	ug/Kg	1	01/06/22	WB	SW8270D
Naphthalene	ND	250	ug/Kg	1	01/06/22	WB	SW8270D
Phenanthrene	360	250	ug/Kg	1	01/06/22	WB	SW8270D
Pyrene	460	250	ug/Kg	1	01/06/22	WB	SW8270D
<u>QA/QC Surrogates</u>							
% 2-Fluorobiphenyl	75		%	1	01/06/22	WB	30 - 130 %
% Nitrobenzene-d5	78		%	1	01/06/22	WB	30 - 130 %
% Terphenyl-d14	50		%	1	01/06/22	WB	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 11, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 11, 2022

FOR: Attn: Madelyn Sampson
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: SOIL
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by: MS
Received by: CP
Analyzed by: see "By" below

Date

01/04/22 14:09
01/05/22 12:42

Time

Laboratory Data

SDG ID: GCK09788
Phoenix ID: CK09801

Project ID: MCCOY STADIUM
Client ID: 1603220103-14

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.39	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Arsenic	13.4	0.77	mg/Kg	1	01/06/22	CPP	SW6010D
Beryllium	0.42	0.31	mg/Kg	1	01/06/22	CPP	SW6010D
Cadmium	0.60	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Chromium	15.3	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Copper	21.8	0.8	mg/kg	1	01/06/22	CPP	SW6010D
Mercury	0.08	0.03	mg/Kg	2	01/06/22	AP	SW7471B
Nickel	12.5	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Lead	48.3	0.39	mg/Kg	1	01/06/22	CPP	SW6010D
Antimony	< 3.9	3.9	mg/Kg	1	01/06/22	CPP	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	01/06/22	CPP	SW6010D
Thallium	< 3.5	3.5	mg/Kg	1	01/06/22	CPP	SW6010D
Zinc	64.7	0.8	mg/Kg	1	01/06/22	CPP	SW6010D
Percent Solid	82		%		01/05/22	JS	SW846-%Solid
Soil Extraction for PCB	Completed				01/05/22	O/E	SW3545A
Field Extraction	Completed				01/04/22		SW5035A
Mercury Digestion	Completed				01/06/22	AB/AB	SW7471B
Extraction of ETPH	Completed				01/05/22	I/E	SW3545A
Soil Extraction for SVOA PAH	Completed				01/05/22	I/L	SW3545A
Total Metals Digest	Completed				01/05/22	M/AG	SW3050B

Polychlorinated Biphenyls

PCB-1016	ND	410	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1221	ND	410	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1232	ND	410	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1242	ND	410	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1248	ND	410	ug/Kg	10	01/06/22	SC	SW8082A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
PCB-1254	ND	410	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1260	ND	410	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1262	ND	410	ug/Kg	10	01/06/22	SC	SW8082A
PCB-1268	ND	410	ug/Kg	10	01/06/22	SC	SW8082A

QA/QC Surrogates

% DCBP	83		%	10	01/06/22	SC	30 - 150 %
% DCBP (Confirmation)	77		%	10	01/06/22	SC	30 - 150 %
% TCMX	69		%	10	01/06/22	SC	30 - 150 %
% TCMX (Confirmation)	68		%	10	01/06/22	SC	30 - 150 %

TPH by GC (Extractable (C9-C36))

Fuel Oil #2 / Diesel Fuel	ND	60	mg/kg	1	01/06/22	JRB	SW8015D DRO
Fuel Oil #4	ND	60	mg/kg	1	01/06/22	JRB	SW8015D DRO
Fuel Oil #6	ND	60	mg/kg	1	01/06/22	JRB	SW8015D DRO
Kerosene	ND	60	mg/kg	1	01/06/22	JRB	SW8015D DRO
Motor Oil	ND	60	mg/kg	1	01/06/22	JRB	SW8015D DRO
Total TPH	ND	60	mg/kg	1	01/06/22	JRB	SW8015D DRO
Unidentified	ND	60	mg/kg	1	01/06/22	JRB	SW8015D DRO

QA/QC Surrogates

% COD (surr)	113		%	1	01/06/22	JRB	50 - 150 %
% Terphenyl (surr)	96		%	1	01/06/22	JRB	50 - 150 %

Volatiles

1,1,1,2-Tetrachloroethane	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
1,1,1-Trichloroethane	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2,2-Tetrachloroethane	ND	4.6	ug/Kg	1	01/06/22	JLI	SW8260
1,1,2-Trichloroethane	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethane	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloroethene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
1,1-Dichloropropene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichlorobenzene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2,3-Trichloropropane	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trichlorobenzene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2,4-Trimethylbenzene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromo-3-chloropropane	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dibromoethane	ND	0.77	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichlorobenzene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloroethane	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
1,2-Dichloropropane	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
1,3,5-Trimethylbenzene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichlorobenzene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
1,3-Dichloropropane	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
1,4-Dichlorobenzene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
2,2-Dichloropropane	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
2-Chlorotoluene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
2-Hexanone	ND	38	ug/Kg	1	01/06/22	JLI	SW8260
2-Isopropyltoluene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
4-Chlorotoluene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
4-Methyl-2-pentanone	ND	38	ug/Kg	1	01/06/22	JLI	SW8260
Acetone	ND	380	ug/Kg	1	01/06/22	JLI	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acrylonitrile	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Benzene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Bromobenzene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Bromochloromethane	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Bromodichloromethane	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Bromoform	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Bromomethane	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Carbon Disulfide	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Carbon tetrachloride	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Chlorobenzene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Chloroethane	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Chloroform	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Chloromethane	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,2-Dichloroethene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
cis-1,3-Dichloropropene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Dibromochloromethane	ND	4.6	ug/Kg	1	01/06/22	JLI	SW8260
Dibromomethane	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Dichlorodifluoromethane	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Ethylbenzene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Hexachlorobutadiene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Isopropylbenzene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
m&p-Xylene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Methyl Ethyl Ketone	ND	46	ug/Kg	1	01/06/22	JLI	SW8260
Methyl t-butyl ether (MTBE)	ND	15	ug/Kg	1	01/06/22	JLI	SW8260
Methylene chloride	ND	15	ug/Kg	1	01/06/22	JLI	SW8260
Naphthalene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
n-Butylbenzene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
n-Propylbenzene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
o-Xylene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
p-Isopropyltoluene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
sec-Butylbenzene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Styrene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
tert-Butylbenzene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Tetrachloroethene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Tetrahydrofuran (THF)	ND	15	ug/Kg	1	01/06/22	JLI	SW8260
Toluene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Total Xylenes	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,2-Dichloroethene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,3-Dichloropropene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
trans-1,4-dichloro-2-butene	ND	15	ug/Kg	1	01/06/22	JLI	SW8260
Trichloroethene	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorofluoromethane	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
Trichlorotrifluoroethane	ND	15	ug/Kg	1	01/06/22	JLI	SW8260
Vinyl chloride	ND	7.7	ug/Kg	1	01/06/22	JLI	SW8260
<u>QA/QC Surrogates</u>							
% 1,2-dichlorobenzene-d4	100		%	1	01/06/22	JLI	70 - 130 %
% Bromofluorobenzene	97		%	1	01/06/22	JLI	70 - 130 %
% Dibromofluoromethane	116		%	1	01/06/22	JLI	70 - 130 %
% Toluene-d8	100		%	1	01/06/22	JLI	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Polynuclear Aromatic HC</u>							
2-Methylnaphthalene	ND	280	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthene	ND	280	ug/Kg	1	01/06/22	WB	SW8270D
Acenaphthylene	ND	280	ug/Kg	1	01/06/22	WB	SW8270D
Anthracene	ND	280	ug/Kg	1	01/06/22	WB	SW8270D
Benz(a)anthracene	340	280	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(a)pyrene	320	280	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(b)fluoranthene	300	280	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(ghi)perylene	ND	280	ug/Kg	1	01/06/22	WB	SW8270D
Benzo(k)fluoranthene	330	280	ug/Kg	1	01/06/22	WB	SW8270D
Chrysene	380	280	ug/Kg	1	01/06/22	WB	SW8270D
Dibenz(a,h)anthracene	ND	280	ug/Kg	1	01/06/22	WB	SW8270D
Fluoranthene	390	280	ug/Kg	1	01/06/22	WB	SW8270D
Fluorene	ND	280	ug/Kg	1	01/06/22	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	280	ug/Kg	1	01/06/22	WB	SW8270D
Naphthalene	ND	280	ug/Kg	1	01/06/22	WB	SW8270D
Phenanthrene	410	280	ug/Kg	1	01/06/22	WB	SW8270D
Pyrene	300	280	ug/Kg	1	01/06/22	WB	SW8270D
<u>QA/QC Surrogates</u>							
% 2-Fluorobiphenyl	74		%	1	01/06/22	WB	30 - 130 %
% Nitrobenzene-d5	78		%	1	01/06/22	WB	30 - 130 %
% Terphenyl-d14	49		%	1	01/06/22	WB	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 11, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

January 11, 2022

QA/QC Data

SDG I.D.: GCK09788

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 607162 (mg/kg), QC Sample No: CK09794 2X (CK09789, CK09790, CK09791, CK09792, CK09793, CK09794, CK09796, CK09797, CK09798, CK09799, CK09800, CK09801)													
Mercury - Soil	BRL	0.02	0.11	0.09	20.0	108	107	0.9	117	116	0.9	70 - 130	30

Comment:

Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 70-130%. MS acceptance range is 75-125%.

QA/QC Batch 607087 (mg/kg), QC Sample No: CK09765 (CK09789, CK09790, CK09791, CK09792, CK09793, CK09794, CK09796, CK09797, CK09798, CK09799, CK09800, CK09801)

ICP Metals - Soil

Antimony	BRL	3.3	<3.7	<3.3	NC	91.5	87.9	4.0	87.9			75 - 125	35
Arsenic	BRL	0.67	3.09	3.42	NC	98.8	93.7	5.3	94.7			75 - 125	35
Beryllium	BRL	0.27	0.37	0.40	NC	96.6	91.2	5.8	95.4			75 - 125	35
Cadmium	BRL	0.33	0.55	0.64	NC	92.5	85.8	7.5	94.2			75 - 125	35
Chromium	BRL	0.33	18.2	23.2	24.2	99.3	92.9	6.7	104			75 - 125	35
Copper	BRL	0.67	32.6	40.6	21.9	99.2	94.5	4.9	98.7			75 - 125	35
Lead	BRL	0.33	24.5	45.1	59.2	104	101	2.9	92.8			75 - 125	35
Nickel	BRL	0.33	14.5	17.7	19.9	91.7	84.4	8.3	101			75 - 125	35
Selenium	BRL	1.3	<1.5	<1.3	NC	96.2	89.7	7.0	93.5			75 - 125	35
Silver	BRL	0.33	<0.37	<0.33	NC	101	96.0	5.1	95.5			75 - 125	35
Thallium	BRL	3.0	<3.4	<3.0	NC	100	91.5	8.9	93.8			75 - 125	35
Zinc	BRL	0.67	68.6	59.1	14.9	96.3	95.1	1.3	103			75 - 125	35

Comment:

Additional Criteria: LCS acceptance range is 80-120% MS acceptance range 75-125%.

r = This parameter is outside laboratory RPD specified recovery limits.



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QA/QC Report

January 11, 2022

QA/QC Data

SDG I.D.: GCK09788

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
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QA/QC Batch 607098 (mg/Kg), QC Sample No: CK09797 (CK09789, CK09790, CK09792, CK09793, CK09794, CK09796, CK09797, CK09798, CK09799, CK09800, CK09801)

TPH by GC (Extractable Products) - Soil

Ext. Petroleum H.C. (C9-C36)	ND	50	105	93	12.1	92	92	0.0	60 - 120	30
% COD (surr)	93	%	95	92	3.2	96	93	3.2	50 - 150	30
% Terphenyl (surr)	88	%	92	81	12.7	82	86	4.8	50 - 150	30

Comment:

Additional surrogate criteria: LCS acceptance range is 60-120% MS acceptance range 50-150%. The ETPH/DRO LCS has been normalized based on the alkane calibration.

QA/QC Batch 607091 (ug/Kg), QC Sample No: CK09771 2X (CK09789, CK09790, CK09791, CK09792, CK09793, CK09794, CK09796, CK09797, CK09798, CK09799, CK09800, CK09801)

Polychlorinated Biphenyls - Soil

PCB-1016	ND	33	82	80	2.5	81	77	5.1	40 - 140	30
PCB-1221	ND	33							40 - 140	30
PCB-1232	ND	33							40 - 140	30
PCB-1242	ND	33							40 - 140	30
PCB-1248	ND	33							40 - 140	30
PCB-1254	ND	33							40 - 140	30
PCB-1260	ND	33	82	81	1.2	81	79	2.5	40 - 140	30
PCB-1262	ND	33							40 - 140	30
PCB-1268	ND	33							40 - 140	30
% DCBP (Surrogate Rec)	79	%	89	105	16.5	92	89	3.3	30 - 150	30
% DCBP (Surrogate Rec) (Confirm)	81	%	92	110	17.8	95	112	16.4	30 - 150	30
% TCMX (Surrogate Rec)	82	%	85	85	0.0	83	79	4.9	30 - 150	30
% TCMX (Surrogate Rec) (Confirm)	81	%	86	87	1.2	84	80	4.9	30 - 150	30

QA/QC Batch 607036 (ug/kg), QC Sample No: CK08944 (CK09789)

Polynuclear Aromatic HC - Soil

2-Methylnaphthalene	ND	230	77	70	9.5	68	55	21.1	40 - 140	30
Acenaphthene	ND	230	87	82	5.9	69	62	10.7	30 - 130	30
Acenaphthylene	ND	230	80	76	5.1	64	58	9.8	40 - 140	30
Anthracene	ND	230	86	82	4.8	69	62	10.7	40 - 140	30
Benz(a)anthracene	ND	230	84	79	6.1	69	63	9.1	40 - 140	30
Benzo(a)pyrene	ND	230	83	80	3.7	69	61	12.3	40 - 140	30
Benzo(b)fluoranthene	ND	230	87	85	2.3	70	62	12.1	40 - 140	30
Benzo(ghi)perylene	ND	230	88	87	1.1	76	70	8.2	40 - 140	30
Benzo(k)fluoranthene	ND	230	89	84	5.8	69	61	12.3	40 - 140	30
Chrysene	ND	230	87	83	4.7	70	63	10.5	40 - 140	30
Dibenz(a,h)anthracene	ND	230	93	92	1.1	80	74	7.8	40 - 140	30
Fluoranthene	ND	230	94	90	4.3	75	69	8.3	40 - 140	30
Fluorene	ND	230	86	78	9.8	72	63	13.3	40 - 140	30
Indeno(1,2,3-cd)pyrene	ND	230	107	77	32.6	72	64	11.8	40 - 140	30
Naphthalene	ND	230	75	71	5.5	60	54	10.5	40 - 140	30
Phenanthrene	ND	230	84	79	6.1	73	64	13.1	40 - 140	30

QA/QC Data

SDG I.D.: GCK09788

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Pyrene	ND	230	97	94	3.1	75	71	5.5	30 - 130	30
% 2-Fluorobiphenyl	82	%	78	80	2.5	60	58	3.4	30 - 130	30
% Nitrobenzene-d5	68	%	68	66	3.0	61	50	19.8	30 - 130	30
% Terphenyl-d14	87	%	97	96	1.0	74	71	4.1	30 - 130	30

Comment:

Additional 8270 criteria: 20% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 15-110%, for soils 30-130%)

QA/QC Batch 607099 (ug/kg), QC Sample No: CK09794 (CK09790, CK09791, CK09792, CK09793, CK09794, CK09796, CK09797, CK09798, CK09799, CK09800, CK09801)

Polynuclear Aromatic HC - Soil

2-Methylnaphthalene	ND	230	64	71	10.4	70	74	5.6	40 - 140	30	
Acenaphthene	ND	230	79	83	4.9	81	83	2.4	30 - 130	30	
Acenaphthylene	ND	230	75	77	2.6	67	69	2.9	40 - 140	30	
Anthracene	ND	230	82	84	2.4	75	77	2.6	40 - 140	30	
Benz(a)anthracene	ND	230	82	85	3.6	73	72	1.4	40 - 140	30	
Benzo(a)pyrene	ND	230	76	78	2.6	59	59	0.0	40 - 140	30	
Benzo(b)fluoranthene	ND	230	77	80	3.8	68	70	2.9	40 - 140	30	
Benzo(ghi)perylene	ND	230	67	74	9.9	71	70	1.4	40 - 140	30	
Benzo(k)fluoranthene	ND	230	78	76	2.6	60	58	3.4	40 - 140	30	
Chrysene	ND	230	82	84	2.4	74	73	1.4	40 - 140	30	
Dibenz(a,h)anthracene	ND	230	83	89	7.0	87	88	1.1	40 - 140	30	
Fluoranthene	ND	230	84	86	2.4	78	46	51.6	40 - 140	30	r
Fluorene	ND	230	80	81	1.2	84	85	1.2	40 - 140	30	
Indeno(1,2,3-cd)pyrene	ND	230	92	95	3.2	80	77	3.8	40 - 140	30	
Naphthalene	ND	230	62	70	12.1	68	64	6.1	40 - 140	30	
Phenanthrene	ND	230	82	84	2.4	84	74	12.7	40 - 140	30	
Pyrene	ND	230	80	71	11.9	63	42	40.0	30 - 130	30	r
% 2-Fluorobiphenyl	81	%	71	76	6.8	70	66	5.9	30 - 130	30	
% Nitrobenzene-d5	66	%	57	66	14.6	69	62	10.7	30 - 130	30	
% Terphenyl-d14	67	%	88	83	5.8	67	57	16.1	30 - 130	30	

Comment:

Additional 8270 criteria: 20% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 15-110%, for soils 30-130%)

QA/QC Batch 607214 (ug/kg), QC Sample No: CK09767 (CK09789, CK09790)

Volatiles - Soil (Low Level)

1,1,1,2-Tetrachloroethane	ND	5.0	100	105	4.9	88			70 - 130	30	
1,1,1-Trichloroethane	ND	5.0	100	107	6.8	97			70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	3.0	101	105	3.9	84			70 - 130	30	
1,1,2-Trichloroethane	ND	5.0	98	103	5.0	91			70 - 130	30	
1,1-Dichloroethane	ND	5.0	105	111	5.6	103			70 - 130	30	
1,1-Dichloroethene	ND	5.0	102	108	5.7	101			70 - 130	30	
1,1-Dichloropropene	ND	5.0	102	107	4.8	98			70 - 130	30	
1,2,3-Trichlorobenzene	ND	5.0	100	102	2.0	40			70 - 130	30	m
1,2,3-Trichloropropane	ND	5.0	104	109	4.7	94			70 - 130	30	
1,2,4-Trichlorobenzene	ND	5.0	103	104	1.0	42			70 - 130	30	m
1,2,4-Trimethylbenzene	ND	1.0	100	103	3.0	67			70 - 130	30	m
1,2-Dibromo-3-chloropropane	ND	5.0	99	102	3.0	78			70 - 130	30	
1,2-Dibromoethane	ND	5.0	101	105	3.9	91			70 - 130	30	
1,2-Dichlorobenzene	ND	5.0	96	101	5.1	58			70 - 130	30	m
1,2-Dichloroethane	ND	5.0	98	103	5.0	93			70 - 130	30	
1,2-Dichloropropane	ND	5.0	102	107	4.8	100			70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	101	107	5.8	76			70 - 130	30	

QA/QC Data

SDG I.D.: GCK09788

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,3-Dichlorobenzene	ND	5.0	98	102	4.0	63			70 - 130	30	m
1,3-Dichloropropane	ND	5.0	102	106	3.8	95			70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	97	100	3.0	62			70 - 130	30	m
2,2-Dichloropropane	ND	5.0	108	115	6.3	104			70 - 130	30	
2-Chlorotoluene	ND	5.0	100	105	4.9	74			70 - 130	30	
2-Hexanone	ND	25	106	108	1.9	87			70 - 130	30	
2-Isopropyltoluene	ND	5.0	100	104	3.9	68			70 - 130	30	m
4-Chlorotoluene	ND	5.0	101	105	3.9	73			70 - 130	30	
4-Methyl-2-pentanone	ND	25	111	115	3.5	103			70 - 130	30	
Acetone	ND	10	106	109	2.8	93			70 - 130	30	
Acrylonitrile	ND	5.0	107	110	2.8	95			70 - 130	30	
Benzene	ND	1.0	100	105	4.9	98			70 - 130	30	
Bromobenzene	ND	5.0	98	103	5.0	77			70 - 130	30	
Bromochloromethane	ND	5.0	103	107	3.8	97			70 - 130	30	
Bromodichloromethane	ND	5.0	99	104	4.9	93			70 - 130	30	
Bromoform	ND	5.0	100	103	3.0	81			70 - 130	30	
Bromomethane	ND	5.0	94	101	7.2	99			70 - 130	30	
Carbon Disulfide	ND	5.0	99	104	4.9	93			70 - 130	30	
Carbon tetrachloride	ND	5.0	92	99	7.3	87			70 - 130	30	
Chlorobenzene	ND	5.0	97	102	5.0	83			70 - 130	30	
Chloroethane	ND	5.0	99	108	8.7	103			70 - 130	30	
Chloroform	ND	5.0	102	109	6.6	98			70 - 130	30	
Chloromethane	ND	5.0	96	103	7.0	100			70 - 130	30	
cis-1,2-Dichloroethene	ND	5.0	102	109	6.6	99			70 - 130	30	
cis-1,3-Dichloropropene	ND	5.0	104	108	3.8	94			70 - 130	30	
Dibromochloromethane	ND	3.0	98	102	4.0	88			70 - 130	30	
Dibromomethane	ND	5.0	100	106	5.8	92			70 - 130	30	
Dichlorodifluoromethane	ND	5.0	97	104	7.0	108			70 - 130	30	
Ethylbenzene	ND	1.0	99	103	4.0	84			70 - 130	30	
Hexachlorobutadiene	ND	5.0	99	103	4.0	49			70 - 130	30	m
Isopropylbenzene	ND	1.0	102	106	3.8	83			70 - 130	30	
m&p-Xylene	ND	2.0	100	105	4.9	82			70 - 130	30	
Methyl ethyl ketone	ND	5.0	107	114	6.3	97			70 - 130	30	
Methyl t-butyl ether (MTBE)	ND	1.0	101	107	5.8	100			70 - 130	30	
Methylene chloride	ND	5.0	93	99	6.3	90			70 - 130	30	
Naphthalene	ND	5.0	103	107	3.8	15			70 - 130	30	m
n-Butylbenzene	ND	1.0	105	110	4.7	61			70 - 130	30	m
n-Propylbenzene	ND	1.0	101	106	4.8	75			70 - 130	30	
o-Xylene	ND	2.0	98	102	4.0	81			70 - 130	30	
p-Isopropyltoluene	ND	1.0	103	107	3.8	71			70 - 130	30	
sec-Butylbenzene	ND	1.0	103	107	3.8	70			70 - 130	30	
Styrene	ND	5.0	103	108	4.7	75			70 - 130	30	
tert-Butylbenzene	ND	1.0	101	107	5.8	77			70 - 130	30	
Tetrachloroethene	ND	5.0	97	102	5.0	82			70 - 130	30	
Tetrahydrofuran (THF)	ND	5.0	107	109	1.9	101			70 - 130	30	
Toluene	ND	1.0	97	103	6.0	90			70 - 130	30	
trans-1,2-Dichloroethene	ND	5.0	101	107	5.8	96			70 - 130	30	
trans-1,3-Dichloropropene	ND	5.0	106	112	5.5	90			70 - 130	30	
trans-1,4-dichloro-2-butene	ND	5.0	111	114	2.7	91			70 - 130	30	
Trichloroethene	ND	5.0	98	103	5.0	95			70 - 130	30	
Trichlorofluoromethane	ND	5.0	101	108	6.7	98			70 - 130	30	
Trichlorotrifluoroethane	ND	5.0	92	97	5.3	89			70 - 130	30	
Vinyl chloride	ND	5.0	105	113	7.3	110			70 - 130	30	

QA/QC Data

SDG I.D.: GCK09788

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% 1,2-dichlorobenzene-d4	102	%	101	101	0.0	99			70 - 130	30
% Bromofluorobenzene	95	%	101	100	1.0	99			70 - 130	30
% Dibromofluoromethane	101	%	100	100	0.0	99			70 - 130	30
% Toluene-d8	98	%	99	100	1.0	100			70 - 130	30

Comment:

The MSD is not reported for this LL soil batch.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%, 25-160% for Chloroethane-HL and Trichlorofluoromethane-HL.

QA/QC Batch 607240 (ug/kg), QC Sample No: CK09799 (CK09799)

Volatiles - Soil (Low Level)

1,1,1,2-Tetrachloroethane	ND	5.0	99	98	1.0	91			70 - 130	30	
1,1,1-Trichloroethane	ND	5.0	100	99	1.0	95			70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	3.0	100	101	1.0	85			70 - 130	30	
1,1,2-Trichloroethane	ND	5.0	99	98	1.0	93			70 - 130	30	
1,1-Dichloroethane	ND	5.0	105	103	1.9	101			70 - 130	30	
1,1-Dichloroethene	ND	5.0	103	101	2.0	97			70 - 130	30	
1,1-Dichloropropene	ND	5.0	102	100	2.0	95			70 - 130	30	
1,2,3-Trichlorobenzene	ND	5.0	100	100	0.0	47			70 - 130	30	m
1,2,3-Trichloropropane	ND	5.0	105	105	0.0	91			70 - 130	30	
1,2,4-Trichlorobenzene	ND	5.0	102	101	1.0	46			70 - 130	30	m
1,2,4-Trimethylbenzene	ND	1.0	99	96	3.1	74			70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	5.0	99	102	3.0	77			70 - 130	30	
1,2-Dibromoethane	ND	5.0	101	101	0.0	94			70 - 130	30	
1,2-Dichlorobenzene	ND	5.0	97	95	2.1	64			70 - 130	30	m
1,2-Dichloroethane	ND	5.0	97	96	1.0	94			70 - 130	30	
1,2-Dichloropropane	ND	5.0	103	101	2.0	99			70 - 130	30	
1,3,5-Trimethylbenzene	ND	1.0	101	99	2.0	78			70 - 130	30	
1,3-Dichlorobenzene	ND	5.0	98	95	3.1	65			70 - 130	30	m
1,3-Dichloropropane	ND	5.0	101	102	1.0	95			70 - 130	30	
1,4-Dichlorobenzene	ND	5.0	95	94	1.1	64			70 - 130	30	m
2,2-Dichloropropane	ND	5.0	108	106	1.9	101			70 - 130	30	
2-Chlorotoluene	ND	5.0	100	99	1.0	76			70 - 130	30	
2-Hexanone	ND	25	108	109	0.9	94			70 - 130	30	
2-Isopropyltoluene	ND	5.0	99	96	3.1	75			70 - 130	30	
4-Chlorotoluene	ND	5.0	100	99	1.0	74			70 - 130	30	
4-Methyl-2-pentanone	ND	25	112	114	1.8	104			70 - 130	30	
Acetone	ND	10	100	100	0.0	64			70 - 130	30	m
Acrylonitrile	ND	5.0	105	107	1.9	96			70 - 130	30	
Benzene	ND	1.0	102	100	2.0	96			70 - 130	30	
Bromobenzene	ND	5.0	99	98	1.0	79			70 - 130	30	
Bromochloromethane	ND	5.0	102	101	1.0	99			70 - 130	30	
Bromodichloromethane	ND	5.0	100	98	2.0	93			70 - 130	30	
Bromoform	ND	5.0	97	98	1.0	84			70 - 130	30	
Bromomethane	ND	5.0	103	97	6.0	89			70 - 130	30	
Carbon Disulfide	ND	5.0	100	98	2.0	93			70 - 130	30	
Carbon tetrachloride	ND	5.0	92	91	1.1	86			70 - 130	30	
Chlorobenzene	ND	5.0	97	96	1.0	84			70 - 130	30	
Chloroethane	ND	5.0	102	101	1.0	98			70 - 130	30	
Chloroform	ND	5.0	102	101	1.0	97			70 - 130	30	
Chloromethane	ND	5.0	104	101	2.9	91			70 - 130	30	
cis-1,2-Dichloroethene	ND	5.0	104	102	1.9	98			70 - 130	30	
cis-1,3-Dichloropropene	ND	5.0	105	104	1.0	97			70 - 130	30	

QA/QC Data

SDG I.D.: GCK09788

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Dibromochloromethane	ND	3.0	98	97	1.0	90			70 - 130	30
Dibromomethane	ND	5.0	102	100	2.0	96			70 - 130	30
Dichlorodifluoromethane	ND	5.0	103	100	3.0	100			70 - 130	30
Ethylbenzene	ND	1.0	98	97	1.0	85			70 - 130	30
Hexachlorobutadiene	ND	5.0	97	95	2.1	48			70 - 130	30 m
Isopropylbenzene	ND	1.0	102	100	2.0	83			70 - 130	30
m&p-Xylene	ND	2.0	99	98	1.0	84			70 - 130	30
Methyl ethyl ketone	ND	5.0	111	113	1.8	96			70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	101	100	1.0	100			70 - 130	30
Methylene chloride	ND	5.0	94	93	1.1	89			70 - 130	30
Naphthalene	ND	5.0	106	107	0.9	61			70 - 130	30 m
n-Butylbenzene	ND	1.0	102	100	2.0	61			70 - 130	30 m
n-Propylbenzene	ND	1.0	100	99	1.0	77			70 - 130	30
o-Xylene	ND	2.0	99	97	2.0	85			70 - 130	30
p-Isopropyltoluene	ND	1.0	101	99	2.0	71			70 - 130	30
sec-Butylbenzene	ND	1.0	101	99	2.0	73			70 - 130	30
Styrene	ND	5.0	103	102	1.0	85			70 - 130	30
tert-Butylbenzene	ND	1.0	101	100	1.0	81			70 - 130	30
Tetrachloroethene	ND	5.0	96	94	2.1	84			70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	107	107	0.0	97			70 - 130	30
Toluene	ND	1.0	99	97	2.0	91			70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	101	99	2.0	96			70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	106	105	0.9	97			70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	111	112	0.9	91			70 - 130	30
Trichloroethene	ND	5.0	99	98	1.0	92			70 - 130	30
Trichlorofluoromethane	ND	5.0	98	96	2.1	96			70 - 130	30
Trichlorotrifluoroethane	ND	5.0	89	88	1.1	85			70 - 130	30
Vinyl chloride	ND	5.0	110	106	3.7	102			70 - 130	30
% 1,2-dichlorobenzene-d4	101	%	101	101	0.0	98			70 - 130	30
% Bromofluorobenzene	96	%	100	101	1.0	100			70 - 130	30
% Dibromofluoromethane	101	%	100	100	0.0	101			70 - 130	30
% Toluene-d8	98	%	100	101	1.0	100			70 - 130	30

Comment:

The MSD is not reported for this LL soil batch.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%, 25-160% for Chloroethane-HL and Trichlorofluoromethane-HL.

QA/QC Batch 607191 (ug/kg), QC Sample No: CK10058 (CK09788, CK09791, CK09792, CK09793, CK09794, CK09796, CK09797, CK09798, CK09800, CK09801)

Volatiles - Soil (Low Level)

1,1,1,2-Tetrachloroethane	ND	5.0	96	96	0.0	91	100	9.4	70 - 130	30
1,1,1-Trichloroethane	ND	5.0	101	101	0.0	105	115	9.1	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	3.0	90	87	3.4	78	91	15.4	70 - 130	30
1,1,2-Trichloroethane	ND	5.0	93	91	2.2	87	95	8.8	70 - 130	30
1,1-Dichloroethane	ND	5.0	97	95	2.1	101	106	4.8	70 - 130	30
1,1-Dichloroethene	ND	5.0	110	109	0.9	114	119	4.3	70 - 130	30
1,1-Dichloropropene	ND	5.0	117	113	3.5	116	122	5.0	70 - 130	30
1,2,3-Trichlorobenzene	ND	5.0	103	99	4.0	64	87	30.5	70 - 130	30 m
1,2,3-Trichloropropane	ND	5.0	93	90	3.3	86	98	13.0	70 - 130	30
1,2,4-Trichlorobenzene	ND	5.0	101	97	4.0	65	85	26.7	70 - 130	30 m
1,2,4-Trimethylbenzene	ND	1.0	95	91	4.3	85	97	13.2	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	5.0	92	90	2.2	77	94	19.9	70 - 130	30
1,2-Dibromoethane	ND	5.0	97	95	2.1	94	103	9.1	70 - 130	30

QA/QC Data

SDG I.D.: GCK09788

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2-Dichlorobenzene	ND	5.0	96	93	3.2	80	97	19.2	70 - 130	30
1,2-Dichloroethane	ND	5.0	100	97	3.0	99	106	6.8	70 - 130	30
1,2-Dichloropropane	ND	5.0	93	91	2.2	92	99	7.3	70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	97	94	3.1	90	100	10.5	70 - 130	30
1,3-Dichlorobenzene	ND	5.0	94	90	4.3	79	95	18.4	70 - 130	30
1,3-Dichloropropane	ND	5.0	97	94	3.1	95	106	10.9	70 - 130	30
1,4-Dichlorobenzene	ND	5.0	95	91	4.3	80	96	18.2	70 - 130	30
2,2-Dichloropropane	ND	5.0	98	98	0.0	97	102	5.0	70 - 130	30
2-Chlorotoluene	ND	5.0	97	94	3.1	88	101	13.8	70 - 130	30
2-Hexanone	ND	25	87	85	2.3	80	92	14.0	70 - 130	30
2-Isopropyltoluene	ND	5.0	96	93	3.2	87	99	12.9	70 - 130	30
4-Chlorotoluene	ND	5.0	95	92	3.2	85	97	13.2	70 - 130	30
4-Methyl-2-pentanone	ND	25	91	87	4.5	84	96	13.3	70 - 130	30
Acetone	ND	10	94	97	3.1	94	108	13.9	70 - 130	30
Acrylonitrile	ND	5.0	90	88	2.2	88	101	13.8	70 - 130	30
Benzene	ND	1.0	99	97	2.0	99	105	5.9	70 - 130	30
Bromobenzene	ND	5.0	96	92	4.3	88	100	12.8	70 - 130	30
Bromochloromethane	ND	5.0	103	102	1.0	104	111	6.5	70 - 130	30
Bromodichloromethane	ND	5.0	95	91	4.3	89	97	8.6	70 - 130	30
Bromoform	ND	5.0	87	87	0.0	72	86	17.7	70 - 130	30
Bromomethane	ND	5.0	118	120	1.7	127	133	4.6	70 - 130	30 m
Carbon Disulfide	ND	5.0	97	96	1.0	102	107	4.8	70 - 130	30
Carbon tetrachloride	ND	5.0	97	95	2.1	94	100	6.2	70 - 130	30
Chlorobenzene	ND	5.0	99	97	2.0	96	104	8.0	70 - 130	30
Chloroethane	ND	5.0	88	88	0.0	96	98	2.1	70 - 130	30
Chloroform	ND	5.0	98	98	0.0	103	109	5.7	70 - 130	30
Chloromethane	ND	5.0	81	80	1.2	86	91	5.6	70 - 130	30
cis-1,2-Dichloroethene	ND	5.0	103	102	1.0	106	114	7.3	70 - 130	30
cis-1,3-Dichloropropene	ND	5.0	93	90	3.3	86	96	11.0	70 - 130	30
Dibromochloromethane	ND	3.0	95	94	1.1	85	98	14.2	70 - 130	30
Dibromomethane	ND	5.0	98	96	2.1	94	104	10.1	70 - 130	30
Dichlorodifluoromethane	ND	5.0	116	114	1.7	134	140	4.4	70 - 130	30 m
Ethylbenzene	ND	1.0	100	97	3.0	97	104	7.0	70 - 130	30
Hexachlorobutadiene	ND	5.0	98	93	5.2	75	91	19.3	70 - 130	30
Isopropylbenzene	ND	1.0	97	94	3.1	94	102	8.2	70 - 130	30
m&p-Xylene	ND	2.0	99	97	2.0	96	104	8.0	70 - 130	30
Methyl ethyl ketone	ND	5.0	98	93	5.2	89	99	10.6	70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	96	94	2.1	98	107	8.8	70 - 130	30
Methylene chloride	ND	5.0	84	84	0.0	87	93	6.7	70 - 130	30
Naphthalene	ND	5.0	106	103	2.9	75	98	26.6	70 - 130	30
n-Butylbenzene	ND	1.0	95	93	2.1	83	97	15.6	70 - 130	30
n-Propylbenzene	ND	1.0	98	95	3.1	90	101	11.5	70 - 130	30
o-Xylene	ND	2.0	96	94	2.1	92	100	8.3	70 - 130	30
p-Isopropyltoluene	ND	1.0	97	94	3.1	88	100	12.8	70 - 130	30
sec-Butylbenzene	ND	1.0	98	94	4.2	90	100	10.5	70 - 130	30
Styrene	ND	5.0	96	95	1.0	91	101	10.4	70 - 130	30
tert-Butylbenzene	ND	1.0	98	95	3.1	92	102	10.3	70 - 130	30
Tetrachloroethene	ND	5.0	101	97	4.0	99	105	5.9	70 - 130	30
Tetrahydrofuran (THF)	ND	5.0	90	89	1.1	89	103	14.6	70 - 130	30
Toluene	ND	1.0	98	95	3.1	95	102	7.1	70 - 130	30
trans-1,2-Dichloroethene	ND	5.0	102	103	1.0	107	111	3.7	70 - 130	30
trans-1,3-Dichloropropene	ND	5.0	95	92	3.2	88	96	8.7	70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	90	86	4.5	74	85	13.8	70 - 130	30

QA/QC Data

SDG I.D.: GCK09788

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Trichloroethene	ND	5.0	101	98	3.0	104	107	2.8	70 - 130	30
Trichlorofluoromethane	ND	5.0	114	114	0.0	124	131	5.5	70 - 130	30
Trichlorotrifluoroethane	ND	5.0	102	99	3.0	108	112	3.6	70 - 130	30
Vinyl chloride	ND	5.0	105	104	1.0	112	119	6.1	70 - 130	30
% 1,2-dichlorobenzene-d4	99	%	101	101	0.0	101	100	1.0	70 - 130	30
% Bromofluorobenzene	96	%	100	101	1.0	101	100	1.0	70 - 130	30
% Dibromofluoromethane	107	%	104	105	1.0	105	108	2.8	70 - 130	30
% Toluene-d8	99	%	101	100	1.0	99	99	0.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%, 25-160% for Chloroethane-HL and Trichlorofluoromethane-HL.

QA/QC Batch 607191H (ug/kg), QC Sample No: CK10058 50X (CK09795 (50X))

Volatiles - Soil (High Level)

1,1,1,2-Tetrachloroethane	ND	250	104	104	0.0	95	93	2.1	70 - 130	30
1,1,1-Trichloroethane	ND	250	104	105	1.0	109	107	1.9	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	250	98	98	0.0	94	93	1.1	70 - 130	30
1,1,2-Trichloroethane	ND	250	96	98	2.1	97	93	4.2	70 - 130	30
1,1-Dichloroethane	ND	250	100	101	1.0	105	101	3.9	70 - 130	30
1,1-Dichloroethene	ND	250	71	67	5.8	68	66	3.0	70 - 130	30
1,1-Dichloropropene	ND	250	124	121	2.4	122	118	3.3	70 - 130	30
1,2,3-Trichlorobenzene	ND	250	112	116	3.5	105	102	2.9	70 - 130	30
1,2,3-Trichloropropane	ND	250	97	100	3.0	96	94	2.1	70 - 130	30
1,2,4-Trichlorobenzene	ND	250	113	116	2.6	107	102	4.8	70 - 130	30
1,2,4-Trimethylbenzene	ND	250	103	103	0.0	101	98	3.0	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	250	96	100	4.1	85	87	2.3	70 - 130	30
1,2-Dibromoethane	ND	250	102	106	3.8	102	100	2.0	70 - 130	30
1,2-Dichlorobenzene	ND	250	107	108	0.9	105	103	1.9	70 - 130	30
1,2-Dichloroethane	ND	250	103	105	1.9	107	103	3.8	70 - 130	30
1,2-Dichloropropane	ND	250	98	99	1.0	98	94	4.2	70 - 130	30
1,3,5-Trimethylbenzene	ND	250	105	105	0.0	102	100	2.0	70 - 130	30
1,3-Dichlorobenzene	ND	250	105	105	0.0	100	98	2.0	70 - 130	30
1,3-Dichloropropane	ND	250	104	105	1.0	104	103	1.0	70 - 130	30
1,4-Dichlorobenzene	ND	250	107	107	0.0	103	101	2.0	70 - 130	30
2,2-Dichloropropane	ND	250	101	102	1.0	101	96	5.1	70 - 130	30
2-Chlorotoluene	ND	250	106	106	0.0	101	100	1.0	70 - 130	30
2-Hexanone	ND	1300	89	93	4.4	89	86	3.4	70 - 130	30
2-Isopropyltoluene	ND	250	103	104	1.0	101	99	2.0	70 - 130	30
4-Chlorotoluene	ND	250	105	104	1.0	101	98	3.0	70 - 130	30
4-Methyl-2-pentanone	ND	1300	91	94	3.2	91	89	2.2	70 - 130	30
Acetone	ND	500	72	71	1.4	71	67	5.8	70 - 130	30
Acrylonitrile	ND	250	91	94	3.2	100	95	5.1	70 - 130	30
Benzene	ND	250	104	106	1.9	104	101	2.9	70 - 130	30
Bromobenzene	ND	250	103	105	1.9	101	99	2.0	70 - 130	30
Bromochloromethane	ND	250	107	108	0.9	109	106	2.8	70 - 130	30
Bromodichloromethane	ND	250	96	96	0.0	90	88	2.2	70 - 130	30
Bromoform	ND	250	90	91	1.1	72	73	1.4	70 - 130	30
Bromomethane	ND	250	93	96	3.2	89	95	6.5	70 - 130	30
Carbon Disulfide	ND	250	62	58	6.7	61	60	1.7	70 - 130	30
Carbon tetrachloride	ND	250	98	98	0.0	88	86	2.3	70 - 130	30
Chlorobenzene	ND	250	110	109	0.9	107	104	2.8	70 - 130	30
Chloroethane	ND	250	33	31	6.3	34	33	3.0	70 - 130	30
Chloroform	ND	250	103	97	6.0	109	95	13.7	70 - 130	30

QA/QC Data

SDG I.D.: GCK09788

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Chloromethane	ND	250	88	88	0.0	93	85	9.0	70 - 130	30
cis-1,2-Dichloroethene	ND	250	107	110	2.8	114	101	12.1	70 - 130	30
cis-1,3-Dichloropropene	ND	250	97	98	1.0	92	89	3.3	70 - 130	30
Dibromochloromethane	ND	150	100	99	1.0	84	83	1.2	70 - 130	30
Dibromomethane	ND	250	101	103	2.0	103	98	5.0	70 - 130	30
Dichlorodifluoromethane	ND	250	129	126	2.4	135	128	5.3	70 - 130	30 m
Ethylbenzene	ND	250	110	111	0.9	107	103	3.8	70 - 130	30
Hexachlorobutadiene	ND	250	109	111	1.8	104	102	1.9	70 - 130	30
Isopropylbenzene	ND	250	105	106	0.9	101	99	2.0	70 - 130	30
m&p-Xylene	ND	250	110	110	0.0	107	104	2.8	70 - 130	30
Methyl ethyl ketone	ND	250	99	100	1.0	103	96	7.0	70 - 130	30
Methyl t-butyl ether (MTBE)	ND	250	97	97	0.0	103	99	4.0	70 - 130	30
Methylene chloride	ND	250	84	81	3.6	86	84	2.4	70 - 130	30
Naphthalene	ND	250	112	115	2.6	104	103	1.0	70 - 130	30
n-Butylbenzene	ND	250	107	109	1.9	102	100	2.0	70 - 130	30
n-Propylbenzene	ND	250	106	106	0.0	102	100	2.0	70 - 130	30
o-Xylene	ND	250	106	106	0.0	102	100	2.0	70 - 130	30
p-Isopropyltoluene	ND	250	107	106	0.9	103	100	3.0	70 - 130	30
sec-Butylbenzene	ND	250	105	106	0.9	101	99	2.0	70 - 130	30
Styrene	ND	250	107	107	0.0	104	101	2.9	70 - 130	30
tert-Butylbenzene	ND	250	105	105	0.0	102	100	2.0	70 - 130	30
Tetrachloroethene	ND	250	108	109	0.9	105	101	3.9	70 - 130	30
Tetrahydrofuran (THF)	ND	250	92	97	5.3	107	102	4.8	70 - 130	30
Toluene	ND	250	104	104	0.0	103	99	4.0	70 - 130	30
trans-1,2-Dichloroethene	ND	250	105	104	1.0	108	102	5.7	70 - 130	30
trans-1,3-Dichloropropene	ND	250	98	100	2.0	93	91	2.2	70 - 130	30
trans-1,4-dichloro-2-butene	ND	250	93	96	3.2	83	81	2.4	70 - 130	30
Trichloroethene	ND	250	107	109	1.9	108	103	4.7	70 - 130	30
Trichlorofluoromethane	ND	250	30	31	3.3	33	32	3.1	70 - 130	30 l,m
Trichlorotrifluoroethane	ND	250	70	68	2.9	72	68	5.7	70 - 130	30 l,m
Vinyl chloride	ND	250	113	114	0.9	116	110	5.3	70 - 130	30
% 1,2-dichlorobenzene-d4	100	%	100	100	0.0	101	102	1.0	70 - 130	30
% Bromofluorobenzene	96	%	99	100	1.0	101	101	0.0	70 - 130	30
% Dibromofluoromethane	97	%	97	96	1.0	106	107	0.9	70 - 130	30
% Toluene-d8	99	%	98	99	1.0	100	99	1.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%, 25-160% for Chloroethane-HL and Trichlorofluoromethane-HL.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.

m = This parameter is outside laboratory MS/MSD specified recovery limits.

r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MS Dup - Matrix Spike Duplicate

NC - No Criteria

Intf - Interference



Phyllis Shiller, Laboratory Director

January 11, 2022

Tuesday, January 11, 2022

Criteria: RI: RC

State: RI

Sample Criteria Exceedances Report

GCK09788 - FO-RI

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CK09789	AS-SM	Arsenic	RI / Direct Exposure Criteria / Inorganics (Res)	12.1	0.73	7	7	mg/Kg
CK09789	BE-SM	Beryllium	RI / Direct Exposure Criteria / Inorganics (Res)	0.43	0.29	0.4	0.4	mg/Kg
CK09790	AS-SM	Arsenic	RI / Direct Exposure Criteria / Inorganics (Res)	8.89	0.71	7	7	mg/Kg
CK09790	BE-SM	Beryllium	RI / Direct Exposure Criteria / Inorganics (Res)	0.50	0.28	0.4	0.4	mg/Kg
CK09791	\$8100SMR	Benzo(a)pyrene	RI / Direct Exposure Criteria / Semivolatiles (Res)	670	260	400	400	ug/Kg
CK09791	\$8100SMR	Chrysene	RI / Direct Exposure Criteria / Semivolatiles (Res)	660	260	400	400	ug/Kg
CK09791	AS-SM	Arsenic	RI / Direct Exposure Criteria / Inorganics (Res)	8.41	0.78	7	7	mg/Kg
CK09791	BE-SM	Beryllium	RI / Direct Exposure Criteria / Inorganics (Res)	0.46	0.31	0.4	0.4	mg/Kg
CK09792	\$8100SMR	Benzo(b)fluoranthene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1200	250	900	900	ug/Kg
CK09792	\$8100SMR	Benzo(k)fluoranthene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1000	250	900	900	ug/Kg
CK09792	\$8100SMR	Benzo(a)pyrene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1200	250	400	400	ug/Kg
CK09792	\$8100SMR	Benz(a)anthracene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1100	250	900	900	ug/Kg
CK09792	\$8100SMR	Chrysene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1200	250	400	400	ug/Kg
CK09792	AS-SM	Arsenic	RI / Direct Exposure Criteria / Inorganics (Res)	7.04	0.70	7	7	mg/Kg
CK09792	BE-SM	Beryllium	RI / Direct Exposure Criteria / Inorganics (Res)	0.61	0.28	0.4	0.4	mg/Kg
CK09792	PB-SM	Lead	RI / Direct Exposure Criteria / Inorganics (Res)	157	0.35	150	150	mg/Kg
CK09793	\$8100SMR	Indeno(1,2,3-cd)pyrene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1000	260	900	900	ug/Kg
CK09793	\$8100SMR	Benz(a)anthracene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1800	260	900	900	ug/Kg
CK09793	\$8100SMR	Benzo(a)pyrene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1500	260	400	400	ug/Kg
CK09793	\$8100SMR	Benzo(b)fluoranthene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1300	260	900	900	ug/Kg
CK09793	\$8100SMR	Benzo(ghi)perylene	RI / Direct Exposure Criteria / Semivolatiles (Res)	900	260	800	800	ug/Kg
CK09793	\$8100SMR	Benzo(k)fluoranthene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1400	260	900	900	ug/Kg
CK09793	\$8100SMR	Chrysene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1800	260	400	400	ug/Kg
CK09793	BE-SM	Beryllium	RI / Direct Exposure Criteria / Inorganics (Res)	0.56	0.31	0.4	0.4	mg/Kg
CK09793	PB-SM	Lead	RI / Direct Exposure Criteria / Inorganics (Res)	245	0.39	150	150	mg/Kg
CK09794	\$8100SMR	Benz(a)anthracene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1300	250	900	900	ug/Kg
CK09794	\$8100SMR	Benzo(a)pyrene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1200	250	400	400	ug/Kg
CK09794	\$8100SMR	Benzo(b)fluoranthene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1200	250	900	900	ug/Kg
CK09794	\$8100SMR	Benzo(ghi)perylene	RI / Direct Exposure Criteria / Semivolatiles (Res)	910	250	800	800	ug/Kg
CK09794	\$8100SMR	Benzo(k)fluoranthene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1300	250	900	900	ug/Kg
CK09794	\$8100SMR	Chrysene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1400	250	400	400	ug/Kg
CK09794	BE-SM	Beryllium	RI / Direct Exposure Criteria / Inorganics (Res)	0.46	0.31	0.4	0.4	mg/Kg
CK09796	\$8100SMR	Chrysene	RI / Direct Exposure Criteria / Semivolatiles (Res)	860	250	400	400	ug/Kg
CK09796	\$8100SMR	Benz(a)anthracene	RI / Direct Exposure Criteria / Semivolatiles (Res)	920	250	900	900	ug/Kg
CK09796	\$8100SMR	Benzo(a)pyrene	RI / Direct Exposure Criteria / Semivolatiles (Res)	780	250	400	400	ug/Kg
CK09796	BE-SM	Beryllium	RI / Direct Exposure Criteria / Inorganics (Res)	0.57	0.27	0.4	0.4	mg/Kg

Tuesday, January 11, 2022

Criteria: RI: RC

State: RI

Sample Criteria Exceedances Report

GCK09788 - FO-RI

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CK09797	\$8100SMR	Benzo(a)pyrene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1300	240	400	400	ug/Kg
CK09797	\$8100SMR	Benzo(b)fluoranthene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1300	240	900	900	ug/Kg
CK09797	\$8100SMR	Benzo(ghi)perylene	RI / Direct Exposure Criteria / Semivolatiles (Res)	960	240	800	800	ug/Kg
CK09797	\$8100SMR	Benzo(k)fluoranthene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1200	240	900	900	ug/Kg
CK09797	\$8100SMR	Chrysene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1200	240	400	400	ug/Kg
CK09797	\$8100SMR	Indeno(1,2,3-cd)pyrene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1100	240	900	900	ug/Kg
CK09797	\$8100SMR	Benz(a)anthracene	RI / Direct Exposure Criteria / Semivolatiles (Res)	1100	240	900	900	ug/Kg
CK09800	\$8100SMR	Benzo(a)pyrene	RI / Direct Exposure Criteria / Semivolatiles (Res)	570	250	400	400	ug/Kg
CK09800	\$8100SMR	Chrysene	RI / Direct Exposure Criteria / Semivolatiles (Res)	560	250	400	400	ug/Kg
CK09801	AS-SM	Arsenic	RI / Direct Exposure Criteria / Inorganics (Res)	13.4	0.77	7	7	mg/Kg
CK09801	BE-SM	Beryllium	RI / Direct Exposure Criteria / Inorganics (Res)	0.42	0.31	0.4	0.4	mg/Kg

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Comments

January 11, 2022

SDG I.D.: GCK09788

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

VOA Narration

CHEM31 01/05/22-2: CK09788, CK09791, CK09792, CK09793, CK09794, CK09795, CK09796, CK09797, CK09798, CK09800, CK09801

The following Initial Calibration compounds did not meet RSD% criteria: Chloroethane 27% (20%), Methyl Ethyl Ketone 27% (20%), Methylene chloride 35% (20%)

The following Initial Calibration compounds did not meet maximum RSD% criteria: None.

The following Initial Calibration compounds did not meet recommended response factors: Acetone 0.087 (0.1), Tetrachloroethene 0.159 (0.2)

The following Initial Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.



FUSS & O'NEILL

(860) 646-2469 • www.FandO.com

- ☐ 146 Hartford Road, Manchester, CT 06040
☒ 56 Quarry Road, Trumbull, CT 06611
☐ 1419 Richland Street, Columbia, SC 29201

- ☐ 78 Interstate Drive, West Springfield, MA 01089
☒ 317 Iron Horse Way, Suite 204, Providence, RI 02908
☐ 80 Washington Street, Suite 301, Poughkeepsie, NY

Page 1 of 2

WCIP
2.4

☐ Other

CHAIN-OF-CUSTODY RECORD

37158

Turnaround

☐ 24-Hour* ☐ 72-Hour* ☐ Other (days)
☐ 48-Hour* ☒ Standard (days) *Surcharge Applies

PROJECT NAME:

Mokey Stadium

PROJECT LOCATION:

Pawtucket, RI

PROJECT NUMBER:

20160501810

LABORATORY:

Phoenix

REPORT TO: Madelyn Sampson (msampson@fandoc.com)

INVOICE TO: "

Analysis Request

Containers

P.O. No: 1603220160501810

Date: 1/3/22

Sampler's Signature: Madelyn Sampson

Source Codes: MW=Monitoring Well PW=Portable Water T=Treatment Facility S=Soil B=Sediment
SW=Surface Water ST=Stormwater W=Waste A=Air C=Concrete

X=Other TNSB BURN

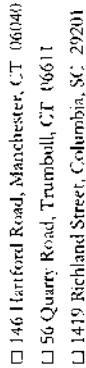
Item No.	Transfer Check				Sample Number	Source Code	Date Sampled	Time Sampled	Analysis Request									
	1	2	3	4					PAH	PCB	THH	PCBs	Soil VOA	Glass VOA	Other	Other	Other	Comments
1	X				1603220103-01 LL	X	1/3/22	0730	X									Tip Blank
2	X				-02	MW		0600	X	X	X							MW-5
3	X				-03			0930	X	X	X							MW-6
4	X				-04			1119	X	X	X							MW-7
5	X				-05			1221	X	X	X							MW-8
6	X				-06			1400	X	X	X							MW-9 *
7	X				-07			1448	X	X	X							MW-10
8	X				1603220104-06 HL	X	1/4/22	0730	X									Tip Blank
9	X				-09	MW	1/4/22	0802	X	X	X							MW-11 *
10	X				-10	MW	1/4/22	0852	X	X	X							MW-12

Transfer Number	Relinquished By	Accepted By	Date	Time
1	Madelyn Sampson	F+O SRIDGE	1/3/22	1630
2	Theresa, Syle	F+O FLIDGE	1/4/22	1515
3			1/5/22	1000
4			1/5	1242

Charge Exceptions: ☐ CT Tax Exempt ☐ QA/QC ☐ Other
Reporting and Detection Limit Requirements: ☐ RCP Deliverables ☐ MCP CAM Cert.

Additional Comments:

* 1X LL VOA received broken EJ



☐ 78 Interstate Drive, West Springfield, MA 01089
☒ 317 Iron Horse Way, Suite 204, Providence, RI 02908
☐ 80 Washington Street, Suite 301, Poughkeepsie, NY

page 2 of 2
WCIP
2.4

37183

Tubing round

☐ 24-Hour* ☐ 72-Hour* ☐ Other _____ (days)

☐ 48-Hour* ☒ Standard { _____ days} *Surcharge Applies

Project Number

26160501, B10

erson@fando.com

—

Date: 1/4/22Oil
B-Sediment
Concrete $X=Other$

Item No.	Transfer Check				Sample Number	Source Code	Date Sampled	Time Sampled
	1	2	3	4				
11					1103220104 - 11	HW	1/4/22	0450
12					- 12	↓	↓	1115
13					- 13	↓	↓	1226
14					- 14	↓	↓	1409

W	P4	PM	TR	PC	Soil	Class	Chit	Water	Class	Phase	Phase	CONTENTS
X	X	X	X	X	1	2	1		09798			SB-13
X	X	X	X	X	1	2	1		09799			SB-14
X	X	X	X	X	1	2	1		09800			MW-15
X	X	X	X	X	1	2	1		09801			SB-16

Transfer Number	Relinquished By	Accepted By	Date	Time	Charge Exceptions: <input type="checkbox"/> CTT Tax Exempt <input type="checkbox"/> Q/A/QC <input type="checkbox"/> Other _____ _____ Duplicates _____ Blanks _____ (Item Nos. _____)
1	Mailec Syn	P. O. F. A. S. S. E	11/14/22	1515	Reporting and Detection Limit Requirements: <input type="checkbox"/> RCP Deliverables <input type="checkbox"/> MCP CMM Cert.
2			11/15/22	1000	
3			11/15	1242	Additional Comments:
4					

Appendix C

Phoenix Laboratory Analytical Report – Groundwater



Thursday, February 03, 2022

Attn: Allen Tevyaw
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Project ID: MCCOY STADIUM
SDG ID: GCK26146
Sample ID#s: CK26146 - CK26150

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis Shiller

Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



SDG Comments

February 03, 2022

SDG I.D.: GCK26146

8260 Analysis:

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane do not meet GW criteria, these compounds are analyzed by GC/ECD method 504 or 8011 when this criteria needs to be met.



Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

February 03, 2022

SDG I.D.: GCK26146

Project ID: MCCOY STADIUM

Client Id	Lab Id	Matrix
1708220127-01	CK26146	GROUND WATER
1708220127-02	CK26147	GROUND WATER
1708220127-03	CK26148	GROUND WATER
1708220127-04	CK26149	GROUND WATER
1708220127-05	CK26150	GROUND WATER



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

February 03, 2022

FOR: Attn: Allen Tevyaw
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: GROUND WATER
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by:
Received by: B
Analyzed by: see "By" below

Date

01/27/22
01/31/22

Time

11:15
14:58

Laboratory Data

SDG ID: GCK26146
Phoenix ID: CK26146

Project ID: MCCOY STADIUM
Client ID: 1708220127-01

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,1-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,1,2-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloropropene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromoethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloroethane	ND	0.60	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,4-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Hexanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
2-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Methyl-2-pentanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	02/02/22	MH	SW8260
Acrylonitrile	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Benzene	ND	0.70	ug/L	1	02/02/22	MH	SW8260
Bromobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromochloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromodichloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Bromoform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Carbon Disulfide	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Carbon tetrachloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Dibromochloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Dibromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Dichlorodifluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Ethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Hexachlorobutadiene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Isopropylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
m&p-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methyl ethyl ketone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methylene chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Naphthalene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Propylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
o-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
p-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
sec-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Styrene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
tert-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrachloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	02/02/22	MH	SW8260
Toluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Total Xylenes	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Trichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorofluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorotrifluoroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Vinyl chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	02/02/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	02/02/22	MH	70 - 130 %
% Dibromofluoromethane	108		%	1	02/02/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8	101		%	1	02/02/22	MH	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

February 03, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

February 03, 2022

FOR: Attn: Allen Tevyaw
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: GROUND WATER
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by:
Received by: B
Analyzed by: see "By" below

Date

01/27/22 12:10
01/31/22 14:58

Time

Laboratory Data

SDG ID: GCK26146
Phoenix ID: CK26147

Project ID: MCCOY STADIUM
Client ID: 1708220127-02

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,1-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,1,2-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloropropene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromoethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloroethane	ND	0.60	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,4-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Hexanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
2-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Methyl-2-pentanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	02/02/22	MH	SW8260
Acrylonitrile	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Benzene	ND	0.70	ug/L	1	02/02/22	MH	SW8260
Bromobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromochloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromodichloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Bromoform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Carbon Disulfide	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Carbon tetrachloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Dibromochloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Dibromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Dichlorodifluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Ethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Hexachlorobutadiene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Isopropylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
m&p-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methyl ethyl ketone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methylene chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Naphthalene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Propylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
o-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
p-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
sec-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Styrene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
tert-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrachloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	02/02/22	MH	SW8260
Toluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Total Xylenes	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Trichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorofluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorotrifluoroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Vinyl chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	02/02/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	02/02/22	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	02/02/22	MH	70 - 130 %

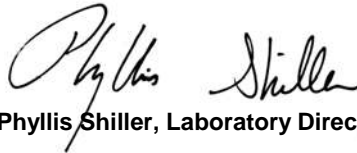
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8	102		%	1	02/02/22	MH	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

February 03, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

February 03, 2022

FOR: Attn: Allen Tevyaw
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: GROUND WATER
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by:
Received by: B
Analyzed by: see "By" below

Date

01/27/22 13:35
01/31/22 14:58

Time

Laboratory Data

SDG ID: GCK26146
Phoenix ID: CK26148

Project ID: MCCOY STADIUM
Client ID: 1708220127-03

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,1-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,1,2-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloropropene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromoethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloroethane	ND	0.60	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,4-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Hexanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
2-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Methyl-2-pentanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	02/02/22	MH	SW8260
Acrylonitrile	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Benzene	ND	0.70	ug/L	1	02/02/22	MH	SW8260
Bromobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromochloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromodichloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Bromoform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Carbon Disulfide	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Carbon tetrachloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Dibromochloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Dibromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Dichlorodifluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Ethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Hexachlorobutadiene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Isopropylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
m&p-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methyl ethyl ketone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methylene chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Naphthalene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Propylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
o-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
p-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
sec-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Styrene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
tert-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrachloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	02/02/22	MH	SW8260
Toluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Total Xylenes	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Trichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorofluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorotrifluoroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Vinyl chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	02/02/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	02/02/22	MH	70 - 130 %
% Dibromofluoromethane	104		%	1	02/02/22	MH	70 - 130 %

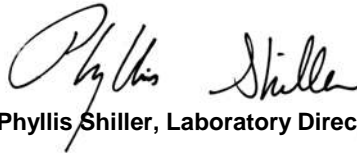
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8	101		%	1	02/02/22	MH	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

February 03, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

February 03, 2022

FOR: Attn: Allen Tevyaw
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: GROUND WATER
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by:
Received by: B
Analyzed by: see "By" below

Date

01/27/22 14:30
01/31/22 14:58

Time

Laboratory Data

SDG ID: GCK26146
Phoenix ID: CK26149

Project ID: MCCOY STADIUM
Client ID: 1708220127-04

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,1-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,1,2-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloropropene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromoethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloroethane	ND	0.60	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,4-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Hexanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
2-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Methyl-2-pentanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	02/02/22	MH	SW8260
Acrylonitrile	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Benzene	ND	0.70	ug/L	1	02/02/22	MH	SW8260
Bromobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromochloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromodichloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Bromoform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Carbon Disulfide	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Carbon tetrachloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Dibromochloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Dibromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Dichlorodifluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Ethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Hexachlorobutadiene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Isopropylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
m&p-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methyl ethyl ketone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methylene chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Naphthalene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Propylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
o-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
p-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
sec-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Styrene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
tert-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrachloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	02/02/22	MH	SW8260
Toluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Total Xylenes	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Trichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorofluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorotrifluoroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Vinyl chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	02/02/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	02/02/22	MH	70 - 130 %
% Dibromofluoromethane	108		%	1	02/02/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8	102		%	1	02/02/22	MH	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

February 03, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

February 03, 2022

FOR: Attn: Allen Tevyaw
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: GROUND WATER
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by:
Received by: B
Analyzed by: see "By" below

Date

01/27/22 16:35
01/31/22 14:58

Time

Laboratory Data

SDG ID: GCK26146
Phoenix ID: CK26150

Project ID: MCCOY STADIUM
Client ID: 1708220127-05

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,1-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,1,2-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloropropene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromoethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloroethane	ND	0.60	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,4-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Hexanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
2-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Methyl-2-pentanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	02/02/22	MH	SW8260
Acrylonitrile	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Benzene	ND	0.70	ug/L	1	02/02/22	MH	SW8260
Bromobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromochloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromodichloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Bromoform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Carbon Disulfide	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Carbon tetrachloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Dibromochloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Dibromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Dichlorodifluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Ethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Hexachlorobutadiene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Isopropylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
m&p-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methyl ethyl ketone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methylene chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Naphthalene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Propylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
o-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
p-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
sec-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Styrene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
tert-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrachloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	02/02/22	MH	SW8260
Toluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Total Xylenes	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Trichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorofluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorotrifluoroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Vinyl chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	02/02/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	02/02/22	MH	70 - 130 %
% Dibromofluoromethane	104		%	1	02/02/22	MH	70 - 130 %

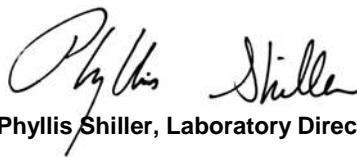
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8	103		%	1	02/02/22	MH	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

February 03, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

February 03, 2022

QA/QC Data

SDG I.D.: GCK26146

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 610440 (ug/L), QC Sample No: CK25912 (CK26146, CK26147, CK26148, CK26149, CK26150)										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	93	98	5.2				70 - 130	30
1,1,1-Trichloroethane	ND	1.0	94	96	2.1				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	93	98	5.2				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	92	99	7.3				70 - 130	30
1,1-Dichloroethane	ND	1.0	90	94	4.3				70 - 130	30
1,1-Dichloroethene	ND	1.0	86	92	6.7				70 - 130	30
1,1-Dichloropropene	ND	1.0	96	96	0.0				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	76	100	27.3				70 - 130	30
1,2,3-Trichloropropane	ND	1.0	88	104	16.7				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	84	99	16.4				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	87	93	6.7				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	93	110	16.7				70 - 130	30
1,2-Dibromoethane	ND	1.0	96	101	5.1				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	88	94	6.6				70 - 130	30
1,2-Dichloroethane	ND	1.0	93	96	3.2				70 - 130	30
1,2-Dichloropropane	ND	1.0	89	94	5.5				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	88	94	6.6				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	86	93	7.8				70 - 130	30
1,3-Dichloropropane	ND	1.0	93	98	5.2				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	85	92	7.9				70 - 130	30
2,2-Dichloropropane	ND	1.0	87	94	7.7				70 - 130	30
2-Chlorotoluene	ND	1.0	89	94	5.5				70 - 130	30
2-Hexanone	ND	5.0	94	101	7.2				70 - 130	30
2-Isopropyltoluene	ND	1.0	85	91	6.8				70 - 130	30
4-Chlorotoluene	ND	1.0	90	95	5.4				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	97	104	7.0				70 - 130	30
Acetone	ND	5.0	111	126	12.7				70 - 130	30
Acrylonitrile	ND	5.0	91	93	2.2				70 - 130	30
Benzene	ND	0.70	89	94	5.5				70 - 130	30
Bromobenzene	ND	1.0	89	94	5.5				70 - 130	30
Bromochloromethane	ND	1.0	98	101	3.0				70 - 130	30
Bromodichloromethane	ND	0.50	90	94	4.3				70 - 130	30
Bromoform	ND	1.0	96	101	5.1				70 - 130	30
Bromomethane	ND	1.0	86	101	16.0				70 - 130	30
Carbon Disulfide	ND	1.0	83	87	4.7				70 - 130	30
Carbon tetrachloride	ND	1.0	92	96	4.3				70 - 130	30
Chlorobenzene	ND	1.0	88	93	5.5				70 - 130	30
Chloroethane	ND	1.0	91	97	6.4				70 - 130	30
Chloroform	ND	1.0	97	100	3.0				70 - 130	30
Chloromethane	ND	1.0	91	99	8.4				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	90	94	4.3				70 - 130	30

QA/QC Data

SDG I.D.: GCK26146

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
cis-1,3-Dichloropropene	ND	0.40	92	97	5.3				70 - 130	30
Dibromochloromethane	ND	0.50	92	98	6.3				70 - 130	30
Dibromomethane	ND	1.0	96	101	5.1				70 - 130	30
Dichlorodifluoromethane	ND	1.0	99	112	12.3				70 - 130	30
Ethylbenzene	ND	1.0	89	95	6.5				70 - 130	30
Hexachlorobutadiene	ND	0.40	79	89	11.9				70 - 130	30
Isopropylbenzene	ND	1.0	89	94	5.5				70 - 130	30
m&p-Xylene	ND	1.0	90	94	4.3				70 - 130	30
Methyl ethyl ketone	ND	5.0	107	110	2.8				70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	93	97	4.2				70 - 130	30
Methylene chloride	ND	1.0	79	83	4.9				70 - 130	30
Naphthalene	ND	1.0	90	111	20.9				70 - 130	30
n-Butylbenzene	ND	1.0	87	95	8.8				70 - 130	30
n-Propylbenzene	ND	1.0	86	92	6.7				70 - 130	30
o-Xylene	ND	1.0	91	95	4.3				70 - 130	30
p-Isopropyltoluene	ND	1.0	87	94	7.7				70 - 130	30
sec-Butylbenzene	ND	1.0	87	93	6.7				70 - 130	30
Styrene	ND	1.0	94	99	5.2				70 - 130	30
tert-Butylbenzene	ND	1.0	87	94	7.7				70 - 130	30
Tetrachloroethene	ND	1.0	87	92	5.6				70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	112	118	5.2				70 - 130	30
Toluene	ND	1.0	88	93	5.5				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	88	92	4.4				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	97	101	4.0				70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	98	102	4.0				70 - 130	30
Trichloroethene	ND	1.0	88	92	4.4				70 - 130	30
Trichlorofluoromethane	ND	1.0	90	97	7.5				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	75	83	10.1				70 - 130	30
Vinyl chloride	ND	1.0	91	99	8.4				70 - 130	30
% 1,2-dichlorobenzene-d4	98	%	98	100	2.0				70 - 130	30
% Bromofluorobenzene	94	%	102	103	1.0				70 - 130	30
% Dibromofluoromethane	107	%	103	100	3.0				70 - 130	30
% Toluene-d8	100	%	101	100	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%, 25-160% for Chloroethane-HL and Trichlorofluoromethane-HL.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference

LCS - Laboratory Control Sample


LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MS Dup - Matrix Spike Duplicate

NC - No Criteria

Intf - Interference



Phyllis Shiller, Laboratory Director
February 03, 2022

Thursday, February 03, 2022

Criteria: RI: GA GW

State: RI

Sample Criteria Exceedances Report

GCK26146 - FO-RI

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CK26146	\$8260GWR	1,2-Dibromoethane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.05	0.05	ug/L
CK26146	\$8260GWR	1,2-Dibromo-3-chloropropane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.2	0.2	ug/L
CK26147	\$8260GWR	1,2-Dibromoethane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.05	0.05	ug/L
CK26147	\$8260GWR	1,2-Dibromo-3-chloropropane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.2	0.2	ug/L
CK26148	\$8260GWR	1,2-Dibromoethane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.05	0.05	ug/L
CK26148	\$8260GWR	1,2-Dibromo-3-chloropropane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.2	0.2	ug/L
CK26149	\$8260GWR	1,2-Dibromoethane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.05	0.05	ug/L
CK26149	\$8260GWR	1,2-Dibromo-3-chloropropane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.2	0.2	ug/L
CK26150	\$8260GWR	1,2-Dibromoethane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.05	0.05	ug/L
CK26150	\$8260GWR	1,2-Dibromo-3-chloropropane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.2	0.2	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Comments

February 03, 2022

SDG I.D.: GCK26146

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

VOA Narration

CHEM02 02/01/22-2: CK26146, CK26147, CK26148, CK26149, CK26150

Chem02 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments. EPA method 8260D Table 4 supports this approach.

The following Initial Calibration compounds did not meet RSD% criteria: 1,2-Dibromo-3-chloropropane 23% (20%), Bromoform 21% (20%), Methylene chloride 23% (20%), Naphthalene 30% (20%), trans-1,4-dichloro-2-butene 21% (20%)

The following Initial Calibration compounds did not meet maximum RSD% criteria: None.

The following Initial Calibration compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.027 (0.05), 2-Hexanone 0.055 (0.1), 4-Methyl-2-pentanone 0.086 (0.1), Acetone 0.050 (0.1), Bromoform 0.070 (0.1), Methyl ethyl ketone 0.067 (0.1), Tetrahydrofuran (THF) 0.043 (0.05)

The following Initial Calibration compounds did not meet minimum response factors: 1,2-Dibromo-3-chloropropane 0.027 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

The following Continuing Calibration compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.031 (0.05)

The following Continuing Calibration compounds did not meet minimum response factors: 1,2-Dibromo-3-chloropropane 0.027 (0.05)

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

Lisa Arnold

From: Allen Teyyaw <aTeyyaw@fando.com>
Sent: Tuesday, February 01, 2022 8:46 AM
To: Lisa Arnold
Cc: Evan Koncewicz
Subject: Forgot to add reporting limit criteria to COC
Attachments: Sample Acknowledgement.pdf; Sample Acknowledgement.pdf

Hi Lisa,

These samples were picked up yesterday but we forgot to specify the reporting limit criteria on the chain of custody. Can you add that the criteria should be RI GA GW for both.

Thank you!



Fuss & O'Neill, Inc. | 317 Iron Horse Way, Suite 204 | Providence, RI 02908
401.861.3070 x4539 | atevyaw@fando.com
www.fando.com | [twitter](#) | [facebook](#) | [linkedin](#)



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Sample Acknowledgement

January 31, 2022

FOR: Attn: Allen Tevyaw
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10
Price Quote #:

SDG ID: GCK26146

Project Id: MCCOY STADIUM
Temperature: The samples in this delivery group were received at 2.6°C.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Phoenix Id	Client Id	Matrix	Sub Date	Col Date	Col By
CK26146	1708220127-01	GROUND WATER	01/31 2:58p	01/27 11:15a	
CK26147	1708220127-02	GROUND WATER	01/31 2:58p	01/27 12:10p	
CK26148	1708220127-03	GROUND WATER	01/31 2:58p	01/27 01:35p	
CK26149	1708220127-04	GROUND WATER	01/31 2:58p	01/27 02:30p	
CK26150	1708220127-05	GROUND WATER	01/31 2:58p	01/27 04:35p	

GCK26146 Criteria:
None.

If there are any questions regarding this submittal, please call Phoenix Client Services at extension 200.



Friday, February 04, 2022

Attn: Allen Tevyaw
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Project ID: MCCOY STADIUM
SDG ID: GCK26151
Sample ID#s: CK26151 - CK26157, CK26507

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis Shiller

Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



SDG Comments

February 04, 2022

SDG I.D.: GCK26151

8260 Analysis:

1,2-Dibromoethane and 1,2-Dibromo-3-chloropropane do not meet GW criteria, these compounds are analyzed by GC/ECD method 504 or 8011 when this criteria needs to be met.



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Sample Id Cross Reference

February 04, 2022

SDG I.D.: GCK26151

Project ID: MCCOY STADIUM

Client Id	Lab Id	Matrix
1708220128-06	CK26151	GROUND WATER
1708220128-07	CK26152	GROUND WATER
1708220128-08	CK26153	GROUND WATER
1708220128-09	CK26154	GROUND WATER
1708220128-10	CK26155	GROUND WATER
1708220128-11	CK26156	GROUND WATER
1708220128-12	CK26157	GROUND WATER
TRIP BLANK	CK26507	WATER



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

February 04, 2022

FOR: Attn: Allen Tevyaw
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: GROUND WATER
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by:
Received by: B
Analyzed by: see "By" below

Date Time

01/28/22 8:55
01/31/22 14:58

Laboratory Data

SDG ID: GCK26151
Phoenix ID: CK26151

Project ID: MCCOY STADIUM
Client ID: 1708220128-06

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,1-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,1,2-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloropropene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromoethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloroethane	ND	0.60	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,4-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Hexanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
2-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Methyl-2-pentanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	02/02/22	MH	SW8260
Acrylonitrile	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Benzene	ND	0.70	ug/L	1	02/02/22	MH	SW8260
Bromobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromochloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromodichloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Bromoform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Carbon Disulfide	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Carbon tetrachloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Dibromochloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Dibromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Dichlorodifluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Ethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Hexachlorobutadiene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Isopropylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
m&p-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methyl ethyl ketone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methylene chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Naphthalene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Propylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
o-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
p-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
sec-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Styrene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
tert-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrachloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	02/02/22	MH	SW8260
Toluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Total Xylenes	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Trichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorofluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorotrifluoroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Vinyl chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	02/02/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	02/02/22	MH	70 - 130 %
% Dibromofluoromethane	103		%	1	02/02/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8	102		%	1	02/02/22	MH	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

February 04, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

February 04, 2022

FOR: Attn: Allen Tevyaw
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: GROUND WATER
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by:
Received by: B
Analyzed by: see "By" below

Date

01/28/22
01/31/22

Time

10:05
14:58

Laboratory Data

SDG ID: GCK26151
Phoenix ID: CK26152

Project ID: MCCOY STADIUM
Client ID: 1708220128-07

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,1-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,1,2-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloropropene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromoethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloroethane	ND	0.60	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,4-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Hexanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
2-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Methyl-2-pentanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	02/02/22	MH	SW8260
Acrylonitrile	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Benzene	ND	0.70	ug/L	1	02/02/22	MH	SW8260
Bromobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromochloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromodichloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Bromoform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Carbon Disulfide	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Carbon tetrachloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Dibromochloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Dibromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Dichlorodifluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Ethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Hexachlorobutadiene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Isopropylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
m&p-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methyl ethyl ketone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methylene chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Naphthalene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Propylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
o-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
p-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
sec-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Styrene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
tert-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrachloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	02/02/22	MH	SW8260
Toluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Total Xylenes	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Trichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorofluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorotrifluoroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Vinyl chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
<u>QA/QC Surrogates</u>							
% 1,2-dichlorobenzene-d4	99		%	1	02/02/22	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	02/02/22	MH	70 - 130 %
% Dibromofluoromethane	99		%	1	02/02/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8	101		%	1	02/02/22	MH	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

February 04, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

February 04, 2022

FOR: Attn: Allen Tevyaw
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: GROUND WATER
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by:
Received by: B
Analyzed by: see "By" below

Date

01/28/22 10:25
01/31/22 14:58

Time

Laboratory Data

SDG ID: GCK26151
Phoenix ID: CK26153

Project ID: MCCOY STADIUM
Client ID: 1708220128-08

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,1-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,1,2-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloropropene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromoethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloroethane	ND	0.60	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,4-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Hexanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
2-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Methyl-2-pentanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	02/02/22	MH	SW8260
Acrylonitrile	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Benzene	ND	0.70	ug/L	1	02/02/22	MH	SW8260
Bromobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromochloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromodichloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Bromoform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Carbon Disulfide	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Carbon tetrachloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Dibromochloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Dibromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Dichlorodifluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Ethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Hexachlorobutadiene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Isopropylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
m&p-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methyl ethyl ketone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methylene chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Naphthalene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Propylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
o-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
p-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
sec-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Styrene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
tert-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrachloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	02/02/22	MH	SW8260
Toluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Total Xylenes	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Trichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorofluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorotrifluoroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Vinyl chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	101		%	1	02/02/22	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	02/02/22	MH	70 - 130 %
% Dibromofluoromethane	97		%	1	02/02/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8	101		%	1	02/02/22	MH	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

February 04, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

February 04, 2022

FOR: Attn: Allen Tevyaw
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: GROUND WATER
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by:
Received by: B
Analyzed by: see "By" below

Date

01/28/22 11:25
01/31/22 14:58

Time

Laboratory Data

SDG ID: GCK26151
Phoenix ID: CK26154

Project ID: MCCOY STADIUM
Client ID: 1708220128-09

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,1-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,1,2-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloropropene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromoethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloroethane	ND	0.60	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,4-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Hexanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
2-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Methyl-2-pentanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	02/02/22	MH	SW8260
Acrylonitrile	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Benzene	ND	0.70	ug/L	1	02/02/22	MH	SW8260
Bromobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromochloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromodichloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Bromoform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Carbon Disulfide	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Carbon tetrachloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Dibromochloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Dibromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Dichlorodifluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Ethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Hexachlorobutadiene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Isopropylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
m&p-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methyl ethyl ketone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methylene chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Naphthalene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Propylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
o-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
p-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
sec-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Styrene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
tert-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrachloroethene	2.1	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	02/02/22	MH	SW8260
Toluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Total Xylenes	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Trichloroethene	2.0	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorofluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorotrifluoroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Vinyl chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	02/02/22	MH	70 - 130 %
% Bromofluorobenzene	96		%	1	02/02/22	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	02/02/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8	102		%	1	02/02/22	MH	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

February 04, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

February 04, 2022

FOR: Attn: Allen Tevyaw
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: GROUND WATER
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by:
Received by: B
Analyzed by: see "By" below

Date

01/28/22 13:30
01/31/22 14:58

Time

Laboratory Data

SDG ID: GCK26151
Phoenix ID: CK26155

Project ID: MCCOY STADIUM
Client ID: 1708220128-10

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,1-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,1,2-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloropropene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromoethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloroethane	ND	0.60	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,4-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Hexanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
2-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Methyl-2-pentanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	02/02/22	MH	SW8260
Acrylonitrile	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Benzene	ND	0.70	ug/L	1	02/02/22	MH	SW8260
Bromobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromochloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromodichloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Bromoform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Carbon Disulfide	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Carbon tetrachloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Dibromochloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Dibromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Dichlorodifluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Ethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Hexachlorobutadiene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Isopropylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
m&p-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methyl ethyl ketone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methylene chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Naphthalene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Propylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
o-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
p-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
sec-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Styrene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
tert-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrachloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	02/02/22	MH	SW8260
Toluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Total Xylenes	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Trichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorofluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorotrifluoroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Vinyl chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	02/02/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	02/02/22	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	02/02/22	MH	70 - 130 %

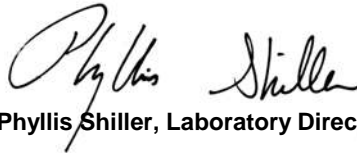
Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8	102		%	1	02/02/22	MH	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

February 04, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

February 04, 2022

FOR: Attn: Allen Tevyaw
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: GROUND WATER
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by:
Received by: B
Analyzed by: see "By" below

Date

01/28/22 14:15
01/31/22 14:58

Time

Laboratory Data

SDG ID: GCK26151
Phoenix ID: CK26156

Project ID: MCCOY STADIUM
Client ID: 1708220128-11

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,1-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,1,2-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloropropene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromoethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloroethane	ND	0.60	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,4-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Hexanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
2-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Methyl-2-pentanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	02/02/22	MH	SW8260
Acrylonitrile	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Benzene	ND	0.70	ug/L	1	02/02/22	MH	SW8260
Bromobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromochloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromodichloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Bromoform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Carbon Disulfide	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Carbon tetrachloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Dibromochloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Dibromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Dichlorodifluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Ethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Hexachlorobutadiene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Isopropylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
m&p-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methyl ethyl ketone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methylene chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Naphthalene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Propylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
o-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
p-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
sec-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Styrene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
tert-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrachloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	02/02/22	MH	SW8260
Toluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Total Xylenes	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Trichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorofluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorotrifluoroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Vinyl chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	02/02/22	MH	70 - 130 %
% Bromofluorobenzene	95		%	1	02/02/22	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	02/02/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8	101		%	1	02/02/22	MH	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

February 04, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

February 04, 2022

FOR: Attn: Allen Tevyaw
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: GROUND WATER
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501.B10

Custody Information

Collected by:
Received by: B
Analyzed by: see "By" below

Date

01/28/22 15:05
01/31/22 14:58

Time

Laboratory Data

SDG ID: GCK26151
Phoenix ID: CK26157

Project ID: MCCOY STADIUM
Client ID: 1708220128-12

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,1-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,1,2-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloropropene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromoethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloroethane	ND	0.60	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,4-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Hexanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
2-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Methyl-2-pentanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	02/02/22	MH	SW8260
Acrylonitrile	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Benzene	1.5	0.70	ug/L	1	02/02/22	MH	SW8260
Bromobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromochloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromodichloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Bromoform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Carbon Disulfide	24	5.0	ug/L	1	02/02/22	MH	SW8260
Carbon tetrachloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Dibromochloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Dibromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Dichlorodifluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Ethylbenzene	5.6	1.0	ug/L	1	02/02/22	MH	SW8260
Hexachlorobutadiene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Isopropylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
m&p-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methyl ethyl ketone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methylene chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Naphthalene	1.8	1.0	ug/L	1	02/02/22	MH	SW8260
n-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Propylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
o-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
p-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
sec-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Styrene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
tert-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrachloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	02/02/22	MH	SW8260
Toluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Total Xylenes	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Trichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorofluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorotrifluoroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Vinyl chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	02/02/22	MH	70 - 130 %
% Bromofluorobenzene	99		%	1	02/02/22	MH	70 - 130 %
% Dibromofluoromethane	100		%	1	02/02/22	MH	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8	101		%	1	02/02/22	MH	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

February 04, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

February 04, 2022

FOR: Attn: Allen Tevyaw
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: WATER
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501B10

Custody Information

Collected by:
Received by: SW
Analyzed by: see "By" below

Date

01/28/22

Time

14:58

Laboratory Data

SDG ID: GCK26151
Phoenix ID: CK26507

Project ID: MCCOY STADIUM
Client ID: TRIP BLANK

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,1-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,1,2-Trichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,1-Dichloropropene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,3-Trichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dibromoethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
1,2-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloroethane	ND	0.60	ug/L	1	02/02/22	MH	SW8260
1,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,3-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
1,4-Dichlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2,2-Dichloropropane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
2-Hexanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
2-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Chlorotoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
4-Methyl-2-pentanone	ND	5.0	ug/L	1	02/02/22	MH	SW8260

Client ID: TRIP BLANK

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	02/02/22	MH	SW8260
Acrylonitrile	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Benzene	ND	0.70	ug/L	1	02/02/22	MH	SW8260
Bromobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromochloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromodichloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Bromoform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Bromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Carbon Disulfide	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Carbon tetrachloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chlorobenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloroform	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Chloromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Dibromochloromethane	ND	0.50	ug/L	1	02/02/22	MH	SW8260
Dibromomethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Dichlorodifluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Ethylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Hexachlorobutadiene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
Isopropylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
m&p-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methyl ethyl ketone	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Methylene chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Naphthalene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
n-Propylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
o-Xylene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
p-Isopropyltoluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
sec-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Styrene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
tert-Butylbenzene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrachloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	02/02/22	MH	SW8260
Toluene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Total Xylenes	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	02/02/22	MH	SW8260
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	02/02/22	MH	SW8260
Trichloroethene	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorofluoromethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Trichlorotrifluoroethane	ND	1.0	ug/L	1	02/02/22	MH	SW8260
Vinyl chloride	ND	1.0	ug/L	1	02/02/22	MH	SW8260
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	98		%	1	02/02/22	MH	70 - 130 %
% Bromofluorobenzene	92		%	1	02/02/22	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	02/02/22	MH	70 - 130 %

Client ID: TRIP BLANK

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8	101		%	1	02/02/22	MH	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

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Phyllis Shiller, Laboratory Director

February 04, 2022

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

February 04, 2022

QA/QC Data

SDG I.D.: GCK26151

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 610440 (ug/L), QC Sample No: CK25912 (CK26151, CK26152, CK26507)										
Volatiles - Ground Water										
1,1,1,2-Tetrachloroethane	ND	1.0	93	98	5.2				70 - 130	30
1,1,1-Trichloroethane	ND	1.0	94	96	2.1				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	93	98	5.2				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	92	99	7.3				70 - 130	30
1,1-Dichloroethane	ND	1.0	90	94	4.3				70 - 130	30
1,1-Dichloroethene	ND	1.0	86	92	6.7				70 - 130	30
1,1-Dichloropropene	ND	1.0	96	96	0.0				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	76	100	27.3				70 - 130	30
1,2,3-Trichloropropane	ND	1.0	88	104	16.7				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	84	99	16.4				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	87	93	6.7				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	93	110	16.7				70 - 130	30
1,2-Dibromoethane	ND	1.0	96	101	5.1				70 - 130	30
1,2-Dichlorobenzene	ND	1.0	88	94	6.6				70 - 130	30
1,2-Dichloroethane	ND	1.0	93	96	3.2				70 - 130	30
1,2-Dichloropropane	ND	1.0	89	94	5.5				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	88	94	6.6				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	86	93	7.8				70 - 130	30
1,3-Dichloropropane	ND	1.0	93	98	5.2				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	85	92	7.9				70 - 130	30
2,2-Dichloropropane	ND	1.0	87	94	7.7				70 - 130	30
2-Chlorotoluene	ND	1.0	89	94	5.5				70 - 130	30
2-Hexanone	ND	5.0	94	101	7.2				70 - 130	30
2-Isopropyltoluene	ND	1.0	85	91	6.8				70 - 130	30
4-Chlorotoluene	ND	1.0	90	95	5.4				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	97	104	7.0				70 - 130	30
Acetone	ND	5.0	111	126	12.7				70 - 130	30
Acrylonitrile	ND	5.0	91	93	2.2				70 - 130	30
Benzene	ND	0.70	89	94	5.5				70 - 130	30
Bromobenzene	ND	1.0	89	94	5.5				70 - 130	30
Bromochloromethane	ND	1.0	98	101	3.0				70 - 130	30
Bromodichloromethane	ND	0.50	90	94	4.3				70 - 130	30
Bromoform	ND	1.0	96	101	5.1				70 - 130	30
Bromomethane	ND	1.0	86	101	16.0				70 - 130	30
Carbon Disulfide	ND	1.0	83	87	4.7				70 - 130	30
Carbon tetrachloride	ND	1.0	92	96	4.3				70 - 130	30
Chlorobenzene	ND	1.0	88	93	5.5				70 - 130	30
Chloroethane	ND	1.0	91	97	6.4				70 - 130	30
Chloroform	ND	1.0	97	100	3.0				70 - 130	30
Chloromethane	ND	1.0	91	99	8.4				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	90	94	4.3				70 - 130	30

QA/QC Data

SDG I.D.: GCK26151

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
cis-1,3-Dichloropropene	ND	0.40	92	97	5.3				70 - 130	30
Dibromochloromethane	ND	0.50	92	98	6.3				70 - 130	30
Dibromomethane	ND	1.0	96	101	5.1				70 - 130	30
Dichlorodifluoromethane	ND	1.0	99	112	12.3				70 - 130	30
Ethylbenzene	ND	1.0	89	95	6.5				70 - 130	30
Hexachlorobutadiene	ND	0.40	79	89	11.9				70 - 130	30
Isopropylbenzene	ND	1.0	89	94	5.5				70 - 130	30
m&p-Xylene	ND	1.0	90	94	4.3				70 - 130	30
Methyl ethyl ketone	ND	5.0	107	110	2.8				70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	93	97	4.2				70 - 130	30
Methylene chloride	ND	1.0	79	83	4.9				70 - 130	30
Naphthalene	ND	1.0	90	111	20.9				70 - 130	30
n-Butylbenzene	ND	1.0	87	95	8.8				70 - 130	30
n-Propylbenzene	ND	1.0	86	92	6.7				70 - 130	30
o-Xylene	ND	1.0	91	95	4.3				70 - 130	30
p-Isopropyltoluene	ND	1.0	87	94	7.7				70 - 130	30
sec-Butylbenzene	ND	1.0	87	93	6.7				70 - 130	30
Styrene	ND	1.0	94	99	5.2				70 - 130	30
tert-Butylbenzene	ND	1.0	87	94	7.7				70 - 130	30
Tetrachloroethene	ND	1.0	87	92	5.6				70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	112	118	5.2				70 - 130	30
Toluene	ND	1.0	88	93	5.5				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	88	92	4.4				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	97	101	4.0				70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	98	102	4.0				70 - 130	30
Trichloroethene	ND	1.0	88	92	4.4				70 - 130	30
Trichlorofluoromethane	ND	1.0	90	97	7.5				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	75	83	10.1				70 - 130	30
Vinyl chloride	ND	1.0	91	99	8.4				70 - 130	30
% 1,2-dichlorobenzene-d4	98	%	98	100	2.0				70 - 130	30
% Bromofluorobenzene	94	%	102	103	1.0				70 - 130	30
% Dibromofluoromethane	107	%	103	100	3.0				70 - 130	30
% Toluene-d8	100	%	101	100	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%, 25-160% for Chloroethane-HL and Trichlorofluoromethane-HL.

QA/QC Batch 610653 (ug/L), QC Sample No: CK26153 (CK26153, CK26154, CK26155, CK26156, CK26157)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	103	102	1.0				70 - 130	30
1,1,1-Trichloroethane	ND	1.0	98	106	7.8				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.50	103	103	0.0				70 - 130	30
1,1,2-Trichloroethane	ND	1.0	101	99	2.0				70 - 130	30
1,1-Dichloroethane	ND	1.0	98	100	2.0				70 - 130	30
1,1-Dichloroethene	ND	1.0	102	102	0.0				70 - 130	30
1,1-Dichloropropene	ND	1.0	104	110	5.6				70 - 130	30
1,2,3-Trichlorobenzene	ND	1.0	106	109	2.8				70 - 130	30
1,2,3-Trichloropropane	ND	1.0	100	110	9.5				70 - 130	30
1,2,4-Trichlorobenzene	ND	1.0	99	99	0.0				70 - 130	30
1,2,4-Trimethylbenzene	ND	1.0	101	101	0.0				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	1.0	110	109	0.9				70 - 130	30
1,2-Dibromoethane	ND	1.0	104	103	1.0				70 - 130	30

QA/QC Data

SDG I.D.: GCK26151

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,2-Dichlorobenzene	ND	1.0	97	99	2.0				70 - 130	30
1,2-Dichloroethane	ND	1.0	100	99	1.0				70 - 130	30
1,2-Dichloropropane	ND	1.0	99	98	1.0				70 - 130	30
1,3,5-Trimethylbenzene	ND	1.0	101	103	2.0				70 - 130	30
1,3-Dichlorobenzene	ND	1.0	99	100	1.0				70 - 130	30
1,3-Dichloropropane	ND	1.0	101	99	2.0				70 - 130	30
1,4-Dichlorobenzene	ND	1.0	98	98	0.0				70 - 130	30
2,2-Dichloropropane	ND	1.0	104	101	2.9				70 - 130	30
2-Chlorotoluene	ND	1.0	103	104	1.0				70 - 130	30
2-Hexanone	ND	5.0	107	99	7.8				70 - 130	30
2-Isopropyltoluene	ND	1.0	98	98	0.0				70 - 130	30
4-Chlorotoluene	ND	1.0	104	103	1.0				70 - 130	30
4-Methyl-2-pentanone	ND	5.0	111	105	5.6				70 - 130	30
Acetone	ND	5.0	90	98	8.5				70 - 130	30
Acrylonitrile	ND	5.0	98	91	7.4				70 - 130	30
Benzene	ND	0.70	100	100	0.0				70 - 130	30
Bromobenzene	ND	1.0	101	101	0.0				70 - 130	30
Bromochloromethane	ND	1.0	99	102	3.0				70 - 130	30
Bromodichloromethane	ND	0.50	99	96	3.1				70 - 130	30
Bromoform	ND	1.0	111	108	2.7				70 - 130	30
Bromomethane	ND	1.0	89	104	15.5				70 - 130	30
Carbon Disulfide	ND	1.0	95	98	3.1				70 - 130	30
Carbon tetrachloride	ND	1.0	101	107	5.8				70 - 130	30
Chlorobenzene	ND	1.0	100	99	1.0				70 - 130	30
Chloroethane	ND	1.0	103	106	2.9				70 - 130	30
Chloroform	ND	1.0	97	105	7.9				70 - 130	30
Chloromethane	ND	1.0	104	109	4.7				70 - 130	30
cis-1,2-Dichloroethene	ND	1.0	98	100	2.0				70 - 130	30
cis-1,3-Dichloropropene	ND	0.40	102	99	3.0				70 - 130	30
Dibromochloromethane	ND	0.50	101	101	0.0				70 - 130	30
Dibromomethane	ND	1.0	105	104	1.0				70 - 130	30
Dichlorodifluoromethane	ND	1.0	129	123	4.8				70 - 130	30
Ethylbenzene	ND	1.0	103	102	1.0				70 - 130	30
Hexachlorobutadiene	ND	0.40	83	87	4.7				70 - 130	30
Isopropylbenzene	ND	1.0	104	106	1.9				70 - 130	30
m&p-Xylene	ND	1.0	103	102	1.0				70 - 130	30
Methyl ethyl ketone	ND	5.0	98	104	5.9				70 - 130	30
Methyl t-butyl ether (MTBE)	ND	1.0	102	102	0.0				70 - 130	30
Methylene chloride	ND	1.0	87	88	1.1				70 - 130	30
Naphthalene	ND	1.0	122	125	2.4				70 - 130	30
n-Butylbenzene	ND	1.0	102	103	1.0				70 - 130	30
n-Propylbenzene	ND	1.0	102	104	1.9				70 - 130	30
o-Xylene	ND	1.0	104	103	1.0				70 - 130	30
p-Isopropyltoluene	ND	1.0	100	102	2.0				70 - 130	30
sec-Butylbenzene	ND	1.0	101	101	0.0				70 - 130	30
Styrene	ND	1.0	108	106	1.9				70 - 130	30
tert-Butylbenzene	ND	1.0	103	104	1.0				70 - 130	30
Tetrachloroethene	ND	1.0	101	99	2.0				70 - 130	30
Tetrahydrofuran (THF)	ND	2.5	99	117	16.7				70 - 130	30
Toluene	ND	1.0	99	98	1.0				70 - 130	30
trans-1,2-Dichloroethene	ND	1.0	100	100	0.0				70 - 130	30
trans-1,3-Dichloropropene	ND	0.40	105	104	1.0				70 - 130	30
trans-1,4-dichloro-2-butene	ND	5.0	112	106	5.5				70 - 130	30

QA/QC Data

SDG I.D.: GCK26151

Parameter	Blk		LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
	Blank	RL								
Trichloroethene	ND	1.0	100	99	1.0				70 - 130	30
Trichlorofluoromethane	ND	1.0	111	110	0.9				70 - 130	30
Trichlorotrifluoroethane	ND	1.0	97	95	2.1				70 - 130	30
Vinyl chloride	ND	1.0	110	112	1.8				70 - 130	30
% 1,2-dichlorobenzene-d4	98	%	98	99	1.0				70 - 130	30
% Bromofluorobenzene	95	%	104	102	1.9				70 - 130	30
% Dibromofluoromethane	95	%	93	102	9.2				70 - 130	30
% Toluene-d8	101	%	100	99	1.0				70 - 130	30

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%, 25-160% for Chloroethane-HL and Trichlorofluoromethane-HL.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference



Phyllis Shiller, Laboratory Director

February 04, 2022

Friday, February 04, 2022

Criteria: RI: GA GW

State: RI

Sample Criteria Exceedances Report

GCK26151 - FO-RI

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CK26151	\$8260GWR	1,2-Dibromoethane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.05	0.05	ug/L
CK26151	\$8260GWR	1,2-Dibromo-3-chloropropane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.2	0.2	ug/L
CK26152	\$8260GWR	1,2-Dibromo-3-chloropropane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.2	0.2	ug/L
CK26152	\$8260GWR	1,2-Dibromoethane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.05	0.05	ug/L
CK26153	\$8260GWR	1,2-Dibromo-3-chloropropane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.2	0.2	ug/L
CK26153	\$8260GWR	1,2-Dibromoethane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.05	0.05	ug/L
CK26154	\$8260GWR	1,2-Dibromoethane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.05	0.05	ug/L
CK26154	\$8260GWR	1,2-Dibromo-3-chloropropane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.2	0.2	ug/L
CK26155	\$8260GWR	1,2-Dibromoethane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.05	0.05	ug/L
CK26155	\$8260GWR	1,2-Dibromo-3-chloropropane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.2	0.2	ug/L
CK26156	\$8260GWR	1,2-Dibromo-3-chloropropane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.2	0.2	ug/L
CK26156	\$8260GWR	1,2-Dibromoethane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.05	0.05	ug/L
CK26157	\$8260GWR	1,2-Dibromo-3-chloropropane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.2	0.2	ug/L
CK26157	\$8260GWR	1,2-Dibromoethane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.05	0.05	ug/L
CK26507	\$8260GWR	1,2-Dibromoethane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.05	0.05	ug/L
CK26507	\$8260GWR	1,2-Dibromo-3-chloropropane	RI / GA Groundwater / Volatile Organics	ND	0.50	0.2	0.2	ug/L

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



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Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Comments

February 04, 2022

SDG I.D.: GCK26151

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

VOA Narration

CHEM02 02/01/22-2: CK26151, CK26152, CK26507

Chem02 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments. EPA method 8260D Table 4 supports this approach.

The following Initial Calibration compounds did not meet RSD% criteria: 1,2-Dibromo-3-chloropropane 23% (20%), Bromoform 21% (20%), Methylene chloride 23% (20%), Naphthalene 30% (20%), trans-1,4-dichloro-2-butene 21% (20%)

The following Initial Calibration compounds did not meet maximum RSD% criteria: None.

The following Initial Calibration compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.027 (0.05), 2-Hexanone 0.055 (0.1), 4-Methyl-2-pentanone 0.086 (0.1), Acetone 0.050 (0.1), Bromoform 0.070 (0.1), Methyl ethyl ketone 0.067 (0.1), Tetrahydrofuran (THF) 0.043 (0.05)

The following Initial Calibration compounds did not meet minimum response factors: 1,2-Dibromo-3-chloropropane 0.027 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

The following Continuing Calibration compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.031 (0.05)

The following Continuing Calibration compounds did not meet minimum response factors: 1,2-Dibromo-3-chloropropane 0.027 (0.05)

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

CHEM02 02/02/22-1: CK26153, CK26154, CK26155, CK26156, CK26157

Chem02 is a 25ml purge instrument. The laboratory minimum response factor is set at 0.01 instead of 0.05 for the 25ml purge instruments. EPA method 8260D Table 4 supports this approach.

The following Initial Calibration compounds did not meet RSD% criteria: 1,2-Dibromo-3-chloropropane 23% (20%), Bromoform 21% (20%), Methylene chloride 23% (20%), Naphthalene 30% (20%), trans-1,4-dichloro-2-butene 21% (20%)

The following Initial Calibration compounds did not meet maximum RSD% criteria: None.

The following Initial Calibration compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.027 (0.05), 2-Hexanone 0.055 (0.1), 4-Methyl-2-pentanone 0.086 (0.1), Acetone 0.050 (0.1), Bromoform 0.070 (0.1), Methyl ethyl ketone 0.067 (0.1), Tetrahydrofuran (THF) 0.043 (0.05)

The following Initial Calibration compounds did not meet minimum response factors: 1,2-Dibromo-3-chloropropane 0.027 (0.05), Tetrahydrofuran (THF) 0.043 (0.05)

The following Continuing Calibration compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.029 (0.05), Acetone 0.049 (0.05)

The following Continuing Calibration compounds did not meet minimum response factors: 1,2-Dibromo-3-chloropropane 0.027 (0.05), Acetone 0.050 (0.05)

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.



FUSS & O'NEILL

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☒ 317 Iron Horse Way, Suite 204, Providence, RI 02908

- ☐ 80 Washington Street, Suite 301, Poughkeepsie, NY
☐ Other _____

WCIP

2-6

CHAIN-OF-CUSTODY RECORD

41967

PROJECT NAME

McCon Stadium

PROJECT LOCATION

Pawtucket, RI

PROJECT NUMBER

20160501.B10

LABORATORY

Dynex

REPORT TO: Allen Terryan aterryan@fandO.com

INVOICE TO: " "

P.O. No.: 17082201-170820160501.B10

Sampler's Signature: *[Signature]* Date: 1/28/12

Source Codes: MW=Monitoring Well PW=Portable Water T=Treatment Facility S=Soil B=Sediment
SW=Surface Water ST=Stormwater W=Waste A=Air C=Concrete

X=Other

Analysis Request

Containers

Item No.	Transfer Check 1 2 3 4	Sample Number	Source Code	Date Sampled	Time Sampled	Soil VOA Val. □ methanol Glass VOA Val. □ water □ NaOH Other □ Soil Container () oz	Water VOA Val. □ As is □ HCl Glass Amber () ml □ As is □ H ₂ SO ₄ Plastic - As is □ 250 ml □ 500 □ 1000 ml Plastic - H ₂ SO ₄ □ 250 ml □ 500 □ 1000 ml Plastic - HNO ₃ □ 250 ml □ 500 □ 1000 ml Plastic - NaOH, 250 ml	Comments
6		1708220128-06	MW	1/28/12	855			26151
7		" " -07			1005			26152
8		" " -08			1025			26153
9		" " -09			1125			26154
10		" " -10			1300			26155
11		" " -11			1415			26156
12		" " -12			1505			26157
								26607

Transfer Number	Relinquished By	Accepted By	Date	Time	Charge Exceptions: □ CT Tax Exempt □ QA/QC □ Other _____ Duplications _____ Blanks (Item Nos: _____)
1	Elvan Konyazir	Prudence Fridge	1/28/12	1600	Reporting and Detection Limit Requirements: □ RCP Deliverables □ MCP CAM Cert.
2	<i>[Signature]</i>	<i>[Signature]</i>	1/31/12	10:20	Additional Comments:
3	<i>[Signature]</i>	<i>[Signature]</i>	1/31	1458	
4					

Lisa Arnold

20:15:17

From: Allen Tevyaw <aTevyaw@fando.com>
Sent: Tuesday, February 01, 2022 8:46 AM
To: Lisa Arnold
Cc: Evan Koncewicz
Subject: Forgot to add reporting limit criteria to COC
Attachments: Sample Acknowledgement.pdf; Sample Acknowledgement.pdf

Hi Lisa,

These samples were picked up yesterday but we forgot to specify the reporting limit criteria on the chain of custody. Can you add that the criteria should be RI GA GW for both.

Thank you!



Allen Tevyaw
Environmental Scientist

Fuss & O'Neill, Inc. | 317 Iron Horse Way, Suite 204 | Providence, RI 02908
401.861.3070 x4539 | atevyaw@fando.com
www.fando.com | [Twitter](#) | [Facebook](#) | [LinkedIn](#)



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Sample Acknowledgement

January 31, 2022

FOR: Attn: Allen Tevyaw
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Location Code: F&O-RI SDG ID: GCK26151
Rush Request: Standard
P.O.#: 20160501.B10
Price Quote #:
Project Id: MCCOY STADIUM
Temperature: The samples in this delivery group were received at 2.6°C.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Phoenix Id	Client Id	Matrix	Sub Date	Col Date	Col By
CK26151	1708220128-06	GROUND WATER	01/31 2:58p	01/28 08:55a	
CK26152	1708220128-07	GROUND WATER	01/31 2:58p	01/28 10:05a	
CK26153	1708220128-08	GROUND WATER	01/31 2:58p	01/28 10:25a	
CK26154	1708220128-09	GROUND WATER	01/31 2:58p	01/28 11:25a	
CK26155	1708220128-10	GROUND WATER	01/31 2:58p	01/28 01:30p	
CK26156	1708220128-11	GROUND WATER	01/31 2:58p	01/28 02:15p	
CK26157	1708220128-12	GROUND WATER	01/31 2:58p	01/28 03:05p	
CK26507	TRIP BLANK	WATER	01/31 2:58p	01/28	

GCK26151 Criteria:
None.

If there are any questions regarding this submittal, please call Phoenix Client Services at extension 200.

Appendix D

Phoenix Laboratory Analytical Report – Soil Gas



Wednesday, January 12, 2022

Attn: Patrick Dowling
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Project ID: MCCOY STADIUM
SDG ID: GCK12637
Sample ID#s: CK12637 - CK12648

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis Shiller

Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

January 12, 2022

SDG I.D.: GCK12637

Project ID: MCCOY STADIUM

Client Id	Lab Id	Matrix
1603220105-01	CK12637	AIR
1603220105-02	CK12638	AIR
1603220105-03	CK12639	AIR
1603220105-04	CK12640	AIR
1603220105-05	CK12641	AIR
1603220105-06	CK12642	AIR
1603220106-07	CK12643	AIR
1603220106-08	CK12644	AIR
1603220106-09	CK12645	AIR
1603220106-10	CK12646	AIR
1603220106-11	CK12647	AIR
1603220106-12	CK12648	AIR



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 12, 2022

FOR: Attn: Patrick Dowling
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: AIR
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501B10
Canister Id: 19960

Custody Information

Collected by: MHS
Received by: SW
Analyzed by: see "By" below

Date

01/05/22 11:26
01/10/22 15:04

Time

Laboratory Data

SDG ID: GCK12637
Phoenix ID: CK12637

Project ID: MCCOY STADIUM
Client ID: 1603220105-01

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	0.375	ND	2.57	01/10/22	KCA	5
1,1,1-Trichloroethane	ND	2.50	ND	13.6	01/10/22	KCA	5
1,1,2,2-Tetrachloroethane	ND	0.100	ND	0.69	01/10/22	KCA	5
1,1,2-Trichloroethane	ND	0.100	ND	0.55	01/10/22	KCA	5
1,1-Dichloroethane	ND	0.750	ND	3.03	01/10/22	KCA	5
1,1-Dichloroethene	ND	0.100	ND	0.40	01/10/22	KCA	5
1,2,4-Trichlorobenzene	ND	0.270	ND	2.00	01/10/22	KCA	5
1,2,4-Trimethylbenzene	ND	2.50	ND	12.3	01/10/22	KCA	5
1,2-Dibromoethane(EDB)	ND	0.100	ND	0.77	01/10/22	KCA	5
1,2-Dichlorobenzene	ND	0.500	ND	3.00	01/10/22	KCA	5
1,2-Dichloroethane	ND	0.100	ND	0.40	01/10/22	KCA	5
1,2-dichloropropane	ND	0.100	ND	0.46	01/10/22	KCA	5
1,2-Dichlorotetrafluoroethane	ND	2.50	ND	17.5	01/10/22	KCA	5
1,3,5-Trimethylbenzene	ND	2.50	ND	12.3	01/10/22	KCA	5
1,3-Butadiene	ND	2.50	ND	5.53	01/10/22	KCA	5
1,3-Dichlorobenzene	ND	0.500	ND	3.00	01/10/22	KCA	5
1,4-Dichlorobenzene	ND	0.400	ND	2.40	01/10/22	KCA	5
1,4-Dioxane	ND	0.650	ND	2.34	01/10/22	KCA	5
2-Hexanone(MBK)	ND	2.50	ND	10.2	01/10/22	KCA	5
4-Ethyltoluene	ND	2.50	ND	12.3	01/10/22	KCA	5
4-Isopropyltoluene	ND	2.50	ND	13.7	01/10/22	KCA	5
4-Methyl-2-pentanone(MIBK)	ND	2.50	ND	10.2	01/10/22	KCA	5
Acetone	34.8	3.75	82.6	8.90	01/10/22	KCA	5
Acrylonitrile	ND	2.50	ND	5.42	01/10/22	KCA	5
Benzene	ND	1.00	ND	3.19	01/10/22	KCA	5
Benzyl chloride	ND	2.50	ND	12.9	01/10/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.100	ND	0.67	01/10/22	KCA	5
Bromoform	ND	0.750	ND	7.75	01/10/22	KCA	5
Bromomethane	ND	0.700	ND	2.72	01/10/22	KCA	5
Carbon Disulfide	ND	2.50	ND	7.78	01/10/22	KCA	5
Carbon Tetrachloride	ND	0.430	ND	2.70	01/10/22	KCA	5
Chlorobenzene	ND	1.00	ND	4.60	01/10/22	KCA	5
Chloroethane	ND	2.50	ND	6.59	01/10/22	KCA	5
Chloroform	ND	1.00	ND	4.88	01/10/22	KCA	5
Chloromethane	ND	2.50	ND	5.16	01/10/22	KCA	5
Cis-1,2-Dichloroethene	ND	1.00	ND	3.96	01/10/22	KCA	5
cis-1,3-Dichloropropene	ND	0.500	ND	2.27	01/10/22	KCA	5
Cyclohexane	ND	2.50	ND	8.60	01/10/22	KCA	5
Dibromochloromethane	ND	0.100	ND	0.85	01/10/22	KCA	5
Dichlorodifluoromethane	ND	2.50	ND	12.4	01/10/22	KCA	5
Ethanol	57.7	3.75	109	7.06	01/10/22	KCA	5
Ethyl acetate	ND	2.50	ND	9.00	01/10/22	KCA	5
Ethylbenzene	ND	2.50	ND	10.8	01/10/22	KCA	5
Heptane	ND	2.50	ND	10.2	01/10/22	KCA	5
Hexachlorobutadiene	ND	0.100	ND	1.07	01/10/22	KCA	5
Hexane	5.80	2.25	20.4	7.93	01/10/22	KCA	5
Isopropylalcohol	ND	3.75	ND	9.21	01/10/22	KCA	5
Isopropylbenzene	ND	2.50	ND	12.3	01/10/22	KCA	5
m,p-Xylene	ND	5.00	ND	21.7	01/10/22	KCA	5
Methyl Ethyl Ketone	ND	2.25	ND	6.63	01/10/22	KCA	5
Methyl tert-butyl ether(MTBE)	ND	2.50	ND	9.01	01/10/22	KCA	5
Methylene Chloride	ND	15.0	ND	52.1	01/10/22	KCA	5
Naphthalene	ND	0.500	ND	2.62	01/10/22	KCA	5
n-Butylbenzene	ND	2.50	ND	13.7	01/10/22	KCA	5
o-Xylene	ND	2.50	ND	10.8	01/10/22	KCA	5
Propylene	2.70	2.50	4.64	4.30	01/10/22	KCA	5
sec-Butylbenzene	ND	2.50	ND	13.7	01/10/22	KCA	5
Styrene	ND	1.00	ND	4.26	01/10/22	KCA	5
Tetrachloroethene	ND	0.500	ND	3.39	01/10/22	KCA	5
Tetrahydrofuran	ND	2.50	ND	7.37	01/10/22	KCA	5
Toluene	ND	2.50	ND	9.42	01/10/22	KCA	5
Trans-1,2-Dichloroethene	ND	1.00	ND	3.96	01/10/22	KCA	5
trans-1,3-Dichloropropene	ND	2.50	ND	11.3	01/10/22	KCA	5
Trichloroethene	ND	0.250	ND	1.34	01/10/22	KCA	5
Trichlorofluoromethane	ND	2.50	ND	14.0	01/10/22	KCA	5
Trichlorotrifluoroethane	ND	2.50	ND	19.1	01/10/22	KCA	5
Vinyl Chloride	ND	0.100	ND	0.26	01/10/22	KCA	5
<u>QA/QC Surrogates/Internals</u>							
% Bromofluorobenzene (5x)	99	%	99	%	01/10/22	KCA	5
% IS-1,4-Difluorobenzene (5x)	110	%	110	%	01/10/22	KCA	5
% IS-Bromochloromethane (5x)	113	%	113	%	01/10/22	KCA	5
% IS-Chlorobenzene-d5 (5x)	108	%	108	%	01/10/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 12, 2022

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 12, 2022

FOR: Attn: Patrick Dowling
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: AIR
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501B10
Canister Id: 16604

Custody Information

Collected by: MHS
Received by: SW
Analyzed by: see "By" below

Date

01/05/22 12:06
01/10/22 15:04

Time

Laboratory Data

SDG ID: GCK12637
Phoenix ID: CK12638

Project ID: MCCOY STADIUM
Client ID: 1603220105-02

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	0.375	ND	2.57	01/10/22	KCA	5
1,1,1-Trichloroethane	ND	2.50	ND	13.6	01/10/22	KCA	5
1,1,2,2-Tetrachloroethane	ND	0.100	ND	0.69	01/10/22	KCA	5
1,1,2-Trichloroethane	ND	0.100	ND	0.55	01/10/22	KCA	5
1,1-Dichloroethane	ND	0.750	ND	3.03	01/10/22	KCA	5
1,1-Dichloroethene	ND	0.100	ND	0.40	01/10/22	KCA	5
1,2,4-Trichlorobenzene	ND	0.270	ND	2.00	01/10/22	KCA	5
1,2,4-Trimethylbenzene	ND	2.50	ND	12.3	01/10/22	KCA	5
1,2-Dibromoethane(EDB)	ND	0.100	ND	0.77	01/10/22	KCA	5
1,2-Dichlorobenzene	ND	0.500	ND	3.00	01/10/22	KCA	5
1,2-Dichloroethane	ND	0.100	ND	0.40	01/10/22	KCA	5
1,2-dichloropropane	ND	0.100	ND	0.46	01/10/22	KCA	5
1,2-Dichlorotetrafluoroethane	ND	2.50	ND	17.5	01/10/22	KCA	5
1,3,5-Trimethylbenzene	ND	2.50	ND	12.3	01/10/22	KCA	5
1,3-Butadiene	ND	2.50	ND	5.53	01/10/22	KCA	5
1,3-Dichlorobenzene	ND	0.500	ND	3.00	01/10/22	KCA	5
1,4-Dichlorobenzene	ND	0.400	ND	2.40	01/10/22	KCA	5
1,4-Dioxane	ND	0.650	ND	2.34	01/10/22	KCA	5
2-Hexanone(MBK)	ND	2.50	ND	10.2	01/10/22	KCA	5
4-Ethyltoluene	ND	2.50	ND	12.3	01/10/22	KCA	5
4-Isopropyltoluene	ND	2.50	ND	13.7	01/10/22	KCA	5
4-Methyl-2-pentanone(MIBK)	ND	2.50	ND	10.2	01/10/22	KCA	5
Acetone	40.2	3.75	95.4	8.90	01/10/22	KCA	5
Acrylonitrile	ND	2.50	ND	5.42	01/10/22	KCA	5
Benzene	ND	1.00	ND	3.19	01/10/22	KCA	5
Benzyl chloride	ND	2.50	ND	12.9	01/10/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.100	ND	0.67	01/10/22	KCA	5
Bromoform	ND	0.750	ND	7.75	01/10/22	KCA	5
Bromomethane	ND	0.700	ND	2.72	01/10/22	KCA	5
Carbon Disulfide	ND	2.50	ND	7.78	01/10/22	KCA	5
Carbon Tetrachloride	ND	0.430	ND	2.70	01/10/22	KCA	5
Chlorobenzene	ND	1.00	ND	4.60	01/10/22	KCA	5
Chloroethane	ND	2.50	ND	6.59	01/10/22	KCA	5
Chloroform	ND	1.00	ND	4.88	01/10/22	KCA	5
Chloromethane	ND	2.50	ND	5.16	01/10/22	KCA	5
Cis-1,2-Dichloroethene	ND	1.00	ND	3.96	01/10/22	KCA	5
cis-1,3-Dichloropropene	ND	0.500	ND	2.27	01/10/22	KCA	5
Cyclohexane	ND	2.50	ND	8.60	01/10/22	KCA	5
Dibromochloromethane	ND	0.100	ND	0.85	01/10/22	KCA	5
Dichlorodifluoromethane	ND	2.50	ND	12.4	01/10/22	KCA	5
Ethanol	46.4	3.75	87.4	7.06	01/10/22	KCA	5
Ethyl acetate	ND	2.50	ND	9.00	01/10/22	KCA	5
Ethylbenzene	ND	2.50	ND	10.8	01/10/22	KCA	5
Heptane	ND	2.50	ND	10.2	01/10/22	KCA	5
Hexachlorobutadiene	ND	0.100	ND	1.07	01/10/22	KCA	5
Hexane	5.66	2.25	19.9	7.93	01/10/22	KCA	5
Isopropylalcohol	ND	3.75	ND	9.21	01/10/22	KCA	5
Isopropylbenzene	ND	2.50	ND	12.3	01/10/22	KCA	5
m,p-Xylene	ND	5.00	ND	21.7	01/10/22	KCA	5
Methyl Ethyl Ketone	ND	2.25	ND	6.63	01/10/22	KCA	5
Methyl tert-butyl ether(MTBE)	ND	2.50	ND	9.01	01/10/22	KCA	5
Methylene Chloride	ND	15.0	ND	52.1	01/10/22	KCA	5
Naphthalene	ND	0.500	ND	2.62	01/10/22	KCA	5
n-Butylbenzene	ND	2.50	ND	13.7	01/10/22	KCA	5
o-Xylene	ND	2.50	ND	10.8	01/10/22	KCA	5
Propylene	3.90	2.50	6.71	4.30	01/10/22	KCA	5
sec-Butylbenzene	ND	2.50	ND	13.7	01/10/22	KCA	5
Styrene	ND	1.00	ND	4.26	01/10/22	KCA	5
Tetrachloroethene	ND	0.500	ND	3.39	01/10/22	KCA	5
Tetrahydrofuran	ND	2.50	ND	7.37	01/10/22	KCA	5
Toluene	ND	2.50	ND	9.42	01/10/22	KCA	5
Trans-1,2-Dichloroethene	ND	1.00	ND	3.96	01/10/22	KCA	5
trans-1,3-Dichloropropene	ND	2.50	ND	11.3	01/10/22	KCA	5
Trichloroethene	ND	0.250	ND	1.34	01/10/22	KCA	5
Trichlorofluoromethane	ND	2.50	ND	14.0	01/10/22	KCA	5
Trichlorotrifluoroethane	ND	2.50	ND	19.1	01/10/22	KCA	5
Vinyl Chloride	ND	0.100	ND	0.26	01/10/22	KCA	5
<u>QA/QC Surrogates/Internals</u>							
% Bromofluorobenzene (5x)	97	%	97	%	01/10/22	KCA	5
% IS-1,4-Difluorobenzene (5x)	107	%	107	%	01/10/22	KCA	5
% IS-Bromochloromethane (5x)	113	%	113	%	01/10/22	KCA	5
% IS-Chlorobenzene-d5 (5x)	108	%	108	%	01/10/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 12, 2022

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 12, 2022

FOR: Attn: Patrick Dowling
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: AIR
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501B10
Canister Id: 19628

Custody Information

Collected by: MHS
Received by: SW
Analyzed by: see "By" below

Date

01/05/22 12:27
01/10/22 15:04

Time

Laboratory Data

SDG ID: GCK12637
Phoenix ID: CK12639

Project ID: MCCOY STADIUM
Client ID: 1603220105-03

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	0.375	ND	2.57	01/10/22	KCA	5
1,1,1-Trichloroethane	ND	2.50	ND	13.6	01/10/22	KCA	5
1,1,2,2-Tetrachloroethane	ND	0.100	ND	0.69	01/10/22	KCA	5
1,1,2-Trichloroethane	ND	0.100	ND	0.55	01/10/22	KCA	5
1,1-Dichloroethane	ND	0.750	ND	3.03	01/10/22	KCA	5
1,1-Dichloroethene	ND	0.100	ND	0.40	01/10/22	KCA	5
1,2,4-Trichlorobenzene	ND	0.270	ND	2.00	01/10/22	KCA	5
1,2,4-Trimethylbenzene	ND	2.50	ND	12.3	01/10/22	KCA	5
1,2-Dibromoethane(EDB)	ND	0.100	ND	0.77	01/10/22	KCA	5
1,2-Dichlorobenzene	ND	0.500	ND	3.00	01/10/22	KCA	5
1,2-Dichloroethane	ND	0.100	ND	0.40	01/10/22	KCA	5
1,2-dichloropropane	ND	0.100	ND	0.46	01/10/22	KCA	5
1,2-Dichlorotetrafluoroethane	ND	2.50	ND	17.5	01/10/22	KCA	5
1,3,5-Trimethylbenzene	ND	2.50	ND	12.3	01/10/22	KCA	5
1,3-Butadiene	ND	2.50	ND	5.53	01/10/22	KCA	5
1,3-Dichlorobenzene	ND	0.500	ND	3.00	01/10/22	KCA	5
1,4-Dichlorobenzene	ND	0.400	ND	2.40	01/10/22	KCA	5
1,4-Dioxane	ND	0.650	ND	2.34	01/10/22	KCA	5
2-Hexanone(MBK)	ND	2.50	ND	10.2	01/10/22	KCA	5
4-Ethyltoluene	ND	2.50	ND	12.3	01/10/22	KCA	5
4-Isopropyltoluene	ND	2.50	ND	13.7	01/10/22	KCA	5
4-Methyl-2-pentanone(MIBK)	ND	2.50	ND	10.2	01/10/22	KCA	5
Acetone	55.2	3.75	131	8.90	01/10/22	KCA	5
Acrylonitrile	ND	2.50	ND	5.42	01/10/22	KCA	5
Benzene	ND	1.00	ND	3.19	01/10/22	KCA	5
Benzyl chloride	ND	2.50	ND	12.9	01/10/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.100	ND	0.67	01/10/22	KCA	5
Bromoform	ND	0.750	ND	7.75	01/10/22	KCA	5
Bromomethane	ND	0.700	ND	2.72	01/10/22	KCA	5
Carbon Disulfide	ND	2.50	ND	7.78	01/10/22	KCA	5
Carbon Tetrachloride	ND	0.430	ND	2.70	01/10/22	KCA	5
Chlorobenzene	ND	1.00	ND	4.60	01/10/22	KCA	5
Chloroethane	ND	2.50	ND	6.59	01/10/22	KCA	5
Chloroform	ND	1.00	ND	4.88	01/10/22	KCA	5
Chloromethane	ND	2.50	ND	5.16	01/10/22	KCA	5
Cis-1,2-Dichloroethene	ND	1.00	ND	3.96	01/10/22	KCA	5
cis-1,3-Dichloropropene	ND	0.500	ND	2.27	01/10/22	KCA	5
Cyclohexane	ND	2.50	ND	8.60	01/10/22	KCA	5
Dibromochloromethane	ND	0.100	ND	0.85	01/10/22	KCA	5
Dichlorodifluoromethane	ND	2.50	ND	12.4	01/10/22	KCA	5
Ethanol	88.6	3.75	167	7.06	01/10/22	KCA	5
Ethyl acetate	ND	2.50	ND	9.00	01/10/22	KCA	5
Ethylbenzene	ND	2.50	ND	10.8	01/10/22	KCA	5
Heptane	ND	2.50	ND	10.2	01/10/22	KCA	5
Hexachlorobutadiene	ND	0.100	ND	1.07	01/10/22	KCA	5
Hexane	10.1	2.25	35.6	7.93	01/10/22	KCA	5
Isopropylalcohol	ND	3.75	ND	9.21	01/10/22	KCA	5
Isopropylbenzene	ND	2.50	ND	12.3	01/10/22	KCA	5
m,p-Xylene	ND	5.00	ND	21.7	01/10/22	KCA	5
Methyl Ethyl Ketone	ND	2.25	ND	6.63	01/10/22	KCA	5
Methyl tert-butyl ether(MTBE)	ND	2.50	ND	9.01	01/10/22	KCA	5
Methylene Chloride	ND	15.0	ND	52.1	01/10/22	KCA	5
Naphthalene	ND	0.500	ND	2.62	01/10/22	KCA	5
n-Butylbenzene	ND	2.50	ND	13.7	01/10/22	KCA	5
o-Xylene	ND	2.50	ND	10.8	01/10/22	KCA	5
Propylene	3.47	2.50	5.97	4.30	01/10/22	KCA	5
sec-Butylbenzene	ND	2.50	ND	13.7	01/10/22	KCA	5
Styrene	ND	1.00	ND	4.26	01/10/22	KCA	5
Tetrachloroethene	ND	0.500	ND	3.39	01/10/22	KCA	5
Tetrahydrofuran	ND	2.50	ND	7.37	01/10/22	KCA	5
Toluene	ND	2.50	ND	9.42	01/10/22	KCA	5
Trans-1,2-Dichloroethene	ND	1.00	ND	3.96	01/10/22	KCA	5
trans-1,3-Dichloropropene	ND	2.50	ND	11.3	01/10/22	KCA	5
Trichloroethene	ND	0.250	ND	1.34	01/10/22	KCA	5
Trichlorofluoromethane	ND	2.50	ND	14.0	01/10/22	KCA	5
Trichlorotrifluoroethane	ND	2.50	ND	19.1	01/10/22	KCA	5
Vinyl Chloride	ND	0.100	ND	0.26	01/10/22	KCA	5
<u>QA/QC Surrogates/Internals</u>							
% Bromofluorobenzene (5x)	96	%	96	%	01/10/22	KCA	5
% IS-1,4-Difluorobenzene (5x)	103	%	103	%	01/10/22	KCA	5
% IS-Bromochloromethane (5x)	106	%	106	%	01/10/22	KCA	5
% IS-Chlorobenzene-d5 (5x)	103	%	103	%	01/10/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

January 12, 2022

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 12, 2022

FOR: Attn: Patrick Dowling
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: AIR
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501B10
Canister Id: 13636

Custody Information

Collected by: MHS
Received by: SW
Analyzed by: see "By" below

Date

01/05/22 12:45
01/10/22 15:04

Time

Laboratory Data

SDG ID: GCK12637
Phoenix ID: CK12640

Project ID: MCCOY STADIUM
Client ID: 1603220105-04

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	0.750	ND	5.15	01/11/22	KCA	10
1,1,1-Trichloroethane	ND	5.00	ND	27.3	01/11/22	KCA	10
1,1,2,2-Tetrachloroethane	ND	0.200	ND	1.37	01/11/22	KCA	10
1,1,2-Trichloroethane	ND	0.200	ND	1.09	01/11/22	KCA	10
1,1-Dichloroethane	ND	1.50	ND	6.07	01/11/22	KCA	10
1,1-Dichloroethene	ND	0.200	ND	0.79	01/11/22	KCA	10
1,2,4-Trichlorobenzene	ND	0.540	ND	4.00	01/11/22	KCA	10
1,2,4-Trimethylbenzene	ND	5.00	ND	24.6	01/11/22	KCA	10
1,2-Dibromoethane(EDB)	ND	0.200	ND	1.54	01/11/22	KCA	10
1,2-Dichlorobenzene	ND	1.00	ND	6.01	01/11/22	KCA	10
1,2-Dichloroethane	ND	0.200	ND	0.81	01/11/22	KCA	10
1,2-dichloropropane	ND	0.200	ND	0.92	01/11/22	KCA	10
1,2-Dichlorotetrafluoroethane	ND	5.00	ND	34.9	01/11/22	KCA	10
1,3,5-Trimethylbenzene	ND	5.00	ND	24.6	01/11/22	KCA	10
1,3-Butadiene	ND	5.00	ND	11.1	01/11/22	KCA	10
1,3-Dichlorobenzene	ND	1.00	ND	6.01	01/11/22	KCA	10
1,4-Dichlorobenzene	ND	0.800	ND	4.81	01/11/22	KCA	10
1,4-Dioxane	ND	1.30	ND	4.68	01/11/22	KCA	10
2-Hexanone(MBK)	ND	5.00	ND	20.5	01/11/22	KCA	10
4-Ethyltoluene	ND	5.00	ND	24.6	01/11/22	KCA	10
4-Isopropyltoluene	ND	5.00	ND	27.4	01/11/22	KCA	10
4-Methyl-2-pentanone(MIBK)	ND	5.00	ND	20.5	01/11/22	KCA	10
Acetone	86.4	7.50	205	17.8	01/11/22	KCA	10
Acrylonitrile	ND	5.00	ND	10.8	01/11/22	KCA	10
Benzene	ND	2.00	ND	6.39	01/11/22	KCA	10
Benzyl chloride	ND	5.00	ND	25.9	01/11/22	KCA	10

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.200	ND	1.34	01/11/22	KCA	10
Bromoform	ND	1.50	ND	15.5	01/11/22	KCA	10
Bromomethane	ND	1.40	ND	5.43	01/11/22	KCA	10
Carbon Disulfide	ND	5.00	ND	15.6	01/11/22	KCA	10
Carbon Tetrachloride	ND	0.860	ND	5.41	01/11/22	KCA	10
Chlorobenzene	ND	2.00	ND	9.20	01/11/22	KCA	10
Chloroethane	ND	5.00	ND	13.2	01/11/22	KCA	10
Chloroform	ND	2.00	ND	9.8	01/11/22	KCA	10
Chloromethane	ND	5.00	ND	10.3	01/11/22	KCA	10
Cis-1,2-Dichloroethene	ND	2.00	ND	7.92	01/11/22	KCA	10
cis-1,3-Dichloropropene	ND	1.00	ND	4.54	01/11/22	KCA	10
Cyclohexane	ND	5.00	ND	17.2	01/11/22	KCA	10
Dibromochloromethane	ND	0.200	ND	1.70	01/11/22	KCA	10
Dichlorodifluoromethane	ND	5.00	ND	24.7	01/11/22	KCA	10
Ethanol	162	7.50	305	14.1	01/11/22	KCA	10
Ethyl acetate	ND	5.00	ND	18.0	01/11/22	KCA	10
Ethylbenzene	ND	5.00	ND	21.7	01/11/22	KCA	10
Heptane	ND	5.00	ND	20.5	01/11/22	KCA	10
Hexachlorobutadiene	ND	0.200	ND	2.13	01/11/22	KCA	10
Hexane	15.5	4.50	54.6	15.9	01/11/22	KCA	10
Isopropylalcohol	ND	7.50	ND	18.4	01/11/22	KCA	10
Isopropylbenzene	ND	5.00	ND	24.6	01/11/22	KCA	10
m,p-Xylene	ND	10.0	ND	43.4	01/11/22	KCA	10
Methyl Ethyl Ketone	4.70	4.50	13.9	13.3	01/11/22	KCA	10
Methyl tert-butyl ether(MTBE)	ND	5.00	ND	18.0	01/11/22	KCA	10
Methylene Chloride	ND	30.0	ND	104	01/11/22	KCA	10
Naphthalene	ND	1.00	ND	5.23	01/11/22	KCA	10
n-Butylbenzene	ND	5.00	ND	27.4	01/11/22	KCA	10
o-Xylene	ND	5.00	ND	21.7	01/11/22	KCA	10
Propylene	28.8	5.00	49.5	8.60	01/11/22	KCA	10
sec-Butylbenzene	ND	5.00	ND	27.4	01/11/22	KCA	10
Styrene	ND	2.00	ND	8.51	01/11/22	KCA	10
Tetrachloroethene	ND	1.00	ND	6.78	01/11/22	KCA	10
Tetrahydrofuran	ND	5.00	ND	14.7	01/11/22	KCA	10
Toluene	ND	5.00	ND	18.8	01/11/22	KCA	10
Trans-1,2-Dichloroethene	ND	2.00	ND	7.92	01/11/22	KCA	10
trans-1,3-Dichloropropene	ND	5.00	ND	22.7	01/11/22	KCA	10
Trichloroethene	ND	0.500	ND	2.69	01/11/22	KCA	10
Trichlorofluoromethane	ND	5.00	ND	28.1	01/11/22	KCA	10
Trichlorotrifluoroethane	ND	5.00	ND	38.3	01/11/22	KCA	10
Vinyl Chloride	ND	0.200	ND	0.51	01/11/22	KCA	10
<u>QA/QC Surrogates/Internals</u>							
% Bromofluorobenzene (10x)	92	%	92	%	01/11/22	KCA	10
% IS-1,4-Difluorobenzene (10x)	91	%	91	%	01/11/22	KCA	10
% IS-Bromochloromethane (10x)	95	%	95	%	01/11/22	KCA	10
% IS-Chlorobenzene-d5 (10x)	93	%	93	%	01/11/22	KCA	10

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

January 12, 2022

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 12, 2022

FOR: Attn: Patrick Dowling
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: AIR
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501B10
Canister Id: 28559

Custody Information

Collected by: MHS
Received by: SW
Analyzed by: see "By" below

Date

01/05/22 15:30
01/10/22 15:04

Time

Laboratory Data

SDG ID: GCK12637
Phoenix ID: CK12641

Project ID: MCCOY STADIUM
Client ID: 1603220105-05

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	0.375	ND	2.57	01/11/22	KCA	5
1,1,1-Trichloroethane	ND	2.50	ND	13.6	01/11/22	KCA	5
1,1,2,2-Tetrachloroethane	ND	0.100	ND	0.69	01/11/22	KCA	5
1,1,2-Trichloroethane	ND	0.100	ND	0.55	01/11/22	KCA	5
1,1-Dichloroethane	ND	0.750	ND	3.03	01/11/22	KCA	5
1,1-Dichloroethene	ND	0.100	ND	0.40	01/11/22	KCA	5
1,2,4-Trichlorobenzene	ND	0.270	ND	2.00	01/11/22	KCA	5
1,2,4-Trimethylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
1,2-Dibromoethane(EDB)	ND	0.100	ND	0.77	01/11/22	KCA	5
1,2-Dichlorobenzene	ND	0.500	ND	3.00	01/11/22	KCA	5
1,2-Dichloroethane	ND	0.100	ND	0.40	01/11/22	KCA	5
1,2-dichloropropane	ND	0.100	ND	0.46	01/11/22	KCA	5
1,2-Dichlorotetrafluoroethane	ND	2.50	ND	17.5	01/11/22	KCA	5
1,3,5-Trimethylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
1,3-Butadiene	6.97	2.50	15.4	5.53	01/11/22	KCA	5
1,3-Dichlorobenzene	ND	0.500	ND	3.00	01/11/22	KCA	5
1,4-Dichlorobenzene	ND	0.400	ND	2.40	01/11/22	KCA	5
1,4-Dioxane	ND	0.650	ND	2.34	01/11/22	KCA	5
2-Hexanone(MBK)	ND	2.50	ND	10.2	01/11/22	KCA	5
4-Ethyltoluene	ND	2.50	ND	12.3	01/11/22	KCA	5
4-Isopropyltoluene	ND	2.50	ND	13.7	01/11/22	KCA	5
4-Methyl-2-pentanone(MIBK)	ND	2.50	ND	10.2	01/11/22	KCA	5
Acetone	39.7	3.75	94.2	8.90	01/11/22	KCA	5
Acrylonitrile	ND	2.50	ND	5.42	01/11/22	KCA	5
Benzene	1.37	1.00	4.37	3.19	01/11/22	KCA	5
Benzyl chloride	ND	2.50	ND	12.9	01/11/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.100	ND	0.67	01/11/22	KCA	5
Bromoform	ND	0.750	ND	7.75	01/11/22	KCA	5
Bromomethane	ND	0.700	ND	2.72	01/11/22	KCA	5
Carbon Disulfide	2.52	2.50	7.84	7.78	01/11/22	KCA	5
Carbon Tetrachloride	ND	0.430	ND	2.70	01/11/22	KCA	5
Chlorobenzene	ND	1.00	ND	4.60	01/11/22	KCA	5
Chloroethane	ND	2.50	ND	6.59	01/11/22	KCA	5
Chloroform	ND	1.00	ND	4.88	01/11/22	KCA	5
Chloromethane	ND	2.50	ND	5.16	01/11/22	KCA	5
Cis-1,2-Dichloroethene	ND	1.00	ND	3.96	01/11/22	KCA	5
cis-1,3-Dichloropropene	ND	0.500	ND	2.27	01/11/22	KCA	5
Cyclohexane	ND	2.50	ND	8.60	01/11/22	KCA	5
Dibromochloromethane	ND	0.100	ND	0.85	01/11/22	KCA	5
Dichlorodifluoromethane	ND	2.50	ND	12.4	01/11/22	KCA	5
Ethanol	98.9	3.75	186	7.06	01/11/22	KCA	5
Ethyl acetate	ND	2.50	ND	9.00	01/11/22	KCA	5
Ethylbenzene	ND	2.50	ND	10.8	01/11/22	KCA	5
Heptane	ND	2.50	ND	10.2	01/11/22	KCA	5
Hexachlorobutadiene	ND	0.100	ND	1.07	01/11/22	KCA	5
Hexane	10.1	2.25	35.6	7.93	01/11/22	KCA	5
Isopropylalcohol	ND	3.75	ND	9.21	01/11/22	KCA	5
Isopropylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
m,p-Xylene	ND	5.00	ND	21.7	01/11/22	KCA	5
Methyl Ethyl Ketone	3.71	2.25	10.9	6.63	01/11/22	KCA	5
Methyl tert-butyl ether(MTBE)	ND	2.50	ND	9.01	01/11/22	KCA	5
Methylene Chloride	ND	15.0	ND	52.1	01/11/22	KCA	5
Naphthalene	ND	0.500	ND	2.62	01/11/22	KCA	5
n-Butylbenzene	ND	2.50	ND	13.7	01/11/22	KCA	5
o-Xylene	ND	2.50	ND	10.8	01/11/22	KCA	5
Propylene	33.0	2.50	56.8	4.30	01/11/22	KCA	5
sec-Butylbenzene	ND	2.50	ND	13.7	01/11/22	KCA	5
Styrene	ND	1.00	ND	4.26	01/11/22	KCA	5
Tetrachloroethene	ND	0.500	ND	3.39	01/11/22	KCA	5
Tetrahydrofuran	ND	2.50	ND	7.37	01/11/22	KCA	5
Toluene	4.05	2.50	15.3	9.42	01/11/22	KCA	5
Trans-1,2-Dichloroethene	ND	1.00	ND	3.96	01/11/22	KCA	5
trans-1,3-Dichloropropene	ND	2.50	ND	11.3	01/11/22	KCA	5
Trichloroethene	ND	0.250	ND	1.34	01/11/22	KCA	5
Trichlorofluoromethane	ND	2.50	ND	14.0	01/11/22	KCA	5
Trichlorotrifluoroethane	ND	2.50	ND	19.1	01/11/22	KCA	5
Vinyl Chloride	ND	0.100	ND	0.26	01/11/22	KCA	5
<u>QA/QC Surrogates/Internals</u>							
% Bromofluorobenzene (5x)	97	%	97	%	01/11/22	KCA	5
% IS-1,4-Difluorobenzene (5x)	105	%	105	%	01/11/22	KCA	5
% IS-Bromochloromethane (5x)	106	%	106	%	01/11/22	KCA	5
% IS-Chlorobenzene-d5 (5x)	105	%	105	%	01/11/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

January 12, 2022

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 12, 2022

FOR: Attn: Patrick Dowling
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: AIR
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501B10
Canister Id: 19924

Custody Information

Collected by: MHS
Received by: SW
Analyzed by: see "By" below

Date

01/05/22 14:34
01/10/22 15:04

Time

Laboratory Data

SDG ID: GCK12637
Phoenix ID: CK12642

Project ID: MCCOY STADIUM
Client ID: 1603220105-06

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	0.375	ND	2.57	01/11/22	KCA	5
1,1,1-Trichloroethane	ND	2.50	ND	13.6	01/11/22	KCA	5
1,1,2,2-Tetrachloroethane	ND	0.100	ND	0.69	01/11/22	KCA	5
1,1,2-Trichloroethane	ND	0.100	ND	0.55	01/11/22	KCA	5
1,1-Dichloroethane	ND	0.750	ND	3.03	01/11/22	KCA	5
1,1-Dichloroethene	ND	0.100	ND	0.40	01/11/22	KCA	5
1,2,4-Trichlorobenzene	ND	0.270	ND	2.00	01/11/22	KCA	5
1,2,4-Trimethylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
1,2-Dibromoethane(EDB)	ND	0.100	ND	0.77	01/11/22	KCA	5
1,2-Dichlorobenzene	ND	0.500	ND	3.00	01/11/22	KCA	5
1,2-Dichloroethane	ND	0.100	ND	0.40	01/11/22	KCA	5
1,2-dichloropropane	ND	0.100	ND	0.46	01/11/22	KCA	5
1,2-Dichlorotetrafluoroethane	ND	2.50	ND	17.5	01/11/22	KCA	5
1,3,5-Trimethylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
1,3-Butadiene	ND	2.50	ND	5.53	01/11/22	KCA	5
1,3-Dichlorobenzene	ND	0.500	ND	3.00	01/11/22	KCA	5
1,4-Dichlorobenzene	ND	0.400	ND	2.40	01/11/22	KCA	5
1,4-Dioxane	ND	0.650	ND	2.34	01/11/22	KCA	5
2-Hexanone(MBK)	ND	2.50	ND	10.2	01/11/22	KCA	5
4-Ethyltoluene	ND	2.50	ND	12.3	01/11/22	KCA	5
4-Isopropyltoluene	ND	2.50	ND	13.7	01/11/22	KCA	5
4-Methyl-2-pentanone(MIBK)	ND	2.50	ND	10.2	01/11/22	KCA	5
Acetone	36.4	3.75	86.4	8.90	01/11/22	KCA	5
Acrylonitrile	ND	2.50	ND	5.42	01/11/22	KCA	5
Benzene	ND	1.00	ND	3.19	01/11/22	KCA	5
Benzyl chloride	ND	2.50	ND	12.9	01/11/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.100	ND	0.67	01/11/22	KCA	5
Bromoform	ND	0.750	ND	7.75	01/11/22	KCA	5
Bromomethane	ND	0.700	ND	2.72	01/11/22	KCA	5
Carbon Disulfide	ND	2.50	ND	7.78	01/11/22	KCA	5
Carbon Tetrachloride	ND	0.430	ND	2.70	01/11/22	KCA	5
Chlorobenzene	ND	1.00	ND	4.60	01/11/22	KCA	5
Chloroethane	ND	2.50	ND	6.59	01/11/22	KCA	5
Chloroform	ND	1.00	ND	4.88	01/11/22	KCA	5
Chloromethane	ND	2.50	ND	5.16	01/11/22	KCA	5
Cis-1,2-Dichloroethene	ND	1.00	ND	3.96	01/11/22	KCA	5
cis-1,3-Dichloropropene	ND	0.500	ND	2.27	01/11/22	KCA	5
Cyclohexane	ND	2.50	ND	8.60	01/11/22	KCA	5
Dibromochloromethane	ND	0.100	ND	0.85	01/11/22	KCA	5
Dichlorodifluoromethane	ND	2.50	ND	12.4	01/11/22	KCA	5
Ethanol	94.3	3.75	178	7.06	01/11/22	KCA	5
Ethyl acetate	ND	2.50	ND	9.00	01/11/22	KCA	5
Ethylbenzene	ND	2.50	ND	10.8	01/11/22	KCA	5
Heptane	ND	2.50	ND	10.2	01/11/22	KCA	5
Hexachlorobutadiene	ND	0.100	ND	1.07	01/11/22	KCA	5
Hexane	8.93	2.25	31.5	7.93	01/11/22	KCA	5
Isopropylalcohol	ND	3.75	ND	9.21	01/11/22	KCA	5
Isopropylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
m,p-Xylene	ND	5.00	ND	21.7	01/11/22	KCA	5
Methyl Ethyl Ketone	ND	2.25	ND	6.63	01/11/22	KCA	5
Methyl tert-butyl ether(MTBE)	ND	2.50	ND	9.01	01/11/22	KCA	5
Methylene Chloride	ND	15.0	ND	52.1	01/11/22	KCA	5
Naphthalene	ND	0.500	ND	2.62	01/11/22	KCA	5
n-Butylbenzene	ND	2.50	ND	13.7	01/11/22	KCA	5
o-Xylene	ND	2.50	ND	10.8	01/11/22	KCA	5
Propylene	5.39	2.50	9.27	4.30	01/11/22	KCA	5
sec-Butylbenzene	ND	2.50	ND	13.7	01/11/22	KCA	5
Styrene	ND	1.00	ND	4.26	01/11/22	KCA	5
Tetrachloroethene	ND	0.500	ND	3.39	01/11/22	KCA	5
Tetrahydrofuran	ND	2.50	ND	7.37	01/11/22	KCA	5
Toluene	4.23	2.50	15.9	9.42	01/11/22	KCA	5
Trans-1,2-Dichloroethene	ND	1.00	ND	3.96	01/11/22	KCA	5
trans-1,3-Dichloropropene	ND	2.50	ND	11.3	01/11/22	KCA	5
Trichloroethene	ND	0.250	ND	1.34	01/11/22	KCA	5
Trichlorofluoromethane	ND	2.50	ND	14.0	01/11/22	KCA	5
Trichlorotrifluoroethane	ND	2.50	ND	19.1	01/11/22	KCA	5
Vinyl Chloride	ND	0.100	ND	0.26	01/11/22	KCA	5
<u>QA/QC Surrogates/Internals</u>							
% Bromofluorobenzene (5x)	96	%	96	%	01/11/22	KCA	5
% IS-1,4-Difluorobenzene (5x)	100	%	100	%	01/11/22	KCA	5
% IS-Bromochloromethane (5x)	103	%	103	%	01/11/22	KCA	5
% IS-Chlorobenzene-d5 (5x)	100	%	100	%	01/11/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 12, 2022

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 12, 2022

FOR: Attn: Patrick Dowling
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: AIR
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501B10
Canister Id: 28578

Custody Information

Collected by: MHS
Received by: SW
Analyzed by: see "By" below

Date

01/06/22 9:17
01/10/22 15:04

Time

Laboratory Data

SDG ID: GCK12637
Phoenix ID: CK12643

Project ID: MCCOY STADIUM
Client ID: 1603220106-07

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	0.375	ND	2.57	01/11/22	KCA	5
1,1,1-Trichloroethane	ND	2.50	ND	13.6	01/11/22	KCA	5
1,1,2,2-Tetrachloroethane	ND	0.100	ND	0.69	01/11/22	KCA	5
1,1,2-Trichloroethane	ND	0.100	ND	0.55	01/11/22	KCA	5
1,1-Dichloroethane	ND	0.750	ND	3.03	01/11/22	KCA	5
1,1-Dichloroethene	ND	0.100	ND	0.40	01/11/22	KCA	5
1,2,4-Trichlorobenzene	ND	0.270	ND	2.00	01/11/22	KCA	5
1,2,4-Trimethylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
1,2-Dibromoethane(EDB)	ND	0.100	ND	0.77	01/11/22	KCA	5
1,2-Dichlorobenzene	ND	0.500	ND	3.00	01/11/22	KCA	5
1,2-Dichloroethane	ND	0.100	ND	0.40	01/11/22	KCA	5
1,2-dichloropropane	ND	0.100	ND	0.46	01/11/22	KCA	5
1,2-Dichlorotetrafluoroethane	ND	2.50	ND	17.5	01/11/22	KCA	5
1,3,5-Trimethylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
1,3-Butadiene	ND	2.50	ND	5.53	01/11/22	KCA	5
1,3-Dichlorobenzene	ND	0.500	ND	3.00	01/11/22	KCA	5
1,4-Dichlorobenzene	ND	0.400	ND	2.40	01/11/22	KCA	5
1,4-Dioxane	ND	0.650	ND	2.34	01/11/22	KCA	5
2-Hexanone(MBK)	ND	2.50	ND	10.2	01/11/22	KCA	5
4-Ethyltoluene	ND	2.50	ND	12.3	01/11/22	KCA	5
4-Isopropyltoluene	ND	2.50	ND	13.7	01/11/22	KCA	5
4-Methyl-2-pentanone(MIBK)	ND	2.50	ND	10.2	01/11/22	KCA	5
Acetone	19.3	3.75	45.8	8.90	01/11/22	KCA	5
Acrylonitrile	ND	2.50	ND	5.42	01/11/22	KCA	5
Benzene	ND	1.00	ND	3.19	01/11/22	KCA	5
Benzyl chloride	ND	2.50	ND	12.9	01/11/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.100	ND	0.67	01/11/22	KCA	5
Bromoform	ND	0.750	ND	7.75	01/11/22	KCA	5
Bromomethane	ND	0.700	ND	2.72	01/11/22	KCA	5
Carbon Disulfide	ND	2.50	ND	7.78	01/11/22	KCA	5
Carbon Tetrachloride	ND	0.430	ND	2.70	01/11/22	KCA	5
Chlorobenzene	ND	1.00	ND	4.60	01/11/22	KCA	5
Chloroethane	ND	2.50	ND	6.59	01/11/22	KCA	5
Chloroform	ND	1.00	ND	4.88	01/11/22	KCA	5
Chloromethane	ND	2.50	ND	5.16	01/11/22	KCA	5
Cis-1,2-Dichloroethene	ND	1.00	ND	3.96	01/11/22	KCA	5
cis-1,3-Dichloropropene	ND	0.500	ND	2.27	01/11/22	KCA	5
Cyclohexane	ND	2.50	ND	8.60	01/11/22	KCA	5
Dibromochloromethane	ND	0.100	ND	0.85	01/11/22	KCA	5
Dichlorodifluoromethane	ND	2.50	ND	12.4	01/11/22	KCA	5
Ethanol	146	3.75	275	7.06	01/11/22	KCA	5
Ethyl acetate	ND	2.50	ND	9.00	01/11/22	KCA	5
Ethylbenzene	ND	2.50	ND	10.8	01/11/22	KCA	5
Heptane	ND	2.50	ND	10.2	01/11/22	KCA	5
Hexachlorobutadiene	ND	0.100	ND	1.07	01/11/22	KCA	5
Hexane	ND	2.25	ND	7.93	01/11/22	KCA	5
Isopropylalcohol	ND	3.75	ND	9.21	01/11/22	KCA	5
Isopropylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
m,p-Xylene	ND	5.00	ND	21.7	01/11/22	KCA	5
Methyl Ethyl Ketone	ND	2.25	ND	6.63	01/11/22	KCA	5
Methyl tert-butyl ether(MTBE)	ND	2.50	ND	9.01	01/11/22	KCA	5
Methylene Chloride	ND	15.0	ND	52.1	01/11/22	KCA	5
Naphthalene	ND	0.500	ND	2.62	01/11/22	KCA	5
n-Butylbenzene	ND	2.50	ND	13.7	01/11/22	KCA	5
o-Xylene	ND	2.50	ND	10.8	01/11/22	KCA	5
Propylene	21.0	2.50	36.1	4.30	01/11/22	KCA	5
sec-Butylbenzene	ND	2.50	ND	13.7	01/11/22	KCA	5
Styrene	ND	1.00	ND	4.26	01/11/22	KCA	5
Tetrachloroethene	ND	0.500	ND	3.39	01/11/22	KCA	5
Tetrahydrofuran	ND	2.50	ND	7.37	01/11/22	KCA	5
Toluene	ND	2.50	ND	9.42	01/11/22	KCA	5
Trans-1,2-Dichloroethene	ND	1.00	ND	3.96	01/11/22	KCA	5
trans-1,3-Dichloropropene	ND	2.50	ND	11.3	01/11/22	KCA	5
Trichloroethene	ND	0.250	ND	1.34	01/11/22	KCA	5
Trichlorofluoromethane	ND	2.50	ND	14.0	01/11/22	KCA	5
Trichlorotrifluoroethane	ND	2.50	ND	19.1	01/11/22	KCA	5
Vinyl Chloride	ND	0.100	ND	0.26	01/11/22	KCA	5
<u>QA/QC Surrogates/Internals</u>							
% Bromofluorobenzene (5x)	93	%	93	%	01/11/22	KCA	5
% IS-1,4-Difluorobenzene (5x)	101	%	101	%	01/11/22	KCA	5
% IS-Bromochloromethane (5x)	103	%	103	%	01/11/22	KCA	5
% IS-Chlorobenzene-d5 (5x)	100	%	100	%	01/11/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

January 12, 2022

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 12, 2022

FOR: Attn: Patrick Dowling
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: AIR
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501B10
Canister Id: 28623

Custody Information

Collected by: MHS
Received by: SW
Analyzed by: see "By" below

Date

01/06/22 9:41
01/10/22 15:04

Time

Laboratory Data

SDG ID: GCK12637
Phoenix ID: CK12644

Project ID: MCCOY STADIUM
Client ID: 1603220106-08

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	0.375	ND	2.57	01/11/22	KCA	5
1,1,1-Trichloroethane	ND	2.50	ND	13.6	01/11/22	KCA	5
1,1,2,2-Tetrachloroethane	ND	0.100	ND	0.69	01/11/22	KCA	5
1,1,2-Trichloroethane	ND	0.100	ND	0.55	01/11/22	KCA	5
1,1-Dichloroethane	ND	0.750	ND	3.03	01/11/22	KCA	5
1,1-Dichloroethene	ND	0.100	ND	0.40	01/11/22	KCA	5
1,2,4-Trichlorobenzene	ND	0.270	ND	2.00	01/11/22	KCA	5
1,2,4-Trimethylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
1,2-Dibromoethane(EDB)	ND	0.100	ND	0.77	01/11/22	KCA	5
1,2-Dichlorobenzene	ND	0.500	ND	3.00	01/11/22	KCA	5
1,2-Dichloroethane	ND	0.100	ND	0.40	01/11/22	KCA	5
1,2-dichloropropane	ND	0.100	ND	0.46	01/11/22	KCA	5
1,2-Dichlorotetrafluoroethane	ND	2.50	ND	17.5	01/11/22	KCA	5
1,3,5-Trimethylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
1,3-Butadiene	3.69	2.50	8.16	5.53	01/11/22	KCA	5
1,3-Dichlorobenzene	ND	0.500	ND	3.00	01/11/22	KCA	5
1,4-Dichlorobenzene	ND	0.400	ND	2.40	01/11/22	KCA	5
1,4-Dioxane	ND	0.650	ND	2.34	01/11/22	KCA	5
2-Hexanone(MBK)	ND	2.50	ND	10.2	01/11/22	KCA	5
4-Ethyltoluene	ND	2.50	ND	12.3	01/11/22	KCA	5
4-Isopropyltoluene	ND	2.50	ND	13.7	01/11/22	KCA	5
4-Methyl-2-pentanone(MIBK)	ND	2.50	ND	10.2	01/11/22	KCA	5
Acetone	15.2	3.75	36.1	8.90	01/11/22	KCA	5
Acrylonitrile	ND	2.50	ND	5.42	01/11/22	KCA	5
Benzene	ND	1.00	ND	3.19	01/11/22	KCA	5
Benzyl chloride	ND	2.50	ND	12.9	01/11/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.100	ND	0.67	01/11/22	KCA	5
Bromoform	ND	0.750	ND	7.75	01/11/22	KCA	5
Bromomethane	ND	0.700	ND	2.72	01/11/22	KCA	5
Carbon Disulfide	ND	2.50	ND	7.78	01/11/22	KCA	5
Carbon Tetrachloride	ND	0.430	ND	2.70	01/11/22	KCA	5
Chlorobenzene	ND	1.00	ND	4.60	01/11/22	KCA	5
Chloroethane	ND	2.50	ND	6.59	01/11/22	KCA	5
Chloroform	ND	1.00	ND	4.88	01/11/22	KCA	5
Chloromethane	ND	2.50	ND	5.16	01/11/22	KCA	5
Cis-1,2-Dichloroethene	ND	1.00	ND	3.96	01/11/22	KCA	5
cis-1,3-Dichloropropene	ND	0.500	ND	2.27	01/11/22	KCA	5
Cyclohexane	ND	2.50	ND	8.60	01/11/22	KCA	5
Dibromochloromethane	ND	0.100	ND	0.85	01/11/22	KCA	5
Dichlorodifluoromethane	ND	2.50	ND	12.4	01/11/22	KCA	5
Ethanol	86.2	3.75	162	7.06	01/11/22	KCA	5
Ethyl acetate	ND	2.50	ND	9.00	01/11/22	KCA	5
Ethylbenzene	ND	2.50	ND	10.8	01/11/22	KCA	5
Heptane	ND	2.50	ND	10.2	01/11/22	KCA	5
Hexachlorobutadiene	ND	0.100	ND	1.07	01/11/22	KCA	5
Hexane	ND	2.25	ND	7.93	01/11/22	KCA	5
Isopropylalcohol	ND	3.75	ND	9.21	01/11/22	KCA	5
Isopropylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
m,p-Xylene	ND	5.00	ND	21.7	01/11/22	KCA	5
Methyl Ethyl Ketone	ND	2.25	ND	6.63	01/11/22	KCA	5
Methyl tert-butyl ether(MTBE)	ND	2.50	ND	9.01	01/11/22	KCA	5
Methylene Chloride	ND	15.0	ND	52.1	01/11/22	KCA	5
Naphthalene	ND	0.500	ND	2.62	01/11/22	KCA	5
n-Butylbenzene	ND	2.50	ND	13.7	01/11/22	KCA	5
o-Xylene	ND	2.50	ND	10.8	01/11/22	KCA	5
Propylene	16.4	2.50	28.2	4.30	01/11/22	KCA	5
sec-Butylbenzene	ND	2.50	ND	13.7	01/11/22	KCA	5
Styrene	ND	1.00	ND	4.26	01/11/22	KCA	5
Tetrachloroethene	ND	0.500	ND	3.39	01/11/22	KCA	5
Tetrahydrofuran	ND	2.50	ND	7.37	01/11/22	KCA	5
Toluene	ND	2.50	ND	9.42	01/11/22	KCA	5
Trans-1,2-Dichloroethene	ND	1.00	ND	3.96	01/11/22	KCA	5
trans-1,3-Dichloropropene	ND	2.50	ND	11.3	01/11/22	KCA	5
Trichloroethene	ND	0.250	ND	1.34	01/11/22	KCA	5
Trichlorofluoromethane	ND	2.50	ND	14.0	01/11/22	KCA	5
Trichlorotrifluoroethane	ND	2.50	ND	19.1	01/11/22	KCA	5
Vinyl Chloride	ND	0.100	ND	0.26	01/11/22	KCA	5
<u>QA/QC Surrogates/Internals</u>							
% Bromofluorobenzene (5x)	96	%	96	%	01/11/22	KCA	5
% IS-1,4-Difluorobenzene (5x)	101	%	101	%	01/11/22	KCA	5
% IS-Bromochloromethane (5x)	102	%	102	%	01/11/22	KCA	5
% IS-Chlorobenzene-d5 (5x)	98	%	98	%	01/11/22	KCA	5

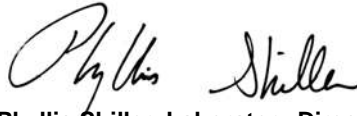
Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

January 12, 2022

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 12, 2022

FOR: Attn: Patrick Dowling
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: AIR
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501B10
Canister Id: 0219

Custody Information

Collected by: MHS
Received by: SW
Analyzed by: see "By" below

Date

01/06/22 10:14
01/10/22 15:04

Time

Laboratory Data

SDG ID: GCK12637
Phoenix ID: CK12645

Project ID: MCCOY STADIUM
Client ID: 1603220106-09

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	0.375	ND	2.57	01/11/22	KCA	5
1,1,1-Trichloroethane	ND	2.50	ND	13.6	01/11/22	KCA	5
1,1,2,2-Tetrachloroethane	ND	0.100	ND	0.69	01/11/22	KCA	5
1,1,2-Trichloroethane	ND	0.100	ND	0.55	01/11/22	KCA	5
1,1-Dichloroethane	ND	0.750	ND	3.03	01/11/22	KCA	5
1,1-Dichloroethene	ND	0.100	ND	0.40	01/11/22	KCA	5
1,2,4-Trichlorobenzene	ND	0.270	ND	2.00	01/11/22	KCA	5
1,2,4-Trimethylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
1,2-Dibromoethane(EDB)	ND	0.100	ND	0.77	01/11/22	KCA	5
1,2-Dichlorobenzene	ND	0.500	ND	3.00	01/11/22	KCA	5
1,2-Dichloroethane	ND	0.100	ND	0.40	01/11/22	KCA	5
1,2-dichloropropane	ND	0.100	ND	0.46	01/11/22	KCA	5
1,2-Dichlorotetrafluoroethane	ND	2.50	ND	17.5	01/11/22	KCA	5
1,3,5-Trimethylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
1,3-Butadiene	ND	2.50	ND	5.53	01/11/22	KCA	5
1,3-Dichlorobenzene	ND	0.500	ND	3.00	01/11/22	KCA	5
1,4-Dichlorobenzene	ND	0.400	ND	2.40	01/11/22	KCA	5
1,4-Dioxane	ND	0.650	ND	2.34	01/11/22	KCA	5
2-Hexanone(MBK)	ND	2.50	ND	10.2	01/11/22	KCA	5
4-Ethyltoluene	ND	2.50	ND	12.3	01/11/22	KCA	5
4-Isopropyltoluene	ND	2.50	ND	13.7	01/11/22	KCA	5
4-Methyl-2-pentanone(MIBK)	ND	2.50	ND	10.2	01/11/22	KCA	5
Acetone	25.2	3.75	59.8	8.90	01/11/22	KCA	5
Acrylonitrile	ND	2.50	ND	5.42	01/11/22	KCA	5
Benzene	ND	1.00	ND	3.19	01/11/22	KCA	5
Benzyl chloride	ND	2.50	ND	12.9	01/11/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.100	ND	0.67	01/11/22	KCA	5
Bromoform	ND	0.750	ND	7.75	01/11/22	KCA	5
Bromomethane	ND	0.700	ND	2.72	01/11/22	KCA	5
Carbon Disulfide	ND	2.50	ND	7.78	01/11/22	KCA	5
Carbon Tetrachloride	ND	0.430	ND	2.70	01/11/22	KCA	5
Chlorobenzene	ND	1.00	ND	4.60	01/11/22	KCA	5
Chloroethane	ND	2.50	ND	6.59	01/11/22	KCA	5
Chloroform	ND	1.00	ND	4.88	01/11/22	KCA	5
Chloromethane	ND	2.50	ND	5.16	01/11/22	KCA	5
Cis-1,2-Dichloroethene	ND	1.00	ND	3.96	01/11/22	KCA	5
cis-1,3-Dichloropropene	ND	0.500	ND	2.27	01/11/22	KCA	5
Cyclohexane	ND	2.50	ND	8.60	01/11/22	KCA	5
Dibromochloromethane	ND	0.100	ND	0.85	01/11/22	KCA	5
Dichlorodifluoromethane	ND	2.50	ND	12.4	01/11/22	KCA	5
Ethanol	140	3.75	264	7.06	01/11/22	KCA	5
Ethyl acetate	ND	2.50	ND	9.00	01/11/22	KCA	5
Ethylbenzene	ND	2.50	ND	10.8	01/11/22	KCA	5
Heptane	ND	2.50	ND	10.2	01/11/22	KCA	5
Hexachlorobutadiene	ND	0.100	ND	1.07	01/11/22	KCA	5
Hexane	ND	2.25	ND	7.93	01/11/22	KCA	5
Isopropylalcohol	ND	3.75	ND	9.21	01/11/22	KCA	5
Isopropylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
m,p-Xylene	ND	5.00	ND	21.7	01/11/22	KCA	5
Methyl Ethyl Ketone	ND	2.25	ND	6.63	01/11/22	KCA	5
Methyl tert-butyl ether(MTBE)	ND	2.50	ND	9.01	01/11/22	KCA	5
Methylene Chloride	ND	15.0	ND	52.1	01/11/22	KCA	5
Naphthalene	ND	0.500	ND	2.62	01/11/22	KCA	5
n-Butylbenzene	ND	2.50	ND	13.7	01/11/22	KCA	5
o-Xylene	ND	2.50	ND	10.8	01/11/22	KCA	5
Propylene	7.94	2.50	13.7	4.30	01/11/22	KCA	5
sec-Butylbenzene	ND	2.50	ND	13.7	01/11/22	KCA	5
Styrene	ND	1.00	ND	4.26	01/11/22	KCA	5
Tetrachloroethene	ND	0.500	ND	3.39	01/11/22	KCA	5
Tetrahydrofuran	ND	2.50	ND	7.37	01/11/22	KCA	5
Toluene	ND	2.50	ND	9.42	01/11/22	KCA	5
Trans-1,2-Dichloroethene	ND	1.00	ND	3.96	01/11/22	KCA	5
trans-1,3-Dichloropropene	ND	2.50	ND	11.3	01/11/22	KCA	5
Trichloroethene	ND	0.250	ND	1.34	01/11/22	KCA	5
Trichlorofluoromethane	ND	2.50	ND	14.0	01/11/22	KCA	5
Trichlorotrifluoroethane	ND	2.50	ND	19.1	01/11/22	KCA	5
Vinyl Chloride	ND	0.100	ND	0.26	01/11/22	KCA	5
<u>QA/QC Surrogates/Internals</u>							
% Bromofluorobenzene (5x)	95	%	95	%	01/11/22	KCA	5
% IS-1,4-Difluorobenzene (5x)	98	%	98	%	01/11/22	KCA	5
% IS-Bromochloromethane (5x)	100	%	100	%	01/11/22	KCA	5
% IS-Chlorobenzene-d5 (5x)	96	%	96	%	01/11/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 12, 2022

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 12, 2022

FOR: Attn: Patrick Dowling
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: AIR
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501B10
Canister Id: 9544

Custody Information

Collected by: MHS
Received by: SW
Analyzed by: see "By" below

Date

01/06/22 11:40
01/10/22 15:04

Time

Laboratory Data

SDG ID: GCK12637
Phoenix ID: CK12646

Project ID: MCCOY STADIUM
Client ID: 1603220106-10

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	0.375	ND	2.57	01/11/22	KCA	5
1,1,1-Trichloroethane	ND	2.50	ND	13.6	01/11/22	KCA	5
1,1,2,2-Tetrachloroethane	ND	0.100	ND	0.69	01/11/22	KCA	5
1,1,2-Trichloroethane	ND	0.100	ND	0.55	01/11/22	KCA	5
1,1-Dichloroethane	ND	0.750	ND	3.03	01/11/22	KCA	5
1,1-Dichloroethene	ND	0.100	ND	0.40	01/11/22	KCA	5
1,2,4-Trichlorobenzene	ND	0.270	ND	2.00	01/11/22	KCA	5
1,2,4-Trimethylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
1,2-Dibromoethane(EDB)	ND	0.100	ND	0.77	01/11/22	KCA	5
1,2-Dichlorobenzene	ND	0.500	ND	3.00	01/11/22	KCA	5
1,2-Dichloroethane	ND	0.100	ND	0.40	01/11/22	KCA	5
1,2-dichloropropane	ND	0.100	ND	0.46	01/11/22	KCA	5
1,2-Dichlorotetrafluoroethane	ND	2.50	ND	17.5	01/11/22	KCA	5
1,3,5-Trimethylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
1,3-Butadiene	ND	2.50	ND	5.53	01/11/22	KCA	5
1,3-Dichlorobenzene	ND	0.500	ND	3.00	01/11/22	KCA	5
1,4-Dichlorobenzene	ND	0.400	ND	2.40	01/11/22	KCA	5
1,4-Dioxane	ND	0.650	ND	2.34	01/11/22	KCA	5
2-Hexanone(MBK)	ND	2.50	ND	10.2	01/11/22	KCA	5
4-Ethyltoluene	ND	2.50	ND	12.3	01/11/22	KCA	5
4-Isopropyltoluene	ND	2.50	ND	13.7	01/11/22	KCA	5
4-Methyl-2-pentanone(MIBK)	ND	2.50	ND	10.2	01/11/22	KCA	5
Acetone	17.8	3.75	42.3	8.90	01/11/22	KCA	5
Acrylonitrile	ND	2.50	ND	5.42	01/11/22	KCA	5
Benzene	1.16	1.00	3.70	3.19	01/11/22	KCA	5
Benzyl chloride	ND	2.50	ND	12.9	01/11/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.100	ND	0.67	01/11/22	KCA	5
Bromoform	ND	0.750	ND	7.75	01/11/22	KCA	5
Bromomethane	ND	0.700	ND	2.72	01/11/22	KCA	5
Carbon Disulfide	ND	2.50	ND	7.78	01/11/22	KCA	5
Carbon Tetrachloride	ND	0.430	ND	2.70	01/11/22	KCA	5
Chlorobenzene	ND	1.00	ND	4.60	01/11/22	KCA	5
Chloroethane	ND	2.50	ND	6.59	01/11/22	KCA	5
Chloroform	ND	1.00	ND	4.88	01/11/22	KCA	5
Chloromethane	ND	2.50	ND	5.16	01/11/22	KCA	5
Cis-1,2-Dichloroethene	ND	1.00	ND	3.96	01/11/22	KCA	5
cis-1,3-Dichloropropene	ND	0.500	ND	2.27	01/11/22	KCA	5
Cyclohexane	ND	2.50	ND	8.60	01/11/22	KCA	5
Dibromochloromethane	ND	0.100	ND	0.85	01/11/22	KCA	5
Dichlorodifluoromethane	ND	2.50	ND	12.4	01/11/22	KCA	5
Ethanol	73.8	3.75	139	7.06	01/11/22	KCA	5
Ethyl acetate	ND	2.50	ND	9.00	01/11/22	KCA	5
Ethylbenzene	ND	2.50	ND	10.8	01/11/22	KCA	5
Heptane	ND	2.50	ND	10.2	01/11/22	KCA	5
Hexachlorobutadiene	ND	0.100	ND	1.07	01/11/22	KCA	5
Hexane	ND	2.25	ND	7.93	01/11/22	KCA	5
Isopropylalcohol	ND	3.75	ND	9.21	01/11/22	KCA	5
Isopropylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
m,p-Xylene	ND	5.00	ND	21.7	01/11/22	KCA	5
Methyl Ethyl Ketone	ND	2.25	ND	6.63	01/11/22	KCA	5
Methyl tert-butyl ether(MTBE)	ND	2.50	ND	9.01	01/11/22	KCA	5
Methylene Chloride	ND	15.0	ND	52.1	01/11/22	KCA	5
Naphthalene	ND	0.500	ND	2.62	01/11/22	KCA	5
n-Butylbenzene	ND	2.50	ND	13.7	01/11/22	KCA	5
o-Xylene	ND	2.50	ND	10.8	01/11/22	KCA	5
Propylene	4.65	2.50	8.00	4.30	01/11/22	KCA	5
sec-Butylbenzene	ND	2.50	ND	13.7	01/11/22	KCA	5
Styrene	ND	1.00	ND	4.26	01/11/22	KCA	5
Tetrachloroethene	ND	0.500	ND	3.39	01/11/22	KCA	5
Tetrahydrofuran	ND	2.50	ND	7.37	01/11/22	KCA	5
Toluene	ND	2.50	ND	9.42	01/11/22	KCA	5
Trans-1,2-Dichloroethene	ND	1.00	ND	3.96	01/11/22	KCA	5
trans-1,3-Dichloropropene	ND	2.50	ND	11.3	01/11/22	KCA	5
Trichloroethene	ND	0.250	ND	1.34	01/11/22	KCA	5
Trichlorofluoromethane	ND	2.50	ND	14.0	01/11/22	KCA	5
Trichlorotrifluoroethane	ND	2.50	ND	19.1	01/11/22	KCA	5
Vinyl Chloride	ND	0.100	ND	0.26	01/11/22	KCA	5
<u>QA/QC Surrogates/Internals</u>							
% Bromofluorobenzene (5x)	94	%	94	%	01/11/22	KCA	5
% IS-1,4-Difluorobenzene (5x)	94	%	94	%	01/11/22	KCA	5
% IS-Bromochloromethane (5x)	98	%	98	%	01/11/22	KCA	5
% IS-Chlorobenzene-d5 (5x)	95	%	95	%	01/11/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 12, 2022

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 12, 2022

FOR: Attn: Patrick Dowling
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: AIR
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501B10
Canister Id: 457

Custody Information

Collected by: MHS
Received by: SW
Analyzed by: see "By" below

Date

01/06/22 11:55
01/10/22 15:04

Time

Laboratory Data

SDG ID: GCK12637
Phoenix ID: CK12647

Project ID: MCCOY STADIUM
Client ID: 1603220106-11

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	0.375	ND	2.57	01/11/22	KCA	5
1,1,1-Trichloroethane	ND	2.50	ND	13.6	01/11/22	KCA	5
1,1,2,2-Tetrachloroethane	ND	0.100	ND	0.69	01/11/22	KCA	5
1,1,2-Trichloroethane	ND	0.100	ND	0.55	01/11/22	KCA	5
1,1-Dichloroethane	ND	0.750	ND	3.03	01/11/22	KCA	5
1,1-Dichloroethene	ND	0.100	ND	0.40	01/11/22	KCA	5
1,2,4-Trichlorobenzene	ND	0.270	ND	2.00	01/11/22	KCA	5
1,2,4-Trimethylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
1,2-Dibromoethane(EDB)	ND	0.100	ND	0.77	01/11/22	KCA	5
1,2-Dichlorobenzene	ND	0.500	ND	3.00	01/11/22	KCA	5
1,2-Dichloroethane	ND	0.100	ND	0.40	01/11/22	KCA	5
1,2-dichloropropane	ND	0.100	ND	0.46	01/11/22	KCA	5
1,2-Dichlorotetrafluoroethane	ND	2.50	ND	17.5	01/11/22	KCA	5
1,3,5-Trimethylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
1,3-Butadiene	ND	2.50	ND	5.53	01/11/22	KCA	5
1,3-Dichlorobenzene	ND	0.500	ND	3.00	01/11/22	KCA	5
1,4-Dichlorobenzene	ND	0.400	ND	2.40	01/11/22	KCA	5
1,4-Dioxane	ND	0.650	ND	2.34	01/11/22	KCA	5
2-Hexanone(MBK)	ND	2.50	ND	10.2	01/11/22	KCA	5
4-Ethyltoluene	ND	2.50	ND	12.3	01/11/22	KCA	5
4-Isopropyltoluene	ND	2.50	ND	13.7	01/11/22	KCA	5
4-Methyl-2-pentanone(MIBK)	ND	2.50	ND	10.2	01/11/22	KCA	5
Acetone	18.2	3.75	43.2	8.90	01/11/22	KCA	5
Acrylonitrile	ND	2.50	ND	5.42	01/11/22	KCA	5
Benzene	2.32	1.00	7.41	3.19	01/11/22	KCA	5
Benzyl chloride	ND	2.50	ND	12.9	01/11/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.100	ND	0.67	01/11/22	KCA	5
Bromoform	ND	0.750	ND	7.75	01/11/22	KCA	5
Bromomethane	ND	0.700	ND	2.72	01/11/22	KCA	5
Carbon Disulfide	3.14	2.50	9.8	7.78	01/11/22	KCA	5
Carbon Tetrachloride	ND	0.430	ND	2.70	01/11/22	KCA	5
Chlorobenzene	ND	1.00	ND	4.60	01/11/22	KCA	5
Chloroethane	ND	2.50	ND	6.59	01/11/22	KCA	5
Chloroform	ND	1.00	ND	4.88	01/11/22	KCA	5
Chloromethane	ND	2.50	ND	5.16	01/11/22	KCA	5
Cis-1,2-Dichloroethene	ND	1.00	ND	3.96	01/11/22	KCA	5
cis-1,3-Dichloropropene	ND	0.500	ND	2.27	01/11/22	KCA	5
Cyclohexane	ND	2.50	ND	8.60	01/11/22	KCA	5
Dibromochloromethane	ND	0.100	ND	0.85	01/11/22	KCA	5
Dichlorodifluoromethane	ND	2.50	ND	12.4	01/11/22	KCA	5
Ethanol	110	3.75	207	7.06	01/11/22	KCA	5
Ethyl acetate	ND	2.50	ND	9.00	01/11/22	KCA	5
Ethylbenzene	3.30	2.50	14.3	10.8	01/11/22	KCA	5
Heptane	4.29	2.50	17.6	10.2	01/11/22	KCA	5
Hexachlorobutadiene	ND	0.100	ND	1.07	01/11/22	KCA	5
Hexane	5.62	2.25	19.8	7.93	01/11/22	KCA	5
Isopropylalcohol	ND	3.75	ND	9.21	01/11/22	KCA	5
Isopropylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
m,p-Xylene	10.4	5.00	45.1	21.7	01/11/22	KCA	5
Methyl Ethyl Ketone	2.27	2.25	6.69	6.63	01/11/22	KCA	5
Methyl tert-butyl ether(MTBE)	ND	2.50	ND	9.01	01/11/22	KCA	5
Methylene Chloride	ND	15.0	ND	52.1	01/11/22	KCA	5
Naphthalene	ND	0.500	ND	2.62	01/11/22	KCA	5
n-Butylbenzene	ND	2.50	ND	13.7	01/11/22	KCA	5
o-Xylene	3.09	2.50	13.4	10.8	01/11/22	KCA	5
Propylene	18.1	2.50	31.1	4.30	01/11/22	KCA	5
sec-Butylbenzene	ND	2.50	ND	13.7	01/11/22	KCA	5
Styrene	ND	1.00	ND	4.26	01/11/22	KCA	5
Tetrachloroethene	ND	0.500	ND	3.39	01/11/22	KCA	5
Tetrahydrofuran	ND	2.50	ND	7.37	01/11/22	KCA	5
Toluene	27.0	2.50	102	9.42	01/11/22	KCA	5
Trans-1,2-Dichloroethene	ND	1.00	ND	3.96	01/11/22	KCA	5
trans-1,3-Dichloropropene	ND	2.50	ND	11.3	01/11/22	KCA	5
Trichloroethene	ND	0.250	ND	1.34	01/11/22	KCA	5
Trichlorofluoromethane	ND	2.50	ND	14.0	01/11/22	KCA	5
Trichlorotrifluoroethane	ND	2.50	ND	19.1	01/11/22	KCA	5
Vinyl Chloride	ND	0.100	ND	0.26	01/11/22	KCA	5
<u>QA/QC Surrogates/Internals</u>							
% Bromofluorobenzene (5x)	95	%	95	%	01/11/22	KCA	5
% IS-1,4-Difluorobenzene (5x)	96	%	96	%	01/11/22	KCA	5
% IS-Bromochloromethane (5x)	97	%	97	%	01/11/22	KCA	5
% IS-Chlorobenzene-d5 (5x)	94	%	94	%	01/11/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

The canister was received under no vacuum, therefore sample results may not be representative.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.

The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 12, 2022

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 12, 2022

FOR: Attn: Patrick Dowling
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Sample Information

Matrix: AIR
Location Code: F&O-RI
Rush Request: Standard
P.O.#: 20160501B10
Canister Id: 23338

Custody Information

Collected by: MHS
Received by: SW
Analyzed by: see "By" below

Date

01/06/22 12:27
01/10/22 15:04

Time

Laboratory Data

SDG ID: GCK12637
Phoenix ID: CK12648

Project ID: MCCOY STADIUM
Client ID: 1603220106-12

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
<u>Volatiles</u>							
1,1,1,2-Tetrachloroethane	ND	0.375	ND	2.57	01/11/22	KCA	5
1,1,1-Trichloroethane	ND	2.50	ND	13.6	01/11/22	KCA	5
1,1,2,2-Tetrachloroethane	ND	0.100	ND	0.69	01/11/22	KCA	5
1,1,2-Trichloroethane	ND	0.100	ND	0.55	01/11/22	KCA	5
1,1-Dichloroethane	ND	0.750	ND	3.03	01/11/22	KCA	5
1,1-Dichloroethene	ND	0.100	ND	0.40	01/11/22	KCA	5
1,2,4-Trichlorobenzene	ND	0.270	ND	2.00	01/11/22	KCA	5
1,2,4-Trimethylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
1,2-Dibromoethane(EDB)	ND	0.100	ND	0.77	01/11/22	KCA	5
1,2-Dichlorobenzene	ND	0.500	ND	3.00	01/11/22	KCA	5
1,2-Dichloroethane	ND	0.100	ND	0.40	01/11/22	KCA	5
1,2-dichloropropane	ND	0.100	ND	0.46	01/11/22	KCA	5
1,2-Dichlorotetrafluoroethane	ND	2.50	ND	17.5	01/11/22	KCA	5
1,3,5-Trimethylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
1,3-Butadiene	ND	2.50	ND	5.53	01/11/22	KCA	5
1,3-Dichlorobenzene	ND	0.500	ND	3.00	01/11/22	KCA	5
1,4-Dichlorobenzene	ND	0.400	ND	2.40	01/11/22	KCA	5
1,4-Dioxane	ND	0.650	ND	2.34	01/11/22	KCA	5
2-Hexanone(MBK)	ND	2.50	ND	10.2	01/11/22	KCA	5
4-Ethyltoluene	ND	2.50	ND	12.3	01/11/22	KCA	5
4-Isopropyltoluene	ND	2.50	ND	13.7	01/11/22	KCA	5
4-Methyl-2-pentanone(MIBK)	ND	2.50	ND	10.2	01/11/22	KCA	5
Acetone	13.7	3.75	32.5	8.90	01/11/22	KCA	5
Acrylonitrile	ND	2.50	ND	5.42	01/11/22	KCA	5
Benzene	1.68	1.00	5.36	3.19	01/11/22	KCA	5
Benzyl chloride	ND	2.50	ND	12.9	01/11/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
Bromodichloromethane	ND	0.100	ND	0.67	01/11/22	KCA	5
Bromoform	ND	0.750	ND	7.75	01/11/22	KCA	5
Bromomethane	ND	0.700	ND	2.72	01/11/22	KCA	5
Carbon Disulfide	ND	2.50	ND	7.78	01/11/22	KCA	5
Carbon Tetrachloride	ND	0.430	ND	2.70	01/11/22	KCA	5
Chlorobenzene	ND	1.00	ND	4.60	01/11/22	KCA	5
Chloroethane	ND	2.50	ND	6.59	01/11/22	KCA	5
Chloroform	ND	1.00	ND	4.88	01/11/22	KCA	5
Chloromethane	ND	2.50	ND	5.16	01/11/22	KCA	5
Cis-1,2-Dichloroethene	ND	1.00	ND	3.96	01/11/22	KCA	5
cis-1,3-Dichloropropene	ND	0.500	ND	2.27	01/11/22	KCA	5
Cyclohexane	ND	2.50	ND	8.60	01/11/22	KCA	5
Dibromochloromethane	ND	0.100	ND	0.85	01/11/22	KCA	5
Dichlorodifluoromethane	ND	2.50	ND	12.4	01/11/22	KCA	5
Ethanol	98.1	3.75	185	7.06	01/11/22	KCA	5
Ethyl acetate	ND	2.50	ND	9.00	01/11/22	KCA	5
Ethylbenzene	ND	2.50	ND	10.8	01/11/22	KCA	5
Heptane	2.53	2.50	10.4	10.2	01/11/22	KCA	5
Hexachlorobutadiene	ND	0.100	ND	1.07	01/11/22	KCA	5
Hexane	3.96	2.25	13.9	7.93	01/11/22	KCA	5
Isopropylalcohol	ND	3.75	ND	9.21	01/11/22	KCA	5
Isopropylbenzene	ND	2.50	ND	12.3	01/11/22	KCA	5
m,p-Xylene	ND	5.00	ND	21.7	01/11/22	KCA	5
Methyl Ethyl Ketone	ND	2.25	ND	6.63	01/11/22	KCA	5
Methyl tert-butyl ether(MTBE)	ND	2.50	ND	9.01	01/11/22	KCA	5
Methylene Chloride	ND	15.0	ND	52.1	01/11/22	KCA	5
Naphthalene	ND	0.500	ND	2.62	01/11/22	KCA	5
n-Butylbenzene	ND	2.50	ND	13.7	01/11/22	KCA	5
o-Xylene	ND	2.50	ND	10.8	01/11/22	KCA	5
Propylene	13.2	2.50	22.7	4.30	01/11/22	KCA	5
sec-Butylbenzene	ND	2.50	ND	13.7	01/11/22	KCA	5
Styrene	ND	1.00	ND	4.26	01/11/22	KCA	5
Tetrachloroethene	ND	0.500	ND	3.39	01/11/22	KCA	5
Tetrahydrofuran	ND	2.50	ND	7.37	01/11/22	KCA	5
Toluene	12.4	2.50	46.7	9.42	01/11/22	KCA	5
Trans-1,2-Dichloroethene	ND	1.00	ND	3.96	01/11/22	KCA	5
trans-1,3-Dichloropropene	ND	2.50	ND	11.3	01/11/22	KCA	5
Trichloroethene	ND	0.250	ND	1.34	01/11/22	KCA	5
Trichlorofluoromethane	ND	2.50	ND	14.0	01/11/22	KCA	5
Trichlorotrifluoroethane	ND	2.50	ND	19.1	01/11/22	KCA	5
Vinyl Chloride	ND	0.100	ND	0.26	01/11/22	KCA	5
<u>QA/QC Surrogates/Internals</u>							
% Bromofluorobenzene (5x)	95	%	95	%	01/11/22	KCA	5
% IS-1,4-Difluorobenzene (5x)	92	%	92	%	01/11/22	KCA	5
% IS-Bromochloromethane (5x)	95	%	95	%	01/11/22	KCA	5
% IS-Chlorobenzene-d5 (5x)	93	%	93	%	01/11/22	KCA	5

Parameter	ppbv Result	ppbv RL	ug/m3 Result	ug/m3 RL	Date/Time	By	Dilution
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

January 12, 2022

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Canister Sampling Information

January 12, 2022

FOR: Attn: Patrick Dowling
Fuss & O'Neill, Inc.
Foundry Corporate Office Center
317 Iron Horse Way, Suite 204
Providence, RI 02908

Location Code: F&O-RI

SDG I.D.: GCK12637

Project ID: MCCOY STADIUM

Client Id	Lab Id	Canister		Reg. Id	Chk Out Date	Laboratory					Field			
		Id	Type			Out Hg	In Hg	Out Flow	In Flow	Flow RPD	Start Hg	End Hg	Sampling Start Date	Sampling End Date
1603220105-01	CK12637	19960	6.0L	5539	12/27/21	-30	-5	87	94	7.7	-27	-5	01/05/22 10:26	01/05/22 11:26
1603220105-02	CK12638	16004	6.0L	7039	12/27/21	-30	-4	87	98	11.9	-28	-5	01/05/22 11:06	01/05/22 12:06
1603220105-03	CK12639	19628	6.0L	7032	12/27/21	-30	-5	87	96	9.8	-27	-3	01/05/22 11:27	01/05/22 12:27
1603220105-04	CK12640	13636	6.0L	4990	12/27/21	-30	-4	87	98	11.9	-28	-4	01/05/22 11:48	01/05/22 12:48
1603220105-05	CK12641	28559	6.0L	5042	12/27/21	-30	-17	87	28.9	100.3	-29	-10	01/05/22 13:19	01/05/22 15:30
1603220105-06	CK12642	19924	6.0L	3414	12/27/21	-30	-5	87	93	6.7	-27	-4	01/05/22 13:34	01/05/22 14:34
1603220106-07	CK12643	28578	6.0L	7026	12/27/21	-30	-4	87	88	1.1	-29	-5	01/06/22 08:15	01/06/22 09:17
1603220106-08	CK12644	28623	6.0L	7047	12/27/21	-30	-2	87	893	164.5	-29	-4	01/06/22 08:41	01/06/22 09:41
1603220106-09	CK12645	219	6.0L	5348	12/27/21	-30	-2	87	87	0.0	-25	-4	01/06/22 09:14	01/06/22 10:14
1603220106-10	CK12646	9544	6.0L	6981	12/27/21	-30	-3	87	87	0.0	-28	-5	01/06/22 10:40	01/06/22 11:40
1603220106-11	CK12647	457	6.0L	3510	12/27/21	-30	0	87	77	12.2	-30	-4	01/06/22 10:55	01/06/22 11:55
1603220106-12	CK12648	23338	6.0L	5621	12/27/21	-30	-4	87	90	3.4	-27	-4	01/06/22 11:27	01/06/22 12:27



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

January 12, 2022

QA/QC Data

SDG I.D.: GCK12637

Parameter	Blk ppbv	Blk RL ppbv	Blk ug/m3	Blk RL ug/m3	LCS %	Sample Result ug/m3	Sample Dup ug/m3	Sample Result ppbv	Sample Dup ppbv	DUP RPD	% Rec Limits	% RPD Limits
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QA/QC Batch 607736 (ppbv), QC Sample No: CK12647 (CK12637 (5X) , CK12638 (5X) , CK12639 (5X) , CK12640 (10X) , CK12641 (5X) , CK12642 (5X) , CK12643 (5X) , CK12644 (5X) , CK12645 (5X) , CK12646 (5X) , CK12647 (5X) , CK12648 (5X))

Volatiles

1,1,1,2-Tetrachloroethane	ND	0.375	ND	2.57	90	ND	ND	ND	ND	NC	70 - 130	25
1,1,1-Trichloroethane	ND	2.50	ND	13.6	111	ND	ND	ND	ND	NC	70 - 130	25
1,1,2,2-Tetrachloroethane	ND	0.100	ND	0.69	98	ND	ND	ND	ND	NC	70 - 130	25
1,1,2-Trichloroethane	ND	0.100	ND	0.55	104	ND	ND	ND	ND	NC	70 - 130	25
1,1-Dichloroethane	ND	0.750	ND	3.03	108	ND	ND	ND	ND	NC	70 - 130	25
1,1-Dichloroethene	ND	0.100	ND	0.40	110	ND	ND	ND	ND	NC	70 - 130	25
1,2,4-Trichlorobenzene	ND	0.270	ND	2.00	62	ND	ND	ND	ND	NC	70 - 130	25
1,2,4-Trimethylbenzene	ND	2.50	ND	12.3	104	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dibromoethane(EDB)	ND	0.100	ND	0.77	102	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichlorobenzene	ND	0.500	ND	3.00	97	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichloroethane	ND	0.100	ND	0.40	110	ND	ND	ND	ND	NC	70 - 130	25
1,2-dichloropropane	ND	0.100	ND	0.46	106	ND	ND	ND	ND	NC	70 - 130	25
1,2-Dichlorotetrafluoroethane	ND	2.50	ND	17.5	115	ND	ND	ND	ND	NC	70 - 130	25
1,3,5-Trimethylbenzene	ND	2.50	ND	12.3	100	ND	ND	ND	ND	NC	70 - 130	25
1,3-Butadiene	ND	2.50	ND	5.53	104	ND	ND	ND	ND	NC	70 - 130	25
1,3-Dichlorobenzene	ND	0.500	ND	3.00	105	ND	ND	ND	ND	NC	70 - 130	25
1,4-Dichlorobenzene	ND	0.400	ND	2.40	107	ND	ND	ND	ND	NC	70 - 130	25
1,4-Dioxane	ND	0.650	ND	2.34	99	ND	ND	ND	ND	NC	70 - 130	25
2-Hexanone(MBK)	ND	2.50	ND	10.2	111	ND	ND	ND	ND	NC	70 - 130	25
4-Ethyltoluene	ND	2.50	ND	12.3	103	ND	ND	ND	ND	NC	70 - 130	25
4-Isopropyltoluene	ND	2.50	ND	13.7	100	ND	ND	ND	ND	NC	70 - 130	25
4-Methyl-2-pentanone(MIBK)	ND	2.50	ND	10.2	115	ND	ND	ND	ND	NC	70 - 130	25
Acetone	ND	3.75	ND	8.90	111	43.2	36.3	18.2	15.3	NC	70 - 130	25
Acrylonitrile	ND	2.50	ND	5.42	101	ND	ND	ND	ND	NC	70 - 130	25
Benzene	ND	1.00	ND	3.19	108	7.38	7.09	2.31	2.22	NC	70 - 130	25
Benzyl chloride	ND	2.50	ND	12.9	97	ND	ND	ND	ND	NC	70 - 130	25
Bromodichloromethane	ND	0.100	ND	0.67	111	ND	ND	ND	ND	NC	70 - 130	25
Bromoform	ND	0.750	ND	7.75	84	ND	ND	ND	ND	NC	70 - 130	25
Bromomethane	ND	0.700	ND	2.72	98	ND	ND	ND	ND	NC	70 - 130	25
Carbon Disulfide	ND	2.50	ND	7.78	111	9.8	9.27	3.14	2.98	NC	70 - 130	25
Carbon Tetrachloride	ND	0.430	ND	2.70	113	ND	ND	ND	ND	NC	70 - 130	25
Chlorobenzene	ND	1.00	ND	4.60	94	ND	ND	ND	ND	NC	70 - 130	25
Chloroethane	ND	2.50	ND	6.59	98	ND	ND	ND	ND	NC	70 - 130	25
Chloroform	ND	1.00	ND	4.88	105	ND	ND	ND	ND	NC	70 - 130	25
Chloromethane	ND	2.50	ND	5.16	113	ND	ND	ND	ND	NC	70 - 130	25
Cis-1,2-Dichloroethene	ND	1.00	ND	3.96	106	ND	ND	ND	ND	NC	70 - 130	25
cis-1,3-Dichloropropene	ND	0.500	ND	2.27	108	ND	ND	ND	ND	NC	70 - 130	25
Cyclohexane	ND	2.50	ND	8.60	107	ND	8.98	ND	2.61	NC	70 - 130	25
Dibromochloromethane	ND	0.100	ND	0.85	100	ND	ND	ND	ND	NC	70 - 130	25
Dichlorodifluoromethane	ND	2.50	ND	12.4	116	ND	ND	ND	ND	NC	70 - 130	25

QA/QC Data

SDG I.D.: GCK12637

Parameter	Blk ppbv	Blk RL ppbv	Blk ug/m3	Blk RL ug/m3	LCS %	Sample Result ug/m3	Sample Dup ug/m3	Sample Result ppbv	Sample Dup ppbv	DUP RPD	% Rec Limits	% RPD Limits
Ethanol	ND	3.75	ND	7.06	87	207	174	110	92.4	17.4	70 - 130	25
Ethyl acetate	ND	2.50	ND	9.00	137	ND	ND	ND	ND	NC	70 - 130	25
Ethylbenzene	ND	2.50	ND	10.8	96	14.3	14.6	3.29	3.36	NC	70 - 130	25
Heptane	ND	2.50	ND	10.2	106	17.6	15.6	4.29	3.81	NC	70 - 130	25
Hexachlorobutadiene	ND	0.100	ND	1.07	56	ND	ND	ND	ND	NC	70 - 130	25
Hexane	ND	2.25	ND	7.93	108	19.8	18.2	5.62	5.18	NC	70 - 130	25
Isopropylalcohol	ND	3.75	ND	9.21	121	ND	ND	ND	ND	NC	70 - 130	25
Isopropylbenzene	ND	2.50	ND	12.3	97	ND	ND	ND	ND	NC	70 - 130	25
m,p-Xylene	ND	5.00	ND	21.7	99	45.1	46.9	10.4	10.8	NC	70 - 130	25
Methyl Ethyl Ketone	ND	2.25	ND	6.63	104	6.69	ND	2.27	ND	NC	70 - 130	25
Methyl tert-butyl ether(MTBE)	ND	2.50	ND	9.01	106	ND	ND	ND	ND	NC	70 - 130	25
Methylene Chloride	ND	15.0	ND	52.1	97	ND	ND	ND	ND	NC	70 - 130	25
Naphthalene	ND	25.0	ND	131	60	ND	ND	ND	ND	NC	70 - 130	25
n-Butylbenzene	ND	2.50	ND	13.7	111	ND	ND	ND	ND	NC	70 - 130	25
o-Xylene	ND	2.50	ND	10.8	96	13.4	14.0	3.08	3.23	NC	70 - 130	25
Propylene	ND	2.50	ND	4.30	117	31.1	28.2	18.1	16.4	9.9	70 - 130	25
sec-Butylbenzene	ND	2.50	ND	13.7	100	ND	ND	ND	ND	NC	70 - 130	25
Styrene	ND	1.00	ND	4.26	96	ND	ND	ND	ND	NC	70 - 130	25
Tetrachloroethene	ND	0.500	ND	3.39	91	ND	ND	ND	ND	NC	70 - 130	25
Tetrahydrofuran	ND	2.50	ND	7.37	105	ND	ND	ND	ND	NC	70 - 130	25
Toluene	ND	2.50	ND	9.42	105	102	99.4	27.0	26.4	2.2	70 - 130	25
Trans-1,2-Dichloroethene	ND	1.00	ND	3.96	108	ND	ND	ND	ND	NC	70 - 130	25
trans-1,3-Dichloropropene	ND	2.50	ND	11.3	100	ND	ND	ND	ND	NC	70 - 130	25
Trichloroethene	ND	0.250	ND	1.34	102	ND	ND	ND	ND	NC	70 - 130	25
Trichlorofluoromethane	ND	2.50	ND	14.0	110	ND	ND	ND	ND	NC	70 - 130	25
Trichlorotrifluoroethane	ND	2.50	ND	19.1	108	ND	ND	ND	ND	NC	70 - 130	25
Vinyl Chloride	ND	0.100	ND	0.26	108	ND	ND	ND	ND	NC	70 - 130	25
% Bromofluorobenzene	82		82		98	95	99	95	99	NC	70 - 130	25
% IS-1,4-Difluorobenzene	121	%	121	%	105	96	102	96	102	NC	60 - 140	25
% IS-Bromochloromethane	120	%	120	%	108	97	105	97	105	NC	60 - 140	25
% IS-Chlorobenzene-d5	114	%	114	%	117	94	101	94	101	NC	60 - 140	25

I = This parameter is outside laboratory LCS/LCSD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MS Dup - Matrix Spike Duplicate

NC - No Criteria

Intf - Interference



Phyllis Shiller, Laboratory Director

January 12, 2022

Wednesday, January 12, 2022

Criteria: CT: R-SVVC
State: CT

Sample Criteria Exceedances Report
GCK12637 - FO-RI

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
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*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Comments

January 12, 2022

SDG I.D.: GCK12637

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

AIRSIM

CHEM20 01/10/22-1: CK12637, CK12638, CK12639, CK12640, CK12641, CK12642, CK12643, CK12644, CK12645, CK12646, CK12647, CK12648

The following Continuing Calibration compounds did not meet % deviation criteria: Hexachlorobutadiene(sim) 44%L (30%)

The following Continuing Calibration compounds did not meet Maximum % deviation criteria: Hexachlorobutadiene(sim) 44%L (30%)



CHAIN OF CUSTODY RECORD
AIR ANALYSES

P.O. #20160501B10

Page 1 of 2

Data Delivery:

☐ Fax #:

☒ Email: pdouling@fendo.com

☐ Phone #:

800-827-5426

email: greg@phoenixlabs.com

Report to: Patrick Douling pdouling@fendo.com		Project Name: Holey Stadium (20160501B10)		Data Format: (Circle) Equis <input checked="" type="checkbox"/> Other: <input checked="" type="checkbox"/> RAF													
Customer: Fuss + O'Neill		Invoice to: pdouling@fendo.com		Requested Deliverable: RCP ASP CAT B													
Address: 317 Iron Horse Way, Providence, RI		Sampled by: MHS		MCP NI Deliverables													
Quote Number:																	
Phoenix ID #	Client Sample ID	Canister ID #	Canister Size (L)	Outgoing Canister Pressure (in Hg)	Incoming Canister Pressure (in Hg)	Flow Regulator ID #	Flow Controller Setting (mL/min)	Sampling Start Time	Sampling End Time	Sample Start Date	Canister Pressure at Start (in Hg)	Canister Pressure at End (in Hg)	Soil Gas	Ambient/Indoor Air	Grab (G) Composite (C)	ANALYSES	
12637	1603220105 - 01	19460	6.0	-30	-5	5539	87	1026	1126	11/5/22	-27	-5	X		X		
12638	-02	16604	6.0		-4	7039		1106	1206		-28	-5	X		X		
12639	-03	19628	6.0		-5	7032		1127	1227		-27	-3	X		X		
12640	-04	13636	6.0		-4	4990		1148	1248		-28	-4	X		X		
12641	-05	28559	6.0		-17	5042		1314	1530		-29	-10	X		X		
12642	-06	19924	6.0		-5	3414		1334	1434		-27	-4	X		X		
12643	1603220106 - 07	28578	6.0		-4	7026		0815	0917	11/6/22	-29	-5	X		X		
12644	-08	28623	6.0		-2	7047		0841	0941		-29	-4	X		X		
12645	-09	0219	6.0		-2	5348		0914	1014		-25	-4	X		X		
12646	-10	9544	6.0		-3	6961		1040	1140		-28	-5	X		X		
Relinquished by: <i>Matthew Gurr</i>		Accepted by: <i>Greg</i>		Date: 11/6/22		Time: 1430		If arrest that all media released by Phoenix Environmental Laboratories, Inc. have been received in good working condition and agree to the terms and conditions as listed on the back of this document.									
State Where Samples Collected: <i>MA</i>		Requested Criteria: (Please Circle) <input checked="" type="checkbox"/> TAC I/C <input type="checkbox"/> SVVC I/C <input checked="" type="checkbox"/> SVVC RES <input type="checkbox"/> GWV I/C <input checked="" type="checkbox"/> GWV RES		Turnaround Time: <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> 4 Day <input checked="" type="checkbox"/> 5 Day		Signature: <i>Matthew Gurr</i>		Date: 11/6/22		Signature: <i>Matthew Gurr</i>		Date: 11/6/22		PA: <input type="checkbox"/> VT: <input type="checkbox"/>		Indoor Air: Residential <input type="checkbox"/> Vapor Intrusion <input type="checkbox"/> Indoor Air: Residential <input type="checkbox"/> Non-Residential <input type="checkbox"/> Soil Gas: Residential <input type="checkbox"/> Ind/Commercial <input type="checkbox"/> Indoor Air: Residential <input type="checkbox"/> Industrial <input type="checkbox"/> Sub-slab <input type="checkbox"/> Industrial <input type="checkbox"/>	
SPECIAL INSTRUCTIONS, QC REQUIREMENTS, REGULATORY INFORMATION: <i>John - 01/10/22 1504</i>																	

APPENDIX G

REMEDIAL ACTION WORK PLAN

Remedial Action Work Plan Pawtucket Unified High School

City of Pawtucket School Department
Pawtucket, Rhode Island

January 2025

January 17, 2025

Ms. Joanna Pawlina
Environmental Scientist II
Office of Land Revitalization & Sustainable Materials Management
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, Rhode Island 02908

RE: Remedial Action Work Plan
McCoy Stadium
2 Columbus Avenue, Pawtucket, Rhode Island
RIDEM File No.: SR-26-2077

Dear Ms. Pawlina:

The purpose of this letter is to present the enclosed Remedial Action Work Plan (RAWP) for the above-referenced Site. Fuss & O'Neill, Inc. (Fuss & O'Neill) prepared this RAWP on behalf of Jonathan Levi Architects (JLA) and the City of Pawtucket, Rhode Island School Department. A check for the Remedial Action Approval Application Fee of \$1,000 will be submitted under separate cover.

Please contact us if you require any additional information or if you have any questions regarding this RAWP.

Sincerely,



Christopher J. Flannery, EIT
Environmental Engineer II



Patrick J. Dowling, CPG
Vice President

/rlz

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1 Introduction

The purpose of this document is to provide a Remedial Action Work Plan (RAWP) in accordance with *Section 1.10* of the Rhode Island Department of Environmental Management (RIDEM) *Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations; 250-RICR-140-30-1)*. This RAWP was prepared by Fuss & O'Neill, Inc. (Fuss & O'Neill) on behalf of the City of Pawtucket School Department for the property located at 2 Columbus Avenue in Pawtucket, Rhode Island (hereafter, the "Site" or "subject site"). The planned remedial measures for the Site are to mitigate risk posed to future Site users and environmental receptors associated with environmental media containing polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), and metals.

2 Background

2.1 Site Description and History

The Site is the current location of McCoy Stadium, and is identified as the City of Pawtucket Tax Assessor's Map 26, Lot 630 and is located on the north side of Columbus Avenue in a Public Open zone of Pawtucket, Rhode Island (Providence County). A map consisting of a portion of a United States Geological Survey (USGS) topographic map showing the subject site location is provided as *Figure 1*.

According to City records, the Site is an approximately 23-acre parcel owned by the City of Pawtucket since the 1940s. As documented in the *Site Investigation Report*, the Site was previously the location of Hammond Pond. Hammond Pond was filled in the late 1930s to facilitate construction of the stadium. Structures located on the subject site include a 46,521 square foot baseball stadium constructed in 1942 with associated parking to the north, west, and south. Additionally, a 9,986 square foot fire station with associated parking was located on the southwest portion of the Site. Pariseau Field, consisting of a football field, concession stand, and bleachers, is located on the northeast portion of the Site. A Site plan is provided as *Figure 2*.

2.2 Previous Environmental Investigation Activities

2.2.1 November 1998 Underground Storage Tank Assessment

Kenyon Environmental Inc. (KEI) prepared an *Underground Storage Tank (UST) Assessment* to document the removal of a 3,000-gallon #4 fuel oil UST located on the southern portion of the Site. During removal of the tank, a 2-inch hole and large gash was observed in the tank, which was caused by construction activities (pile driving) associated with a stadium renovation project happening at that time. Petroleum impacted soil and groundwater was observed upon removal of the UST. Approximately 2,250 gallons of impacted groundwater and 300 cubic yards of impacted soil were removed from the Site. KEI recommended a *Site Investigation Report (SIR)* be completed due to the observation of free product in soil and groundwater following the removal of the UST.

2.2.2 September 2000 Site Investigation Report

Sage Environmental, LLC (SAGE) prepared a *Site Investigation Report (SIR)* to determine if an impact to soil and groundwater existed at the Site after the removal of the 3,000-gallon UST in November 1998 located on the southern portion of the Site. The investigation consisted of the advancement of three soil borings completed as monitoring wells. Confirmatory soil sampling did not find total petroleum hydrocarbons (TPH) above the RIDEM Industrial/Commercial Direct Exposure (I/C-DEC). No volatile organic compounds (VOC) were detected in groundwater samples exceeding the RIDEM GB Groundwater Objectives (GB-GO). SAGE recommended a status of No Further Action be assigned to the Site by RIDEM.

2.2.3 March 2022 Phase I Environmental Site Assessment

Fuss & O'Neill prepared a *Phase I Environmental Site Assessment* (Phase I ESA) to identify potential releases or threats of releases of oil and/or hazardous materials, also known as Recognized Environmental Conditions (RECs) at the Site. The Phase I ESA was included in the 2024 Site Investigation Report prepared for the Site.

2.2.4 March 2022 Phase II Environmental Site Assessment

Fuss & O'Neill prepared a *Phase II Environmental Site Assessment* (Phase II ESA) to document the findings of field investigations and laboratory analyses performed at the subject site. The Phase II ESA was included in the 2024 Site Investigation Report prepared for the Site.

2.2.5 October 2024 Site Investigation Report

On behalf of the City of Pawtucket, Fuss & O'Neill completed a Site Investigation of the Site, which was summarized in a *Site Investigation Report (SIR)* in October 2024. The following statements summarize the quality of each environmental media investigated at the subject Site, as detailed in the SIR:

- **Soil containing metals and PAHs:** Historically, the Site was the location of Hammond Pond. Fill observed throughout the Site during investigation activities contained anthropogenic materials, including brick, ash, and concrete and samples of the fill material contained PAH, lead, and arsenic at concentrations exceeding the RIDEM Residential Direct Exposure Criteria (R-DEC) and/or Industrial/Commercial Direct Exposure Criteria (I/C-DEC). Fill materials were identified across the Site at a thickness up to 10 feet. Remedial response actions are required to bring the Site into compliance with the RIDEM Remediation Regulations.
- **Soil Containing Petroleum:** TPH was detected in the sample collected from soil boring MW-10 at a concentration exceeding the RIDEM R-DEC. No soil samples collected from the Site contained petroleum at concentrations above the GB Leachability Criteria (GB-LC) of 2,500 mg/kg. Remedial response actions will be required to bring the Site into compliance with the RIDEM Remediation Regulations, consistent with those appropriate for site-wide soil containing metals and PAHs, as outlined above.

- **Groundwater:** No VOCs were reported above the applicable RIDEM GB Groundwater Objective. No evidence of petroleum (e.g. – a sheen or separate phase liquid) was observed in any of the groundwater wells.
- **Soil Gas:** Fuss & O'Neill evaluated the potential for vapor intrusion via the RIDEM *School Sitting Guidance For The Evaluation of Vapor Intrusion Potential In Proposed Rhode Island School Sites* four-step flow chart. The potential for vapor intrusion risk into a future development was determined to be not present.

Additionally, since a soil gas quality standard for VOC has not been established by RIDEM, the soil gas analytical data collected in January 2022 were compared to the MassDEP Residential Sub Slab Gas Screening Values (SSGSV) as published in the MassDEP 2016 guidance document *Vapor Intrusion Guidance: Site Assessment, Mitigation, and Closure*. No exceedances of the MassDEP SSGSV were identified, further substantiating the finding that a vapor intrusion risk was not present.

2.3 Conceptual Site Remedy

The preferred conceptual remedial approach for the Site was documented in the September SIR *prepared by* Fuss & O'Neill. On January 13, 2025, RIDEM issued a Remedial Decision Letter, attached as *Appendix A*, which signified that the Site Investigation was deemed complete, public notice activities were conducted, and the conceptual remedial approach was approved.

The remedial approach approved by RIDEM included the following:

- Soil capping, including a combination of the following sections placed over existing soil:
 - A two-foot thickness of clean fill over a marker barrier.
 - A one-foot thickness of clean fill over a geotextile fabric.
 - A four-inch thickness of asphalt or concrete over six inches of clean fill.
 - Concrete building foundations in areas improved by building or other structures.
- Limited soil excavation and off-site disposal would only be conducted where necessary to support grading and site preparation needs during redevelopment of the Site.
- Institutional controls in the form of an ELUR and Post-Remediation Soil Management Plan (SMP) would also be implemented. The ELUR would require that future uses of the Site be compatible with the soil cap and would ensure the integrity of the soil cap through inspection, maintenance, and reporting requirements. The ELUR would require appropriate management of soil in the event of a disturbance of the cap were required. The Post-Construction SMP would detail the protocols required for disturbances of the cap or regulated soil at the subject site.

3 Remedial Action Work Plan

Fuss & O'Neill prepared this RAWP to address the requirements of Section 1.10.1 of the Remediation Regulations. To facilitate RIDEM review of the RAWP, each of the following sections addresses a specific section of the Remediation Regulations, noting the relevant section in parentheses, where applicable.

3.1 Remedial Objectives (Section 1.10.2)

3.1.1 Soil Objectives

The overall remedial objective for soil at the Site includes removal and off-Site disposal of only the volume of regulated soil containing that is necessary to construct proposed redevelopment activities. A Site-wide remediation cap will mitigate the potential for direct exposure to remaining underlying regulated soil exceeding the RIDEM R-DEC and/or I/C-DEC. The implementation of an ELUR and associated Post-Remediation SMP will provide an administrative mechanism to restrict access to soil, will prohibit the use of groundwater, and will require regular inspection and maintenance of the integrity of the remediation cap. Soil materials utilized in cap construction will be demonstrated to comply with the requirements of Clean Soil as outlined herein. Soil remaining at the surface of the Site will comply with the R-DEC.

3.1.2 Groundwater Objectives

No VOCs were detected at concentrations above the RIDEM Method 1 GB Groundwater Objectives (GB-GO) at any of the monitoring well locations on the Site. There are no planned remedial activities for groundwater at the Site. If necessary to support construction, groundwater dewatering will be managed in accordance with an appropriate State permit.

3.1.3 Surface Water and Sediment Objectives

No surface water or sediment are present on the subject site, and therefore, no objectives have been established. During Site construction, erosion controls and dust mitigation measures (e.g., stockpile management and surface wetting) will be employed to limit the potential for contaminants entrained in on-Site soil to migrate from the Site via windborne or waterborne erosion. Site construction activities will be conducted in accordance with applicable state and local wetland, surface water, stormwater, and erosion control regulations.

3.1.4 Air Objectives

No air emissions are anticipated as part of the remedy at the Site. No VOCs were detected at concentrations above the MassDEP Residential SSGSV at any of the soil gas sampling locations on the Site. While the collected data supported the conclusion that a vapor mitigation risk was not present, a sub slab vapor barrier is proposed beneath the new building to provide added protection against the intrusion of soil vapors or moisture into occupied building spaces. The material specification for the proposed vapor barrier product is included in *Appendix B*.

3.2 Proposed Remedy (Section 1.10.3)

As detailed herein, the proposed remedy for the Site includes targeted soil excavation and off-Site disposal as needed, on-site soil management, Site-wide capping, and the implementation of institutional controls.

Excavation activities will be limited to the excavation and grading activities necessary to facilitate Site construction activities, including removal of subsurface peat beneath the proposed building footprint for geotechnical ground improvements. Subsequent to targeted excavation, the implementation of a Site-wide remediation cap will mitigate direct exposure to soil documented to contain regulated concentrations of compounds by creating a physical barrier between the soil and human receptors. The cap would also mitigate risks posed by entrainment of dust and soil erosion by securing regulated soil beneath the cap.

Lastly, an integral part of the remediation strategy will be the implementation of an ELUR and associated Post-Remediation SMP at the Site. The implementation of an ELUR will require that future uses of the Site be compatible with the implemented remedial strategies at the Site. Procedures to be followed subsequent to the completion of construction activities at the Site will be documented in the Post-Remediation SMP. Drafts of the ELUR and Post-Remediation SMP are included in *Appendix C* and will also be submitted for RIDEM review at the completion of the remedial activities documented herein.

As the design of the Site redevelopment progresses to final Construction Documents, minor changes may be incorporated that may slightly alter the cap layout. However, the overall objective of the remedies, as discussed herein, will remain. Documentation of the final cap configuration will be provided to RIDEM in a Remedial Action Closure Report (RACR) at the completion of the project.

3.3 Remediation of Impacted Groundwater (Section 1.10.4)

No active remediation of groundwater is proposed at the Site.

3.4 Limited Design Investigation (Section 1.10.5)

A Limited Design Investigation (LDI) was completed at the Site in October and November 2024 to further assess Site subsurface conditions for geotechnical considerations as part of the design of the proposed new school building. The geotechnical investigations were conducted by GZA GeoEnvironmental (GZA) and included the excavation of subsurface investigations within the proposed building footprint to delineate the extent of a subsurface peat layer. During test pits excavated as part of the investigation, GZA collected six (6) samples of a distinct layer of peat from test pits TP-3, TP-4, TP-9, TP-10, TP-11, and TP-14, depicted in the Site plan included as *Figure 2*. The intent of this sampling was to gather representative characterization data to support soil management decision making should it be necessary to excavate and dispose of the peat off-site as part of geotechnical ground improvement activities. GZA submitted the soil samples to ESS Laboratory of Cranston, Rhode Island for analysis of the following soil parameters:

- Volatile organic compounds (VOC) via United States Environmental Protection Agency (USEPA) Method 8260
- Semi-volatile organic compounds (SVOC) via USEPA Method 8270
- Priority Pollutant 13 Metals (PP13 Metals) via USEPA Method 6010

- TPH via USEPA Method 8100
- Polychlorinated biphenyls (PCBs) via USEPA Method 8082
- Lead via Toxicity characteristic leaching procedure (TCLP) via USEPA Method 1311/6010 (2 samples only)

Laboratory analytical results for the soil samples collected from the Site are summarized in the attached *Table 1*, and a copy of the full laboratory analytical report is included in *Appendix D*. The laboratory results indicated the following:

- VOC were not detected at concentrations greater than the laboratory reporting limits, except for acetone.
- Lead, arsenic, and/or beryllium were detected at concentrations greater than the RIDEM R-DEC and/or I/C-DEC in all six soil samples.
- Benzo(a)pyrene, benzo(b)fluoranthene, and chrysene were detected at concentrations greater than the RIDEM R-DEC and/or I/C-DEC in two of the samples.
- TPH was identified at a concentration greater than the RIDEM R-DEC in only one of the samples. However, these results are likely skewed by the very high level of organic material in the peat samples.
- PCBs were not detected in the soil samples at concentrations greater than the applicable regulatory criteria.
- Two samples were analyzed for TCLP Lead. Neither of the samples analyzed for TCLP Lead identified concentrations above the applicable regulatory criteria.

The subsurface investigations conducted in October and November 2024 and the corresponding analytical data proved to be consistent with the previous environmental investigations and will be used to evaluate soil management options.

3.5 Points of Compliance (Section 1.10.6)

3.5.1 Remediation Capping Extents

Overall, soil excavation activities will be limited to select removal of geotechnically unsuitable soil and grading activities necessary to facilitate the proposed Site improvements and installation of the Site-wide cap. Grading, relocation, and management of existing soil will be necessary during construction activities. Any excavated soil that cannot be reused on-site will be reinterred beneath a capped surface at the completion of the project shall be disposed of at a licensed disposal facility. The capping extents and locations are depicted in *Figure 3*.

During construction of the cap, an Environmental Professional will perform routine inspections of capping activities to confirm and document that the cap is installed in accordance with the specifications described herein. These inspections will include confirmation of the appropriate extents and thicknesses of the overall cap. The results of these inspections will be provided to RIDEM in monthly status reports submitted via e-mail and in the *RACR* at the end of the project.

3.5.2 Clean Soil

the primary remedial objective is to mitigate the potential for direct exposure to soil containing PAHs, petroleum, and metals at concentrations exceeding the RIDEM R-DEC and/or I/C-DEC. To ensure that this remedial objective is met, imported fill materials which are used in cap construction at the Site must meet the definition of Clean Soil, as outlined below. For the purposes of this project, Clean Soil is defined as follows:

- Imported fill material that meets the definition of Clean Soil as documented in the RIDEM Remediation Regulations, as further discussed in Section 3.5.2.1 below.
- Compost that meets the requirements for Class “A” compost in accordance with RIDEM Solid Waste Regulation No. 8, October 2005. Rule 8.8.03 of this regulation allows for unrestricted use of compost classified as Class “A.”
- New or recycled asphalt, new concrete, recycled concrete (un-painted with no steel reinforcing), or stone.
- Any combination of two or more of the materials listed above that, prior to being combined, meets the requirements for Clean Soil, as defined above.

3.5.2.1 Imported Fill Material

To evaluate compliance with the R-DEC, and thus consistency with the Clean Soil definition, prior to importation, samples of Clean Soil to be used for the construction of the cap will be collected at a minimum frequency of one sample per 2,000 cubic yards, per source of material. Prior to importation to the Site, each sample will be submitted for laboratory analysis for:

- VOC by USEPA Method 8260/5035
- SVOC by USEPA Method 8270
- TPH by USEPA Method 8100
- PCBs by USEPA Method 8082
- PP13 Metals by USEPA Method 6010/7471

The analytical results for the imported soil samples will be reviewed by an Environmental Professional to confirm compliance with the RIDEM R-DEC prior to importation. Soil represented by samples that do not comply with RIDEM R-DEC, based on laboratory analytical results, will be rejected for importation to the Site.

3.6 Remediation Schedule (Section 1.10.7)

The proposed remedial strategies will be performed concurrently with Site redevelopment activities. Consequently, the schedule of remediation implementation will be contingent upon the overall construction schedule. At this time, the major anticipated milestones for the construction project are as follows:

- Mobilization and Utility Relocation Complete: June 2025
- Demolition Complete: July 2025

• Ground Improvements Complete:	March 2026
• Foundations Complete:	May 2026
• Structural Steel Complete:	December 2026
• Building Construction Complete:	December 2028
• Punchlist Complete:	December 2028
• Student Move In:	September 2029

3.7 Contractors and Consultants (Section 1.10.8)

The contractors and consultants for the project are provided below:

Owner:	City of Pawtucket School Department
General Contractor:	Shawmut Design and Construction
Owner's Project Manager:	Colliers Engineering & Design
Civil:	CDW Consultants, Inc.
Landscape Architect:	Halvorson
Environmental:	Fuss & O'Neill, Inc.
Geotechnical:	GZA GeoEnvironmental

3.8 Site Plan (Section 1.10.9)

A Site Plan showing the current conditions at the Site, including the soil, groundwater, and soil gas sampling locations, is provided as *Figure 2*. A figure depicting the proposed Site capping plan is provided as *Figure 3*.

3.9 Design Standards and Technical Specifications (Section 1.10.10)

3.9.1 Remediation Cap

The remediation cap at the Site will be constructed in accordance with federal, state, and local regulations, the specifications detailed herein and in *Figure 4*. In particular, the specific design standards and technical specifications are discussed below. Compliance with this RAWP will be documented in the RACR prepared after Site remediation activities are complete.

The various remediation cap types to mitigate the potential for direct exposure to soil are depicted on the Minimum Soil Capping Requirement Details in *Figure 4* and further described below. These cap types are considered the minimum requirements for capping in accordance with the Remediation Regulations, and the civil engineering plans for the redevelopment of the Site may specify additional requirements to meet the needs of the redevelopment.

- **Landscaped Cap:** The landscaped cap will consist of either two feet of imported Clean Soil, overlying a marker barrier (e.g. snow fence), overlying existing soil, or a minimum of 12 inches of imported Clean Soil, overlying geotextile fabric, overlying existing soil.

- **Sports Field Cap:** The sports field cap will consist of a 2-inch-thick synthetic infill turf surface overlying a shock pad. The synthetic turf and shock pad will be constructed atop layers of clean subbase to be specified by the landscape architect, overlying geotextile fabric, overlying existing soil.
- **Hardscape Cap:** The cap that will be constructed at hardscaped areas will consist of a minimum of four inches of bituminous asphalt or concrete overlying a minimum of six inches of Clean Soil, overlying existing soil. The hardscape cap will be constructed in new paved drive and parking areas, sidewalks, slabs, and new building footprints.
- **Existing Hardscape Cap:** One small existing structure, a fire station building, is located within the Site boundary, fronting Columbus Avenue. This structure will remain in place and will remain an active facility. The existing building footprint and minimum adjacent hardscape facilities will remain as is. These existing surface treatments will serve as part of the final remediation cap.

Clean Soil imported to the Site will be subject to applicable civil and structural requirements for the project as well the technical specifications detailed in *Section 3.5.2*.

At areas of the Site to be landscaped with a one-foot cap, geotextile fabric will be applied to the prepared ground surface. Imported Clean Soil material will then be applied across the capping area and compacted until the appropriate thickness is achieved. The thickness requirements referenced in the above cap type descriptions will apply to the final compacted cap layers. Asphalt, concrete, or screened loam to support vegetation in landscaped areas will then be added and compacted to complete the cap thickness. Grass, trees, and other plantings will be planted concurrently with or just after construction of the landscaped cap. Coordination with the project landscape architect will be conducted to select plant types and sizes to facilitate planting in a manner which minimizes disturbance of existing soil beneath the cap. Plantings may warrant the removal of portions of the underlying geotextile fabric to accommodate root balls and future root growth.

3.9.2 Geotextile Fabric

Areas to be improved with a one-foot landscape cap will require the installation of geotextile fabric to be placed beneath the imported Clean Soil material. The geotextile fabric will be certified by the manufacturer to meet the puncture strength (e.g., 120 pounds) requirements documented in Section 1.13 of the RIDEM Remediation Regulations. An Environmental Professional will perform routine inspections of capping activities to confirm and document that the cap is installed in accordance with the specifications described herein. These inspections will include confirmation that geotextile fabric is placed throughout the one-foot landscaped capped areas.

3.9.3 Vapor Barrier

A vapor barrier will be installed as part of the new building foundation as a redundant measure for mitigating the migration vapors or moisture into the building. The vapor barrier will consist of a 20-mil (0.020-inch) liner placed directly above the rigid insulation and immediately below the concrete floor slab. Installation will be compliant with the manufacturer's specifications. Precautions will be taken to ensure that the vapor barrier remains protected from damage during construction (e.g., penetrations caused by reinforcing bars, gravel,

and pedestrian and equipment traffic). The specification sheet for the proposed 20-mil vapor barrier, or a to-be-determined approved equal product, is included as *Appendix B*.

3.10 Set-Up Plan (Section 1.10.11)

Prior to remedy implementation, appropriate measures will be taken to manage and minimize the potential for migration of hazardous materials through surface run-off or air-borne dust. This will be achieved by the installation of erosion controls, wetting soil, or other appropriate measures, as necessary. Material staging areas, including the locations of stockpiled or containerized contaminated media, will be designated at the Site. These areas will be secured and protected from runoff with appropriate best management practices including use of polyethylene sheeting and perimeter erosion controls, as appropriate.

Existing pavement may be demolished, pulverized, and screened. Depending on structural requirements, the pulverized existing pavement may be re-used on-Site as structural fill beneath paved surfaces or as general fill beneath other capped surfaces for grading purposes as needed.

3.11 Effluent Disposal (Section 1.10.12)

Effluent soil disposal is not anticipated during remedial activities. In the event that soil disposal is required, excavated soil containing PAHs, petroleum, and metals will be disposed off-Site at an appropriately licensed receiving facility or capped beneath an appropriate cap type. The soil slated for off-Site disposal will be stockpiled at a designated staging area that has been selected and secured to limit unauthorized access to the materials. Unless live-loading can be performed, soil will be placed on and covered with a minimum of six-millimeter polyethylene/plastic sheeting during the entire duration of its staging and secured with appropriate controls to limit the loss of the cover and protect against stormwater and/or wind erosion (hay bales, silt fencing, rocks, etc.). A daily inspection of the stockpile shall be made to ensure that the required controls are adequate and are maintained. Repairs to controls will be made as needed.

Disposal characterization sampling of excavated material will be conducted for the analytical parameters and frequency specified by the selected receiving facility. The transportation and disposal of soil from the Site is subject to the review and approval of an Environmental Professional to certify compliance with this document and to ensure compliance with RIDEM's anti-degradation guidance.

Upon receipt of the laboratory analytical results and approval from the Environmental Professional and the disposal facility, soil will be transported off-Site under appropriate waste shipping documentation (i.e., manifest, Material shipping record, bill of lading) and disposed in accordance with local, state, and federal regulations as well as the receiving facility's acceptance criteria.

Copies of shipping documentation for regulated material removed from the Site will be included in the *RACR*.

3.12 Contingency Plan (Section 1.10.13)

3.12.1 Health and Safety

Contractors and workers performing soil management activities at the remediation Site will be required to comply with Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements in

accordance with Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120 and 1926.65, to the extent that those regulations apply to the work they are performing. Procedures for management of contact with soil at the Site will be detailed in Site-specific Health and Safety Plans (*HASPs*), prepared in accordance with OSHA 29 CFR 1910.120 and 1926.65.

Applicable Site-specific information, including the above-mentioned reports and the *RAWP* documented herein, will be made available to contractors performing remedial activities at the Site. These documents will allow the contractors to develop their Site-specific *HASPs*.

3.12.2 Emergency Response

The remedial actions proposed for the Site are not expected to result in the collection and storage of liquid hazardous materials which could result in a sudden release incident at the Site. However, in order to address potential unforeseen environmental incidents during construction, emergency response planning was conducted.

The primary contingency plan managers at the Site will be Mr. Ed McNaught. Mr. McNaught will act as the primary contact for any emergencies or unexpected incidents encountered during remediation implementation. Any unexpected incidents will be managed both to protect the health and safety of on-Site workers as well as the public. Furthermore, unexpected incidents will be managed in accordance with applicable local, state, and federal regulations. The Environmental Professional will assist Mr. McNaught as necessary in the evaluation of unexpected incidents and associated response actions relative to potentially applicable regulations. The contact information for Mr. McNaught and the local emergency services includes the following:

Mr. Ed McNaught, Shawmut	(867) 366-3755
Pawtucket Fire Department:	911 or (401) 725-1422
Pawtucket Police Department:	911 or (401) 727-9100

3.13 Remediation Operating Log (Section 1.10.14)

During Site preparation, soil excavation, disposal, and soil capping, the Environmental Professional will conduct routine Site visits to confirm and document that the remediation is conducted in accordance with the specifications described herein. The results of this remediation monitoring will be provided to RIDEM in monthly status reports submitted via e-mail.

Records of Site preparation, capping, and restoration activities will be maintained in an Operating Log during remedial activities. The Operating Log will document the implementation of the remedial actions and remedial oversight. Additionally, instances of the implementation of the Contingency Plan or Health and Safety Plan, as discussed below, will also be recorded in the Operating Log.

3.14 Site Security Procedures (Section 1.10.15)

During remediation activities, the Site will be left in a secure and stable condition following each workday. Temporary or permanent fencing and signage will be utilized to restrict unauthorized access to the construction zone during remedial activities.

Heavy equipment utilized for excavation will remain on-Site during remediation activities. However, heavy equipment that has become contaminated due to remedial activities will be decontaminated within the limits of the remediation area to the extent feasible, prior to removal from the Site. Equipment decontamination procedures will be specified in the HASP developed by the remedial contractors and will consist of cleaning contaminated equipment to remove adhered soil or sediment. If decontamination of equipment must be conducted outside of the specific area of on-going remediation, the decontamination will be conducted on an impermeable liner, and the rinse water will be collected. The rinse water will be containerized, characterized, and disposed of off-Site at an appropriately licensed receiving facility within 90 days of the decontamination activities.

3.15 Shut-Down, Closure, and Post-Closure Requirements (Section 1.10.16)

Upon completion of remedial activities described above and establishment of vegetation in landscaped areas, heavy machinery and other equipment will be removed from the Site. Any erosion control barriers will be left on-Site until stabilization of the Site is deemed complete by the Environmental Professional. Once stabilization is considered complete, the erosion control measures will be removed from the Site.

The Environmental Professional will submit a Remedial Action Closure Report (RACR) to RIDEM certifying that the remediation was completed in accordance with the specifications and requirements detailed herein. The RACR will include description of excavation and off-Site disposal, a depiction of the final restoration limits, and analytical data for imported Clean Soil samples. If necessary, substantial variances from this RAWP that occurred during remedial implementation will be documented in the RACR.

3.16 Institutional Controls and Notices (Section 1.10.17)

Upon completion of remedial activities and submission of the RACR to RIDEM, a RIDEM-approved ELUR will be recorded on the deed to the Site property. The primary objective of the ELUR will be to restrict certain activities within the capping extents and to ensure that the engineered controls are maintained and remain compliant with RIDEM requirements.

Requirements for annual inspections and reporting will also be specified in the ELUR. These measures will record the condition of the cap and outline necessary repairs. These measures will also ensure that other terms of the ELUR, such as prohibition of the use of groundwater beneath the Site, are adhered to. Documentation of the inspections will be submitted to RIDEM on an annual basis, in accordance with the requirements of the ELUR.

Disturbances of the remediation cap and underlying soil conducted after cap construction must be conducted in accordance with the Post-Remediation SMP, which will be attached to the ELUR. The Post-Remediation SMP will define the procedures necessary for management of the remediation cap and identifies the steps required if disturbance of the cap or existing soil beneath the cap is necessary in the future. The requirements of the Post-Remediation SMP will also limit the potential for direct exposure to soil containing contaminants at concentrations exceeding the R-DEC and/or I/C-DEC by regulating future excavation and soil disturbance activities.

Draft versions of the ELUR and Post-Remediation SMP are provided in *Appendix C*. Upon project completion, revised drafts will be prepared and submitted to RIDEM for review and approval, prior to filing.

3.17 Compliance Determination (Section 1.10.18)

Once Site remedial activities have been completed, the following procedures will be taken to demonstrate that the remedial objectives for the Site have been met:

- A *RACR* documenting the Site remedial activities will be submitted to the RIDEM for review.
- The final *ELUR* and Post-Remediation *SMP* will be filed with the Land Evidence Records for the City of Pawtucket and recorded on the Site deed.
- A stamped/certified copy of this filing will be forwarded to RIDEM within 15 days of being recorded.
- Completion of an Annual Compliance Evaluation Form for the *ELUR*, and submittal of the form to RIDEM.

4 Certifications (Section 1.10.19)

I hereby certify the accuracy of the information contained in the above referenced report to the best of my knowledge.



Signature of Consultant
Patrick J. Dowling, CPG
Fuss & O'Neill, Inc.

Vice President
Title

January 17, 2025

Date

I hereby certify that the report is a complete and accurate representation of the contaminated site and the release and contains all available facts surrounding the release to the best of my knowledge.

Signature of Performing Party
City of Pawtucket School Department

Title

Date

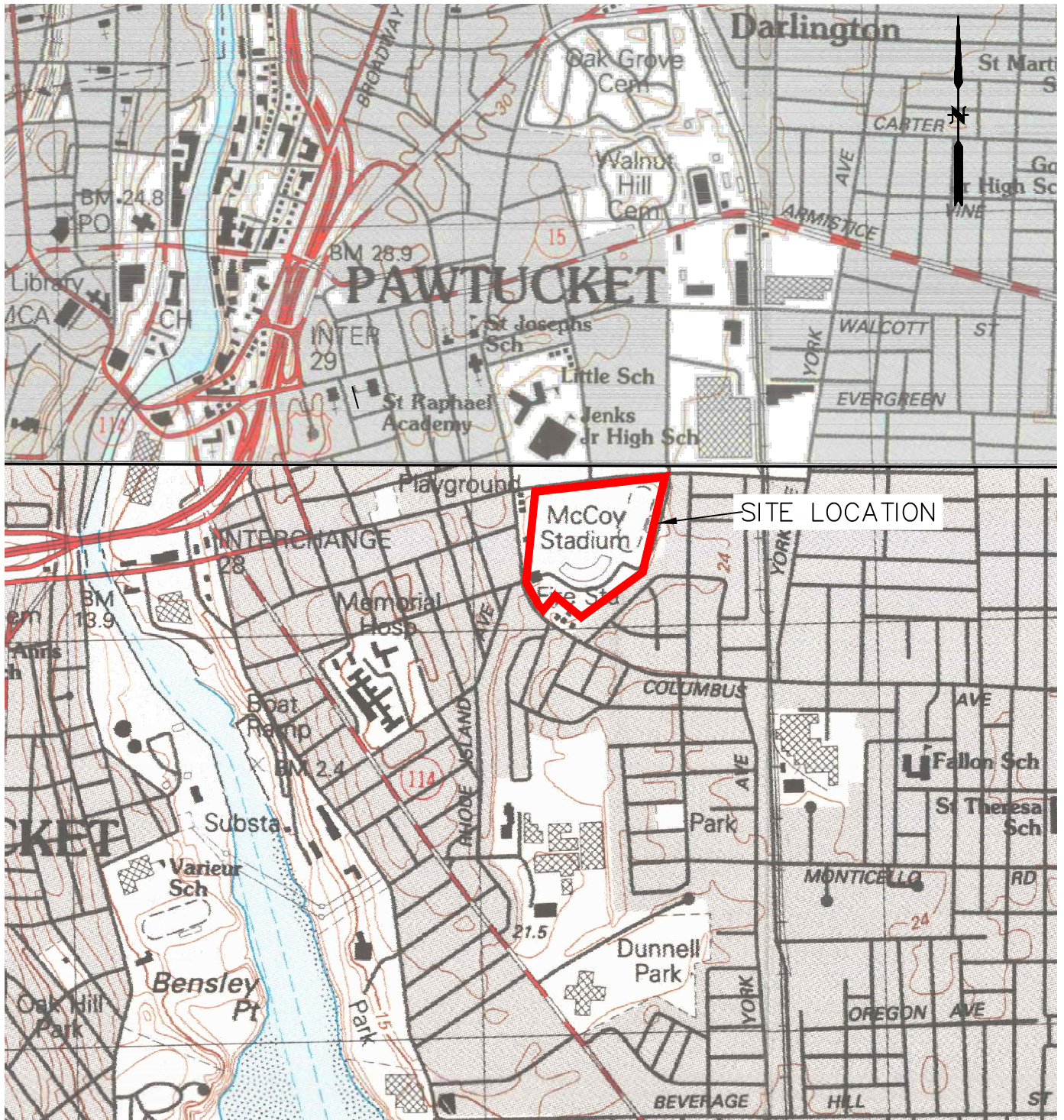
5 Limitations of Work Product

This document was prepared for the use of the Jonathan Levi Architects and the City of Pawtucket School Department, the only intended beneficiaries of our work. Those who may use or rely upon the report and the services (hereafter “work product”) performed by Fuss & O'Neill, Inc. and/or its subsidiaries or independent professional associates, subconsultants and subcontractors (collectively the “Consultant”) expressly accept the work product upon the following specific conditions.

1. Consultant represents that it prepared the work product in accordance with the professional and industry standards prevailing at the time such services were rendered.
2. The work product may contain information that is time sensitive. The work product was prepared by Consultant subject to the particular scope limitations, budgetary and time constraints and business objectives of the Client which are detailed therein or in the contract between Consultant and Client. Changes in use, tenants, work practices, storage, Federal, state, or local laws, rules or regulations may affect the work product.
3. The observations described and upon which the work product was based were made under the conditions stated therein. Any conclusions presented in the work product were based solely upon the services described therein, and not on scientific or engineering tasks or procedures beyond the scope of described services.
4. In preparing its work product, Consultant may have relied on certain information provided by state and local officials and information and representations made by other parties referenced therein, and on information contained in the files of state and/or local agencies made available at the time of the project. To the extent that such files which may affect the conclusions of the work product are missing, incomplete, inaccurate or not provided, Consultant is not responsible. Although there may have been some degree of overlap in the information provided by these various sources, Consultant did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this project. Consultant assumes no responsibility or liability to discover or determine any defects in such information which could result in failure to identify contamination or other defects in, at or near the Site. Unless specifically stated in the work product, Consultant assumes no responsibility or liability for the accuracy of drawings and reports obtained, received or reviewed.
5. If the purpose of this project was to assess the physical characteristics of the subject Site with respect to the presence in the environment of hazardous substances, waste or petroleum and chemical products and wastes as defined in the work product, unless otherwise noted, no specific attempt was made to check the compliance of present or past owners or operators of the subject Site with Federal, state, or local laws and regulations, environmental or otherwise.
6. If water level readings have been made, these observations were made at the times and under the conditions stated in the report. However, it must be noted that fluctuations in water levels may occur due to variations in rainfall, passage of time and other factors and such fluctuations may affect the conclusions and recommendations presented herein.

7. Except as noted in the work product, no quantitative laboratory testing was performed as part of the project. Where such analyses have been conducted by an outside laboratory, Consultant has relied upon the data provided and, unless otherwise described in the work product, has not conducted an independent evaluation of the reliability of these tests.
8. If the conclusions and recommendations contained in the work product are based, in part, upon various types of chemical data, then the conclusions and recommendations are contingent upon the validity of such data. This data (if obtained) has been reviewed and interpretations made by the Consultant. If indicated in the work product, some of these data may be preliminary or 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.
9. Chemical analyses may have been performed for specific parameters during the course of this project, as described in the work product. However, it should be noted that additional chemical constituents not included in the analyses conducted for the project may be present in soil, groundwater, surface water, sediments or building materials at the subject Site.
10. Ownership and property interests of all documents, including reports, electronic media, drawings, and specifications, prepared or furnished by Consultant pursuant to this project are subject to the terms and conditions specified in the contract between the Consultant and Client, whether or not the project is completed.
11. Unless otherwise specifically noted in the work product or a requirement of the contract between the Consultant and Client, any reuse, modification or disbursement of documents to third parties will be at the sole risk of the third party and without liability or legal exposure to Consultant.
12. In the event that any questions arise with respect to the scope or meaning of Consultant's work product, immediately contact Consultant for clarification, explanation or to update the work product. In addition, Consultant has the right to verify, at the party's expense, the accuracy of the information contained in the work product, as deemed necessary by Consultant, based upon the passage of time or other material change in conditions since conducting the work.
13. Any use of or reliance on the work product shall constitute acceptance of the terms hereof.

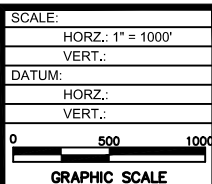
Figures



MAP REFERENCE:

THIS MAP WAS PREPARED FROM THE FOLLOWING
7.5 x 15 MINUTE USGS TOPOGRAPHIC QUADRANGLES:
PROVIDENCE, RI (1987).
ATTLEBORO, MA (1987).

SOURCE: RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM (RIGIS).



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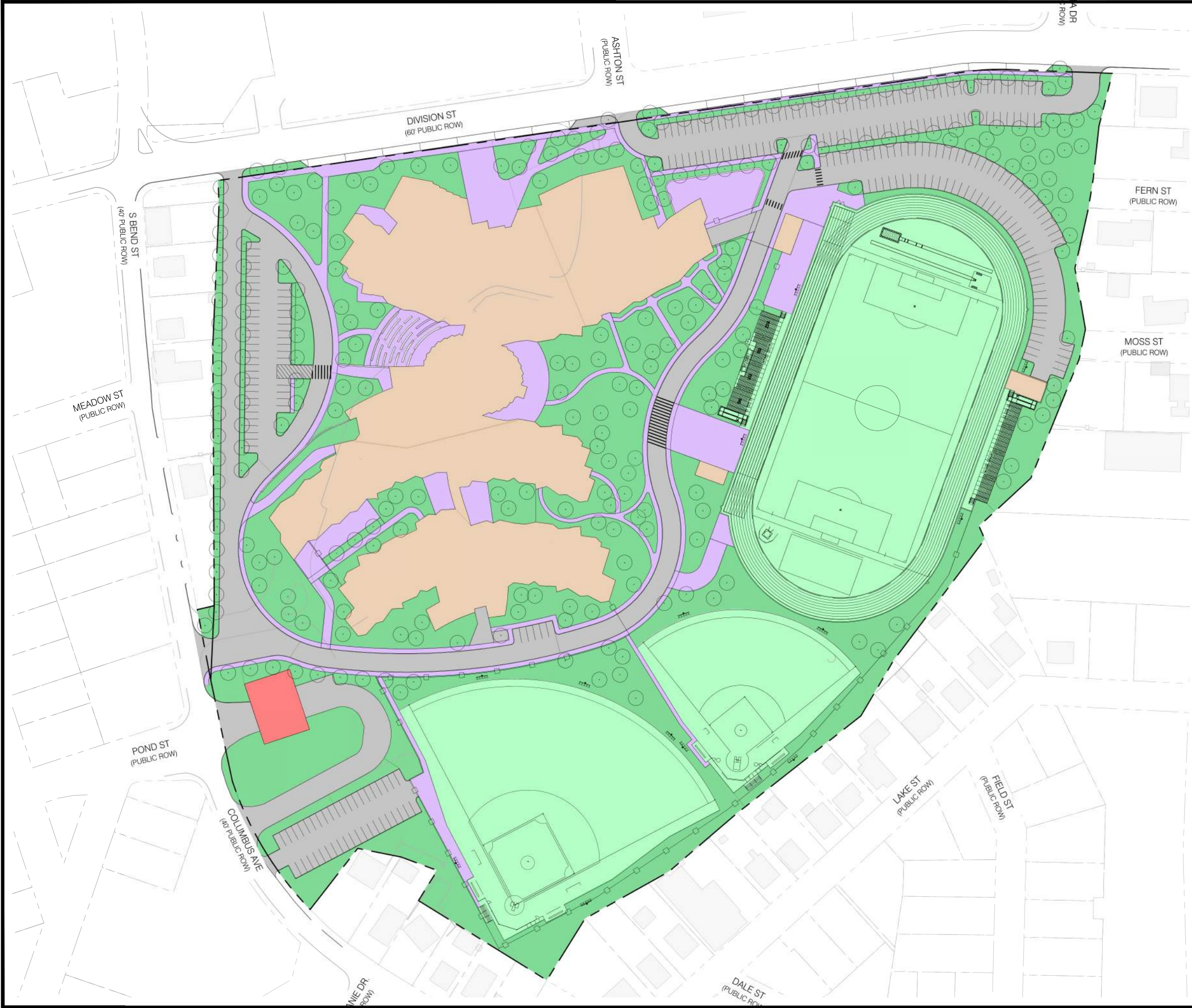
CITY OF PAWTUCKET
SITE LOCATION PLAN
2 COLUMBUS AVENUE

PAWTUCKET

RHODE ISLAND

PROJ. No.: 20160501.B10
DATE: JANUARY 2025

FIGURE 1



LEGEND

- APPROXIMATE PROPERTY LINE
- BUILDING FOUNDATION CAP
- ONE OR TWO FOOT LANDSCAPE CAP
- ASPHALT CAP
- CONCRETE CAP
- SPORT FIELDS CAP
- EXISTING HARDSCAPE CAP

CITY OF PAWTUCKET
SITE CAPPING PLAN
2 COLUMBUS AVENUE

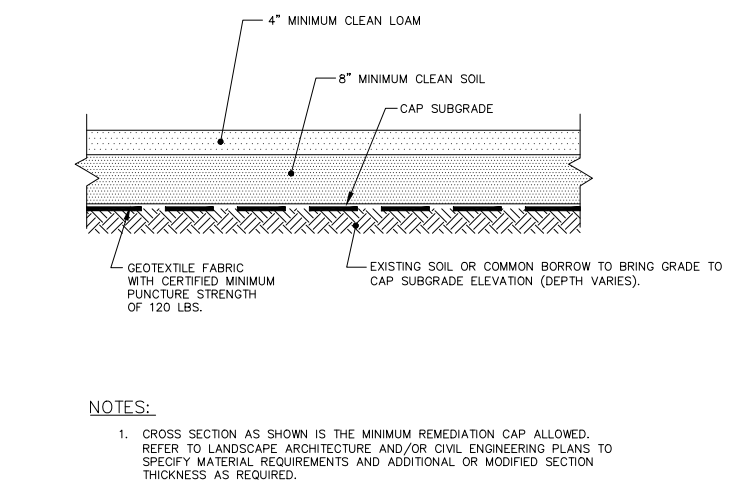
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DATE: JANUARY 2025

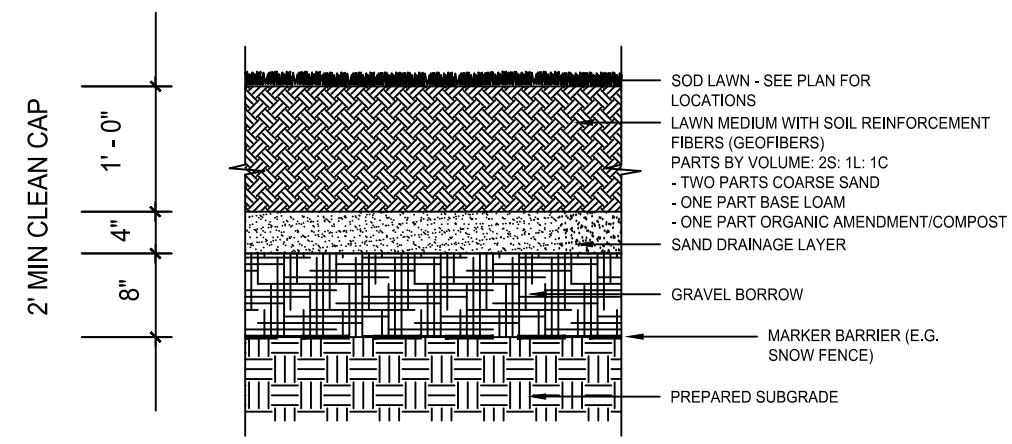
FIGURE 3

SCALE: 1" = 130'
HORIZ.: 1" = 130'
VERT.: -
DATUM: -
HORIZ.: -
VERT.: -
0 65' 130'
GRAPHIC SCALE



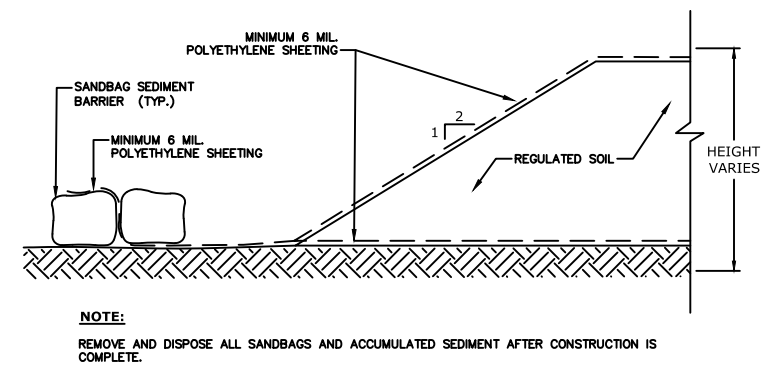
1 TYPICAL CAP SECTION AT LANDSCAPED AREAS (1-FOOT CAP)

NOT TO SCALE



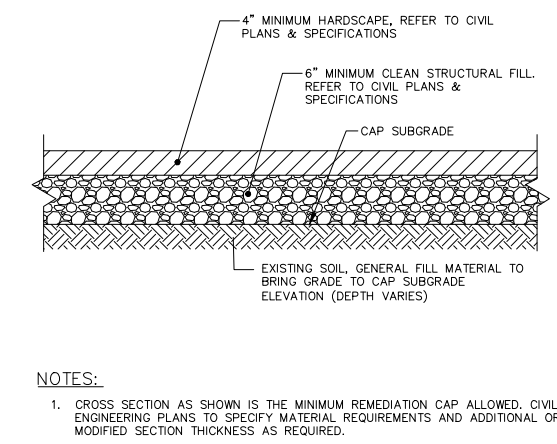
2 TYPICAL CAP SECTION AT LANDSCAPED AREAS (2-FOOT CAP)

NOT TO SCALE



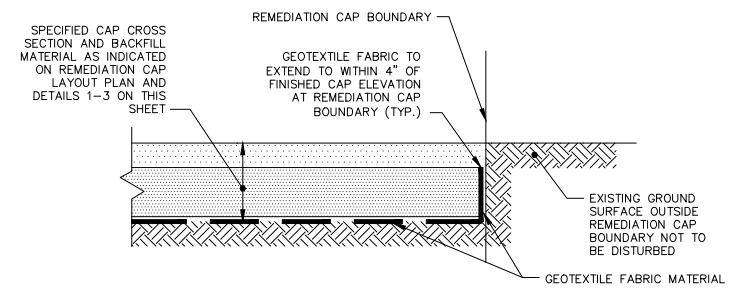
3 SOIL STOCKPILE FOR REGULATED SOIL

NOT TO SCALE



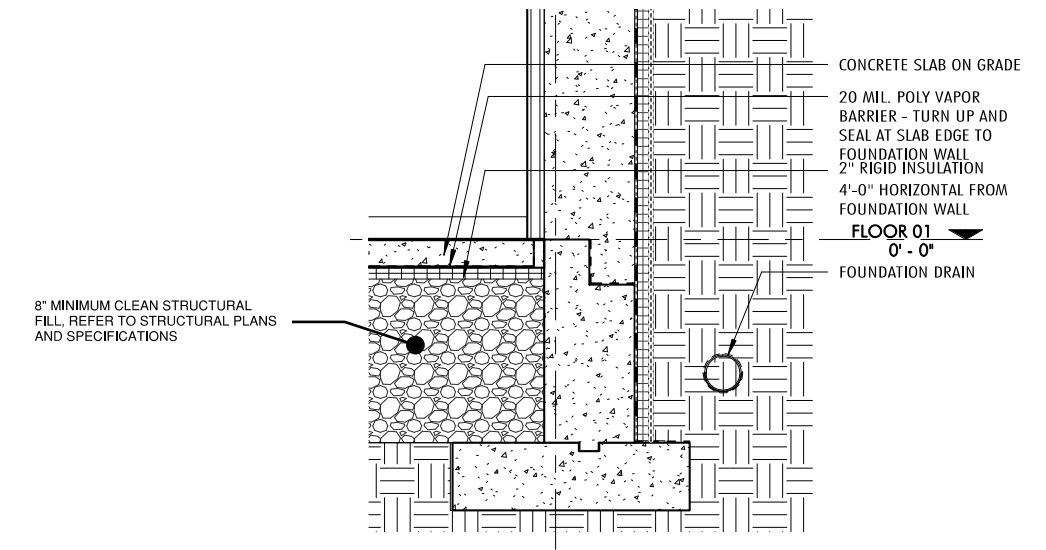
4 TYPICAL CAP SECTION AT HARDSCAPED AREAS

NOT TO SCALE



5 TYPICAL CAP SECTION TERMINATION AT REMEDIATION CAP BOUNDARY

NOT TO SCALE



6 TYPICAL CAP SECTION AT BUILDING FOUNDATION

NOT TO SCALE

CAP CONSTRUCTION NOTES:

- ALL REMEDIAL CAP MATERIALS SHALL BE APPROVED AND COMPLY WITH THE ANALYTICAL TESTING REQUIRED PER "REMEDIAL ACTION WORK PLAN".
- ALL FINISH GRADES FOR CAP SYSTEM SHALL BE AS SHOWN ON CIVIL, LANDSCAPE, AND STRUCTURAL PLANS AND SPECIFICATIONS WITH INDICATED CAP THICKNESSES AND GEOTEXTILE FABRIC OR MARKING MATERIAL AS SHOWN ON THE DETAILS ON THIS SHEET.
- ALL CAP MATERIALS TO BE TESTED AT A FREQUENCY OF ONE SAMPLE PER 2,000 CUBIC YARDS FOR VOLATILE ORGANIC COMPOUNDS, SEMI-VOLATILE ORGANIC COMPOUNDS, TOTAL PETROLEUM HYDROCARBONS, POLYCHLORINATED BIPHENYLS, AND PRIORITY POLLUTANT 13 METALS, CERTIFIED TO BE CLEAN SOIL, MEET RIDEM RESIDENTIAL DIRECT EXPOSURE CRITERIA, AND BE APPROVED BY OWNER PRIOR TO IMPORTATION.

File: J:\DWG\PP20160501B30\Environmental\Plan\20160501.B30_DET.dwg Layout: FIG 4A Plotted: 2025-01-17 9:49 AM Saved: 2025-01-17 9:48 AM User: Chris.Flanery
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CITY OF PAWTUCKET

MINIMUM SOIL CAPPING DETAILS

2 COLUMBUS AVENUE

PAWTUCKET

RHODE ISLAND

PROJ. No.: 20160501.B30
DATE: JANUARY 2025

FIGURE 4A



1. ALL REMEDIAL CAP MATERIALS SHALL BE APPROVED AND COMPLY WITH THE ANALYTICAL TESTING REQUIRED PER "REMEDIAL ACTION WORK PLAN.
2. ALL FINISH GRADES FOR CAP SYSTEM SHALL BE AS SHOWN ON CIVIL, LANDSCAPE, AND STRUCTURAL PLANS AND SPECIFICATIONS WITH INDICATED CAP THICKNESSES AND GEOTEXTILE FABRIC OR MARKING MATERIAL AS SHOWN ON THE DETAILS ON THIS SHEET.
3. ALL CAP MATERIALS TO BE TESTED AT A FREQUENCY OF ONE SAMPLE PER 2,000 CUBIC YARDS FOR VOLATILE ORGANIC COMPOUNDS, SEMI-VOLATILE ORGANIC COMPOUNDS, TOTAL PETROLEUM HYDROCARBONS, POLYCHLORINATED BIPHENYLS, AND PRIORITY POLLUTANT 13 METALS, CERTIFIED TO BE CLEAN SOIL, MEET RIEM RESIDENTIAL DIRECT EXPOSURE CRITERIA, AND BE APPROVED BY OWNER PRIOR TO IMPORTATION.

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER

SCALE:	
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RHODE ISLAND

PROJ. No.: 20160501.B30
DATE: JANUARY 2025

FIGURE 4B

Tables

Table 1
Summary of Soil Analytical Data and Objectives
Samples Collected on November 1, 2024

McCoy Stadium
Pawtucket, Rhode Island

December 2024

								RIDEM Regulatory Criteria**			
		Location ID	TP-13	TP-11	TP-4	TP-10	TP-9	TP-14			
		Laboratory Number	24K0082-01	24K0082-02	24K0082-03	24K0082-04	24K0082-05	24K0082-06			
		Sample Date	11/1/2024	11/1/2024	11/1/2024	11/1/2024	11/1/2024	11/1/2024	R-DEC	I/C-DEC	GB-LC
VOC (USEPA METHOD 8260)		Units									
Acetone		mg/kg	0.637	0.340	0.421	ND < 0.0768	0.229	0.117	7,800	10,000	---
Metals (USEPA Method 6010D)											
Antimony		mg/kg	ND < 21.3	ND < 10.7	ND < 15.5	ND < 10.1	ND < 10.6	ND < 4.33	10	820	----
Arsenic		mg/kg	ND < 10.7	12.1	ND < 7.75	ND < 5.05	6.94	EL	7.0	7.0	----
Beryllium		mg/kg	2.17	0.51	3.10	4.03	1.33	13.6	1.5	1.5	----
Cadmium		mg/kg	ND < 2.13	ND < 1.07	ND < 1.55	ND < 1.01	ND < 1.06	EL	39	1,000	----
Chromium		mg/kg	5.49	48.4	13.0	8.41	21.8	EL	390	10,000	----
Copper		mg/kg	15.3	183	10.1	5.09	61.4	EL	3,100	10,000	----
Lead		mg/kg	ND < 21.3	172	ND < 15.5	11.1	179	EL	150	500	----
Nickel		mg/kg	ND < 10.7	25.5	8.16	ND < 5.05	19.0	EL	1,000	10,000	----
Selenium		mg/kg	ND < 21.3	ND < 10.7	ND < 15.5	ND < 10.1	ND < 10.6	7.96	390	10,000	----
Silver		mg/kg	ND < 2.13	ND < 1.07	ND < 1.55	ND < 1.01	ND < 1.06	EL	200	10,000	----
Thallium		mg/kg	ND < 21.3	ND < 10.7	ND < 15.5	ND < 10.1	ND < 10.6	ND < 4.33	5.5	140	----
Zinc		mg/kg	ND < 10.7	115	244	ND < 5.05	122	ND < 4.33	6,000	10,000	----
Mercury (USEPA METHOD 7471B)											
Mercury		mg/kg	0.189	0.503	0.253	0.160	0.684	0.151	23	610	----
TCLP (USEPA METHOD 1311/6010D)											
Lead		mg/kg	NA	0.05	NA	NA	ND < 0.05	NA	---	---	---
SVOC (USEPA METHOD 8270E)											
Benzo[a]pyrene		mg/kg	ND < 1.19	0.873	ND < 0.855	ND < 1.1	0.670	ND < 0.675	0.4	0.8	----
Benzo[a]anthracene		mg/kg	ND < 1.19	0.833	ND < 0.855	ND < 1.1	ND < 0.616	ND < 0.675	0.9	7.8	----
Benzo[b]fluoranthene		mg/kg	ND < 1.19	1.34	ND < 0.855	ND < 1.1	0.939	ND < 0.675	0.9	7.8	----
Benzo[g,h,i]perylene		mg/kg	ND < 1.19	ND < 0.600	ND < 0.855	ND < 0.605	ND < 0.616	ND < 0.675	0.8	10,000	----
Benzo[k]fluoranthene		mg/kg	ND < 1.19	ND < 0.600	ND < 0.855	ND < 0.605	ND < 0.616	ND < 0.675	0.9	78	----
Chrysene		mg/kg	ND < 1.19	1.15	ND < 0.855	ND < 1.1	0.764	ND < 0.675	0.4	780	----
Dibenz[a,h]anthracene		mg/kg	ND < 1.19	ND < 0.600	ND < 0.855	ND < 0.605	ND < 0.616	ND < 0.675	0.4	0.8	----
Fluoranthene		mg/kg	ND < 1.19	2.08	ND < 0.855	ND < 1.1	1.60	ND < 0.675	20	10,000	----
Indeno[1,2,3-cd]pyrene		mg/kg	ND < 1.19	ND < 0.600	ND < 0.855	ND < 0.605	ND < 0.616	ND < 0.675	0.9	7.8	----
Phenanthrene		mg/kg	ND < 1.19	1.10	ND < 0.855	ND < 1.1	0.864	ND < 0.675	40	10,000	----
Pyrene		mg/kg	ND < 1.19	1.86	ND < 0.855	ND < 1.1	1.41	ND < 0.675	13	10,000	----
TPH (USEPA METHOD 8100M)											
Total TPH		mg/kg	316 & 706*	275	331	167	347	154	500	2,500	2,500
PCBs (USEPA METHOD 8082A)											
Aroclor 1262		mg/kg	ND < 0.2	0.3	ND < 0.2	ND < 0.1	0.1	ND < 0.1	10	10	10

NOTES:

Only target analytes detected in at least one sample are listed.

VOC: volatile organic compounds

SVOC: semi-volatile organic compounds

TPH: total petroleum hydrocarbons

PCBs: polychlorinated biphenyls

TCLP: toxicity characteristic leaching procedure

USEPA: United States Environmental Protection Agency

RIDEM: Rhode Island Department of Environmental Management

TP: test pit

fbg: feet below grade

ppmv: part per million by volume

mg/kg: milligrams per kilogram

ND<X: compound not detected above laboratory reporting limit

NA: not analyzed

----: not established

EL: elevated method reporting limits due to sample matrix

C: degrees Celsius

R-DEC: Residential direct exposure criteria

I/C-DEC: Industrial/Commercial direct exposure criteria

GB/LC: GB leachability criteria

Bold values exceed RIDEM R-DEC criteria

Bold, italic, and underlined values exceed I/C-DEC criteria

= Values exceed the R-DEC

= Values exceed the R-DEC and I/C-DEC

*surrogate recovery outside of criteria, re-extraction/re-analysis performed to confirm result

**RIDEM Remediation Regulations 250-RICR-140-30-1, last amended April 2020

Created by: **CF**

Checked by: **AB**

Appendix A

RIDEM Remedial Decision Letter



RHODE ISLAND

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF LAND REVITALIZATION & SUSTAINABLE MATERIALS MANAGEMENT

235 Promenade Street, Providence, Rhode Island 02908

REMEDIAL DECISION LETTER

File No. SR-26-2077

January 13, 2025

Mr. David Clemente
Pawtucket Public Works Center
250 Armistice Boulevard
Pawtucket, RI 02860

RE: McCoy Stadium – Proposed School
2 Columbus Avenue
Pawtucket, Rhode Island
Plat Map 26 / Lot 630

Dear Mr. Clemente:

On April 22, 2020, the Rhode Island Department of Environmental Management's (the Department) Office of Land Revitalization and Sustainable Materials Management (LRSMM) enacted the codified 250-RICR-140-30-1, Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations). Following periodic refiling, the active Rule became effective on January 4, 2022. 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. 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 (RAWP) in order to achieve the objectives of the environmental clean-up.

In the matter of the above-referenced property (the Site), the Department's Office of LRSMM is in receipt of the following documentation submitted pursuant to the Remediation Regulations in response to the reported release at the Site:

1. Notification of Release Package and Phase II Environmental Site Assessment (ESA), received by the Department on March 28, 2022, and prepared by Fuss & O'Neill, Inc. (F&O).
2. Pre-Site Investigation Public Notice, received by the Department on August 26, 2024, and prepared by F&O;
3. Site Investigation Report (SIR), received by the Department on November 11, 2024, and prepared by F&O; and
4. Post-Site Investigation Public Notice, received by the Department on December 11, 2024, and

prepared by F&O.

Collectively, these documents define “Existing contamination” at the Site and fulfill the requirements of a Site Investigation Report (SIR) as described in Section 1.8.8 of the Remediation Regulations. In addition, according to our records, public notice was conducted to all abutting property owners, tenants, easement holders, the municipality, and the Environmental Justice Focus Area regarding the substantive findings of the completed investigation in accordance with Sections 1.8.7(A)(2) and 1.8.9 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 September 12, 2024, and the opportunity for public review and comment on the technical feasibility of the proposed remedial alternatives commenced on December 11, 2024, and the period closed on December 25, 2024. No comments were received.

The preferred remedial alternative, as stated in the SIR, consists of the following conceptual measures:

- Encapsulation of Site soils by Department-approved engineering barriers that consist of a minimum of two (2) feet of clean fill or an equivalent level of protection (i.e., building foundations, one (1) foot of clean fill over a geotextile fabric or indicator barrier, and/or four (4) inches of hardscape (asphalt or concrete) over six (6) inches of clean subbase).
- Limited excavation of impacted soils to meet the planned grading requirements for the proposed redevelopment. Excavated jurisdictional material shall be either placed beneath new engineered barriers (as described above) and/or disposed of properly at a licensed facility.
- An Environmental Land Usage Restriction (ELUR) shall be recorded on the deed for the entire property (Plat Map 26/ Lot 630). The ELUR shall require the performance of annual inspections to document the status of the ELUR and the condition of the engineered controls. The ELUR shall also include a Department-approved Post-Remediation Soil Management Plan (SMP) which will address any future activities that may disturb on-Site soils. The ELUR shall be recorded for the entire property in the Land Evidence Records for the City of Pawtucket, and a recorded copy forwarded back to the Department’s Office of Land Revitalization & Sustainable Materials Management within fifteen (15) days of recording.

The Department hereby approves the SIR, with the above identified preferred remedial alternatives, and requires a 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 1.9 and 1.10 of the Remediation Regulations, a RAWP shall be submitted for Department review and approval within ninety (90) days from the date of this letter. 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 1.10 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 Section 1.11.2 of the Remediation Regulations, an application fee for Remedial Action Approvals in the amount of one thousand (\$1,000.00) dollars shall be made payable to the State of Rhode Island General Treasurer and remitted to the Office of Management Services with the attached Remedial Action Approval Application Fee Form. Receipt of this Remedial Action Approval Application Fee is required prior to the Department's RAWP review.
3. Once the Department reviews the RAWP for consistency with Sections 1.9 and 1.10 of the Remediation Regulations, any written comments generated and forwarded as a result of the review(s) shall be incorporated forthwith into a RAWP Addendum, to be 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:

- Conditions at the Site 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 Pawtucket Public Works Center 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 SMP for the Property.

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) 537-4359, or by E-mail at Joanna.pawlina@dem.ri.gov.

Sincerely,



Joanna Pawlina
Environmental Scientist II
Office of Land Revitalization &

Sustainable Materials Management

Cc: Kelly Owens, RIDEM/OLRSMM
Ashley Blauvelt, RIDEM/OLRSMM
Patrick Dowling, Fuss & O'Neill, Inc.
Chris Flannery, Fuss & O'Neill, Inc.

Attachment: Remedial Action Approval Application Fee Form



RHODE ISLAND

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF LAND REVITALIZATION & SUSTAINABLE MATERIALS MANAGEMENT

235 Promenade Street, Providence, Rhode Island 02908

REMEDIAL ACTION APPROVAL APPLICATION FEE FORM

Rule 1.11.2 of the Department's Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, requires an application fee for Remedial Action Approvals in the amount of one thousand (\$1,000) dollars. Please submit this form and check, made payable to the State of Rhode Island General Treasurer, directly to:

R.I. Department of Environmental Management
Office of Management Services - Rm 340
235 Promenade Street
Providence, RI 02908

Please complete this page and attach it to the check or money order. This information must be provided to coordinate your fee with the application submitted.

Site Name: McCoy Stadium

Address: 2 Columbus Avenue

Town/City: Pawtucket, RI

File Number: _____

Contact Person: _____

Phone No: _____

RIDEM Project Manager: Joanna Pawlina

FOR RIDEM OFFICE USE ONLY:

Fee Amount Received: _____

Date Received: _____

Check#: _____

Receipt Account:

10.074.3765103.03.461043

cc:74:3481 Leg.17-18-841

Appendix B

Vapor Barrier Material Specification



STEGO® WRAP 20-MIL VAPOR BARRIER

A STEGO INDUSTRIES, LLC INNOVATION | VAPOR RETARDERS 07 26 00, 03 30 00 | VERSION: JUL 17, 2024

1. PRODUCT NAME

STEGO WRAP 20-MIL VAPOR BARRIER

2. MANUFACTURER

Stego Industries, LLC
216 Avenida Fabricante, Suite 101
San Clemente, CA 92672 USA
Sales, Technical Assistance
Ph: (877) 464-7834
contact@stegoindustries.com
stegoindustries.com



3. PRODUCT DESCRIPTION

USES: Stego Wrap 20-Mil Vapor Barrier is used as a below-slab vapor barrier.

COMPOSITION: Stego Wrap 20-Mil Vapor Barrier is a multi-layer plastic extrusion manufactured with only the highest grade of prime, virgin, polyolefin resins.

ENVIRONMENTAL FACTORS: Stego Wrap 20-Mil Vapor Barrier can be used in systems for the control of soil gases (radon, methane), soil poisons (oil by-products), and sulfates.

4. TECHNICAL DATA

TABLE 4.1: PHYSICAL PROPERTIES OF STEGO WRAP 20-MIL VAPOR BARRIER

PROPERTY	TEST	RESULTS
Under Slab Vapor Retarders	ASTM E1745 Class A, B & C – Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs	Exceeds Class A, B & C
Water Vapor Permeance	ASTM F1249 – Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor	0.0071 perms
Permeance After Conditioning (ASTM E1745 Sections 7.1.2 - 7.1.5)	ASTM E154 Section 8, F1249 – Permeance after wetting, drying, and soaking ASTM E154 Section 11, F1249 – Permeance after heat conditioning ASTM E154 Section 12, F1249 – Permeance after low temperature conditioning ASTM E154 Section 13, F1249 – Permeance after soil organism exposure	0.0088 perms 0.0081 perms 0.0084 perms 0.0077 perms
Methane Transmission Rate	ASTM D1434 – Standard Test Method for Determining Gas Permeability Characteristics of Plastic Film and Sheeting	152.2 GTR* (mL(STPI)/m ² *day)
Radon Diffusion Coefficient	K124/02/95	9.9 x 10 ⁻¹² m ² /second
Puncture Resistance	ASTM D1709 – Test Method for Impact Resistance of Plastic Film by Free-Falling Dart Method	3500+ grams**
Tensile Strength	ASTM D882 – Test Method for Tensile Properties of Thin Plastic Sheeting	97.7 lbf/in
Thickness		20 mil
Roll Dimensions		width x length: area: 14' x 105' 1470 ft ²
Roll Weight		152 lb

Note: perm unit = grains/(ft²*hr*in-Hg)

*GTR = Gas Transmission Rate

**The material maxed out the testing equipment and did not fail at 3746 grams.

Continued...

Note – legal notice on page 2.

STEGO® WRAP 20-MIL VAPOR WRAP BARRIER

A STEGO INDUSTRIES, LLC INNOVATION | VAPOR RETARDERS 07 26 00, 03 30 00 | VERSION: JUL 17, 2024

5. INSTALLATION

UNDER SLAB: Unroll Stego Wrap 20-Mil Vapor Barrier over an aggregate, sand, or tamped earth base. Overlap all seams a minimum of 6 inches and tape using Stego® Tape or Stego® Crete Claw® Tape. All penetrations must be sealed using a combination of Stego Wrap and Stego accessories.

For additional information, please refer to Stego's complete installation instructions.

6. AVAILABILITY & COST

Stego Wrap 20-Mil Vapor Barrier is available through our network of building supply distributors. For current cost information, contact your local Stego® distributor or Stego Sales Representative.

7. WARRANTY

Stego believes to the best of its knowledge, that specifications and recommendations herein are accurate and reliable. However, since site conditions are not within its control, Stego does not guarantee results from the use of the information provided herein. Stego does offer a limited warranty on Stego Wrap 20-Mil Vapor Barrier. Please see stegoindustries.com/legal

8. MAINTENANCE AND STORAGE

Maintenance: Inspect after installation. Repair visible damage with Stego Tape or recommended accessories.

Storage and Handling: Store in original packaging in a cool, dry place. Handle with care to avoid damage.

Please refer to the Safety Data Sheet (SDS) for detailed safety, storage, and handling procedures.

9. TECHNICAL SERVICES

Technical advice, custom CAD drawings, and additional information can be obtained by contacting Stego or by visiting the website.

Email: contact@stegoindustries.com

Contact Number: (877) 464-7834

Website: stegoindustries.com

10. FILING SYSTEMS: stegoindustries.com



Appendix C

Draft ELUR and Post-Remediation SMP

ENVIRONMENTAL LAND USAGE RESTRICTION

This Declaration of Environmental Land Usage Restriction ("Restriction") is made on this _____ day of _____, 20__ by the City of Pawtucket, and its successors and/or assigns (hereinafter, the "Grantor").

Deleted: [property owner]

WITNESSETH:

WHEREAS, the Grantor, the City of Pawtucket, Rhode Island School Department, is the Owner in fee simple of certain real property identified as the City of Pawtucket Tax Assessor's Plat 26, Lot 630 located at 2 Columbus Avenue in Pawtucket, Rhode Island (the "Property"), more particularly described in Exhibit A (Legal Description) which is attached hereto and made a part hereof;

Deleted: _____ (name)

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WHEREAS, the Property has been determined to contain soil and/or groundwater which is contaminated with certain Hazardous Materials and/or petroleum in excess of applicable Residential and/or Industrial/Commercial Direct Exposure Criteria pursuant to the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases ("Remediation Regulations");

Deleted: (or portion thereof identified in the Class I survey which is attached hereto as Exhibit 2A and is made a part hereof) has been

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WHEREAS, the Grantor and the Rhode Island Department of Environmental Management ("Department") have determined that the environmental land use restrictions set forth below are consistent with the regulations adopted by the Department pursuant to R.I.G.L. § 23-19.14-1 and that this restriction shall be a Conservation Restriction pursuant to R.I.G.L. § 34-39-1 et. seq. and shall not be subject to the 30-year limitation provided in R.I.G.L. § 34-4-21;

WHEREAS, the Department's written approval of this Restriction is contained in the document entitled: Remedial Decision Letter issued pursuant to the Remediation Regulations;

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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, 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.

NOW, THEREFORE, Grantor agrees as follows:

A. Restrictions Applicable to the Property: In accordance with the Remedial Decision Letter, the use, occupancy and activity of and at the Property is restricted as follows:

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Deleted: / Remedial Agreement/ Order of Approval/ Remedial Approval Letter], the use, occupancy and activity of and at the [

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i. No residential use of the Property shall be permitted that is contrary to Department approvals and restrictions contained herein;

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 Land Revitalization & Sustainable Materials Management, except as permitted in the Soil Management Plan (SMP), Exhibit B and attached hereto, approved by the Department in a written approval letter dated _____ (date);

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;

v. The engineered controls at the Property described in the SMP contained in Exhibit B attached hereto shall not be disturbed and shall be properly maintained to prevent humans engaged in Residential and/or Industrial/Commercial activity from being exposed to soils containing Hazardous Materials and/or petroleum in concentrations exceeding the applicable Department-approved Residential 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 engineering controls utilized at the Property, except as permitted in the Department-approved SMP contained in Exhibit B.

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.-viii.) 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 Land Revitalization & Sustainable Materials 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.);
- ii. Grantor shall limit both the extent and duration of the suspension to the minimum period reasonable and necessary to adequately respond to the emergency;

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<#>Water at the [Property/Contaminated-Site] shall be prohibited from infiltrating soils containing Hazardous Materials and/or petroleum in concentrations exceeding the applicable Department approved leachability criteria set forth in the Remediation Regulations; ¶

<#>No subsurface structures shall be constructed on the [Property/Contaminated-Site] over groundwater containing Hazardous Materials and/or petroleum in concentrations exceeding the applicable Department approved GA or GB Groundwater Objectives set forth in the Remediation Regulations; ¶

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Deleted: and/or Industrial/Commercial] Direct Exposure Criteria

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<#>The engineered controls at the [Property/Contaminated-Site] described in the [RAWP or Soil Management Plan SMP] contained in Exhibit B attached hereto shall not be disturbed and shall be properly maintained so that water does not infiltrate soils containing Hazardous Materials and/or petroleum in concentrations exceeding the applicable Department-approved leachability criteria set forth in the Remediation Regulations. ¶

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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.

G. Binding Effect: All of the terms, covenants, and conditions of this Restriction shall run with the 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.

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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.

An officer or Director of the company with direct knowledge of past and present conditions of the Property, (the "Company Representative"), or 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.

IN WITNESS WHEREOF, the Grantor has hereunto set (his/her) hand and seal on the day and year set forth above.

City of Pawtucket

By: _____
Grantor (signature) _____ Grantor (typed name)

STATE OF RHODE ISLAND
COUNTY OF _____

In (CITY/TOWN), in said County and State, on the _____ day of _____, 20____, before me Personally appeared _____, 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.

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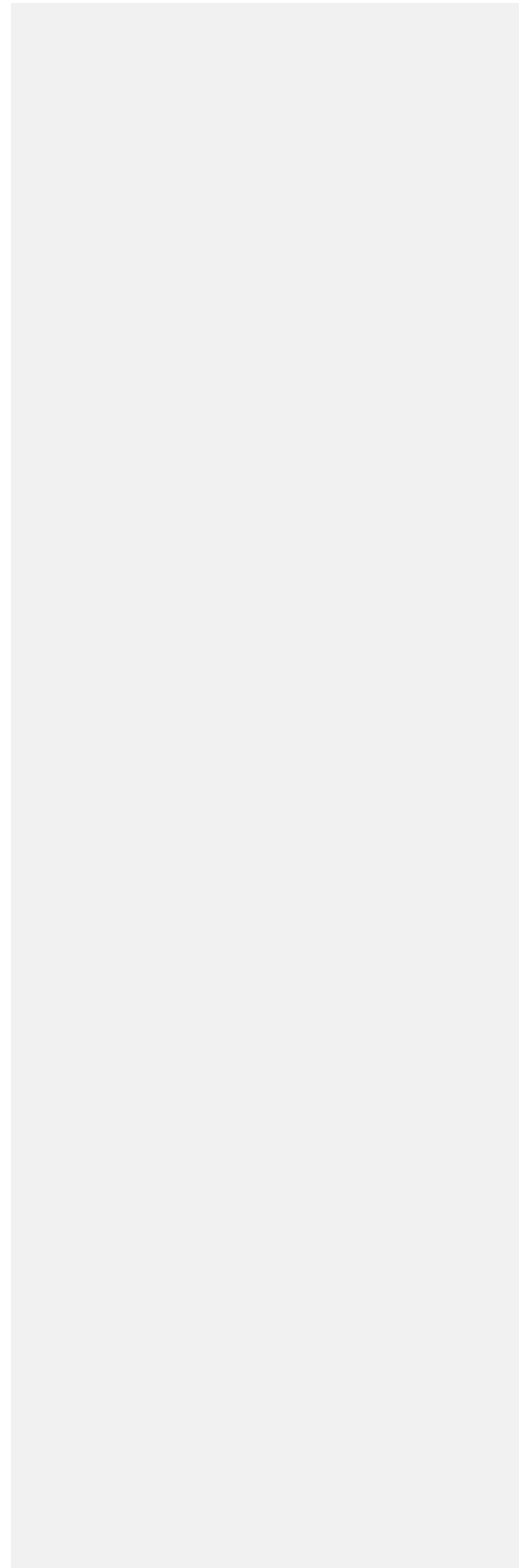
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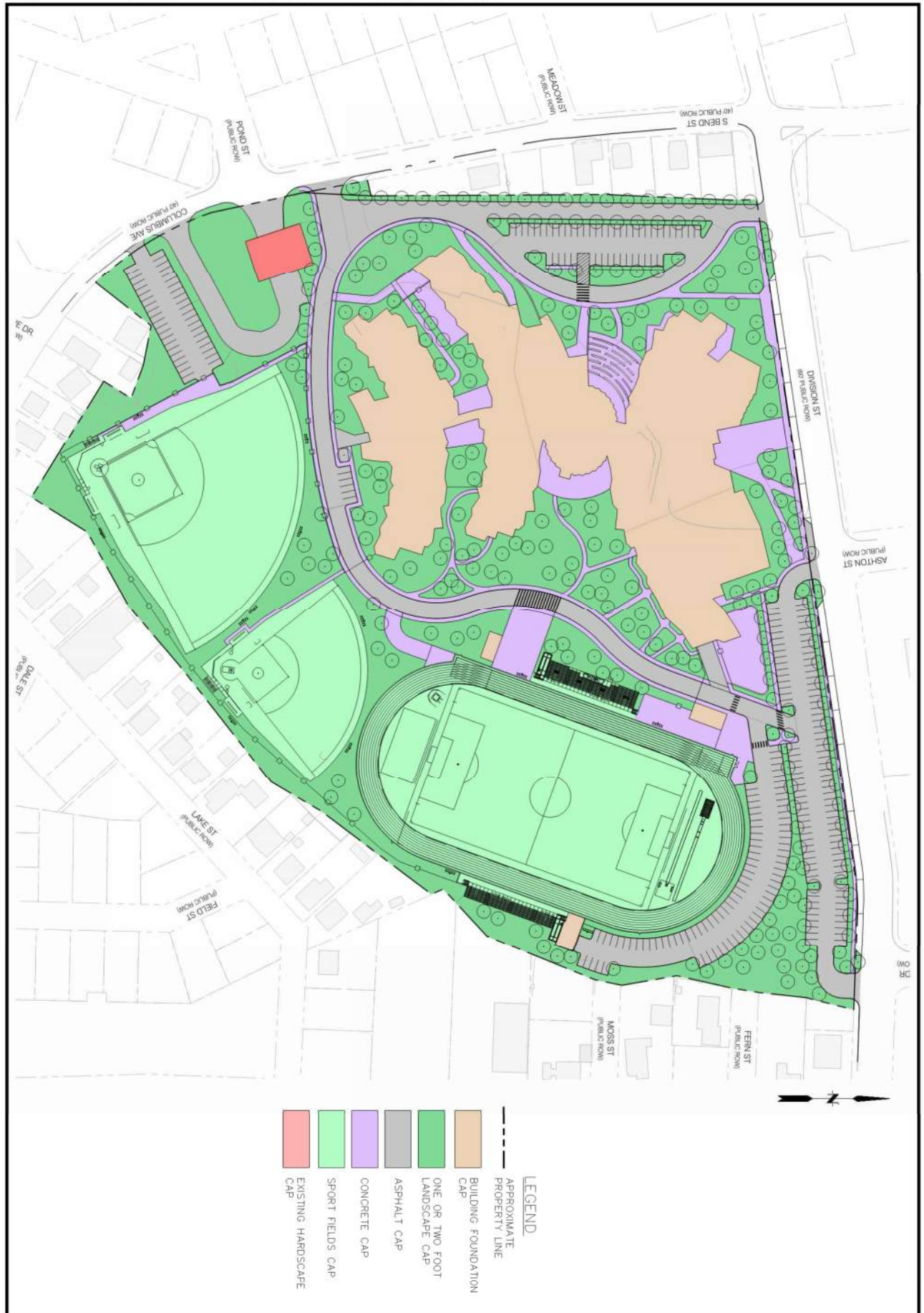
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Notary Public: _____

My Comm. Expires: _____





Post Remediation Soil Management Plan 2 Columbus Avenue, Pawtucket, Rhode Island

This Soil Management Plan (SMP) has been prepared to establish procedures that will be followed should future construction/maintenance activities at the 2 Columbus Avenue, Pawtucket, Rhode Island property require the need to manage soils excavated from the subsurface or when existing site surfaces / Department approved engineered controls (asphalt, concrete, landscaping and/or foundations) are disturbed. The plan serves to supplement, and will be initiated by, the RIDEM notification requirement established by the Environmental Land Use Restriction (ELUR) for the property.

Background

The Property, located at 2 Columbus Avenue, was formerly the McCoy Stadium site. Soil at the property was found to contain concentrations of polycyclic aromatic hydrocarbons, petroleum, and metals in soil exceeding the RIDEM Method 1 Residential and/or Industrial/Commercial Direct Exposure Criteria during a site investigation performed at the property. The site has been redeveloped into the Pawtucket Unified High School campus. The Department approved remedy included targeted soil excavation and off-Site disposal, on-site soil management, Site-wide capping, and the implementation of institutional controls. The regulated site soils are covered with Department approved engineered controls, consisting of building foundations, asphalt pavement, and landscaping as detailed in the Remedial Action Work Plan and Remedial Action Closure Report in order to prevent direct exposure to regulated soils.

Applicable Area

This SMP and affiliated ELUR, which restricts usage of the property, pertains to the entire Property. See attached site plan.

Soil Management

The direct exposure pathway is the primary concern at the site. Individuals engaged in activities at the site may be exposed through incidental ingestion, dermal contact, or inhalation of vapors or entrained soil particles if proper precautions are not taken. Therefore, the following procedures will be followed to minimize the potential of exposure.

During site work, the appropriate precautions will be taken to restrict unauthorized access to the property.

During all site/earth work, dust suppression (e.g. watering, etc) techniques must be employed at all times. If it is anticipated due to the nature of the contaminants of concern that odors may be generated during site activities, air monitoring and means to control odors will be utilized, as appropriate (e.g. odor-suppressing foam, etc).

In the event that an unexpected observation or situation arises during site work, such activities will immediately stop. Workers will not attempt to handle the situation themselves but will contact the appropriate authority for further direction.

In the event that certain soils on site were not previously characterized, these soils are presumed to be regulated until such time that it is demonstrated to the Department, through sampling and laboratory analysis that they are not regulated. (For example, presumptive remedies or locations of previously inaccessible soil.)

If excess soil is generated / excavated from the Property, the soil is to remain on-site for analytical testing, to be performed by an environmental professional, in order to determine the appropriate disposal and/or management options. The soil must be placed on and covered with polyethylene/plastic sheeting during the entire duration of its staging and secured with appropriate controls to limit the loss of the cover and protect against storm-water and / or wind erosion (e.g. hay bales, silt fencing, rocks, etc).

Excavated soils will be staged and temporarily stored in a designated area of the property. Within reason, the storage location will be selected to limit the unauthorized access to the materials (e.g., away from public roadways/walkways). No regulated soil will be stockpiled on-site for greater than 60 days without prior Department approval.

In the event that stockpiled soils pose a risk or threat of leaching hazardous materials, a proper leak-proof container (e.g. drum or lined roll-off) or secondary containment will be utilized.

Soils excavated from the site may not be re-used as fill on residential property. Excavated fill material shall not be re-used as fill on commercial or industrial properties unless it meets the Department's Method 1 Residential Direct Exposure Criteria for all constituents listed in Table 1 of the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations). Copies of the laboratory analysis results shall be maintained by the site owner and included in the annual inspection report for the site, or the closure report if applicable. In the event that the soil does not meet any of these criteria, the material must be properly managed and disposed of off site at a licensed facility.

Site soils, which are to be disposed of off-site, must be done so at a licensed facility in accordance with all local, state, and federal laws. Copies of the material shipping records associated with the disposal of the material shall be maintained by the site owner and included in the annual inspection report for the site.

Best soil management practices should be employed at all times and regulated soils should be segregated into separate piles (or cells or containers) as appropriate based upon the results of analytical testing, when multiple reuse options are planned (e.g. reuse on-site, reuse at a Department approved Industrial/Commercial property, or disposal at a Department approved licensed facility).

All non-disposable equipment used during the soil disturbance activities will be properly decontaminated as appropriate prior to removal from the site. All disposable equipment used during the soil disturbance activities will be properly containerized and disposed of following completion of the work. All vehicles utilized during the work shall be properly decontaminated as appropriate prior to leaving the site.

At the completion of site work, all exposed soils are required to be recapped with Department approved engineered controls (2 ft of clean fill or equivalent: building foundations, 4 inches of pavement/concrete underlain with 6 inches of clean fill, and/or 1 foot of clean fill underlain with a geotextile fabric) in compliance with the Remedial Action Work Plan consistent or better than the site surface conditions prior to the work that took place. These measures must also be consistent with the Department approved ELUR recorded on the property. Any clean fill material brought on site is required to meet the Department's Method 1 Residential Direct Exposure Criteria or be designated by an Environmental Professional as Non-Jurisdictional under the Remediation Regulations. The Annual Inspection Report for the site, or Closure Report if applicable, should include either analytical sampling results from the fill demonstrating compliance or alternatively include written certification by an Environmental Professional that the fill is not jurisdictional.

Worker Health and Safety

To ensure the health and safety of on-site workers, persons involved in the excavation and handling of the material on site are required to wear a minimum of Level D personal protection equipment, including gloves, work boots and eye protection. Workers are also required to wash their hands with soap and water prior to eating, drinking, smoking, or leaving the site.

Department Approval

In accordance with Section A iii of the ELUR, no soil at the property is to be disturbed in any manner without prior written permission of the Department's Office of Land Revitalization & Sustainable Materials Management, except for minor inspections, maintenance, and landscaping activities that do not disturb the contaminated soil at the Site. As part of the notification process, the site owner shall provide a brief written description of the anticipated site activity involving soil excavation. The notification should be submitted to the Department no later than 60 days prior to the proposed initiation of the start of site activities. The description shall include an estimate of the volume of soil to be excavated, a list of the known and anticipated contaminants of concern, a site figure clearly identifying the proposed areas to be excavated/disturbed, the duration of the project and the proposed disposal location of the soil.

Following written Notification, the Department will determine the post closure reporting requirements. Significant disturbances of regulated soil will require submission of a Closure Report for Department review and approval documenting that the activities were performed in accordance with this SMP and the Department approved ELUR. Minor

disturbances of regulated soil may be documented through the annual certification submitted in accordance with Section H (Inspection & Non-Compliance) of the Department approved ELUR. The Department will also make a determination regarding the necessity of performing Public Notice to abutting property owners/tenants concerning the proposed activities. Work associated with the Notification will not commence until written Department approval has been issued. Once Department approval has been issued, the Department will be notified a minimum of two (2) days prior to the start of activities at the site. Shall any significant alterations to the Department approved plan be necessary, a written description of the proposed deviation, will be submitted to the Department for review and approval prior to initiating such changes.

Appendix D

Limited Design Investigation Peat Analytical Data

CERTIFICATE OF ANALYSIS

Joe Unsworth
GZA GeoEnvironmental, Inc.
188 Valley Street
Providence, RI 02909

RE: Pawtucket High School (03.0035453.00)
ESS Laboratory Work Order Number: 24K0082

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 1:29 pm, Nov 12, 2024

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 TNI and relative state standards, 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: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

SAMPLE RECEIPT

The following samples were received on November 04, 2024 for the analyses specified on the enclosed Chain of Custody Record.

Low Level VOA vials were frozen by the client on November 01, 2024.

Lab Number	Sample Name	Matrix	Analysis
24K0082-01	TP-13 S-1	Soil	6010D, 7471B, 8082A, 8100M, 8260D Low, 8270E
24K0082-02	TP-11 S-1	Soil	1311, 1311/6010D, 6010D, 7471B, 8082A, 8100M, 8260D Low, 8270E
24K0082-03	TP-4 S-1	Soil	6010D, 7471B, 8082A, 8100M, 8260D Low, 8270E
24K0082-04	TP-10 S-1	Soil	6010D, 7471B, 8082A, 8100M, 8260D Low, 8270E
24K0082-05	TP-9 S-1	Soil	1311, 1311/6010D, 6010D, 7471B, 8082A, 8100M, 8260D Low, 8270E
24K0082-06	TP-14 S-1	Soil	6010D, 6020B, 7471B, 8082A, 8100M, 8260D Low, 8270E

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

PROJECT NARRATIVE

8100M Total Petroleum Hydrocarbons

24K0082-01 Surrogate recovery(ies) outside of criteria. Reextraction/Reanalysis confirms results (SC).

O-Terphenyl (24% @ 40-140%)

24K0082-01RE1 Surrogate recovery(ies) outside of criteria. Reextraction/Reanalysis confirms results (SC).

O-Terphenyl (34% @ 40-140%)

Semi-Volatile Organic Compounds

D4K0078-CCV1 Calibration required quadratic regression (Q).

2,4-Dinitrophenol (114% @ 40-160%), 4,6-Dinitro-2-Methylphenol (106% @ 80-120%), Benzidine (112% @ 80-120%), Benzoic Acid (96% @ 80-120%), Pentachlorophenol (100% @ 40-160%)

D4K0078-CCV1 Initial Calibration Verification recovery is above upper control limit (ICV+).

Pyridine

D4K0078-CCV1 Initial Calibration Verification recovery is below lower control limit (ICV-).

Benzidine

DK40452-BS1 Blank Spike recovery is below lower control limit (B-).

Benzidine (15% @ 40-140%)

DK40452-BSD1 Blank Spike recovery is below lower control limit (B-).

Benzidine (14% @ 40-140%)

Total Metals

24K0082-06 Elevated Method Reporting Limits due to sample matrix (EL).

Arsenic , Cadmium , Chromium , Copper , Lead , Nickel , Silver

Volatile Organics Low Level

24K0082-03 Internal Standard(s) outside of criteria. Sample was reanalyzed to confirm (IC).

1,4-Dichlorobenzene-D4 (29% @ 50-200%), Chlorobenzene-d5 (49% @ 50-200%)

24K0082-03 Surrogate recovery(ies) below lower control limit (S-).

4-Bromofluorobenzene (67% @ 70-130%)

24K0082-05 Surrogate recovery(ies) outside of criteria. Reextraction/Reanalysis confirms results (SC).

1,2-Dichloroethane-d4 (142% @ 70-130%)

24K0082-06 Surrogate recovery(ies) outside of criteria. Reextraction/Reanalysis confirms results (SC).

1,2-Dichloroethane-d4 (149% @ 70-130%), Dibromofluoromethane (131% @ 70-130%)

D4K0107-CCV1 Continuing Calibration %Diff/Drift is above control limit (CD+).

Isopropylbenzene (21% @ 20%)

D4K0135-CCV1 Continuing Calibration %Diff/Drift is above control limit (CD+).

Isopropylbenzene (23% @ 20%), n-Butylbenzene (22% @ 20%), tert-Butylbenzene (22% @ 20%)

DK40517-BS1 Blank Spike recovery is above upper control limit (B+).

Isopropylbenzene (146% @ 70-130%)

DK40517-BSD1 Blank Spike recovery is above upper control limit (B+).

1,1-Dichloroethene (132% @ 70-130%), 1,4-Dioxane (132% @ 70-130%), Ethyl tertiary-butyl ether (131% @ 70-130%), Isopropylbenzene (149% @ 70-130%), tert-Butylbenzene (131% @ 70-130%)

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

DK40615-BS1 Blank Spike recovery is above upper control limit (B+).

1,2,3-Trichlorobenzene (132% @ 70-130%), Isopropylbenzene (141% @ 70-130%)

DK40615-BSD1 Blank Spike recovery is above upper control limit (B+).

1,2,3-Trichlorobenzene (135% @ 70-130%), Isopropylbenzene (151% @ 70-130%), tert-Butylbenzene (132% @ 70-130%)

DK40721-BS1 Blank Spike recovery is above upper control limit (B+).

1,2,3-Trichlorobenzene (132% @ 70-130%), Isopropylbenzene (147% @ 70-130%), tert-Butylbenzene (131% @ 70-130%)

DK40721-BSD1 Blank Spike recovery is above upper control limit (B+).

1,2,3-Trichlorobenzene (135% @ 70-130%), Ethyl tertiary-butyl ether (132% @ 70-130%), Isopropylbenzene (150% @ 70-130%), tert-Butylbenzene (131% @ 70-130%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[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: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010D - ICP
6020B - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260D - VOA
8270E - SVOA
8270E 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 19-2.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / 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
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-13 S-1
Date Sampled: 11/01/24 13:40
Percent Solids: 22

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	IV / FV	Batch
Antimony	ND (21.3)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Arsenic	ND (10.7)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Beryllium	2.17 (0.43)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Cadmium	ND (2.13)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Chromium	5.49 (4.26)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Copper	15.3 (10.7)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Lead	ND (21.3)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Mercury	0.189 (0.148)	---	7471B	---	1	AFV	11/04/24 18:50	0.61 40	DK40403
Nickel	ND (10.7)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Selenium	ND (21.3)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Silver	ND (2.13)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Thallium	ND (21.3)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402
Zinc	ND (10.7)	---	6010D	---	1	KJB	11/05/24 10:57	2.14 100	DK40402

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-13 S-1
Date Sampled: 11/01/24 13:40
Percent Solids: 22
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,1,1-Trichloroethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,1,2,2-Tetrachloroethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,1,2-Trichloroethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,1-Dichloroethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,1-Dichloroethene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,1-Dichloropropene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,2,3-Trichlorobenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,2,3-Trichloropropane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,2,4-Trichlorobenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,2,4-Trimethylbenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,2-Dibromo-3-Chloropropane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,2-Dibromoethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,2-Dichlorobenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,2-Dichloroethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,2-Dichloropropane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,3,5-Trimethylbenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,3-Dichlorobenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,3-Dichloropropane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,4-Dichlorobenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1,4-Dioxane	ND (0.400)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
1-Chlorohexane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
2,2-Dichloropropane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
2-Butanone	ND (0.200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
2-Chlorotoluene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
2-Hexanone	ND (0.200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
4-Chlorotoluene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-13 S-1
Date Sampled: 11/01/24 13:40
Percent Solids: 22
Initial Volume: 5.7g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Isopropyltoluene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
4-Methyl-2-Pentanone	ND (0.200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Acetone	0.637 (0.200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Benzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Bromobenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Bromochloromethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Bromodichloromethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Bromoform	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Bromomethane	ND (0.0400)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Carbon Disulfide	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Carbon Tetrachloride	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Chlorobenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Chloroethane	ND (0.0400)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Chloroform	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Chloromethane	ND (0.0400)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
cis-1,2-Dichloroethene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
cis-1,3-Dichloropropene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Dibromochloromethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Dibromomethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Dichlorodifluoromethane	ND (0.0400)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Diethyl Ether	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Di-isopropyl ether	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Ethyl tertiary-butyl ether	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Ethylbenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Hexachlorobutadiene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Isopropylbenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Methyl tert-Butyl Ether	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-13 S-1
 Date Sampled: 11/01/24 13:40
 Percent Solids: 22
 Initial Volume: 5.7g
 Final Volume: 10ml
 Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-01
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: MEK
 Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Methylene Chloride	ND (0.100)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Naphthalene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
n-Butylbenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
n-Propylbenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
sec-Butylbenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Styrene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
tert-Butylbenzene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Tertiary-amyl methyl ether	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Tetrachloroethene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Tetrahydrofuran	ND (0.0800)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Toluene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
trans-1,2-Dichloroethene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
trans-1,3-Dichloropropene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Trichloroethene	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Trichlorofluoromethane	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Vinyl Acetate	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Vinyl Chloride	ND (0.0400)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Xylene O	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Xylene P,M	ND (0.0400)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517
Xylenes (Total)	ND (0.0200)	---	8260D Low	---	1	MEK	11/05/24 18:38	D4K0068	DK40517

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>107 %</i>		<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>84 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>99 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>107 %</i>		<i>70-130</i>

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-13 S-1
Date Sampled: 11/01/24 13:40
Percent Solids: 22
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1-Biphenyl	ND (0.119)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
1,2,4-Trichlorobenzene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
1,2-Dichlorobenzene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
1,3-Dichlorobenzene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
1,4-Dichlorobenzene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2,3,4,6-Tetrachlorophenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2,4,5-Trichlorophenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2,4,6-Trichlorophenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2,4-Dichlorophenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2,4-Dimethylphenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2,4-Dinitrophenol	ND (4.78)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2,4-Dinitrotoluene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2,6-Dinitrotoluene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2-Chloronaphthalene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2-Chlorophenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2-Methylnaphthalene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2-Methylphenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2-Nitroaniline	ND (2.39)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
2-Nitrophenol	ND (2.39)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
3,3'-Dichlorobenzidine	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
3+4-Methylphenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
3-Nitroaniline	ND (2.39)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
4,6-Dinitro-2-Methylphenol	ND (4.78)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
4-Bromophenyl-phenylether	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
4-Chloro-3-Methylphenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
4-Chloroaniline	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
4-Chloro-phenyl-phenyl ether	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-13 S-1
Date Sampled: 11/01/24 13:40
Percent Solids: 22
Initial Volume: 19.1g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Nitroaniline	ND (2.39)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
4-Nitrophenol	ND (4.78)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Acenaphthene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Acenaphthylene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Acetophenone	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Aniline	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Anthracene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Azobenzene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Benzo(a)anthracene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Benzo(a)pyrene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Benzo(b)fluoranthene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Benzo(g,h,i)perylene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Benzo(k)fluoranthene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Benzoic Acid	ND (11.9)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Benzyl Alcohol	ND (2.39)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
bis(2-Chloroethoxy)methane	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
bis(2-Chloroethyl)ether	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
bis(2-chloroisopropyl)Ether	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
bis(2-Ethylhexyl)phthalate	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Butylbenzylphthalate	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Carbazole	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Chrysene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Dibenzo(a,h)Anthracene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Dibenzofuran	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Diethylphthalate	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Dimethylphthalate	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Di-n-butylphthalate	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-13 S-1
 Date Sampled: 11/01/24 13:40
 Percent Solids: 22
 Initial Volume: 19.1g
 Final Volume: 1ml
 Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-01
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: TJ
 Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Di-n-octylphthalate	ND (2.39)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Fluoranthene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Fluorene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Hexachlorobenzene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Hexachlorobutadiene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Hexachlorocyclopentadiene	ND (2.39)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Hexachloroethane	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Indeno(1,2,3-cd)Pyrene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Isophorone	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Naphthalene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Nitrobenzene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
N-Nitrosodimethylamine	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
N-Nitroso-Di-n-Propylamine	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
N-nitrosodiphenylamine	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Pentachlorophenol	ND (4.78)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Phenanthrene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Phenol	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Pyrene	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452
Pyridine	ND (1.19)	---	8270E	---	1	TJ	11/05/24 22:27	D4K0078	DK40452

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	40 %		30-130
<i>Surrogate: 2,4,6-Tribromophenol</i>	66 %		30-130
<i>Surrogate: 2-Chlorophenol-d4</i>	47 %		30-130
<i>Surrogate: 2-Fluorobiphenyl</i>	54 %		30-130
<i>Surrogate: 2-Fluorophenol</i>	40 %		30-130
<i>Surrogate: Nitrobenzene-d5</i>	44 %		30-130
<i>Surrogate: Phenol-d6</i>	42 %		30-130
<i>Surrogate: p-Terphenyl-d14</i>	63 %		30-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-13 S-1
Date Sampled: 11/01/24 13:40
Percent Solids: 22
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/4/24 17:03

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.2)	---	8082A	---	1	11/05/24 20:49	---	DK40408
Aroclor 1221	ND (0.2)	---	8082A	---	1	11/05/24 20:49	---	DK40408
Aroclor 1232	ND (0.2)	---	8082A	---	1	11/05/24 20:49	---	DK40408
Aroclor 1242	ND (0.2)	---	8082A	---	1	11/05/24 20:49	---	DK40408
Aroclor 1248	ND (0.2)	---	8082A	---	1	11/05/24 20:49	---	DK40408
Aroclor 1254	ND (0.2)	---	8082A	---	1	11/05/24 20:49	---	DK40408
Aroclor 1260	ND (0.2)	---	8082A	---	1	11/05/24 20:49	---	DK40408
Aroclor 1262	ND (0.2)	---	8082A	---	1	11/05/24 20:49	---	DK40408
Aroclor 1268	ND (0.2)	---	8082A	---	1	11/05/24 20:49	---	DK40408

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	61 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	67 %		30-150

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-13 S-1
 Date Sampled: 11/01/24 13:40
 Percent Solids: 22
 Initial Volume: 19g
 Final Volume: 1ml
 Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-01
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: JDN
 Prepared: 11/5/24 10:40

8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Total Petroleum Hydrocarbons (C9-C36)	316 (180)	---	8100M	---	1	11/07/24 20:16	---	DK40506
<hr/>								
		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				
<i>Surrogate: O-Terphenyl</i>		24 %	SC	40-140				

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-13 S-1
 Date Sampled: 11/01/24 13:40
 Percent Solids: 22
 Initial Volume: 19.3g
 Final Volume: 1ml
 Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-01RE1
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: JDN
 Prepared: 11/8/24 17:23

8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Total Petroleum Hydrocarbons (C9-C36)	706 (177)	---	8100M	---	1	11/09/24 0:20	---	DK40842
<hr/>								
		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				
<i>Surrogate: O-Terphenyl</i>		34 %	SC	40-140				

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-11 S-1
Date Sampled: 11/01/24 12:41
Percent Solids: 41

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	IV / FV	Batch
Antimony	ND (10.7)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Arsenic	12.1 (5.34)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Beryllium	0.51 (0.21)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Cadmium	ND (1.07)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Chromium	48.4 (2.13)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Copper	183 (5.34)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Lead	172 (10.7)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Mercury	0.503 (0.075)	---	7471B	---	1	AFV	11/04/24 18:52	0.64 40	DK40403
Nickel	25.5 (5.34)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Selenium	ND (10.7)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Silver	ND (1.07)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Thallium	ND (10.7)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402
Zinc	115 (5.34)	---	6010D	---	1	KJB	11/05/24 10:59	2.27 100	DK40402



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-11 S-1
Date Sampled: 11/01/24 12:41
Percent Solids: 41

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-02
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>IV / FV</u>	<u>Batch</u>
Lead	0.05 (0.05)	---	1311/6010D	5	1	KJB	11/11/24 13:48	50 50	DK40851

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-11 S-1
Date Sampled: 11/01/24 12:41
Percent Solids: 41
Initial Volume: 7.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,1,1-Trichloroethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,1,2,2-Tetrachloroethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,1,2-Trichloroethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,1-Dichloroethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,1-Dichloroethene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,1-Dichloropropene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,2,3-Trichlorobenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,2,3-Trichloropropane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,2,4-Trichlorobenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,2,4-Trimethylbenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,2-Dibromo-3-Chloropropane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,2-Dibromoethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,2-Dichlorobenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,2-Dichloroethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,2-Dichloropropane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,3,5-Trimethylbenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,3-Dichlorobenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,3-Dichloropropane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,4-Dichlorobenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1,4-Dioxane	ND (0.171)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
1-Chlorohexane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
2,2-Dichloropropane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
2-Butanone	ND (0.0853)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
2-Chlorotoluene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
2-Hexanone	ND (0.0853)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
4-Chlorotoluene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-11 S-1
Date Sampled: 11/01/24 12:41
Percent Solids: 41
Initial Volume: 7.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Isopropyltoluene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
4-Methyl-2-Pentanone	ND (0.0853)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Acetone	0.340 (0.0853)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Benzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Bromobenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Bromochloromethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Bromodichloromethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Bromoform	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Bromomethane	ND (0.0171)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Carbon Disulfide	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Carbon Tetrachloride	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Chlorobenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Chloroethane	ND (0.0171)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Chloroform	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Chloromethane	ND (0.0171)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
cis-1,2-Dichloroethene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
cis-1,3-Dichloropropene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Dibromochloromethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Dibromomethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Dichlorodifluoromethane	ND (0.0171)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Diethyl Ether	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Di-isopropyl ether	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Ethyl tertiary-butyl ether	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Ethylbenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Hexachlorobutadiene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Isopropylbenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Methyl tert-Butyl Ether	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-11 S-1
Date Sampled: 11/01/24 12:41
Percent Solids: 41
Initial Volume: 7.1g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Methylene Chloride	ND (0.0427)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Naphthalene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
n-Butylbenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
n-Propylbenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
sec-Butylbenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Styrene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
tert-Butylbenzene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Tertiary-amyl methyl ether	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Tetrachloroethene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Tetrahydrofuran	ND (0.0341)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Toluene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
trans-1,2-Dichloroethene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
trans-1,3-Dichloropropene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Trichloroethene	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Trichlorofluoromethane	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Vinyl Acetate	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Vinyl Chloride	ND (0.0171)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Xylene O	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Xylene P,M	ND (0.0171)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517
Xylenes (Total)	ND (0.0085)	---	8260D Low	---	1	MEK	11/05/24 19:03	D4K0068	DK40517

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	99 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	90 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	98 %		70-130
<i>Surrogate: Toluene-d8</i>	106 %		70-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-11 S-1
Date Sampled: 11/01/24 12:41
Percent Solids: 41
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1-Biphenyl	ND (0.060)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
1,2,4-Trichlorobenzene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
1,2-Dichlorobenzene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
1,3-Dichlorobenzene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
1,4-Dichlorobenzene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2,3,4,6-Tetrachlorophenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2,4,5-Trichlorophenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2,4,6-Trichlorophenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2,4-Dichlorophenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2,4-Dimethylphenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2,4-Dinitrophenol	ND (2.40)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2,4-Dinitrotoluene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2,6-Dinitrotoluene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2-Chloronaphthalene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2-Chlorophenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2-Methylnaphthalene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2-Methylphenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2-Nitroaniline	ND (1.20)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
2-Nitrophenol	ND (1.20)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
3,3'-Dichlorobenzidine	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
3+4-Methylphenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
3-Nitroaniline	ND (1.20)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
4,6-Dinitro-2-Methylphenol	ND (2.40)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
4-Bromophenyl-phenylether	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
4-Chloro-3-Methylphenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
4-Chloroaniline	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
4-Chloro-phenyl-phenyl ether	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-11 S-1
Date Sampled: 11/01/24 12:41
Percent Solids: 41
Initial Volume: 20.2g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Nitroaniline	ND (1.20)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
4-Nitrophenol	ND (2.40)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Acenaphthene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Acenaphthylene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Acetophenone	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Aniline	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Anthracene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Azobenzene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Benzo(a)anthracene	0.833 (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Benzo(a)pyrene	0.873 (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Benzo(b)fluoranthene	1.34 (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Benzo(g,h,i)perylene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Benzo(k)fluoranthene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Benzoic Acid	ND (6.00)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Benzyl Alcohol	ND (1.20)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
bis(2-Chloroethoxy)methane	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
bis(2-Chloroethyl)ether	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
bis(2-chloroisopropyl)Ether	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
bis(2-Ethylhexyl)phthalate	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Butylbenzylphthalate	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Carbazole	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Chrysene	1.15 (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Dibenzo(a,h)Anthracene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Dibenzofuran	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Diethylphthalate	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Dimethylphthalate	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Di-n-butylphthalate	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-11 S-1
 Date Sampled: 11/01/24 12:41
 Percent Solids: 41
 Initial Volume: 20.2g
 Final Volume: 1ml
 Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-02
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: TJ
 Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Di-n-octylphthalate	ND (1.20)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Fluoranthene	2.08 (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Fluorene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Hexachlorobenzene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Hexachlorobutadiene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Hexachlorocyclopentadiene	ND (1.20)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Hexachloroethane	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Indeno(1,2,3-cd)Pyrene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Isophorone	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Naphthalene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Nitrobenzene	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
N-Nitrosodimethylamine	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
N-Nitroso-Di-n-Propylamine	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
N-nitrosodiphenylamine	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Pentachlorophenol	ND (2.40)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Phenanthrene	1.10 (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Phenol	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Pyrene	1.86 (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452
Pyridine	ND (0.600)	---	8270E	---	1	TJ	11/05/24 22:57	D4K0078	DK40452

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	78 %		30-130
<i>Surrogate: 2,4,6-Tribromophenol</i>	107 %		30-130
<i>Surrogate: 2-Chlorophenol-d4</i>	89 %		30-130
<i>Surrogate: 2-Fluorobiphenyl</i>	83 %		30-130
<i>Surrogate: 2-Fluorophenol</i>	82 %		30-130
<i>Surrogate: Nitrobenzene-d5</i>	80 %		30-130
<i>Surrogate: Phenol-d6</i>	82 %		30-130
<i>Surrogate: p-Terphenyl-d14</i>	103 %		30-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-11 S-1
Date Sampled: 11/01/24 12:41
Percent Solids: 41
Initial Volume: 19.9g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/4/24 17:03

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.1)	---	8082A	---	1	11/05/24 21:09	---	DK40408
Aroclor 1221	ND (0.1)	---	8082A	---	1	11/05/24 21:09	---	DK40408
Aroclor 1232	ND (0.1)	---	8082A	---	1	11/05/24 21:09	---	DK40408
Aroclor 1242	ND (0.1)	---	8082A	---	1	11/05/24 21:09	---	DK40408
Aroclor 1248	ND (0.1)	---	8082A	---	1	11/05/24 21:09	---	DK40408
Aroclor 1254	ND (0.1)	---	8082A	---	1	11/05/24 21:09	---	DK40408
Aroclor 1260	ND (0.1)	---	8082A	---	1	11/05/24 21:09	---	DK40408
Aroclor 1262	0.3 (0.1)	---	8082A	---	1	11/05/24 21:09	---	DK40408
Aroclor 1268	ND (0.1)	---	8082A	---	1	11/05/24 21:09	---	DK40408

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	71 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	75 %		30-150

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-11 S-1
 Date Sampled: 11/01/24 12:41
 Percent Solids: 41
 Initial Volume: 19g
 Final Volume: 1ml
 Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-02
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: JDN
 Prepared: 11/5/24 10:40

8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Total Petroleum Hydrocarbons (C9-C36)	275 (95.6)	---	8100M	---	1	11/07/24 20:48	---	DK40506
<hr/>								
		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				
<i>Surrogate: O-Terphenyl</i>		66 %		40-140				

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-11 S-1
 Date Sampled: 11/01/24 12:41
 Percent Solids: 41

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-02
 Sample Matrix: Soil
 Units: °C

Extraction Method: 1311

TCLP Extraction by 1311 - Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>IV / FV</u>	<u>Batch</u>
Temperature (Min C)	19.0 (N/A)	---	1311	---	1	JEB	11/08/24 13:00		DK40728
Temperature (Max C)	21.7 (N/A)	---	1311	---	1	JEB	11/08/24 13:00		DK40728
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)								

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-4 S-1
Date Sampled: 11/01/24 10:30
Percent Solids: 30

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-03
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	IV / FV	Batch
Antimony	ND (15.5)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Arsenic	ND (7.75)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Beryllium	3.10 (0.31)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Cadmium	ND (1.55)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Chromium	13.0 (3.10)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Copper	10.1 (7.75)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Lead	ND (15.5)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Mercury	0.253 (0.102)	---	7471B	---	1	AFV	11/04/24 18:54	0.65 40	DK40403
Nickel	8.16 (7.75)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Selenium	ND (15.5)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Silver	ND (1.55)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Thallium	ND (15.5)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402
Zinc	244 (7.75)	---	6010D	---	1	KJB	11/05/24 11:01	2.15 100	DK40402

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-4 S-1
Date Sampled: 11/01/24 10:30
Percent Solids: 30
Initial Volume: 7.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,1,1-Trichloroethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,1,2,2-Tetrachloroethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,1,2-Trichloroethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,1-Dichloroethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,1-Dichloroethene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,1-Dichloropropene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,2,3-Trichlorobenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,2,3-Trichloropropane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,2,4-Trichlorobenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,2,4-Trimethylbenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,2-Dibromo-3-Chloropropane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,2-Dibromoethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,2-Dichlorobenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,2-Dichloroethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,2-Dichloropropane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,3,5-Trimethylbenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,3-Dichlorobenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,3-Dichloropropane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,4-Dichlorobenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1,4-Dioxane	ND (0.228)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
1-Chlorohexane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
2,2-Dichloropropane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
2-Butanone	ND (0.114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
2-Chlorotoluene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
2-Hexanone	ND (0.114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
4-Chlorotoluene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-4 S-1
Date Sampled: 11/01/24 10:30
Percent Solids: 30
Initial Volume: 7.3g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Isopropyltoluene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
4-Methyl-2-Pentanone	ND (0.114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Acetone	0.421 (0.114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Benzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Bromobenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Bromochloromethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Bromodichloromethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Bromoform	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Bromomethane	ND (0.0228)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Carbon Disulfide	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Carbon Tetrachloride	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Chlorobenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Chloroethane	ND (0.0228)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Chloroform	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Chloromethane	ND (0.0228)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
cis-1,2-Dichloroethene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
cis-1,3-Dichloropropene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Dibromochloromethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Dibromomethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Dichlorodifluoromethane	ND (0.0228)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Diethyl Ether	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Di-isopropyl ether	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Ethyl tertiary-butyl ether	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Ethylbenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Hexachlorobutadiene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Isopropylbenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Methyl tert-Butyl Ether	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-4 S-1
 Date Sampled: 11/01/24 10:30
 Percent Solids: 30
 Initial Volume: 7.3g
 Final Volume: 10ml
 Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-03
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: MEK
 Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Methylene Chloride	ND (0.0571)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Naphthalene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
n-Butylbenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
n-Propylbenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
sec-Butylbenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Styrene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
tert-Butylbenzene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Tertiary-amyl methyl ether	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Tetrachloroethene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Tetrahydrofuran	ND (0.0457)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Toluene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
trans-1,2-Dichloroethene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
trans-1,3-Dichloropropene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Trichloroethene	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Trichlorofluoromethane	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Vinyl Acetate	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Vinyl Chloride	ND (0.0228)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Xylene O	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Xylene P,M	ND (0.0228)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517
Xylenes (Total)	ND (0.0114)	---	8260D Low	---	1	MEK	11/05/24 19:28	D4K0068	DK40517

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	111 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	67 %	S-	70-130
<i>Surrogate: Dibromofluoromethane</i>	107 %		70-130
<i>Surrogate: Toluene-d8</i>	130 %		70-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-4 S-1
Date Sampled: 11/01/24 10:30
Percent Solids: 30
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
1,1-Biphenyl	ND (0.085)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
1,2,4-Trichlorobenzene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
1,2-Dichlorobenzene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
1,3-Dichlorobenzene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
1,4-Dichlorobenzene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2,3,4,6-Tetrachlorophenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2,4,5-Trichlorophenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2,4,6-Trichlorophenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2,4-Dichlorophenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2,4-Dimethylphenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2,4-Dinitrophenol	ND (3.42)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2,4-Dinitrotoluene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2,6-Dinitrotoluene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2-Chloronaphthalene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2-Chlorophenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2-Methylnaphthalene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2-Methylphenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2-Nitroaniline	ND (1.71)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
2-Nitrophenol	ND (1.71)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
3,3'-Dichlorobenzidine	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
3+4-Methylphenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
3-Nitroaniline	ND (1.71)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
4,6-Dinitro-2-Methylphenol	ND (3.42)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
4-Bromophenyl-phenylether	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
4-Chloro-3-Methylphenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
4-Chloroaniline	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
4-Chloro-phenyl-phenyl ether	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-4 S-1
 Date Sampled: 11/01/24 10:30
 Percent Solids: 30
 Initial Volume: 19.5g
 Final Volume: 1ml
 Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-03
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: TJ
 Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Nitroaniline	ND (1.71)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
4-Nitrophenol	ND (3.42)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Acenaphthene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Acenaphthylene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Acetophenone	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Aniline	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Anthracene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Azobenzene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Benzo(a)anthracene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Benzo(a)pyrene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Benzo(b)fluoranthene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Benzo(g,h,i)perylene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Benzo(k)fluoranthene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Benzoic Acid	ND (8.55)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Benzyl Alcohol	ND (1.71)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
bis(2-Chloroethoxy)methane	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
bis(2-Chloroethyl)ether	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
bis(2-chloroisopropyl)Ether	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
bis(2-Ethylhexyl)phthalate	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Butylbenzylphthalate	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Carbazole	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Chrysene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Dibenzo(a,h)Anthracene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Dibenzofuran	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Diethylphthalate	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Dimethylphthalate	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Di-n-butylphthalate	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-4 S-1
Date Sampled: 11/01/24 10:30
Percent Solids: 30
Initial Volume: 19.5g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Di-n-octylphthalate	ND (1.71)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Fluoranthene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Fluorene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Hexachlorobenzene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Hexachlorobutadiene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Hexachlorocyclopentadiene	ND (1.71)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Hexachloroethane	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Indeno(1,2,3-cd)Pyrene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Isophorone	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Naphthalene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Nitrobenzene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
N-Nitrosodimethylamine	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
N-Nitroso-Di-n-Propylamine	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
N-nitrosodiphenylamine	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Pentachlorophenol	ND (3.42)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Phenanthrene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Phenol	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Pyrene	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452
Pyridine	ND (0.855)	---	8270E	---	1	TJ	11/05/24 23:28	D4K0078	DK40452

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	52 %		30-130
<i>Surrogate: 2,4,6-Tribromophenol</i>	71 %		30-130
<i>Surrogate: 2-Chlorophenol-d4</i>	60 %		30-130
<i>Surrogate: 2-Fluorobiphenyl</i>	64 %		30-130
<i>Surrogate: 2-Fluorophenol</i>	51 %		30-130
<i>Surrogate: Nitrobenzene-d5</i>	56 %		30-130
<i>Surrogate: Phenol-d6</i>	51 %		30-130
<i>Surrogate: p-Terphenyl-d14</i>	79 %		30-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-4 S-1
Date Sampled: 11/01/24 10:30
Percent Solids: 30
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/4/24 17:03

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.2)	---	8082A	---	1	11/05/24 21:29	---	DK40408
Aroclor 1221	ND (0.2)	---	8082A	---	1	11/05/24 21:29	---	DK40408
Aroclor 1232	ND (0.2)	---	8082A	---	1	11/05/24 21:29	---	DK40408
Aroclor 1242	ND (0.2)	---	8082A	---	1	11/05/24 21:29	---	DK40408
Aroclor 1248	ND (0.2)	---	8082A	---	1	11/05/24 21:29	---	DK40408
Aroclor 1254	ND (0.2)	---	8082A	---	1	11/05/24 21:29	---	DK40408
Aroclor 1260	ND (0.2)	---	8082A	---	1	11/05/24 21:29	---	DK40408
Aroclor 1262	ND (0.2)	---	8082A	---	1	11/05/24 21:29	---	DK40408
Aroclor 1268	ND (0.2)	---	8082A	---	1	11/05/24 21:29	---	DK40408

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	69 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	75 %		30-150

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-4 S-1
 Date Sampled: 11/01/24 10:30
 Percent Solids: 30
 Initial Volume: 19.1g
 Final Volume: 1ml
 Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-03
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: JDN
 Prepared: 11/5/24 10:40

8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Total Petroleum Hydrocarbons (C9-C36)	331 (131)	---	8100M	---	1	11/07/24 21:21	---	DK40506

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: O-Terphenyl</i>	41 %		40-140

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-10 S-1
Date Sampled: 11/01/24 13:57
Percent Solids: 42

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	IV / FV	Batch
Antimony	ND (10.1)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Arsenic	ND (5.05)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Beryllium	4.03 (0.20)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Cadmium	ND (1.01)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Chromium	8.41 (2.02)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Copper	5.09 (5.05)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Lead	11.1 (10.1)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Mercury	0.160 (0.069)	---	7471B	---	1	AFV	11/04/24 19:01	0.69 40	DK40403
Nickel	ND (5.05)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Selenium	ND (10.1)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Silver	ND (1.01)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Thallium	ND (10.1)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402
Zinc	ND (5.05)	---	6010D	---	1	KJB	11/05/24 11:03	2.37 100	DK40402

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-10 S-1
Date Sampled: 11/01/24 13:57
Percent Solids: 42
Initial Volume: 7.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,1,1-Trichloroethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,1,2,2-Tetrachloroethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,1,2-Trichloroethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,1-Dichloroethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,1-Dichloroethene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,1-Dichloropropene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,2,3-Trichlorobenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,2,3-Trichloropropane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,2,4-Trichlorobenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,2,4-Trimethylbenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,2-Dibromo-3-Chloropropane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,2-Dibromoethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,2-Dichlorobenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,2-Dichloroethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,2-Dichloropropane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,3,5-Trimethylbenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,3-Dichlorobenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,3-Dichloropropane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,4-Dichlorobenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1,4-Dioxane	ND (0.154)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
1-Chlorohexane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
2,2-Dichloropropane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
2-Butanone	ND (0.0768)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
2-Chlorotoluene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
2-Hexanone	ND (0.0768)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
4-Chlorotoluene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-10 S-1
Date Sampled: 11/01/24 13:57
Percent Solids: 42
Initial Volume: 7.8g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Isopropyltoluene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
4-Methyl-2-Pentanone	ND (0.0768)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Acetone	ND (0.0768)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Benzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Bromobenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Bromochloromethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Bromodichloromethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Bromoform	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Bromomethane	ND (0.0154)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Carbon Disulfide	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Carbon Tetrachloride	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Chlorobenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Chloroethane	ND (0.0154)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Chloroform	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Chloromethane	ND (0.0154)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
cis-1,2-Dichloroethene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
cis-1,3-Dichloropropene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Dibromochloromethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Dibromomethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Dichlorodifluoromethane	ND (0.0154)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Diethyl Ether	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Di-isopropyl ether	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Ethyl tertiary-butyl ether	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Ethylbenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Hexachlorobutadiene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Isopropylbenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Methyl tert-Butyl Ether	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-10 S-1
 Date Sampled: 11/01/24 13:57
 Percent Solids: 42
 Initial Volume: 7.8g
 Final Volume: 10ml
 Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-04
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: MEK
 Prepared: 11/5/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Methylene Chloride	ND (0.0384)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Naphthalene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
n-Butylbenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
n-Propylbenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
sec-Butylbenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Styrene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
tert-Butylbenzene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Tertiary-amyl methyl ether	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Tetrachloroethene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Tetrahydrofuran	ND (0.0307)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Toluene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
trans-1,2-Dichloroethene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
trans-1,3-Dichloropropene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Trichloroethene	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Trichlorofluoromethane	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Vinyl Acetate	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Vinyl Chloride	ND (0.0154)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Xylene O	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Xylene P,M	ND (0.0154)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517
Xylenes (Total)	ND (0.0077)	---	8260D Low	---	1	MEK	11/05/24 19:54	D4K0068	DK40517

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	113 %		70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	78 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	107 %		70-130
<i>Surrogate: Toluene-d8</i>	106 %		70-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-10 S-1
Date Sampled: 11/01/24 13:57
Percent Solids: 42
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1-Biphenyl	ND (0.060)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
1,2,4-Trichlorobenzene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
1,2-Dichlorobenzene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
1,3-Dichlorobenzene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
1,4-Dichlorobenzene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2,3,4,6-Tetrachlorophenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2,4,5-Trichlorophenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2,4,6-Trichlorophenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2,4-Dichlorophenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2,4-Dimethylphenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2,4-Dinitrophenol	ND (2.42)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2,4-Dinitrotoluene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2,6-Dinitrotoluene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2-Chloronaphthalene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2-Chlorophenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2-Methylnaphthalene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2-Methylphenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2-Nitroaniline	ND (1.21)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
2-Nitrophenol	ND (1.21)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
3,3'-Dichlorobenzidine	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
3+4-Methylphenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
3-Nitroaniline	ND (1.21)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
4,6-Dinitro-2-Methylphenol	ND (2.42)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
4-Bromophenyl-phenylether	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
4-Chloro-3-Methylphenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
4-Chloroaniline	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
4-Chloro-phenyl-phenyl ether	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-10 S-1
Date Sampled: 11/01/24 13:57
Percent Solids: 42
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Nitroaniline	ND (1.21)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
4-Nitrophenol	ND (2.42)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Acenaphthene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Acenaphthylene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Acetophenone	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Aniline	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Anthracene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Azobenzene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Benzo(a)anthracene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Benzo(a)pyrene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Benzo(b)fluoranthene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Benzo(g,h,i)perylene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Benzo(k)fluoranthene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Benzoic Acid	ND (6.05)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Benzyl Alcohol	ND (1.21)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
bis(2-Chloroethoxy)methane	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
bis(2-Chloroethyl)ether	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
bis(2-chloroisopropyl)Ether	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
bis(2-Ethylhexyl)phthalate	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Butylbenzylphthalate	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Carbazole	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Chrysene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Dibenzo(a,h)Anthracene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Dibenzofuran	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Diethylphthalate	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Dimethylphthalate	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Di-n-butylphthalate	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-10 S-1
Date Sampled: 11/01/24 13:57
Percent Solids: 42
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Di-n-octylphthalate	ND (1.21)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Fluoranthene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Fluorene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Hexachlorobenzene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Hexachlorobutadiene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Hexachlorocyclopentadiene	ND (1.21)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Hexachloroethane	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Indeno(1,2,3-cd)Pyrene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Isophorone	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Naphthalene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Nitrobenzene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
N-Nitrosodimethylamine	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
N-Nitroso-Di-n-Propylamine	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
N-nitrosodiphenylamine	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Pentachlorophenol	ND (2.42)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Phenanthrene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Phenol	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Pyrene	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452
Pyridine	ND (0.605)	---	8270E	---	1	TJ	11/05/24 23:58	D4K0078	DK40452

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	83 %		30-130
<i>Surrogate: 2,4,6-Tribromophenol</i>	112 %		30-130
<i>Surrogate: 2-Chlorophenol-d4</i>	92 %		30-130
<i>Surrogate: 2-Fluorobiphenyl</i>	92 %		30-130
<i>Surrogate: 2-Fluorophenol</i>	84 %		30-130
<i>Surrogate: Nitrobenzene-d5</i>	84 %		30-130
<i>Surrogate: Phenol-d6</i>	83 %		30-130
<i>Surrogate: p-Terphenyl-d14</i>	107 %		30-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-10 S-1
Date Sampled: 11/01/24 13:57
Percent Solids: 42
Initial Volume: 20.2g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/4/24 17:03

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.1)	---	8082A	---	1	11/05/24 21:49	---	DK40408
Aroclor 1221	ND (0.1)	---	8082A	---	1	11/05/24 21:49	---	DK40408
Aroclor 1232	ND (0.1)	---	8082A	---	1	11/05/24 21:49	---	DK40408
Aroclor 1242	ND (0.1)	---	8082A	---	1	11/05/24 21:49	---	DK40408
Aroclor 1248	ND (0.1)	---	8082A	---	1	11/05/24 21:49	---	DK40408
Aroclor 1254	ND (0.1)	---	8082A	---	1	11/05/24 21:49	---	DK40408
Aroclor 1260	ND (0.1)	---	8082A	---	1	11/05/24 21:49	---	DK40408
Aroclor 1262	ND (0.1)	---	8082A	---	1	11/05/24 21:49	---	DK40408
Aroclor 1268	ND (0.1)	---	8082A	---	1	11/05/24 21:49	---	DK40408

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	68 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	64 %		30-150

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-10 S-1
 Date Sampled: 11/01/24 13:57
 Percent Solids: 42
 Initial Volume: 19.2g
 Final Volume: 1ml
 Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-04
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: JDN
 Prepared: 11/5/24 10:40

8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Total Petroleum Hydrocarbons (C9-C36)	167 (93.5)	---	8100M	---	1	11/07/24 21:53	---	DK40506
<hr/>								
		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				
<i>Surrogate: O-Terphenyl</i>		74 %		40-140				

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-9 S-1
Date Sampled: 11/01/24 14:07
Percent Solids: 41

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-05
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	IV / FV	Batch
Antimony	ND (10.6)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Arsenic	6.94 (5.28)	---	6010D	---	1	KJB	11/05/24 15:02	2.31 100	DK40402
Beryllium	1.33 (0.21)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Cadmium	ND (1.06)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Chromium	21.8 (2.11)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Copper	61.4 (5.28)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Lead	179 (10.6)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Mercury	0.684 (0.073)	---	7471B	---	1	AFV	11/04/24 19:03	0.66 40	DK40403
Nickel	19.0 (5.28)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Selenium	ND (10.6)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Silver	ND (1.06)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Thallium	ND (10.6)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402
Zinc	122 (5.28)	---	6010D	---	1	KJB	11/05/24 11:05	2.31 100	DK40402



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-9 S-1
Date Sampled: 11/01/24 14:07
Percent Solids: 41

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-05
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>IV / FV</u>	<u>Batch</u>
Lead	ND (0.05)	---	1311/6010D	5	1	KJB	11/11/24 13:51	50 50	DK40851

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-9 S-1
Date Sampled: 11/01/24 14:07
Percent Solids: 41
Initial Volume: 7.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/6/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,1,1-Trichloroethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,1,2,2-Tetrachloroethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,1,2-Trichloroethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,1-Dichloroethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,1-Dichloroethene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,1-Dichloropropene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,2,3-Trichlorobenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,2,3-Trichloropropane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,2,4-Trichlorobenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,2,4-Trimethylbenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,2-Dibromo-3-Chloropropane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,2-Dibromoethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,2-Dichlorobenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,2-Dichloroethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,2-Dichloropropane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,3,5-Trimethylbenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,3-Dichlorobenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,3-Dichloropropane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,4-Dichlorobenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1,4-Dioxane	ND (0.161)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
1-Chlorohexane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
2,2-Dichloropropane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
2-Butanone	ND (0.0803)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
2-Chlorotoluene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
2-Hexanone	ND (0.0803)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
4-Chlorotoluene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-9 S-1
Date Sampled: 11/01/24 14:07
Percent Solids: 41
Initial Volume: 7.6g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/6/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Isopropyltoluene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
4-Methyl-2-Pentanone	ND (0.0803)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Acetone	0.229 (0.0803)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Benzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Bromobenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Bromochloromethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Bromodichloromethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Bromoform	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Bromomethane	ND (0.0161)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Carbon Disulfide	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Carbon Tetrachloride	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Chlorobenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Chloroethane	ND (0.0161)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Chloroform	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Chloromethane	ND (0.0161)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
cis-1,2-Dichloroethene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
cis-1,3-Dichloropropene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Dibromochloromethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Dibromomethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Dichlorodifluoromethane	ND (0.0161)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Diethyl Ether	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Di-isopropyl ether	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Ethyl tertiary-butyl ether	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Ethylbenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Hexachlorobutadiene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Isopropylbenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Methyl tert-Butyl Ether	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-9 S-1
 Date Sampled: 11/01/24 14:07
 Percent Solids: 41
 Initial Volume: 7.6g
 Final Volume: 10ml
 Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-05
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: MEK
 Prepared: 11/6/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Methylene Chloride	ND (0.0401)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Naphthalene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
n-Butylbenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
n-Propylbenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
sec-Butylbenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Styrene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
tert-Butylbenzene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Tertiary-amyl methyl ether	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Tetrachloroethene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Tetrahydrofuran	ND (0.0321)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Toluene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
trans-1,2-Dichloroethene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
trans-1,3-Dichloropropene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Trichloroethene	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Trichlorofluoromethane	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Vinyl Acetate	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Vinyl Chloride	ND (0.0161)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Xylene O	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Xylene P,M	ND (0.0161)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615
Xylenes (Total)	ND (0.0080)	---	8260D Low	---	1	MEK	11/06/24 15:26	D4K0107	DK40615

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>142 %</i>	<i>SC</i>	<i>70-130</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>81 %</i>		<i>70-130</i>
<i>Surrogate: Dibromofluoromethane</i>	<i>124 %</i>		<i>70-130</i>
<i>Surrogate: Toluene-d8</i>	<i>100 %</i>		<i>70-130</i>

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-9 S-1
Date Sampled: 11/01/24 14:07
Percent Solids: 41
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1-Biphenyl	ND (0.062)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
1,2,4-Trichlorobenzene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
1,2-Dichlorobenzene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
1,3-Dichlorobenzene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
1,4-Dichlorobenzene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2,3,4,6-Tetrachlorophenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2,4,5-Trichlorophenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2,4,6-Trichlorophenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2,4-Dichlorophenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2,4-Dimethylphenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2,4-Dinitrophenol	ND (2.46)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2,4-Dinitrotoluene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2,6-Dinitrotoluene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2-Chloronaphthalene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2-Chlorophenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2-Methylnaphthalene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2-Methylphenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2-Nitroaniline	ND (1.23)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
2-Nitrophenol	ND (1.23)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
3,3'-Dichlorobenzidine	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
3+4-Methylphenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
3-Nitroaniline	ND (1.23)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
4,6-Dinitro-2-Methylphenol	ND (2.46)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
4-Bromophenyl-phenylether	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
4-Chloro-3-Methylphenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
4-Chloroaniline	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
4-Chloro-phenyl-phenyl ether	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-9 S-1
Date Sampled: 11/01/24 14:07
Percent Solids: 41
Initial Volume: 19.8g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Nitroaniline	ND (1.23)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
4-Nitrophenol	ND (2.46)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Acenaphthene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Acenaphthylene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Acetophenone	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Aniline	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Anthracene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Azobenzene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Benzo(a)anthracene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Benzo(a)pyrene	0.670 (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Benzo(b)fluoranthene	0.939 (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Benzo(g,h,i)perylene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Benzo(k)fluoranthene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Benzoic Acid	ND (6.16)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Benzyl Alcohol	ND (1.23)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
bis(2-Chloroethoxy)methane	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
bis(2-Chloroethyl)ether	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
bis(2-chloroisopropyl)Ether	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
bis(2-Ethylhexyl)phthalate	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Butylbenzylphthalate	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Carbazole	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Chrysene	0.764 (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Dibenzo(a,h)Anthracene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Dibenzofuran	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Diethylphthalate	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Dimethylphthalate	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Di-n-butylphthalate	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-9 S-1
 Date Sampled: 11/01/24 14:07
 Percent Solids: 41
 Initial Volume: 19.8g
 Final Volume: 1ml
 Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-05
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: TJ
 Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Di-n-octylphthalate	ND (1.23)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Fluoranthene	1.60 (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Fluorene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Hexachlorobenzene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Hexachlorobutadiene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Hexachlorocyclopentadiene	ND (1.23)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Hexachloroethane	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Indeno(1,2,3-cd)Pyrene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Isophorone	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Naphthalene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Nitrobenzene	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
N-Nitrosodimethylamine	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
N-Nitroso-Di-n-Propylamine	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
N-nitrosodiphenylamine	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Pentachlorophenol	ND (2.46)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Phenanthrene	0.864 (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Phenol	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Pyrene	1.41 (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452
Pyridine	ND (0.616)	---	8270E	---	1	TJ	11/06/24 0:29	D4K0078	DK40452

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	81 %		30-130
<i>Surrogate: 2,4,6-Tribromophenol</i>	113 %		30-130
<i>Surrogate: 2-Chlorophenol-d4</i>	92 %		30-130
<i>Surrogate: 2-Fluorobiphenyl</i>	86 %		30-130
<i>Surrogate: 2-Fluorophenol</i>	85 %		30-130
<i>Surrogate: Nitrobenzene-d5</i>	83 %		30-130
<i>Surrogate: Phenol-d6</i>	86 %		30-130
<i>Surrogate: p-Terphenyl-d14</i>	107 %		30-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-9 S-1
Date Sampled: 11/01/24 14:07
Percent Solids: 41
Initial Volume: 20.3g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/4/24 17:03

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.1)	---	8082A	---	1	11/05/24 22:08	---	DK40408
Aroclor 1221	ND (0.1)	---	8082A	---	1	11/05/24 22:08	---	DK40408
Aroclor 1232	ND (0.1)	---	8082A	---	1	11/05/24 22:08	---	DK40408
Aroclor 1242	ND (0.1)	---	8082A	---	1	11/05/24 22:08	---	DK40408
Aroclor 1248	ND (0.1)	---	8082A	---	1	11/05/24 22:08	---	DK40408
Aroclor 1254	ND (0.1)	---	8082A	---	1	11/05/24 22:08	---	DK40408
Aroclor 1260	ND (0.1)	---	8082A	---	1	11/05/24 22:08	---	DK40408
Aroclor 1262	0.1 (0.1)	---	8082A	---	1	11/05/24 22:08	---	DK40408
Aroclor 1268	ND (0.1)	---	8082A	---	1	11/05/24 22:08	---	DK40408

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	64 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	61 %		30-150

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-9 S-1
 Date Sampled: 11/01/24 14:07
 Percent Solids: 41
 Initial Volume: 19.1g
 Final Volume: 1ml
 Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-05
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: JDN
 Prepared: 11/5/24 10:40

8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Total Petroleum Hydrocarbons (C9-C36)	347 (95.8)	---	8100M	---	1	11/07/24 22:26	---	DK40506

<i>Surrogate: O-Terphenyl</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
	73 %		40-140

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-9 S-1
 Date Sampled: 11/01/24 14:07
 Percent Solids: 41

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-05
 Sample Matrix: Soil
 Units: °C

Extraction Method: 1311

TCLP Extraction by 1311 - Metals

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>IV / FV</u>	<u>Batch</u>
Temperature (Min C)	19.0 (N/A)	---	1311	---	1	JEB	11/08/24 13:00		DK40728
Temperature (Max C)	21.7 (N/A)	---	1311	---	1	JEB	11/08/24 13:00		DK40728
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)								

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-14 S-1
Date Sampled: 11/01/24 09:46
Percent Solids: 38

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-06
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	IV / FV	Batch
Antimony	ND (4.33)	---	6020B	---	20	BJV	11/06/24 11:44	2.41 100	DK40402
Arsenic	EL ND (27.0)	---	6010D	---	5	KJB	11/05/24 15:04	2.41 100	DK40402
Beryllium	13.6 (1.08)	---	6010D	---	5	KJB	11/05/24 15:04	2.41 100	DK40402
Cadmium	EL ND (5.41)	---	6010D	---	5	KJB	11/05/24 15:04	2.41 100	DK40402
Chromium	EL ND (10.8)	---	6010D	---	5	KJB	11/05/24 15:04	2.41 100	DK40402
Copper	EL ND (27.0)	---	6010D	---	5	KJB	11/05/24 15:04	2.41 100	DK40402
Lead	EL ND (54.1)	---	6010D	---	5	KJB	11/05/24 15:04	2.41 100	DK40402
Mercury	0.151 (0.086)	---	7471B	---	1	AFV	11/04/24 19:05	0.6 40	DK40403
Nickel	EL ND (27.0)	---	6010D	---	5	KJB	11/05/24 15:04	2.41 100	DK40402
Selenium	7.96 (4.33)	---	6020B	---	20	BJV	11/06/24 11:44	2.41 100	DK40402
Silver	EL ND (10.8)	---	6010D	---	10	KJB	11/06/24 10:30	2.41 100	DK40402
Thallium	ND (4.33)	---	6020B	---	20	BJV	11/06/24 11:44	2.41 100	DK40402
Zinc	ND (27.0)	---	6010D	---	5	KJB	11/05/24 15:04	2.41 100	DK40402

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-14 S-1
Date Sampled: 11/01/24 09:46
Percent Solids: 38
Initial Volume: 6.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/7/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1,1,2-Tetrachloroethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,1,1-Trichloroethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,1,2,2-Tetrachloroethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,1,2-Trichloroethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,1-Dichloroethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,1-Dichloroethene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,1-Dichloropropene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,2,3-Trichlorobenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,2,3-Trichloropropane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,2,4-Trichlorobenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,2,4-Trimethylbenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,2-Dibromo-3-Chloropropane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,2-Dibromoethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,2-Dichlorobenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,2-Dichloroethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,2-Dichloropropane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,3,5-Trimethylbenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,3-Dichlorobenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,3-Dichloropropane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,4-Dichlorobenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1,4-Dioxane	ND (0.204)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
1-Chlorohexane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
2,2-Dichloropropane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
2-Butanone	ND (0.102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
2-Chlorotoluene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
2-Hexanone	ND (0.102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
4-Chlorotoluene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-14 S-1
Date Sampled: 11/01/24 09:46
Percent Solids: 38
Initial Volume: 6.4g
Final Volume: 10ml
Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK
Prepared: 11/7/24 8:00

Volatile Organics Low Level

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Isopropyltoluene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
4-Methyl-2-Pentanone	ND (0.102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Acetone	0.117 (0.102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Benzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Bromobenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Bromochloromethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Bromodichloromethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Bromoform	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Bromomethane	ND (0.0204)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Carbon Disulfide	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Carbon Tetrachloride	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Chlorobenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Chloroethane	ND (0.0204)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Chloroform	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Chloromethane	ND (0.0204)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
cis-1,2-Dichloroethene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
cis-1,3-Dichloropropene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Dibromochloromethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Dibromomethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Dichlorodifluoromethane	ND (0.0204)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Diethyl Ether	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Di-isopropyl ether	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Ethyl tertiary-butyl ether	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Ethylbenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Hexachlorobutadiene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Isopropylbenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Methyl tert-Butyl Ether	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-14 S-1
 Date Sampled: 11/01/24 09:46
 Percent Solids: 38
 Initial Volume: 6.4g
 Final Volume: 10ml
 Extraction Method: 5035

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-06
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: MEK
 Prepared: 11/7/24 8:00

Volatile Organics Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Sequence	Batch
Methylene Chloride	ND (0.0509)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Naphthalene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
n-Butylbenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
n-Propylbenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
sec-Butylbenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Styrene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
tert-Butylbenzene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Tertiary-amyl methyl ether	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Tetrachloroethene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Tetrahydrofuran	ND (0.0407)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Toluene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
trans-1,2-Dichloroethene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
trans-1,3-Dichloropropene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Trichloroethene	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Trichlorofluoromethane	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Vinyl Acetate	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Vinyl Chloride	ND (0.0204)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Xylene O	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Xylene P,M	ND (0.0204)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721
Xylenes (Total)	ND (0.0102)	---	8260D Low	---	1	MEK	11/07/24 12:53	D4K0135	DK40721

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	149 %	SC	70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	77 %		70-130
<i>Surrogate: Dibromofluoromethane</i>	131 %	SC	70-130
<i>Surrogate: Toluene-d8</i>	105 %		70-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-14 S-1
Date Sampled: 11/01/24 09:46
Percent Solids: 38
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
1,1-Biphenyl	ND (0.068)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
1,2,4-Trichlorobenzene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
1,2-Dichlorobenzene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
1,3-Dichlorobenzene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
1,4-Dichlorobenzene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2,3,4,6-Tetrachlorophenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2,4,5-Trichlorophenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2,4,6-Trichlorophenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2,4-Dichlorophenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2,4-Dimethylphenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2,4-Dinitrophenol	ND (2.70)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2,4-Dinitrotoluene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2,6-Dinitrotoluene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2-Chloronaphthalene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2-Chlorophenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2-Methylnaphthalene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2-Methylphenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2-Nitroaniline	ND (1.35)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
2-Nitrophenol	ND (1.35)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
3,3'-Dichlorobenzidine	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
3+4-Methylphenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
3-Nitroaniline	ND (1.35)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
4,6-Dinitro-2-Methylphenol	ND (2.70)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
4-Bromophenyl-phenylether	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
4-Chloro-3-Methylphenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
4-Chloroaniline	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
4-Chloro-phenyl-phenyl ether	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-14 S-1
Date Sampled: 11/01/24 09:46
Percent Solids: 38
Initial Volume: 19.3g
Final Volume: 1ml
Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
4-Nitroaniline	ND (1.35)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
4-Nitrophenol	ND (2.70)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Acenaphthene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Acenaphthylene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Acetophenone	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Aniline	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Anthracene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Azobenzene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Benzo(a)anthracene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Benzo(a)pyrene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Benzo(b)fluoranthene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Benzo(g,h,i)perylene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Benzo(k)fluoranthene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Benzoic Acid	ND (6.75)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Benzyl Alcohol	ND (1.35)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
bis(2-Chloroethoxy)methane	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
bis(2-Chloroethyl)ether	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
bis(2-chloroisopropyl)Ether	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
bis(2-Ethylhexyl)phthalate	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Butylbenzylphthalate	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Carbazole	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Chrysene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Dibenzo(a,h)Anthracene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Dibenzofuran	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Diethylphthalate	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Dimethylphthalate	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Di-n-butylphthalate	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-14 S-1
 Date Sampled: 11/01/24 09:46
 Percent Solids: 38
 Initial Volume: 19.3g
 Final Volume: 1ml
 Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-06
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: TJ
 Prepared: 11/4/24 18:20

Semi-Volatile Organic Compounds

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Di-n-octylphthalate	ND (1.35)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Fluoranthene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Fluorene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Hexachlorobenzene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Hexachlorobutadiene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Hexachlorocyclopentadiene	ND (1.35)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Hexachloroethane	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Indeno(1,2,3-cd)Pyrene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Isophorone	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Naphthalene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Nitrobenzene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
N-Nitrosodimethylamine	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
N-Nitroso-Di-n-Propylamine	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
N-nitrosodiphenylamine	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Pentachlorophenol	ND (2.70)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Phenanthrene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Phenol	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Pyrene	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452
Pyridine	ND (0.675)	---	8270E	---	1	TJ	11/06/24 0:59	D4K0078	DK40452

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	73 %		30-130
<i>Surrogate: 2,4,6-Tribromophenol</i>	75 %		30-130
<i>Surrogate: 2-Chlorophenol-d4</i>	78 %		30-130
<i>Surrogate: 2-Fluorobiphenyl</i>	69 %		30-130
<i>Surrogate: 2-Fluorophenol</i>	74 %		30-130
<i>Surrogate: Nitrobenzene-d5</i>	71 %		30-130
<i>Surrogate: Phenol-d6</i>	71 %		30-130
<i>Surrogate: p-Terphenyl-d14</i>	62 %		30-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School
Client Sample ID: TP-14 S-1
Date Sampled: 11/01/24 09:46
Percent Solids: 38
Initial Volume: 19.5g
Final Volume: 10ml
Extraction Method: 3540C

ESS Laboratory Work Order: 24K0082
ESS Laboratory Sample ID: 24K0082-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 11/4/24 17:03

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.1)	---	8082A	---	1	11/05/24 22:28	---	DK40408
Aroclor 1221	ND (0.1)	---	8082A	---	1	11/05/24 22:28	---	DK40408
Aroclor 1232	ND (0.1)	---	8082A	---	1	11/05/24 22:28	---	DK40408
Aroclor 1242	ND (0.1)	---	8082A	---	1	11/05/24 22:28	---	DK40408
Aroclor 1248	ND (0.1)	---	8082A	---	1	11/05/24 22:28	---	DK40408
Aroclor 1254	ND (0.1)	---	8082A	---	1	11/05/24 22:28	---	DK40408
Aroclor 1260	ND (0.1)	---	8082A	---	1	11/05/24 22:28	---	DK40408
Aroclor 1262	ND (0.1)	---	8082A	---	1	11/05/24 22:28	---	DK40408
Aroclor 1268	ND (0.1)	---	8082A	---	1	11/05/24 22:28	---	DK40408

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	78 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	76 %		30-150

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School
 Client Sample ID: TP-14 S-1
 Date Sampled: 11/01/24 09:46
 Percent Solids: 38
 Initial Volume: 19.4g
 Final Volume: 1ml
 Extraction Method: 3546

ESS Laboratory Work Order: 24K0082
 ESS Laboratory Sample ID: 24K0082-06
 Sample Matrix: Soil
 Units: mg/kg dry
 Analyst: JDN
 Prepared: 11/5/24 10:40

8100M Total Petroleum Hydrocarbons

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Total Petroleum Hydrocarbons (C9-C36)	154 (101)	---	8100M	---	1	11/07/24 22:58	---	DK40506
<hr/>								
		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				
<i>Surrogate: O-Terphenyl</i>		69 %		40-140				

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Total Metals

Batch DK40402 - 3050B

Blank

Antimony	ND	4.22	mg/kg wet
Arsenic	ND	2.11	mg/kg wet
Beryllium	ND	0.08	mg/kg wet
Cadmium	ND	0.42	mg/kg wet
Chromium	ND	0.84	mg/kg wet
Copper	ND	2.11	mg/kg wet
Lead	ND	4.22	mg/kg wet
Nickel	ND	2.11	mg/kg wet
Selenium	ND	4.22	mg/kg wet
Silver	ND	0.42	mg/kg wet
Thallium	ND	4.22	mg/kg wet
Zinc	ND	2.11	mg/kg wet

Blank

Antimony	ND	2.00	mg/kg wet
Selenium	ND	2.00	mg/kg wet
Thallium	ND	2.00	mg/kg wet

LCS

Antimony	78.2	15.9	mg/kg wet	245.0	32	10-110
Arsenic	126	7.94	mg/kg wet	280.0	45	32-110
Beryllium	48.5	0.32	mg/kg wet	105.0	46	32-110
Cadmium	90.9	1.59	mg/kg wet	210.0	43	33-110
Chromium	146	3.17	mg/kg wet	225.0	65	50-110
Copper	134	7.94	mg/kg wet	290.0	46	33-110
Lead	157	15.9	mg/kg wet	350.0	45	31-110
Nickel	61.6	7.94	mg/kg wet	95.00	65	48-111
Selenium	144	15.9	mg/kg wet	320.0	45	29-110
Silver	41.5	1.59	mg/kg wet	95.00	44	30-111
Thallium	111	15.9	mg/kg wet	250.0	44	28-110
Zinc	222	7.94	mg/kg wet	500.0	44	30-110

LCS

Antimony	78.7	31.7	mg/kg wet	245.0	32	10-110
Selenium	155	31.7	mg/kg wet	320.0	48	29-110
Thallium	87.4	31.7	mg/kg wet	250.0	35	28-110

LCS Dup

Antimony	79.6	15.6	mg/kg wet	245.0	33	10-110	2	30
Arsenic	126	7.81	mg/kg wet	280.0	45	32-110	0.005	30
Beryllium	48.0	0.31	mg/kg wet	105.0	46	32-110	1	30
Cadmium	89.2	1.56	mg/kg wet	210.0	42	33-110	2	30
Chromium	150	3.12	mg/kg wet	225.0	67	50-110	3	30
Copper	133	7.81	mg/kg wet	290.0	46	33-110	1	30
Lead	156	15.6	mg/kg wet	350.0	45	31-110	0.5	30
Nickel	62.9	7.81	mg/kg wet	95.00	66	48-111	2	30

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Total Metals

Batch DK40402 - 3050B

Selenium	145	15.6	mg/kg wet	320.0		45	29-110	0.7	30	
Silver	41.3	1.56	mg/kg wet	95.00		44	30-111	0.4	30	
Thallium	108	15.6	mg/kg wet	250.0		43	28-110	2	30	
Zinc	219	7.81	mg/kg wet	500.0		44	30-110	1	30	

LCS Dup

Antimony	79.8	31.2	mg/kg wet	245.0		33	10-110	1	30	
Selenium	156	31.2	mg/kg wet	320.0		49	29-110	1	30	
Thallium	81.6	31.2	mg/kg wet	250.0		33	28-110	7	30	

Batch DK40403 - 7471B

Blank

Mercury	ND	0.032	mg/kg wet							
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LCS

Mercury	12.5	3.05	mg/kg wet	14.40		87	80-120			
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LCS Dup

Mercury	13.2	3.14	mg/kg wet	14.40		92	80-120	5	30	
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1311 TCLP Metals

Batch DK40851 - 3005A_TCLP

Blank

Lead	ND	0.05	mg/L							
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LCS

Lead	0.46	0.05	mg/L	0.5000		92	80-120			
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LCS Dup

Lead	0.46	0.05	mg/L	0.5000		92	80-120	0.4	20	
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Volatile Organics Low Level

Batch DK40517 - 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							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40517 - 5035

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
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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40517 - 5035

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	0.0200	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							

Surrogate: 1,2-Dichloroethane-d4	0.0644		mg/kg wet	0.05000		129	70-130
Surrogate: 4-Bromofluorobenzene	0.0466		mg/kg wet	0.05000		93	70-130
Surrogate: Dibromofluoromethane	0.0593		mg/kg wet	0.05000		119	70-130
Surrogate: Toluene-d8	0.0493		mg/kg wet	0.05000		99	70-130

LCS

1,1,1,2-Tetrachloroethane	0.0540	0.0050	mg/kg wet	0.05000		108	70-130
1,1,1-Trichloroethane	0.0578	0.0050	mg/kg wet	0.05000		116	70-130
1,1,2,2-Tetrachloroethane	0.0569	0.0050	mg/kg wet	0.05000		114	40-160
1,1,2-Trichloroethane	0.0551	0.0050	mg/kg wet	0.05000		110	70-130
1,1-Dichloroethane	0.0580	0.0050	mg/kg wet	0.05000		116	70-130
1,1-Dichloroethene	0.0625	0.0050	mg/kg wet	0.05000		125	70-130
1,1-Dichloropropene	0.0583	0.0050	mg/kg wet	0.05000		117	70-130
1,2,3-Trichlorobenzene	0.0619	0.0050	mg/kg wet	0.05000		124	70-130
1,2,3-Trichloropropane	0.0528	0.0050	mg/kg wet	0.05000		106	70-130
1,2,4-Trichlorobenzene	0.0539	0.0050	mg/kg wet	0.05000		108	70-130
1,2,4-Trimethylbenzene	0.0634	0.0050	mg/kg wet	0.05000		127	70-130
1,2-Dibromo-3-Chloropropane	0.0538	0.0050	mg/kg wet	0.05000		108	70-130
1,2-Dibromoethane	0.0519	0.0050	mg/kg wet	0.05000		104	70-130
1,2-Dichlorobenzene	0.0578	0.0050	mg/kg wet	0.05000		116	70-130
1,2-Dichloroethane	0.0541	0.0050	mg/kg wet	0.05000		108	70-130
1,2-Dichloropropane	0.0567	0.0050	mg/kg wet	0.05000		113	70-130
1,3,5-Trimethylbenzene	0.0635	0.0050	mg/kg wet	0.05000		127	70-130
1,3-Dichlorobenzene	0.0568	0.0050	mg/kg wet	0.05000		114	70-130
1,3-Dichloropropane	0.0525	0.0050	mg/kg wet	0.05000		105	70-130
1,4-Dichlorobenzene	0.0569	0.0050	mg/kg wet	0.05000		114	70-130
1,4-Dioxane	1.11	0.100	mg/kg wet	1.000		111	70-130
1-Chlorohexane	0.0496	0.0050	mg/kg wet	0.05000		99	70-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40517 - 5035

2,2-Dichloropropane	0.0592	0.0050	mg/kg wet	0.05000		118	70-130			
2-Butanone	0.312	0.0500	mg/kg wet	0.2500		125	40-160			
2-Chlorotoluene	0.0600	0.0050	mg/kg wet	0.05000		120	70-130			
2-Hexanone	0.242	0.0500	mg/kg wet	0.2500		97	40-160			
4-Chlorotoluene	0.0606	0.0050	mg/kg wet	0.05000		121	70-130			
4-Isopropyltoluene	0.0591	0.0050	mg/kg wet	0.05000		118	70-130			
4-Methyl-2-Pentanone	0.240	0.0500	mg/kg wet	0.2500		96	40-160			
Acetone	0.321	0.0500	mg/kg wet	0.2500		128	40-160			
Benzene	0.0569	0.0050	mg/kg wet	0.05000		114	70-130			
Bromobenzene	0.0583	0.0050	mg/kg wet	0.05000		117	70-130			
Bromochloromethane	0.0543	0.0050	mg/kg wet	0.05000		109	70-130			
Bromodichloromethane	0.0566	0.0050	mg/kg wet	0.05000		113	70-130			
Bromoform	0.0519	0.0050	mg/kg wet	0.05000		104	40-160			
Bromomethane	0.0610	0.0100	mg/kg wet	0.05000		122	40-160			
Carbon Disulfide	0.0607	0.0050	mg/kg wet	0.05000		121	70-130			
Carbon Tetrachloride	0.0579	0.0050	mg/kg wet	0.05000		116	70-130			
Chlorobenzene	0.0525	0.0050	mg/kg wet	0.05000		105	70-130			
Chloroethane	0.0571	0.0100	mg/kg wet	0.05000		114	40-160			
Chloroform	0.0551	0.0050	mg/kg wet	0.05000		110	70-130			
Chloromethane	0.0465	0.0100	mg/kg wet	0.05000		93	40-160			
cis-1,2-Dichloroethene	0.0573	0.0050	mg/kg wet	0.05000		115	70-130			
cis-1,3-Dichloropropene	0.0592	0.0050	mg/kg wet	0.05000		118	40-160			
Dibromochloromethane	0.0541	0.0050	mg/kg wet	0.05000		108	40-160			
Dibromomethane	0.0534	0.0050	mg/kg wet	0.05000		107	70-130			
Dichlorodifluoromethane	0.0401	0.0100	mg/kg wet	0.05000		80	40-160			
Diethyl Ether	0.0607	0.0050	mg/kg wet	0.05000		121	70-130			
Di-isopropyl ether	0.0613	0.0050	mg/kg wet	0.05000		123	70-130			
Ethyl tertiary-butyl ether	0.0610	0.0050	mg/kg wet	0.05000		122	70-130			
Ethylbenzene	0.0575	0.0050	mg/kg wet	0.05000		115	70-130			
Hexachlorobutadiene	0.0593	0.0050	mg/kg wet	0.05000		119	40-160			
Isopropylbenzene	0.0731	0.0050	mg/kg wet	0.05000		146	70-130			B+
Methyl tert-Butyl Ether	0.0586	0.0050	mg/kg wet	0.05000		117	70-130			
Methylene Chloride	0.0553	0.0250	mg/kg wet	0.05000		111	70-130			
Naphthalene	0.0581	0.0050	mg/kg wet	0.05000		116	40-160			
n-Butylbenzene	0.0643	0.0050	mg/kg wet	0.05000		129	70-130			
n-Propylbenzene	0.0637	0.0050	mg/kg wet	0.05000		127	70-130			
sec-Butylbenzene	0.0589	0.0050	mg/kg wet	0.05000		118	70-130			
Styrene	0.0507	0.0050	mg/kg wet	0.05000		101	40-160			
tert-Butylbenzene	0.0641	0.0050	mg/kg wet	0.05000		128	70-130			
Tertiary-amyl methyl ether	0.0518	0.0050	mg/kg wet	0.05000		104	70-130			
Tetrachloroethene	0.0486	0.0050	mg/kg wet	0.05000		97	70-130			
Tetrahydrofuran	0.0492	0.0200	mg/kg wet	0.05000		98	70-130			
Toluene	0.0574	0.0050	mg/kg wet	0.05000		115	70-130			
trans-1,2-Dichloroethene	0.0597	0.0050	mg/kg wet	0.05000		119	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40517 - 5035

trans-1,3-Dichloropropene	0.0498	0.0050	mg/kg wet	0.05000		100	70-130			
Trichloroethene	0.0574	0.0050	mg/kg wet	0.05000		115	70-130			
Trichlorofluoromethane	0.0548	0.0050	mg/kg wet	0.05000		110	40-160			
Vinyl Acetate	0.0548	0.0050	mg/kg wet	0.05000		110	70-130			
Vinyl Chloride	0.0504	0.0100	mg/kg wet	0.05000		101	70-130			
Xylene O	0.0530	0.0050	mg/kg wet	0.05000		106	70-130			
Xylene P,M	0.109	0.0100	mg/kg wet	0.1000		109	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0489</i>		mg/kg wet	<i>0.05000</i>		<i>98</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0468</i>		mg/kg wet	<i>0.05000</i>		<i>94</i>	<i>70-130</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>0.0499</i>		mg/kg wet	<i>0.05000</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0474</i>		mg/kg wet	<i>0.05000</i>		<i>95</i>	<i>70-130</i>			

LCS Dup

1,1,1,2-Tetrachloroethane	0.0570	0.0050	mg/kg wet	0.05000		114	70-130	5	20	
1,1,1-Trichloroethane	0.0610	0.0050	mg/kg wet	0.05000		122	70-130	5	20	
1,1,2,2-Tetrachloroethane	0.0610	0.0050	mg/kg wet	0.05000		122	40-160	7	20	
1,1,2-Trichloroethane	0.0580	0.0050	mg/kg wet	0.05000		116	70-130	5	20	
1,1-Dichloroethane	0.0608	0.0050	mg/kg wet	0.05000		122	70-130	5	20	
1,1-Dichloroethene	0.0658	0.0050	mg/kg wet	0.05000		132	70-130	5	20	B+
1,1-Dichloropropene	0.0612	0.0050	mg/kg wet	0.05000		122	70-130	5	20	
1,2,3-Trichlorobenzene	0.0642	0.0050	mg/kg wet	0.05000		128	70-130	4	20	
1,2,3-Trichloropropane	0.0579	0.0050	mg/kg wet	0.05000		116	70-130	9	20	
1,2,4-Trichlorobenzene	0.0552	0.0050	mg/kg wet	0.05000		110	70-130	2	20	
1,2,4-Trimethylbenzene	0.0645	0.0050	mg/kg wet	0.05000		129	70-130	2	20	
1,2-Dibromo-3-Chloropropane	0.0614	0.0050	mg/kg wet	0.05000		123	70-130	13	20	
1,2-Dibromoethane	0.0579	0.0050	mg/kg wet	0.05000		116	70-130	11	20	
1,2-Dichlorobenzene	0.0585	0.0050	mg/kg wet	0.05000		117	70-130	1	20	
1,2-Dichloroethane	0.0572	0.0050	mg/kg wet	0.05000		114	70-130	6	20	
1,2-Dichloropropane	0.0598	0.0050	mg/kg wet	0.05000		120	70-130	5	20	
1,3,5-Trimethylbenzene	0.0649	0.0050	mg/kg wet	0.05000		130	70-130	2	20	
1,3-Dichlorobenzene	0.0589	0.0050	mg/kg wet	0.05000		118	70-130	4	20	
1,3-Dichloropropane	0.0575	0.0050	mg/kg wet	0.05000		115	70-130	9	20	
1,4-Dichlorobenzene	0.0568	0.0050	mg/kg wet	0.05000		114	70-130	0.1	20	
1,4-Dioxane	1.32	0.100	mg/kg wet	1.000		132	70-130	17	20	B+
1-Chlorohexane	0.0536	0.0050	mg/kg wet	0.05000		107	70-130	8	20	
2,2-Dichloropropane	0.0623	0.0050	mg/kg wet	0.05000		125	70-130	5	20	
2-Butanone	0.344	0.0500	mg/kg wet	0.2500		138	40-160	10	20	
2-Chlorotoluene	0.0608	0.0050	mg/kg wet	0.05000		122	70-130	1	20	
2-Hexanone	0.283	0.0500	mg/kg wet	0.2500		113	40-160	16	20	
4-Chlorotoluene	0.0610	0.0050	mg/kg wet	0.05000		122	70-130	0.8	20	
4-Isopropyltoluene	0.0600	0.0050	mg/kg wet	0.05000		120	70-130	2	20	
4-Methyl-2-Pentanone	0.279	0.0500	mg/kg wet	0.2500		111	40-160	15	20	
Acetone	0.358	0.0500	mg/kg wet	0.2500		143	40-160	11	20	
Benzene	0.0592	0.0050	mg/kg wet	0.05000		118	70-130	4	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40517 - 5035

Bromobenzene	0.0597	0.0050	mg/kg wet	0.05000		119	70-130	2	20	
Bromochloromethane	0.0573	0.0050	mg/kg wet	0.05000		115	70-130	6	20	
Bromodichloromethane	0.0592	0.0050	mg/kg wet	0.05000		118	70-130	4	20	
Bromoform	0.0575	0.0050	mg/kg wet	0.05000		115	40-160	10	20	
Bromomethane	0.0616	0.0100	mg/kg wet	0.05000		123	40-160	0.9	20	
Carbon Disulfide	0.0639	0.0050	mg/kg wet	0.05000		128	70-130	5	20	
Carbon Tetrachloride	0.0606	0.0050	mg/kg wet	0.05000		121	70-130	5	20	
Chlorobenzene	0.0559	0.0050	mg/kg wet	0.05000		112	70-130	6	20	
Chloroethane	0.0594	0.0100	mg/kg wet	0.05000		119	40-160	4	20	
Chloroform	0.0572	0.0050	mg/kg wet	0.05000		114	70-130	4	20	
Chloromethane	0.0478	0.0100	mg/kg wet	0.05000		96	40-160	3	20	
cis-1,2-Dichloroethene	0.0597	0.0050	mg/kg wet	0.05000		119	70-130	4	20	
cis-1,3-Dichloropropene	0.0625	0.0050	mg/kg wet	0.05000		125	40-160	5	20	
Dibromochloromethane	0.0587	0.0050	mg/kg wet	0.05000		117	40-160	8	20	
Dibromomethane	0.0572	0.0050	mg/kg wet	0.05000		114	70-130	7	20	
Dichlorodifluoromethane	0.0409	0.0100	mg/kg wet	0.05000		82	40-160	2	20	
Diethyl Ether	0.0651	0.0050	mg/kg wet	0.05000		130	70-130	7	20	
Di-isopropyl ether	0.0641	0.0050	mg/kg wet	0.05000		128	70-130	4	20	
Ethyl tertiary-butyl ether	0.0655	0.0050	mg/kg wet	0.05000		131	70-130	7	20	B+
Ethylbenzene	0.0613	0.0050	mg/kg wet	0.05000		123	70-130	6	20	
Hexachlorobutadiene	0.0608	0.0050	mg/kg wet	0.05000		122	40-160	2	20	
Isopropylbenzene	0.0746	0.0050	mg/kg wet	0.05000		149	70-130	2	20	B+
Methyl tert-Butyl Ether	0.0639	0.0050	mg/kg wet	0.05000		128	70-130	9	20	
Methylene Chloride	0.0578	0.0250	mg/kg wet	0.05000		116	70-130	4	20	
Naphthalene	0.0627	0.0050	mg/kg wet	0.05000		125	40-160	8	20	
n-Butylbenzene	0.0652	0.0050	mg/kg wet	0.05000		130	70-130	1	20	
n-Propylbenzene	0.0649	0.0050	mg/kg wet	0.05000		130	70-130	2	20	
sec-Butylbenzene	0.0599	0.0050	mg/kg wet	0.05000		120	70-130	2	20	
Styrene	0.0535	0.0050	mg/kg wet	0.05000		107	40-160	5	20	
tert-Butylbenzene	0.0654	0.0050	mg/kg wet	0.05000		131	70-130	2	20	B+
Tertiary-amyl methyl ether	0.0565	0.0050	mg/kg wet	0.05000		113	70-130	9	20	
Tetrachloroethene	0.0532	0.0050	mg/kg wet	0.05000		106	70-130	9	20	
Tetrahydrofuran	0.0595	0.0200	mg/kg wet	0.05000		119	70-130	19	20	
Toluene	0.0600	0.0050	mg/kg wet	0.05000		120	70-130	4	20	
trans-1,2-Dichloroethene	0.0629	0.0050	mg/kg wet	0.05000		126	70-130	5	20	
trans-1,3-Dichloropropene	0.0533	0.0050	mg/kg wet	0.05000		107	70-130	7	20	
Trichloroethene	0.0593	0.0050	mg/kg wet	0.05000		119	70-130	3	20	
Trichlorofluoromethane	0.0575	0.0050	mg/kg wet	0.05000		115	40-160	5	20	
Vinyl Acetate	0.0608	0.0050	mg/kg wet	0.05000		122	70-130	10	20	
Vinyl Chloride	0.0522	0.0100	mg/kg wet	0.05000		104	70-130	4	20	
Xylene O	0.0562	0.0050	mg/kg wet	0.05000		112	70-130	6	20	
Xylene P,M	0.116	0.0100	mg/kg wet	0.1000		116	70-130	7	20	

Surrogate: 1,2-Dichloroethane-d4

0.0511

mg/kg wet

0.05000

102

70-130

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40517 - 5035

Surrogate: 4-Bromofluorobenzene	0.0485		mg/kg wet	0.05000		97	70-130			
Surrogate: Dibromofluoromethane	0.0507		mg/kg wet	0.05000		101	70-130			
Surrogate: Toluene-d8	0.0485		mg/kg wet	0.05000		97	70-130			

Batch DK40615 - 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

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40615 - 5035

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	0.0200	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							

Surrogate: 1,2-Dichloroethane-d4	0.0573		mg/kg wet	0.05000		115	70-130
Surrogate: 4-Bromofluorobenzene	0.0443		mg/kg wet	0.05000		89	70-130
Surrogate: Dibromofluoromethane	0.0561		mg/kg wet	0.05000		112	70-130
Surrogate: Toluene-d8	0.0488		mg/kg wet	0.05000		98	70-130

LCS

1,1,1,2-Tetrachloroethane	0.0557	0.0050	mg/kg wet	0.05000		111	70-130
1,1,1-Trichloroethane	0.0533	0.0050	mg/kg wet	0.05000		107	70-130
1,1,2,2-Tetrachloroethane	0.0549	0.0050	mg/kg wet	0.05000		110	40-160

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40615 - 5035

1,1,2-Trichloroethane	0.0535	0.0050	mg/kg wet	0.05000		107	70-130			
1,1-Dichloroethane	0.0539	0.0050	mg/kg wet	0.05000		108	70-130			
1,1-Dichloroethene	0.0601	0.0050	mg/kg wet	0.05000		120	70-130			
1,1-Dichloropropene	0.0544	0.0050	mg/kg wet	0.05000		109	70-130			
1,2,3-Trichlorobenzene	0.0658	0.0050	mg/kg wet	0.05000		132	70-130			B+
1,2,3-Trichloropropane	0.0521	0.0050	mg/kg wet	0.05000		104	70-130			
1,2,4-Trichlorobenzene	0.0572	0.0050	mg/kg wet	0.05000		114	70-130			
1,2,4-Trimethylbenzene	0.0618	0.0050	mg/kg wet	0.05000		124	70-130			
1,2-Dibromo-3-Chloropropane	0.0529	0.0050	mg/kg wet	0.05000		106	70-130			
1,2-Dibromoethane	0.0551	0.0050	mg/kg wet	0.05000		110	70-130			
1,2-Dichlorobenzene	0.0581	0.0050	mg/kg wet	0.05000		116	70-130			
1,2-Dichloroethane	0.0496	0.0050	mg/kg wet	0.05000		99	70-130			
1,2-Dichloropropane	0.0547	0.0050	mg/kg wet	0.05000		109	70-130			
1,3,5-Trimethylbenzene	0.0613	0.0050	mg/kg wet	0.05000		123	70-130			
1,3-Dichlorobenzene	0.0562	0.0050	mg/kg wet	0.05000		112	70-130			
1,3-Dichloropropane	0.0539	0.0050	mg/kg wet	0.05000		108	70-130			
1,4-Dichlorobenzene	0.0558	0.0050	mg/kg wet	0.05000		112	70-130			
1,4-Dioxane	1.07	0.100	mg/kg wet	1.000		107	70-130			
1-Chlorohexane	0.0526	0.0050	mg/kg wet	0.05000		105	70-130			
2,2-Dichloropropane	0.0547	0.0050	mg/kg wet	0.05000		109	70-130			
2-Butanone	0.292	0.0500	mg/kg wet	0.2500		117	40-160			
2-Chlorotoluene	0.0580	0.0050	mg/kg wet	0.05000		116	70-130			
2-Hexanone	0.251	0.0500	mg/kg wet	0.2500		100	40-160			
4-Chlorotoluene	0.0584	0.0050	mg/kg wet	0.05000		117	70-130			
4-Isopropyltoluene	0.0571	0.0050	mg/kg wet	0.05000		114	70-130			
4-Methyl-2-Pentanone	0.240	0.0500	mg/kg wet	0.2500		96	40-160			
Acetone	0.298	0.0500	mg/kg wet	0.2500		119	40-160			
Benzene	0.0535	0.0050	mg/kg wet	0.05000		107	70-130			
Bromobenzene	0.0594	0.0050	mg/kg wet	0.05000		119	70-130			
Bromochloromethane	0.0532	0.0050	mg/kg wet	0.05000		106	70-130			
Bromodichloromethane	0.0535	0.0050	mg/kg wet	0.05000		107	70-130			
Bromoform	0.0547	0.0050	mg/kg wet	0.05000		109	40-160			
Bromomethane	0.0569	0.0100	mg/kg wet	0.05000		114	40-160			
Carbon Disulfide	0.0553	0.0050	mg/kg wet	0.05000		111	70-130			
Carbon Tetrachloride	0.0526	0.0050	mg/kg wet	0.05000		105	70-130			
Chlorobenzene	0.0535	0.0050	mg/kg wet	0.05000		107	70-130			
Chloroethane	0.0545	0.0100	mg/kg wet	0.05000		109	40-160			
Chloroform	0.0514	0.0050	mg/kg wet	0.05000		103	70-130			
Chloromethane	0.0430	0.0100	mg/kg wet	0.05000		86	40-160			
cis-1,2-Dichloroethene	0.0549	0.0050	mg/kg wet	0.05000		110	70-130			
cis-1,3-Dichloropropene	0.0583	0.0050	mg/kg wet	0.05000		117	40-160			
Dibromochloromethane	0.0565	0.0050	mg/kg wet	0.05000		113	40-160			
Dibromomethane	0.0516	0.0050	mg/kg wet	0.05000		103	70-130			
Dichlorodifluoromethane	0.0352	0.0100	mg/kg wet	0.05000		70	40-160			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40615 - 5035

Diethyl Ether	0.0607	0.0050	mg/kg wet	0.05000		121	70-130			
Di-isopropyl ether	0.0591	0.0050	mg/kg wet	0.05000		118	70-130			
Ethyl tertiary-butyl ether	0.0610	0.0050	mg/kg wet	0.05000		122	70-130			
Ethylbenzene	0.0585	0.0050	mg/kg wet	0.05000		117	70-130			
Hexachlorobutadiene	0.0592	0.0050	mg/kg wet	0.05000		118	40-160			
Isopropylbenzene	0.0704	0.0050	mg/kg wet	0.05000		141	70-130			B+
Methyl tert-Butyl Ether	0.0601	0.0050	mg/kg wet	0.05000		120	70-130			
Methylene Chloride	0.0523	0.0250	mg/kg wet	0.05000		105	70-130			
Naphthalene	0.0624	0.0050	mg/kg wet	0.05000		125	40-160			
n-Butylbenzene	0.0610	0.0050	mg/kg wet	0.05000		122	70-130			
n-Propylbenzene	0.0612	0.0050	mg/kg wet	0.05000		122	70-130			
sec-Butylbenzene	0.0567	0.0050	mg/kg wet	0.05000		113	70-130			
Styrene	0.0555	0.0050	mg/kg wet	0.05000		111	40-160			
tert-Butylbenzene	0.0622	0.0050	mg/kg wet	0.05000		124	70-130			
Tertiary-amyl methyl ether	0.0530	0.0050	mg/kg wet	0.05000		106	70-130			
Tetrachloroethene	0.0511	0.0050	mg/kg wet	0.05000		102	70-130			
Tetrahydrofuran	0.0485	0.0200	mg/kg wet	0.05000		97	70-130			
Toluene	0.0542	0.0050	mg/kg wet	0.05000		108	70-130			
trans-1,2-Dichloroethene	0.0576	0.0050	mg/kg wet	0.05000		115	70-130			
trans-1,3-Dichloropropene	0.0494	0.0050	mg/kg wet	0.05000		99	70-130			
Trichloroethene	0.0527	0.0050	mg/kg wet	0.05000		105	70-130			
Trichlorofluoromethane	0.0493	0.0050	mg/kg wet	0.05000		99	40-160			
Vinyl Acetate	0.0551	0.0050	mg/kg wet	0.05000		110	70-130			
Vinyl Chloride	0.0466	0.0100	mg/kg wet	0.05000		93	70-130			
Xylene O	0.0533	0.0050	mg/kg wet	0.05000		107	70-130			
Xylene P,M	0.110	0.0100	mg/kg wet	0.1000		110	70-130			

Surrogate: 1,2-Dichloroethane-d4	0.0440		mg/kg wet	0.05000		88	70-130			
Surrogate: 4-Bromofluorobenzene	0.0481		mg/kg wet	0.05000		96	70-130			
Surrogate: Dibromofluoromethane	0.0472		mg/kg wet	0.05000		94	70-130			
Surrogate: Toluene-d8	0.0487		mg/kg wet	0.05000		97	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	0.0588	0.0050	mg/kg wet	0.05000		118	70-130	5	20	
1,1,1-Trichloroethane	0.0549	0.0050	mg/kg wet	0.05000		110	70-130	3	20	
1,1,2,2-Tetrachloroethane	0.0601	0.0050	mg/kg wet	0.05000		120	40-160	9	20	
1,1,2-Trichloroethane	0.0563	0.0050	mg/kg wet	0.05000		113	70-130	5	20	
1,1-Dichloroethane	0.0562	0.0050	mg/kg wet	0.05000		112	70-130	4	20	
1,1-Dichloroethene	0.0625	0.0050	mg/kg wet	0.05000		125	70-130	4	20	
1,1-Dichloropropene	0.0562	0.0050	mg/kg wet	0.05000		112	70-130	3	20	
1,2,3-Trichlorobenzene	0.0674	0.0050	mg/kg wet	0.05000		135	70-130	2	20	B+
1,2,3-Trichloropropane	0.0571	0.0050	mg/kg wet	0.05000		114	70-130	9	20	
1,2,4-Trichlorobenzene	0.0591	0.0050	mg/kg wet	0.05000		118	70-130	3	20	
1,2,4-Trimethylbenzene	0.0647	0.0050	mg/kg wet	0.05000		129	70-130	5	20	
1,2-Dibromo-3-Chloropropane	0.0584	0.0050	mg/kg wet	0.05000		117	70-130	10	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40615 - 5035

1,2-Dibromoethane	0.0598	0.0050	mg/kg wet	0.05000		120	70-130	8	20	
1,2-Dichlorobenzene	0.0606	0.0050	mg/kg wet	0.05000		121	70-130	4	20	
1,2-Dichloroethane	0.0515	0.0050	mg/kg wet	0.05000		103	70-130	4	20	
1,2-Dichloropropane	0.0564	0.0050	mg/kg wet	0.05000		113	70-130	3	20	
1,3,5-Trimethylbenzene	0.0648	0.0050	mg/kg wet	0.05000		130	70-130	6	20	
1,3-Dichlorobenzene	0.0594	0.0050	mg/kg wet	0.05000		119	70-130	5	20	
1,3-Dichloropropane	0.0574	0.0050	mg/kg wet	0.05000		115	70-130	6	20	
1,4-Dichlorobenzene	0.0580	0.0050	mg/kg wet	0.05000		116	70-130	4	20	
1,4-Dioxane	1.21	0.100	mg/kg wet	1.000		121	70-130	12	20	
1-Chlorohexane	0.0554	0.0050	mg/kg wet	0.05000		111	70-130	5	20	
2,2-Dichloropropane	0.0559	0.0050	mg/kg wet	0.05000		112	70-130	2	20	
2-Butanone	0.316	0.0500	mg/kg wet	0.2500		126	40-160	8	20	
2-Chlorotoluene	0.0612	0.0050	mg/kg wet	0.05000		122	70-130	5	20	
2-Hexanone	0.286	0.0500	mg/kg wet	0.2500		114	40-160	13	20	
4-Chlorotoluene	0.0611	0.0050	mg/kg wet	0.05000		122	70-130	5	20	
4-Isopropyltoluene	0.0598	0.0050	mg/kg wet	0.05000		120	70-130	5	20	
4-Methyl-2-Pentanone	0.261	0.0500	mg/kg wet	0.2500		104	40-160	9	20	
Acetone	0.335	0.0500	mg/kg wet	0.2500		134	40-160	11	20	
Benzene	0.0552	0.0050	mg/kg wet	0.05000		110	70-130	3	20	
Bromobenzene	0.0626	0.0050	mg/kg wet	0.05000		125	70-130	5	20	
Bromochloromethane	0.0556	0.0050	mg/kg wet	0.05000		111	70-130	4	20	
Bromodichloromethane	0.0551	0.0050	mg/kg wet	0.05000		110	70-130	3	20	
Bromoform	0.0593	0.0050	mg/kg wet	0.05000		119	40-160	8	20	
Bromomethane	0.0572	0.0100	mg/kg wet	0.05000		114	40-160	0.6	20	
Carbon Disulfide	0.0575	0.0050	mg/kg wet	0.05000		115	70-130	4	20	
Carbon Tetrachloride	0.0540	0.0050	mg/kg wet	0.05000		108	70-130	3	20	
Chlorobenzene	0.0566	0.0050	mg/kg wet	0.05000		113	70-130	6	20	
Chloroethane	0.0565	0.0100	mg/kg wet	0.05000		113	40-160	3	20	
Chloroform	0.0527	0.0050	mg/kg wet	0.05000		105	70-130	3	20	
Chloromethane	0.0435	0.0100	mg/kg wet	0.05000		87	40-160	1	20	
cis-1,2-Dichloroethene	0.0568	0.0050	mg/kg wet	0.05000		114	70-130	3	20	
cis-1,3-Dichloropropene	0.0600	0.0050	mg/kg wet	0.05000		120	40-160	3	20	
Dibromochloromethane	0.0604	0.0050	mg/kg wet	0.05000		121	40-160	7	20	
Dibromomethane	0.0541	0.0050	mg/kg wet	0.05000		108	70-130	5	20	
Dichlorodifluoromethane	0.0341	0.0100	mg/kg wet	0.05000		68	40-160	3	20	
Diethyl Ether	0.0637	0.0050	mg/kg wet	0.05000		127	70-130	5	20	
Di-isopropyl ether	0.0611	0.0050	mg/kg wet	0.05000		122	70-130	3	20	
Ethyl tertiary-butyl ether	0.0630	0.0050	mg/kg wet	0.05000		126	70-130	3	20	
Ethylbenzene	0.0615	0.0050	mg/kg wet	0.05000		123	70-130	5	20	
Hexachlorobutadiene	0.0621	0.0050	mg/kg wet	0.05000		124	40-160	5	20	
Isopropylbenzene	0.0753	0.0050	mg/kg wet	0.05000		151	70-130	7	20	B+
Methyl tert-Butyl Ether	0.0634	0.0050	mg/kg wet	0.05000		127	70-130	5	20	
Methylene Chloride	0.0542	0.0250	mg/kg wet	0.05000		108	70-130	4	20	
Naphthalene	0.0649	0.0050	mg/kg wet	0.05000		130	40-160	4	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40615 - 5035

n-Butylbenzene	0.0635	0.0050	mg/kg wet	0.05000		127	70-130	4	20	
n-Propylbenzene	0.0642	0.0050	mg/kg wet	0.05000		128	70-130	5	20	
sec-Butylbenzene	0.0593	0.0050	mg/kg wet	0.05000		119	70-130	5	20	
Styrene	0.0578	0.0050	mg/kg wet	0.05000		116	40-160	4	20	
tert-Butylbenzene	0.0658	0.0050	mg/kg wet	0.05000		132	70-130	6	20	B+
Tertiary-amyl methyl ether	0.0551	0.0050	mg/kg wet	0.05000		110	70-130	4	20	
Tetrachloroethene	0.0547	0.0050	mg/kg wet	0.05000		109	70-130	7	20	
Tetrahydrofuran	0.0545	0.0200	mg/kg wet	0.05000		109	70-130	12	20	
Toluene	0.0558	0.0050	mg/kg wet	0.05000		112	70-130	3	20	
trans-1,2-Dichloroethene	0.0597	0.0050	mg/kg wet	0.05000		119	70-130	4	20	
trans-1,3-Dichloropropene	0.0509	0.0050	mg/kg wet	0.05000		102	70-130	3	20	
Trichloroethene	0.0554	0.0050	mg/kg wet	0.05000		111	70-130	5	20	
Trichlorofluoromethane	0.0508	0.0050	mg/kg wet	0.05000		102	40-160	3	20	
Vinyl Acetate	0.0582	0.0050	mg/kg wet	0.05000		116	70-130	6	20	
Vinyl Chloride	0.0469	0.0100	mg/kg wet	0.05000		94	70-130	0.6	20	
Xylene O	0.0564	0.0050	mg/kg wet	0.05000		113	70-130	6	20	
Xylene P,M	0.116	0.0100	mg/kg wet	0.1000		116	70-130	5	20	

Surrogate: 1,2-Dichloroethane-d4	0.0454		mg/kg wet	0.05000		91	70-130			
Surrogate: 4-Bromofluorobenzene	0.0462		mg/kg wet	0.05000		92	70-130			
Surrogate: Dibromofluoromethane	0.0482		mg/kg wet	0.05000		96	70-130			
Surrogate: Toluene-d8	0.0502		mg/kg wet	0.05000		100	70-130			

Batch DK40721 - 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							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40721 - 5035

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
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	0.0200	mg/kg wet

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40721 - 5035

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							

Surrogate: 1,2-Dichloroethane-d4	0.0633		mg/kg wet	0.05000		127	70-130			
Surrogate: 4-Bromofluorobenzene	0.0452		mg/kg wet	0.05000		90	70-130			
Surrogate: Dibromofluoromethane	0.0593		mg/kg wet	0.05000		119	70-130			
Surrogate: Toluene-d8	0.0477		mg/kg wet	0.05000		95	70-130			

LCS

1,1,1,2-Tetrachloroethane	0.0559	0.0050	mg/kg wet	0.05000		112	70-130			
1,1,1-Trichloroethane	0.0597	0.0050	mg/kg wet	0.05000		119	70-130			
1,1,2,2-Tetrachloroethane	0.0568	0.0050	mg/kg wet	0.05000		114	40-160			
1,1,2-Trichloroethane	0.0565	0.0050	mg/kg wet	0.05000		113	70-130			
1,1-Dichloroethane	0.0587	0.0050	mg/kg wet	0.05000		117	70-130			
1,1-Dichloroethene	0.0634	0.0050	mg/kg wet	0.05000		127	70-130			
1,1-Dichloropropene	0.0588	0.0050	mg/kg wet	0.05000		118	70-130			
1,2,3-Trichlorobenzene	0.0658	0.0050	mg/kg wet	0.05000		132	70-130			B+
1,2,3-Trichloropropane	0.0542	0.0050	mg/kg wet	0.05000		108	70-130			
1,2,4-Trichlorobenzene	0.0573	0.0050	mg/kg wet	0.05000		115	70-130			
1,2,4-Trimethylbenzene	0.0646	0.0050	mg/kg wet	0.05000		129	70-130			
1,2-Dibromo-3-Chloropropane	0.0557	0.0050	mg/kg wet	0.05000		111	70-130			
1,2-Dibromoethane	0.0551	0.0050	mg/kg wet	0.05000		110	70-130			
1,2-Dichlorobenzene	0.0593	0.0050	mg/kg wet	0.05000		119	70-130			
1,2-Dichloroethane	0.0564	0.0050	mg/kg wet	0.05000		113	70-130			
1,2-Dichloropropane	0.0585	0.0050	mg/kg wet	0.05000		117	70-130			
1,3,5-Trimethylbenzene	0.0645	0.0050	mg/kg wet	0.05000		129	70-130			
1,3-Dichlorobenzene	0.0576	0.0050	mg/kg wet	0.05000		115	70-130			
1,3-Dichloropropane	0.0537	0.0050	mg/kg wet	0.05000		107	70-130			
1,4-Dichlorobenzene	0.0580	0.0050	mg/kg wet	0.05000		116	70-130			
1,4-Dioxane	1.10	0.100	mg/kg wet	1.000		110	70-130			
1-Chlorohexane	0.0517	0.0050	mg/kg wet	0.05000		103	70-130			
2,2-Dichloropropane	0.0606	0.0050	mg/kg wet	0.05000		121	70-130			
2-Butanone	0.310	0.0500	mg/kg wet	0.2500		124	40-160			
2-Chlorotoluene	0.0611	0.0050	mg/kg wet	0.05000		122	70-130			
2-Hexanone	0.241	0.0500	mg/kg wet	0.2500		96	40-160			
4-Chlorotoluene	0.0611	0.0050	mg/kg wet	0.05000		122	70-130			
4-Isopropyltoluene	0.0595	0.0050	mg/kg wet	0.05000		119	70-130			
4-Methyl-2-Pentanone	0.246	0.0500	mg/kg wet	0.2500		99	40-160			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40721 - 5035

Acetone	0.303	0.0500	mg/kg wet	0.2500		121	40-160			
Benzene	0.0566	0.0050	mg/kg wet	0.05000		113	70-130			
Bromobenzene	0.0606	0.0050	mg/kg wet	0.05000		121	70-130			
Bromochloromethane	0.0568	0.0050	mg/kg wet	0.05000		114	70-130			
Bromodichloromethane	0.0589	0.0050	mg/kg wet	0.05000		118	70-130			
Bromoform	0.0547	0.0050	mg/kg wet	0.05000		109	40-160			
Bromomethane	0.0608	0.0100	mg/kg wet	0.05000		122	40-160			
Carbon Disulfide	0.0601	0.0050	mg/kg wet	0.05000		120	70-130			
Carbon Tetrachloride	0.0593	0.0050	mg/kg wet	0.05000		119	70-130			
Chlorobenzene	0.0536	0.0050	mg/kg wet	0.05000		107	70-130			
Chloroethane	0.0578	0.0100	mg/kg wet	0.05000		116	40-160			
Chloroform	0.0564	0.0050	mg/kg wet	0.05000		113	70-130			
Chloromethane	0.0473	0.0100	mg/kg wet	0.05000		95	40-160			
cis-1,2-Dichloroethene	0.0583	0.0050	mg/kg wet	0.05000		117	70-130			
cis-1,3-Dichloropropene	0.0619	0.0050	mg/kg wet	0.05000		124	40-160			
Dibromochloromethane	0.0567	0.0050	mg/kg wet	0.05000		113	40-160			
Dibromomethane	0.0555	0.0050	mg/kg wet	0.05000		111	70-130			
Dichlorodifluoromethane	0.0409	0.0100	mg/kg wet	0.05000		82	40-160			
Diethyl Ether	0.0638	0.0050	mg/kg wet	0.05000		128	70-130			
Di-isopropyl ether	0.0630	0.0050	mg/kg wet	0.05000		126	70-130			
Ethyl tertiary-butyl ether	0.0644	0.0050	mg/kg wet	0.05000		129	70-130			
Ethylbenzene	0.0589	0.0050	mg/kg wet	0.05000		118	70-130			
Hexachlorobutadiene	0.0626	0.0050	mg/kg wet	0.05000		125	40-160			
Isopropylbenzene	0.0736	0.0050	mg/kg wet	0.05000		147	70-130			B+
Methyl tert-Butyl Ether	0.0632	0.0050	mg/kg wet	0.05000		126	70-130			
Methylene Chloride	0.0560	0.0250	mg/kg wet	0.05000		112	70-130			
Naphthalene	0.0611	0.0050	mg/kg wet	0.05000		122	40-160			
n-Butylbenzene	0.0648	0.0050	mg/kg wet	0.05000		130	70-130			
n-Propylbenzene	0.0638	0.0050	mg/kg wet	0.05000		128	70-130			
sec-Butylbenzene	0.0591	0.0050	mg/kg wet	0.05000		118	70-130			
Styrene	0.0523	0.0050	mg/kg wet	0.05000		105	40-160			
tert-Butylbenzene	0.0655	0.0050	mg/kg wet	0.05000		131	70-130			B+
Tertiary-amyl methyl ether	0.0557	0.0050	mg/kg wet	0.05000		111	70-130			
Tetrachloroethene	0.0495	0.0050	mg/kg wet	0.05000		99	70-130			
Tetrahydrofuran	0.0504	0.0200	mg/kg wet	0.05000		101	70-130			
Toluene	0.0579	0.0050	mg/kg wet	0.05000		116	70-130			
trans-1,2-Dichloroethene	0.0606	0.0050	mg/kg wet	0.05000		121	70-130			
trans-1,3-Dichloropropene	0.0525	0.0050	mg/kg wet	0.05000		105	70-130			
Trichloroethene	0.0580	0.0050	mg/kg wet	0.05000		116	70-130			
Trichlorofluoromethane	0.0560	0.0050	mg/kg wet	0.05000		112	40-160			
Vinyl Acetate	0.0577	0.0050	mg/kg wet	0.05000		115	70-130			
Vinyl Chloride	0.0512	0.0100	mg/kg wet	0.05000		102	70-130			
Xylene O	0.0533	0.0050	mg/kg wet	0.05000		107	70-130			
Xylene P,M	0.110	0.0100	mg/kg wet	0.1000		110	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40721 - 5035

Surrogate: 1,2-Dichloroethane-d4	0.0504		mg/kg wet	0.05000		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.0480		mg/kg wet	0.05000		96	70-130			
Surrogate: Dibromofluoromethane	0.0514		mg/kg wet	0.05000		103	70-130			
Surrogate: Toluene-d8	0.0474		mg/kg wet	0.05000		95	70-130			

LCS Dup

1,1,1,2-Tetrachloroethane	0.0571	0.0050	mg/kg wet	0.05000		114	70-130	2	20	
1,1,1-Trichloroethane	0.0610	0.0050	mg/kg wet	0.05000		122	70-130	2	20	
1,1,2,2-Tetrachloroethane	0.0571	0.0050	mg/kg wet	0.05000		114	40-160	0.6	20	
1,1,2-Trichloroethane	0.0572	0.0050	mg/kg wet	0.05000		114	70-130	1	20	
1,1-Dichloroethane	0.0602	0.0050	mg/kg wet	0.05000		120	70-130	2	20	
1,1-Dichloroethene	0.0646	0.0050	mg/kg wet	0.05000		129	70-130	2	20	
1,1-Dichloropropene	0.0604	0.0050	mg/kg wet	0.05000		121	70-130	3	20	
1,2,3-Trichlorobenzene	0.0673	0.0050	mg/kg wet	0.05000		135	70-130	2	20	B+
1,2,3-Trichloropropane	0.0545	0.0050	mg/kg wet	0.05000		109	70-130	0.6	20	
1,2,4-Trichlorobenzene	0.0579	0.0050	mg/kg wet	0.05000		116	70-130	1	20	
1,2,4-Trimethylbenzene	0.0650	0.0050	mg/kg wet	0.05000		130	70-130	0.5	20	
1,2-Dibromo-3-Chloropropane	0.0565	0.0050	mg/kg wet	0.05000		113	70-130	1	20	
1,2-Dibromoethane	0.0554	0.0050	mg/kg wet	0.05000		111	70-130	0.5	20	
1,2-Dichlorobenzene	0.0598	0.0050	mg/kg wet	0.05000		120	70-130	0.8	20	
1,2-Dichloroethane	0.0573	0.0050	mg/kg wet	0.05000		115	70-130	2	20	
1,2-Dichloropropane	0.0595	0.0050	mg/kg wet	0.05000		119	70-130	2	20	
1,3,5-Trimethylbenzene	0.0647	0.0050	mg/kg wet	0.05000		129	70-130	0.2	20	
1,3-Dichlorobenzene	0.0586	0.0050	mg/kg wet	0.05000		117	70-130	2	20	
1,3-Dichloropropane	0.0551	0.0050	mg/kg wet	0.05000		110	70-130	2	20	
1,4-Dichlorobenzene	0.0573	0.0050	mg/kg wet	0.05000		115	70-130	1	20	
1,4-Dioxane	1.07	0.100	mg/kg wet	1.000		107	70-130	2	20	
1-Chlorohexane	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	1	20	
2,2-Dichloropropane	0.0615	0.0050	mg/kg wet	0.05000		123	70-130	2	20	
2-Butanone	0.309	0.0500	mg/kg wet	0.2500		124	40-160	0.3	20	
2-Chlorotoluene	0.0611	0.0050	mg/kg wet	0.05000		122	70-130	0	20	
2-Hexanone	0.239	0.0500	mg/kg wet	0.2500		96	40-160	0.7	20	
4-Chlorotoluene	0.0618	0.0050	mg/kg wet	0.05000		124	70-130	1	20	
4-Isopropyltoluene	0.0594	0.0050	mg/kg wet	0.05000		119	70-130	0.2	20	
4-Methyl-2-Pentanone	0.246	0.0500	mg/kg wet	0.2500		98	40-160	0.3	20	
Acetone	0.300	0.0500	mg/kg wet	0.2500		120	40-160	1	20	
Benzene	0.0580	0.0050	mg/kg wet	0.05000		116	70-130	2	20	
Bromobenzene	0.0610	0.0050	mg/kg wet	0.05000		122	70-130	0.8	20	
Bromochloromethane	0.0567	0.0050	mg/kg wet	0.05000		113	70-130	0.04	20	
Bromodichloromethane	0.0602	0.0050	mg/kg wet	0.05000		120	70-130	2	20	
Bromoform	0.0547	0.0050	mg/kg wet	0.05000		109	40-160	0.1	20	
Bromomethane	0.0613	0.0100	mg/kg wet	0.05000		123	40-160	0.9	20	
Carbon Disulfide	0.0613	0.0050	mg/kg wet	0.05000		123	70-130	2	20	
Carbon Tetrachloride	0.0606	0.0050	mg/kg wet	0.05000		121	70-130	2	20	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Volatile Organics Low Level

Batch DK40721 - 5035

Chlorobenzene	0.0546	0.0050	mg/kg wet	0.05000		109	70-130	2	20	
Chloroethane	0.0593	0.0100	mg/kg wet	0.05000		119	40-160	3	20	
Chloroform	0.0577	0.0050	mg/kg wet	0.05000		115	70-130	2	20	
Chloromethane	0.0472	0.0100	mg/kg wet	0.05000		94	40-160	0.4	20	
cis-1,2-Dichloroethene	0.0592	0.0050	mg/kg wet	0.05000		118	70-130	2	20	
cis-1,3-Dichloropropene	0.0625	0.0050	mg/kg wet	0.05000		125	40-160	1	20	
Dibromochloromethane	0.0578	0.0050	mg/kg wet	0.05000		116	40-160	2	20	
Dibromomethane	0.0564	0.0050	mg/kg wet	0.05000		113	70-130	2	20	
Dichlorodifluoromethane	0.0396	0.0100	mg/kg wet	0.05000		79	40-160	3	20	
Diethyl Ether	0.0647	0.0050	mg/kg wet	0.05000		129	70-130	1	20	
Di-isopropyl ether	0.0640	0.0050	mg/kg wet	0.05000		128	70-130	2	20	
Ethyl tertiary-butyl ether	0.0658	0.0050	mg/kg wet	0.05000		132	70-130	2	20	B+
Ethylbenzene	0.0601	0.0050	mg/kg wet	0.05000		120	70-130	2	20	
Hexachlorobutadiene	0.0631	0.0050	mg/kg wet	0.05000		126	40-160	0.9	20	
Isopropylbenzene	0.0752	0.0050	mg/kg wet	0.05000		150	70-130	2	20	B+
Methyl tert-Butyl Ether	0.0646	0.0050	mg/kg wet	0.05000		129	70-130	2	20	
Methylene Chloride	0.0572	0.0250	mg/kg wet	0.05000		114	70-130	2	20	
Naphthalene	0.0630	0.0050	mg/kg wet	0.05000		126	40-160	3	20	
n-Butylbenzene	0.0652	0.0050	mg/kg wet	0.05000		130	70-130	0.5	20	
n-Propylbenzene	0.0647	0.0050	mg/kg wet	0.05000		129	70-130	1	20	
sec-Butylbenzene	0.0593	0.0050	mg/kg wet	0.05000		119	70-130	0.4	20	
Styrene	0.0548	0.0050	mg/kg wet	0.05000		110	40-160	5	20	
tert-Butylbenzene	0.0657	0.0050	mg/kg wet	0.05000		131	70-130	0.4	20	B+
Tertiary-amyl methyl ether	0.0567	0.0050	mg/kg wet	0.05000		113	70-130	2	20	
Tetrachloroethene	0.0507	0.0050	mg/kg wet	0.05000		101	70-130	2	20	
Tetrahydrofuran	0.0511	0.0200	mg/kg wet	0.05000		102	70-130	1	20	
Toluene	0.0588	0.0050	mg/kg wet	0.05000		118	70-130	1	20	
trans-1,2-Dichloroethene	0.0621	0.0050	mg/kg wet	0.05000		124	70-130	3	20	
trans-1,3-Dichloropropene	0.0529	0.0050	mg/kg wet	0.05000		106	70-130	0.7	20	
Trichloroethene	0.0592	0.0050	mg/kg wet	0.05000		118	70-130	2	20	
Trichlorofluoromethane	0.0571	0.0050	mg/kg wet	0.05000		114	40-160	2	20	
Vinyl Acetate	0.0592	0.0050	mg/kg wet	0.05000		118	70-130	3	20	
Vinyl Chloride	0.0513	0.0100	mg/kg wet	0.05000		103	70-130	0.1	20	
Xylene O	0.0541	0.0050	mg/kg wet	0.05000		108	70-130	1	20	
Xylene P,M	0.111	0.0100	mg/kg wet	0.1000		111	70-130	1	20	

Surrogate: 1,2-Dichloroethane-d4	0.0501		mg/kg wet	0.05000		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.0474		mg/kg wet	0.05000		95	70-130			
Surrogate: Dibromofluoromethane	0.0514		mg/kg wet	0.05000		103	70-130			
Surrogate: Toluene-d8	0.0477		mg/kg wet	0.05000		95	70-130			

Semi-Volatile Organic Compounds

Batch DK40452 - 3546

Blank

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Semi-Volatile Organic Compounds

Batch DK40452 - 3546

1,1-Biphenyl	ND	0.025	mg/kg wet
1,2,4-Trichlorobenzene	ND	0.250	mg/kg wet
1,2-Dichlorobenzene	ND	0.250	mg/kg wet
1,3-Dichlorobenzene	ND	0.250	mg/kg wet
1,4-Dichlorobenzene	ND	0.250	mg/kg wet
2,3,4,6-Tetrachlorophenol	ND	0.250	mg/kg wet
2,4,5-Trichlorophenol	ND	0.250	mg/kg wet
2,4,6-Trichlorophenol	ND	0.250	mg/kg wet
2,4-Dichlorophenol	ND	0.250	mg/kg wet
2,4-Dimethylphenol	ND	0.250	mg/kg wet
2,4-Dinitrophenol	ND	1.00	mg/kg wet
2,4-Dinitrotoluene	ND	0.250	mg/kg wet
2,6-Dinitrotoluene	ND	0.250	mg/kg wet
2-Chloronaphthalene	ND	0.250	mg/kg wet
2-Chlorophenol	ND	0.250	mg/kg wet
2-Methylnaphthalene	ND	0.250	mg/kg wet
2-Methylphenol	ND	0.250	mg/kg wet
2-Nitroaniline	ND	0.500	mg/kg wet
2-Nitrophenol	ND	0.500	mg/kg wet
3,3'-Dichlorobenzidine	ND	0.250	mg/kg wet
3+4-Methylphenol	ND	0.250	mg/kg wet
3-Nitroaniline	ND	0.500	mg/kg wet
4,6-Dinitro-2-Methylphenol	ND	1.00	mg/kg wet
4-Bromophenyl-phenylether	ND	0.250	mg/kg wet
4-Chloro-3-Methylphenol	ND	0.250	mg/kg wet
4-Chloroaniline	ND	0.250	mg/kg wet
4-Chloro-phenyl-phenyl ether	ND	0.250	mg/kg wet
4-Nitroaniline	ND	0.500	mg/kg wet
4-Nitrophenol	ND	1.00	mg/kg wet
Acenaphthene	ND	0.250	mg/kg wet
Acenaphthylene	ND	0.250	mg/kg wet
Acetophenone	ND	0.250	mg/kg wet
Aniline	ND	0.250	mg/kg wet
Anthracene	ND	0.250	mg/kg wet
Azobenzene	ND	0.250	mg/kg wet
Benzo(a)anthracene	ND	0.250	mg/kg wet
Benzo(a)pyrene	ND	0.250	mg/kg wet
Benzo(b)fluoranthene	ND	0.250	mg/kg wet
Benzo(g,h,i)perylene	ND	0.250	mg/kg wet
Benzo(k)fluoranthene	ND	0.250	mg/kg wet
Benzoic Acid	ND	2.50	mg/kg wet
Benzyl Alcohol	ND	0.500	mg/kg wet
bis(2-Chloroethoxy)methane	ND	0.250	mg/kg wet
bis(2-Chloroethyl)ether	ND	0.250	mg/kg wet

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Semi-Volatile Organic Compounds

Batch DK40452 - 3546

bis(2-chloroisopropyl)Ether	ND	0.250	mg/kg wet							
bis(2-Ethylhexyl)phthalate	ND	0.250	mg/kg wet							
Butylbenzylphthalate	ND	0.250	mg/kg wet							
Carbazole	ND	0.250	mg/kg wet							
Chrysene	ND	0.250	mg/kg wet							
Dibenzo(a,h)Anthracene	ND	0.250	mg/kg wet							
Dibenzofuran	ND	0.250	mg/kg wet							
Diethylphthalate	ND	0.250	mg/kg wet							
Dimethylphthalate	ND	0.250	mg/kg wet							
Di-n-butylphthalate	ND	0.250	mg/kg wet							
Di-n-octylphthalate	ND	0.500	mg/kg wet							
Fluoranthene	ND	0.250	mg/kg wet							
Fluorene	ND	0.250	mg/kg wet							
Hexachlorobenzene	ND	0.250	mg/kg wet							
Hexachlorobutadiene	ND	0.250	mg/kg wet							
Hexachlorocyclopentadiene	ND	0.500	mg/kg wet							
Hexachloroethane	ND	0.250	mg/kg wet							
Indeno(1,2,3-cd)Pyrene	ND	0.250	mg/kg wet							
Isophorone	ND	0.250	mg/kg wet							
Naphthalene	ND	0.250	mg/kg wet							
Nitrobenzene	ND	0.250	mg/kg wet							
N-Nitrosodimethylamine	ND	0.250	mg/kg wet							
N-Nitroso-Di-n-Propylamine	ND	0.250	mg/kg wet							
N-nitrosodiphenylamine	ND	0.250	mg/kg wet							
Pentachlorophenol	ND	1.00	mg/kg wet							
Phenanthrene	ND	0.250	mg/kg wet							
Phenol	ND	0.250	mg/kg wet							
Pyrene	ND	0.250	mg/kg wet							
Pyridine	ND	0.250	mg/kg wet							

Surrogate: 1,2-Dichlorobenzene-d4	2.52		mg/kg wet	2.500		101	30-130
Surrogate: 2,4,6-Tribromophenol	4.43		mg/kg wet	3.750		118	30-130
Surrogate: 2-Chlorophenol-d4	4.15		mg/kg wet	3.750		111	30-130
Surrogate: 2-Fluorobiphenyl	2.65		mg/kg wet	2.500		106	30-130
Surrogate: 2-Fluorophenol	4.16		mg/kg wet	3.750		111	30-130
Surrogate: Nitrobenzene-d5	2.58		mg/kg wet	2.500		103	30-130
Surrogate: Phenol-d6	4.12		mg/kg wet	3.750		110	30-130
Surrogate: p-Terphenyl-d14	2.78		mg/kg wet	2.500		111	30-130

LCS

1,1-Biphenyl	2.47	0.025	mg/kg wet	2.500		99	40-140
1,2,4-Trichlorobenzene	2.09	0.250	mg/kg wet	2.500		84	40-140
1,2-Dichlorobenzene	2.38	0.250	mg/kg wet	2.500		95	40-140
1,3-Dichlorobenzene	2.37	0.250	mg/kg wet	2.500		95	40-140
1,4-Dichlorobenzene	2.36	0.250	mg/kg wet	2.500		94	40-140

CERTIFICATE OF ANALYSIS

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Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Semi-Volatile Organic Compounds

Batch DK40452 - 3546

2,3,4,6-Tetrachlorophenol	2.58	0.250	mg/kg wet	2,500		103	30-130			
2,4,5-Trichlorophenol	2.54	0.250	mg/kg wet	2,500		101	30-130			
2,4,6-Trichlorophenol	2.49	0.250	mg/kg wet	2,500		100	30-130			
2,4-Dichlorophenol	2.16	0.250	mg/kg wet	2,500		86	30-130			
2,4-Dimethylphenol	2.13	0.250	mg/kg wet	2,500		85	30-130			
2,4-Dinitrophenol	2.83	1.00	mg/kg wet	2,500		113	15-140			
2,4-Dinitrotoluene	2.64	0.250	mg/kg wet	2,500		105	40-140			
2,6-Dinitrotoluene	2.62	0.250	mg/kg wet	2,500		105	40-140			
2-Chloronaphthalene	2.37	0.250	mg/kg wet	2,500		95	40-140			
2-Chlorophenol	2.45	0.250	mg/kg wet	2,500		98	30-130			
2-Methylnaphthalene	2.36	0.250	mg/kg wet	2,500		94	40-140			
2-Methylphenol	2.49	0.250	mg/kg wet	2,500		100	15-140			
2-Nitroaniline	2.15	0.500	mg/kg wet	2,500		86	40-140			
2-Nitrophenol	2.14	0.500	mg/kg wet	2,500		86	30-130			
3,3'-Dichlorobenzidine	2.34	0.250	mg/kg wet	2,500		94	40-140			
3+4-Methylphenol	5.18	0.250	mg/kg wet	5,000		104	15-140			
3-Nitroaniline	2.26	0.500	mg/kg wet	2,500		90	40-140			
4,6-Dinitro-2-Methylphenol	2.73	1.00	mg/kg wet	2,500		109	30-130			
4-Bromophenyl-phenylether	2.57	0.250	mg/kg wet	2,500		103	40-140			
4-Chloro-3-Methylphenol	2.29	0.250	mg/kg wet	2,500		91	30-130			
4-Chloroaniline	1.59	0.250	mg/kg wet	2,500		64	15-140			
4-Chloro-phenyl-phenyl ether	2.59	0.250	mg/kg wet	2,500		104	40-140			
4-Nitroaniline	2.48	0.500	mg/kg wet	2,500		99	40-140			
4-Nitrophenol	2.68	1.00	mg/kg wet	2,500		107	15-140			
Acenaphthene	2.55	0.250	mg/kg wet	2,500		102	40-140			
Acenaphthylene	2.47	0.250	mg/kg wet	2,500		99	40-140			
Acetophenone	2.46	0.250	mg/kg wet	2,500		98	40-140			
Aniline	1.36	0.250	mg/kg wet	2,500		54	40-140			
Anthracene	2.49	0.250	mg/kg wet	2,500		99	40-140			
Azobenzene	2.28	0.250	mg/kg wet	2,500		91	40-140			
Benzidine	0.378	1.00	mg/kg wet	2,500		15	40-140			B-
Benzo(a)anthracene	2.44	0.250	mg/kg wet	2,500		98	40-140			
Benzo(a)pyrene	2.61	0.250	mg/kg wet	2,500		104	40-140			
Benzo(b)fluoranthene	2.37	0.250	mg/kg wet	2,500		95	40-140			
Benzo(g,h,i)perylene	2.36	0.250	mg/kg wet	2,500		94	40-140			
Benzo(k)fluoranthene	2.52	0.250	mg/kg wet	2,500		101	40-140			
Benzoic Acid	2.20	2.50	mg/kg wet	2,500		88	30-130			
Benzyl Alcohol	2.30	0.500	mg/kg wet	2,500		92	40-140			
bis(2-Chloroethoxy)methane	2.12	0.250	mg/kg wet	2,500		85	40-140			
bis(2-Chloroethyl)ether	2.19	0.250	mg/kg wet	2,500		87	40-140			
bis(2-chloroisopropyl)Ether	2.19	0.250	mg/kg wet	2,500		88	40-140			
bis(2-Ethylhexyl)phthalate	2.55	0.250	mg/kg wet	2,500		102	40-140			
Butylbenzylphthalate	2.48	0.250	mg/kg wet	2,500		99	40-140			
Carbazole	2.57	0.250	mg/kg wet	2,500		103	40-140			

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Semi-Volatile Organic Compounds

Batch DK40452 - 3546

Chrysene	2.52	0.250	mg/kg wet	2,500		101	40-140			
Dibenzo(a,h)Anthracene	2.58	0.250	mg/kg wet	2,500		103	40-140			
Dibenzofuran	2.50	0.250	mg/kg wet	2,500		100	40-140			
Diethylphthalate	2.67	0.250	mg/kg wet	2,500		107	40-140			
Dimethylphthalate	2.61	0.250	mg/kg wet	2,500		104	15-140			
Di-n-butylphthalate	2.74	0.250	mg/kg wet	2,500		110	40-140			
Di-n-octylphthalate	2.52	0.500	mg/kg wet	2,500		101	40-140			
Fluoranthene	2.71	0.250	mg/kg wet	2,500		108	40-140			
Fluorene	2.60	0.250	mg/kg wet	2,500		104	40-140			
Hexachlorobenzene	2.46	0.250	mg/kg wet	2,500		98	40-140			
Hexachlorobutadiene	2.11	0.250	mg/kg wet	2,500		84	40-140			
Hexachlorocyclopentadiene	2.31	0.500	mg/kg wet	2,500		92	40-140			
Hexachloroethane	2.31	0.250	mg/kg wet	2,500		92	40-140			
Indeno(1,2,3-cd)Pyrene	2.40	0.250	mg/kg wet	2,500		96	40-140			
Isophorone	2.01	0.250	mg/kg wet	2,500		81	40-140			
Naphthalene	2.01	0.250	mg/kg wet	2,500		80	40-140			
Nitrobenzene	2.02	0.250	mg/kg wet	2,500		81	40-140			
N-Nitrosodimethylamine	2.57	0.250	mg/kg wet	2,500		103	40-140			
N-Nitroso-Di-n-Propylamine	2.49	0.250	mg/kg wet	2,500		100	40-140			
N-nitrosodiphenylamine	2.14	0.250	mg/kg wet	2,500		85	40-140			
Pentachlorophenol	2.25	1.00	mg/kg wet	2,500		90	15-140			
Phenanthrene	2.45	0.250	mg/kg wet	2,500		98	40-140			
Phenol	2.48	0.250	mg/kg wet	2,500		99	15-140			
Pyrene	2.34	0.250	mg/kg wet	2,500		93	40-140			
Pyridine	2.99	0.250	mg/kg wet	2,500		120	40-140			

Surrogate: 1,2-Dichlorobenzene-d4	2.50		mg/kg wet	2,500		100	30-130			
Surrogate: 2,4,6-Tribromophenol	4.78		mg/kg wet	3,750		127	30-130			
Surrogate: 2-Chlorophenol-d4	4.19		mg/kg wet	3,750		112	30-130			
Surrogate: 2-Fluorobiphenyl	2.75		mg/kg wet	2,500		110	30-130			
Surrogate: 2-Fluorophenol	4.20		mg/kg wet	3,750		112	30-130			
Surrogate: Nitrobenzene-d5	2.29		mg/kg wet	2,500		92	30-130			
Surrogate: Phenol-d6	4.24		mg/kg wet	3,750		113	30-130			
Surrogate: p-Terphenyl-d14	2.73		mg/kg wet	2,500		109	30-130			

LCS Dup

1,1-Biphenyl	2.16	0.025	mg/kg wet	2,500		86	40-140	14	30	
1,2,4-Trichlorobenzene	1.90	0.250	mg/kg wet	2,500		76	40-140	10	30	
1,2-Dichlorobenzene	2.09	0.250	mg/kg wet	2,500		83	40-140	13	30	
1,3-Dichlorobenzene	2.08	0.250	mg/kg wet	2,500		83	40-140	13	30	
1,4-Dichlorobenzene	2.07	0.250	mg/kg wet	2,500		83	40-140	13	30	
2,3,4,6-Tetrachlorophenol	2.29	0.250	mg/kg wet	2,500		91	30-130	12	30	
2,4,5-Trichlorophenol	2.22	0.250	mg/kg wet	2,500		89	30-130	13	30	
2,4,6-Trichlorophenol	2.18	0.250	mg/kg wet	2,500		87	30-130	14	30	
2,4-Dichlorophenol	1.92	0.250	mg/kg wet	2,500		77	30-130	12	30	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Semi-Volatile Organic Compounds

Batch DK40452 - 3546

2,4-Dimethylphenol	1.92	0.250	mg/kg wet	2,500		77	30-130	10	30	
2,4-Dinitrophenol	2.55	1.00	mg/kg wet	2,500		102	15-140	10	30	
2,4-Dinitrotoluene	2.31	0.250	mg/kg wet	2,500		92	40-140	13	30	
2,6-Dinitrotoluene	2.26	0.250	mg/kg wet	2,500		91	40-140	15	30	
2-Chloronaphthalene	2.07	0.250	mg/kg wet	2,500		83	40-140	14	30	
2-Chlorophenol	2.14	0.250	mg/kg wet	2,500		86	30-130	14	30	
2-Methylnaphthalene	2.14	0.250	mg/kg wet	2,500		86	40-140	10	30	
2-Methylphenol	2.19	0.250	mg/kg wet	2,500		87	15-140	13	30	
2-Nitroaniline	1.85	0.500	mg/kg wet	2,500		74	40-140	15	30	
2-Nitrophenol	1.94	0.500	mg/kg wet	2,500		77	30-130	10	30	
3,3'-Dichlorobenzidine	2.09	0.250	mg/kg wet	2,500		83	40-140	12	30	
3+4-Methylphenol	4.53	0.250	mg/kg wet	5,000		91	15-140	13	30	
3-Nitroaniline	2.02	0.500	mg/kg wet	2,500		81	40-140	11	30	
4,6-Dinitro-2-Methylphenol	2.52	1.00	mg/kg wet	2,500		101	30-130	8	30	
4-Bromophenyl-phenylether	2.32	0.250	mg/kg wet	2,500		93	40-140	10	30	
4-Chloro-3-Methylphenol	2.05	0.250	mg/kg wet	2,500		82	30-130	11	30	
4-Chloroaniline	1.49	0.250	mg/kg wet	2,500		60	15-140	7	30	
4-Chloro-phenyl-phenyl ether	2.28	0.250	mg/kg wet	2,500		91	40-140	13	30	
4-Nitroaniline	2.20	0.500	mg/kg wet	2,500		88	40-140	12	30	
4-Nitrophenol	2.31	1.00	mg/kg wet	2,500		92	15-140	15	30	
Acenaphthene	2.20	0.250	mg/kg wet	2,500		88	40-140	15	30	
Acenaphthylene	2.15	0.250	mg/kg wet	2,500		86	40-140	14	30	
Acetophenone	2.13	0.250	mg/kg wet	2,500		85	40-140	14	30	
Aniline	1.17	0.250	mg/kg wet	2,500		47	40-140	15	30	
Anthracene	2.24	0.250	mg/kg wet	2,500		90	40-140	10	30	
Azobenzene	2.05	0.250	mg/kg wet	2,500		82	40-140	11	30	
Benzidine	0.341	1.00	mg/kg wet	2,500		14	40-140	10	30	B-
Benzo(a)anthracene	2.16	0.250	mg/kg wet	2,500		86	40-140	13	30	
Benzo(a)pyrene	2.27	0.250	mg/kg wet	2,500		91	40-140	14	30	
Benzo(b)fluoranthene	2.02	0.250	mg/kg wet	2,500		81	40-140	16	30	
Benzo(g,h,i)perylene	2.15	0.250	mg/kg wet	2,500		86	40-140	9	30	
Benzo(k)fluoranthene	2.22	0.250	mg/kg wet	2,500		89	40-140	13	30	
Benzoic Acid	2.07	2.50	mg/kg wet	2,500		83	30-130	6	30	
Benzyl Alcohol	2.02	0.500	mg/kg wet	2,500		81	40-140	13	30	
bis(2-Chloroethoxy)methane	1.94	0.250	mg/kg wet	2,500		77	40-140	9	30	
bis(2-Chloroethyl)ether	1.89	0.250	mg/kg wet	2,500		76	40-140	15	30	
bis(2-chloroisopropyl)Ether	1.92	0.250	mg/kg wet	2,500		77	40-140	13	30	
bis(2-Ethylhexyl)phthalate	2.21	0.250	mg/kg wet	2,500		88	40-140	14	30	
Butylbenzylphthalate	2.16	0.250	mg/kg wet	2,500		87	40-140	14	30	
Carbazole	2.27	0.250	mg/kg wet	2,500		91	40-140	12	30	
Chrysene	2.20	0.250	mg/kg wet	2,500		88	40-140	13	30	
Dibenzo(a,h)Anthracene	2.30	0.250	mg/kg wet	2,500		92	40-140	12	30	
Dibenzofuran	2.18	0.250	mg/kg wet	2,500		87	40-140	13	30	
Diethylphthalate	2.34	0.250	mg/kg wet	2,500		94	40-140	13	30	

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Semi-Volatile Organic Compounds

Batch DK40452 - 3546

Dimethylphthalate	2.28	0.250	mg/kg wet	2,500		91	15-140	14	30	
Di-n-butylphthalate	2.42	0.250	mg/kg wet	2,500		97	40-140	12	30	
Di-n-octylphthalate	2.17	0.500	mg/kg wet	2,500		87	40-140	15	30	
Fluoranthene	2.43	0.250	mg/kg wet	2,500		97	40-140	11	30	
Fluorene	2.31	0.250	mg/kg wet	2,500		92	40-140	12	30	
Hexachlorobenzene	2.25	0.250	mg/kg wet	2,500		90	40-140	9	30	
Hexachlorobutadiene	1.93	0.250	mg/kg wet	2,500		77	40-140	9	30	
Hexachlorocyclopentadiene	2.01	0.500	mg/kg wet	2,500		80	40-140	14	30	
Hexachloroethane	1.97	0.250	mg/kg wet	2,500		79	40-140	16	30	
Indeno(1,2,3-cd)Pyrene	2.15	0.250	mg/kg wet	2,500		86	40-140	11	30	
Isophorone	1.79	0.250	mg/kg wet	2,500		72	40-140	12	30	
Naphthalene	1.82	0.250	mg/kg wet	2,500		73	40-140	10	30	
Nitrobenzene	1.82	0.250	mg/kg wet	2,500		73	40-140	11	30	
N-Nitrosodimethylamine	2.23	0.250	mg/kg wet	2,500		89	40-140	14	30	
N-Nitroso-Di-n-Propylamine	2.19	0.250	mg/kg wet	2,500		87	40-140	13	30	
N-nitrosodiphenylamine	1.92	0.250	mg/kg wet	2,500		77	40-140	11	30	
Pentachlorophenol	1.99	1.00	mg/kg wet	2,500		80	15-140	12	30	
Phenanthrene	2.18	0.250	mg/kg wet	2,500		87	40-140	12	30	
Phenol	2.19	0.250	mg/kg wet	2,500		87	15-140	13	30	
Pyrene	2.03	0.250	mg/kg wet	2,500		81	40-140	14	30	
Pyridine	2.63	0.250	mg/kg wet	2,500		105	40-140	13	30	

Surrogate: 1,2-Dichlorobenzene-d4	2.17		mg/kg wet	2,500		87	30-130			
Surrogate: 2,4,6-Tribromophenol	4.06		mg/kg wet	3,750		108	30-130			
Surrogate: 2-Chlorophenol-d4	3.56		mg/kg wet	3,750		95	30-130			
Surrogate: 2-Fluorobiphenyl	2.32		mg/kg wet	2,500		93	30-130			
Surrogate: 2-Fluorophenol	3.58		mg/kg wet	3,750		96	30-130			
Surrogate: Nitrobenzene-d5	2.00		mg/kg wet	2,500		80	30-130			
Surrogate: Phenol-d6	3.57		mg/kg wet	3,750		95	30-130			
Surrogate: p-Terphenyl-d14	2.31		mg/kg wet	2,500		93	30-130			

8082A Polychlorinated Biphenyls (PCB)

Batch DK40408 - 3540C

Blank										
Aroclor 1016	ND	0.02	mg/kg wet							
Aroclor 1016 [2C]	ND	0.02	mg/kg wet							
Aroclor 1221	ND	0.02	mg/kg wet							
Aroclor 1221 [2C]	ND	0.02	mg/kg wet							
Aroclor 1232	ND	0.02	mg/kg wet							
Aroclor 1232 [2C]	ND	0.02	mg/kg wet							
Aroclor 1242	ND	0.02	mg/kg wet							
Aroclor 1242 [2C]	ND	0.02	mg/kg wet							
Aroclor 1248	ND	0.02	mg/kg wet							
Aroclor 1248 [2C]	ND	0.02	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8082A Polychlorinated Biphenyls (PCB)

Batch DK40408 - 3540C

Aroclor 1254	ND	0.02	mg/kg wet							
Aroclor 1254 [2C]	ND	0.02	mg/kg wet							
Aroclor 1260	ND	0.02	mg/kg wet							
Aroclor 1260 [2C]	ND	0.02	mg/kg wet							
Aroclor 1262	ND	0.02	mg/kg wet							
Aroclor 1262 [2C]	ND	0.02	mg/kg wet							
Aroclor 1268	ND	0.02	mg/kg wet							
Aroclor 1268 [2C]	ND	0.02	mg/kg wet							
Surrogate: Decachlorobiphenyl	0.0215		mg/kg wet	0.02500		86	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0202		mg/kg wet	0.02500		81	30-150			
Surrogate: Tetrachloro-m-xylene	0.0202		mg/kg wet	0.02500		81	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0211		mg/kg wet	0.02500		85	30-150			

LCS

Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		85	40-140			
Aroclor 1016 [2C]	0.4	0.05	mg/kg wet	0.5000		82	40-140			
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		86	40-140			
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		82	40-140			
Surrogate: Decachlorobiphenyl	0.0214		mg/kg wet	0.02500		86	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0198		mg/kg wet	0.02500		79	30-150			
Surrogate: Tetrachloro-m-xylene	0.0202		mg/kg wet	0.02500		81	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0199		mg/kg wet	0.02500		80	30-150			

LCS Dup

Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		87	40-140	2	30	
Aroclor 1016 [2C]	0.4	0.05	mg/kg wet	0.5000		87	40-140	6	30	
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		87	40-140	1	30	
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		87	40-140	5	30	
Surrogate: Decachlorobiphenyl	0.0215		mg/kg wet	0.02500		86	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0197		mg/kg wet	0.02500		79	30-150			
Surrogate: Tetrachloro-m-xylene	0.0209		mg/kg wet	0.02500		84	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0207		mg/kg wet	0.02500		83	30-150			

8100M Total Petroleum Hydrocarbons

Batch DK40506 - 3546

Blank

Decane (C10)	ND	0.2	mg/kg wet							
Docosane (C22)	ND	0.2	mg/kg wet							
Dodecane (C12)	ND	0.2	mg/kg wet							
Eicosane (C20)	ND	0.2	mg/kg wet							
Hexacosane (C26)	ND	0.2	mg/kg wet							
Hexadecane (C16)	ND	0.2	mg/kg wet							
Nonadecane (C19)	ND	0.2	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
 Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8100M Total Petroleum Hydrocarbons

Batch DK40506 - 3546

Nonane (C9)	ND	0.2	mg/kg wet							
Octacosane (C28)	ND	0.2	mg/kg wet							
Octadecane (C18)	ND	0.2	mg/kg wet							
Tetracosane (C24)	ND	0.2	mg/kg wet							
Tetradecane (C14)	ND	0.2	mg/kg wet							
Total Petroleum Hydrocarbons (C9-C36)	ND	37.5	mg/kg wet							
Triacontane (C30)	ND	0.2	mg/kg wet							

Surrogate: O-Terphenyl	4.12		mg/kg wet	5.000		82	40-140
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LCS

Decane (C10)	1.6	0.2	mg/kg wet	2,500		62	40-140		
Docosane (C22)	1.9	0.2	mg/kg wet	2,500		76	40-140		
Dodecane (C12)	1.8	0.2	mg/kg wet	2,500		71	40-140		
Eicosane (C20)	1.9	0.2	mg/kg wet	2,500		77	40-140		
Hexacosane (C26)	1.9	0.2	mg/kg wet	2,500		76	40-140		
Hexadecane (C16)	1.9	0.2	mg/kg wet	2,500		75	40-140		
Nonadecane (C19)	1.9	0.2	mg/kg wet	2,500		77	40-140		
Nonane (C9)	1.4	0.2	mg/kg wet	2,500		58	30-140		
Octacosane (C28)	1.8	0.2	mg/kg wet	2,500		73	40-140		
Octadecane (C18)	1.9	0.2	mg/kg wet	2,500		76	40-140		
Tetracosane (C24)	1.8	0.2	mg/kg wet	2,500		72	40-140		
Tetradecane (C14)	1.8	0.2	mg/kg wet	2,500		73	40-140		
Total Petroleum Hydrocarbons (C9-C36)	26.1	37.5	mg/kg wet	35.00		75	40-140		
Triacontane (C30)	1.8	0.2	mg/kg wet	2,500		74	40-140		

Surrogate: O-Terphenyl	3.99		mg/kg wet	5.000		80	40-140
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LCS Dup

Decane (C10)	1.5	0.2	mg/kg wet	2,500		61	40-140	2	25
Docosane (C22)	1.9	0.2	mg/kg wet	2,500		78	40-140	2	25
Dodecane (C12)	1.8	0.2	mg/kg wet	2,500		71	40-140	0.8	25
Eicosane (C20)	2.0	0.2	mg/kg wet	2,500		78	40-140	2	25
Hexacosane (C26)	2.0	0.2	mg/kg wet	2,500		78	40-140	2	25
Hexadecane (C16)	2.0	0.2	mg/kg wet	2,500		78	40-140	4	25
Nonadecane (C19)	2.0	0.2	mg/kg wet	2,500		80	40-140	3	25
Nonane (C9)	1.4	0.2	mg/kg wet	2,500		57	30-140	1	25
Octacosane (C28)	1.9	0.2	mg/kg wet	2,500		75	40-140	2	25
Octadecane (C18)	2.0	0.2	mg/kg wet	2,500		78	40-140	3	25
Tetracosane (C24)	1.8	0.2	mg/kg wet	2,500		73	40-140	2	25
Tetradecane (C14)	1.9	0.2	mg/kg wet	2,500		75	40-140	2	25
Total Petroleum Hydrocarbons (C9-C36)	26.8	37.5	mg/kg wet	35.00		76	40-140	2	25
Triacontane (C30)	1.9	0.2	mg/kg wet	2,500		75	40-140	2	25

Surrogate: O-Terphenyl	4.02		mg/kg wet	5.000		80	40-140
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Batch DK40842 - 3546

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8100M Total Petroleum Hydrocarbons

Batch DK40842 - 3546

Blank

Decane (C10)	ND	0.2	mg/kg wet
Docosane (C22)	ND	0.2	mg/kg wet
Dodecane (C12)	ND	0.2	mg/kg wet
Eicosane (C20)	ND	0.2	mg/kg wet
Hexacosane (C26)	ND	0.2	mg/kg wet
Hexadecane (C16)	ND	0.2	mg/kg wet
Nonadecane (C19)	ND	0.2	mg/kg wet
Nonane (C9)	ND	0.2	mg/kg wet
Octacosane (C28)	ND	0.2	mg/kg wet
Octadecane (C18)	ND	0.2	mg/kg wet
Tetracosane (C24)	ND	0.2	mg/kg wet
Tetradecane (C14)	ND	0.2	mg/kg wet
Total Petroleum Hydrocarbons (C9-C36)	ND	37.5	mg/kg wet
Triacontane (C30)	ND	0.2	mg/kg wet

Surrogate: O-Terphenyl 4.51 mg/kg wet 5.000 90 40-140

LCS

Decane (C10)	2.0	0.2	mg/kg wet	2,500	80	40-140
Docosane (C22)	2.3	0.2	mg/kg wet	2,500	94	40-140
Dodecane (C12)	2.2	0.2	mg/kg wet	2,500	86	40-140
Eicosane (C20)	2.4	0.2	mg/kg wet	2,500	94	40-140
Hexacosane (C26)	2.3	0.2	mg/kg wet	2,500	92	40-140
Hexadecane (C16)	2.3	0.2	mg/kg wet	2,500	92	40-140
Nonadecane (C19)	2.4	0.2	mg/kg wet	2,500	95	40-140
Nonane (C9)	1.7	0.2	mg/kg wet	2,500	69	30-140
Octacosane (C28)	2.2	0.2	mg/kg wet	2,500	87	40-140
Octadecane (C18)	2.3	0.2	mg/kg wet	2,500	92	40-140
Tetracosane (C24)	2.2	0.2	mg/kg wet	2,500	88	40-140
Tetradecane (C14)	2.3	0.2	mg/kg wet	2,500	91	40-140
Total Petroleum Hydrocarbons (C9-C36)	30.2	37.5	mg/kg wet	35.00	86	40-140
Triacontane (C30)	2.1	0.2	mg/kg wet	2,500	83	40-140

Surrogate: O-Terphenyl 4.75 mg/kg wet 5.000 95 40-140

LCS Dup

Decane (C10)	1.9	0.2	mg/kg wet	2,500	74	40-140	7	25
Docosane (C22)	2.2	0.2	mg/kg wet	2,500	90	40-140	4	25
Dodecane (C12)	2.1	0.2	mg/kg wet	2,500	83	40-140	3	25
Eicosane (C20)	2.2	0.2	mg/kg wet	2,500	90	40-140	5	25
Hexacosane (C26)	2.2	0.2	mg/kg wet	2,500	89	40-140	4	25
Hexadecane (C16)	2.2	0.2	mg/kg wet	2,500	89	40-140	3	25
Nonadecane (C19)	2.3	0.2	mg/kg wet	2,500	90	40-140	5	25
Nonane (C9)	1.7	0.2	mg/kg wet	2,500	67	30-140	3	25
Octacosane (C28)	2.1	0.2	mg/kg wet	2,500	84	40-140	3	25



CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8100M Total Petroleum Hydrocarbons

Batch DK40842 - 3546

Octadecane (C18)	2.2	0.2	mg/kg wet	2,500		89	40-140	3	25	
Tetracosane (C24)	2.1	0.2	mg/kg wet	2,500		85	40-140	4	25	
Tetradecane (C14)	2.2	0.2	mg/kg wet	2,500		88	40-140	4	25	
Total Petroleum Hydrocarbons (C9-C36)	29.0	37.5	mg/kg wet	35.00		83	40-140	4	25	
Triacotane (C30)	2.0	0.2	mg/kg wet	2,500		82	40-140	2	25	

<i>Surrogate: O-Terphenyl</i>	<i>4.63</i>		mg/kg wet	<i>5.000</i>		<i>93</i>	<i>40-140</i>			
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CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.

Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

Notes and Definitions

Z18	Temperature is not within 23 +/-2 °C.
U	Analyte included in the analysis, but not detected
SC	Surrogate recovery(ies) outside of criteria. Reextraction/Reanalysis confirms results (SC).
S-	Surrogate recovery(ies) below lower control limit (S-).
Q	Calibration required quadratic regression (Q).
ICV+	Initial Calibration Verification recovery is above upper control limit (ICV+).
ICV-	Initial Calibration Verification recovery is below lower control limit (ICV-).
IC	Internal Standard(s) outside of criteria. Sample was reanalyzed to confirm (IC).
EL	Elevated Method Reporting Limits due to sample matrix (EL).
D	Diluted.
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
B+	Blank Spike recovery is above upper control limit (B+).
B-	Blank Spike recovery is below lower control limit (B-).
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
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probable Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: GZA GeoEnvironmental, Inc.
Client Project ID: Pawtucket High School

ESS Laboratory Work Order: 24K0082

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

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: RI00002

<http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml>

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

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/ML

ESS Project ID: 24K0082

Date Received: 11/4/2024

Project Due Date: 11/11/2024

Days for Project: 5 Day

Shipped/Delivered Via: Client

1. Air bill manifest present? ☐ No
Air No.: NA

6. Does COC match bottles? ☒ Yes ☐ No ^{11/4/24}

2. Were custody seals present? ☐ No

7. Is COC complete and correct? ☐ Yes

3. Is radiation count <100 CPM? ☐ Yes

8. Were samples received intact? ☐ Yes

4. Is a Cooler Present? ☐ Yes

9. Were labs informed about short holds & rushes? Yes / No ☒ NA

Temp: 5.7 Iced with: Ice

10. Were any analyses received outside of hold time? Yes ☒ No

5. Was COC signed and dated by client? ☐ Yes

11. Any Subcontracting needed? Yes / ☒ No

12. Were VOAs received? ☒ Yes / No

ESS Sample IDs:

a. Air bubbles in aqueous VOAs?

Analysis:

b. Does methanol cover soil completely?

TAT:

Yes / No ☒ NA

13. Are the samples properly preserved? ☒ Yes / No

a. If metals preserved upon receipt:

Date:

Time: By/Acid Lot#:

b. If dissolved metals are requested, are they:

Yes / No Field Filtered

Yes / No To Be Lab Filtered

c. Low Level VOA vials frozen:

Date: 11/4/24

Time: nh By: client

Sample Receiving Notes:

Only sample 6 MeOH covers sample.

COC = TP-3 S-1 @ 1340; Labels = TP13 S-1 @ 1340

14. Was there a need to contact Project Manager?

☒ Yes / No

a. Was there a need to contact the client?

☒ Yes / No

Who was contacted? _____

Date: _____

Time: _____

By: _____

Resolution:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	609815	Yes	N/A	Yes	VOA Vial	DI Water	
1	609816	Yes	N/A	Yes	VOA Vial	DI Water	
1	609827	Yes	N/A	Yes	VOA Vial	MeOH	
1	609833	Yes	N/A	Yes	8 oz jar	NP	
1	609834	Yes	N/A	Yes	8 oz jar	NP	
1	609845	Yes	N/A	Yes	4 oz. Jar	NP	
2	609817	Yes	N/A	Yes	VOA Vial	DI Water	
2	609818	Yes	N/A	Yes	VOA Vial	DI Water	
2	609828	Yes	N/A	Yes	VOA Vial	MeOH	
2	609835	Yes	N/A	Yes	8 oz jar	NP	
2	609836	Yes	N/A	Yes	8 oz jar	NP	
2	609846	Yes	N/A	Yes	4 oz. Jar	NP	
3	609819	Yes	N/A	Yes	VOA Vial	DI Water	
3	609820	Yes	N/A	Yes	VOA Vial	DI Water	
3	609829	Yes	N/A	Yes	VOA Vial	MeOH	
3	609837	Yes	N/A	Yes	8 oz jar	NP	
3	609838	Yes	N/A	Yes	8 oz jar	NP	
3	609847	Yes	N/A	Yes	4 oz. Jar	NP	
4	609821	Yes	N/A	Yes	VOA Vial	DI Water	
4	609822	Yes	N/A	Yes	VOA Vial	DI Water	

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GZA - Providence, RI - GZA/ML

ESS Project ID: 24K0082

Date Received: 11/4/2024

4	609830	Yes	N/A	Yes	VOA Vial	MeOH
4	609839	Yes	N/A	Yes	8 oz jar	NP
4	609840	Yes	N/A	Yes	8 oz jar	NP
4	609848	Yes	N/A	Yes	4 oz. Jar	NP
5	609823	Yes	N/A	Yes	VOA Vial	DI Water
5	609824	Yes	N/A	Yes	VOA Vial	DI Water
5	609831	Yes	N/A	Yes	VOA Vial	MeOH
5	609841	Yes	N/A	Yes	8 oz jar	NP
5	609842	Yes	N/A	Yes	8 oz jar	NP
5	609849	Yes	N/A	Yes	4 oz. Jar	NP
6	609825	Yes	N/A	Yes	VOA Vial	DI Water
6	609826	Yes	N/A	Yes	VOA Vial	DI Water
6	609832	Yes	N/A	Yes	VOA Vial	MeOH
6	609843	Yes	N/A	Yes	8 oz jar	NP
6	609844	Yes	N/A	Yes	8 oz jar	NP
6	609850	Yes	N/A	Yes	4 oz. Jar	NP

2nd Review

Were all containers scanned into storage/lab?

Are barcode labels on correct containers?

Are all Flashpoint stickers attached/container ID # circled?

Are all Hex Chrome stickers attached?

Are all QC stickers attached?

Are VOA stickers attached if bubbles noted?

Initials TD
☒ Yes ☐ No
 Yes / No / NA
 Yes / No / NA
 Yes / No / NA
 Yes / No / NA

Completed

By: [Signature]

Reviewed

By: [Signature]

Date & Time:

11/4/24 1244

Date & Time:

11/4/24 1757

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

Turn Time	5-Day	Rush
Regulatory State	Rhode Island	
Is this project for any of the following?:		
<input type="radio"/> MA MCP <input type="radio"/> RGP		

24K0082

RIDEM ICDEC/RDEC

☒ Limit Checker ☐ Standard Excel

joseph.unsworth@gza.com

TCLP Metals (20x Rule)

[illegible][illegible][illegible][illegible][illegible]

2. All samples are peat (organic soil).

Received By: (Signature, Date & Time)



800.286.2469 | www.fando.com

APPENDIX H

SITE LOGISTICS PLAN

PAWTUCKET HIGH SCHOOL PROJECT

Logistics Plan: ERP 1a | Site Enabling, Demolition, Early Utility Work | February 2025 – April 2025



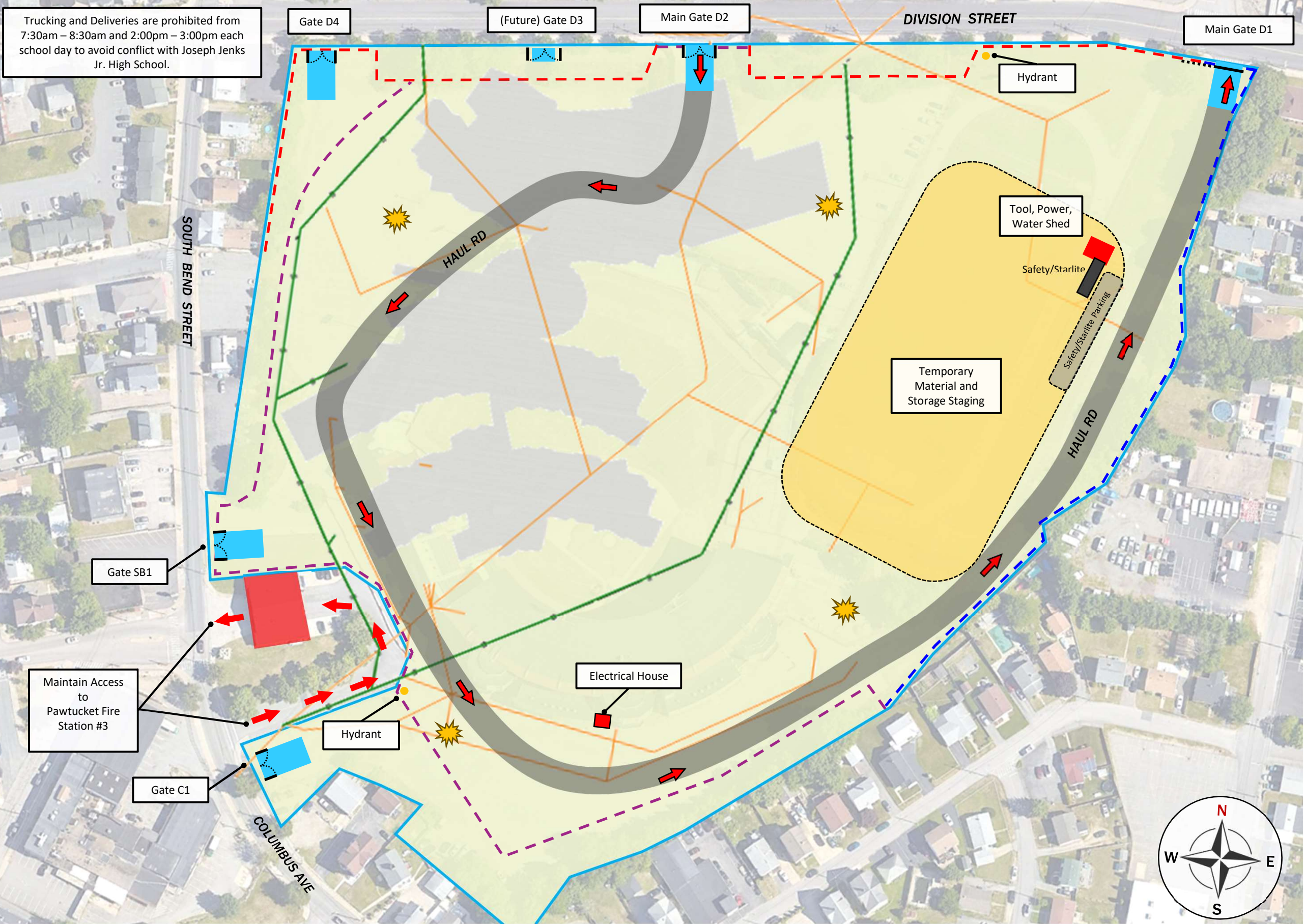
- Property Line
- Existing Fence
- Temp Fence Panels (no scrim)
- New Pounded Fence
- New Scrim
- Traffic Flow
- Swing Gate Access w/ Control Mat
- Sliding Gate Access w/ Control Mat
- Dumpster / Recycling
- Trade Storage Boxes
- SDC Site Offices
- Mobile Light Stand / 120v Power

Shawmut Site Signage:



PAWTUCKET HIGH SCHOOL PROJECT

Logistics Plan: ERP 1b | Demolition Demobilization and Utility Construction | April 2025 – June 2025



- Property Line
- Existing Fence
- Temp Fence Panels (no scrim)
- New Pounded Fence
- New Scrim
- Traffic Flow
- Swing Gate Access w/ Control Mat
- Sliding Gate Access w/ Control Mat
- Dumpster / Recycling
- Trade Storage Boxes
- SDC Site Offices
- Mobile Light Stand / 120v Power

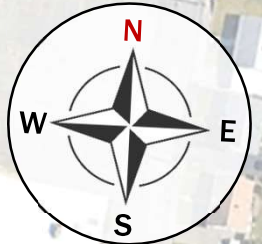
Shawmut Site Signage:



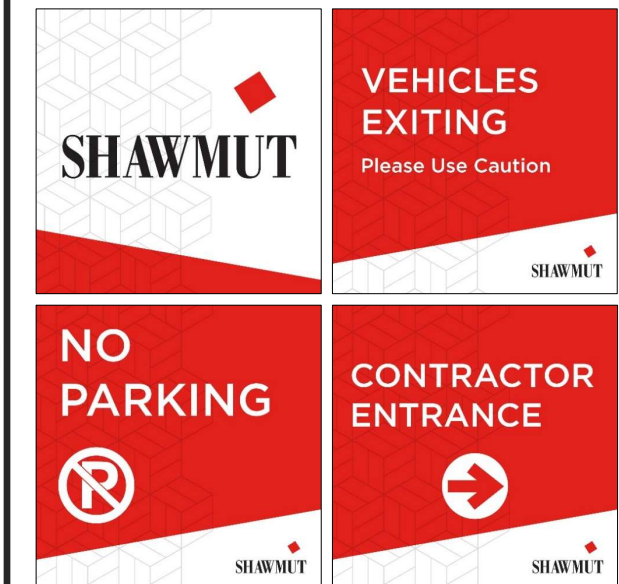
VEHICLES EXITING
Please Use Caution

NO PARKING

CONTRACTOR ENTRANCE



Logistics Plan: ERP 2 | Ground Improvements, Foundation Site Work, Utilities | June 2025 – December 2025



PAWTUCKET HIGH SCHOOL PROJECT

Logistics Plan: ERP 3 | Foundations | January 2026 – May 2026



- Property Line
- Existing Fence
- Temp Fence Panels (no scrim)
- New Pounded Fence
- New Scrim
- Traffic Flow
- Swing Gate Access w/ Control Mat
- Sliding Gate Access w/ Control Mat
- Dumpster / Recycling
- Trade Storage Boxes
- SDC Site Offices
- Mobile Light Stand / 120v Power

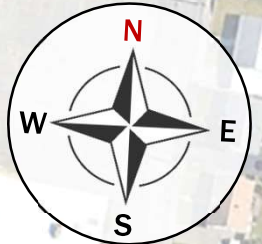
Shawmut Site Signage:

VEHICLES EXITING

Please Use Caution

NO PARKING

CONTRACTOR ENTRANCE



PAWTUCKET HIGH SCHOOL PROJECT

Logistics Plan: ERP 4 | Super Structure | June 2026 – December 2026



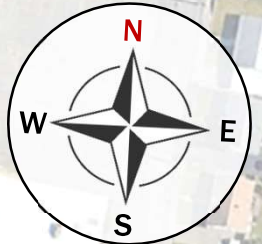
- Property Line
- Existing Fence
- Temp Fence Panels (no scrim)
- New Pounded Fence
- New Scrim
- Traffic Flow
- Swing Gate Access w/ Control Mat
- Sliding Gate Access w/ Control Mat
- Dumpster / Recycling
- Trade Storage Boxes
- SDC Site Offices
- Mobile Light Stand / 120v Power

Shawmut Site Signage:

VEHICLES EXITING
Please Use Caution

NO PARKING

CONTRACTOR ENTRANCE



PAWTUCKET HIGH SCHOOL PROJECT

Logistics Plan: GMP | Exterior and Interior Construction | January 2027 – August 2027



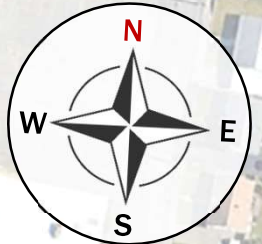
Trucking and Deliveries are prohibited from 7:30am – 8:30am and 2:00pm – 3:00pm each school day to avoid conflict with Joseph Jenks Jr. High School.

- Property Line
- Existing Fence
- Temp Fence Panels (no scrim)
- New Pounded Fence
- New Scrim
- Traffic Flow
- Swing Gate Access w/ Control Mat
- Sliding Gate Access w/ Control Mat
- Dumpster / Recycling
- Trade Storage Boxes
- SDC Site Offices
- Mobile Light Stand
- Leave Out (Trash, Access, Heat, etc.)

Shawmut Site Signage:







PAWTUCKET HIGH SCHOOL PROJECT

Logistics Plan: GMP | Exterior, Interior, Field Construction | August 2027 – May 2028



Trucking and Deliveries are prohibited from 7:30am – 8:30am and 2:00pm – 3:00pm each school day to avoid conflict with Joseph Jenks Jr. High School.

- Property Line
- Existing Fence
- Temp Fence Panels (no scrim)
- New Pounded Fence
- New Scrim
- Traffic Flow
- Swing Gate Access w/ Control Mat
- Sliding Gate Access w/ Control Mat
- Dumpster / Recycling
- Trade Storage Boxes
- SDC Site Offices
- Mobile Light Stand
- Leave Out (Trash, Access, Heat, etc.)

Shawmut Site Signage:



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CONTRACTOR ENTRANCE





PAWTUCKET HIGH SCHOOL PROJECT

Logistics Plan: GMP | Close Out and Final Landscaping | May 2028 – November 3, 2028



Shawmut Site Signage:



PAWTUCKET HIGH SCHOOL PROJECT

Logistics Plan: GMP | Close Out and Final Landscaping | May 2028 – November 3, 2028

