NEW ELEMENTARY SCHOOL

SWAMPSCOTT, MA

NARRATIVES AND REPORTS
EARTH REMOVAL PERMIT APPLICATION
07 APRIL 2022

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1. Introduction and Summary

Introduction

The Town of Swampscott will be constructing a new Elementary School at the current Stanley School site at 10 Whitman Road. The school site is 6.2 acres. The project includes minor improvements on the adjacent Unitarian Universalist Church site to support vehicular and pedestrian connections to the school site. The construction work will be completed through two construction contracts:

1. Early Site Preparation and Demolition Construction Contract
2. Elementary School Construction Contract

Early Site Preparation and Demolition Construction Contract Scope of Work

The Early Site contractor will provide a perimeter fence to secure the site, erosion controls and a stabilized construction entrance. If the Early Site contractor brings a field trailer to the site, it will be placed to limit visibility relative to abutters. The proposed range for work hours for the early site phase is 7 AM to 6 PM, Monday through Saturday. No work shall take place on Sundays and Holidays. It is not expected that the full range of those hours and Saturday work will be utilized on a regular basis. There may be select/intermittent longer-time activities that will require the full range. Work hours and days and required restrictions will be incorporated into the contract documents.

The Early Site Contract will remove topsoil, gravel/ordinary borrow, contaminated soil and rock ledge in preparation for the building construction to follow. Refer to Section 2 of this document for estimated quantities of these materials.

When the contractor is stockpiling earthwork, a maximum earthwork slope of 2:1 (50%) will be enforced.

The following demolition activities will also be performed:

A. Demolition of the existing Stanley School in its entirety. The Swampscott School District will identify any items they wish salvaged.
B. Demolition of all existing site improvements on the Stanley School site, including vehicular paving, pedestrian paving, playground equipment, stairs, benches, fencing, bleachers, select utilities, etc. Refer to Civil Drawing C-100 Site Demolition, Erosion Control and Sedimentation Plan for more information.
C. Removal of existing trees and shrubs include those near the existing school building and areas at the western side of the site. Removals at the site perimeter will be limited to what's required to make vehicular and pedestrian connections to the neighborhood. The contract documents will include a protection plan for existing trees, vegetation and site elements to remain.

Wetland Buffer Zones

There are wetland resource areas within the adjacent Ewing Woods and Unitarian Universalist Church sites. The 100-foot buffer zones for these wetlands extend onto the school site at the southeast and west/northwest areas. The project has submitted a Notice-of-Intent application with the Swampscott Conservation Commission and is in the process of getting the Order of Conditions.

Truck Routing and Temporary Traffic Control Plan

The contractor will be required to follow the truck routes as set by the Swampscott Chief of Police. Refer to the Temporary Traffic Control Plan drawing included in the permit drawing set for additional information.

The contractor will be required to minimize mud and dust being tracked by hauling trucks onto Town streets. The contractor will be required to complete the following tasks:

A. Provide wheel wash operations for all hauling trucks entering Town streets.
B. Use calcium chloride or suitable equivalent for on-site hauling routes to control airborne dust.
C. All truck loads will be covered.
D. Refer to Section 4 of this Narrative for additional information on Dust Control.

Proposed Form of Performance Security

Both the Early Site Preparation and Demolition and the Elementary School Construction Contracts will require the contractors to provide performance bonds as is routine for projects of this size and scope.

Earth Removal Permit Drawings

The following plans are included in this Earth Removal Permit Application:

A. Cover Sheet
B. X-X – Existing Conditions Surveys – School and UU Church Sites
C. EX-1 – Existing Conditions Survey – School Site
D. T-1 – Topographic Plan of Land – UU Church Site
E. C-000 – Civil Notes, Legends and Abbreviations
F. C-100 – Site Demolition, Erosion Controls & Sedimentation Plan
G. C-101 – Site Demolition, Erosion Controls & Sedimentation Plan
H. C-200 – Site Layout and Materials Plan
I. C-201 – Site Layout and Materials Plan
J. C-300 – Site Utility Plan
K. C-301 – Site Utility Plan
L. C-400 – Site Drainage Plan
M. C-401 – Site Drainage Plan
N. C-500 – Site Grading Plan

O. C-501 – Site Grading Plan
P. C-600 – Site Erosion Control & Sedimentation Details
Q. L1.01 – Layout and Materials
R. L3.01 – Planting
S. T1 – Temporary Traffic Control Plan

General By-Laws Questions and Responses

No.	Comment	Response
1	Method of Removal	The site contractor will utilize backhoes to remove topsoil, ordinary borrow and fractured ledge from the project site to prepare the site for the proposed school, parking lot and athletic fields. Most of the excavated material will be placed in hauling trucks and removed from the project site and disposed. Solid ledge will be removed using explosives. The plan is to have an on-site rock crusher to re-use small aggregate as backfill.
2	Type and Location of Structures	The existing Stanley School on site will be demolished by the site contractor
3	Fencing	An initial action item for the site contractor is to install a perimeter fence for security purposes.
4	Hours of Operation	7 AM to 6 PM, Monday through Saturday
5	Truck Routes	The truck routes to be used by the site contractor will be set by the Swampscott Police Department.
6	Duration of Removal Operations	The duration of project earthwork removal is 3 months
7	Area and Depth of Excavations	The project site will have approximately 4 acres in area that will be excavated. The maximum depth of excavation is 12 feet to allow the foundation walls of the proposed school to be constructed
8	Re-Establishment of Ground Levels	The project site will be brought to the grades in the proposed grading plan to build the school, parking lot and athletic fields
9	Steepness of Slopes	The maximum allowed earthwork stockpile slope is 50%
10	Temporary and Permanent Drainage	During the excavation work, the site contractor will not be allowed to increase any stormwater flows in any direction from pre-construction conditions.
11	Disposition of Boulders and Tree Trunks	Some on-site boulders are anticipated to be preserved and incorporated into the landscape architecture as a reference to the natural site features. Remaining boulders will be sent to the portable rock crusher. Any tree trunks will be excavated and removed from the project site.
12	Grading of Slopes and Replacement of Loam	The final grades at the school site will not have any slopes greater that 6%. Uncontaminated loam stripped by the site contractor will be stockpiled and material meeting specification reused for landscaping purposes.
13	Planting of Suitable Cover and Trees	The proposed school site has a landscaping plan the includes trees and shrubs

14	Distance from Excavation to Street and Lot Lines	Soil and rock excavation work will be 100 feet from Whitman Road and abutting properties.
15	Adequate Buffer for Noise, Dust, Aesthetics and Safety	The site contractor will have strict limits set for noise, dust control and protection of perimeter buffer/tree lines. A perimeter fence will be installed for safety reasons.
16	Corrective Measures for Past Removal Operations	There has not been any previous earth removal completed on this proposed school site.
17	Pollution Insurance	We do not believe that earth removal contract will require any pollution insurance.
18	Integrated Pest Management Plan	Attached to this application is an Integrated Pest Management specification which will be enforced under this site construction contract.

Abutting Property Owners Within 300 Feet

Property lines, names and addresses of all abutting property owners within three hundred (300) feet of the project property line are illustrated on the Abutter/Locus drawing included following in this section.

Parcel Ownership

Swampscott Middle School

10 Whitman Rd and 101 Forest Ave, Swampscott, MA

Nitsch Engineering

2. Material Removal and Restoration

Material Removal/Export

The Early Site Preparation and Demolition Construction Contract is projected to remove the following site materials with the estimated approximate quantities in cubic yards (CY):

Topsoil	5,800 CY
Soils	11,100 CY
Rock Ledge*	13,550 CY
Total Export	30,450 CY

* Total estimated rock ledge removal. Figure does not reflect proposed crushing and reuse of materials on-site.

Note quantity of materials are estimated and based on site investigations (test pits and borings) and are subject to change.

Of the estimated amount of soil exports, approximately 5,800 CY has been identified as contaminated material. However, additional site investigations were recently performed to better define the actual areas of contamination and the estimated quantity is expected to decrease.

Contaminated soils will be remediated in accordance with Mass DEP requirements as detailed in the Release Abatement Measure (RAM) Plan. A progress draft of this plan is included under Section 6.

Rock Ledge Removal

Refer to Section 3 for additional information on rock ledge removal procedures.

Rock Crushing

The project is proposing a rock crushing operation using a portable rock crushing plant on site. The benefit of on-site rock crushing is that the processed aggregate produced by the on-site rock crusher can be used as backfill on site, which will reduce both the amount of export material and required import material and reduce the number of hauling trucks on Town streets. As rock ledge is blasted, the rock will be brought to the rock crushing equipment for processing. Once processed, the aggregate can be stockpiled on site for future backfill use.

Locations for the rock crushing plant and operations will be limited to areas that best mitigate potential impacts to site abutters. Noise readings will be taken during rock crushing operations, and a general limit of 85 decibels at the property line will be used to control noise at the project site. At the end of rock crushing operations, the portable rock crushing plant will be removed from the project site.

The work hours for crushing operations will be limited to Monday through Friday, 9:00 AM to 5:00 PM.

For control of dust from crushing operations, the contract documents will require the rock crushing plant be provided with an integrated water spray system. The contractor will also be required to spray water onto the rock material at both the input and output sides of the crusher using a separate on-site water source.

Dust control for truck loading will require water sprays be used on all materials during the loading process.

The Owners Project Manager site representative will monitor crushing operations to enforce operational requirements.

Refer to Section 4 of this Narrative for additional information on proposed Dust Control measures.

Material Restoration/Import

The Early Site Preparation and Demolition Construction Contract is projected to import the following site materials with the estimated approximate quantities in cubic yards (CY):

Topsoil	1,525 CY
Structural Fill, Backfill	34,750 CY
Gravel Borrow *	5,700 CY
Total Import	41,975 CY

* Total estimated gravel borrow import. Figure does not reflect proposed crushing and reuse of materials on-site.

Note quantity of materials are estimated and based on site investigations (test pits and borings) and are subject to change.

3. Rock Ledge Removal

Introduction

This Drilling and Blasting Plan describes the drilling and blasting operations projected to occur during construction of the Swampscott Hadley Elementary School Project located at 10 Whitman Road, Swampscott, MA 01907. The purpose of this Plan is to provide project-specific information concerning drilling and blasting procedures, including the safe use and storage of explosives, and the measures and best management practices (BMPs) that will be implemented to prevent potential adverse impacts to human health, safety, and the environment from the use of explosives during blasting activities. The Demolition Contractor and their Blasting Contractor shall comply with all conditions within this plan. Additionally, during any blasting, Contractor shall ensure full compliance of the Fire Prevention and Suppression Plan for this project.

Drilling and Blasting Procedure

The Site Contractor shall excavate as needed for the foundations and utilities required for the entire project. At that time, all ledges shall be exposed, and a determination shall be made regarding the extent of any blasting that may be required. The Site and Blasting Contractors shall then adhere to the following procedure. This list will be finalized with the Site and Blasting Contractors.

A. Clearly mark all areas of ledge to be drilled and blasted
B. Determine a drilling pattern to maximize efficiency of blasting and minimize the impact on the surrounding neighborhood.
C. Clearly define all neighboring properties that lie within 300 horizontal feet of any potential blast area and employ the services of a professional pre-blast survey company to perform video and narrative survey of all such properties and their present condition.
D. Drilling Contractor shall drill holes for blasting to the minimum depth required to construct the project, but no less than the minimum depth as required by law.
E. Contractor shall provide water to site to minimize air-born dust, and impact on surrounding neighborhood during drilling.
F. Contractor shall notify the Town of Swampscott Fire Department, Planner, and neighbors, once surveys are complete and site is ready for blasting.
G. Contractor shall employ the services of a Swampscott Fire Department detail officer to be present on site, and to monitor all seismic readings during blasting.
H. Contractor shall notify neighbors of dates and times of any planned blasting activities.
I. Prior to blasting ledge adjacent to the 2 wetland areas, the contractor will be required to install hay bales or acceptable alternates around the wetland areas to prevent silt and clay from entering the wetland areas.

Procedures

Site Contractor will contract a qualified, experienced, and licensed blasting contractor that will perform blasting using current and professionally accepted methods, products, and procedures to maximize safety during blasting operations.
Blasting procedures will be carried out according to, and in compliance with, applicable laws and will be closely monitored by Blasting Contractor, Owner's Project Representative, and the required local authorities.

Blasting procedures will be conducted according to the following four basic principles:

A. The blast will produce fractured rock of appropriate dimensions.
B. The blast will prevent/minimize production of fly rock and air blast hazards.
C. The blast will minimize peak particle velocities.
D. The blast will be scaled/sized to minimize over-blasting that can result in excessive excavation and handling of excavated material, and increased drilling, excavation, and backfill costs.

Materials

The Blasting Contractor will determine the specific materials needed for blasting operations. These materials will be included on the hazardous materials list for the project and their use and storage will comply with applicable federal, state, and local laws.

Safety Measures

Safe storage and use of explosive materials will be a top priority during construction. The safety measures discussed in this section are intended to prevent theft and/or vandalism of the explosive materials, protect them against fire, and to prevent personal injury and property damage. These measures are intended as general guidelines.

During Blasting, a Police Detail will be utilized in the event that the activity requires the stoppage of traffic.

Storage Requirements

The Storage of explosives on site will be highly discouraged and avoided, with the exception of those required for the imminent day's work. At a minimum, the following storage requirements will be implemented:

A. Explosives must be stored in an approved structure (magazine);
B. Explosive's storage facilities will be bullet-resistant, weather-resistant, and fire resistant;
C. Magazines sites will be located in remote (out-of-sight) areas with restricted access, kept cool, dry, and well ventilated, and will be properly labeled and signed;

D. Detonators will be stored separately from other explosive materials;
E. The most stringent spacing between individual magazines will be determined according to the guidelines contained in the BATF publication or state or local explosive storage regulations; and
F. Both the quantity and duration of on-site explosives storage will be minimized.

Site Contractor will provide the local Regulatory Enforcement Agencies with a list of dates and locations for the explosives and blasting agent storage facilities to be used on the project at least 7 days before the establishment of such storage facilities.

The Blasting Contractor will handle and dispose of dynamite storage boxes in accordance with relevant federal, state, and local laws.

Personal Safety, Protection of Property, And Notification

All personnel responsible for handling explosives and present in and around blasting sites will be fully informed and trained in applicable safety precautions/procedures. Site Contractor and their Blasting Contractor will ensure project personnel's safety by requiring the Blasting Contractor to provide safety training to its personnel, provide experienced supervisors, use safety equipment, practice good communication, and adhere to notification procedures (including pre-blast and emergency notification). If inclement weather approaches during blasting preparation, the Blasting Contractor will follow the appropriate regulatory procedures and delay or reschedule the blast, as necessary.

The Blasting Contractor shall provide the local Fire Department to identify the number and locations of any seismographs used during blasting.

The Blasting Contractor will use a signaling system to alert workers of an impending blast. The signaling system will be comprised of the following components:

Warning Signal: 5 minutes prior to the blasting signal, a I-minute series of long, audible signals will be sounded at the blast site.
Blasting Signal: 1 minute prior to a blast, a series of short, audible signals will be sounded at the blast site.
All-clear Signal: Following inspection of the blast area, a prolonged, audible signal will be sounded at the blast site.

The Blasting Contractor will post signs explaining the signaling protocol at construction staging areas and other appropriate locations. All active blast zones will have clear warning signs located at key access points to ensure the public does not accidently enter a blast zone. Before blasting, the Blasting Supervisor will make sure the blasting area is clear and access in and around the blasting area will be restricted to prevent people from entering the blasting area. Following detonation, the blasting area will be inspected for undetonated or misfired explosives. The blasting area will also be inspected for hazards such as falling rock and

rockslides. Once the area has been inspected and these issues have been addressed, the "all-clear" signal will sound, and personnel will be able to safely re-enter the blast zone.

Additional safety precautions will be developed to address site-specific conditions at the time of the blast. Special attention will be given to preventing potential hazards in the blasting area resulting from flying rock, destabilized walls, structures, presence of low flying aircraft, dispersion of smoke and gases, etc., as discussed in the Environmental Protection Measures listed below.

Fire Safety

The presence of explosive materials on the project site could potentially increase the risk of fire during construction. As with the entire project, fire risk is of highest concern for the neighborhood and surrounding area. All blasting work will be conducted in compliance with the Project Fire Prevention Plan and all pertinent fire prevention laws and regulations. Special precautions will be taken to minimize this risk, including but not limited to:

A. Prohibiting ignition devices within 50 feet of an explosive's storage area;
B. Properly maintaining magazine sites so that they are clear of fuels and combustible materials, are well ventilated, and are fire-resistant.
C. Protecting magazines from wildfires that could occur in the immediate area.
D. Posting fire suppression personnel at the blast site during high fire danger periods; and
E. Prohibiting blasting during extreme fire danger periods.

Transportation of Explosives

Transportation of explosives will comply with all applicable federal, state, and local laws including Title 49 of the Code of Federal Regulations, Chapter III. These regulations are administered by the USDOT and govern the packaging, labeling, materials compatibility, driver qualifications, and safety of transported explosives.

In general, these regulations require that:

A. Vehicles carrying explosive materials must be well maintained, properly marked with placards, and have a non-sparking floor.
B. Prior to loading a vehicle with explosives, the vehicle must be fully fueled and inspected to ensure its safe operation.
C. Materials in contact with the explosives will be non-sparking and the
D. Load will be covered with a fire- and water-resistant tarpaulin.
E. Vehicles must be equipped with fire extinguishers and a copy of the Emergency Response Guidebook (USDOT).

The Blasting Contractor will also implement the following restrictions on vehicles carrying explosives:

A. Refueling of vehicles carrying explosives will be avoided.
B. Smoking will be prohibited during the loading, transporting, or unloading of explosives.
C. Vehicles carrying explosives will not be parked or left unattended except in designated parking areas with approval of the State Fire Marshall.

The following restrictions will apply to the transport of other items in vehicles carrying explosives:

A. Tools may be carried in the vehicle, but not in the cargo compartment.
B. Detonation devices can, in some cases, be carried in the same vehicle as the explosives, but they must be stored in specifically constructed compartments.
C. Batteries and firearms may never be carried in a vehicle with explosives.
D. Vehicle drivers must comply with the specific laws related to the materials being transported.

Every effort will be made to minimize transportation of explosives through congested or heavily populated areas.

<u>Environmental Protection Measures</u>

A. Construction activities will occur only during the following times, and no work shall take place on Sundays and Holidays; 7:00 a.m. to 6:00 p.m. Monday through Friday and 7:00 a.m. to 6:00 p.m. Saturday.
B. Blasting operations shall commence no earlier than 7:00am and cease before 4:00pm.
C. Blasting will be conducted between 9:00am and 4:00pm. Blasting shall not take place on Saturdays, Sundays, and all observed Holidays.
D. In accordance with state and local laws, no blasting shall occur within 250 feet of a residence or other occupied structure that has not first has a pre-construction blast survey conducted.
E. Warning audible within the Blast area will be used. All persons within the preconditions survey area will be informed of the blasting signals, and signs will be posted depicting the warning signals.
F. Access to the blasting area shall be regulated to protect the public from the effects of blasting. Access to the blasting area shall be controlled to prevent unauthorized entry before each blast and until the perimeter's authorized representative has determined that no unusual circumstances exist after the blast. Access to and travel in or through the area can then safely resume.
G. Areas in which charged holes are awaiting firing shall be guarded, barricaded, and posted or flagged against unauthorized entry.
H. All blasts shall be designed to use existing relief either natural or previous blast hole.
I. All stemming shall be the minimum as specified using clean, dry 3/8" crushed stone.

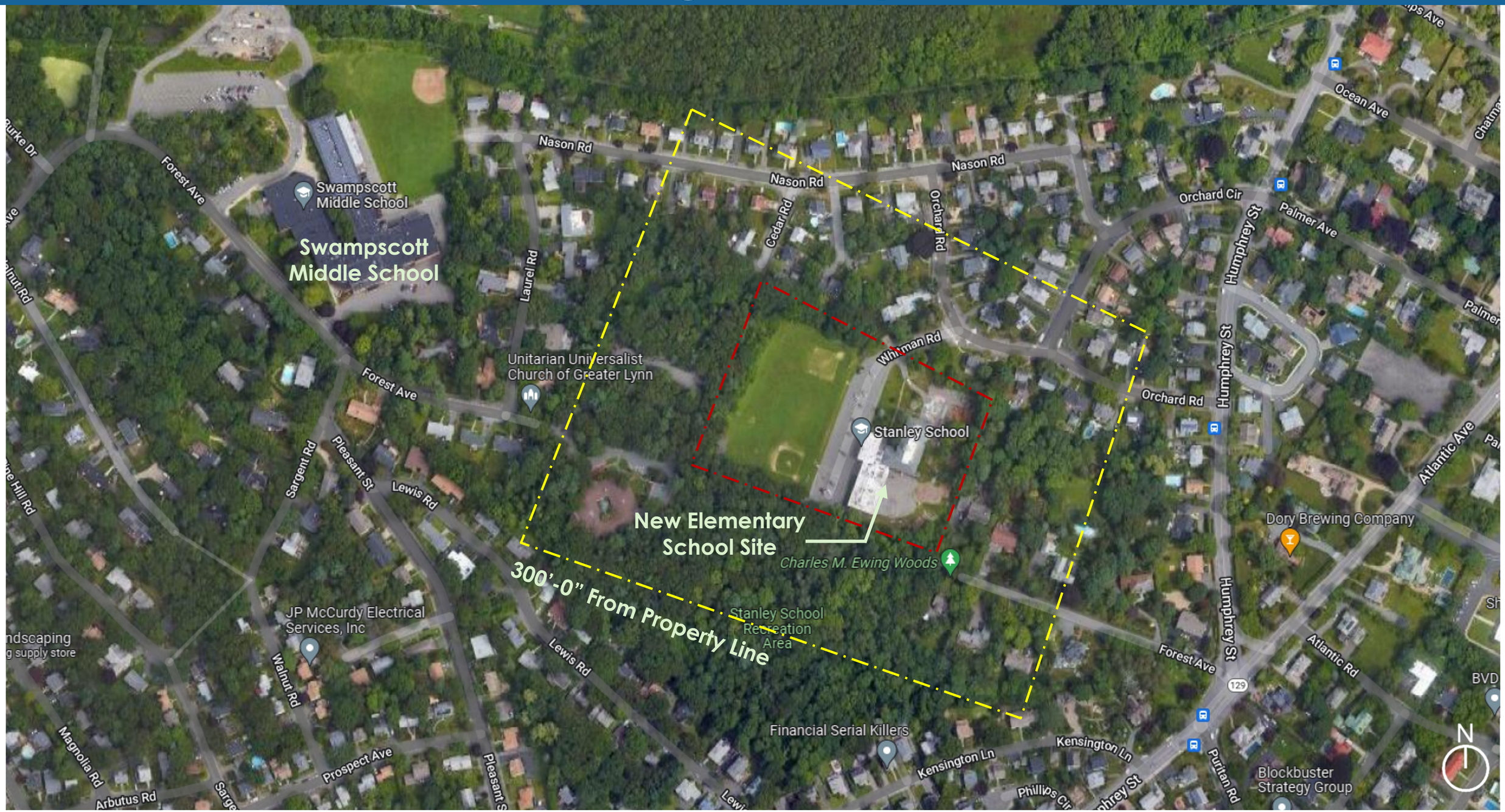
J. Blasting mats will be used to prevent or reduce the number of rock particles thrown into the air following detonation.
K. Prior to any blasting, Contractor will review all mapping, including the locus and pre-blast report completed for the project to identify all structures within 250 feet of blasting zone.
L. Blasts will be designed to minimize ground vibrations that can cause slope instability and impact wells and springs
M. Swampscott Fire Department will be present at all times explosives are on site.

Since blasting for this project will not entail large blasts, blasts will be designed to minimize vibrations, and blasting is not expected to occur in close proximity to occupied structures, monitoring of blast vibration is recommended and shall be conducted by the local Fire Department. Blast vibration will be monitored to determine the actual levels experienced and limits for blast vibration will be established as necessary to minimize annoyance to the affected residents and to ensure that nearby structures are not damaged.

Pre-Blast Survey Extents

Following in this section is a graphic indicating the extents of abutting and nearby properties that are within a 300'-0" distance from the school construction site as referenced in the Drilling and Blasting procedures above.

Pre-Blasting Survey Extents



4. Dust Control

The procedures and sequences for the dust control associated with this project are as follows:

1. Existing Pavement shall remain in place on site during Demolition to reduce dust and dirt on vehicle tires.
2. Demolition Contractor to keep work sprinkled with water, using hoses, to minimize dust.
3. Demolition Contractor to utilize available water hydrant at south end of site adjacent to Ewing Woods.
4. Demolition Contractor will provide 1.5" fire hose manned by laborers throughout take down of building, with a constant flow of water.
5. Dust control will be conducted daily. Water sprays will be used on exposed soil, demolition, excavations and on excavated materials during loading to reduce emissions. Trucks hauling material from the site will be covered with tarpaulins or other appropriate covering that can be securely fastened. Trucks will also have sealed tailgates preventing deposition of material onto public ways.
6. Dirty Tires shall be rinsed on site prior to exiting onto town roads.
7. Silt socks shall be used to protect nearby catch basins.
8. Precautions shall be taken in winter months to minimize icing on streets and neighboring properties.
9. Throughout the project, the contractor shall make all reasonable efforts to minimize dust on the street, including periodic sweeping and cleaning as may be needed.

5. Integrated Pest Management Plan

The Integrated Pest Management Plan and sequence that will be followed for the development will be approximately as follows:

A minimum of 21 days prior to demolition, hire a licensed, reputable Pest Control Operator to assess and survey the property to identify pest and rodent activity and develop a Pest Control Plan in compliance with all Massachusetts Sanitation Codes, and as needed to implement a pre-demolition plan.

Provide the Health and the Building Departments with a copy of the pest control plan those details strategies to eliminate pest activity on site and prevent off-site migration of pests, as follows:

A. Full site assessment and survey detailing areas detailing evidence of general pest activity on site, if any.
B. Methods for eliminating activity prior to demolition including rodenticides, traps, etc. used as well as dates of service.
C. Plan for preventing pest migration off site during demolition and construction - baiting, trapping, perimeter trapping, and/or other methods as well as proposed frequency of service.
D. The use of anticoagulant pesticide agents shall be prohibited.
E. Last pest control site visit shall be no later than two weeks prior to demolition.

The pest control operator should continue to monitor the demolition site for the duration of the project and take whatever action necessary to control the pest infestation.
The pest control operator shall file a report with the Health Dept. every two weeks during demolition and then at 4–6-week intervals during construction, or at other intervals at Health Dept. discretion, summarizing his or her findings.

If new rodent complaint issues arise in the general area (surrounding neighborhood) after development begins, licensed pest control operator shall visit site of complaint and service affected property as needed on request of the Director of Public Health."

Following in this Section is the Integrated Pest Management specification in accordance with the Town of Swampscott General By-Laws, Section 17. These specifications will be integrated into the Early Site Preparation and Demolition Construction Contract Documents as requirements for the Contractor to satisfy pest management requirements.

SECTION 015716

INTEGRATED PEST MANAGEMENT

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 GENERAL REQUIREMENTS

A. This Section specifies rodent control and general pest control requirements within construction areas, laydown areas, dump areas, and bordering areas. This work is to be performed prior to demolition, excavation, and site preparation and also throughout construction, so that rodents (rats and mice) and other pests (such as raccoons) do not disperse from or infest construction areas.

B. The Contractor shall develop and implement an integrated pest management (IPM) approach. As part of that approach, the Contractor shall maintain a cooperative dialogue with appropriate agencies and management representatives of neighboring properties. This IPM effort shall consist of an Initial Program that achieves control of existing rodents prior to any site disruptions, followed by a Maintenance Program that ensures continued control throughout the duration of construction and site occupancy.

C. In addition the rodent control tasks described in this Section, the Contractor shall also respond to other pest control needs when directed by the Architect. .

D. The Contractor is responsible for the phasing requirements indicated on all other Contract Drawings and Specification Sections.

1.3 SUBMITTALS

A. The CONTRACTOR shall furnish all supervision, labor, materials, and equipment necessary to accomplish the monitoring, trapping, pesticide application, and pest removal components of the IPM program.

B. The IPM Plan will include, but not be limited to, the following sections:

1. Name and contact information for the Pest Control Contractor and the IPM Team members;
2. Provisions for utilizing environmentally friendly products as a first resort before using pesticides or other potentially harmful products;
3. Company and employee qualifications/certifications to perform Pest Management Control activities, including copies of Pest Applicator Licenses and Certifications;
4. Tolerance thresholds or definitive goals for each project specific pest of concern;
5. Project specific documentation including but not limited to pest logging and reporting procedures, complaints and reports from the public, staff, employees, tenants, and MBTA personnel, as applicable;
6. Training protocols for Pest Control Contractor and any other applicable personnel;
7. Proposed frequency of inspections, visits, and activities to be performed;
8. Summary of how the effectiveness of the program will be evaluated and documented;
9. Proposed methods, materials, quantities, and equipment for service;
10. Proposed methods and schedule for monitoring and detection;
11. When applicable, the date of planned initial pesticide application and continuing service schedule for each activity location (including duration and frequency);
12. Preventative measures and maintenance that will be undertaken prior to the start of work and during construction which can include evaluation of the laydown area that may contain construction materials, construction debris, and trash;
13. An action plan for any existing infestations that is tailored to the specific species and site;
14. A site reconnaissance and evaluation of the potential effects of pest displacement and migration associated with the work and approaches for mitigation of those effects;
15. Emergency 24-hour contact information;
16. Manufacturer's application instructions for the approved toxicants used on each site;
17. Current, updated Safety Data Sheets (SDS) for any and all approved pesticides or other hazardous substances and chemicals that are, or may be, used in association with implementation of the IPM Plan;
18. Pesticides are not to be stored at construction sites without express pre-approval by the Engineer.

If required/requested then the IPM should include a description of temporary storage locations for pesticides prior to application, including safety, security and containment of these locations;

19. Sketch plan showing the minimum pest monitoring radius, specific locations proposed for baiting and trapping, and locations of schools, daycare facilities, hospitals, and fast food establishments and wetland resource areas at, or adjacent to, the construction site. If such school, day care or school age child care program facility is located at or adjacent to the construction site, the CONTRACTOR is responsible for adhering to all components of 333 CMR 14.00 Protection of Children and Families from Harmful Pesticides including submitting proof to the Engineer that standard written notification requirements were met.

20. Inspection Report template. At a minimum the template will include the name of the location treated, dates being covered, name(s) of Applicators, amount and types of pesticides used during the reporting period, determinable results, complaints and resolution summary, and any other comments or issues;

21. Operations Log template designed to document, at a minimum, the following methods of control and applications:

    a) Name and Type of Control (cultural, mechanical, biological and/or chemical);
    b) Date of Installation or Application
    c) Place of Installation or Application;
    d) Name of Product;
        i. If biological/chemical include:
            - Trade name, brand name or registered name;
            - Current SDS;
            - The EPA registration number of the pesticide;
            - The amount of pesticide applied;
            - The target pest or infestation (rodents/mammals, flying insects, crawling insects, birds/bats, other, etc);
    e) Method of application;
    f) The certified or licensed persons who participated in the planning and execution of the application;
    g) Accidents or incidents resulting from use of a pesticide that caused pollution;
    h) Any illnesses or injuries caused by or suspected to have been caused by pesticides and reported to the applicator; and
    i) Current, updated SDS for all pesticides approved for use.

C. The CONTRACTOR will submit Reports on IPM activities to the Engineer after each inspection.

D. The CONTRACTOR will submit copies of the Operations Log to the Engineer upon request.

E. The IPM Plan will be maintained on the Construction Site and will be available for reference or upon request. The CONTRACTOR is responsible for updating the IPM Plan to reflect any changes or modifications to the pest management approach or techniques. Any changes in approach or techniques must be submitted to the Engineer for review and authorization before implementation. In addition to the IPM Plan, Post-inspection Reports and Operations Logs must also be kept on Site with the IPM and available for reference or upon request.

F. A Health and Safety Plan (HASP) addressing IPM activities that conforms to state, local and federal regulation to the Engineer a minimum of 10 days prior to initiating work.

G. The CONTRACTOR shall submit proof to the Engineer of compliance with the requirements of Massachusetts General Law Chapter 132 (B)(6B). Chapter 132(B)(6B) subsections pertain to the provision of notices to the Department, and various elected officials and municipal administrators (including posting in the newspaper) at least 48 hours prior to spraying releasing, depositing, or applying pesticides; the content of the notice and timing of submittals; and personal protective equipment (PPE) and SDS requirements. In addition, the Conservation Commission may need to be notified, if applicable if application is in a wetland resource area.

H. The CONTRACTOR will demonstrate that the CONTRACTOR has appropriate insurance coverage as required by state and federal regulations and including financial responsibility requirements identified in 333 CMR 10.13 and will provide documentation to the Engineer upon receipt of Notification to Proceed.

I. The CONTRACTOR will assemble all records of inspections, evaluations, planning, complaints, execution and monitoring logs, and submit the complete record to the Engineer at the completion of the project.

1.4 QUALIFICATIONS

A. A qualified pest control Non Subcontractor shall perform this Work at all times in accordance with the following minimum standards and as acceptable to the Architect:

1. The pest control Non Subcontractor and key personnel shall have experience with commercial and residential accounts and construction and demolition projects; have experience and technical training in vertebrate pest management and integrated pest management; have experience with various rodent control techniques, equipment, and strategies; have training and experience with insect control; and have knowledge of and experience with techniques to reduce non target hazards.
2. The supervisor shall be licensed and certified by the Massachusetts Pesticide Bureau in General Pest Control (category 41). The supervisor shall have specific training and experience in vertebrate pest management, commercial rodent control, general pest control, and integrated pest management.
3. Applicators shall be licensed by the Massachusetts Pesticide Bureau and certified in General Pest Control (category 41). Applicators shall have specific training and experience in commercial rodent control and integrated pest management.
4. The supervisor and applicators shall have up-to-date knowledge of pest control techniques as obtainable through national or regional pest control associations and attendance at training seminars.
5. The supervisor and applicators shall have experience and ability in record keeping and data management.
6. The supervisor and applicators shall possess communication skills (both oral and written) adequate to ensure effective communication with residents and businesses.

1.5 COORDINATION

A. Do not proceed with this Work until written release is issued by The Architect.

B. Establish an Initial Program to control rodents before field mobilization begins for the demolition and construction work designated on the Plans and with adequate timing to achieve control before environmental disruptions and site work begins. Provide a Maintenance Program until construction is completed and all equipment and materials are removed, as determined by the Architect.

C. Perform the Work according to the preliminary schedule described in this Contract and as revised by the Architect. Estimated durations and start dates may be changed by the Architect to suit changes in construction schedules and field conditions. The Work could potentially require performance any day of the week and any hour of the day or night, regardless of weather, as authorized by the Architect.

D. Perform this Work in such a manner that toxicants or other control tools do not pose a hazard to persons, domestic animals, or non-target wildlife.

1.6 PERMITS

A. Obtain and maintain in coordination with the Architect appropriate permit(s) from city, state or federal agencies for pest control activities associated with this Work.

B. Obtain and maintain in coordination with the Architect all right-of-entry permits required for the performance of this Work. This includes all utilities and private properties to which entrance is required, as approved by the Architect.

1.7 PRODUCTS

A. Furnish and use only pesticide formulations registered by the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Food and Agriculture, where appropriate according to label directions and as acceptable to the Architect.

B. Furnish and use devices and supplies (e.g., traps and bait stations) to facilitate the management and effectiveness of the pest control program, where appropriate according to label directions and as acceptable to the Architect.

1.8 MEETINGS

The Pest Control Contractor will

A. Meet with the Architect weekly to discuss pest control activities.

1.9 SURVEY

A. Before baiting begins, conduct a thorough baseline survey of the proposed construction area and accessible or observable bordering areas and record signs of rodent activity and sanitation deficiencies. Closely inspect all embankments, edge areas, and properties within and adjoining the construction area. Maintain survey records in the manner described herein.

B. Thoroughly inspect construction areas and accessible or observable bordering areas designated on the Plans, and any nearby areas designated by Architect, for rodent activity and sanitation deficiencies weekly throughout the duration of this Contract and in accordance with the work schedule. This weekly survey shall include every premises within the areas designated. Perform one of these surveys every other month during dark (between one hour after sunset and one hour before sunrise), as acceptable to the Architect. Maintain inspection records in the manner described herein.

C. Plan the control program and allocate resources based on survey and inspection data. Pest control areas designated on the Plans are approximate and the Contractor shall extend services beyond those areas as required based on survey and inspection results.

2.1 MATERIALS

A. Industry standard toxicants in rodent baits can be utilized and include but not limited to the following:

1. Talon;
2. Quintox;
3. Rozol; or
4. Zinc Phosphide.

Should other products be proposed for use, these products should be documented in the IPM plan for ENGINEER approval pursuant to Section 1.6(B) of this specification.

B. All Pest Control Contractor vehicles must be state approved commercial vehicles, in good working condition and in compliance with U.S. DOT and Commonwealth of Massachusetts vehicle regulations.

C. Any and all personal protective equipment (PPE) required for use must be supplied by the Pest Control Contractor and the Pest Control Contractor's employees. At a minimum the Pest Control Contractor must supply the proper PPE as identified by the safety precautions listed in the Safety Data Sheet for the products used.

D. All labels and signage must comply with all applicable state and federal regulations concerning contents

and associated warnings with products.

PART 3 – EXECUTION

3.1 IPM BASELINE SERVICES

A. Perform and document initial site assessment (see Section 3.2);
B. Develop and submit IPM Plan to Engineer for review and comment;
C. Implement IPM Plan;
D. Prevent pest infestations by identifying and correcting conditions and activities that have the potential to cause pest infestation; and
E. Eliminate pest infestations by monitoring, trapping, applying pesticides and physically removing pests.

3.2 INITIAL SITE ASSESSMENT

Prior to preparing the IPM plan and at least 10 days prior to the starting date of the contract, the CONTRACTOR will complete a thorough, initial inspection and assessment of the site. The inspection will encompass the areas within the limits of work (Zone 1) and a distance of no less than 100 feet beyond the limits of the work (Zone 2). The CONTRACTOR will identify present and/or suspected pest infestations, as indicated by live sightings and the presence of droppings, burrows, nests, and tracks. The CONTRACTOR will also identify preventative controls that can be implemented at the site, with the goal of eliminating pest access to food, water, and areas of harborage and mitigating the potential effects of pest displacement and migration associated with planned construction work. These preventative controls should seek to eliminate the following:

A. Dense vegetation, particularly against structures and fences;
B. Grass and weeds that exceed 12" in height;
C. Debris and clutter that is stored less than 12-18" away from a structure and less than 6-8" off the ground;
D. Structural deficiencies, such as gaps, cracks and crevices;
E. Standing water, condensate, and leaks;
F. Exposed garbage; and
G. Refuse containers that are not water tight or pest proof.

If the CONTRACTOR identifies or suspects a pest infestation at the site(s), a thorough site inspection by a Pest Control Contractor must be conducted and pest monitoring devices and/or traps must be installed in and around the perimeter of the site. These devices may include non-lethal devices, such as tracking tunnels, motion activated cameras, wax blocks, live trap stations, UV light, and hair traps; and, when applicable, lethal devices, such as kill traps.

3.3 INTEGRATED PEST MANAGEMENT PLANS (IPM Plans)

The CONTRACTOR will establish an IPM Plan that is tailored to each Construction Site after conducting an initial assessment of the site(s). The IPM Plan will establish management, preventive maintenance and treatment procedures for achieving long term, environmentally sound pest control. The IPM Plan will include information listed in Section 1.6 B, with a focus on:

A. IPM Team;
B. Company and employee qualifications/certifications/licenses to perform Pest Management services;
C. Training protocols for CONTRACTOR and Applicator personnel;

D. Tolerance thresholds for specific pests of concern;
E. An action plan for any existing infestations that is tailored to the specific species and site;
F. Preventative measures that will be undertaken prior to the start of work;
G. The type and frequency of preventative maintenance;
H. Plan for the laydown area that may contain construction materials, construction debris, and trash;
I. Addressing the potential effects of pest displacement and migration associated with the work and approaches for mitigation of those effects;
J. Frequency and time of day of inspections and activities proposed;
K. Pest logging and reporting procedures, including complaints and reports from the public, staff, employees, tenants, and MBTA personnel, as applicable;
L. Provisions for using environmentally friendly products as a first resort before using pesticides or other harmful products; and
M. Quality assurance/quality control (QA/QC) protocols.

D. Designate specific locations as lunch and coffee break areas to prevent random disposal of garbage and trash. Keep those areas free of litter and garbage, and provide refuse containers. Keep refuse containers upright with their lids shut tight.

E. Have all refuse containers described in 2.01 A emptied daily to maintain site sanitation. If a dumpster is used as described in 2.01 B, empty it at least weekly and keep the area under and around it clean.

3.4 SITE INSPECTIONS AND REPORTS

A. The CONTRACTOR will complete regular site inspections at the frequency and time specified in the IPM Plan.
B. The inspections will encompass the areas within the limits of work (Zone 1) and a distance of no less than 100 feet beyond the limits of the work (Zone 2).

C. The inspections will document, but not necessarily be limited to, the following:

1. The number and location of living and dead pests;
2. Pest indicators, such as droppings, burrows, nests, tracks, and gnaw marks;
3. The species of pest and stage of life cycle;
4. Current monitoring devices and traps, including the replacement of bait, monitoring devices and traps; and
5. Adherence to preventative maintenance and control measures as defined in IPM Plan.

D. The CONTRACTOR will maintain copies of assessment and inspection records on site with the IPM Plan and provide them to the Engineer upon request.

E. The CONTRACTOR will also monitor complaints and reports from the public, staff, employees, tenants, and MBTA personnel.

3.5 EVALUATION

The CONTRACTOR will complete an evaluation following each site inspection to measure the effectiveness of pest reduction efforts and submit a report to the Engineer after each evaluation. The evaluation shall measure and examine the following:

A. Any changes between current and previous site inspections and reports, including:
   1. Number of pests
   2. Species
   3. Stage of life cycle

4. Location
5. Access to food, water, and harborage
6. Site access

B. Compare pest presence and activity to tolerance thresholds as defined by IPM Plan;

C. The effectiveness of current pest control methods;

D. Current public health announcements about pests of concern and best management practices recommended;

E. Complaints and reports from the public, staff, employees, tenants, and MBTA personnel of pests and public nuisance and adverse episodes of chemicals/toxicants used; and

F. The necessity and opportunities for additional of alternative pest control measures and changes to the IPM Plan.

G. If chemical applications are being used, assess whether a change to a non-chemical application would be effective.

3.6 CHANGES TO THE INTEGRATED PEST MANAGEMENT PLAN(S)

A. If an infestation is present and there is no reduction in the number of pests between three consecutive inspections or the Engineer notifies the CONTRACTOR of unacceptable pest management issues at the site, the CONTRACTOR will make changes to IPM Plan. Required changes to the plan may include, but are not limited to, the following:

1. More frequent and detailed inspections;
2. Night inspections to fully understand the extent of the infestation;
3. Additional administrative, cultural, physical and biological controls that are targeted to the specific pest and its life cycle, such as:
    a. Increased monitoring,
    b. Increased preventative maintenance to minimize access to food, water, and harborage,
    c. Solicitation of complaints and reports from the staff, employees, tenants, and MBTA personnel, and
    d. The training of staff, employees, tenants, and MBTA personnel in best practices; and
4. An escalation in treatment that may include, if approved, the use of pesticides and other chemicals (see Section 3.7-3.9)

B. The CONTRACTOR will submit the revised IPM Plan to the Engineer for review and comment.

C. If no infestation is present and pests are consistently below the tolerance threshold(s), the CONTRACTOR, in consultation with the Engineer, may make reasonable changes to the Integrated Pest Management Plan that may reduce the frequency or intensity of inspections, preventative maintenance, and administrative, cultural, physical and biological controls.

3.7 TREATMENT

A. The CONTRACTOR will use administrative, cultural, physical and biological controls to attempt to control areas of known or suspected pests prior to chemical application of pesticide or other chemical as approved. Such controls shall include good housekeeping of debris accumulating containers, closure or coverage of trash and debris containing receptacles.

B. The CONTRACTOR will be responsible for maintaining the Operations Log for each type of control

and location and/or site building or site specified in this contract. The Operations Log will be kept on-site and maintained on each visit by the CONTRACTOR. Each log or file becomes part of the final IPM Plan submitted at the end of the project. Information to be contained in the Operations Log was described in Section 1.6 (B) (19) above.

C. Any and all pesticides to be used must be approved for use by the US EPA and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the Pesticide Control Board and the Engineer prior to use.

1. Infestation:

a) If infestation has been found, document time, date and location of observation/finding in the IPM Operations Log. Also document immediate actions taken to prevent spread or contact with infestation including worksite restrictions.
b) Use less-intensive application starting with physical or mechanical traps if feasible.
c) If chemical application is warranted, post warning signs adjacent to the area of application to help avoid human or mammal exposure.
d) Any chemical application must be pre-approved for use by the Massachusetts Pesticide Control Act, FIFRA and Engineer.
e) Apply materials in strict accordance with EPA approved label directions and the Massachusetts Pesticide Regulations.

3.8 SPECIAL PROVISIONS FOR RODENT CONTROL

A. The CONTRACTOR will be responsible for adhering to the following minimum provisions for the control of rodent populations.

B. Apply materials in strict accordance with EPA-approved label directions, and Massachusetts Pesticide Regulations.

C. Implementation:

1. Indoor Trapping:

a) If rodent control will be accomplished with trapping devices only, all such devices will be concealed out of the general view and in protected areas so as not to be affected by routine cleaning and other operations.
b) Trapping devices will be checked on a schedule approved by the Engineer.
c) The CONTRACTOR will be responsible for disposing of all trapped rodents and all rodent carcasses in accordance with all local, state and federal regulations.

2. Use of Rodenticides:

a) When rodenticides are deemed essential for adequate rodent control, the CONTRACTOR will obtain approval of the Engineer prior to making any rodenticide treatment.
b) All rodenticides, regardless of packaging, will be placed either in locations not accessible to children, pets, wildlife, and domestic animals, or in EPA-approved tamper-resistant bait boxes.

c) Rodenticide application outside buildings and construction sites will emphasize the direct treatment of rodent burrows wherever feasible.

d) First Application – Blitz: Apply immediately after execution of the contract and written authorization by the Engineer. Use zinc phosphide or other approved toxicant/pesticide with suitable bait placed to attract the greatest number of rodents. The blitz application shall be applied prior to all other work except survey.

e) Anticoagulants, such as Warfarin, must be applied in accordance with manufacturer's standard recommended practice and as follows:
   i. Place anticoagulant in sealed, moisture resistant containers such as glassine, paraffin blocks, or comparable protective material, and distribute as recommended;
   ii. Place on a moisture-resistant plate or pan, not in direct contact with earth, concrete, or masonry; protect from moisture, rain, snow and dust by bait stations or other suitable covers;
   iii. Inspect anticoagulant bait a minimum of once each week and replenish with fresh material when necessary.

f) Maintain accurate records of placement, type and volume of rodent baits applied.

3. Use of Bait Boxes:

   a) All bait boxes will be maintained in accordance with EPA regulations, with an emphasis on the safety of non-target organisms. The CONTRACTOR will adhere to the following 5 points:
      i. All bait boxes will be placed out of the general view, in locations where they will not be disturbed by routine operations.
      ii. The lids of all bait boxes will be securely locked or fastened shut.
      iii. All bait boxes will be securely attached or anchored to ground, wall, or other immovable surface, so that the box cannot be picked up or moved.
      iv. Bait will always be secured in the feeding chamber of the box and never placed in the runway or entryways of the box.
      v. All bait boxes will be labelled on the inside with the CONTRACTOR's business name and address, and dated by the CONTRACTOR's technician at the time of installation and each servicing.

4. Maintenance

   a) Within 1 week after initial application, the CONTRACTOR will institute a program of maintenance to rid structures and adjacent areas, within limits of or in areas adjacent to this contract, of rodents and prevent their migration to abutting properties. Maintenance will continue for the duration of the contract.
      i. Apply anticoagulant in the required percent mixture with suitable cereal in structures and torpedo form in open areas;
      ii. Renew toxic bait semi-monthly throughout maintenance period and as required by the Massachusetts Pesticide Bureau Requirements.

5. Cleanup

   a) Remove carcasses daily and dispose of properly in accordance with all local, state and federal laws.

b) Upon completion of operations at the site, remove remaining exposed bait or anticoagulant packages and dispose of properly in accordance with all local, state, and federal laws.

3.9 SPECIAL PROVISIONS FOR OTHER PESTS

A. If evidence is found, provide detailed, site-specific recommendations to adequately suppress the presence of the following pests. All plans and proposals to manage these, or other pests, will be submitted in writing to the Engineer for review and approval before implementation.

1. Populations of opossum, skunks, raccoons, feral cats, squirrels, coyotes and other small mammals.
2. Populations of potentially infesting species (flies, mosquitoes, bees, hornets, wasps, roaches) within the property boundaries including nests of stinging insects.
3. Birds and bats.
4. Other pests identified in the Integrated Pest Management Plan that relate to specific site conditions.

B. Small Mammals: The CONTRACTOR will be responsible for adhering to the following minimum provisions for the control of populations of nuisance mammals:

1. The CONTRACTOR will use non-pesticide methods of control wherever possible.
2. The CONTRACTOR shall develop and propose a barrier system that would prevent mammals access to the site. Such proposal will be submitted to the Engineer for approval before implementation.
3. The CONTRACTOR shall deploy traps when a barrier system is impracticable or evidence that the barrier system is not effective.
4. The CONTRACTOR shall identify and report areas of harborage and then create a plan of action to mitigate those areas.

C. Insects: The CONTRACTOR shall be responsible for adhering to the following minimum provisions for the control of insect populations including nests:

1. The CONTRACTOR shall use non-pesticide methods of control wherever possible.
2. The CONTRACTOR shall apply all pesticides as "crack and crevice" treatments only, defined in this contract as treatments in which the formulated pesticide is not visible to a bystander during or after the application process.
3. Application of pesticides to exposed surfaces or as space sprays ("fogging") shall be restricted to exceptional circumstances where no alternative measures are practical.
4. The CONTRACTOR shall obtain approval of the Engineer prior to any application of pesticide to an exposed surface or any space spray treatment.
5. No surface application or space spray shall be made while personnel are present.
6. The CONTRACTOR shall take all necessary precautions to ensure employee safety, and all necessary steps to ensure the containment of the pesticide to the site of application.
7. Bait formulations shall be the standard pesticide technology for cockroach and ant control, with alternate formulations restricted to unique situations where baits are not practical.
8. Sticky traps shall be used to guide and evaluate insect control efforts wherever necessary.

D. Birds and Bats: The CONTRACTOR shall be responsible for adhering to the following minimum provisions for the control of nuisance bird and bat populations and their habitats:

1. The CONTRACTOR shall identify areas where birds and bats may have nested or where droppings have been observed
2. The CONTRACTOR shall develop plans to mitigate these pests and submit them to the Engineer for approval before implementation.
3. The CONTRACTOR is responsible for the proper cleanup and disposal of bird and bat droppings and guano.

3.10 MAINTENANCE

A. The CONTRACTOR shall perform routine pest control services that do not adversely affect human health or worker productivity during the regular hours of operation on the site.

B. The CONTRACTOR shall review and assess control techniques for the site on a weekly basis. Review and assess the devices being used and the chemical application performed and their results. Document any change in controls or additional controls used to address pests. Continue to evaluate possible management alternatives including cultural, engineered, biological, and chemical approaches if chemical applications are used, assess whether a change to a non-chemical application would be effective. Make a brief report to the Engineer after each review and assessment. The CONTRACTOR shall not make any changes to Pest Management Practices or pesticides without prior review and approval by the Engineer.

C. When it is necessary to perform work outside of the regularly scheduled service time set forth in the IPM Plan, the CONTRACTOR shall notify the Engineer at least 1 day in advance.

D. The CONTRACTOR shall advise the Engineer of any practices at the site that are contributing to pest management problems.

E. The CONTRACTOR will respond within 1 day to any notifications by the Engineer of pest management issues at the site or sites and will recommend a plan of action, in the form of a revised IPM Plan, to address issues observed for review and approval by the Engineer.

3.11 CLEANUP

A. The CONTRACTOR is responsible for the removal and disposal of carcasses, droppings, nests or nesting materials, traps, boxes, or any other materials or devices related to pests and their management. The CONTRACTOR will follow all local, state and federal regulations pertaining to cleanup activities including, but not limited to, those applicable to biological waste, solid waste, and hazardous waste regulations and site requirements.

B. The CONTRACTOR is responsible for the removal and disposal of any and all materials used in implementation of the IPM Plan in addition to any and all containers of pesticides, chemicals, bait boxes, empty containers, etc. that are subject to regulation by the Pesticide Control Act, the US EPA, the Massachusetts Pesticide Control Board or any other local, state or federal regulation.

3.12 DISPOSAL

A. The CONTRACTOR will identify all procedures and protocols to properly collect, contain, transport and dispose of all pest management related debris including carcasses, bait boxes, traps, used chemical containers, and unused chemicals in accordance with all applicable local, state or federal law. All paperwork associated with the transportation and disposal of IPM related wastes will be provided to the Engineer at the completion of site activities.

B. The CONTRACTOR will abide by all local, state, and federal regulations regarding the disposal of all pest management related debris including carcasses, bait boxes, traps, used chemical containers, and unused chemicals including waste disposal requirements for hazardous waste, hazardous materials, and pesticides.

C. The CONTRACTOR is responsible for the removal and disposal of all solid waste, recyclables, hazardous materials, and hazardous waste that is generated by the services provided under this specification.

END OF SECTION

6. Draft Release Abatement Measure (RAM) Plan

Follows is the RAM plan draft as developed by the project's Geoenvironmental Engineer Nobis Group. The RAM plan defines the handling and remediation requirements for contaminated soils for this project. The finalized RAM plan will be included in the Early Site Preparation and Demolition Construction Contract Documents as part of the requirements for that contract.

Note this draft RAM plan and the estimated soil quantities will be finalized following receipt and review of pending laboratory analysis of supplemental soil samples that were collected March 2022.

DRAFT RELEASE ABATEMENT MEASURE PLAN

10 WHITMAN ROAD
SWAMPSCOTT, MASSACHUSETTS
RELEASE TRACKING NUMBER 3-TBD

PREPARED ON BEHALF OF:

TOWN OF SWAMPSCOTT, MASSACHUSETTS
200 ESSEX STREET
SWAMPSCOTT MA 01907

BY

NOBIS GROUP®

(800) 394-4182

www.nobis-group.com

Nobis Project No. 96700.040
APRIL 2022

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APPENDICES

1.0 INTRODUCTION

Nobis Engineering, Inc. d/b/a Nobis Group® (Nobis) is submitting this Release Abatement Measure (RAM) Plan on behalf of the Town of Swampscott, Massachusetts (Town) to support a RAM at the Hadley School Construction Project at 10 Whitman Rd in Swampscott, Massachusetts. (the Site). Refer to Figure 1 for a Site Locus Map.

Nobis conducted a site investigation to pre-characterize subsurface soil to be generated for off-site disposal during construction of the new school. In December 2021, zinc, lead, and semi-volatile organic compounds (SVOCS) were detected at concentrations exceeding the applicable Massachusetts Contingency Plan Reportable Concentration for soil categorized as S-1 (RCS-1) in disposal characterization samples collected for proposed soil export during construction.

In February 2022, Nobis collected environmental samples in conjunction with geotechnical borings advanced to install monitoring wells. In March 2022, Nobis collected subsequent soil data via geoprobe to further delineate contaminated areas to attempt to reduce disposal costs.

The Town of Swampscott notified the Massachusetts Department of Environmental Protection (MassDEP) of the above release conditions on April 20, 2022, and MassDEP subsequently assigned Release Tracking Number (RTN) 3-TBD. This RAM has been developed in accordance with 310 CMR 40.1067(5)(b) to manage remediation wastes generated during construction activities. A RAM Plan Transmittal form (BWSC-106) will be electronically attached to this document as part of the eDEP submittal. Limitations are attached as Appendix A.

2.0 NAME, ADDRESS, AND TELEPHONE NUMBER OF PERSONS UNDERTAKING RESPONSE ACTIONS

Max Kasper
Facilities Director
Town of Swampscott/Swampscott Public Schools
200 Essex Street
Swampscott, MA 01907
781-596-8830 x5531

3.0 SITE DESCRIPTION AND SUMMARY OF RELEASE

A description of the Site properties and the release of contaminants to the environment are provided in this section.

3.1 Site and Disposal Site Description

The Site consists of the existing Stanley School, located at 10 Whitman Road in a residential area of Swampscott, Essex County, Massachusetts; however, the project site is identified as the location of the new Hanley School to be constructed.

The property is identified by the Town of Swampscott as Map-Lot: 21-E1-0. The property measures 6.079 acres and includes the 43,043 square-foot school building that was constructed in 1960 and is owned by the Town of Swampscott.

The Disposal Site is the entirety of the property. Approximately 16,900 cubic yards of soil may be exported during new school construction. The geographic location coordinates of the Disposal Site are 42.47209° north and -70.89786° west. As shown on Figure 2, it is bounded by residences to the north and east, conservation land to the south (Stanley School Recreation Area), and the Unitarian Universalist Church property to the west. The disposal site is accessible via walking trails and various entrances to the school parking lot via Whitman Rd and Forest Ave Extension.

3.2 Release Description

The Site is in the design phase for the construction of the new Hadley School. Nobis collected site-wide environmental soil samples in December 2021 to pre-characterize soil for off-site disposal. Soil samples were analyzed for volatile organic compounds (VOCs), total petroleum hydrocarbons (TPH), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), metals, flashpoint, corrosivity/pH, reactivity (sulfide/cyanide), and conductivity.

Nobis compared analytical results to Massachusetts Contingency Plan (MCP) reportable concentration standards for soil categorized as S-1 (RCS-1). Category RCS-1 applies to the site because sample locations are within 500 feet of the Stanley School (Section 310 CMR 40.0361). Soil pre-characterization data is presented in Tables 1a through 1d. Detected compounds exceed the RCS-1 standards at five test pit locations as follows:

- Metals
    - Zinc and lead in test pit NTP-112.
    - Lead in test pits NTP-120, NTP-124, and NTP-132.
- SVOCS:
    - Benzo(a)Pyrene, 2-Methylnapthalene, and Phenanthrene in test pit NTP-120
    - Benzo(a)Pyrene in test pit NTP-133.

In addition, TCLP lead was detected above the Resource Conservation and Recovery Act (RCRA) hazardous waste standard at NTP-126; therefore, this soil is classified as a characteristic hazardous waste.

On March 23rd through 25th, 2022, Nobis conducted additional soil sampling to delineate contamination to help inform bidders on the extent of contamination for bidding purposes. Delineation samples were analyzed for lead, zinc, and SVOCs only using EPA Methods 6010D and 8270C, respectively. **Results of this investigation are pending**. Analytical results collected to date are presented in Tables 1a through 1d. Laboratory data reports are included as Appendix A.

3.3 Receptors

An elementary school is currently located at the Disposal Site. Potential receptors to the Disposal Site include students, teachers and school employees, construction workers, visitors, and trespassers. The Disposal Site is not located within a Public Water Source Protection Area (Zone II, Zone A, Interim Wellhead Protection Area). GW-2 applies due to the presence of the school building, and GW-3 applies for the protection of surface water and the environment.

Portions of the Disposal Site are within and adjacent to protected open space and wetlands are present to the south. The Site is not within the FEMA 100-year floodplain. The nearest surface water bodies are small ponds across Nason Road, approximately 875 feet to the northwest. Nahant Bay and the Atlantic Ocean are to the south, with the closest shoreline approximately 3,162 feet to the east-southeast. A MassDEP Priority Resource Map is provided as Figure 3.

3.5.1 Critical Exposure Pathways

Critical Exposure Pathways (CEPs) are defined in 310 CMR 40.0006 as those routes by which oil and/or hazardous material(s) released at a disposal site are transported, or are likely to be transported, to human receptors via:

1. Vapor-phase emissions of measurable concentrations of oil and/or hazardous materials into the living or working space of a pre-school, daycare, school or occupied residential dwelling; or

2. Ingestion, dermal absorption, or inhalation of measurable concentrations of oil and/or hazardous materials from drinking water supply wells located at and servicing a pre-school, daycare, school or occupied residential dwelling.

The Site contaminants are limited to metals (zinc and lead) and SVOCs likely associated with natural conditions or historic fill, and is not anticipated to result in vapor phase emissions into a current or future occupied pre-school, daycare, school, or residential dwelling. The Site is currently serviced by municipal drinking water sources. Therefore, there is currently no evidence of a CEP at the Site. The primary exposure pathway is ingestion and/or direct dermal contact.

3.5.2 Substantial Release Migration

A Condition of Substantial Release Migration (SRM) is defined in 310 CMR 40.0313(4) as any of the following:

1. Releases that have resulted in the discharge of separate-phase oil and/or hazardous material to surface waters, subsurface structures, or underground utilities or conduits;

2. Releases to the ground surface or to the vadose zone that, if not promptly removed or contained, are likely to significantly impact the underlying groundwater, or significantly exacerbate an existing condition of groundwater pollution;

3. Releases to the groundwater that have migrated or are expected to migrate more than 200 feet per year;

4. Releases to the groundwater that have been or are within one year likely to be detected in a public or private water supply well;

5. Releases to the groundwater that have been or are within one year likely to be detected in a surface water body, wetland, or public water supply reservoir; or

6. Releases to the groundwater that have resulted or are within one year likely to result in the discharge of vapors into school buildings or occupied residential dwellings.

Nobis installed four groundwater monitoring wells for permeability testing as part of the geotechnical evaluation; however, these wells are outside of areas where lead, zinc, or SVOCs in soil exceeded RCS-1.

Bedrock is shallow with outcrops throughout the Site. Two monitoring wells were installed in the overburden where bedrock was encountered at 9 and 10 feet below ground surface (bgs), and two were installed across the bedrock interface where bedrock was encountered at 5 and 7 feet bgs. The overburden groundwater wells are dry or contain less than 1 foot of groundwater. Two monitoring wells are screened across the bedrock interface and contain up to 4.5 feet of groundwater (approximately 2 gallons). Test pits advanced to bedrock were dry.

Groundwater is not prevalent at the Disposal Site and is assumed to be collected run-off from storm events. In addition, the primary contaminants are heavy metals that generally exhibit low solubility and mobility in groundwater;; therefore, a Condition of Substantial Release Migration (SRM) does not exist. Groundwater will be evaluated post-RAM, if deemed necessary by the LSP.

3.5.3 Imminent Hazard

To date, there have been no conditions identified at the Disposal Site that represent a potential Imminent Hazard condition.

4.0 CURRENT SITE CONDITIONS

The Site is currently an active elementary school; however, it will soon be an inactive school due to new school construction. The Disposal Site will soon be an active construction site.

5.0 RAM PLAN

This RAM has been developed in accordance with 310 CMR 40.1067(5)(b) to manage remediation wastes generated during school construction activities. The approximate extent of earthwork will be a 350 by 600-foot excavation area that includes the footprint for the proposed new school building and associated site grading outside of the footprint; however, some of this earthwork is conducted outside of contaminated areas. The approximate location of proposed structures is shown on Figure 2.

5.1 Objectives

The primary objective of this RAM Plan is to establish requirements for the excavation, management, and off-site disposal of Disposal Site soils.

5.2 Specific Plans

Below is a general scope of work for soil management, soil characterization, and off-site disposal of soils generated during construction activities at the Disposal Site.

As stated above, Nobis collected 50 preliminary soil disposal pre-characterization samples from test pits excavated throughout the site in areas to be redeveloped during construction. Subsequent soil data was collected during installation of geotechnical wells (5 samples collected) and during a focused soil sampling event (123 samples collected, XX samples analyzed) to delineate known contaminated areas. Soil sample locations are depicted on Figure 2 and soil characterization data is presented in Tables 1a through 1d.

The estimated volume of soil to be removed is approximately 16,900 cubic yards. Soil samples collected to pre-characterize soil may be sufficient for disposal facility approval; however, acceptance criteria vary from each facility. The earthwork contractor (Contractor) will be responsible for collecting additional soil classification data for waste disposal, if required, to gain acceptance into their selected off-site disposal facility.

If additional soil samples are required to profile waste, prior to commencement of contaminated soil excavation, transportation, and disposal, the Contractor shall collect composite soil samples from the proposed excavation area and submit the samples for laboratory analysis of VOCs, SVOCs, TPH, pesticides, PCBs, MCP metals, corrosivity, ignitability, pesticides, and reactivity. Other analysis maybe required depending on receiving facility permits. The Contractor is responsible for additional analytical testing as needed to meet the requirements of their selected disposal facilities. Contractor-collected data shall be provided to Nobis for use in risk assessment activities.

Groundwater was not encountered during test pitting, and groundwater is not prevalent in the overburden; therefore, dewatering is not expected.

Excavated soils will either be “live-loaded” into trucks immediately upon removal or temporarily stockpiled in soil staging areas. The soil staging areas will be established on the Site to enable temporary storage of excavated material when immediate transport to the landfill is not possible. Temporary storage of soils will comply with the requirements of 310 CMR 40.0030, Management Procedures for Remediation Waste. Soils will be staged on top of polyethylene liners and erosion control measures installed at the perimeter of the stockpile. Soil piles will be covered at the end of each day to the transport of contaminants via erosion or wind dispersion. Soil staging areas will be monitored to ensure the effectiveness of controls and repaired if deficiencies are identified.

Nobis will conduct part-time observation during the Contractor's implementation of the RAM Plan to record if the Contractor performs work and handles and manages wastes encountered during excavation in a manner consistent with project specifications, local and state regulations, and the MCP. The Nobis field inspector will document excavation activities via field logs and photographs.

At the completion of RAM excavation activities, Nobis will collect soil samples for laboratory analysis to evaluate concentrations of lead, zinc, and SVOCs in soil at the limits of the excavation. Based on the size of the proposed excavation, Nobis assumes the collection of 50 soil samples will be required to verify the achievement of cleanup goals. Nobis will collect samples spaced both horizontally and vertically throughout the excavation to provide adequate data supportive of Site closure.

Nobis will subcontract with an analytical laboratory to analyze soil for zinc and lead by EPA Method 6010 and SVOCs via Method 8270. Analytical methods will comply with the MassDEP Compendium of Analytical Methods (CAM).

5.3 Proposed Implementation Schedule

The following is the proposed schedule for implementation of the RAM:

Proposed Activity	Dates
Submit RAM Plan	July 2022
Commence Site Excavation Activities	July 2022
Complete Site Excavation Activities	July 2023
Submit RAM Completion Report	July 2023

A RAM Status Report will be submitted to MassDEP within 120 days of MassDEP's receipt of this RAM Plan and subsequent RAM Status Reports every 6 months thereafter. A RAM Completion Report will be submitted within 60 days of the completion of RAM activities.

6.0 REMEDIATION WASTE MANAGEMENT

A summary of Remediation Waste volumes is provided below.

6.1 Summary of Remediation Waste Volumes

Remediation Waste generated during the RAM will be transported to either an in-state or out-of-state disposal facility permitted to accept soils contaminated with lead and zinc. Characteristic hazardous waste (lead samples that failed TCLP) will be disposed at an out-of-state disposal facility permitted to accept such waste. Disposal facility locations are to be selected by the Contractor; however, Nobis will review disposal facility selections to proof permitting and compliance to accept wastes to be generated during this project.

The total volume of Remediation Waste requiring off-site disposal is estimated to be 5,756 cubic yards. The Town (through its Contractor) will arrange for proper on-site storage and subsequent off-site management of Site soil within 120 days of its initial excavation pursuant to 310 CMR 40.0034(3).

Remediation Wastes generated during the project will be managed in accordance with the MCP BOL process or under a hazardous waste manifest, in addition to any other federal requirements for transportation and disposal documentation. Nobis will provide comments/consultation to the Contractor via email regarding completion of Material Shipping Records (MSRs) and hazardous waste manifests for transportation and off-site disposal of soils/waste. Nobis will complete Bills of Lading (BOLs) as required by the MCP for off-site soil disposal.

6.2 Financial Assurance Statement

Since Remediation Waste is anticipated to exceed 1,500 cubic yards, 310 CMR 40.0442(5) requires a statement that certifies the Town has the financial resources to manage the proposed Remediation Waste volumes as the project is being funded by the Massachusetts School Building Authority. Based upon information provided to the LSP and Nobis's understanding of the project, the Town certifies that they have sufficient financial resources to manage excavated materials in the manner and time frames specified in 301 CMR 40.0030.

7.0 PERMITS

No permits other than DigSafe are required to conduct environmental soil excavation or sampling activities. Construction-related permits will be obtained by the Contractor. Known or suspected

utilities within or adjacent to the project area have been surveyed prior to the start of construction activities. Based on groundwater elevations at the Site, temporary excavation dewatering is not anticipated.

8.0 ENVIRONMENTAL MONITORING

The Contractor will implement engineering controls and environmental monitoring (dust control and monitoring, etc.) and erosion and sedimentation control to limit contaminant migration during soil excavation and management activities. Soil stockpiling is not proposed for the project. Requirements for engineering controls to be implemented by the earthwork contractor are presented in Specification Sections 026100 (Removal and Disposal of Contaminated Soils) and 312500 (Erosion and Sedimentation Controls). Contractor means and methods for dust and odor control are to be presented in their Dust, Vapor, and Odor Control Plan.

The earthwork contractor will provide erosion, dust, odor, and vapor control measures prior to earthwork operations and will install and maintain these control during construction operations according to project plans and specifications. Dust shall be controlled during excavation of soil/fill material to limit potential spread of contaminants and potential exposure of contaminants to workers and the public. Dust monitoring will include daily monitoring and documentation for one upwind and two downwind locations whenever there is a potential to generate dust. Dust controls and monitoring frequency and locations will be increased if elevated dust levels are detected.

Control methods include use of water spray, synthetic reusable covers, lime, foam suppressants or other methods to reduce off-site dust, vapor, and odor. The Contractor shall monitor the covers daily to ensure the covers are in place and effectively eliminating the generation of dust. The Contractor shall not use soil suitable for on-site re-use as a cover to control vapor and odors.

9.0 PUBLIC NOTIFICATION

Public notification letters will be submitted to the Town of Swampscott Board of Selectman's office and the Town of Swampscott's Health Department within 20 days of the commencement of the RAM. The letters will address the purpose, nature of the work, and expected duration of the RAM, pursuant to 310 CMR 40.1403(d). Copies of the letters are included as Appendix B.

Table 1a
Summary of Soil Pre-Characterization Results
Metals and Physical Characteristics
Hadley School Project
Swampscott, MA

Parameter	Reportable Concentrations (RCs)	COMM-97 Landfill Acceptance Criteria		NTP-101 (0-3)	NTP-101 (3-7)	NTP-102 (0-3)	NTP-103 (0-2)	NTP-104 (0-3)	NTP-105 (0-2)	NTP-106 (0-1.7)	NTP-107 (0-1.5)	NTP-108 (0-3)	NTP-109 (0-2.5)	NTP-110 (0-3)
Sampling Date	RCS-1	Lined	Unlined	12/1/2021 9:30:00 AM	12/1/2021 10:30:00 AM	12/1/2021 11:30:00 AM	12/1/2021 12:20:00 PM	12/1/2021 1:15:00 PM	12/1/2021 1:55:00 PM	12/1/2021 2:50:00 PM	12/1/2021 3:25:00 PM	12/1/2021 9:00:00 AM	12/2/2021 9:05:00 AM	12/2/2021 10:30:00 AM
Sample Depth				0-3 Feet	3-7 Feet	0-3 Feet	0-2 Feet	0-3 Feet	0-2 Feet	0-1.7 Feet	0-1.5 Feet	0-3 Feet	0-2.5 Feet	0-3 Feet
SM 2540G (% Wt)														
% Solids	~	~	~	88.6	88.4	89.4	74.2	82.3	89.1	75.7	73.4	87.3	82	90.5
SW-846 6010D (mg/Kg dry) Metals Digestion														
ANTIMONY	20	~	~	ND (1.9)	ND (1.8)	ND (1.8)	ND (2.2)	ND (2.0)	ND (1.8)	ND (2.2)	ND (2.2)	ND (1.9)	ND (2.0)	ND (1.8)
ARSENIC	20	40	40	ND (3.7)	ND (3.5)	ND (3.6)	ND (4.4)	ND (4.0)	ND (3.6)	6.3	ND (4.4)	ND (3.8)	ND (4.0)	ND (3.6)
BARIUM	1000	~	~	30	20	33	48	42	24	39	28	13	37	34
BERYLLIUM	90	~	~	0.53	0.48	0.48	0.56	0.75	0.6	0.68	0.62	0.47	0.56	0.48
CADMIUM	70	80	30	ND (0.37)	ND (0.35)	ND (0.36)	ND (0.44)	ND (0.40)	ND (0.36)	ND (0.44)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.36)
CHROMIUM	100	1000	1000	6.6	16	6.3	16	22	28	20	16	13	11	9.1
LEAD	200	2000	1000	13	6.4	7.2	16	18	26	94	46	14	20	13
NICKEL	600	~	~	6.4	12	6.5	14	14	18	12	8.4	7.4	9.5	7.7
SELENIUM	400	~	~	ND (3.7)	ND (3.5)	ND (3.6)	ND (4.4)	ND (4.0)	ND (3.6)	ND (4.4)	ND (4.4)	ND (3.8)	ND (4.0)	ND (3.6)
SILVER	100	~	~	ND (0.37)	ND (0.35)	ND (0.36)	ND (0.44)	ND (0.40)	ND (0.36)	ND (0.44)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.36)
THALLIUM	8	~	~	ND (1.9)	ND (1.8)	ND (1.8)	ND (2.2)	ND (2.0)	ND (1.8)	ND (2.2)	ND (2.2)	ND (1.9)	ND (2.0)	ND (1.8)
VANADIUM	400	~	~	48	53	44	65	66	78	55	48	37	35	35
ZINC	1000	~	~	50	38	50	58	54	73	67	47	31	49	54
SW-846 6010D (mg/L) 1311 TCLP EXT														
TCLP LEAD	5	NONE	NONE	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
SW-846 7471B (mg/Kg dry) Metals Digestion														
MERCURY	20	10	10	0.032	ND (0.029)	ND (0.028)	0.037	0.041	0.056	0.31	0.11	ND (0.031)	0.059	0.031
SM21-23 2510B Modified (µmhos/cm)														
SPECIFIC CONDUCTANCE	~	8000	4000	2.4	4.3	ND (2.0)	3.1	2.2	2.5	2.2	4.1	2.5	2.9	2.7
SW-846 1010A-B (°F)														
FLASHPOINT	~	~	~	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F
SW-846 9014 (mg/Kg)														
REACTIVE CYANIDE	~	~	~	ND (3.9)	ND (3.9)	ND (4.0)	ND (3.9)	ND (3.9)	ND (3.9)	ND (3.9)	ND (3.9)	ND (3.9)	ND (3.9)	ND (3.9)
SW-846 9030A (mg/Kg)														
REACTIVE SULFIDE	~	~	~	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (19)	ND (20)	ND (20)
SW-846 9045C (pH Units)														
PH	~	~	~	10	5.3	5.6	5.5	5	5.4	5.3	4.9	5	5.6	6.3

NOTES:
1. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting limit exceeds one or more of the regulatory criteria.
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. ~ = No Method 1 Standard or UCL available
5. Grey shaded values exceed the MCP Reportable Concentrations (RCs).
6. Orange shading denotes compounds and locations where standards are exceeded.
7. Bold Red values exceed the TCLP limits/COMM-97 Acceptance Criteria
8. Yellow highlighted cells indicated pending results.

Table 1a
Summary of Soil Pre-Characterization Results
Metals and Physical Characteristics
Hadley School Project
Swampscott, MA

Parameter	Reportable Concentrations (RCs)	COMM-97 Landfill Acceptance Criteria		NTP-110 (3-5.5)	NTP-111 (0-3)	NTP-111 (3-7)	NTP-112 (0-4)	NTP-113 (0-3)	NTP-114 (0-2)	NTP-115 (0-3)	NTP-115 (3-7)	NTP-116 (0-3.5)	NTP-117 (0-2.5)	NTP-117 (2.5-5.5)
Sampling Date	RCS-1	Lined	Unlined	12/2/2021 11:40:00 AM	12/2/2021 12:50:00 PM	12/2/2021 1:40:00 PM	12/2/2021 3:00:00 PM	12/2/2021 3:40:00 PM	12/3/2021 10:20:00 AM	12/3/2021 8:50:00 AM	12/3/2021 9:15:00 AM	12/3/2021 11:00:00 AM	12/3/2021 12:30:00 PM	12/3/2021 12:30:00 PM
Sample Depth				3-5.5 Feet	0-3 Feet	3-7 Feet	0-4 Feet	0-3 Feet	0-2 Feet	0-3 Feet	3-7 Feet	0-3.5 Feet	0-2.5 Feet	2.5-5.5 Feet
SM 2540G (% Wt)														
% Solids	~	~	~	90.6	86.6	85.4	77.9	94.8	79.9	91.8	87.7	88.1	92.5	91.9
SW-846 6010D (mg/Kg dry) Metals Digestion														
ANTIMONY	20	~	~	ND (1.8)	ND (1.8)	ND (1.9)	ND (2.1)	ND (1.7)	ND (2.0)	ND (1.8)	ND (1.9)	ND (1.8)	ND (1.7)	ND (1.8)
ARSENIC	20	40	40	ND (3.6)	ND (3.6)	ND (3.8)	15	7.2	ND (4.1)	ND (3.6)	ND (3.8)	ND (3.7)	ND (3.5)	ND (3.5)
BARIUM	1000	~	~	26	36	35	510	31	37	23	31	21	32	36
BERYLLIUM	90	~	~	0.49	0.56	0.74	0.7	0.43	0.82	0.47	0.57	0.45	0.5	0.44
CADMIUM	70	80	30	ND (0.36)	ND (0.36)	ND (0.38)	**15**	ND (0.33)	ND (0.41)	ND (0.36)	ND (0.38)	ND (0.37)	ND (0.35)	ND (0.35)
CHROMIUM	100	1000	1000	8.2	15	15	48	14	31	6.3	11	8	13	8
LEAD	200	2000	1000	8.8	16	21	940	13	23	19	54	12	9.6	8
NICKEL	600	~	~	7.2	13	10	25	12	15	7.4	9.8	7.3	10	7.4
SELENIUM	400	~	~	ND (3.6)	ND (3.6)	ND (3.8)	ND (4.2)	ND (3.3)	ND (4.1)	ND (3.6)	ND (3.8)	ND (3.7)	ND (3.5)	ND (3.5)
SILVER	100	~	~	ND (0.36)	ND (0.36)	ND (0.38)	ND (0.42)	ND (0.33)	ND (0.82)	ND (0.36)	ND (0.38)	ND (0.37)	ND (0.69)	ND (0.70)
THALLIUM	8	~	~	ND (1.8)	ND (1.8)	ND (1.9)	ND (2.1)	ND (1.7)	ND (2.0)	ND (1.8)	ND (1.9)	ND (1.8)	ND (1.7)	ND (1.8)
VANADIUM	400	~	~	31	35	43	51	17	52	26	35	27	39	38
ZINC	1000	~	~	44	53	49	**6100**	31	60	49	56	42	54	55
SW-846 6010D (mg/L) 1311 TCLP EXT														
TCLP LEAD	5	NONE	NONE	NT	NT	NT	0.51	NT	NT	NT	NT	NT	NT	NT
SW-846 7471B (mg/Kg dry) Metals Digestion														
MERCURY	20	10	10	0.028	0.04	0.095	0.27	ND (0.027)	0.046	0.053	0.15	ND (0.028)	ND (0.030)	ND (0.028)
SM21-23 2510B Modified (µmhos/cm)														
SPECIFIC CONDUCTANCE	~	8000	4000	2.3	2.6	3.1	3.2	ND (2.0)	ND (2.0)	ND (2.0)	2.1	ND (2.0)	ND (2.0)	2.1
SW-846 1010A-B (°F)														
FLASHPOINT	~	~	~	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F
SW-846 9014 (mg/Kg)														
REACTIVE CYANIDE	~	~	~	ND (3.9)	ND (3.9)	ND (3.9)	ND (3.9)	ND (4.0)	ND (3.9)	ND (4.0)	ND (3.9)	ND (4.0)	ND (3.9)	ND (3.9)
SW-846 9030A (mg/Kg)														
REACTIVE SULFIDE	~	~	~	ND (20)	ND (19)	ND (19)	ND (19)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)
SW-846 9045C (pH Units)														
PH	~	~	~	6.2	5.8	8.9	7.7	6.3	5.4	5.8	6.3	5.7	6.5	6.3

NOTES:
1. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting li
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. ~ = No Method 1 Standard or UCL available
5. Grey shaded values exceed the MCP Reportable Concentrations (RCs).
6. Orange shading denotes compounds and locations where standards are exceeded.
7. Bold Red values exceed the TCLP limits/COMM-97 Acceptance Criteria
8. Yellow highlighted cells indicated pending results.

Table 1a
Summary of Soil Pre-Characterization Results
Metals and Physical Characteristics
Hadley School Project
Swampscott, MA

Parameter	Reportable Concentrations (RCs)	COMM-97 Landfill Acceptance Criteria		SAMPLING LOCATION										
				NTP-118 (0-1.6)	NTP-119 (0-4)	NTP-119 (4-6)	NTP-120 (0-3)	NTP-121 (0-4.5)	NTP-122 (0-4)	NTP-122 (4-7.5)	NTP-123 (0-4)	NTP-123 (4-6.5)	NTP-124 (0-.5)	NTP-125 (0-1)
Sampling Date	RCS-1	Lined	Unlined	12/3/2021 2:00:00 PM	12/3/2021 2:30:00 PM	12/3/2021 3:00:00 PM	12/6/2021 10:50:00 AM	12/6/2021 11:30:00 AM	12/6/2021 12:45:00 PM	12/6/2021 1:25:00 PM	12/6/2021 2:15:00 PM	12/6/2021 2:45:00 PM	12/6/2021 3:10:00 PM	12/6/2021 3:40:00 PM
Sample Depth				0-1.6 Feet	0-4 Feet	4-6 Feet	0-3 Feet	0-4.5 Feet	0-4 Feet	4-7.5 Feet	0-4 Feet	4-6.5 Feet	0-0.5 Feet	0-1 Feet
SM 2540G (% Wt)														
% Solids	~	~	~	79.8	89.2	88.5	87.2	87.4	87.1	88.8	83	86.5	46	81
SW-846 6010D (mg/Kg dry) Metals Digestion														
ANTIMONY	20	~	~	ND (2.1)	ND (1.8)	ND (1.8)	ND (1.9)	ND (1.8)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.8)	ND (3.5)	ND (2.0)
ARSENIC	20	40	40	7.9	ND (3.6)	ND (3.7)	9	ND (3.6)	ND (3.8)	ND (3.7)	ND (3.8)	ND (3.7)	11	7
BARIUM	1000	~	~	39	22	21	72	31	32	29	27	24	73	58
BERYLLIUM	90	~	~	0.85	0.45	0.47	0.53	0.51	0.56	0.45	0.6	0.61	1	0.67
CADMIUM	70	80	30	0.9	ND (0.36)	ND (0.37)	0.44	ND (0.36)	ND (0.38)	ND (0.37)	ND (0.38)	ND (0.37)	ND (0.71)	0.78
CHROMIUM	100	1000	1000	63	7.6	9.1	22	15	12	11	14	11	18	52
LEAD	200	2000	1000	57	11	13	270	16	16	9.3	13	11	310	110
NICKEL	600	~	~	9.6	6.6	8.4	16	12	10	9.7	10	7.2	15	12
SELENIUM	400	~	~	ND (4.1)	ND (3.6)	ND (3.7)	ND (3.7)	ND (3.6)	ND (3.8)	ND (3.7)	ND (3.8)	ND (3.7)	ND (7.1)	ND (4.0)
SILVER	100	~	~	ND (0.41)	ND (0.36)	ND (0.37)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.37)	ND (0.38)	ND (0.37)	2.2	ND (0.40)
THALLIUM	8	~	~	ND (2.1)	ND (1.8)	ND (1.8)	ND (1.9)	ND (1.8)	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.8)	ND (3.5)	ND (2.0)
VANADIUM	400	~	~	40	23	33	25	36	43	41	45	43	110	42
ZINC	1000	~	~	78	39	45	94	46	49	48	55	42	75	80
SW-846 6010D (mg/L) 1311 TCLP EXT														
TCLP LEAD	5	NONE	NONE	NT	NT	NT	0.31	NT	NT	NT	NT	NT	ND (0.10)	ND (0.10)
SW-846 7471B (mg/Kg dry) Metals Digestion														
MERCURY	20	10	10	0.19	ND (0.028)	ND (0.028)	0.58	0.028	ND (0.030)	ND (0.029)	0.049	0.037	0.61	0.22
SM21-23 2510B Modified (µmhos/cm)														
SPECIFIC CONDUCTANCE	~	8000	4000	ND (2.0)	ND (2.0)	ND (2.0)	2.2	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	2.3	20	2.3
SW-846 1010A-B (°F)														
FLASHPOINT	~	~	~	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F
SW-846 9014 (mg/Kg)														
REACTIVE CYANIDE	~	~	~	ND (3.9)	ND (3.9)	ND (3.9)	ND (3.9)	ND (4.0)	ND (3.9)	ND (4.0)	ND (4.0)	ND (3.9)	ND (3.9)	ND (3.9)
SW-846 9030A (mg/Kg)														
REACTIVE SULFIDE	~	~	~	ND (19)	ND (19)	ND (20)	ND (19)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (19)	ND (20)
SW-846 9045C (pH Units)														
PH	~	~	~	5.3	6	6.5	7.3	7.5	7.1	7.2	6.4	7	4.8	5.8

NOTES:
1. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting li
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. ~ = No Method 1 Standard or UCL available
5. Grey shaded values exceed the MCP Reportable Concentrations (RCs).
6. Orange shading denotes compounds and locations where standards are exceeded.
7. Bold Red values exceed the TCLP limits/COMM-97 Acceptance Criteria
8. Yellow highlighted cells indicated pending results.

Table 1a
Summary of Soil Pre-Characterization Results
Metals and Physical Characteristics
Hadley School Project
Swampscott, MA

Parameter	Reportable Concentrations (RCs)	COMM-97 Landfill Acceptance Criteria		NTP-126 (0-1)	NTP-127 (0-5)	NTP-128 (0-1)	NTP-128 (1-2)	NTP-129 (0-2)	NTP-129 (2-3)	NTP-130 (0-2)	NTP-130 (2-3.5)	NTP-131 (0-1)	NTP-131 (1-2.5)	NTP-132 (0-1)
Sampling Date	RCS-1	Lined	Unlined	12/6/2021 4:00:00 PM	12/6/2021 10:00:00 AM	12/7/2021 9:00:00 AM	12/7/2021 9:10:00 AM	12/7/2021 9:30:00 AM	12/7/2021 9:45:00 AM	12/7/2021 10:50:00 AM	12/7/2021 10:25:00 AM	12/7/2021 11:25:00 AM	12/7/2021 11:30:00 AM	12/7/2021 12:10:00 PM
Sample Depth				0-1 Feet	0-4 Feet	0-1 Feet	1-2 Feet	0-2 Feet	2-3 Feet	0-2 Feet	2-3.5 Feet	0-1 Feet	1-2.5 Feet	0-1 Feet
SM 2540G (% Wt)														
% Solids	~	~	~	79.4	89.8	81.4	77.7	90.2	90.1	85.7	82.1	89.9	83.2	77.4
SW-846 6010D (mg/Kg dry) Metals Digestion														
ANTIMONY	20	~	~	ND (2.1)	ND (1.8)	ND (2.0)	ND (2.1)	ND (1.8)	ND (1.8)	ND (1.9)	ND (1.9)	ND (1.8)	ND (1.9)	ND (2.1)
ARSENIC	20	40	40	5.9	ND (3.6)	ND (4.0)	ND (4.3)	ND (3.6)	ND (3.6)	ND (3.8)	ND (3.8)	ND (3.5)	ND (3.9)	7
BARIUM	1000	~	~	50	44	33	39	39	34	43	26	42	40	120
BERYLLIUM	90	~	~	0.69	0.77	0.65	0.61	0.5	0.48	0.61	0.56	0.56	0.65	0.82
CADMIUM	70	80	30	0.46	ND (0.36)	ND (0.40)	ND (0.43)	ND (0.36)	ND (0.36)	ND (0.38)	ND (0.38)	ND (0.35)	ND (0.39)	0.82
CHROMIUM	100	1000	1000	19	15	18	15	6.1	5.8	18	13	24	21	52
LEAD	200	2000	1000	110	49	18	43	10	7.8	42	24	16	16	230
NICKEL	600	~	~	12	16	11	9.9	7.1	6.8	11	8.7	16	12	17
SELENIUM	400	~	~	ND (4.1)	ND (3.6)	ND (4.0)	ND (4.3)	ND (3.6)	ND (3.6)	ND (3.8)	ND (3.8)	ND (3.5)	ND (3.9)	ND (4.2)
SILVER	100	~	~	ND (0.41)	ND (0.36)	ND (0.40)	ND (0.43)	ND (0.36)	ND (0.36)	ND (0.38)	ND (0.38)	ND (0.35)	ND (0.39)	ND (0.42)
THALLIUM	8	~	~	ND (2.1)	ND (1.8)	ND (2.0)	ND (2.1)	ND (1.8)	ND (1.8)	ND (1.9)	ND (1.9)	ND (1.8)	ND (1.9)	ND (2.1)
VANADIUM	400	~	~	45	45	56	40	51	47	40	36	61	76	48
ZINC	1000	~	~	71	61	42	47	53	51	52	45	54	61	140
SW-846 6010D (mg/L) 1311 TCLP EXT														
TCLP LEAD	5	NONE	NONE	**5.8**	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.16
SW-846 7471B (mg/Kg dry) Metals Digestion														
MERCURY	20	10	10	0.078	0.057	0.042	0.053	ND (0.030)	ND (0.027)	0.11	0.069	ND (0.029)	ND (0.031)	0.25
SM21-23 2510B Modified (µmhos/cm)														
SPECIFIC CONDUCTANCE	~	8000	4000	4.9	5.3	3.9	2.1	ND (2.0)	ND (2.0)	3.4	2.3	2.8	3.8	3.6
SW-846 1010A-B (°F)														
FLASHPOINT	~	~	~	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F
SW-846 9014 (mg/Kg)														
REACTIVE CYANIDE	~	~	~	ND (3.9)	ND (4.0)	ND (3.9)	ND (3.9)	ND (3.9)	ND (4.0)	ND (3.9)	ND (4.0)	ND (3.9)	ND (4.0)	ND (3.9)
SW-846 9030A (mg/Kg)														
REACTIVE SULFIDE	~	~	~	ND (19)	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (19)	ND (20)	ND (19)	ND (20)	ND (20)
SW-846 9045C (pH Units)														
PH	~	~	~	5.6	7.5	5.1	5.3	5.4	5.7	5.3	5.1	6.6	7	5.3

NOTES:
1. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting li
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. ~ = No Method 1 Standard or UCL available
5. Grey shaded values exceed the MCP Reportable Concentrations (RCs).
6. Orange shading denotes compounds and locations where standards are exceeded.
7. Bold Red values exceed the TCLP limits/COMM-97 Acceptance Criteria
8. Yellow highlighted cells indicated pending results.

Table 1a
Summary of Soil Pre-Characterization Results
Metals and Physical Characteristics
Hadley School Project
Swampscott, MA

Parameter	Reportable Concentrations (RCs)	COMM-97 Landfill Acceptance Criteria		NTP-132 (1-3)	NTP-133 (0-2)	NTP-133 (2-4)	NTP-134 (0-1.5)	NTP-135 (0-1)	NTP-135 (1-3.5)
Sampling Date	RCS-1	Lined	Unlined	12/7/2021 12:20:00 PM	12/7/2021 1:15:00 PM	12/7/2021 1:30:00 PM	12/7/2021 2:00:00 PM	12/7/2021 2:30:00 PM	12/7/2021 2:40:00 PM
Sample Depth				1-3 Feet	0-2 Feet	2-4 Feet	0-1.5 Feet	0-1 Feet	1-3.5 Feet
SM 2540G (% Wt)									
% Solids	~	~	~	89.2	85.3	84.9	80.4	85.5	82.6
SW-846 6010D (mg/Kg dry) Metals Digestion									
ANTIMONY	20	~	~	ND (1.9)	ND (1.9)	ND (1.9)	ND (2.0)	ND (1.9)	ND (1.9)
ARSENIC	20	40	40	ND (3.7)	ND (3.8)	4	5.7	20	4.5
BARIUM	1000	~	~	210	53	65	39	37	23
BERYLLIUM	90	~	~	0.6	0.48	0.46	0.66	0.61	0.53
CADMIUM	70	80	30	ND (0.37)	ND (0.38)	ND (0.39)	0.66	0.82	ND (0.38)
CHROMIUM	100	1000	1000	34	27	18	18	19	16
LEAD	200	2000	1000	1300	140	190	130	110	20
NICKEL	600	~	~	14	17	14	10	17	11
SELENIUM	400	~	~	ND (3.7)	ND (3.8)	ND (3.9)	ND (4.1)	ND (3.8)	ND (3.8)
SILVER	100	~	~	ND (0.37)	ND (0.38)	ND (0.39)	ND (0.41)	ND (0.38)	ND (0.38)
THALLIUM	8	~	~	ND (1.9)	ND (1.9)	ND (1.9)	ND (2.0)	ND (1.9)	ND (1.9)
VANADIUM	400	~	~	41	34	30	55	46	41
ZINC	1000	~	~	170	110	87	66	66	35
SW-846 6010D (mg/L) 1311 TCLP EXT									
TCLP LEAD	5	NONE	NONE	1.6	0.12	0.1	0.13	ND (0.10)	NT
SW-846 7471B (mg/Kg dry) Metals Digestion									
MERCURY	20	10	10	0.23	0.24	0.41	0.11	0.069	0.046
SM21-23 2510B Modified (µmhos/cm)									
SPECIFIC CONDUCTANCE	~	8000	4000	2.5	2.1	4.1	2.4	2.7	3.9
SW-846 1010A-B (°F)									
FLASHPOINT	~	~	~	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F	> 212 °F
SW-846 9014 (mg/Kg)									
REACTIVE CYANIDE	~	~	~	ND (3.9)	ND (3.9)	ND (4.0)	ND (4.0)	ND (4.0)	ND (3.9)
SW-846 9030A (mg/Kg)									
REACTIVE SULFIDE	~	~	~	ND (20)	ND (20)	ND (20)	ND (20)	ND (20)	ND (19)
SW-846 9045C (pH Units)									
PH	~	~	~	6	6.1	7.4	5.4	5.5	5.6

NOTES:
1. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting li
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. ~ = No Method 1 Standard or UCL available
5. Grey shaded values exceed the MCP Reportable Concentrations (RCs).
6. Orange shading denotes compounds and locations where standards are exceeded.
7. Bold Red values exceed the TCLP limits/COMM-97 Acceptance Criteria
8. Yellow highlighted cells indicated pending results.

Table 1b
Summary of Soil Pre-Characterization Results
Pseticides and PCBs
Hadley School Project
Swampscott, MA

Parameter	Reportable Concentrations (RCs)	COMM-97 Landfill Acceptance Criteria		NTP-101 (0-3)	NTP-101 (3-7)	NTP-102 (0-3)	NTP-103 (0-2)	NTP-104 (0-3)	NTP-105 (0-2)	NTP-106 (0-1.7)	NTP-107 (0-1.5)	NTP-108 (0-3)	NTP-109 (0-2.5)	NTP-110 (0-3)
Sampling Date	RCS-1	Lined	Unlined	12/1/2021 9:30:00 AM	12/1/2021 10:30:00 AM	12/1/2021 11:30:00 AM	12/1/2021 12:20:00 PM	12/1/2021 1:15:00 PM	12/1/2021 1:55:00 PM	12/1/2021 2:50:00 PM	12/1/2021 3:25:00 PM	12/1/2021 9:00:00 AM	12/2/2021 9:05:00 AM	12/2/2021 10:30:00 AM
Sample Depth				0-3 Feet	3-7 Feet	0-3 Feet	0-2 Feet	0-3 Feet	0-2 Feet	0-1.7 Feet	0-1.5 Feet	0-3 Feet	0-2.5 Feet	0-3 Feet
SW-846 8081B (mg/Kg dry)														
ALACHOR	~	~	~	ND (0.023)	ND (0.023)	ND (0.022)	ND (0.027)	ND (0.024)	ND (0.022)	ND (0.26)	ND (0.026)	ND (0.021)	ND (0.023)	ND (0.021)
ALDRIN	0.08	~	~	ND (0.0056)	ND (0.0057)	ND (0.0056)	ND (0.0067)	ND (0.0061)	ND (0.0056)	ND (0.064)	ND (0.0065)	ND (0.0054)	ND (0.0058)	ND (0.0053)
ALPHA-BHC	50	~	~	ND (0.0056)	ND (0.0057)	ND (0.0056)	ND (0.0067)	ND (0.0061)	ND (0.0056)	ND (0.064)	ND (0.0065)	ND (0.0054)	ND (0.0058)	ND (0.0053)
BETA-BHC	10	~	~	ND (0.0056)	ND (0.0057)	ND (0.0056)	ND (0.0067)	ND (0.0061)	ND (0.0056)	ND (0.064)	ND (0.0065)	ND (0.0054)	ND (0.0058)	ND (0.0053)
DELTA-BHC	10	~	~	ND (0.0056)	ND (0.0057)	ND (0.0056)	ND (0.0067)	ND (0.0061)	ND (0.0056)	ND (0.064)	ND (0.0065)	ND (0.0054)	ND (0.0058)	ND (0.0053)
GAMMA-BHC (LINDANE)	0.003	~	~	ND (0.0023)	ND (0.0023)	ND (0.0022)	ND (0.0027)	ND (0.0024)	ND (0.0022)	**ND (0.026) ***	ND (0.0026)	ND (0.0021)	ND (0.0023)	ND (0.0021)
CHLORDANE	5	~	~	ND (0.023)	ND (0.023)	ND (0.022)	ND (0.027)	ND (0.024)	ND (0.022)	ND (0.26)	ND (0.026)	ND (0.021)	ND (0.023)	ND (0.021)
4,4'-DDD	8	~	~	ND (0.0045)	ND (0.0045)	ND (0.0045)	ND (0.0054)	ND (0.0049)	ND (0.0045)	ND (0.051)	ND (0.0052)	ND (0.0043)	ND (0.0046)	ND (0.0042)
4,4'-DDE	6	~	~	ND (0.0045)	ND (0.0045)	ND (0.0045)	ND (0.0054)	ND (0.0049)	ND (0.0045)	ND (0.051)	0.0062	ND (0.0043)	ND (0.0046)	ND (0.0042)
4,4'-DDT	6	~	~	ND (0.0045)	ND (0.0045)	ND (0.0045)	ND (0.0054)	ND (0.0049)	ND (0.0045)	ND (0.051)	0.011	ND (0.0043)	ND (0.0046)	ND (0.0042)
DIELDRIN	0.08	~	~	ND (0.0045)	ND (0.0045)	ND (0.0045)	ND (0.0054)	ND (0.0049)	ND (0.0045)	ND (0.051)	ND (0.0052)	ND (0.0043)	ND (0.0046)	ND (0.0042)
ENDOSULFAN I	0.5	~	~	ND (0.0056)	ND (0.0057)	ND (0.0056)	ND (0.0067)	ND (0.0061)	ND (0.0056)	ND (0.064)	ND (0.0065)	ND (0.0054)	ND (0.0058)	ND (0.0053)
ENDOSULFAN II	0.5	~	~	ND (0.0090)	ND (0.0091)	ND (0.0090)	ND (0.011)	ND (0.0097)	ND (0.0090)	ND (0.10)	ND (0.010)	ND (0.0086)	ND (0.0092)	ND (0.0084)
ENDOSULFAN SULFATE	~	~	~	ND (0.0090)	ND (0.0091)	ND (0.0090)	ND (0.011)	ND (0.0097)	ND (0.0090)	ND (0.10)	ND (0.010)	ND (0.0086)	ND (0.0092)	ND (0.0084)
ENDRIN	10	~	~	ND (0.0090)	ND (0.0091)	ND (0.0090)	ND (0.011)	ND (0.0097)	ND (0.0090)	ND (0.10)	ND (0.010)	ND (0.0086)	ND (0.0092)	ND (0.0084)
ENDRIN ALDEHYDE	10	~	~	ND (0.0090)	ND (0.0091)	ND (0.0090)	ND (0.011)	ND (0.0097)	ND (0.0090)	ND (0.10)	ND (0.010)	ND (0.0086)	ND (0.0092)	ND (0.0084)
ENDRIN KETONE	~	~	~	ND (0.0090)	ND (0.0091)	ND (0.0090)	ND (0.011)	ND (0.0097)	ND (0.0090)	ND (0.10)	ND (0.010)	ND (0.0086)	ND (0.0092)	ND (0.0084)
HEPTACHLOR	0.3	~	~	ND (0.0056)	ND (0.0057)	ND (0.0056)	ND (0.0067)	ND (0.0061)	ND (0.0056)	ND (0.064)	ND (0.0065)	ND (0.0054)	ND (0.0058)	ND (0.0053)
HEPTACHLOR EPOXIDE	0.1	~	~	ND (0.0056)	ND (0.0057)	ND (0.0056)	ND (0.0067)	ND (0.0061)	ND (0.0056)	ND (0.064)	ND (0.0065)	ND (0.0054)	ND (0.0058)	ND (0.0053)
HEXACHLOROBENZENE	0.7	~	~	ND (0.0068)	ND (0.0068)	ND (0.0067)	ND (0.0081)	ND (0.0073)	ND (0.0067)	ND (0.077)	ND (0.0078)	ND (0.0064)	ND (0.0069)	ND (0.0063)
METHOXYCHLOR	200	~	~	ND (0.056)	ND (0.057)	ND (0.056)	ND (0.067)	ND (0.061)	ND (0.056)	ND (0.64)	ND (0.065)	ND (0.054)	ND (0.058)	ND (0.053)
TOXAPHENE	10	~	~	ND (0.11)	ND (0.11)	ND (0.11)	ND (0.13)	ND (0.12)	ND (0.11)	ND (1.3)	ND (0.13)	ND (0.11)	ND (0.12)	ND (0.11)
SW-846 8082A (mg/Kg dry)														
PCB 1016	1	~	~	ND (0.090)	ND (0.091)	ND (0.090)	ND (0.11)	ND (0.097)	ND (0.090)	ND (0.11)	ND (0.11)	ND (0.092)	ND (0.098)	ND (0.088)
PCB 1221	1	~	~	ND (0.090)	ND (0.091)	ND (0.090)	ND (0.11)	ND (0.097)	ND (0.090)	ND (0.11)	ND (0.11)	ND (0.092)	ND (0.098)	ND (0.088)
PCB 1232	1	~	~	ND (0.090)	ND (0.091)	ND (0.090)	ND (0.11)	ND (0.097)	ND (0.090)	ND (0.11)	ND (0.11)	ND (0.092)	ND (0.098)	ND (0.088)
PCB 1242	1	~	~	ND (0.090)	ND (0.091)	ND (0.090)	ND (0.11)	ND (0.097)	ND (0.090)	ND (0.11)	ND (0.11)	ND (0.092)	ND (0.098)	ND (0.088)
PCB 1248	1	~	~	ND (0.090)	ND (0.091)	ND (0.090)	ND (0.11)	ND (0.097)	ND (0.090)	ND (0.11)	ND (0.11)	ND (0.092)	ND (0.098)	ND (0.088)
PCB 1254	1	~	~	ND (0.090)	ND (0.091)	ND (0.090)	ND (0.11)	ND (0.097)	ND (0.090)	ND (0.11)	ND (0.11)	ND (0.092)	ND (0.098)	ND (0.088)
PCB 1260	1	~	~	ND (0.090)	ND (0.091)	ND (0.090)	ND (0.11)	ND (0.097)	ND (0.090)	ND (0.11)	ND (0.11)	ND (0.092)	ND (0.098)	ND (0.088)
PCB 1262	1	~	~	ND (0.090)	ND (0.091)	ND (0.090)	ND (0.11)	ND (0.097)	ND (0.090)	ND (0.11)	ND (0.11)	ND (0.092)	ND (0.098)	ND (0.088)
PCB 1268	1	~	~	ND (0.090)	ND (0.091)	ND (0.090)	ND (0.11)	ND (0.097)	ND (0.090)	ND (0.11)	ND (0.11)	ND (0.092)	ND (0.098)	ND (0.088)
Total PCBs	1	Total <2	Total <2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:
1. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting limit exceeds one or more of the regulatory criteria.
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. ~ = No Method 1 Standard or UCL available
5. Grey shaded values exceed the MCP Reportable Concentrations (RCs).
6. Orange shading denotes compounds and locations where standards are exceeded.
7. Bold Red values exceed the TCLP limits/COMM-97 Acceptance Criteria
8. Yellow highlighted cells indicated pending results.

Table 1b
Summary of Soil Pre-Characterization Results
Pseticides and PCBs
Hadley School Project
Swampscott, MA

Parameter	Reportable Concentrations (RCs)	COMM-97 Landfill Acceptance Criteria											
				NTP-110 (3-5.5)	NTP-111 (0-3)	NTP-111 (3-7)	NTP-112 (0-4)	NTP-113 (0-3)	NTP-114 (0-2)	NTP-115 (0-3)	NTP-115 (3-7)	NTP-116 (0-3.5)	NTP-117 (0-2.5)	NTP-117 (2.5-5.5)
Sampling Date	RCS-1	Lined	Unlined	12/2/2021 11:40:00 AM	12/2/2021 12:50:00 PM	12/2/2021 1:40:00 PM	12/2/2021 3:00:00 PM	12/2/2021 3:40:00 PM	12/3/2021 10:20:00 AM	12/3/2021 8:50:00 AM	12/3/2021 9:15:00 AM	12/3/2021 11:00:00 AM	12/3/2021 12:30:00 PM	12/3/2021 12:30:00 PM
Sample Depth				3-5.5 Feet	0-3 Feet	3-7 Feet	0-4 Feet	0-3 Feet	0-2 Feet	0-3 Feet	3-7 Feet	0-3.5 Feet	0-2.5 Feet	2.5-5.5 Feet
SW-846 8081B (mg/Kg dry)														
ALACHOR	~	~	~	ND (0.020)	ND (0.022)	ND (0.023)	ND (0.26)	ND (0.021)	ND (0.025)	ND (0.22)	ND (0.23)	ND (0.023)	ND (0.022)	ND (0.022)
ALDRIN	0.08	~	~	ND (0.0051)	ND (0.0055)	ND (0.0057)	ND (0.064)	ND (0.0053)	ND (0.0063)	ND (0.054)	ND (0.057)	ND (0.0057)	ND (0.0054)	ND (0.0054)
ALPHA-BHC	50	~	~	ND (0.0051)	ND (0.0055)	ND (0.0057)	ND (0.064)	ND (0.0053)	ND (0.0063)	ND (0.054)	ND (0.057)	ND (0.0057)	ND (0.0054)	ND (0.0054)
BETA-BHC	10	~	~	ND (0.0051)	ND (0.0055)	ND (0.0057)	ND (0.064)	ND (0.0053)	ND (0.0063)	ND (0.054)	ND (0.057)	ND (0.0057)	ND (0.0054)	ND (0.0054)
DELTA-BHC	10	~	~	ND (0.0051)	ND (0.0055)	ND (0.0057)	ND (0.064)	ND (0.0053)	ND (0.0063)	ND (0.054)	ND (0.057)	ND (0.0057)	ND (0.0054)	ND (0.0054)
GAMMA-BHC (LINDANE)	0.003	~	~	ND (0.0020)	ND (0.0022)	ND (0.0023)	**ND (0.026) ***	ND (0.0021)	ND (0.0025)	**ND (0.022) ***	**ND (0.023) ***	ND (0.0023)	ND (0.0022)	ND (0.0022)
CHLORDANE	5	~	~	ND (0.020)	ND (0.022)	ND (0.023)	ND (0.26)	ND (0.021)	ND (0.025)	ND (0.22)	ND (0.23)	ND (0.023)	ND (0.022)	ND (0.022)
4,4'-DDD	8	~	~	ND (0.0041)	ND (0.0044)	ND (0.0046)	ND (0.051)	ND (0.0042)	ND (0.0050)	ND (0.044)	ND (0.046)	ND (0.0045)	ND (0.0043)	ND (0.0044)
4,4'-DDE	6	~	~	ND (0.0041)	ND (0.0044)	ND (0.0046)	ND (0.051)	ND (0.0042)	ND (0.0050)	ND (0.044)	ND (0.046)	ND (0.0045)	ND (0.0043)	ND (0.0044)
4,4'-DDT	6	~	~	ND (0.0041)	ND (0.0044)	ND (0.0046)	ND (0.051)	ND (0.0042)	ND (0.0050)	ND (0.044)	ND (0.046)	ND (0.0045)	ND (0.0043)	ND (0.0044)
DIELDRIN	0.08	~	~	ND (0.0041)	ND (0.0044)	ND (0.0046)	ND (0.051)	ND (0.0042)	ND (0.0050)	ND (0.044)	ND (0.046)	ND (0.0045)	ND (0.0043)	ND (0.0044)
ENDOSULFAN I	0.5	~	~	ND (0.0051)	ND (0.0055)	ND (0.0057)	ND (0.064)	ND (0.0053)	ND (0.0063)	ND (0.054)	ND (0.057)	ND (0.0057)	ND (0.0054)	ND (0.0054)
ENDOSULFAN II	0.5	~	~	ND (0.0082)	ND (0.0088)	ND (0.0092)	ND (0.10)	ND (0.0084)	ND (0.010)	ND (0.087)	ND (0.091)	ND (0.0091)	ND (0.0087)	ND (0.0087)
ENDOSULFAN SULFATE	~	~	~	ND (0.0082)	ND (0.0088)	ND (0.0092)	ND (0.10)	ND (0.0084)	ND (0.010)	ND (0.087)	ND (0.091)	ND (0.0091)	ND (0.0087)	ND (0.0087)
ENDRIN	10	~	~	ND (0.0082)	ND (0.0088)	ND (0.0092)	ND (0.10)	ND (0.0084)	ND (0.010)	ND (0.087)	ND (0.091)	ND (0.0091)	ND (0.0087)	ND (0.0087)
ENDRIN ALDEHYDE	10	~	~	ND (0.0082)	ND (0.0088)	ND (0.0092)	ND (0.10)	ND (0.0084)	ND (0.010)	ND (0.087)	ND (0.091)	ND (0.0091)	ND (0.0087)	ND (0.0087)
ENDRIN KETONE	~	~	~	ND (0.0082)	ND (0.0088)	ND (0.0092)	ND (0.10)	ND (0.0084)	ND (0.010)	ND (0.087)	ND (0.091)	ND (0.0091)	ND (0.0087)	ND (0.0087)
HEPTACHLOR	0.3	~	~	ND (0.0051)	ND (0.0055)	ND (0.0057)	ND (0.064)	ND (0.0053)	ND (0.0063)	ND (0.054)	ND (0.057)	ND (0.0057)	ND (0.0054)	ND (0.0054)
HEPTACHLOR EPOXIDE	0.1	~	~	ND (0.0051)	ND (0.0055)	ND (0.0057)	ND (0.064)	ND (0.0053)	ND (0.0063)	ND (0.054)	ND (0.057)	ND (0.0057)	ND (0.0054)	ND (0.0054)
HEXACHLOROBENZENE	0.7	~	~	ND (0.0061)	ND (0.0066)	ND (0.0069)	ND (0.077)	ND (0.0063)	ND (0.0075)	ND (0.065)	ND (0.068)	ND (0.0068)	ND (0.0065)	ND (0.0065)
METHOXYCHLOR	200	~	~	ND (0.051)	ND (0.055)	ND (0.057)	ND (0.64)	ND (0.053)	ND (0.063)	ND (0.54)	ND (0.57)	ND (0.057)	ND (0.054)	ND (0.054)
TOXAPHENE	10	~	~	ND (0.10)	ND (0.11)	ND (0.11)	ND (1.3)	ND (0.11)	ND (0.13)	ND (1.1)	ND (1.1)	ND (0.11)	ND (0.11)	ND (0.11)
SW-846 8082A (mg/Kg dry)														
PCB 1016	1	~	~	ND (0.088)	ND (0.092)	ND (0.094)	ND (0.10)	ND (0.084)	ND (0.10)	ND (0.087)	ND (0.091)	ND (0.091)	ND (0.085)	ND (0.087)
PCB 1221	1	~	~	ND (0.088)	ND (0.092)	ND (0.094)	ND (0.10)	ND (0.084)	ND (0.10)	ND (0.087)	ND (0.091)	ND (0.091)	ND (0.085)	ND (0.087)
PCB 1232	1	~	~	ND (0.088)	ND (0.092)	ND (0.094)	ND (0.10)	ND (0.084)	ND (0.10)	ND (0.087)	ND (0.091)	ND (0.091)	ND (0.085)	ND (0.087)
PCB 1242	1	~	~	ND (0.088)	ND (0.092)	ND (0.094)	ND (0.10)	ND (0.084)	ND (0.10)	ND (0.087)	ND (0.091)	ND (0.091)	ND (0.085)	ND (0.087)
PCB 1248	1	~	~	ND (0.088)	ND (0.092)	ND (0.094)	ND (0.10)	ND (0.084)	ND (0.10)	ND (0.087)	ND (0.091)	ND (0.091)	ND (0.085)	ND (0.087)
PCB 1254	1	~	~	ND (0.088)	ND (0.092)	ND (0.094)	ND (0.10)	ND (0.084)	ND (0.10)	ND (0.087)	ND (0.091)	ND (0.091)	ND (0.085)	ND (0.087)
PCB 1260	1	~	~	ND (0.088)	ND (0.092)	ND (0.094)	ND (0.10)	ND (0.084)	ND (0.10)	ND (0.087)	ND (0.091)	ND (0.091)	ND (0.085)	ND (0.087)
PCB 1262	1	~	~	ND (0.088)	ND (0.092)	ND (0.094)	ND (0.10)	ND (0.084)	ND (0.10)	ND (0.087)	ND (0.091)	ND (0.091)	ND (0.085)	ND (0.087)
PCB 1268	1	~	~	ND (0.088)	ND (0.092)	ND (0.094)	ND (0.10)	ND (0.084)	ND (0.10)	ND (0.087)	ND (0.091)	ND (0.091)	ND (0.085)	ND (0.087)
Total PCBs	1	Total <2	Total <2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:
1. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting li
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. ~ = No Method 1 Standard or UCL available
5. Grey shaded values exceed the MCP Reportable Concentrations (RCs).
6. Orange shading denotes compounds and locations where standards are exceeded.
7. Bold Red values exceed the TCLP limits/COMM-97 Acceptance Criteria
8. Yellow highlighted cells indicated pending results.

Table 1b
Summary of Soil Pre-Characterization Results
Pseticides and PCBs
Hadley School Project
Swampscott, MA

Parameter	Reportable Concentrations (RCs)	COMM-97 Landfill Acceptance Criteria		SAMPLING LOCATION										
				NTP-118 (0-1.6)	NTP-119 (0-4)	NTP-119 (4-6)	NTP-120 (0-3)	NTP-121 (0-4.5)	NTP-122 (0-4)	NTP-122 (4-7.5)	NTP-123 (0-4)	NTP-123 (4-6.5)	NTP-124 (0-.5)	NTP-125 (0-1)
Sampling Date	RCS-1	Lined	Unlined	12/3/2021 2:00:00 PM	12/3/2021 2:30:00 PM	12/3/2021 3:00:00 PM	12/6/2021 10:50:00 AM	12/6/2021 11:30:00 AM	12/6/2021 12:45:00 PM	12/6/2021 1:25:00 PM	12/6/2021 2:15:00 PM	12/6/2021 2:45:00 PM	12/6/2021 3:10:00 PM	12/6/2021 3:40:00 PM
Sample Depth				0-1.6 Feet	0-4 Feet	4-6 Feet	0-3 Feet	0-4.5 Feet	0-4 Feet	4-7.5 Feet	0-4 Feet	4-6.5 Feet	0-0.5 Feet	0-1 Feet
SW-846 8081B (mg/Kg dry)														
ALACHOR	~	~	~	ND (0.12)	ND (0.022)	ND (0.022)	ND (0.23)	ND (0.023)	ND (0.023)	ND (0.023)	ND (0.024)	ND (0.023)	ND (0.043)	ND (0.12)
ALDRIN	0.08	~	~	ND (0.029)	ND (0.0055)	ND (0.0054)	ND (0.057)	ND (0.0057)	ND (0.0057)	ND (0.0056)	ND (0.0060)	ND (0.0058)	ND (0.011)	ND (0.031)
ALPHA-BHC	50	~	~	ND (0.029)	ND (0.0055)	ND (0.0054)	ND (0.057)	ND (0.0057)	ND (0.0057)	ND (0.0056)	ND (0.0060)	ND (0.0058)	ND (0.011)	ND (0.031)
BETA-BHC	10	~	~	ND (0.029)	ND (0.0055)	ND (0.0054)	ND (0.057)	ND (0.0057)	ND (0.0057)	ND (0.0056)	ND (0.0060)	ND (0.0058)	ND (0.011)	ND (0.031)
DELTA-BHC	10	~	~	ND (0.029)	ND (0.0055)	ND (0.0054)	ND (0.057)	ND (0.0057)	ND (0.0057)	ND (0.0056)	ND (0.0060)	ND (0.0058)	ND (0.011)	ND (0.031)
GAMMA-BHC (LINDANE)	0.003	~	~	**ND (0.012) ***	ND (0.0022)	ND (0.0022)	**ND (0.023) ***	ND (0.0023)	ND (0.0023)	ND (0.0023)	ND (0.0024)	ND (0.0023)	**ND (0.0043) ***	**ND (0.012) ***
CHLORDANE	5	~	~	ND (0.12)	ND (0.022)	ND (0.022)	ND (0.23)	ND (0.023)	ND (0.023)	ND (0.023)	ND (0.024)	ND (0.023)	ND (0.043)	ND (0.12)
4,4'-DDD	8	~	~	ND (0.023)	ND (0.0044)	ND (0.0043)	ND (0.046)	ND (0.0046)	ND (0.0046)	ND (0.0045)	ND (0.0048)	ND (0.0046)	ND (0.0087)	ND (0.025)
4,4'-DDE	6	~	~	0.052	ND (0.0044)	ND (0.0043)	ND (0.046)	ND (0.0046)	ND (0.0046)	ND (0.0045)	ND (0.0048)	ND (0.0046)	0.022	ND (0.025)
4,4'-DDT	6	~	~	0.046	ND (0.0044)	ND (0.0043)	ND (0.046)	ND (0.0046)	ND (0.0046)	ND (0.0045)	ND (0.0048)	ND (0.0046)	0.022	ND (0.025)
DIELDRIN	0.08	~	~	ND (0.023)	ND (0.0044)	ND (0.0043)	ND (0.046)	ND (0.0046)	ND (0.0046)	ND (0.0045)	ND (0.0048)	ND (0.0046)	ND (0.0087)	ND (0.025)
ENDOSULFAN I	0.5	~	~	ND (0.029)	ND (0.0055)	ND (0.0054)	ND (0.057)	ND (0.0057)	ND (0.0057)	ND (0.0056)	ND (0.0060)	ND (0.0058)	ND (0.011)	ND (0.031)
ENDOSULFAN II	0.5	~	~	ND (0.047)	ND (0.0089)	ND (0.0086)	ND (0.092)	ND (0.0092)	ND (0.0092)	ND (0.0090)	ND (0.0096)	ND (0.0092)	ND (0.017)	ND (0.049)
ENDOSULFAN SULFATE	~	~	~	ND (0.047)	ND (0.0089)	ND (0.0086)	ND (0.092)	ND (0.0092)	ND (0.0092)	ND (0.0090)	ND (0.0096)	ND (0.0092)	ND (0.017)	ND (0.049)
ENDRIN	10	~	~	ND (0.047)	ND (0.0089)	ND (0.0086)	ND (0.092)	ND (0.0092)	ND (0.0092)	ND (0.0090)	ND (0.0096)	ND (0.0092)	ND (0.017)	ND (0.049)
ENDRIN ALDEHYDE	10	~	~	ND (0.047)	ND (0.0089)	ND (0.0086)	ND (0.092)	ND (0.0092)	ND (0.0092)	ND (0.0090)	ND (0.0096)	ND (0.0092)	ND (0.017)	ND (0.049)
ENDRIN KETONE	~	~	~	ND (0.047)	ND (0.0089)	ND (0.0086)	ND (0.092)	ND (0.0092)	ND (0.0092)	ND (0.0090)	ND (0.0096)	ND (0.0092)	ND (0.017)	ND (0.049)
HEPTACHLOR	0.3	~	~	ND (0.029)	ND (0.0055)	ND (0.0054)	ND (0.057)	ND (0.0057)	ND (0.0057)	ND (0.0056)	ND (0.0060)	ND (0.0058)	ND (0.011)	ND (0.031)
HEPTACHLOR EPOXIDE	0.1	~	~	ND (0.029)	ND (0.0055)	ND (0.0054)	ND (0.057)	ND (0.0057)	ND (0.0057)	ND (0.0056)	ND (0.0060)	ND (0.0058)	ND (0.011)	ND (0.031)
HEXACHLOROBENZENE	0.7	~	~	ND (0.035)	ND (0.0067)	ND (0.0065)	ND (0.069)	ND (0.0069)	ND (0.0069)	ND (0.0068)	ND (0.0072)	ND (0.0069)	ND (0.013)	ND (0.037)
METHOXYCHLOR	200	~	~	ND (0.29)	ND (0.055)	ND (0.054)	ND (0.57)	ND (0.057)	ND (0.057)	ND (0.056)	ND (0.060)	ND (0.058)	ND (0.11)	ND (0.31)
TOXAPHENE	10	~	~	ND (0.59)	ND (0.11)	ND (0.11)	ND (1.1)	ND (0.11)	ND (0.11)	ND (0.11)	ND (0.12)	ND (0.12)	ND (0.22)	ND (0.62)
SW-846 8082A (mg/Kg dry)														
PCB 1016	1	~	~	ND (0.10)	ND (0.090)	ND (0.090)	ND (0.092)	ND (0.092)	ND (0.092)	ND (0.090)	ND (0.096)	ND (0.092)	ND (0.17)	ND (0.099)
PCB 1221	1	~	~	ND (0.10)	ND (0.090)	ND (0.090)	ND (0.092)	ND (0.092)	ND (0.092)	ND (0.090)	ND (0.096)	ND (0.092)	ND (0.17)	ND (0.099)
PCB 1232	1	~	~	ND (0.10)	ND (0.090)	ND (0.090)	ND (0.092)	ND (0.092)	ND (0.092)	ND (0.090)	ND (0.096)	ND (0.092)	ND (0.17)	ND (0.099)
PCB 1242	1	~	~	ND (0.10)	ND (0.090)	ND (0.090)	ND (0.092)	ND (0.092)	ND (0.092)	ND (0.090)	ND (0.096)	ND (0.092)	ND (0.17)	ND (0.099)
PCB 1248	1	~	~	ND (0.10)	ND (0.090)	ND (0.090)	ND (0.092)	ND (0.092)	ND (0.092)	ND (0.090)	ND (0.096)	ND (0.092)	ND (0.17)	ND (0.099)
PCB 1254	1	~	~	ND (0.10)	ND (0.090)	ND (0.090)	ND (0.092)	ND (0.092)	ND (0.092)	ND (0.090)	ND (0.096)	ND (0.092)	ND (0.17)	ND (0.099)
PCB 1260	1	~	~	ND (0.10)	ND (0.090)	ND (0.090)	ND (0.092)	ND (0.092)	ND (0.092)	ND (0.090)	ND (0.096)	ND (0.092)	ND (0.17)	ND (0.099)
PCB 1262	1	~	~	ND (0.10)	ND (0.090)	ND (0.090)	ND (0.092)	ND (0.092)	ND (0.092)	ND (0.090)	ND (0.096)	ND (0.092)	ND (0.17)	ND (0.099)
PCB 1268	1	~	~	ND (0.10)	ND (0.090)	ND (0.090)	ND (0.092)	ND (0.092)	ND (0.092)	ND (0.090)	ND (0.096)	ND (0.092)	ND (0.17)	ND (0.099)
Total PCBs	1	Total <2	Total <2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:
1. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting li
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. ~ = No Method 1 Standard or UCL available
5. Grey shaded values exceed the MCP Reportable Concentrations (RCs).
6. Orange shading denotes compounds and locations where standards are exceeded.
7. Bold Red values exceed the TCLP limits/COMM-97 Acceptance Criteria
8. Yellow highlighted cells indicated pending results.

Table 1b
Summary of Soil Pre-Characterization Results
Pseticides and PCBs
Hadley School Project
Swampscott, MA

Parameter	Reportable Concentrations (RCs)	COMM-97 Landfill Acceptance Criteria		NTP-126 (0-1)	NTP-127 (0-5)	NTP-128 (0-1)	NTP-128 (1-2)	NTP-129 (0-2)	NTP-129 (2-3)	NTP-130 (0-2)	NTP-130 (2-3.5)	NTP-131 (0-1)	NTP-131 (1-2.5)	NTP-132 (0-1)
Sampling Date	RCS-1	Lined	Unlined	12/6/2021 4:00:00 PM	12/6/2021 10:00:00 AM	12/7/2021 9:00:00 AM	12/7/2021 9:10:00 AM	12/7/2021 9:30:00 AM	12/7/2021 9:45:00 AM	12/7/2021 10:50:00 AM	12/7/2021 10:25:00 AM	12/7/2021 11:25:00 AM	12/7/2021 11:30:00 AM	12/7/2021 12:10:00 PM
Sample Depth				0-1 Feet	0-4 Feet	0-1 Feet	1-2 Feet	0-2 Feet	2-3 Feet	0-2 Feet	2-3.5 Feet	0-1 Feet	1-2.5 Feet	0-1 Feet
SW-846 8081B (mg/Kg dry)														
ALACHOR	~	~	~	ND (0.025)	ND (1.1)	ND (0.025)	ND (0.026)	ND (0.022)	ND (0.022)	ND (0.023)	ND (0.024)	ND (0.022)	ND (0.024)	ND (0.26)
ALDRIN	0.08	~	~	ND (0.0063)	**ND (0.28) ***	ND (0.0061)	ND (0.0064)	ND (0.0055)	ND (0.0056)	ND (0.0058)	ND (0.0061)	ND (0.0056)	ND (0.0060)	ND (0.065)
ALPHA-BHC	50	~	~	ND (0.0063)	ND (0.28)	ND (0.0061)	ND (0.0064)	ND (0.0055)	ND (0.0056)	ND (0.0058)	ND (0.0061)	ND (0.0056)	ND (0.0060)	ND (0.065)
BETA-BHC	10	~	~	ND (0.0063)	ND (0.28)	ND (0.0061)	ND (0.0064)	ND (0.0055)	ND (0.0056)	ND (0.0058)	ND (0.0061)	ND (0.0056)	ND (0.0060)	ND (0.065)
DELTA-BHC	10	~	~	ND (0.0063)	ND (0.28)	ND (0.0061)	ND (0.0064)	ND (0.0055)	ND (0.0056)	ND (0.0058)	ND (0.0061)	ND (0.0056)	ND (0.0060)	ND (0.065)
GAMMA-BHC (LINDANE)	0.003	~	~	ND (0.0025)	**ND (0.11) ***	ND (0.0025)	ND (0.0026)	ND (0.0022)	ND (0.0022)	ND (0.0023)	ND (0.0024)	ND (0.0022)	ND (0.0024)	**ND (0.026) ***
CHLORDANE	5	~	~	ND (0.025)	ND (1.1)	ND (0.025)	ND (0.026)	ND (0.022)	ND (0.022)	ND (0.023)	ND (0.024)	ND (0.022)	ND (0.024)	ND (0.26)
4,4'-DDD	8	~	~	ND (0.0050)	ND (0.22)	ND (0.0049)	ND (0.0052)	ND (0.0044)	ND (0.0044)	ND (0.0047)	ND (0.0049)	ND (0.0045)	ND (0.0048)	ND (0.052)
4,4'-DDE	6	~	~	0.025	ND (0.22)	ND (0.0049)	ND (0.0052)	ND (0.0044)	ND (0.0044)	ND (0.0047)	ND (0.0049)	ND (0.0045)	ND (0.0048)	ND (0.052)
4,4'-DDT	6	~	~	0.012	ND (0.22)	ND (0.0049)	ND (0.0052)	ND (0.0044)	ND (0.0044)	ND (0.0047)	ND (0.0049)	ND (0.0045)	ND (0.0048)	ND (0.052)
DIELDRIN	0.08	~	~	ND (0.0050)	**ND (0.22) ***	ND (0.0049)	ND (0.0052)	ND (0.0044)	ND (0.0044)	ND (0.0047)	ND (0.0049)	ND (0.0045)	ND (0.0048)	ND (0.052)
ENDOSULFAN I	0.5	~	~	ND (0.0063)	ND (0.28)	ND (0.0061)	ND (0.0064)	ND (0.0055)	ND (0.0056)	ND (0.0058)	ND (0.0061)	ND (0.0056)	ND (0.0060)	ND (0.065)
ENDOSULFAN II	0.5	~	~	ND (0.010)	ND (0.45)	ND (0.0098)	ND (0.010)	ND (0.0089)	ND (0.0089)	ND (0.0093)	ND (0.0097)	ND (0.0089)	ND (0.0096)	ND (0.10)
ENDOSULFAN SULFATE	~	~	~	ND (0.010)	ND (0.45)	ND (0.0098)	ND (0.010)	ND (0.0089)	ND (0.0089)	ND (0.0093)	ND (0.0097)	ND (0.0089)	ND (0.0096)	ND (0.10)
ENDRIN	10	~	~	ND (0.010)	ND (0.45)	ND (0.0098)	ND (0.010)	ND (0.0089)	ND (0.0089)	ND (0.0093)	ND (0.0097)	ND (0.0089)	ND (0.0096)	ND (0.10)
ENDRIN ALDEHYDE	10	~	~	ND (0.010)	ND (0.45)	ND (0.0098)	ND (0.010)	ND (0.0089)	ND (0.0089)	ND (0.0093)	ND (0.0097)	ND (0.0089)	ND (0.0096)	ND (0.10)
ENDRIN KETONE	~	~	~	ND (0.010)	ND (0.45)	ND (0.0098)	ND (0.010)	ND (0.0089)	ND (0.0089)	ND (0.0093)	ND (0.0097)	ND (0.0089)	ND (0.0096)	ND (0.10)
HEPTACHLOR	0.3	~	~	ND (0.0063)	ND (0.28)	ND (0.0061)	ND (0.0064)	ND (0.0055)	ND (0.0056)	ND (0.0058)	ND (0.0061)	ND (0.0056)	ND (0.0060)	ND (0.065)
HEPTACHLOR EPOXIDE	0.1	~	~	ND (0.0063)	**ND (0.28) ***	ND (0.0061)	ND (0.0064)	ND (0.0055)	ND (0.0056)	ND (0.0058)	ND (0.0061)	ND (0.0056)	ND (0.0060)	ND (0.065)
HEXACHLOROBENZENE	0.7	~	~	ND (0.0076)	ND (0.33)	ND (0.0074)	ND (0.0077)	ND (0.0067)	ND (0.0067)	ND (0.0070)	ND (0.0073)	ND (0.0067)	ND (0.0072)	ND (0.078)
METHOXYCHLOR	200	~	~	ND (0.063)	ND (2.8)	ND (0.061)	ND (0.064)	ND (0.055)	ND (0.056)	ND (0.058)	ND (0.061)	ND (0.056)	ND (0.060)	ND (0.65)
TOXAPHENE	10	~	~	ND (0.13)	ND (5.6)	ND (0.12)	ND (0.13)	ND (0.11)	ND (0.11)	ND (0.12)	ND (0.12)	ND (0.11)	ND (0.12)	ND (1.3)
SW-846 8082A (mg/Kg dry)														
PCB 1016	1	~	~	ND (0.10)	ND (0.089)	ND (0.097)	ND (0.10)	ND (0.087)	ND (0.086)	ND (0.093)	ND (0.096)	ND (0.089)	ND (0.096)	ND (0.10)
PCB 1221	1	~	~	ND (0.10)	ND (0.089)	ND (0.097)	ND (0.10)	ND (0.087)	ND (0.086)	ND (0.093)	ND (0.096)	ND (0.089)	ND (0.096)	ND (0.10)
PCB 1232	1	~	~	ND (0.10)	ND (0.089)	ND (0.097)	ND (0.10)	ND (0.087)	ND (0.086)	ND (0.093)	ND (0.096)	ND (0.089)	ND (0.096)	ND (0.10)
PCB 1242	1	~	~	ND (0.10)	ND (0.089)	ND (0.097)	ND (0.10)	ND (0.087)	ND (0.086)	ND (0.093)	ND (0.096)	ND (0.089)	ND (0.096)	ND (0.10)
PCB 1248	1	~	~	ND (0.10)	ND (0.089)	ND (0.097)	ND (0.10)	ND (0.087)	ND (0.086)	ND (0.093)	ND (0.096)	ND (0.089)	ND (0.096)	ND (0.10)
PCB 1254	1	~	~	ND (0.10)	ND (0.089)	ND (0.097)	ND (0.10)	ND (0.087)	ND (0.086)	ND (0.093)	ND (0.096)	ND (0.089)	ND (0.096)	ND (0.10)
PCB 1260	1	~	~	ND (0.10)	ND (0.089)	ND (0.097)	ND (0.10)	ND (0.087)	ND (0.086)	ND (0.093)	ND (0.096)	ND (0.089)	ND (0.096)	ND (0.10)
PCB 1262	1	~	~	ND (0.10)	ND (0.089)	ND (0.097)	ND (0.10)	ND (0.087)	ND (0.086)	ND (0.093)	ND (0.096)	ND (0.089)	ND (0.096)	ND (0.10)
PCB 1268	1	~	~	ND (0.10)	ND (0.089)	ND (0.097)	ND (0.10)	ND (0.087)	ND (0.086)	ND (0.093)	ND (0.096)	ND (0.089)	ND (0.096)	ND (0.10)
Total PCBs	1	Total <2	Total <2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:
1. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting li
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. ~ = No Method 1 Standard or UCL available
5. Grey shaded values exceed the MCP Reportable Concentrations (RCs).
6. Orange shading denotes compounds and locations where standards are exceeded.
7. Bold Red values exceed the TCLP limits/COMM-97 Acceptance Criteria
8. Yellow highlighted cells indicated pending results.

Table 1b
Summary of Soil Pre-Characterization Results
Pseticides and PCBs
Hadley School Project
Swampscott, MA

Parameter	Reportable Concentrations (RCs)	COMM-97 Landfill Acceptance Criteria		NTP-132 (1-3)	NTP-133 (0-2)	NTP-133 (2-4)	NTP-134 (0-1.5)	NTP-135 (0-1)	NTP-135 (1-3.5)
Sampling Date	RCS-1	Lined	Unlined	12/7/2021 12:20:00 PM	12/7/2021 1:15:00 PM	12/7/2021 1:30:00 PM	12/7/2021 2:00:00 PM	12/7/2021 2:30:00 PM	12/7/2021 2:40:00 PM
Sample Depth				1-3 Feet	0-2 Feet	2-4 Feet	0-1.5 Feet	0-1 Feet	1-3.5 Feet
SW-846 8081B (mg/Kg dry)									
ALACHOR	~	~	~	ND (0.022)	ND (0.47)	ND (0.23)	ND (0.24)	ND (0.23)	ND (0.023)
ALDRIN	0.08	~	~	ND (0.0056)	**ND (0.12) ***	ND (0.058)	ND (0.060)	ND (0.058)	ND (0.0059)
ALPHA-BHC	50	~	~	ND (0.0056)	ND (0.12)	ND (0.058)	ND (0.060)	ND (0.058)	ND (0.0059)
BETA-BHC	10	~	~	ND (0.0056)	ND (0.12)	ND (0.058)	ND (0.060)	ND (0.058)	ND (0.0059)
DELTA-BHC	10	~	~	ND (0.0056)	ND (0.12)	ND (0.058)	ND (0.060)	ND (0.058)	ND (0.0059)
GAMMA-BHC (LINDANE)	0.003	~	~	ND (0.0022)	**ND (0.047) ***	**ND (0.023) ***	**ND (0.024) ***	**ND (0.023) ***	ND (0.0023)
CHLORDANE	5	~	~	ND (0.022)	ND (0.47)	ND (0.23)	ND (0.24)	ND (0.23)	ND (0.023)
4,4'-DDD	8	~	~	ND (0.0045)	ND (0.094)	ND (0.046)	ND (0.048)	ND (0.046)	ND (0.0047)
4,4'-DDE	6	~	~	ND (0.0045)	ND (0.094)	ND (0.046)	ND (0.048)	0.057	0.01
4,4'-DDT	6	~	~	0.0063	ND (0.094)	ND (0.046)	ND (0.048)	0.086	0.014
DIELDRIN	0.08	~	~	ND (0.0045)	**ND (0.094) ***	ND (0.046)	ND (0.048)	ND (0.046)	ND (0.0047)
ENDOSULFAN I	0.5	~	~	ND (0.0056)	ND (0.12)	ND (0.058)	ND (0.060)	ND (0.058)	ND (0.0059)
ENDOSULFAN II	0.5	~	~	ND (0.0090)	ND (0.19)	ND (0.092)	ND (0.096)	ND (0.093)	ND (0.0094)
ENDOSULFAN SULFATE	~	~	~	ND (0.0090)	ND (0.19)	ND (0.092)	ND (0.096)	ND (0.093)	ND (0.0094)
ENDRIN	10	~	~	ND (0.0090)	ND (0.19)	ND (0.092)	ND (0.096)	ND (0.093)	ND (0.0094)
ENDRIN ALDEHYDE	10	~	~	ND (0.0090)	ND (0.19)	ND (0.092)	ND (0.096)	ND (0.093)	ND (0.0094)
ENDRIN KETONE	~	~	~	ND (0.0090)	ND (0.19)	ND (0.092)	ND (0.096)	ND (0.093)	ND (0.0094)
HEPTACHLOR	0.3	~	~	ND (0.0056)	ND (0.12)	ND (0.058)	ND (0.060)	ND (0.058)	ND (0.0059)
HEPTACHLOR EPOXIDE	0.1	~	~	ND (0.0056)	**ND (0.12) ***	ND (0.058)	ND (0.060)	ND (0.058)	ND (0.0059)
HEXACHLOROBENZENE	0.7	~	~	ND (0.0067)	ND (0.14)	ND (0.069)	ND (0.072)	ND (0.070)	ND (0.0070)
METHOXYCHLOR	200	~	~	ND (0.056)	ND (1.2)	ND (0.58)	ND (0.60)	ND (0.58)	ND (0.059)
TOXAPHENE	10	~	~	ND (0.11)	ND (2.3)	ND (1.2)	ND (1.2)	ND (1.2)	ND (0.12)
SW-846 8082A (mg/Kg dry)									
PCB 1016	1	~	~	ND (0.090)	ND (0.094)	ND (0.094)	ND (0.097)	ND (0.093)	ND (0.094)
PCB 1221	1	~	~	ND (0.090)	ND (0.094)	ND (0.094)	ND (0.097)	ND (0.093)	ND (0.094)
PCB 1232	1	~	~	ND (0.090)	ND (0.094)	ND (0.094)	ND (0.097)	ND (0.093)	ND (0.094)
PCB 1242	1	~	~	ND (0.090)	ND (0.094)	ND (0.094)	ND (0.097)	ND (0.093)	ND (0.094)
PCB 1248	1	~	~	ND (0.090)	ND (0.094)	ND (0.094)	ND (0.097)	ND (0.093)	ND (0.094)
PCB 1254	1	~	~	ND (0.090)	ND (0.094)	ND (0.094)	ND (0.097)	ND (0.093)	ND (0.094)
PCB 1260	1	~	~	ND (0.090)	ND (0.094)	ND (0.094)	ND (0.097)	ND (0.093)	ND (0.094)
PCB 1262	1	~	~	ND (0.090)	ND (0.094)	ND (0.094)	ND (0.097)	ND (0.093)	ND (0.094)
PCB 1268	1	~	~	ND (0.090)	ND (0.094)	ND (0.094)	ND (0.097)	ND (0.093)	ND (0.094)
Total PCBs	1	Total <2	Total <2	ND	ND	ND	ND	ND	ND

NOTES:
1. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting li
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. ~ = No Method 1 Standard or UCL available
5. Grey shaded values exceed the MCP Reportable Concentrations (RCs).
6. Orange shading denotes compounds and locations where standards are exceeded.
7. Bold Red values exceed the TCLP limits/COMM-97 Acceptance Criteria
8. Yellow highlighted cells indicated pending results.

Table 1c
Summary of Soil Pre-Characterization Results
TPH and SVOCs
Hadley School Project
Swampscott, MA

Parameter	Reportable Concentrations (RCs)	COMM-97 Landfill Acceptance Criteria		NTP-101 (0-3)	NTP-101 (3-7)	NTP-102 (0-3)	NTP-103 (0-2)	NTP-104 (0-3)	NTP-105 (0-2)	NTP-106 (0-1.7)	NTP-107 (0-1.5)	NTP-108 (0-3)	NTP-109 (0-2.5)	NTP-110 (0-3)	NTP-110 (3-5.5)	NTP-111 (0-3)	NTP-111 (3-7)	NTP-112 (0-4)	NTP-113 (0-3)	NTP-114 (0-2)
Sampling Date	RCS-1	Lined	Unlined	12/1/2021 9:30:00 AM	12/1/2021 10:30:00 AM	12/1/2021 11:30:00 AM	12/1/2021 12:20:00 PM	12/1/2021 1:15:00 PM	12/1/2021 1:55:00 PM	12/1/2021 2:50:00 PM	12/1/2021 3:25:00 PM	12/1/2021 9:00:00 AM	12/2/2021 9:05:00 AM	12/2/2021 10:30:00 AM	12/2/2021 11:40:00 AM	12/2/2021 12:50:00 PM	12/2/2021 1:40:00 PM	12/2/2021 3:00:00 PM	12/2/2021 3:40:00 PM	12/3/2021 10:20:00 AM
Sample Depth				0-3 Feet	3-7 Feet	0-3 Feet	0-2 Feet	0-3 Feet	0-2 Feet	0-1.7 Feet	0-1.5 Feet	0-3 Feet	0-2.5 Feet	0-3 Feet	3-5.5 Feet	0-3 Feet	3-7 Feet	0-4 Feet	0-3 Feet	0-2 Feet
SW-846 8100 Modified (mg/Kg dry)																				
TPH	1000	5000	2500	51	22	43	170	71	41	140	140	60	55	36	22	44	84	120	38	54
SW-846 8270E (mg/Kg dry)																				
ACENAPHTHENE	4	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	ND (0.22)	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	ND (0.19)	ND (0.22)	ND (0.18)	ND (0.21)
ACENAPHTHYLENE	1	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	ND (0.22)	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	ND (0.19)	ND (0.22)	ND (0.18)	ND (0.21)
ACETOPHENONE	1000	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
ANILINE	1000	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
ANTHRACENE	1000	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	ND (0.22)	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	ND (0.19)	ND (0.22)	ND (0.18)	ND (0.21)
BENZIDINE	10	~	~	ND (0.74)	ND (0.75)	ND (0.74)	ND (0.89)	ND (0.80)	ND (0.73)	ND (0.86)	ND (0.90)	ND (0.74)	ND (0.79)	ND (0.72)	ND (0.71)	ND (0.74)	ND (0.75)	ND (0.85)	ND (0.70)	ND (0.82)
BENZO(A)ANTHRACENE	7	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	0.42	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	ND (0.19)	0.61	ND (0.18)	ND (0.21)
BENZO(A)PYRENE	2	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	0.38	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	ND (0.19)	0.57	ND (0.18)	ND (0.21)
BENZO(B)FLUORANTHENE	7	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	0.47	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	ND (0.19)	0.79	ND (0.18)	ND (0.21)
BENZO(G,H,I)PERYLENE	1000	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	ND (0.22)	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	ND (0.19)	0.31	ND (0.18)	ND (0.21)
BENZO(K)FLUORANTHENE	70	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	ND (0.22)	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	ND (0.19)	0.33	ND (0.18)	ND (0.21)
BENZOIC ACID	1000	~	~	ND (1.1)	ND (1.1)	ND (1.1)	ND (1.3)	ND (1.2)	ND (1.1)	ND (1.3)	ND (1.4)	ND (1.1)	ND (1.2)	ND (1.1)	ND (1.1)	ND (1.1)	ND (1.1)	ND (1.3)	ND (1.1)	ND (1.2)
BIS(2-CHLOROETHOXY)METHANE	500	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
BIS(2-CHLOROETHYL)ETHER	0.7	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
BIS(2-CHLOROISOPROPYL)ETHER	0.7	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
BIS(2-ETHYLHEXYL)PHTHALATE	90	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
4-BROMOPHENYL PHENYL ETHER	100	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
BUTYLBENZYLPHTHALATE	100	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
CARBAZOLE	~	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	ND (0.22)	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	ND (0.19)	ND (0.22)	ND (0.18)	ND (0.21)
4-CHLOROANILINE	1	~	~	ND (0.74)	ND (0.75)	ND (0.74)	ND (0.89)	ND (0.80)	ND (0.73)	ND (0.86)	ND (0.90)	ND (0.74)	ND (0.79)	ND (0.72)	ND (0.71)	ND (0.74)	ND (0.75)	ND (0.85)	ND (0.70)	ND (0.82)
4-CHLORO-3-METHYLPHENOL	1000	~	~	ND (0.74)	ND (0.75)	ND (0.74)	ND (0.89)	ND (0.80)	ND (0.73)	ND (0.86)	ND (0.90)	ND (0.74)	ND (0.79)	ND (0.72)	ND (0.71)	ND (0.74)	ND (0.75)	ND (0.85)	ND (0.70)	ND (0.82)
2-CHLORONAPHTHALENE	1000	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
2-CHLOROPHENOL	0.7	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
4-CHLOROPHENYLPHENYL ETHER	1000	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
CHRYSENE	70	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	0.42	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	ND (0.19)	0.65	ND (0.18)	ND (0.21)
DIBENZ(A,H)ANTHRACENE	0.7	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	ND (0.22)	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	ND (0.19)	ND (0.22)	ND (0.18)	ND (0.21)
DIBENZOFURAN	100	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
DI-N-BUTYLPHTHALATE	50	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
1,2-DICHLOROBENZENE	9	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
1,3-DICHLOROBENZENE	3	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
1,4-DICHLOROBENZENE	0.7	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
3,3'-DICHLOROBENZIDINE	3	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	ND (0.22)	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	ND (0.19)	ND (0.22)	ND (0.18)	ND (0.21)
2,4-DICHLOROPHENOL	0.7	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
DIETHYLPHTHALATE	10	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
2,4-DIMETHYLPHENOL	0.7	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
DIMETHYLPHTHALATE	0.7	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
4,6-DINITRO-2-METHYLPHENOL	50	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
2,4-DINITROPHENOL	3	~	~	ND (0.74)	ND (0.75)	ND (0.74)	ND (0.89)	ND (0.80)	ND (0.73)	ND (0.86)	ND (0.90)	ND (0.74)	ND (0.79)	ND (0.72)	ND (0.71)	ND (0.74)	ND (0.75)	ND (0.85)	ND (0.70)	ND (0.82)
2,4-DINITROTOLUENE	0.7	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
2,6-DINITROTOLUENE	100	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
DI-N-OCTYLPHTHALATE	1000	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	50	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
FLUORANTHENE	1000	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	0.86	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	0.31	1.3	ND (0.18)	ND (0.21)
FLUORENE	1000	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	ND (0.22)	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	ND (0.19)	ND (0.22)	ND (0.18)	ND (0.21)
HEXACHLOROBENZENE	0.7	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
HEXACHLOROBUTADIENE	30	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
HEXACHLOROCYCLOPENTADIENE	50	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
HEXACHLOROETHANE	0.7	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
INDENO(1,2,3-CD)PYRENE	7	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	ND (0.22)	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	ND (0.19)	0.3	ND (0.18)	ND (0.21)
ISOPHORONE	100	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
1-METHYLNAPHTHALENE	~	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	ND (0.22)	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	ND (0.19)	ND (0.22)	ND (0.18)	ND (0.21)
2-METHYLNAPHTHALENE	0.7	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	ND (0.22)	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	ND (0.19)	ND (0.22)	ND (0.18)	ND (0.21)
O-CRESOL	500	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
M/P-CRESOL	500	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
NAPHTHALENE	4	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	ND (0.22)	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	ND (0.19)	ND (0.22)	ND (0.18)	ND (0.21)
2-NITROANILINE	~	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
3-NITROANILINE	~	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
4-NITROANILINE	1000	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
NITROBENZENE	500	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
2-NITROPHENOL	100	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
4-NITROPHENOL	100	~	~	ND (0.74)	ND (0.75)	ND (0.74)	ND (0.89)	ND (0.80)	ND (0.73)	ND (0.86)	ND (0.90)	ND (0.74)	ND (0.79)	ND (0.72)	ND (0.71)	ND (0.74)	ND (0.75)	ND (0.85)	ND (0.70)	ND (0.82)
N-NITROSODIMETHYLAMINE	50	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
N-NITROSODIPHENYLAMINE	100	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
N-NITROSO-DI-N-PROPYLAMINE	50	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
PENTACHLORONITROBENZENE	~	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
PENTACHLOROPHENOL	3	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
PHENANTHRENE	10	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	0.84	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	ND (0.19)	1	ND (0.18)	ND (0.21)
PHENOL	1	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
PYRENE	1000	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.23)	ND (0.21)	ND (0.19)	0.88	ND (0.23)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.18)	ND (0.19)	0.35	1.2	ND (0.18)	ND (0.21)
PYRIDINE	500	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
1,2,4,5-TETRACHLOROBENZENE	~	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
1,2,4-TRICHLOROBENZENE	2	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
2,4,5-TRICHLOROPHENOL	4	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
2,4,6-TRICHLOROPHENOL	0.7	~	~	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.46)	ND (0.41)	ND (0.37)	ND (0.44)	ND (0.46)	ND (0.38)	ND (0.41)	ND (0.37)	ND (0.36)	ND (0.38)	ND (0.39)	ND (0.44)	ND (0.36)	ND (0.42)
Total SVOCs	~	Total <100	Total <100	ND	ND	ND	ND	ND	ND	4.27	ND	ND	ND	ND	ND	ND	0.66	7.06	ND	ND

NOTES:
1. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting limit exceeds one or more of the regulatory criteria.
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. ~ = No Method 1 Standard or UCL available
5. Grey shaded values exceed the MCP Reportable Concentrations (RCs).
6. Orange shading denotes compounds and locations where standards are exceeded.
7. Bold Red values exceed the TCLP limits/COMM-97 Acceptance Criteria
8. Yellow highlighted cells indicated pending results.

Table 1c
Summary of Soil Pre-Characterization Results
TPH and SVOCs
Hadley School Project
Swampscott, MA

Parameter	Reportable Concentrations (RCs)	COMM-97 Landfill Acceptance Criteria		SAMPLING LOCATION															
				NTP-115 (0-3)	NTP-115 (3-7)	NTP-116 (0-3.5)	NTP-117 (0-2.5)	NTP-117 (2.5-5.5)	NTP-118 (0-1.6)	NTP-119 (0-4)	NTP-119 (4-6)	NTP-120 (0-3)	NTP-121 (0-4.5)	NTP-122 (0-4)	NTP-122 (4-7.5)	NTP-123 (0-4)	NTP-123 (4-6.5)	NTP-124 (0-.5)	NTP-125 (0-1)	NTP-126 (0-1)
Sampling Date	RCS-1	Lined	Unlined	12/3/2021 8:50:00 AM	12/3/2021 9:15:00 AM	12/3/2021 11:00:00 AM	12/3/2021 12:30:00 PM	12/3/2021 12:30:00 PM	12/3/2021 2:00:00 PM	12/3/2021 2:30:00 PM	12/3/2021 3:00:00 PM	12/6/2021 10:50:00 AM	12/6/2021 11:30:00 AM	12/6/2021 12:45:00 PM	12/6/2021 1:25:00 PM	12/6/2021 2:15:00 PM	12/6/2021 2:45:00 PM	12/6/2021 3:10:00 PM	12/6/2021 3:40:00 PM	12/6/2021 4:00:00 PM
Sample Depth				0-3 Feet	3-7 Feet	0-3.5 Feet	0-2.5 Feet	2.5-5.5 Feet	0-1.6 Feet	0-4 Feet	4-6 Feet	0-3 Feet	0-4.5 Feet	0-4 Feet	4-7.5 Feet	0-4 Feet	4-6.5 Feet	0-0.5 Feet	0-1 Feet	0-1 Feet
SW-846 8100 Modified (mg/Kg dry)																				
TPH	1000	5000	2500	44	69	30	16	14	110	23	24	390	62	44	28	64	47	680	270	170
SW-846 8270E (mg/Kg dry)																				
ACENAPHTHENE	4	~	~	ND (0.19)	0.33	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	1.3	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.37)	ND (0.21)	ND (0.21)
ACENAPHTHYLENE	1	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	0.22	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.37)	ND (0.21)	ND (0.21)
ACETOPHENONE	1000	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
ANILINE	1000	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
ANTHRACENE	1000	~	~	ND (0.19)	0.79	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	3.2	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.37)	ND (0.21)	ND (0.21)
BENZIDINE	10	~	~	ND (0.72)	ND (0.75)	ND (0.74)	ND (0.71)	ND (0.71)	ND (0.82)	ND (0.73)	ND (0.74)	ND (0.76)	ND (0.76)	ND (0.76)	ND (0.74)	ND (0.79)	ND (0.76)	ND (1.4)	ND (0.81)	ND (0.83)
BENZO(A)ANTHRACENE	7	~	~	0.22	1.1	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	4.4	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.37)	ND (0.21)	0.22
BENZO(A)PYRENE	2	~	~	0.22	0.9	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	**4.2**	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.37)	0.22	0.23
BENZO(B)FLUORANTHENE	7	~	~	0.28	1.1	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	5.2	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	0.41	0.32	0.34
BENZO(G,H,I)PERYLENE	1000	~	~	ND (0.19)	0.53	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	2.9	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.37)	ND (0.21)	ND (0.21)
BENZO(K)FLUORANTHENE	70	~	~	ND (0.19)	0.47	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	2	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.37)	ND (0.21)	ND (0.21)
BENZOIC ACID	1000	~	~	ND (1.1)	ND (1.1)	ND (1.1)	ND (1.1)	ND (1.1)	ND (1.2)	ND (1.1)	ND (1.1)	ND (1.1)	ND (1.1)	ND (1.1)	ND (1.1)	ND (1.2)	ND (1.2)	ND (2.2)	ND (1.2)	ND (1.3)
BIS(2-CHLOROETHOXY)METHANE	500	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
BIS(2-CHLOROETHYL)ETHER	0.7	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	**ND (0.74) ***	ND (0.42)	ND (0.43)
BIS(2-CHLOROISOPROPYL)ETHER	0.7	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	**ND (0.74) ***	ND (0.42)	ND (0.43)
BIS(2-ETHYLHEXYL)PHTHALATE	90	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
4-BROMOPHENYL PHENYL ETHER	100	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
BUTYLBENZYLPHTHALATE	100	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
CARBAZOLE	~	~	~	ND (0.19)	0.38	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	1.7	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.37)	ND (0.21)	ND (0.21)
4-CHLOROANILINE	1	~	~	ND (0.72)	ND (0.75)	ND (0.74)	ND (0.71)	ND (0.71)	ND (0.82)	ND (0.73)	ND (0.74)	ND (0.76)	ND (0.76)	ND (0.76)	ND (0.74)	ND (0.79)	ND (0.76)	**ND (1.4) ***	ND (0.81)	ND (0.83)
4-CHLORO-3-METHYLPHENOL	1000	~	~	ND (0.72)	ND (0.75)	ND (0.74)	ND (0.71)	ND (0.71)	ND (0.82)	ND (0.73)	ND (0.74)	ND (0.76)	ND (0.76)	ND (0.76)	ND (0.74)	ND (0.79)	ND (0.76)	ND (1.4)	ND (0.81)	ND (0.83)
2-CHLORONAPHTHALENE	1000	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
2-CHLOROPHENOL	0.7	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	**ND (0.74) ***	ND (0.42)	ND (0.43)
4-CHLOROPHENYLPHENYL ETHER	1000	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
CHRYSENE	70	~	~	0.22	1	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	4	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.37)	0.24	0.23
DIBENZ(A,H)ANTHRACENE	0.7	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	0.68	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.37)	ND (0.21)	ND (0.21)
DIBENZOFURAN	100	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	1.5	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
DI-N-BUTYLPHTHALATE	50	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
1,2-DICHLOROBENZENE	9	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
1,3-DICHLOROBENZENE	3	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
1,4-DICHLOROBENZENE	0.7	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	**ND (0.74) ***	ND (0.42)	ND (0.43)
3,3'-DICHLOROBENZIDINE	3	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.37)	ND (0.21)	ND (0.21)
2,4-DICHLOROPHENOL	0.7	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	**ND (0.74) ***	ND (0.42)	ND (0.43)
DIETHYLPHTHALATE	10	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
2,4-DIMETHYLPHENOL	0.7	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	**ND (0.74) ***	ND (0.42)	ND (0.43)
DIMETHYLPHTHALATE	0.7	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	**ND (0.74) ***	ND (0.42)	ND (0.43)
4,6-DINITRO-2-METHYLPHENOL	50	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
2,4-DINITROPHENOL	3	~	~	ND (0.72)	ND (0.75)	ND (0.74)	ND (0.71)	ND (0.71)	ND (0.82)	ND (0.73)	ND (0.74)	ND (0.76)	ND (0.76)	ND (0.76)	ND (0.74)	ND (0.79)	ND (0.76)	ND (1.4)	ND (0.81)	ND (0.83)
2,4-DINITROTOLUENE	0.7	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	**ND (0.74) ***	ND (0.42)	ND (0.43)
2,6-DINITROTOLUENE	100	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
DI-N-OCTYLPHTHALATE	1000	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	50	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
FLUORANTHENE	1000	~	~	0.45	2.7	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	12	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	0.54	0.31	0.37
FLUORENE	1000	~	~	ND (0.19)	0.39	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	1.5	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.37)	ND (0.21)	ND (0.21)
HEXACHLOROBENZENE	0.7	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	**ND (0.74) ***	ND (0.42)	ND (0.43)
HEXACHLOROBUTADIENE	30	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
HEXACHLOROCYCLOPENTADIENE	50	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
HEXACHLOROETHANE	0.7	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	**ND (0.74) ***	ND (0.42)	ND (0.43)
INDENO(1,2,3-CD)PYRENE	7	~	~	ND (0.19)	0.53	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	2.6	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.37)	ND (0.21)	ND (0.21)
ISOPHORONE	100	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
1-METHYLNAPHTHALENE	~	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	0.63	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.37)	ND (0.21)	ND (0.21)
2-METHYLNAPHTHALENE	0.7	~	~	ND (0.19)	ND (0.19)	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	**1**	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.37)	ND (0.21)	ND (0.21)
O-CRESOL	500	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
M/P-CRESOL	500	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
NAPHTHALENE	4	~	~	ND (0.19)	0.21	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	2.2	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.37)	ND (0.21)	ND (0.21)
2-NITROANILINE	~	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
3-NITROANILINE	~	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
4-NITROANILINE	1000	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
NITROBENZENE	500	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
2-NITROPHENOL	100	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
4-NITROPHENOL	100	~	~	ND (0.72)	ND (0.75)	ND (0.74)	ND (0.71)	ND (0.71)	ND (0.82)	ND (0.73)	ND (0.74)	ND (0.76)	ND (0.76)	ND (0.76)	ND (0.74)	ND (0.79)	ND (0.76)	ND (1.4)	ND (0.81)	ND (0.83)
N-NITROSODIMETHYLAMINE	50	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
N-NITROSODIPHENYLAMINE	100	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
N-NITROSO-DI-N-PROPYLAMINE	50	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
PENTACHLORONITROBENZENE	~	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
PENTACHLOROPHENOL	3	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
PHENANTHRENE	10	~	~	0.33	3.2	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	**14**	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.37)	ND (0.21)	0.28
PHENOL	1	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
PYRENE	1000	~	~	0.46	2.4	ND (0.19)	ND (0.18)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	11	ND (0.19)	ND (0.20)	ND (0.19)	ND (0.20)	ND (0.20)	0.45	0.27	0.4
PYRIDINE	500	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
1,2,4,5-TETRACHLOROBENZENE	~	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
1,2,4-TRICHLOROBENZENE	2	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
2,4,5-TRICHLOROPHENOL	4	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	ND (0.74)	ND (0.42)	ND (0.43)
2,4,6-TRICHLOROPHENOL	0.7	~	~	ND (0.37)	ND (0.39)	ND (0.38)	ND (0.37)	ND (0.37)	ND (0.42)	ND (0.38)	ND (0.38)	ND (0.39)	ND (0.39)	ND (0.39)	ND (0.38)	ND (0.41)	ND (0.39)	**ND (0.74) ***	ND (0.42)	ND (0.43)
Total SVOCs	~	Total <100	Total <100	2.18	16.03	ND	ND	ND	ND	ND	ND	76.23	ND	ND	ND	ND	ND	1.4	1.36	2.07

NOTES:
1. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting l
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. ~ = No Method 1 Standard or UCL available
5. Grey shaded values exceed the MCP Reportable Concentrations (RCs).
6. Orange shading denotes compounds and locations where standards are exceeded.
7. Bold Red values exceed the TCLP limits/COMM-97 Acceptance Criteria
8. Yellow highlighted cells indicated pending results.

Table 1c
Summary of Soil Pre-Characterization Results
TPH and SVOCs
Hadley School Project
Swampscott, MA

Parameter	Reportable Concentrations (RCs)	COMM-97 Landfill Acceptance Criteria		NTP-127 (0-5)	NTP-128 (0-1)	NTP-128 (1-2)	NTP-129 (0-2)	NTP-129 (2-3)	NTP-130 (0-2)	NTP-130 (2-3.5)	NTP-131 (0-1)	NTP-131 (1-2.5)	NTP-132 (0-1)	NTP-132 (1-3)	NTP-133 (0-2)	NTP-133 (2-4)	NTP-134 (0-1.5)	NTP-135 (0-1)	NTP-135 (1-3.5)
Sampling Date	RCS-1	Lined	Unlined	12/6/2021 10:00:00 AM	12/7/2021 9:00:00 AM	12/7/2021 9:10:00 AM	12/7/2021 9:30:00 AM	12/7/2021 9:45:00 AM	12/7/2021 10:50:00 AM	12/7/2021 10:25:00 AM	12/7/2021 11:25:00 AM	12/7/2021 11:30:00 AM	12/7/2021 12:10:00 PM	12/7/2021 12:20:00 PM	12/7/2021 1:15:00 PM	12/7/2021 1:30:00 PM	12/7/2021 2:00:00 PM	12/7/2021 2:30:00 PM	12/7/2021 2:40:00 PM
Sample Depth				0-4 Feet	0-1 Feet	1-2 Feet	0-2 Feet	2-3 Feet	0-2 Feet	2-3.5 Feet	0-1 Feet	1-2.5 Feet	0-1 Feet	1-3 Feet	0-2 Feet	2-4 Feet	0-1.5 Feet	0-1 Feet	1-3.5 Feet
SW-846 8100 Modified (mg/Kg dry)																			
TPH	1000	5000	2500	390	190	130	61	43	96	170	59	81	190	86	610	230	220	150	67
SW-846 8270E (mg/Kg dry)																			
ACENAPHTHENE	4	~	~	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	ND (0.22)	ND (0.19)	0.34	0.37	0.35	ND (0.20)	ND (0.21)
ACENAPHTHYLENE	1	~	~	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	0.23	ND (0.19)	ND (0.20)	0.2	ND (0.21)	ND (0.20)	ND (0.21)
ACETOPHENONE	1000	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
ANILINE	1000	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
ANTHRACENE	1000	~	~	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	0.51	ND (0.19)	0.71	1.1	0.59	ND (0.20)	ND (0.21)
BENZIDINE	10	~	~	ND (0.74)	ND (0.81)	ND (0.85)	ND (0.73)	ND (0.73)	ND (0.77)	ND (0.80)	ND (0.73)	ND (0.79)	ND (0.85)	ND (0.74)	ND (0.77)	ND (0.78)	ND (0.82)	ND (0.77)	ND (0.80)
BENZO(A)ANTHRACENE	7	~	~	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	1.4	ND (0.19)	1.9	2.6	1.5	0.88	ND (0.21)
BENZO(A)PYRENE	2	~	~	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	1.4	ND (0.19)	1.8	2.3	1.5	0.93	ND (0.21)
BENZO(B)FLUORANTHENE	7	~	~	0.2	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	1.8	0.21	2.4	2.8	2.1	1.2	ND (0.21)
BENZO(G,H,I)PERYLENE	1000	~	~	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	0.81	ND (0.19)	0.96	1.1	0.79	0.55	ND (0.21)
BENZO(K)FLUORANTHENE	70	~	~	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	0.64	ND (0.19)	0.93	1.2	0.75	0.46	ND (0.21)
BENZOIC ACID	1000	~	~	ND (1.1)	ND (1.2)	ND (1.3)	ND (1.1)	ND (1.1)	ND (1.2)	ND (1.2)	ND (1.1)	ND (1.2)	ND (1.3)	ND (1.1)	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.2)
BIS(2-CHLOROETHOXY)METHANE	500	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
BIS(2-CHLOROETHYL)ETHER	0.7	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
BIS(2-CHLOROISOPROPYL)ETHER	0.7	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
BIS(2-ETHYLHEXYL)PHTHALATE	90	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
4-BROMOPHENYL PHENYL ETHER	100	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
BUTYLBENZYLPHTHALATE	100	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
CARBAZOLE	~	~	~	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	0.23	ND (0.19)	0.58	0.51	0.44	ND (0.20)	ND (0.21)
4-CHLOROANILINE	1	~	~	ND (0.74)	ND (0.81)	ND (0.85)	ND (0.73)	ND (0.73)	ND (0.77)	ND (0.80)	ND (0.73)	ND (0.79)	ND (0.85)	ND (0.74)	ND (0.77)	ND (0.78)	ND (0.82)	ND (0.77)	ND (0.80)
4-CHLORO-3-METHYLPHENOL	1000	~	~	ND (0.74)	ND (0.81)	ND (0.85)	ND (0.73)	ND (0.73)	ND (0.77)	ND (0.80)	ND (0.73)	ND (0.79)	ND (0.85)	ND (0.74)	ND (0.77)	ND (0.78)	ND (0.82)	ND (0.77)	ND (0.80)
2-CHLORONAPHTHALENE	1000	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
2-CHLOROPHENOL	0.7	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
4-CHLOROPHENYLPHENYL ETHER	1000	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
CHRYSENE	70	~	~	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	1.2	ND (0.19)	2	2.6	1.6	0.88	ND (0.21)
DIBENZ(A,H)ANTHRACENE	0.7	~	~	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	ND (0.22)	ND (0.19)	0.25	0.32	0.28	ND (0.20)	ND (0.21)
DIBENZOFURAN	100	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
DI-N-BUTYLPHTHALATE	50	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
1,2-DICHLOROBENZENE	9	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
1,3-DICHLOROBENZENE	3	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
1,4-DICHLOROBENZENE	0.7	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
3,3'-DICHLOROBENZIDINE	3	~	~	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	ND (0.22)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.21)	ND (0.20)	ND (0.21)
2,4-DICHLOROPHENOL	0.7	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
DIETHYLPHTHALATE	10	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
2,4-DIMETHYLPHENOL	0.7	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
DIMETHYLPHTHALATE	0.7	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
4,6-DINITRO-2-METHYLPHENOL	50	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
2,4-DINITROPHENOL	3	~	~	ND (0.74)	ND (0.81)	ND (0.85)	ND (0.73)	ND (0.73)	ND (0.77)	ND (0.80)	ND (0.73)	ND (0.79)	ND (0.85)	ND (0.74)	ND (0.77)	ND (0.78)	ND (0.82)	ND (0.77)	ND (0.80)
2,4-DINITROTOLUENE	0.7	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
2,6-DINITROTOLUENE	100	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
DI-N-OCTYLPHTHALATE	1000	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	50	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
FLUORANTHENE	1000	~	~	0.22	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	3.4	0.26	4.8	6.1	3.2	1.6	ND (0.21)
FLUORENE	1000	~	~	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	ND (0.22)	ND (0.19)	0.28	0.4	0.42	ND (0.20)	ND (0.21)
HEXACHLOROBENZENE	0.7	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
HEXACHLOROBUTADIENE	30	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
HEXACHLOROCYCLOPENTADIENE	50	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
HEXACHLOROETHANE	0.7	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
INDENO(1,2,3-CD)PYRENE	7	~	~	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	0.77	ND (0.19)	0.35	1.3	0.98	0.63	ND (0.21)
ISOPHORONE	100	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
1-METHYLNAPHTHALENE	~	~	~	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	ND (0.22)	ND (0.19)	ND (0.20)	ND (0.20)	ND (0.21)	ND (0.20)	ND (0.21)
2-METHYLNAPHTHALENE	0.7	~	~	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	ND (0.22)	ND (0.19)	0.22	ND (0.20)	ND (0.21)	ND (0.20)	ND (0.21)
O-CRESOL	500	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
M/P-CRESOL	500	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
NAPHTHALENE	4	~	~	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	ND (0.22)	ND (0.19)	ND (0.20)	0.26	0.33	ND (0.20)	ND (0.21)
2-NITROANILINE	~	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
3-NITROANILINE	~	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
4-NITROANILINE	1000	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
NITROBENZENE	500	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
2-NITROPHENOL	100	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
4-NITROPHENOL	100	~	~	ND (0.74)	ND (0.81)	ND (0.85)	ND (0.73)	ND (0.73)	ND (0.77)	ND (0.80)	ND (0.73)	ND (0.79)	ND (0.85)	ND (0.74)	ND (0.77)	ND (0.78)	ND (0.82)	ND (0.77)	ND (0.80)
N-NITROSODIMETHYLAMINE	50	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
N-NITROSODIPHENYLAMINE	100	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
N-NITROSO-DI-N-PROPYLAMINE	50	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
PENTACHLORONITROBENZENE	~	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
PENTACHLOROPHENOL	3	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
PHENANTHRENE	10	~	~	ND (0.19)	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	3	ND (0.19)	1.2	4.6	2.8	0.46	ND (0.21)
PHENOL	1	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
PYRENE	1000	~	~	0.2	ND (0.21)	ND (0.22)	ND (0.19)	ND (0.19)	ND (0.20)	ND (0.21)	ND (0.19)	ND (0.20)	3.1	0.26	4.6	5.4	2.3	1.4	ND (0.21)
PYRIDINE	500	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
1,2,4,5-TETRACHLOROBENZENE	~	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
1,2,4-TRICHLOROBENZENE	2	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
2,4,5-TRICHLOROPHENOL	4	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
2,4,6-TRICHLOROPHENOL	0.7	~	~	ND (0.38)	ND (0.42)	ND (0.44)	ND (0.38)	ND (0.38)	ND (0.40)	ND (0.41)	ND (0.38)	ND (0.41)	ND (0.44)	ND (0.38)	ND (0.40)	ND (0.40)	ND (0.42)	ND (0.40)	ND (0.41)
Total SVOCs	~	Total <100	Total <100	0.62	ND	ND	ND	ND	ND	ND	ND	ND	18.49	0.73	23.32	33.16	19.93	8.99	ND

NOTES:
1. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting l
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. ~ = No Method 1 Standard or UCL available
5. Grey shaded values exceed the MCP Reportable Concentrations (RCs).
6. Orange shading denotes compounds and locations where standards are exceeded.
7. Bold Red values exceed the TCLP limits/COMM-97 Acceptance Criteria
8. Yellow highlighted cells indicated pending results.

Table 1d
Summary of Soil Pre-Characterization Results
VOCs
Hadley School Project
Swampscott, MA

Parameter	Reportable Concentrations (RCs)	COMM-97 Landfill Acceptance Criteria		NTP-101 (0-3)	NTP-101 (3-7)	NTP-102 (0-3)	NTP-103 (0-2)	NTP-104 (0-3)	NTP-105 (0-2)	NTP-106 (0-1.7)	NTP-107 (0-1.5)	NTP-108 (0-3)	NTP-109 (0-2.5)	NTP-110 (0-3)	NTP-110 (3-5.5)	NTP-111 (0-3)	NTP-111 (3-7)	NTP-112 (0-4)	NTP-113 (0-3)	NTP-114 (0-2)
Sampling Date	RCS-1	Lined	Unlined	12/1/2021 9:30:00 AM	12/1/2021 10:30:00 AM	12/1/2021 11:30:00 AM	12/1/2021 12:20:00 PM	12/1/2021 1:15:00 PM	12/1/2021 1:55:00 PM	12/1/2021 2:50:00 PM	12/1/2021 3:25:00 PM	12/1/2021 9:00:00 AM	12/2/2021 9:05:00 AM	12/2/2021 10:30:00 AM	12/2/2021 11:40:00 AM	12/2/2021 12:50:00 PM	12/2/2021 1:40:00 PM	12/2/2021 3:00:00 PM	12/2/2021 3:40:00 PM	12/3/2021 10:20:00 AM
Sample Depth				0-3 Feet	3-7 Feet	0-3 Feet	0-2 Feet	0-3 Feet	0-2 Feet	0-1.7 Feet	0-1.5 Feet	0-3 Feet	0-2.5 Feet	0-3 Feet	3-5.5 Feet	0-3 Feet	3-7 Feet	0-4 Feet	0-3 Feet	0-2 Feet
SW-846 8260D (mg/Kg dry)																				
ACETONE	6	~	~	ND (0.095)	ND (0.075)	ND (0.077)	ND (0.094)	ND (0.090)	ND (0.080)	ND (0.12)	ND (0.12)	ND (0.083)	ND (0.082)	ND (0.087)	ND (0.074)	ND (0.074)	ND (0.077)	ND (0.11)	ND (0.076)	ND (0.073)
ACRYLONITRILE	100	~	~	ND (0.0057)	ND (0.0045)	ND (0.0046)	ND (0.0056)	ND (0.0054)	ND (0.0048)	ND (0.0070)	ND (0.0070)	ND (0.0050)	ND (0.0049)	ND (0.0052)	ND (0.0044)	ND (0.0045)	ND (0.0046)	ND (0.0065)	ND (0.0046)	ND (0.0044)
TERT-AMYL METHYL ETHER	~	~	~	ND (0.00095)	ND (0.00075)	ND (0.00077)	ND (0.00094)	ND (0.00090)	ND (0.00080)	ND (0.0012)	ND (0.0012)	ND (0.00083)	ND (0.00082)	ND (0.00087)	ND (0.00074)	ND (0.00074)	ND (0.00077)	ND (0.0011)	ND (0.00076)	ND (0.00073)
BENZENE	2	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
BROMOBENZENE	100	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
BROMOCHLOROMETHANE	~	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
BROMODICHLOROMETHANE	0.1	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
BROMOFORM	0.1	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
BROMOMETHANE	0.5	~	~	ND (0.0095)	ND (0.0075)	ND (0.0077)	ND (0.0094)	ND (0.0090)	ND (0.0080)	ND (0.012)	ND (0.012)	ND (0.0083)	ND (0.0082)	ND (0.0087)	ND (0.0074)	ND (0.0074)	ND (0.0077)	ND (0.011)	ND (0.0076)	ND (0.0073)
2-BUTANONE (MEK)	4	~	~	ND (0.038)	ND (0.030)	ND (0.031)	ND (0.038)	ND (0.036)	ND (0.032)	ND (0.047)	ND (0.047)	ND (0.033)	ND (0.033)	ND (0.035)	ND (0.029)	ND (0.030)	ND (0.031)	ND (0.043)	ND (0.030)	ND (0.029)
TERT-BUTYL ALCOHOL	100	~	~	ND (0.095)	ND (0.075)	ND (0.077)	ND (0.094)	ND (0.090)	ND (0.080)	ND (0.12)	ND (0.12)	ND (0.083)	ND (0.082)	ND (0.087)	ND (0.074)	ND (0.074)	ND (0.077)	ND (0.11)	ND (0.076)	ND (0.073)
N-BUTYLBENZENE	~	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
SEC-BUTYLBENZENE	~	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
TERT-BUTYLBENZENE	100	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0047)	ND (0.0047)	ND (0.0033)	ND (0.0033)	ND (0.0035)	ND (0.0029)	ND (0.0030)	ND (0.0031)	ND (0.0022)	ND (0.0015)	ND (0.0015)
TERT-BUTYLETHYL ETHER	~	~	~	ND (0.00095)	ND (0.00075)	ND (0.00077)	ND (0.00094)	ND (0.00090)	ND (0.00080)	ND (0.0012)	ND (0.0012)	ND (0.00083)	ND (0.00082)	ND (0.00087)	ND (0.00074)	ND (0.00074)	ND (0.00077)	ND (0.0011)	ND (0.00076)	ND (0.00073)
CARBON DISULFIDE	100	~	~	ND (0.0095)	ND (0.0075)	ND (0.0077)	ND (0.0094)	ND (0.0090)	ND (0.0080)	ND (0.012)	ND (0.012)	ND (0.0083)	ND (0.0082)	ND (0.0087)	ND (0.0074)	ND (0.0074)	ND (0.0077)	ND (0.011)	ND (0.0076)	ND (0.0073)
CARBON TETRACHLORIDE	5	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
CHLOROBENZENE	1	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
CHLORODIBROMOMETHANE	0.005	~	~	ND (0.00095)	ND (0.00075)	ND (0.00077)	ND (0.00094)	ND (0.00090)	ND (0.00080)	ND (0.0012)	ND (0.0012)	ND (0.00083)	ND (0.00082)	ND (0.00087)	ND (0.00074)	ND (0.00074)	ND (0.00077)	ND (0.0011)	ND (0.00076)	ND (0.00073)
CHLOROETHANE	100	~	~	ND (0.019)	ND (0.015)	ND (0.015)	ND (0.019)	ND (0.018)	ND (0.016)	ND (0.023)	ND (0.023)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.022)	ND (0.015)	ND (0.015)
CHLOROFORM	0.2	~	~	ND (0.0038)	ND (0.0030)	ND (0.0031)	ND (0.0038)	ND (0.0036)	ND (0.0032)	ND (0.0047)	ND (0.0047)	ND (0.0033)	ND (0.0033)	ND (0.0035)	ND (0.0029)	ND (0.0030)	ND (0.0031)	ND (0.0043)	ND (0.0030)	ND (0.0029)
CHLOROMETHANE	100	~	~	ND (0.0095)	ND (0.0075)	ND (0.0077)	ND (0.0094)	ND (0.0090)	ND (0.0080)	ND (0.012)	ND (0.012)	ND (0.0083)	ND (0.0082)	ND (0.0087)	ND (0.0074)	ND (0.0074)	ND (0.0077)	ND (0.011)	ND (0.0076)	ND (0.0073)
2-CHLOROTOLUENE	100	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
4-CHLOROTOLUENE	100	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,2-DIBROMO-3-CHLOROPROPANE	10	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,2-DIBROMOETHANE (EDB)	0.1	~	~	ND (0.00095)	ND (0.00075)	ND (0.00077)	ND (0.00094)	ND (0.00090)	ND (0.00080)	ND (0.0012)	ND (0.0012)	ND (0.00083)	ND (0.00082)	ND (0.00087)	ND (0.00074)	ND (0.00074)	ND (0.00077)	ND (0.0011)	ND (0.00076)	ND (0.00073)
DIBROMOMETHANE	500	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,2-DICHLOROBENZENE	9	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,3-DICHLOROBENZENE	3	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,4-DICHLOROBENZENE	0.7	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
TRANS-1,4-DICHLORO-2-BUTENE	10	~	~	ND (0.0038)	ND (0.0030)	ND (0.0031)	ND (0.0038)	ND (0.0036)	ND (0.0032)	ND (0.0047)	ND (0.0047)	ND (0.0033)	ND (0.0033)	ND (0.0035)	ND (0.0029)	ND (0.0030)	ND (0.0031)	ND (0.0043)	ND (0.0030)	ND (0.0029)
DICHLORODIFLUOROMETHANE	1000	~	~	ND (0.019)	ND (0.015)	ND (0.015)	ND (0.019)	ND (0.018)	ND (0.016)	ND (0.023)	ND (0.023)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.022)	ND (0.015)	ND (0.015)
1,1-DICHLOROETHANE	0.4	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,2-DICHLOROETHANE	0.1	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,1-DICHLOROETHYLENE	3	~	~	ND (0.0038)	ND (0.0030)	ND (0.0031)	ND (0.0038)	ND (0.0036)	ND (0.0032)	ND (0.0047)	ND (0.0047)	ND (0.0033)	ND (0.0033)	ND (0.0035)	ND (0.0029)	ND (0.0030)	ND (0.0031)	ND (0.0043)	ND (0.0030)	ND (0.0029)
CIS-1,2-DICHLOROETHYLENE	0.1	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
TRANS-1,2-DICHLOROETHYLENE	1	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,2-DICHLOROPROPANE	0.1	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,3-DICHLOROPROPANE	500	~	~	ND (0.00095)	ND (0.00075)	ND (0.00077)	ND (0.00094)	ND (0.00090)	ND (0.00080)	ND (0.0012)	ND (0.0012)	ND (0.00083)	ND (0.00082)	ND (0.00087)	ND (0.00074)	ND (0.00074)	ND (0.00077)	ND (0.0011)	ND (0.00076)	ND (0.00073)
2,2-DICHLOROPROPANE	0.1	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,1-DICHLOROPROPENE	0.01	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
CIS-1,3-DICHLOROPROPENE	0.01	~	~	ND (0.00095)	ND (0.00075)	ND (0.00077)	ND (0.00094)	ND (0.00090)	ND (0.00080)	ND (0.0012)	ND (0.0012)	ND (0.00083)	ND (0.00082)	ND (0.00087)	ND (0.00074)	ND (0.00074)	ND (0.00077)	ND (0.0011)	ND (0.00076)	ND (0.00073)
TRANS-1,3-DICHLOROPROPENE	0.01	~	~	ND (0.00095)	ND (0.00075)	ND (0.00077)	ND (0.00094)	ND (0.00090)	ND (0.00080)	ND (0.0012)	ND (0.0012)	ND (0.00083)	ND (0.00082)	ND (0.00087)	ND (0.00074)	ND (0.00074)	ND (0.00077)	ND (0.0011)	ND (0.00076)	ND (0.00073)
DIETHYL ETHER	100	~	~	ND (0.019)	ND (0.015)	ND (0.015)	ND (0.019)	ND (0.018)	ND (0.016)	ND (0.023)	ND (0.023)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.022)	ND (0.015)	ND (0.015)
DIISOPROPYL ETHER	100	~	~	ND (0.00095)	ND (0.00075)	ND (0.00077)	ND (0.00094)	ND (0.00090)	ND (0.00080)	ND (0.0012)	ND (0.0012)	ND (0.00083)	ND (0.00082)	ND (0.00087)	ND (0.00074)	ND (0.00074)	ND (0.00077)	ND (0.0011)	ND (0.00076)	ND (0.00073)
1,4-DIOXANE	0.2	~	~	ND (0.095)	ND (0.075)	ND (0.077)	ND (0.094)	ND (0.090)	ND (0.080)	ND (0.12)	ND (0.12)	ND (0.083)	ND (0.082)	ND (0.087)	ND (0.074)	ND (0.074)	ND (0.077)	ND (0.11)	ND (0.076)	ND (0.073)
ETHYLBENZENE	40	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
HEXACHLOROBUTADIENE	30	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
2-HEXANONE	100	~	~	ND (0.019)	ND (0.015)	ND (0.015)	ND (0.019)	ND (0.018)	ND (0.016)	ND (0.023)	ND (0.023)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.022)	ND (0.015)	ND (0.015)
ISOPROPYLBENZENE	1000	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
P-ISOPROPYLTOLUENE	100	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
METHYL ACETATE	~	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
METHYL TERT-BUTYL ETHER (MTBE)	0.1	~	~	ND (0.0038)	ND (0.0030)	ND (0.0031)	ND (0.0038)	ND (0.0036)	ND (0.0032)	ND (0.0047)	ND (0.0047)	ND (0.0033)	ND (0.0033)	ND (0.0035)	ND (0.0029)	ND (0.0030)	ND (0.0031)	ND (0.0043)	ND (0.0030)	ND (0.0029)
METHYL CYCLOHEXANE	~	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
METHYLENE CHLORIDE	0.1	~	~	ND (0.019)	ND (0.015)	ND (0.015)	ND (0.019)	ND (0.018)	ND (0.016)	ND (0.023)	ND (0.023)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.022)	ND (0.015)	ND (0.015)
4-METHYL-2-PENTANONE (MIBK)	0.4	~	~	ND (0.019)	ND (0.015)	ND (0.015)	ND (0.019)	ND (0.018)	ND (0.016)	ND (0.023)	ND (0.023)	ND (0.017)	ND (0.016)	ND (0.017)	ND (0.015)	ND (0.015)	ND (0.015)	ND (0.022)	ND (0.015)	ND (0.015)
NAPHTHALENE	4	~	~	ND (0.0038)	ND (0.0030)	ND (0.0031)	ND (0.0038)	ND (0.0036)	ND (0.0032)	ND (0.0047)	ND (0.0047)	ND (0.0033)	ND (0.0033)	ND (0.0035)	ND (0.0029)	ND (0.0030)	ND (0.0031)	ND (0.0043)	ND (0.0030)	ND (0.0029)
N-PROPYLBENZENE	100	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
STYRENE	3	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,1,1,2-TETRACHLOROETHANE	0.1	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,1,2,2-TETRACHLOROETHANE	0.005	~	~	ND (0.00095)	ND (0.00075)	ND (0.00077)	ND (0.00094)	ND (0.00090)	ND (0.00080)	ND (0.0012)	ND (0.0012)	ND (0.00083)	ND (0.00082)	ND (0.00087)	ND (0.00074)	ND (0.00074)	ND (0.00077)	ND (0.0011)	ND (0.00076)	ND (0.00073)
TETRACHLOROETHYLENE	1	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
TETRAHYDROFURAN	500	~	~	ND (0.0095)	ND (0.0075)	ND (0.0077)	ND (0.0094)	ND (0.0090)	ND (0.0080)	ND (0.012)	ND (0.012)	ND (0.0083)	ND (0.0082)	ND (0.0087)	ND (0.0074)	ND (0.0074)	ND (0.0077)	ND (0.011)	ND (0.0076)	ND (0.0073)
TOLUENE	30	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,2,3-TRICHLOROBENZENE	~	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,2,4-TRICHLOROBENZENE	2	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,3,5-TRICHLOROBENZENE	~	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,1,1-TRICHLOROETHANE	30	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,1,2-TRICHLOROETHANE	0.1	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
TRICHLOROETHYLENE	0.3	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
TRICHLOROFLUOROMETHANE	1000	~	~	ND (0.0095)	ND (0.0075)	ND (0.0077)	ND (0.0094)	ND (0.0090)	ND (0.0080)	ND (0.012)	ND (0.012)	ND (0.0083)	ND (0.0082)	ND (0.0087)	ND (0.0074)	ND (0.0074)	ND (0.0077)	ND (0.011)	ND (0.0076)	ND (0.0073)
1,2,3-TRICHLOROPROPANE	100	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	~	~	~	ND (0.0095)	ND (0.0075)	ND (0.0077)	ND (0.0094)	ND (0.0090)	ND (0.0080)	ND (0.012)	ND (0.012)	ND (0.0083)	ND (0.0082)	ND (0.0087)	ND (0.0074)	ND (0.0074)	ND (0.0077)	ND (0.011)	ND (0.0076)	ND (0.0073)
1,2,4-TRIMETHYLBENZENE	1000	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
1,3,5-TRIMETHYLBENZENE	10	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
VINYL CHLORIDE	0.7	~	~	ND (0.0095)	ND (0.0075)	ND (0.0077)	ND (0.0094)	ND (0.0090)	ND (0.0080)	ND (0.012)	ND (0.012)	ND (0.0083)	ND (0.0082)	ND (0.0087)	ND (0.0074)	ND (0.0074)	ND (0.0077)	ND (0.011)	ND (0.0076)	ND (0.0073)
M/P-XYLENE	100	~	~	ND (0.0038)	ND (0.0030)	ND (0.0031)	ND (0.0038)	ND (0.0036)	ND (0.0032)	ND (0.0047)	ND (0.0047)	ND (0.0033)	ND (0.0033)	ND (0.0035)	ND (0.0029)	ND (0.0030)	ND (0.0031)	ND (0.0043)	ND (0.0030)	ND (0.0029)
O-XYLENE	100	~	~	ND (0.0019)	ND (0.0015)	ND (0.0015)	ND (0.0019)	ND (0.0018)	ND (0.0016)	ND (0.0023)	ND (0.0023)	ND (0.0017)	ND (0.0016)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0015)	ND (0.0022)	ND (0.0015)	ND (0.0015)
Total VOCs	~	Total <10	Total <4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:
1. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting limit exceeds one or more of the regulatory criteria.
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. ~ = No Method 1 Standard or UCL available
5. Grey shaded values exceed the MCP Reportable Concentrations (RCs).
6. Orange shading denotes compounds and locations where standards are exceeded.
7. Bold Red values exceed the TCLP limits/COMM-97 Acceptance Criteria
8. Yellow highlighted cells indicated pending results.

Table 1d
Summary of Soil Pre-Characterization Results
VOCs
Hadley School Project
Swampscott, MA

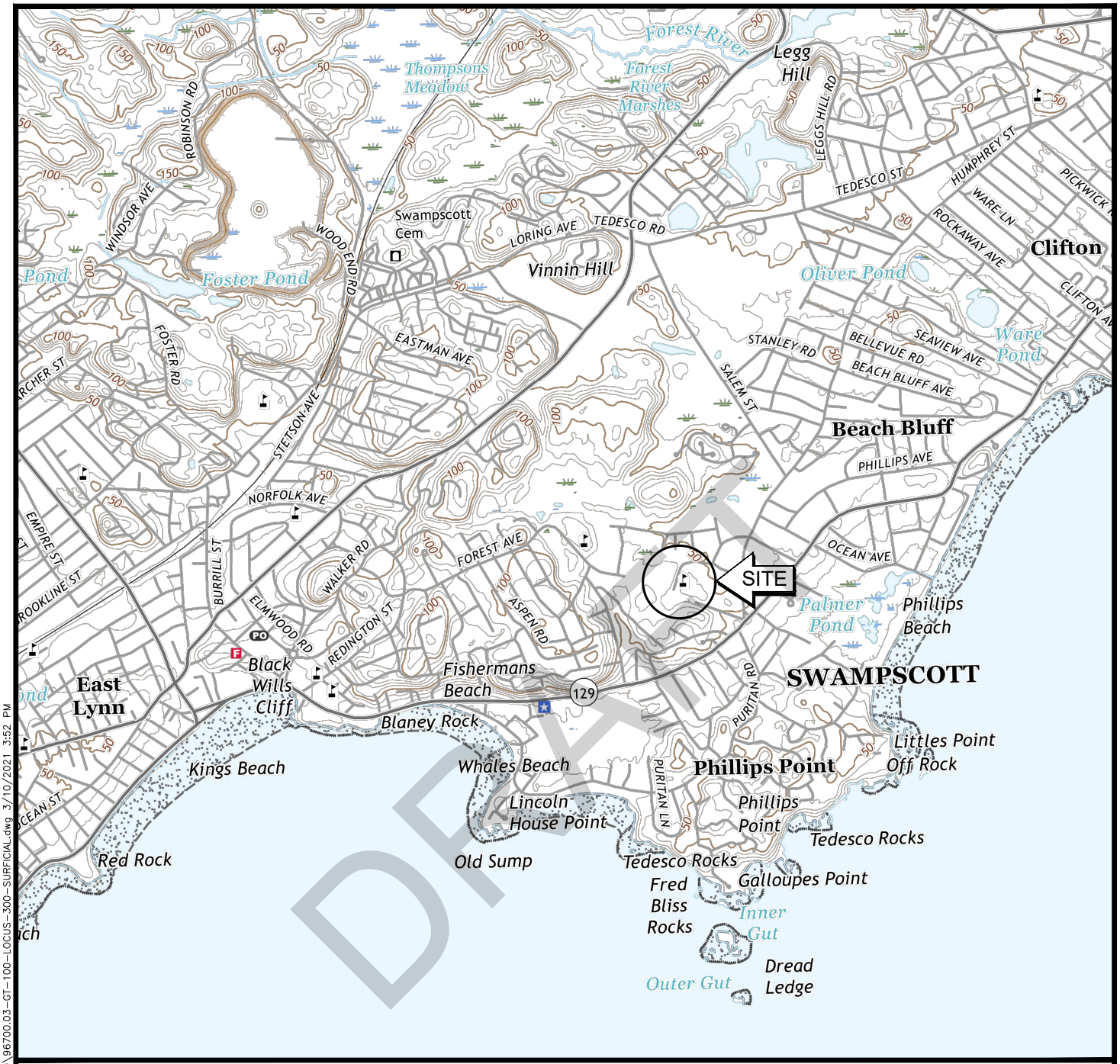
Parameter	Reportable Concentrations (RCs)	COMM-97 Landfill Acceptance Criteria		SAMPLING LOCATION															
				NTP-115 (0-3)	NTP-115 (3-7)	NTP-116 (0-3.5)	NTP-117 (0-2.5)	NTP-117 (2.5-5.5)	NTP-118 (0-1.6)	NTP-119 (0-4)	NTP-119 (4-6)	NTP-120 (0-3)	NTP-121 (0-4.5)	NTP-122 (0-4)	NTP-122 (4-7.5)	NTP-123 (0-4)	NTP-123 (4-6.5)	NTP-124 (0-.5)	NTP-125 (0-1)	NTP-126 (0-1)
Sampling Date	RCS-1	Lined	Unlined	12/3/2021 8:50:00 AM	12/3/2021 9:15:00 AM	12/3/2021 11:00:00 AM	12/3/2021 12:30:00 PM	12/3/2021 12:30:00 PM	12/3/2021 2:00:00 PM	12/3/2021 2:30:00 PM	12/3/2021 3:00:00 PM	12/6/2021 10:50:00 AM	12/6/2021 11:30:00 AM	12/6/2021 12:45:00 PM	12/6/2021 1:25:00 PM	12/6/2021 2:15:00 PM	12/6/2021 2:45:00 PM	12/6/2021 3:10:00 PM	12/6/2021 3:40:00 PM	12/6/2021 4:00:00 PM
Sample Depth				0-3 Feet	3-7 Feet	0-3.5 Feet	0-2.5 Feet	2.5-5.5 Feet	0-1.6 Feet	0-4 Feet	4-6 Feet	0-3 Feet	0-4.5 Feet	0-4 Feet	4-7.5 Feet	0-4 Feet	4-6.5 Feet	0-0.5 Feet	0-1 Feet	0-1 Feet
SW-846 8260D (mg/Kg dry)																				
ACETONE	6	~	~	ND (0.070)	ND (0.067)	ND (0.077)	ND (0.077)	ND (0.081)	ND (0.091)	ND (0.071)	ND (0.084)	ND (0.074)	ND (0.074)	ND (0.069)	ND (0.073)	ND (0.084)	ND (0.073)	**ND (7.4) ***	ND (0.080)	ND (0.098)
ACRYLONITRILE	100	~	~	ND (0.0042)	ND (0.0040)	ND (0.0046)	ND (0.0046)	ND (0.0048)	ND (0.0055)	ND (0.0043)	ND (0.0050)	ND (0.0044)	ND (0.0044)	ND (0.0042)	ND (0.0044)	ND (0.0050)	ND (0.0044)	ND (0.74)	ND (0.0048)	ND (0.0059)
TERT-AMYL METHYL ETHER	~	~	~	ND (0.00070)	ND (0.00067)	ND (0.00077)	ND (0.00077)	ND (0.00081)	ND (0.00091)	ND (0.00071)	ND (0.00084)	ND (0.00074)	ND (0.00074)	ND (0.00069)	ND (0.00073)	ND (0.00084)	ND (0.00073)	ND (0.074)	ND (0.00080)	ND (0.00098)
BENZENE	2	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
BROMOBENZENE	100	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
BROMOCHLOROMETHANE	~	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
BROMODICHLOROMETHANE	0.1	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	**ND (0.15) ***	ND (0.0016)	ND (0.0020)
BROMOFORM	0.1	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	**ND (0.15) ***	ND (0.0016)	ND (0.0020)
BROMOMETHANE	0.5	~	~	ND (0.0070)	ND (0.0067)	ND (0.0077)	ND (0.0077)	ND (0.0081)	ND (0.0091)	ND (0.0071)	ND (0.0084)	ND (0.0074)	ND (0.0074)	ND (0.0069)	ND (0.0073)	ND (0.0084)	ND (0.0073)	ND (0.30)	ND (0.0080)	ND (0.0098)
2-BUTANONE (MEK)	4	~	~	ND (0.028)	ND (0.027)	ND (0.031)	ND (0.031)	ND (0.032)	ND (0.036)	ND (0.029)	ND (0.033)	ND (0.029)	ND (0.030)	ND (0.028)	ND (0.029)	ND (0.034)	ND (0.029)	ND (3.0)	ND (0.032)	ND (0.039)
TERT-BUTYL ALCOHOL	100	~	~	ND (0.070)	ND (0.067)	ND (0.077)	ND (0.077)	ND (0.081)	ND (0.091)	ND (0.071)	ND (0.084)	ND (0.074)	ND (0.074)	ND (0.069)	ND (0.073)	ND (0.084)	ND (0.073)	ND (3.0)	ND (0.080)	ND (0.098)
N-BUTYLBENZENE	~	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
SEC-BUTYLBENZENE	~	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
TERT-BUTYLBENZENE	100	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0036)	ND (0.0029)	ND (0.0033)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
TERT-BUTYLETHYL ETHER	~	~	~	ND (0.00070)	ND (0.00067)	ND (0.00077)	ND (0.00077)	ND (0.00081)	ND (0.00091)	ND (0.00071)	ND (0.00084)	ND (0.00074)	ND (0.00074)	ND (0.00069)	ND (0.00073)	ND (0.00084)	ND (0.00073)	ND (0.074)	ND (0.00080)	ND (0.00098)
CARBON DISULFIDE	100	~	~	ND (0.0070)	ND (0.0067)	ND (0.0077)	ND (0.0077)	ND (0.0081)	ND (0.0091)	ND (0.0071)	ND (0.0084)	ND (0.0074)	ND (0.0074)	ND (0.0069)	ND (0.0073)	ND (0.0084)	ND (0.0073)	ND (0.74)	ND (0.0080)	ND (0.0098)
CARBON TETRACHLORIDE	5	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
CHLOROBENZENE	1	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
CHLORODIBROMOMETHANE	0.005	~	~	ND (0.00070)	ND (0.00067)	ND (0.00077)	ND (0.00077)	ND (0.00081)	ND (0.00091)	ND (0.00071)	ND (0.00084)	ND (0.00074)	ND (0.00074)	ND (0.00069)	ND (0.00073)	ND (0.00084)	ND (0.00073)	**ND (0.074) ***	ND (0.00080)	ND (0.00098)
CHLOROETHANE	100	~	~	ND (0.014)	ND (0.013)	ND (0.015)	ND (0.015)	ND (0.016)	ND (0.018)	ND (0.014)	ND (0.017)	ND (0.015)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.017)	ND (0.015)	ND (0.30)	ND (0.016)	ND (0.020)
CHLOROFORM	0.2	~	~	ND (0.0028)	ND (0.0027)	ND (0.0031)	ND (0.0031)	ND (0.0032)	ND (0.0036)	ND (0.0029)	ND (0.0033)	ND (0.0029)	ND (0.0030)	ND (0.0028)	ND (0.0029)	ND (0.0034)	ND (0.0029)	**ND (0.30) ***	ND (0.0032)	ND (0.0039)
CHLOROMETHANE	100	~	~	ND (0.0070)	ND (0.0067)	ND (0.0077)	ND (0.0077)	ND (0.0081)	ND (0.0091)	ND (0.0071)	ND (0.0084)	ND (0.0074)	ND (0.0074)	ND (0.0069)	ND (0.0073)	ND (0.0084)	ND (0.0073)	ND (0.30)	ND (0.0080)	ND (0.0098)
2-CHLOROTOLUENE	100	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
4-CHLOROTOLUENE	100	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
1,2-DIBROMO-3-CHLOROPROPANE	10	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.74)	ND (0.0016)	ND (0.0020)
1,2-DIBROMOETHANE (EDB)	0.1	~	~	ND (0.00070)	ND (0.00067)	ND (0.00077)	ND (0.00077)	ND (0.00081)	ND (0.00091)	ND (0.00071)	ND (0.00084)	ND (0.00074)	ND (0.00074)	ND (0.00069)	ND (0.00073)	ND (0.00084)	ND (0.00073)	ND (0.074)	ND (0.00080)	ND (0.00098)
DIBROMOMETHANE	500	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
1,2-DICHLOROBENZENE	9	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
1,3-DICHLOROBENZENE	3	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
1,4-DICHLOROBENZENE	0.7	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
TRANS-1,4-DICHLORO-2-BUTENE	10	~	~	ND (0.0028)	ND (0.0027)	ND (0.0031)	ND (0.0031)	ND (0.0032)	ND (0.0036)	ND (0.0029)	ND (0.0033)	ND (0.0029)	ND (0.0030)	ND (0.0028)	ND (0.0029)	ND (0.0034)	ND (0.0029)	ND (0.30)	ND (0.0032)	ND (0.0039)
DICHLORODIFLUOROMETHANE	1000	~	~	ND (0.014)	ND (0.013)	ND (0.015)	ND (0.015)	ND (0.016)	ND (0.018)	ND (0.014)	ND (0.017)	ND (0.015)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.017)	ND (0.015)	ND (0.30)	ND (0.016)	ND (0.020)
1,1-DICHLOROETHANE	0.4	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
1,2-DICHLOROETHANE	0.1	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	**ND (0.15) ***	ND (0.0016)	ND (0.0020)
1,1-DICHLOROETHYLENE	3	~	~	ND (0.0028)	ND (0.0027)	ND (0.0031)	ND (0.0031)	ND (0.0032)	ND (0.0036)	ND (0.0029)	ND (0.0033)	ND (0.0029)	ND (0.0030)	ND (0.0028)	ND (0.0029)	ND (0.0034)	ND (0.0029)	ND (0.15)	ND (0.0032)	ND (0.0039)
CIS-1,2-DICHLOROETHYLENE	0.1	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	**ND (0.15) ***	ND (0.0016)	ND (0.0020)
TRANS-1,2-DICHLOROETHYLENE	1	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
1,2-DICHLOROPROPANE	0.1	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	**ND (0.15) ***	ND (0.0016)	ND (0.0020)
1,3-DICHLOROPROPANE	500	~	~	ND (0.00070)	ND (0.00067)	ND (0.00077)	ND (0.00077)	ND (0.00081)	ND (0.00091)	ND (0.00071)	ND (0.00084)	ND (0.00074)	ND (0.00074)	ND (0.00069)	ND (0.00073)	ND (0.00084)	ND (0.00073)	ND (0.074)	ND (0.00080)	ND (0.00098)
2,2-DICHLOROPROPANE	0.1	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	**ND (0.15) ***	ND (0.0016)	ND (0.0020)
1,1-DICHLOROPROPENE	0.01	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	**ND (0.30) ***	ND (0.0016)	ND (0.0020)
CIS-1,3-DICHLOROPROPENE	0.01	~	~	ND (0.00070)	ND (0.00067)	ND (0.00077)	ND (0.00077)	ND (0.00081)	ND (0.00091)	ND (0.00071)	ND (0.00084)	ND (0.00074)	ND (0.00074)	ND (0.00069)	ND (0.00073)	ND (0.00084)	ND (0.00073)	**ND (0.074) ***	ND (0.00080)	ND (0.00098)
TRANS-1,3-DICHLOROPROPENE	0.01	~	~	ND (0.00070)	ND (0.00067)	ND (0.00077)	ND (0.00077)	ND (0.00081)	ND (0.00091)	ND (0.00071)	ND (0.00084)	ND (0.00074)	ND (0.00074)	ND (0.00069)	ND (0.00073)	ND (0.00084)	ND (0.00073)	**ND (0.074) ***	ND (0.00080)	ND (0.00098)
DIETHYL ETHER	100	~	~	ND (0.014)	ND (0.013)	ND (0.015)	ND (0.015)	ND (0.016)	ND (0.018)	ND (0.014)	ND (0.017)	ND (0.015)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.017)	ND (0.015)	ND (0.30)	ND (0.016)	ND (0.020)
DIISOPROPYL ETHER	100	~	~	ND (0.00070)	ND (0.00067)	ND (0.00077)	ND (0.00077)	ND (0.00081)	ND (0.00091)	ND (0.00071)	ND (0.00084)	ND (0.00074)	ND (0.00074)	ND (0.00069)	ND (0.00073)	ND (0.00084)	ND (0.00073)	ND (0.074)	ND (0.00080)	ND (0.00098)
1,4-DIOXANE	0.2	~	~	ND (0.070)	ND (0.067)	ND (0.077)	ND (0.077)	ND (0.081)	ND (0.091)	ND (0.071)	ND (0.084)	ND (0.074)	ND (0.074)	ND (0.069)	ND (0.073)	ND (0.084)	ND (0.073)	**ND (7.4) ***	ND (0.080)	ND (0.098)
ETHYLBENZENE	40	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
HEXACHLOROBUTADIENE	30	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
2-HEXANONE	100	~	~	ND (0.014)	ND (0.013)	ND (0.015)	ND (0.015)	ND (0.016)	ND (0.018)	ND (0.014)	ND (0.017)	ND (0.015)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.017)	ND (0.015)	ND (1.5)	ND (0.016)	ND (0.020)
ISOPROPYLBENZENE	1000	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
P-ISOPROPYLTOLUENE	100	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
METHYL ACETATE	~	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (1.5)	ND (0.0016)	ND (0.0020)
METHYL TERT-BUTYL ETHER (MTBE)	0.1	~	~	ND (0.0028)	ND (0.0027)	ND (0.0031)	ND (0.0031)	ND (0.0032)	ND (0.0036)	ND (0.0029)	ND (0.0033)	ND (0.0029)	ND (0.0030)	ND (0.0028)	ND (0.0029)	ND (0.0034)	ND (0.0029)	**ND (0.15) ***	ND (0.0032)	ND (0.0039)
METHYL CYCLOHEXANE	~	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
METHYLENE CHLORIDE	0.1	~	~	ND (0.014)	ND (0.013)	ND (0.015)	ND (0.015)	ND (0.016)	ND (0.018)	ND (0.014)	ND (0.017)	ND (0.015)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.017)	ND (0.015)	**ND (0.74) ***	ND (0.016)	ND (0.020)
4-METHYL-2-PENTANONE (MIBK)	0.4	~	~	ND (0.014)	ND (0.013)	ND (0.015)	ND (0.015)	ND (0.016)	ND (0.018)	ND (0.014)	ND (0.017)	ND (0.015)	ND (0.015)	ND (0.014)	ND (0.015)	ND (0.017)	ND (0.015)	**ND (1.5) ***	ND (0.016)	ND (0.020)
NAPHTHALENE	4	~	~	ND (0.0028)	ND (0.0027)	ND (0.0031)	ND (0.0031)	ND (0.0032)	ND (0.0036)	ND (0.0029)	ND (0.0033)	ND (0.0029)	ND (0.0030)	ND (0.0028)	ND (0.0029)	ND (0.0034)	ND (0.0029)	ND (0.30)	ND (0.0032)	ND (0.0039)
N-PROPYLBENZENE	100	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
STYRENE	3	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
1,1,1,2-TETRACHLOROETHANE	0.1	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	**ND (0.15) ***	ND (0.0016)	ND (0.0020)
1,1,2,2-TETRACHLOROETHANE	0.005	~	~	ND (0.00070)	ND (0.00067)	ND (0.00077)	ND (0.00077)	ND (0.00081)	ND (0.00091)	ND (0.00071)	ND (0.00084)	ND (0.00074)	ND (0.00074)	ND (0.00069)	ND (0.00073)	ND (0.00084)	ND (0.00073)	**ND (0.074) ***	ND (0.00080)	ND (0.00098)
TETRACHLOROETHYLENE	1	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
TETRAHYDROFURAN	500	~	~	ND (0.0070)	ND (0.0067)	ND (0.0077)	ND (0.0077)	ND (0.0081)	ND (0.0091)	ND (0.0071)	ND (0.0084)	ND (0.0074)	ND (0.0074)	ND (0.0069)	ND (0.0073)	ND (0.0084)	ND (0.0073)	ND (1.5)	ND (0.0080)	ND (0.0098)
TOLUENE	30	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
1,2,3-TRICHLOROBENZENE	~	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.74)	ND (0.0016)	ND (0.0020)
1,2,4-TRICHLOROBENZENE	2	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
1,3,5-TRICHLOROBENZENE	~	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
1,1,1-TRICHLOROETHANE	30	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
1,1,2-TRICHLOROETHANE	0.1	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	**ND (0.15) ***	ND (0.0016)	ND (0.0020)
TRICHLOROETHYLENE	0.3	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
TRICHLOROFLUOROMETHANE	1000	~	~	ND (0.0070)	ND (0.0067)	ND (0.0077)	ND (0.0077)	ND (0.0081)	ND (0.0091)	ND (0.0071)	ND (0.0084)	ND (0.0074)	ND (0.0074)	ND (0.0069)	ND (0.0073)	ND (0.0084)	ND (0.0073)	ND (0.30)	ND (0.0080)	ND (0.0098)
1,2,3-TRICHLOROPROPANE	100	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.30)	ND (0.0016)	ND (0.0020)
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	~	~	~	ND (0.0070)	ND (0.0067)	ND (0.0077)	ND (0.0077)	ND (0.0081)	ND (0.0091)	ND (0.0071)	ND (0.0084)	ND (0.0074)	ND (0.0074)	ND (0.0069)	ND (0.0073)	ND (0.0084)	ND (0.0073)	ND (0.15)	ND (0.0080)	ND (0.0098)
1,2,4-TRIMETHYLBENZENE	1000	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
1,3,5-TRIMETHYLBENZENE	10	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
VINYL CHLORIDE	0.7	~	~	ND (0.0070)	ND (0.0067)	ND (0.0077)	ND (0.0077)	ND (0.0081)	ND (0.0091)	ND (0.0071)	ND (0.0084)	ND (0.0074)	ND (0.0074)	ND (0.0069)	ND (0.0073)	ND (0.0084)	ND (0.0073)	ND (0.30)	ND (0.0080)	ND (0.0098)
M/P-XYLENE	100	~	~	ND (0.0028)	ND (0.0027)	ND (0.0031)	ND (0.0031)	ND (0.0032)	ND (0.0036)	ND (0.0029)	ND (0.0033)	ND (0.0029)	ND (0.0030)	ND (0.0028)	ND (0.0029)	ND (0.0034)	ND (0.0029)	ND (0.30)	ND (0.0032)	ND (0.0039)
O-XYLENE	100	~	~	ND (0.0014)	ND (0.0013)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0018)	ND (0.0014)	ND (0.0017)	ND (0.0015)	ND (0.0015)	ND (0.0014)	ND (0.0015)	ND (0.0017)	ND (0.0015)	ND (0.15)	ND (0.0016)	ND (0.0020)
Total VOCs	~	Total <10	Total <4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:
1. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. ~ = No Method 1 Standard or UCL available
5. Grey shaded values exceed the MCP Reportable Concentrations (RCs).
6. Orange shading denotes compounds and locations where standards are exceeded.
7. Bold Red values exceed the TCLP limits/COMM-97 Acceptance Criteria
8. Yellow highlighted cells indicated pending results.

Table 1d
Summary of Soil Pre-Characterization Results
VOCs
Hadley School Project
Swampscott, MA

Parameter	Reportable Concentrations (RCs)	COMM-97 Landfill Acceptance Criteria		NTP-127 (0-5)	NTP-128 (0-1)	NTP-128 (1-2)	NTP-129 (0-2)	NTP-129 (2-3)	NTP-130 (0-2)	NTP-130 (2-3.5)	NTP-131 (0-1)	NTP-131 (1-2.5)	NTP-132 (0-1)	NTP-132 (1-3)	NTP-133 (0-2)	NTP-133 (2-4)	NTP-134 (0-1.5)	NTP-135 (0-1)	NTP-135 (1-3.5)
Sampling Date	RCS-1	Lined	Unlined	12/6/2021 10:00:00 AM	12/7/2021 9:00:00 AM	12/7/2021 9:10:00 AM	12/7/2021 9:30:00 AM	12/7/2021 9:45:00 AM	12/7/2021 10:50:00 AM	12/7/2021 10:25:00 AM	12/7/2021 11:25:00 AM	12/7/2021 11:30:00 AM	12/7/2021 12:10:00 PM	12/7/2021 12:20:00 PM	12/7/2021 1:15:00 PM	12/7/2021 1:30:00 PM	12/7/2021 2:00:00 PM	12/7/2021 2:30:00 PM	12/7/2021 2:40:00 PM
Sample Depth				0-4 Feet	0-1 Feet	1-2 Feet	0-2 Feet	2-3 Feet	0-2 Feet	2-3.5 Feet	0-1 Feet	1-2.5 Feet	0-1 Feet	1-3 Feet	0-2 Feet	2-4 Feet	0-1.5 Feet	0-1 Feet	1-3.5 Feet
SW-846 8260D (mg/Kg dry)																			
ACETONE	6	~	~	ND (0.065)	ND (0.089)	ND (0.084)	ND (0.072)	ND (0.067)	ND (0.083)	ND (0.093)	ND (0.068)	ND (0.086)	ND (0.097)	ND (0.071)	ND (0.075)	ND (0.076)	ND (0.081)	ND (0.11)	ND (0.074)
ACRYLONITRILE	100	~	~	ND (0.0039)	ND (0.0053)	ND (0.0050)	ND (0.0043)	ND (0.0040)	ND (0.0050)	ND (0.0056)	ND (0.0041)	ND (0.0052)	ND (0.0058)	ND (0.0042)	ND (0.0045)	ND (0.0046)	ND (0.0048)	ND (0.0065)	ND (0.0044)
TERT-AMYL METHYL ETHER	~	~	~	ND (0.00065)	ND (0.00089)	ND (0.00084)	ND (0.00072)	ND (0.00067)	ND (0.00083)	ND (0.00093)	ND (0.00068)	ND (0.00086)	ND (0.00097)	ND (0.00071)	ND (0.00075)	ND (0.00076)	ND (0.00081)	ND (0.00011)	ND (0.00074)
BENZENE	2	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
BROMOBENZENE	100	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
BROMOCHLOROMETHANE	~	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
BROMODICHLOROMETHANE	0.1	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
BROMOFORM	0.1	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
BROMOMETHANE	0.5	~	~	ND (0.0065)	ND (0.0089)	ND (0.0084)	ND (0.0072)	ND (0.0067)	ND (0.0083)	ND (0.0093)	ND (0.0068)	ND (0.0086)	ND (0.0097)	ND (0.0071)	ND (0.0075)	ND (0.0076)	ND (0.0081)	ND (0.011)	ND (0.0074)
2-BUTANONE (MEK)	4	~	~	ND (0.026)	ND (0.035)	ND (0.034)	ND (0.029)	ND (0.027)	ND (0.033)	ND (0.037)	ND (0.027)	ND (0.034)	ND (0.039)	ND (0.028)	ND (0.030)	ND (0.030)	ND (0.032)	ND (0.043)	ND (0.030)
TERT-BUTYL ALCOHOL	100	~	~	ND (0.065)	ND (0.089)	ND (0.084)	ND (0.072)	ND (0.067)	ND (0.083)	ND (0.093)	ND (0.068)	ND (0.086)	ND (0.097)	ND (0.071)	ND (0.075)	ND (0.076)	ND (0.081)	ND (0.11)	ND (0.074)
N-BUTYLBENZENE	~	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
SEC-BUTYLBENZENE	~	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
TERT-BUTYLBENZENE	100	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
TERT-BUTYLETHYL ETHER	~	~	~	ND (0.00065)	ND (0.00089)	ND (0.00084)	ND (0.00072)	ND (0.00067)	ND (0.00083)	ND (0.00093)	ND (0.00068)	ND (0.00086)	ND (0.00097)	ND (0.00071)	ND (0.00075)	ND (0.00076)	ND (0.00081)	ND (0.00011)	ND (0.00074)
CARBON DISULFIDE	100	~	~	ND (0.0065)	ND (0.0089)	ND (0.0084)	ND (0.0072)	ND (0.0067)	ND (0.0083)	ND (0.0093)	ND (0.0068)	ND (0.0086)	ND (0.0097)	ND (0.0071)	ND (0.0075)	ND (0.0076)	ND (0.0081)	ND (0.011)	ND (0.0074)
CARBON TETRACHLORIDE	5	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
CHLOROBENZENE	1	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
CHLORODIBROMOMETHANE	0.005	~	~	ND (0.00065)	ND (0.00089)	ND (0.00084)	ND (0.00072)	ND (0.00067)	ND (0.00083)	ND (0.00093)	ND (0.00068)	ND (0.00086)	ND (0.00097)	ND (0.00071)	ND (0.00075)	ND (0.00076)	ND (0.00081)	ND (0.00011)	ND (0.00074)
CHLOROETHANE	100	~	~	ND (0.013)	ND (0.018)	ND (0.017)	ND (0.014)	ND (0.013)	ND (0.017)	ND (0.019)	ND (0.014)	ND (0.017)	ND (0.019)	ND (0.014)	ND (0.015)	ND (0.015)	ND (0.016)	ND (0.022)	ND (0.015)
CHLOROFORM	0.2	~	~	ND (0.0026)	ND (0.0035)	ND (0.0034)	ND (0.0029)	ND (0.0027)	ND (0.0033)	ND (0.0037)	ND (0.0027)	ND (0.0034)	ND (0.0039)	ND (0.0028)	ND (0.0030)	ND (0.0030)	ND (0.0032)	ND (0.0043)	ND (0.0030)
CHLOROMETHANE	100	~	~	ND (0.0065)	ND (0.0089)	ND (0.0084)	ND (0.0072)	ND (0.0067)	ND (0.0083)	ND (0.0093)	ND (0.0068)	ND (0.0086)	ND (0.0097)	ND (0.0071)	ND (0.0075)	ND (0.0076)	ND (0.0081)	ND (0.011)	ND (0.0074)
2-CHLOROTOLUENE	100	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
4-CHLOROTOLUENE	100	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,2-DIBROMO-3-CHLOROPROPANE	10	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,2-DIBROMOETHANE (EDB)	0.1	~	~	ND (0.00065)	ND (0.00089)	ND (0.00084)	ND (0.00072)	ND (0.00067)	ND (0.00083)	ND (0.00093)	ND (0.00068)	ND (0.00086)	ND (0.00097)	ND (0.00071)	ND (0.00075)	ND (0.00076)	ND (0.00081)	ND (0.00011)	ND (0.00074)
DIBROMOMETHANE	500	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,2-DICHLOROBENZENE	9	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,3-DICHLOROBENZENE	3	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,4-DICHLOROBENZENE	0.7	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
TRANS-1,4-DICHLORO-2-BUTENE	10	~	~	ND (0.0026)	ND (0.0035)	ND (0.0034)	ND (0.0029)	ND (0.0027)	ND (0.0033)	ND (0.0037)	ND (0.0027)	ND (0.0034)	ND (0.0039)	ND (0.0028)	ND (0.0030)	ND (0.0030)	ND (0.0032)	ND (0.0043)	ND (0.0030)
DICHLORODIFLUOROMETHANE	1000	~	~	ND (0.013)	ND (0.018)	ND (0.017)	ND (0.014)	ND (0.013)	ND (0.017)	ND (0.019)	ND (0.014)	ND (0.017)	ND (0.019)	ND (0.014)	ND (0.015)	ND (0.015)	ND (0.016)	ND (0.022)	ND (0.015)
1,1-DICHLOROETHANE	0.4	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,2-DICHLOROETHANE	0.1	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,1-DICHLOROETHYLENE	3	~	~	ND (0.0026)	ND (0.0035)	ND (0.0034)	ND (0.0029)	ND (0.0027)	ND (0.0033)	ND (0.0037)	ND (0.0027)	ND (0.0034)	ND (0.0039)	ND (0.0028)	ND (0.0030)	ND (0.0030)	ND (0.0032)	ND (0.0043)	ND (0.0030)
CIS-1,2-DICHLOROETHYLENE	0.1	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
TRANS-1,2-DICHLOROETHYLENE	1	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,2-DICHLOROPROPANE	0.1	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,3-DICHLOROPROPANE	500	~	~	ND (0.00065)	ND (0.00089)	ND (0.00084)	ND (0.00072)	ND (0.00067)	ND (0.00083)	ND (0.00093)	ND (0.00068)	ND (0.00086)	ND (0.00097)	ND (0.00071)	ND (0.00075)	ND (0.00076)	ND (0.00081)	ND (0.00011)	ND (0.00074)
2,2-DICHLOROPROPANE	0.1	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,1-DICHLOROPROPENE	0.01	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
CIS-1,3-DICHLOROPROPENE	0.01	~	~	ND (0.00065)	ND (0.00089)	ND (0.00084)	ND (0.00072)	ND (0.00067)	ND (0.00083)	ND (0.00093)	ND (0.00068)	ND (0.00086)	ND (0.00097)	ND (0.00071)	ND (0.00075)	ND (0.00076)	ND (0.00081)	ND (0.00011)	ND (0.00074)
TRANS-1,3-DICHLOROPROPENE	0.01	~	~	ND (0.00065)	ND (0.00089)	ND (0.00084)	ND (0.00072)	ND (0.00067)	ND (0.00083)	ND (0.00093)	ND (0.00068)	ND (0.00086)	ND (0.00097)	ND (0.00071)	ND (0.00075)	ND (0.00076)	ND (0.00081)	ND (0.00011)	ND (0.00074)
DIETHYL ETHER	100	~	~	ND (0.013)	ND (0.018)	ND (0.017)	ND (0.014)	ND (0.013)	ND (0.017)	ND (0.019)	ND (0.014)	ND (0.017)	ND (0.019)	ND (0.014)	ND (0.015)	ND (0.015)	ND (0.016)	ND (0.022)	ND (0.015)
DIISOPROPYL ETHER	100	~	~	ND (0.00065)	ND (0.00089)	ND (0.00084)	ND (0.00072)	ND (0.00067)	ND (0.00083)	ND (0.00093)	ND (0.00068)	ND (0.00086)	ND (0.00097)	ND (0.00071)	ND (0.00075)	ND (0.00076)	ND (0.00081)	ND (0.00011)	ND (0.00074)
1,4-DIOXANE	0.2	~	~	ND (0.065)	ND (0.089)	ND (0.084)	ND (0.072)	ND (0.067)	ND (0.083)	ND (0.093)	ND (0.068)	ND (0.086)	ND (0.097)	ND (0.071)	ND (0.075)	ND (0.076)	ND (0.081)	ND (0.11)	ND (0.074)
ETHYLBENZENE	40	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
HEXACHLOROBUTADIENE	30	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
2-HEXANONE	100	~	~	ND (0.013)	ND (0.018)	ND (0.017)	ND (0.014)	ND (0.013)	ND (0.017)	ND (0.019)	ND (0.014)	ND (0.017)	ND (0.019)	ND (0.014)	ND (0.015)	ND (0.015)	ND (0.016)	ND (0.022)	ND (0.015)
ISOPROPYLBENZENE	1000	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
P-ISOPROPYLTOLUENE	100	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
METHYL ACETATE	~	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
METHYL TERT-BUTYL ETHER (MTBE)	0.1	~	~	ND (0.0026)	ND (0.0035)	ND (0.0034)	ND (0.0029)	ND (0.0027)	ND (0.0033)	ND (0.0037)	ND (0.0027)	ND (0.0034)	ND (0.0039)	ND (0.0028)	ND (0.0030)	ND (0.0030)	ND (0.0032)	ND (0.0043)	ND (0.0030)
METHYL CYCLOHEXANE	~	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
METHYLENE CHLORIDE	0.1	~	~	ND (0.013)	ND (0.018)	ND (0.017)	ND (0.014)	ND (0.013)	ND (0.017)	ND (0.019)	ND (0.014)	ND (0.017)	ND (0.019)	ND (0.014)	ND (0.015)	ND (0.015)	ND (0.016)	ND (0.022)	ND (0.015)
4-METHYL-2-PENTANONE (MIBK)	0.4	~	~	ND (0.013)	ND (0.018)	ND (0.017)	ND (0.014)	ND (0.013)	ND (0.017)	ND (0.019)	ND (0.014)	ND (0.017)	ND (0.019)	ND (0.014)	ND (0.015)	ND (0.015)	ND (0.016)	ND (0.022)	ND (0.015)
NAPHTHALENE	4	~	~	ND (0.0026)	ND (0.0035)	ND (0.0034)	ND (0.0029)	ND (0.0027)	ND (0.0033)	ND (0.0037)	ND (0.0027)	ND (0.0034)	ND (0.0039)	ND (0.0028)	ND (0.0030)	ND (0.0030)	ND (0.0032)	ND (0.0043)	ND (0.0030)
N-PROPYLBENZENE	100	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
STYRENE	3	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,1,1,2-TETRACHLOROETHANE	0.1	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,1,2,2-TETRACHLOROETHANE	0.005	~	~	ND (0.00065)	ND (0.00089)	ND (0.00084)	ND (0.00072)	ND (0.00067)	ND (0.00083)	ND (0.00093)	ND (0.00068)	ND (0.00086)	ND (0.00097)	ND (0.00071)	ND (0.00075)	ND (0.00076)	ND (0.00081)	ND (0.00011)	ND (0.00074)
TETRACHLOROETHYLENE	1	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
TETRAHYDROFURAN	500	~	~	ND (0.0065)	ND (0.0089)	ND (0.0084)	ND (0.0072)	ND (0.0067)	ND (0.0083)	ND (0.0093)	ND (0.0068)	ND (0.0086)	ND (0.0097)	ND (0.0071)	ND (0.0075)	ND (0.0076)	ND (0.0081)	ND (0.011)	ND (0.0074)
TOLUENE	30	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,2,3-TRICHLOROBENZENE	~	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,2,4-TRICHLOROBENZENE	2	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,3,5-TRICHLOROBENZENE	~	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,1,1-TRICHLOROETHANE	30	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,1,2-TRICHLOROETHANE	0.1	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
TRICHLOROETHYLENE	0.3	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
TRICHLOROFLUOROMETHANE	1000	~	~	ND (0.0065)	ND (0.0089)	ND (0.0084)	ND (0.0072)	ND (0.0067)	ND (0.0083)	ND (0.0093)	ND (0.0068)	ND (0.0086)	ND (0.0097)	ND (0.0071)	ND (0.0075)	ND (0.0076)	ND (0.0081)	ND (0.011)	ND (0.0074)
1,2,3-TRICHLOROPROPANE	100	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	~	~	~	ND (0.0065)	ND (0.0089)	ND (0.0084)	ND (0.0072)	ND (0.0067)	ND (0.0083)	ND (0.0093)	ND (0.0068)	ND (0.0086)	ND (0.0097)	ND (0.0071)	ND (0.0075)	ND (0.0076)	ND (0.0081)	ND (0.011)	ND (0.0074)
1,2,4-TRIMETHYLBENZENE	1000	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
1,3,5-TRIMETHYLBENZENE	10	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
VINYL CHLORIDE	0.7	~	~	ND (0.0065)	ND (0.0089)	ND (0.0084)	ND (0.0072)	ND (0.0067)	ND (0.0083)	ND (0.0093)	ND (0.0068)	ND (0.0086)	ND (0.0097)	ND (0.0071)	ND (0.0075)	ND (0.0076)	ND (0.0081)	ND (0.011)	ND (0.0074)
M/P-XYLENE	100	~	~	ND (0.0026)	ND (0.0035)	ND (0.0034)	ND (0.0029)	ND (0.0027)	ND (0.0033)	ND (0.0037)	ND (0.0027)	ND (0.0034)	ND (0.0039)	ND (0.0028)	ND (0.0030)	ND (0.0030)	ND (0.0032)	ND (0.0043)	ND (0.0030)
O-XYLENE	100	~	~	ND (0.0013)	ND (0.0018)	ND (0.0017)	ND (0.0014)	ND (0.0013)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0017)	ND (0.0019)	ND (0.0014)	ND (0.0015)	ND (0.0015)	ND (0.0016)	ND (0.0022)	ND (0.0015)
Total VOCs	~	Total <10	Total <4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:
1. An asterisk (*) following a detection limit indicates that the minimum laboratory reporting
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. ~ = No Method 1 Standard or UCL available
5. Grey shaded values exceed the MCP Reportable Concentrations (RCs).
6. Orange shading denotes compounds and locations where standards are exceeded.
7. Bold Red values exceed the TCLP limits/COMM-97 Acceptance Criteria
8. Yellow highlighted cells indicated pending results.



NORTH

2018 USGS TOPOGRAPHIC MAP

LYNN QUADRANGLE
SWAMPSCOTT, MASSACHUSETTS
NORTH AMERICAN VERTICAL DATUM OF 1988
CONTOUR INTERVAL 10 FEET

APPROXIMATE SCALE
1 INCH = 2,000 FEET

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QUADRANGLE LOCATION

FIGURE 1

SITE LOCUS PLAN
HADLEY ELEMENTARY SCHOOL
PRELIMINARY GEOTECHNICAL REPORT
SWAMPSCOTT, MASSACHUSETTS

DRAWN BY:	SNP	CHECKED BY:	AJ
PROJECT NO.	96700.04	DATE:	APRIL 2022

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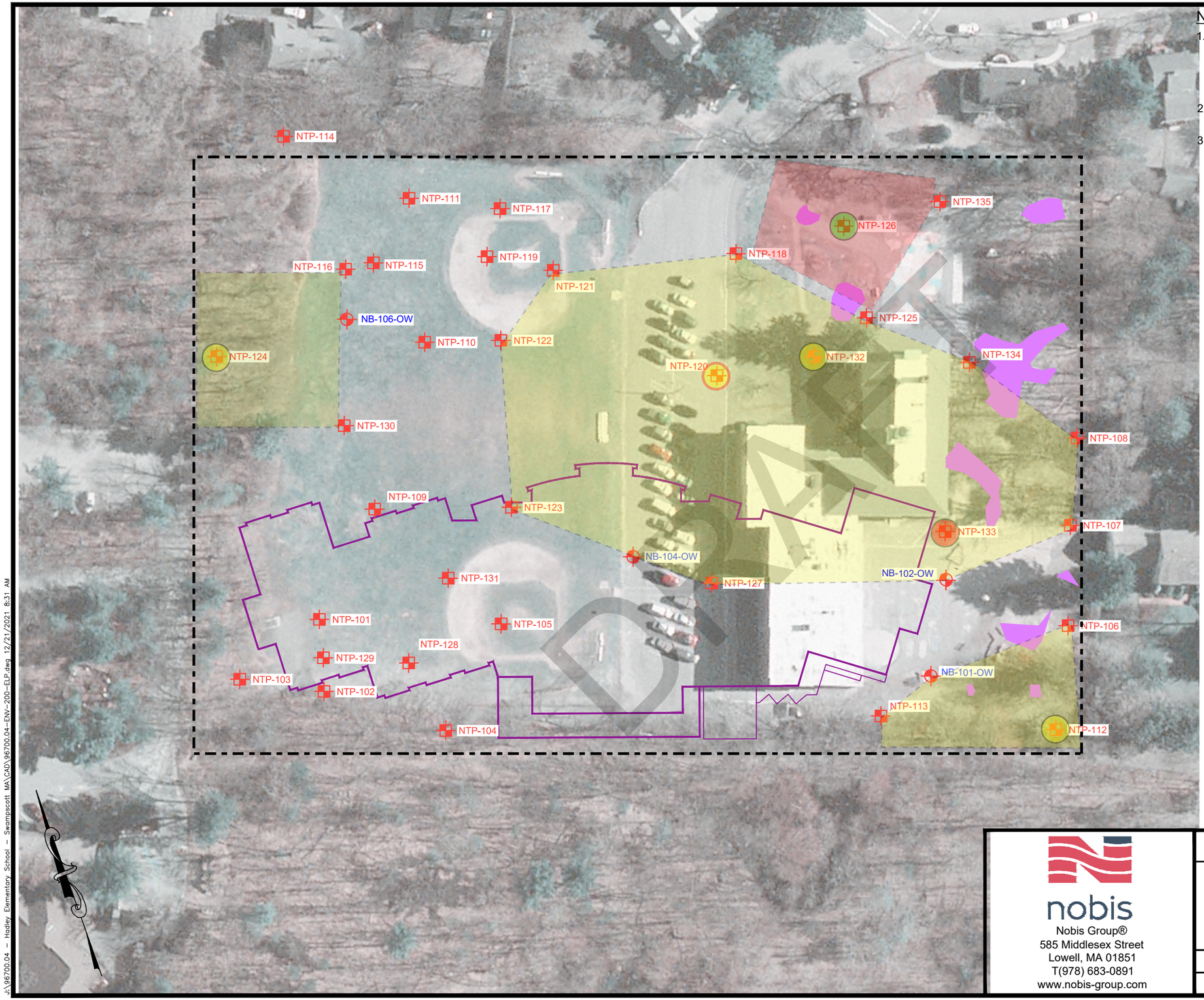

NOTES

1. THIS PLAN WAS WAS DEVELOPED USING 2008/2009 ORTHOIMAGERY OBTAINED FROM THE MASSGIS WEBSITE AND AN AUTOCAD SURVEY DRAWING PREPARED BY NITSCH ENGINEERING AND PROVIDED BY LAVALLEE BRENSINGER ARCHITECTS ON NOVEMBER 22, 2021.
2. LOCATIONS AND SITE FEATURES DEPICTED ARE APPROXIMATE AND GIVEN FOR ILLUSTRATIVE PURPOSES.
3. ELEVATIONS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

LEGEND

- NB-106-OW — APPROXIMATE MONITORING WELL LOCATION
- NTP-101 — APPROXIMATE TEST PIT LOCATION
- BEDROCK OUTCROP
- METALS EXCEEDANCE
- METALS AND SVOC EXCEEDANCE
- TCLP LEAD EXCEEDANCE (CHARACTERISTIC HAZARDOUS WASTE)
- SVOC EXCEEDANCE
- ASSUMED EXTENT OF TCLP HAZARDOUS WASTE (LEAD)
- ASSUMED EXTENT OF SOIL WITH CONCENTRATIONS >RCS-1
- PROPOSED NEW SCHOOL BUILDING
- DISPOSAL SITE BOUNDARY

0 70' 140'

GRAPHIC SCALE

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FIGURE 2

ASSUMED EXTENTS OF CONTAMINATION
HADLEY ELEMENTARY SCHOOL
10 WHITMAN ROAD
SWAMPSCOTT, MASSACHUSETTS

DRAWN BY: SAK	CHECKED BY: JNB
PROJECT NO. 96700.04	DATE: APRIL 2022

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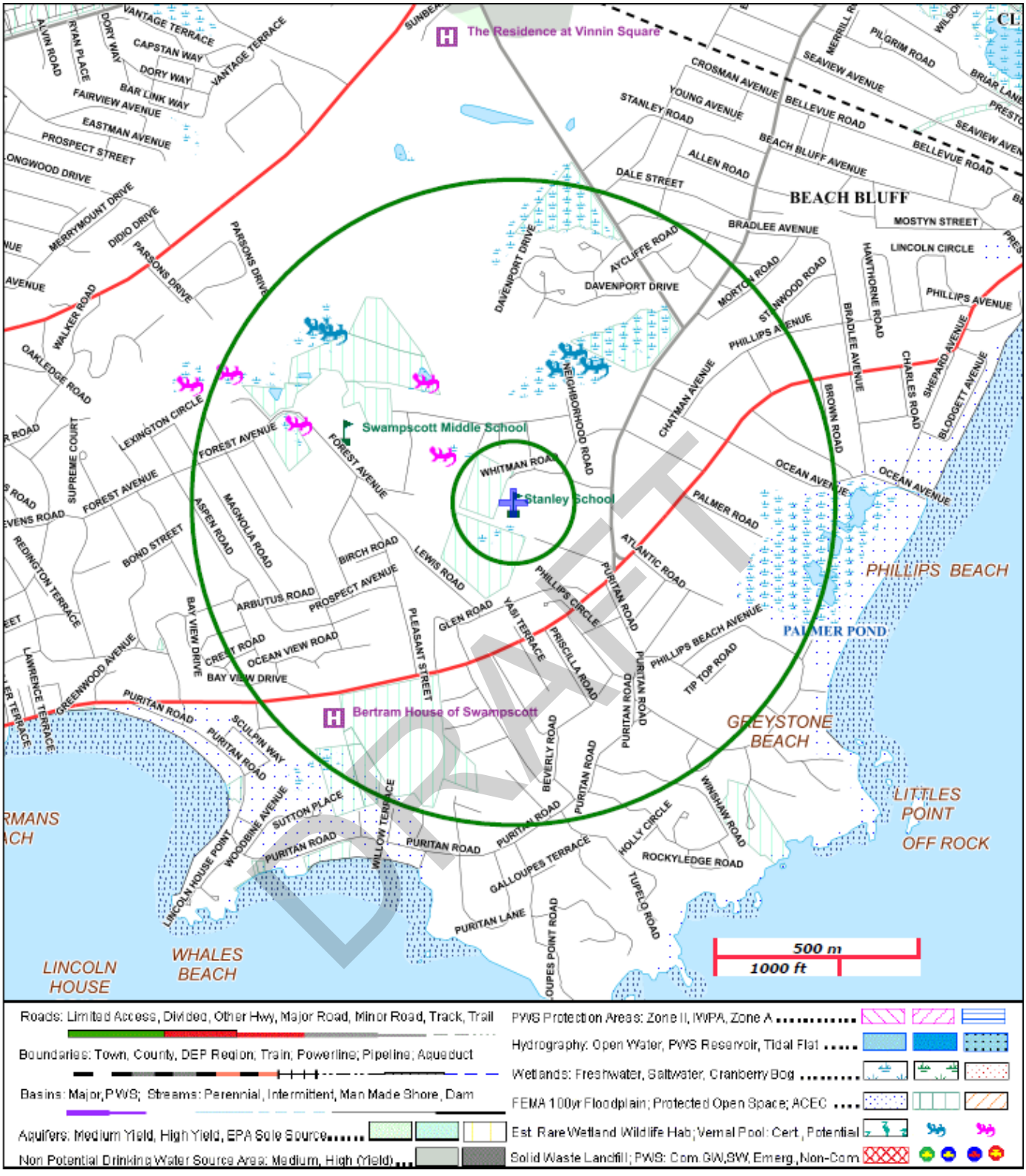

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FIGURE 3

MassDEP PRIORITY RESOURCE MAP

HADLEY ELEMENTARY SCHOOL PRELIMINARY GEOTECHNICAL REPORT SWAMPSCOTT, MASSACHUSETTS

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PROJECT NO.	96700.04	DATE:	APRIL 2022

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