



Tighe&Bond

**Groton Heights School
244 Monument Street
Groton, Connecticut**

Phase II ESA

Prepared For:

Town of Groton

August 2016

G-0674
August 12, 2016

Kristin Doundoulakis
Project Management Specialist
Town of Groton
Public Works Department
134 Groton Long Point Road
Groton, CT 06340

Re: **Phase II Environmental Site Assessment
Groton Heights School
244 Monument Street
Groton, CT**

Dear Ms. Doundoulakis:

Please find enclosed the Phase II Environmental Site Assessment (ESA) report for the Groton Heights School located at 244 Monument Street in Groton, Connecticut.

We appreciate the opportunity to provide our services. If you have any questions or comments, please contact Harley Langford at (860) 704-4781/HALangford@TigheBond.com or Amy Vaillancourt at (860) 704-4769/AJVaillancourt@TigheBond.com.

Very truly yours,

TIGHE & BOND, INC.



Harley Langford, LEP
Senior Environmental Scientist



Amy Vaillancourt, LEP
Project Manager

Cover Letter**Section 1 Introduction****Section 2 Objective****Section 3 Site Description & Environmental Setting**

3.1	Site Location & Background	3-1
3.2	Surrounding Land Use.....	3-1
3.3	Geology	3-1
3.4	Groundwater Classification	3-2

Section 4 Previous Investigations**Section 5 Remediation Criteria**

5.1	Soil Remediation Criteria.....	5-1
5.1.1	Direct Exposure Criteria	5-1
5.1.2	Pollutant Mobility Criteria	5-1
5.2	Groundwater Remediation Criteria.....	5-2
5.2.1	Surface Water Protection Criteria	5-3
5.2.3	Groundwater Volatilization Criteria	5-3

Section 6 Phase II Assessment Activities

6.1	Soil Boring Advancement & Soil Sampling	6-1
6.2	Monitoring Well Installation	6-3

Section 7 Phase II Investigation Results

7.1	VOCs	7-1
7.2	ETPH	7-1
7.3	PAHs	7-1
7.4	Metals.....	7-1
7.5	PCBs.....	7-2
7.6	Pesticides and Herbicides	7-2

Section 8 Quality Assurance/Quality Control (QA/QC)

8.1	Laboratory Quality Control	8-1
8.2	Data Usability Assessment.....	8-1

Section 9 Conceptual Site Model

9.1	Nature & Extent of Contamination	9-1
9.2	Potential Release Mechanisms.....	9-1
9.3	Migration Pathways	9-2
9.4	Areas of Concern.....	9-3

Section 10 Summary and Recommendations

10.1 Summary 10-1
10.2 Recommendations 10-2

APPENDICES

A Figures

- 1 Site Location Map
- 2 Soil Boring Location Map

B Tables

- 1 Summary of Soil Analytical Results
- 2 Conceptual Site Model

C Soil Boring Completion Logs

D Soil Laboratory Analytical Report

Section 1

Introduction

Tighe & Bond has prepared this Phase II Environmental Site Assessment (ESA) report for the former Groton Heights School on behalf of the Town of Groton (Town). Activities were funded by a Brownfield Grant provided by the Connecticut Department of Economic and Community Development (CTDECD). Tighe & Bond was retained to conduct this Phase II ESA to assess environmental conditions at the Groton Heights Elementary School.

The Phase II ESA activities were conducted in general accordance with the guidelines for environmental site assessments established in the Connecticut Department of Energy & Environmental Protection's (CTDEEP) Site Characterization Guidance Document (SCGD) dated September 2007 (revised December 2010) as well as the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments 1903-11.

Section 2

Objective

The primary objective of this Phase II ESA was to assess the area of concerns identified in the March 2016 Phase I ESA prepared by Tighe & Bond. The results of the Phase II activities were used to assess if releases of constituents of concern (COCs) have occurred to the environment at the AOCs and to determine if further investigation and/or remediation is required within these areas.

The following AOCs have been identified at the site:

- AOC-1 Boiler Room
- AOC-2 Heating Oil UST Area(s)
- AOC-3: Historic Pesticides and Herbicides
- AOC-4: Coal Storage Area
- AOC-5: Potential Coal Ash Disposal Areas
- AOC-6: Transformer Pad
- AOC-7: Fill
- AOC-8: Hazardous Building Materials

Additional detail for these AOCs is provided in Section 4.

Section 3

Site Description & Environmental Setting

3.1 Site Location & Background

The site is located along the western side of Smith Street, north of its intersection with Park Avenue. The site consists of one parcel of land designated by the Town of Groton Tax Assessor's office with Property Identification Number 168918412020 E. According to Tax Assessor's information the site is comprised of approximately 2.61 acres and is owned by the Town of Groton. Refer to Figure 1 and Figure 2 for a Site Location Map and an Aerial Site Plan, respectively.

The central portion of the site is occupied by the 27,185 square foot former Groton Heights Elementary School building, constructed in 1912. The building has been vacant since 2007 when the school closed. A 3,200 square foot gymnasium addition was constructed in 1962 on the north of the original building. The main school building includes classrooms, kitchen, gymnasium, custodial closets with utility sinks, offices, and a boiler room. Currently, the building is heated by boilers fueled by #2 heating oil stored in a 3,000 gallon UST located in the parking area to the east of the building. Electricity is supplied to the building via underground lines.

A parking area is located on the east of the building. A small paved area and grassy area are located to the north of the building. Concrete sidewalks are located around the school and site connecting to the grassy area and the small paved area to the north of the building.

3.2 Surrounding Land Use

The site is located in a residential area. The site is bounded to the north by a paved lot known as Parcel V which is reportedly leased to the Town, to the east by residential parcels, to the west by the Bill Memorial Library and residential parcels and to the south by the Fort Griswold Battlefield State Park, Monument House Museum and Groton Monument.

3.3 Geology

According to the Surficial Materials Map of Connecticut (U.S. Geological Survey, 1992) the surficial material beneath the site consists primarily of thin till, which is typically composed of compact sand and silt with some lenses of sorted sand and gravel and occasionally masses of fine-grained sediment. Tills are often poorly drained and difficult to excavate. This published description of surficial soils at the site was consistent with observations made during the Phase II ESA. Tills were observed at depths ranging from 3-11 feet below grade (BG).

According to the *Bedrock Geologic Map of Connecticut* (U.S. Geological Survey, 1985), the site is located within the Mamacoke Formation and New London Gneiss Formation. The USGS Mineral resources spatial data for Connecticut on-line describes this unit as massive gray granitic gneisses and light to dark gray, medium grained gneiss. This is consistent with observations made during the Phase II ESA. Bedrock was encountered during the Phase II ESA at depths ranging from 9-10 feet BG on the east side of the site.

3.4 Groundwater Classification

According to the CTDEEP Bureau of Water Protection and Land Reuse groundwater at the site is classified as GB. CTDEEP Water Quality Standards (WQS; effective October 10, 2013) indicate that GB groundwater is designated for use with fish and wildlife habitat; agricultural and industrial supply and other legitimate uses including navigation. Discharge in GB groundwater areas is restricted to discharges from public or private drinking water treatment systems, dredging and dewatering, emergency and clean water discharges and cooling waters, discharges from industrial and municipal wastewater treatment facilities (providing Best Available Treatment and Best Management Practices are applied), and other discharges subject to the provisions of section 22a-430 CGS.

Based on the topography of the site and surrounding area, it is presumed that groundwater beneath the site likely flows to the west towards the Thames River, though groundwater was not encountered during Phase II ESA drilling activities.

Section 4

Previous Investigations

Lead Inspection Report 1991

Mystic Air Quality Consultants, Inc. conducted a lead-based paint survey on the interior and exterior of the former Groton Heights Elementary School in December 1991. Most surfaces tested negative for lead, with the exception of the 1st and 2nd floor walls and some basement doors and windows. Recommendations included frequent HEPA vacuuming and washing with a solution of Tri-Sodium Phosphate in areas with lead containing paint, until such time as all lead surfaces identified by the inspector be abated in accordance with the Connecticut proposed Lead Poisoning Prevention Program.

Asbestos Inspection Report 2002

Mystic Air Quality Consultants, Inc. conducted asbestos inspections at the former Groton Heights Elementary School every three years as part of an asbestos operations and maintenance (O&M) plan. Asbestos containing or assumed asbestos containing materials noted in this report includes floor tile, floor tile mastic, sheetrock/wallboard, fire doors-insulation, boiler packing and window caulking and glazing.

Limited and Directed Accessible Indoor Air Quality Survey

Mystic Air Quality Consultants, Inc. conducted a limited and directed accessible indoor air quality survey on August 29, 2013 at the former Groton Heights Elementary School. Observations during the inspection include a musty odor with visible fungi growth in the gymnasium as well as loose flaking paint on the floors.

Air measurements including fungal spore count, ambient gas, vapor, temperature and humidity were taken and visual observations including indications of water damage, water intrusion and other items which may potentially impact air quality were assessed. Results from the assessment showed an increase in fungal spores in the interior of building, relative humidity measurements were above the recommended ASHRAE criteria of 30-60%, and hydrogen sulfide, carbon monoxide, oxygen, respirable particulates, total hydrocarbons, temperature and combustible gases were found to be within accessible levels.

Recommendations include limited access to the interior of the school building to individuals wearing proper PPE, including full body Tyvek suits as well as half face negative pressure respirators.

Phase I ESA Report, prepared by Tighe & Bond.

The Phase I identified the following AOCs for the site:

AOC-1 Boiler Room: The boiler room is located on the east side of the school and contains two boilers fueled by #2 heating oil, which is contained in a 3,000 gallon UST located on the east side of the building. The school was heated by coal prior to 1950, and coal ash was potentially disposed of on site, as was common practice at this time. A bricked up doorway on the eastern wall and a

hatch on the southern wall were observed and are likely associated with former coal delivery and coal ash removal.

A copper heating oil fuel line was observed entering the boiler room through the eastern wall and then connecting to the two boilers. Drip pans containing oil soaked speedy dry were observed beneath the oil line fittings where they connected to the boilers.

Two air compressors were observed in the boiler room, both of which had drip pans filled with oily speedy dry beneath their purge lines and compressor fittings. Minimal oil staining was observed on the concrete floor beneath both compressors.

Blow off piping associated with the boilers discharges to a sump located in the boiler room which is assumed to discharge to the municipal sewer system. Releases of oil in the blow off discharge and to the floor of the boiler room would have the potential to collect in the sump where it could release to the environment through cracks in the sump or conveyance piping. COCs would include extractable petroleum hydrocarbons (ETPH), volatile organic compounds (VOCs), poly aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs) and metals.

AOC-2 Heating Oil UST Area(s): A 3,000 gallon #2 heating oil UST is located on the east side of the building in the parking area. This UST was reportedly installed in 1987 to replace a previous 5,000 gallon heating oil UST installed in 1950. Information obtained from the EDR report on November 18, 2015 and from a municipal file review on December 31, 2015, indicate the possibility for additional USTs to exist at the site.

The current UST has passed a recent tightness test in 2000 and a failure determination test in 2015. It is unknown if a release of oil occurred from the previous UST since documentation of soil quality beneath the tank was not identified.

Two additional USTs were reportedly installed at the site in 1963 and 1971. The location of these tanks was not identified in the documents reviewed during this assessment. COCs include ETPH, VOCs, and PAHs.

AOC-3: Historic Pesticides and Herbicides: Soils surrounding the former building footprint may have received pesticide and/or herbicide applications as part of a property management plan for the site. COCs include pesticides, herbicides, and metals.

AOC-4: Coal Storage Area: Coal was stored on site prior to 1950 when the building was heated with coal. A metal hatch was observed on the southern wall of the boiler room as well as a bricked up door way which was located on the eastern wall. These access points were likely associated with former coal delivery and coal ash removal. COCs include: ETPH, PAHs, and metals.

AOC-5: Potential Coal Ash Disposal Areas: Coal was stored at the site at AOC-4, when the school was heated with coal (prior to 1950). Coal ash was not observed during the site walk; however, it may have been disposed of or buried on-site as was common practice at the time when it was burned at the site. COCs include: ETPH, PAHs, and metals.

AOC-6: Transformer Pad: A pad mounted transformer is currently located on the East side of the school building and is labeled as non-PCB containing. Minimal black staining, potentially mold, was observed on the concrete pad. A dry (oil free) transformer was observed in the boiler room. The Town of Groton reports that this transformer was installed in 2000. Due to the age of the building there is the potential that previous transformer(s) existed at the site that may have contained PCBs or had releases of transformer oil. COCs include: ETPH, VOCs, SVOCs and PCBs.

AOC-7: Fill: Fill material of unknown composition may have been used to grade the site prior to construction of the school in 1912 and/or during construction of other site improvements. Coal ash generated at the site may have also been used as fill at the site. COCs include: ETPH, VOCs, PAHs, metals, and PCBs.

AOC-8: Hazardous Building Materials

Previous environmental reports reviewed as part of this Phase I ESA showed that lead-based paint on the interior and exterior of the former Groton Heights Elementary School tested negative for lead, with the exception of the 1st and 2nd floor walls and some basement doors and windows. Asbestos investigations showed asbestos containing or assumed asbestos containing materials include floor tile, floor tile mastic, sheetrock/wallboard, fire doors-insulation, boiler packing and window caulking and glazing. The air quality survey measurements showed an increase in fungal spores in the interior of building, relative humidity measurements were above the recommended ASHRAE criteria of 30-60%, and Hydrogen sulfide, carbon monoxide, oxygen, respirable particulates, total hydrocarbons, temperature and combustible gases were found to be within accessible levels.

Additionally, during a site visit on December 14, 2015 chipped and peeling paint was observed on walls and floors throughout the building as well as on floor drains in the bathrooms.

Tighe and Bond conducted a hazardous building material, radon, and indoor air assessment at the school, the results of which are reported in the Hazardous Building Materials Inspection (HBMI) report prepared by Tighe & Bond, dated June 10, 2016.

HBMs including asbestos containing materials and lead-based paints may have impacted soils surrounding the exterior of the building and may pose a possible health concern in the interior of the building. COCs include lead and asbestos.

Section 5

Remediation Criteria

Analytical results reported in this Phase II ESA were compared to remediation criteria listed in the CTDEEP Remediation Standard Regulations (RSRs) (January 1996, Amended June 2013). Analytical results for COCs not listed in the RSRs were compared to numeric criteria provided in the CTDEEP Technical Support Document: Recommended Numeric Criteria for Common Additional Polluting Substances (APS) and Certain Criteria December 2015, Revised March 2016). CTDEEP's intent in developing the RSRs was to define the following:

- Minimum remediation performance standards
- Specific numeric clean-up criteria
- A process for establishing alternative site-specific standards, if warranted

The RSRs apply to efforts to remediate contaminated soil, surface water, soil vapors, or a groundwater plume at or emanating from a release, provided that the remedial action is required by the following:

- CGS Chapter 445 (Hazardous Waste, Section 22a -134, the Connecticut Transfer Act) or Chapter 446K (Water Pollution Control); or
- Relevant subsections of CGS 22a-133 (Voluntary Clean-up) including but not limited to, any such action required to be taken or verified by a Licensed Environmental Professional, except as otherwise provided in the regulations.

5.1 Soil Remediation Criteria

The CTDEEP soil remediation criteria integrates two risk-based goals: (1) Direct Exposure Criteria (DEC) to protect human health and the environment from risks associated with direct exposure (ingestion) to contaminated soil; and (2) Pollutant Mobility Criteria (PMC) to protect groundwater quality from contaminants that migrate or leach from the soil to the groundwater. Soils to which both criteria apply must be remediated to a level, which is equal to the more stringent criteria.

5.1.1 Direct Exposure Criteria

Specific numeric exposure criteria for a broad range of contaminants in soil have been established by the CTDEEP, based on exposure assumptions relative to incidental ingestion of contaminants in soils. The DEC applies to accessible soil to a depth of 15 feet.

The CTDEEP has established two sets of DEC using exposure assumptions appropriate for residential land use (RES DEC) or for industrial and commercial land use (I/C DEC). Analytical results from the Phase II ESA at the site are compared to both the RES DEC and I/C DEC.

5.1.2 Pollutant Mobility Criteria

The PMC that will apply to remediation of a site depends on the groundwater classification of the site. The purpose of these criteria is to prevent any contamination to groundwater in GA classified areas, and to prevent unacceptable further degradation to groundwater in GB classified areas. The applicable PMC for the site is the PMC for a

GB classified area. The PMC generally applies to all soil within the unsaturated zone, which represents the soil located from the ground surface to the seasonal high water table in GB classified areas. The criteria do not apply to environmentally isolated soils that are polluted with substances other than volatile organic compounds (VOCs) provided that an Environmental Land Use Restriction (ELUR) recorded for the release area which ensures that such soils will not be exposed (unless approved in writing by the CTDEEP Commissioner). Environmentally isolated soils are defined as certain contaminated soils, which are above the seasonal low water table, beneath an existing building and not a source of ongoing contamination. An ELUR must be recorded for the site, which ensures that such soils will not be exposed as a result of building demolition or other activities. Buildings can be constructed over contaminated soils rendering them environmentally isolated.

Remediation based upon the listed PMC requires that a substance, other than an inorganic substance or PCB, in soil be remediated to at least that concentration at which the results of a mass analysis of soil for such substances does not exceed the PMC applicable to the groundwater classification (i.e., GA or GB) of the area in which the soil is located. An inorganic substance (metals) or PCBs in soil must be remediated to at least that concentration at which the analytical results of leachate produced from either the Toxicity Characteristic Leaching Procedure (TCLP) or the Synthetic Precipitation Leaching Procedure (SPLP) does not exceed the PMC applicable to the groundwater classification of the area in which the soil is located.

5.2 Groundwater Remediation Criteria

Groundwater remediation requirements are dependent upon the groundwater classification of the site. The objectives of these standards are the following:

- Protect and preserve groundwater in GA areas as a natural resource
- Protect existing use of groundwater regardless of the area's groundwater classification
- Prevent further degradation of groundwater quality
- Prevent degradation of surface water from discharges of impacted groundwater
- Protect human health and the environment.

Portions of the RSRs governing groundwater regulate remediation of groundwater based on each substance present within the plume and by each distinct plume of impact. Several factors influence the remediation goal at a given site, including: background water quality, the groundwater classification, the proximity of nearby surface water, existing groundwater uses, and the presence of buildings and their usage. When assessing general groundwater remediation requirements, all of these factors must be considered. The site has been connected to the municipal water supply system since 1972.

The site is situated within a GB classified area by the CTDEEP. Therefore, the following criteria would apply to the site:

- Surface Water Protection Criteria (SWPC)
- Groundwater Volatilization Criteria (GWVC)

5.2.1 Surface Water Protection Criteria

The SWPC applies to all groundwater, which discharges to surface water. The SWPC ensure the groundwater contamination resulting from on-site sources, which exceed background, is remediated to levels that adequately protect surface water quality. In general, compliance with the SWPC is achieved when the average concentration of a compound in groundwater emanating from a site is equal to or less than the SWPC established by the CTDEEP. The SWPC, therefore, would apply to the site.

5.2.3 Groundwater Volatilization Criteria

The GWVC apply to all groundwater contaminated with a VOC within 15' of the ground surface or a building. According to the regulations, the VOC of concern will be remediated to a concentration that is equal to or less than the applicable residential volatilization criterion for groundwater. If groundwater contaminated with a VOC is below a building used solely for industrial or commercial activity, groundwater may be remediated such that the concentration of the substance is equal to or less than the applicable industrial/commercial (I/C) GWVC in lieu of the residential (RES) GWVC for groundwater, provided that an ELUR is in effect with respect to the parcel (or portion of the parcel covered by the building). The ELUR must also ensure that the parcel (or portion thereof beneath the building) will not be used for any residential purpose in the future and that future use is limited to industrial or commercial activity.

Groundwater was not encountered during Phase II drilling activities; therefore, groundwater monitoring wells were not installed at the site.

Section 6

Phase II Assessment Activities

The Phase II assessment activities included a subsurface investigation to determine whether releases occurred to the environment associated with previously identified AOCs. Prior to conducting the investigation activities, Call Before You Dig (CBYD) was contacted by Tighe & Bond personnel in order to identify public underground utilities associated with the site as required by state law.

Tighe & Bond also contracted Accurate Markout of Belchertown Massachusetts (Accurate), to further assess the location of on-site utilities and the orientation of the existing UST. Accurate also assessed the area around the school building for potential USTs previously used at the site. A potential second UST was identified directly east of the existing UST, at roughly 4 feet BG.

The approach, procedures and results of the site investigation activities are presented in the following sections.

6.1 Soil Boring Advancement & Soil Sampling

On January 18, 2016 and January 20, 2016 Martin Geo/Environmental, LLC (Martin) of Belchertown, Massachusetts advanced soil borings at the site under the supervision of Tighe & Bond. The soil borings from this investigation were advanced in and around previously identified AOCs to evaluate for potential releases of contaminants to the environment. A total of 17 soil borings (SB-1 through SB-17) were advanced by means of direct push technology and hand tooling. Soil borings were advanced to depths of 15 feet below grade (BG) (SB-1, SB-2, SB-4, SB-5, SB-6, SB-7, SB-8, SB-9, SB-13, SB-14, and SB-15), depths of two feet BG (SB-2, SB-15 and SB-16), and one foot BG (SB-10, SB-11, and SB-12). Refer to Figure 3 (Appendix A) for the boring locations. A summary of borings conducted for each AOC is provided below:

AOC	Borings	Analytical Parameters
AOC-1: Boiler Room	SB-15 and SB-16	ETPH, PCBs, Metals
AOC-2: Heating Oil UST Area	SB-1	VOCs, ETPH, PAHs
AOC-3: Historic Pesticides and Herbicides	SB-10, SB-11, and SB-12	Pesticides, Herbicides, Metals
AOC-4: Coal Storage Areas	SB-2	Sample was not submitted for laboratory analysis
AOC-5: Potential Coal Ash Disposal Areas	SB-4, SB-5, SB-6, SB-7, SB-8, SB-9, SB-13, SB-14, SB-17	ETPH, PAHs, Metals

AOC	Borings	Analytical Parameters
AOC-6: Transformer Pad	SB-3	ETPH, PCBs
AOC-7: Fill	SB-4, SB-5, SB-6, SB-7, SB-8, SB-9, SB-13, SB-14, SB-17	ETPH, PAHs, Metals

Soils from each boring were field-evaluated during this investigation through a three-step approach:

- 1) Physical characteristics of soils within each location were observed and documented
- 2) Soils were field-evaluated using a Photoionization Detector (PID) as well as using visual and olfactory methods for the presence or absence of contamination
- 3) Select soil samples were collected by Tighe & Bond and submitted for laboratory analysis at Complete Environmental Testing (CET) of Stratford, Connecticut (a Connecticut-certified analytical laboratory).

Based upon the above three-step approach, samples were collected from soil borings with a bias towards those exhibiting evidence of environmental impact or the most likely depth of a release (e.g. the bottom of the UST, staining, odors, and/or high PID reading). Following completion of each soil boring, and related soil sample collection activities, the resulting boreholes were backfilled with the drill cuttings.

Samples collected for laboratory analysis were collected in the appropriate laboratory-provided containers and were immediately stored in a cooler on ice pending transportation to CET in Stratford, Connecticut.

It is noted that during the advancement of soil borings, coal ash material was observed in the one to three foot interval in borings SB-6, SB-7, SB-8 and SB-9. This material was sampled and submitted for laboratory analysis of PAHs, ETPH, and Metals. Coal ash was also observed in the 0-3 inch interval in SB-11 and SB-12. No odors, petroleum or otherwise, were noted in association with the coal ash material.

Evidence of soil impacts (i.e. staining or odors) was not observed in any of the other borings conducted during the Phase II ESA. Evidence of building material fill (brick, asphalt) was observed in SB-6, SB-7, SB-8 and SB-9.

PID readings ranging from 0 to 0.3 parts per million (ppm) were recorded for the soil samples collected from each of the 17 soil borings. These readings did not indicate the presence of significant vapor phase volatile organic compounds in site soils. A complete summary of PID readings is presented on each of the boring logs provided in Appendix B.

A total of 13 soil samples were collected and submitted for laboratory analysis. Each soil sample was analyzed for those constituents that had the potential to be released to the subsurface due to historic activities. Soil samples SB-13, SB-14, and SB-17 were advanced to support delineation of the coal ash and fill material that observed in borings

SB-6, SB-7, SB-8, and SB-9. Coal ash and fill material were not observed in soil borings SB-13, SB-14, and SB-17.

Pea gravel was observed at 3-4 feet BG at boring location SB-2. Pea gravel is typically used as a bedding and cover material for USTs, utilities and other buried structures; as such, SB-2 was stopped 4 feet BG to avoid striking the potential subsurface structure. GPR was also used at this location, the results of which were inconclusive in determining if there was a buried structure.

Based on the COCs for the site, the soil samples were analyzed for one or more of the following:

- VOCs via EPA Method 8260
- Extractable Total Petroleum Hydrocarbons (ETPH) via CTDEEP methodology
- Polycyclic Aromatic Hydrocarbons (PAHs) via EPA Method 8270
- Pesticides via EPA Method 8081
- RCP Metals via EPA Method 6010
- PCBs via EPA Method 8082

6.2 Monitoring Well Installation

Overburden groundwater or signs of a significant soil contamination was not encountered during Phase II drilling activities and therefore groundwater monitoring wells were not installed on the site.

Section 7

Phase II Investigation Results

A summary of the soil analytical data discussed below is presented on Table 1 (Appendix C) and the complete laboratory analytical report is attached as Appendix D.

7.1 VOCs

VOCs were analyzed in one soil sample collected from the vicinity of the heating oil USTs SB-1 (6-8'). VOCs were not reported for this sample at concentrations above laboratory reporting limits.

7.2 ETPH

Ten soil samples were submitted for laboratory analysis of ETPH including SB-1 (6-8'), SB-3 (0-3"), SB-4 (2-4'), SB-5 (4-6'), SB-6 (1-3'), SB-7 (1-3'), SB-8 (1-3'), SB-9 (1-3') SB-15 (0-1'), and SB-16 (0-1'). These samples were analyzed for ETPH based on their proximity to AOCs in which petroleum was a COC, such as the heating oil UST area, boiler room, transformer, and fill material.

ETPH was reported above above residential direct exposure criteria in sample SB-16 (0-1'). ETPH was reported at a concentration above laboratory detection limits but not above RSR criteria in SB-15 (0-1'). ETPH was not reported above laboratory reporting limits in the remaining samples analyzed.

7.3 PAHs

Seven soil samples were submitted for laboratory analysis of PAHs. These samples included SB-1 (6-8'), SB-4 (2-4'), SB-5 (4-6'), SB-6 (1-3'), SB-7, (1-3'), SB-8 (1-3'), and SB-9 (1-3').

PAHs were not reported above laboratory reporting limits for the samples submitted for analysis.

7.4 Metals

RSR metals were analyzed in six of the 13 soil samples submitted as part of this Phase II ESA. An additional three samples were analyzed for lead only. Several metals were reported at concentrations above laboratory reporting limits but below the applicable RSR numeric criteria. The metals concentrations were consistent in the majority of samples analyzed and indicative of naturally occurring conditions. The exception to this is the ash material observed in shallow soil samples from borings SB-8, SB-10, SB-11 and SB-12. Lead concentrations were reported above laboratory reporting limits and RES DEC criteria in SB-8 (1-3'), SB-10 (0-3"), and SB-11 (0-3"), and above laboratory reporting limits but below CT DEEP RSR criteria in SB-12 (0-3"). Metals including cadmium, chromium, copper, and zinc were also reported at higher concentrations in SB-8 than in other soil samples submitted for laboratory analysis.

7.5 PCBs

Three shallow soil samples collected from SB-3, SB-15, and SB-16 were analyzed for PCBs. PCBs were not reported above laboratory reporting limits in any of these samples.

7.6 Pesticides and Herbicides

Three soil samples collected of the upper 3 inches of top soil at soil borings SB-10, SB-11, and SB-12 were analyzed for these COCs to determine if pesticides and herbicides were historically utilized near the building foundation could have affected shallow soils. Pesticides were reported above the APS value for the GB PMC in SB-11 and SB-12. Pesticides were not reported above laboratory reporting limits in SB-10.

Herbicides were not reported above laboratory reporting limits in all of the samples analyzed.

Section 8

Quality Assurance/Quality Control (QA/QC)

Quality control checks on field activities were performed to assure collection of data that is representative and valid. Field sampling quality assurance measures consisted of the daily review of field notes and laboratory chains of custody. Laboratory quality assurance measures are also provided.

8.1 Laboratory Quality Control

Tighe & Bond performed a review of the samples collected, laboratory results and detected compounds to identify if quality control deficiencies were present. Quality control deficiencies were not noted during this review.

8.2 Data Usability Assessment

The quality control data and the analytical data were reviewed to form a data usability assessment. This assessment takes into consideration the following parameters:

- Detection limits
- Regulatory criteria
- Matrix effects
- Importance of nonconforming data

Multiple soil samples were collected across the site to provide characterization of the property. Laboratory analysis of soil samples had sufficiently low detection limits in order to identify constituent concentrations approaching the RSR limits. Based on a review of the laboratory reporting limits, sample and blank analytical results, the data derived from this ESA is usable and adequate for the project objectives.

Section 9

Conceptual Site Model

A conceptual site model (CSM) is a representation of an environmental system at a site that is used as a tool to identify releases, pathways of migrations, potential receptors, and ultimately risk. The CSM is used to develop work plans and provide a framework to address issues that arise during the investigation of a site. The CSM is refined throughout the site characterization process as new data are acquired. The final CSM will fully define the environmental system at a site and validate the hypotheses regarding the environmental fate of released contaminants.

The CSM includes the following:

- Nature and extent of contaminants
- Potential release mechanisms for such contaminants
- Evaluation of migration pathways and locations at which environmental media are most likely to have been impacted by a release
- Identification of AOCs at which releases have occurred as well as AOCs at which no releases have occurred
- Data and rationale to support the conclusion

Refer to Table 2 (Appendix B) for a summary of the CSM for each AOC.

9.1 Nature & Extent of Contamination

The main COCs identified for the site during the Phase II drilling activities includes lead in soil borings SB-8, SB-10, and SB-11, SB-12, Pesticides in SB-11 and SB-12, and ETPH in SB-15 and SB-16.

Lead concentrations in SB-8 (1-3'), SB-10 (0-3"), and SB-11 (0-3") were reported above laboratory reporting limits and above RES DEC criteria. Metals concentrations in the remaining soil samples collected during the Phase II ESA were consistent and appear to be indicative of naturally occurring conditions.

The pesticide compounds 4,4'-DDE and 4,4'-DDT were reported at concentrations above the recommended GB PMC APS criteria in soil samples collected near the building. Specific RSR criteria has not been established for these compounds.

ETPH was reported at concentrations above laboratory reporting limits but below RSR criteria in SB-15 (0-1') and above the RES DEC criteria in SB-16 (0-1') in AOC-1.

VOCs were not reported above laboratory reporting limits in the samples analyzed from AOC-2.

9.2 Potential Release Mechanisms

The potential release mechanisms at each AOC are identified in Table 2. A summary of the potential release mechanisms for each COC at the site are as follows:

PAHs – Potential releases from on-site coal storage and coal ash disposal, leaking underground heating oil storage tanks (LUSTs), and fill material used throughout the site.

RSR Metals – Potential deposition of coal ash material, and impacts from lead based paint, historic pesticide applications, fill material or naturally occurring in site soils

ETPH – Potential heating oil releases from heating oil USTs, leaking UST piping and air compressors in the boiler room, on site coal storage and potential disposal of coal ash, and fill material.

VOCs – Potential releases of heating oil from heating oil USTs and boiler room drip pans.

Pesticides and Herbicides – Potential releases to surface soil from historical application to school grounds (Circa 1912 to 2007)

PCBs – Potential oil releases to surface soil from the transformer on the east side of the site and to the concrete floor and underlying soil from the air compressor in the boiler room.

9.3 Migration Pathways

Potential migration pathways for each AOC are identified in Table 2. Various potential exposure pathways were evaluated to determine if possible risks to public health or the environment exists from potential on-site contamination. The evaluation is based on the location and depth of the contaminants identified for the site.

- Coal ash material was identified in flower beds to the west and south of the building at depths of zero to three inches BG and at one to three feet BG in various locations to the east, north, and west of the building on the site.
- Pesticides were reported in shallow soils collected from 0-3 inches BG in the flower beds to the west and south of the building.
- ETPH was reported in soils collected from 0-12 inches beneath the concrete slab in the boiler room. Sub-slab soils were not observed to be stained, did not register a PID response, or show other signs of impact or fill material. As such, deeper samples were not collected.
- Other evidence of a release were not identified during the Phase II ESA.

Soil Migration Pathways

The major soil migration pathway for contaminants at the site would be mobilization of contaminants from soil to groundwater through precipitation infiltration. Groundwater was not observed in the soil borings conducted at the site during the Phase II ESA, which were advanced to a maximum depth of 15 feet BG. Therefore, leaching of contaminants to groundwater through precipitation infiltration is not likely. Migration through air (wind-blown material) or erosion appears less likely since the majority of the site is vegetated and the remaining portions of the site are covered by the building or asphalt. Based on this information there is limited potential for migration of contaminated soils.

Exposure to lead and pesticides through direct contact with shallow surface soils is a potential concern in flower beds to the west and south of the building and lead in areas to the east, north, and west of the building.

Groundwater Migration Pathway

Overburden groundwater was not encountered during Phase II ESA activities. Groundwater flow direction beneath the site is presumed to be west toward the Thames River. Since groundwater was not encountered during the Phase II ESA at maximum depths of 15 feet BG, it is unlikely that groundwater beneath the site has been impacted by the limited surface releases identified at the on-site AOCs. Potable uses of groundwater are not known to currently exist in the area surrounding the site. Based on this information the potential for exposure to contaminated groundwater through direct contact or ingestion is improbable.

Surface Water Migration Pathway

There are no surface water bodies identified on the site during Phase II activities, and therefore potential for exposure to contaminated surface water from on-site AOCs is improbable. The surface waterbody closest to the site is the Thames River, which is located approximately 1,300 feet to the west of the site.

Air Migration Pathway

Sources of VOCs were not found in the soil during the Phase II ESA. Therefore, vapor intrusion issues resulting from on-site AOCs is unlikely. The area upgradient of the site is primarily residential and there are no known releases of VOCs to groundwater in the area of the site. Groundwater was not encountered during the Phase II ESA. Depth to groundwater appears to be greater than 15 feet BG. Migration of wind-blown material is not likely since the majority of the site is vegetated and the remaining portions of the site are covered by the building or asphalt.

9.4 Areas of Concern

The following is a summary of Phase II findings for each AOC:

- **AOC-1: Boiler Room**

Staining was observed on the concrete floor beneath four drip pans adjacent to two boilers and two air compressors in the boiler room during the Phase I ESA. Two soil borings were advanced beneath the drip pans, one beneath the drip pan adjacent to a boiler (SB-15) and one adjacent to an air compressor (SB-16) to evaluate the potential for a release to sub slab soils. COCs associated with storage of these materials include ETPH and PCBs. ETPH concentrations were reported for SB-16 above laboratory reporting limits and above RES DEC. ETPH concentration were reported for SB-15 above laboratory reporting limits but below CT DEEP RSR criteria. PCB concentrations were not reported above RSR criteria in SB-15 and SB-16. The potential risk of direct human exposure to impacted soils is unlikely, as the soils in AOC-1 are located beneath a concrete floor. The potential for contaminant migration from sub slab soils to groundwater is also unlikely, as groundwater is greater than 15 feet BG and soils are environmentally isolated by the building.

- **AOC-2: Current and Former Heating Oil USTs**

One soil boring (SB-1) was advanced to investigate the area of a 3,000-gallon heating oil UST. Overt evidence of a release of oil was not observed during advancement of this boring. Soil samples collected from this area were analyzed for COCs associated with heating fuel including ETPH, PAHs, and VOCs. These constituents were not reported above laboratory reporting limits for the sample submitted for laboratory analysis.

GPR data collected at the site on January 19, 2016 reported a potential additional heating oil UST to the east of the current UST, roughly 4 feet BG. The existing UST and the potential second UST are slated to be removed in summer 2016, at which time an additional assessment of soils will be completed and impacted soils can be removed. COC concentrations were reported below CTDEEP RSR criteria and therefore it is unlikely that a release occurred from USTs in AOC-2.

- **AOC-3: Historic Pesticides and Herbicides**

Pesticides and herbicides may have been utilized at the site prior to and shortly after the construction of the school in 1912, and until 2007 when the school closed. Three shallow soil samples (zero to three inches BG) were collected from soil borings SB-10, SB-11, and SB-12, located in garden beds to the west and south of the school building. Pesticide concentrations in SB-11 and SB-12 were reported above CT DEEP APS RES DEC, I/C DEC, and GB PMC, indicating a release of pesticides likely occurred in AOC-3. Additionally, coal ash and building material debris was observed in all three sample locations.

Lead concentrations were reported above laboratory reporting limits in the samples, and above RES DEC in SB-10 and SB-11. The elevated lead concentrations reported in AOC-3 may be associated with historic pesticide applications as well as potential on site disposal of coal ash (AOC-4), fill material (AOC-7), and lead based paint (AOC-8) used on the site. Herbicides were not reported above laboratory reporting limits in any of the samples. Direct human exposure to impacted soils are likely as the samples are located in the top three inches of soil. Migrations from soils to groundwater is unlikely, as groundwater was not encountered during drilling activities.

- **AOC-4: Coal Storage Area**

The Groton Heights School reportedly burned coal to heat the building from 1912 through the 1950's, at which time heating oil was then used to heat the school. Coal was reportedly stored on the east side of the building. One soil boring (SB-2) was installed in the asphalt parking area to the east of the boiler room to evaluate the potential for a release from the coal storage area. During drilling, pea gravel was observed at 3-4 feet BG at boring location SB-2. Pea gravel is typically used as a bedding and cover material for USTs, utilities and other buried structures; as such, SB-2 was stopped at 4 feet BG to avoid striking the potential subsurface structure. GPR was also used at this location, the results of which were inconclusive in determining if there was a buried structure.

Coal or coal ash was not observed in the sample collected from SB-2.

- **AOC-5: Potential for Coal Ash Disposal**

The Groton Heights School was reportedly heated with coal from 1912 through the 1950's, during which time coal ash was potentially disposed of on site. An ash disposal area was visually observed at one to three feet BG in borings SB-6

through SB-9 and one foot BG in soil borings SB-10 through SB-12, located around the building. COCs typically associated with coal ash include ETPH, PAHs, VOCs, and metals.

Coal ash was identified in four of the six soil borings SB-6, (1-3'), SB-7 (1-3'), SB-8 (1-3'), and SB-9 (1-3')) and in all three shallow surface samples (SB-10 (0-3'), SB-11 (0-3"), and SB-12 (0-3") conducted in AOC-4 during the Phase II sampling activities. Ash material was observed from 1 to 3 feet in SB-5 through SB-9 and to depths of 1 foot BG in SB-10 through SB-12. COCs typically associated with coal ash include ETPH, PAHs, VOCs, and metals. Various metals including antimony, arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, and zinc were reported in the soil borings at concentrations below CTDEEP RSR criteria, with the exception of lead in SB-8, SB-10, and SB-11 reported at concentrations above RES DEC criteria. Based on observations during soil borings, coal ash is present in flower beds around the school building to the west and south of the site, as well at various locations in the grassy areas to the north, west, and east of the building.

The elevated lead concentrations reported at AOC-5 may be associated with historic pesticide applications (AOC-3) as well as on site coal ash disposal (AOC-5), fill material (AOC-7) and lead based paint (AOC-8). There is potential for direct human exposure to these soils due to the shallow nature of the impacts (0-3 feet). Contaminant migration from soils to groundwater is unlikely. Depth to groundwater is greater than 15 feet BG.

- **AOC-6: Transformer Pad**

One shallow surface soil sample was collected at a depth of zero to three inches BG to evaluate the potential for a release from a transformer located to the east of the school building. The transformer was labelled as non-PCB containing, however, previous transformers may have been installed at this location. COCs from the transformer include ETPH and PCBs. ETPH and PCB were not reported above laboratory reporting limits. Evidence of a release from the transformer was not identified.

- **AOC-7: Fill**

Building material debris and fill material were observed in soil borings SB-6 through SB-12. Building material debris and coal ash was observed at depths of 1-3 feet in SB-6 through SB-9 and 1 foot BG in SB-10 through SB-12. COCs include ETPH, PAHs, and Metals. Various metals including antimony, arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, and zinc were reported in the soil borings at concentrations below CTDEEP RSR criteria, with the exception of lead in SB-8, SB-10, and SB-11 reported at concentrations above RES DEC criteria. The elevated lead concentrations reported in AOC-7 may be associated with historic pesticide applications (AOC-3) potential on site disposal of coal ash (AOC-4), fill material (AOC-7), or lead based paint (AOC-8) found on the exterior of the building. There is potential for direct human exposure to these soils due to the shallow nature of the impacts (0-3 feet). Contaminant migration from soils to groundwater is unlikely. Depth to groundwater is greater than 15 feet BG. Additional soil borings will need to be conducted to determine the extent of fill material on site.

- **AOC-8: Hazardous Building Materials**

Shallow surface soil samples (0-3 inches BG) were collected from soil borings SB-10, SB-11, and SB-12 located in flower beds beneath windows reportedly painted with lead based paint. COCs include lead. Building material debris and coal ash was observed at depths of one foot in all soil borings in AOC-8.

Lead concentrations were reported above laboratory reporting limits for all shallow soil samples and above RES DEC criteria in SB-10 (0-3") and SB-11 (0-3"). The elevated lead concentrations reported in AOC-8 may be associated with lead based paint on exterior window components located above the sample locations, historic pesticide applications (AOC-3), potential on site disposal of coal ash (AOC-5), or fill material (AOC-7) used on site. There is potential for direct human exposure to these soils due to the shallow nature of the impacts (0-3 feet). Contaminant migration from soils to groundwater is unlikely. Depth to groundwater is greater than 15 feet BG.

Section 10

Summary and Recommendations

10.1 Summary

Tighe & Bond completed a Phase II ESA at the Groton Heights School located at 244 Monument Street Groton, Connecticut. The purpose of this investigation was to evaluate AOCs identified in the Phase I ESA to determine if a release of COCs has occurred to the environment.

AOCs for the site include:

- AOC-1: Boiler Room
- AOC-2: Heating Oil UST Area(s)
- AOC-3: Historic Pesticides and Herbicides
- AOC-4: Coal Storage Area
- AOC-6: Transformer Pad
- AOC-7: Fill
- AOC-8: Hazardous Building Materials

Martin Geo/Environmental, LLC (Martin) of Belchertown, Massachusetts advanced soil borings at the site under the supervision of Tighe & Bond. The soil borings from this investigation were advanced in and around previously identified AOCs to evaluate for potential releases of contaminants to the environment. A total of 17 soil borings (SB-1 through SB-17) were advanced by means of direct push technology and hand tooling. Soil borings were advanced to depths of 15 feet BG (SB-1, SB-2, SB-4, SB-5, SB-6, SB-7, SB-8, SB-9, SB-13, SB-14, and SB-15), depths of 2 feet BG (SB-2, SB-15 and SB-16), and 1 foot BG (SB-10, SB-11, and SB-12).

Based on the results of this investigation, a release was identified in association with AOC-1 Boiler Room, AOC-3 Historic Pesticide applications, and AOC-5 Potential Coal Ash Disposal Areas.

Coal ash material and fill material was identified in flower beds to the west and south of the building at depths of zero to three inches BG and at one to three feet BG in various locations to the east, north, and west of the building on the site (SB-6, SB-7, SB-8, and SB-9). The extent of coal ash on the site is unknown. Additional exploration is needed to delineate the total extent of coal ash at the site.

Lead concentrations in SB-8 (1-3'), SB-10 (0-3'), and SB-11 (0-3") were reported above laboratory reporting limits and above RES DEC criteria. Metals concentrations in the remaining soil samples collected during the Phase II ESA were consistent and appear to be indicative of naturally occurring conditions.

Pesticides were reported at concentrations above RES DEC, I/C DEC, and GB PMC APS criteria in soil samples collected from around the building.

ETPH was reported at concentrations above laboratory reporting limits but below RSR criteria in SB-15 (0-1') and above both laboratory reporting limits and RES DEC criteria in SB-16 (0-1') in AOC-1.

VOCs were not reported above laboratory reporting limits the samples analyzed from AOC-2.

Groundwater was not encountered during drilling activities; therefore, monitoring wells were not installed at the site during the Phase II ESA.

No other releases were identified during the conduct of this Phase II ESA.

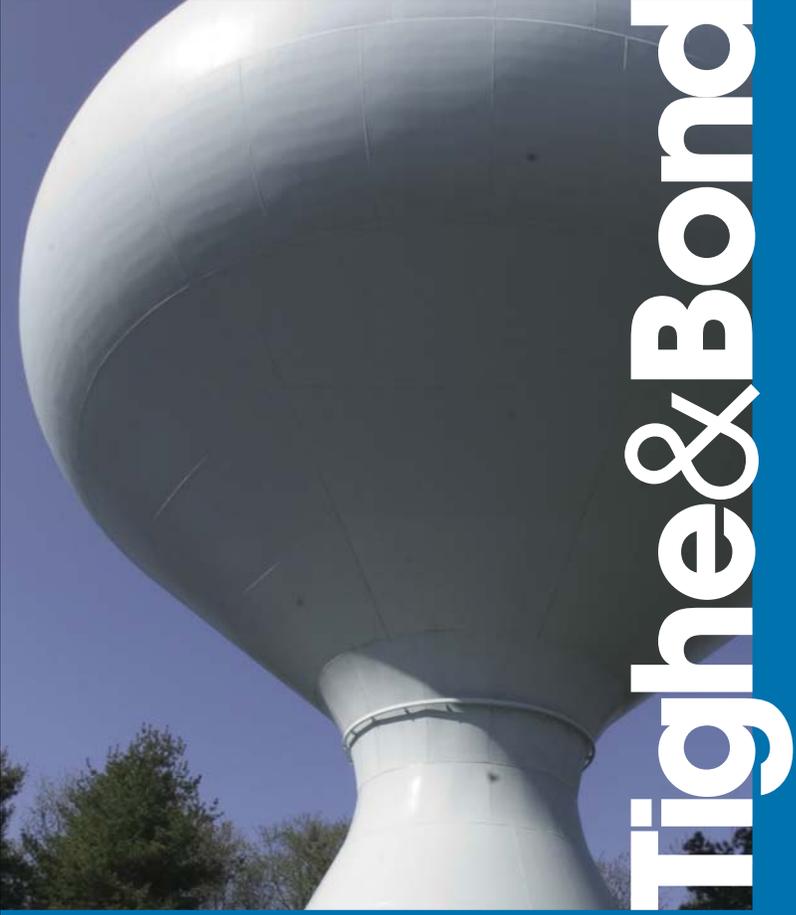
10.2 Recommendations

Based on the findings of this Phase II ESA and the Town's intent to reuse the site as residential or office space, Tighe & Bond recommends the tasks listed in the table below. We have also developed an Opinion of Probable Cost (OPC) for consulting and cleanup costs to help the Town better determine the level of effort and budgetary planning which may be necessary to complete the recommended work. Costs presented below were developed prior to preparing a detailed scope of work or Remedial Action Plan and may be higher or lower depending on the actual services that are required. Should the Town decide to conduct one or more of the recommended tasks Tighe & Bond will prepare a detailed scope of work and cost proposal to conduct the required services.

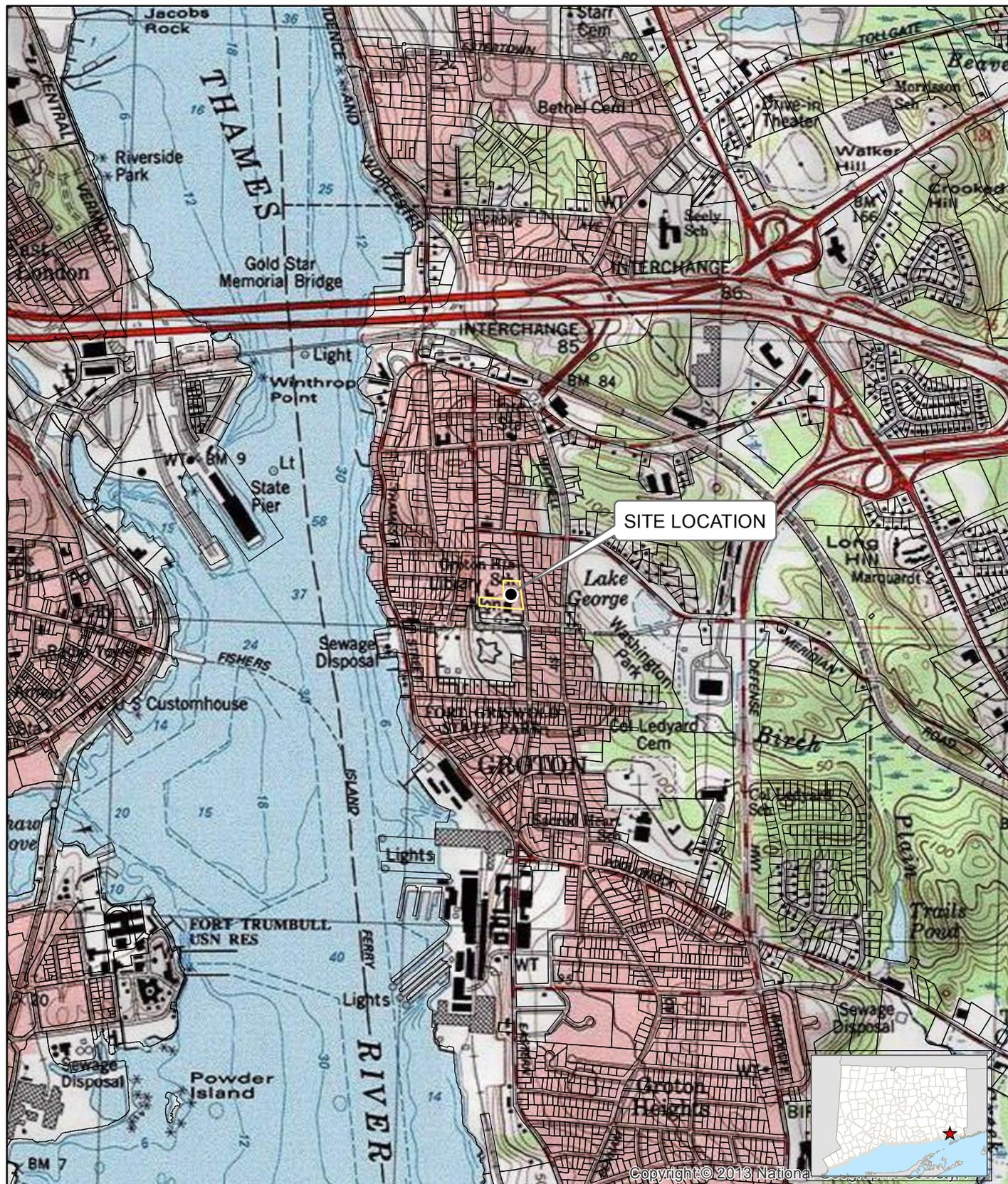
	Recommended Task	Consulting OPC	Contractor OPC
1	Removal of the existing heating oil underground storage tank (UST) in accordance with CTDEEP guidelines including collection of confirmatory soil samples for laboratory analysis. A second potential UST was identified directly east of the known tank during the GPR survey conducted at the site. If a second tank exists at this location, it will likely be encountered during removal of the known tank. If a second tank is encountered, it should be removed along with any contaminated soils.	\$8,800	\$15,000*
2	Install additional soil borings in the boiler room to assess the extent of the ETPH release identified beneath the slab.	\$2,500	\$3,500
3	Installation of additional soil borings to delineate nature and extent of on-site coal ash disposal.	\$4,000	\$4,500
4	Excavation and proper off-site disposal of the lead and pesticide impacted coal ash material located 0-4 feet BG. Anticipated volume is approximately 650 cubic yards.**	\$15,000	\$75,000

*Contaminated soils were not observed around the UST during the Phase II ESA; as such, contaminated soil excavation and disposal costs are not included in this OPC.

**Costs to excavate and dispose of contaminated soil/coal ash may be higher or lower based on the results of task 3. Alternative means of remediation (i.e. consolidation, capping, or a combination of the two) may also be recommended depending on the results of task 3 and the anticipated reuse/redevelopment scenario for the site.



Tighe & Bond

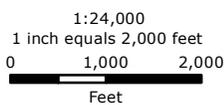


LEGEND

- Approximate Site Boundary
- Site Location



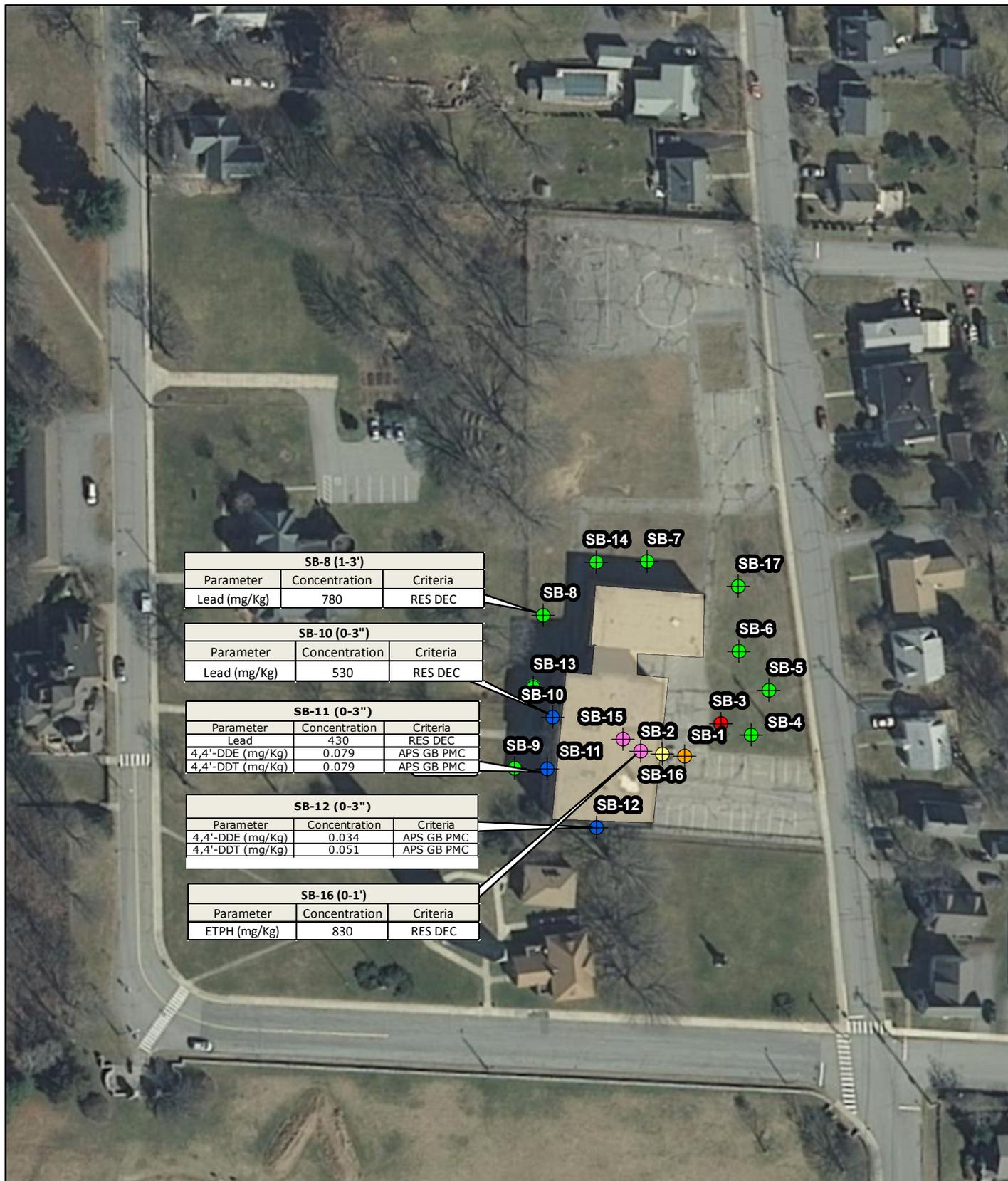
Source: U.S Geological Survey, in cooperation with CTDEEP, Office of Information Management
 Based on USGS Topographic Map for BYK: ec:bcxb, CT, Rev. 19. (, 1:24,000
 Map Date: January 2016



**FIGURE 1
SITE LOCATION MAP**

Groton Heights Elementary School
 244 Monument Street
 Groton, CT

January 2016



SB-8 (1-3')		
Parameter	Concentration	Criteria
Lead (mg/Kg)	780	RES DEC

SB-10 (0-3")		
Parameter	Concentration	Criteria
Lead (mg/Kg)	530	RES DEC

SB-11 (0-3")		
Parameter	Concentration	Criteria
Lead	430	RES DEC
4,4'-DDE (mg/Kg)	0.079	APS GB PMC
4,4'-DDT (mg/Kg)	0.079	APS GB PMC

SB-12 (0-3")		
Parameter	Concentration	Criteria
4,4'-DDE (mg/Kg)	0.034	APS GB PMC
4,4'-DDT (mg/Kg)	0.051	APS GB PMC

SB-16 (0-1')		
Parameter	Concentration	Criteria
ETPH (mg/Kg)	830	RES DEC

LEGEND

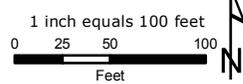
Soil Borings by AOC

- AOC-1: Boiler Room
- AOC-2: UST
- AOC-3: Historic Pesticides and Herbicides
- AOC-4: Coal Storage
- AOC-5 and 7: Coal Ash and Fill
- AOC-6: Transformer

- Approximate Site Boundary
- Approximate Parcel Boundary



Source:
Connecticut DEEP, Office of Information Management GIS Data and State of Connecticut 2012 aerial imagery with 1-foot ground resolution provided by CTECO



**FIGURE 2
AREAS OF CONCERN**

Groton Heights School
244 Monument Street
Groton, Connecticut

June 2016



Tighe & Bond

Project: Groton Heights School
 Location: 244 Monument Street
 Client: Town of Groton

Boring No SB-1
 Page 1 of 1
 File No G-0674-01
 Checked by _____

Drilling Co.: Martin Geo/Environmental

Foreman: Jeremy Martin
 T&B Rep.: DRA
 Date Start: _____ End: _____
 Location: See Exploration Location Plan
 GS. Elev. N/A Datum: N/A

Casing	Sampler
N/A	2" SS
N/A	
Hammer Wt. 140	140
Hammer Fall 30	30
Other	

Date	Time	Depth	Casing	Sta. Time
N/A	N/A	N/A	N/A	N/A

Depth (ft.)	PID PPM	Sample No. Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
5	0.0	20/60	0-5		Top 3": Asphalt 16": Brown-tan, fine to medium SAND, trace Silt, trace Gravel (disturbed fill)	TOPSOIL 0.5		No Well Installed
	0.3	43/60	5-10		38": tan, fine to medium SAND, trace Silt, trace Gravel 5": Tan fine SAND and SILT, trace Gravel (Thick Till)	SAND		
	10	0.2	22/60	10-15	Tan, fine SAND, trace Silt, trace Gravel (Thick Till)			
15					15'	End of Exploration at 15 Feet		
20								
25								
30								

Notes:
 1. Groundwater was not encountered during drilling activities

TRACE (TR.)	0 - <10%
LITTLE (LI.)	10 - <20%
SOME (SO.)	20 - <35%
AND	35 - <50%

VERY LOOSE	0-4	VERY SOFT	<2
LOOSE	4-10	SOFT	2-4
MEDIUM DENSE	10-30	MEDIUM	4-8
DENSE	30-50	STIFF	8-15
VERY DENSE	>50	VERY STIFF	15-30
			>30

Project: Groton Heights School
 Location: 244 Monument Street
 Client: Town of Groton

Boring No SB-2
 Pag 1 of 1
 File N G-0674-01
 Checked t _____

Drilling Co.: Martin Geo/Environmental

Foreman: Jeremy Martin
 T&B Rep.: DRA
 Date Start: _____ End: _____
 Location: See Exploration Location Plan
 GS. Elev. N/A Datum: N/A

	Casing	Sampler
Type	N/A	2" SS
I.D./O.D.	N/A	
Hammer Wt.	140	140
Hammer Fall	30	30
Other		

Groundwater Readings				
Date	Time	Depth	Casing	Sta. Time
N/A	N/A	N/A	N/A	N/A

Depth (ft.)	PID PPM	Sample No. Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
0.0		20/60	0-5		Top 4": Asphalt	TOPSOIL		No Well Installed
					31": Brown, fine to medium SAND, trace Silt, trace Gravel (disturbed fill)	0.5		
					14": Pea Gravel	SAND		
5					End of Exploration at 4 Feet	4'	1	
10								
15								
20								
25								
30								

Notes:
 1. Groundwater was not encountered during drilling activities

Proportions Used	
TRACE (TR.)	0 - <10%
LITTLE (LI.)	10 - <20%
SOME (SO.)	20 - <35%
AND	35 - <50%

Density/Consistenc		
VERY LOOSE	0-4	VERY SOFT <2
LOOSE	4-10	SOFT 2-4
MEDIUM DENSE	10-30	MEDIUM 4-8
DENSE	30-50	STIFF 8-15
VERY DENSE	>50	VERY STIFF 15-30
		>30

Project: Groton Heights School
 Location: 244 Monument Street
 Client: Town of Groton

Boring No SB-4
 Page 1 of 1
 File No G-0674-01
 Checked by _____

Drilling Co.: Martin Geo/Environmental

Foreman: Jeremy Martin
 T&B Rep.: DRA
 Date Start: _____ End: _____
 Location: See Exploration Location Plan
 GS. Elev. N/A Datum: N/A

Casing	Sampler
N/A	2" SS
N/A	
Hammer Wt. 140	Hammer Fall 140
Hammer Fall 30	Hammer Fall 30
Other	Other

Date	Time	Depth	Casing	Sta. Time
N/A	N/A	N/A	N/A	N/A

Depth (ft.)	PID PPM	Sample No. Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
5	0.0	20/60	0-5		Top 4": Topsoil 16": Brown-tan, fine to medium SAND, trace Silt, trace Gravel (disturbed fill)	TOPSOIL 0.5		No Well Installed
	0.3	34/60	5-10		28": tan, fine to medium SAND, trace Silt, trace Gravel 6": Tan fine SAND and SILT, trace Gravel (Thick Till)	SAND		
10					Refusal at 8 Feet	8'	1	
15								
20								
25								
30								

Notes:
 1. Groundwater was not encountered during drilling activities

TRACE (TR.)	0 - <10%
LITTLE (LI.)	10 - <20%
SOME (SO.)	20 - <35%
AND	35 - <50%

VERY LOOSE	0-4	VERY SOFT	<2
LOOSE	4-10	SOFT	2-4
MEDIUM DENSE	10-30	MEDIUM	4-8
DENSE	30-50	STIFF	8-15
VERY DENSE	>50	VERY STIFF	15-30
			>30

Project: Groton Heights School
 Location: 244 Monument Street
 Client: Town of Groton

Boring No SB-5
 Page 1 of 1
 File No G-0674-01
 Checked by _____

Drilling Co.: Martin Geo/Environmental

Foreman: Jeremy Martin
 T&B Rep.: DRA
 Date Start: _____ End: _____
 Location: See Exploration Location Plan
 GS. Elev. N/A Datum: N/A

Casing	Sampler
N/A	2" SS
N/A	
Hammer Wt. 140	Hammer Wt. 140
Hammer Fall 30	Hammer Fall 30
Other	

Date	Time	Depth	Casing	Sta. Time
N/A	N/A	N/A	N/A	N/A

Depth (ft.)	PID PPM	Sample No. Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
0.0		25/60	0-5		Top 4": Topsoil	TOPSOIL		No Well Installed
					21": Brown-tan, fine to medium SAND, trace Silt, trace Gravel (disturbed fill)	0.5		
0.3		36/60	5-10		22": Tan, fine to medium SAND, trace Silt, trace Gravel	SAND		
					14": Tan-Brown fine SAND, some Silt, trace Gravel (Bedrock in Tip)			
9'					Refusal 9 Feet	9'	1	
10								
15								
20								
25								
30								

Notes:
 1. Groundwater was not encountered during drilling activities

TRACE (TR.)	0 - <10%
LITTLE (LI.)	10 - <20%
SOME (SO.)	20 - <35%
AND	35 - <50%

VERY LOOSE	0-4	VERY SOFT	<2
LOOSE	4-10	SOFT	2-4
MEDIUM DENSE	10-30	MEDIUM	4-8
DENSE	30-50	STIFF	8-15
VERY DENSE	>50	VERY STIFF	15-30
			>30

Project: Groton Heights School
 Location: 244 Monument Street
 Client: Town of Groton

Boring No SB-6
 Pag 1 of 1
 File N G-0674-01
 Checked t _____

Drilling Co.: Martin Geo/Environmental

Foreman: Jeremy Martin
 T&B Rep.: DRA
 Date Start: _____ End: _____
 Location: See Exploration Location Plan
 GS. Elev. N/A Datum: N/A

	Casing	Sampler
Type	N/A	2" SS
I.D./O.D.	N/A	
Hammer Wt.	140	140
Hammer Fall	30	30
Other		

Groundwater Readings				
Date	Time	Depth	Casing	Sta. Time
N/A	N/A	N/A	N/A	N/A

Depth (ft.)	PID PPM	Sample No. Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
5	0.0	40/60	0-5		Top 5": Topsoil 5": Brown, fine SAND, trace to little Silt, trace Gravel 4": Building Material fill and coal ash 21": Brown, fine SAND, trace Silt (Little Building Material fill and coal ash) 5": Tan-brown, fine SAND, trace Silt	TOPSOIL 0.5		No Well Installed
	0.3	32/60	5-10		Tan, fine to medium SAND, trace Silt, trace Gravel	SAND		
10	0.1	42/60	10-15		Tan, fine SAND, trace Silt, trace Gravel (Thick Till)			
15					End of Exploration at 15 Feet	15'	1	
20								
25								
30								

Notes:
 1. Groundwater was not encountered during drilling activities

Proportions Used	
TRACE (TR.)	0 - <10%
LITTLE (LI.)	10 - <20%
SOME (SO.)	20 - <35%
AND	35 - <50%

Density/Consistenc		
VERY LOOSE	0-4	VERY SOFT <2
LOOSE	4-10	SOFT 2-4
MEDIUM DENSE	10-30	MEDIUM 4-8
DENSE	30-50	STIFF 8-15
VERY DENSE	>50	VERY STIFF 15-30
		>30

Project: Groton Heights School
 Location: 244 Monument Street
 Client: Town of Groton

Boring No SB-7
 Pag 1 of 1
 File N G-0674-01
 Checked t _____

Drilling Co.: Martin Geo/Environmental

Foreman: Jeremy Martin
 T&B Rep.: DRA
 Date Start: _____ End: _____
 Location: See Exploration Location Plan
 GS. Elev. N/A Datum: N/A

	Casing	Sampler
Type	N/A	2" SS
I.D./O.D.	N/A	
Hammer Wt.	140	140
Hammer Fall	30	30
Other		

Groundwater Readings				
Date	Time	Depth	Casing	Sta. Time
N/A	N/A	N/A	N/A	N/A

Depth (ft.)	PID PPM	Sample No. Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
5	0.3	41/60	0-5		Top 4": Topsoil 6": Brown, fine SAND, trace to little Silt, trace Gravel 5": Building Material fill and coal ash 18": Brown, fine SAND, trace Silt (Little Building Material fill) 8": Tan-brown, fine SAND, trace Silt	TOPSOIL 0.5		No Well Installed
	0.1	38/60	5-10		Tan, fine to medium SAND, trace Silt, trace Gravel	SAND		
	0.1	30/60	10-15		Tan, fine SAND, trace Silt, trace Gravel (Thick Till)			
15				End of exploration at 15 Feet	15'	1		
20								
25								
30								

Notes:
 1. Groundwater was not encountered during drilling activities

Proportions Used	
TRACE (TR.)	0 - <10%
LITTLE (LI.)	10 - <20%
SOME (SO.)	20 - <35%
AND	35 - <50%

Density/Consistenc		
VERY LOOSE	0-4	VERY SOFT <2
LOOSE	4-10	SOFT 2-4
MEDIUM DENSE	10-30	MEDIUM 4-8
DENSE	30-50	STIFF 8-15
VERY DENSE	>50	VERY STIFF 15-30
		>30

Project: Groton Heights School
 Location: 244 Monument Street
 Client: Town of Groton

Boring No SB-8
 Page 1 of 1
 File No G-0674-01
 Checked by _____

Drilling Co.: Martin Geo/Environmental

Foreman: Jeremy Martin
 T&B Rep.: DRA
 Date Start: _____ End: _____
 Location: See Exploration Location Plan
 GS. Elev. N/A Datum: N/A

	Casing	Sampler
Type	N/A	2" SS
I.D./O.D.	N/A	
Hammer Wt.	140	140
Hammer Fall	30	30
Other		

Groundwater Readings				
Date	Time	Depth	Casing	Sta. Time
N/A	N/A	N/A	N/A	N/A

Depth (ft.)	PID PPM	Sample No. Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction	
5	0.0	35/60	0-5		Top 4": Topsoil 8": Brown, fine SAND, trace to little Silt, trace Gravel 3": Building Material fill and coal ash 14": Tan-brown, fine SAND, trace Silt (Little Building Material fill) 6": Tan-brown, fine SAND, trace Silt	TOPSOIL 0.5		No Well Installed	
	0.3	35/60	5-10		Tan, fine to medium SAND, trace Silt, trace Gravel	SAND			
	10	0.1	10/60	10-15	Tan, fine SAND, trace Silt, trace Gravel (Thick Till)	11'	1		
	Refusal at 11 Feet								
	15								
20									
25									
30									

Notes
 1. Groundwater was not encountered during drilling activities

Proportions Used	
TRACE (TR.)	0 - <10%
LITTLE (LI.)	10 - <20%
SOME (SO.)	20 - <35%
AND	35 - <50%

Density/Consistenc		
VERY LOOSE	0-4	VERY SOFT <2
LOOSE	4-10	SOFT 2-4
MEDIUM DENSE	10-30	MEDIUM 4-8
DENSE	30-50	STIFF 8-15
VERY DENSE	>50	VERY STIFF 15-30
		>30

Project: Groton Heights School
 Location: 244 Monument Street
 Client: Town of Groton

Boring No SB-9
 Page 1 of 1
 File No G-0674-01
 Checked by _____

Drilling Co.: Martin Geo/Environmental

Foreman: Jeremy Martin
 T&B Rep.: DRA
 Date Start: _____ End: _____
 Location: See Exploration Location Plan
 GS. Elev. N/A Datum: N/A

Casing	Sampler
N/A	2" SS
N/A	
Hammer Wt. 140	140
Hammer Fall 30	30
Other	

Groundwater Readings				
Date	Time	Depth	Casing	Sta. Time
N/A	N/A	N/A	N/A	N/A

Depth (ft.)	PID PPM	Sample No. Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction	
5	0.2	36/60	0-5		Top 5": Topsoil 4": Brown, fine SAND, trace to little Silt, trace Gravel 6": Building Material fill and coal ash 12": Tan-brown, fine SAND, trace Silt (Little Building Material fill and coal ash throughout) 9": Tan-brown, fine SAND, trace Silt	TOPSOIL 0.5		No Well Installed	
	0.1	40/60	5-10		Tan, fine to medium SAND, trace Silt, trace Gravel	SAND			
	0.3	22/60	10-15		Tan, fine SAND, trace Silt, trace Gravel (Thick Till)				
10									
15									
20									
25									
30									

Notes:
 1. Groundwater was not encountered during drilling activities

Proportions Used	
TRACE (TR.)	0 - <10%
LITTLE (LI.)	10 - <20%
SOME (SO.)	20 - <35%
AND	35 - <50%

Density/Consistenc		
VERY LOOSE	0-4	VERY SOFT <2
LOOSE	4-10	SOFT 2-4
MEDIUM DENSE	10-30	MEDIUM 4-8
DENSE	30-50	STIFF 8-15
VERY DENSE	>50	VERY STIFF 15-30
		>30

Project: Groton Heights School
 Location: 244 Monument Street
 Client: Town of Groton

Boring No SB-13
 Page 1 of 1
 File No G-0674-01
 Checked by _____

Drilling Co.: Martin Geo/Environmental

Foreman: Jeremy Martin
 T&B Rep.: DRA
 Date Start: _____ End: _____
 Location: See Exploration Location Plan
 GS. Elev. N/A Datum: N/A

Casing	Sampler
N/A	2" SS
N/A	
Hammer Wt. 140	Hammer Fall 140
Hammer Fall 30	Hammer Fall 30
Other	Other

Date	Time	Depth	Casing	Sta. Time
N/A	N/A	N/A	N/A	N/A

Depth (ft.)	PID PPM	Sample No. Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
5	0.4	37/60	0-5		Top 5": Topsoil 9": Brown, fine SAND, trace to little Silt, trace Gravel 23": Tan-brown, fine SAND, trace Silt	TOPSOIL 0.5		No Well Installed
	0.3	36/60	5-10		30": Tan, fine to medium SAND, trace Silt, trace Gravel 6": Tan, fine SAND and Silt, trace Gravel (Thick Till)	SAND		
10					End of Exploration at 10 Feet	10'	1	
15								
20								
25								
30								

Notes:
 1. Groundwater was not encountered during drilling activities

TRACE (TR.)	0 - <10%
LITTLE (LI.)	10 - <20%
SOME (SO.)	20 - <35%
AND	35 - <50%

VERY LOOSE	0-4	VERY SOFT	<2
LOOSE	4-10	SOFT	2-4
MEDIUM DENSE	10-30	MEDIUM	4-8
DENSE	30-50	STIFF	8-15
VERY DENSE	>50	VERY STIFF	15-30
			>30

Project: Groton Heights School
 Location: 244 Monument Street
 Client: Town of Groton

Boring No SB-14
 Page 1 of 1
 File No G-0674-01
 Checked by _____

Drilling Co.: Martin Geo/Environmental

Foreman: Jeremy Martin
 T&B Rep.: DRA
 Date Start: _____ End: _____
 Location: See Exploration Location Plan
 GS. Elev. N/A Datum: N/A

Casing	Sampler
N/A	2" SS
N/A	
Hammer Wt. 140	Hammer Fall 140
Hammer Fall 30	Hammer Fall 30
Other	Other

Date	Time	Depth	Casing	Sta. Time
N/A	N/A	N/A	N/A	N/A

Depth (ft.)	PID PPM	Sample No. Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
5	0.2	38/60	0-5		Top 4": Topsoil 8": Brown, fine SAND, trace to little Silt, trace Gravel 26": Tan-brown, fine SAND, trace Silt	TOPSOIL 0.5		No Well Installed
	0.1	46/60	5-10		42": Tan, fine to medium SAND, trace Silt, trace Gravel 4": Tan, fine SAND and Silt, trace Gravel (Thick Till)	SAND		
10					End of Exploration at 10 Feet	10'	1	
15								
20								
25								
30								

Notes:
 1. Groundwater was not encountered during drilling activities

TRACE (TR.)	0 - <10%
LITTLE (LI.)	10 - <20%
SOME (SO.)	20 - <35%
AND	35 - <50%

VERY LOOSE	0-4	VERY SOFT	<2
LOOSE	4-10	SOFT	2-4
MEDIUM DENSE	10-30	MEDIUM	4-8
DENSE	30-50	STIFF	8-15
VERY DENSE	>50	VERY STIFF	15-30
			>30

Project: Groton Heights School
 Location: 244 Monument Street
 Client: Town of Groton

Boring No SB-17
 Page 1 of 1
 File No G-0674-01
 Checked by _____

Drilling Co.: Martin Geo/Environmental

Foreman: Jeremy Martin
 T&B Rep.: DRA
 Date Start: _____ End: _____
 Location: See Exploration Location Plan
 GS. Elev. N/A Datum: N/A

Casing	Sampler
N/A	2" SS
N/A	
Hammer Wt. 140	Hammer Wt. 140
Hammer Fall 30	Hammer Fall 30
Other	

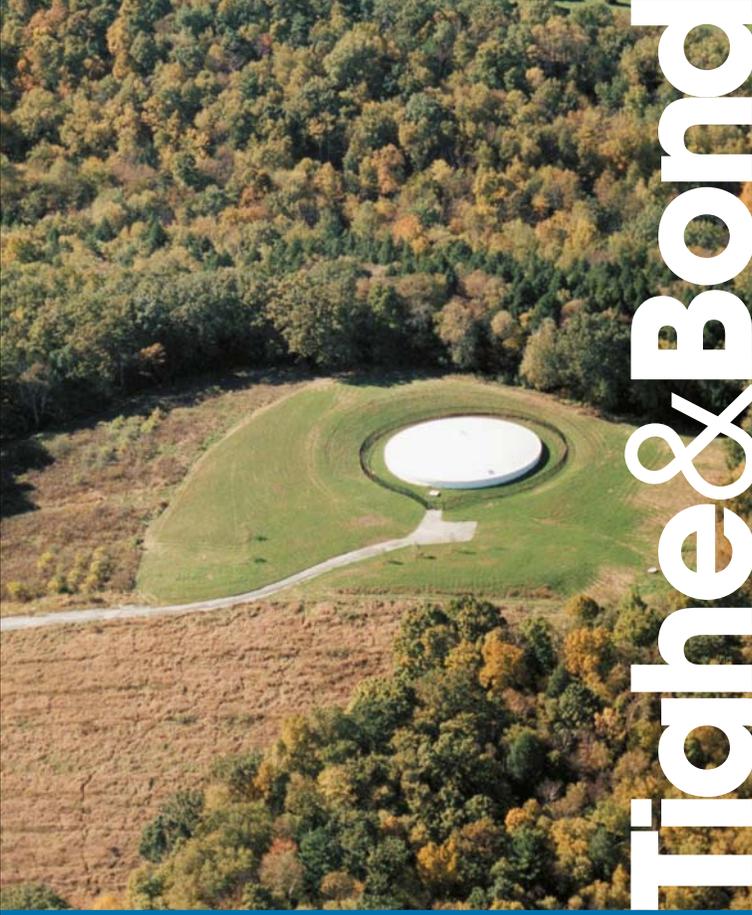
Date	Time	Depth	Casing	Sta. Time
N/A	N/A	N/A	N/A	N/A

Depth (ft.)	PID PPM	Sample No. Rec. (in)	Sample Depth (ft.)	Blows Per 6"	Sample Description	General Stratigraphy	Notes	Well Construction
5	0.5	43/60	0-5		Top 4": Topsoil 10": Brown, fine SAND, trace to little Silt, trace Gravel 29": Tan-brown, fine SAND, trace Silt	TOPSOIL 0.5		No Well Installed
	0.2	48/60	5-10		40": Tan, fine to medium SAND, trace Silt, trace Gravel 8": Tan, fine SAND and Silt, trace Gravel (Thick Till)	SAND		
10					End of Exploration at 10 Feet	10	1	
15								
20								
25								
30								

Notes:
 1. Groundwater was not encountered during drilling activities

TRACE (TR.)	0 - <10%
LITTLE (LI.)	10 - <20%
SOME (SO.)	20 - <35%
AND	35 - <50%

VERY LOOSE	0-4	VERY SOFT	<2
LOOSE	4-10	SOFT	2-4
MEDIUM DENSE	10-30	MEDIUM	4-8
DENSE	30-50	STIFF	8-15
VERY DENSE	>50	VERY STIFF	15-30
			>30



Tighe & Bond

Table 1
 Summary of Soil Analytical Data
 244 Monument Street
 Groton, CT

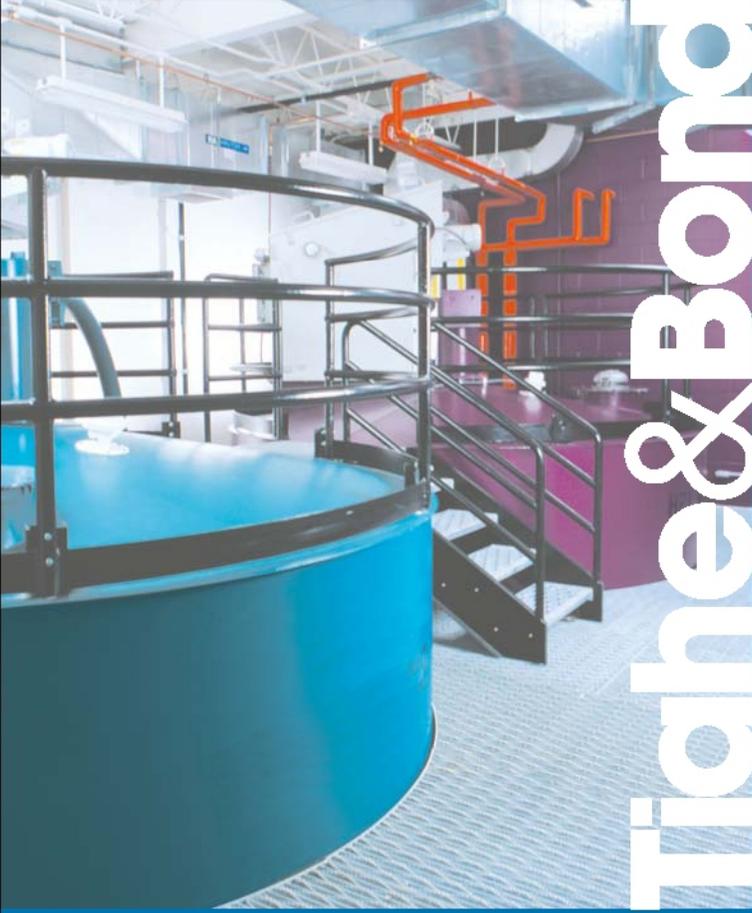
Sample ID	CT DEEP RSRs			SB-1	SB-3	SB-4	SB-5	SB-6	SB-7	SB-8	SB-9	SB-10	SB-11	SB-12	SB-15	SB-16
	Sample Depth	6-8'	0-3"	2-4'	4-6'	1-3'	1-3'	1-3'	1-3'	1-3'	0-3"	0-3"	0-3"	0-1'	0-1'	
Laboratory ID	I/C	GB	6010289-01	6010289-02	6010289-03	6010289-04	6010289-05	6010289-06	6010289-07	6010289-08	6010289-09	6010289-10	6010289-11	6010390-01	6010390-02	
Date Sampled	RES DEC	DEC	PMC	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/20/2016	1/20/2016
CT ETPH (mg/Kg)	500	2,500	2,500	ND<60	ND<60	ND<60	ND<60	ND<57	ND<58	ND<61	ND<59	-	-	-	56	830
VOCs (mg/Kg)	Varies	Varies	Varies	BRL	-	-	-	-	-	-	-	-	-	-	-	-
SVOCs (mg/Kg)	Varies	Varies	Varies	BRL	-	BRL	BRL	BRL	BRL	BRL	BRL	-	-	-	-	-
Chlorinated Pesticides (mg/Kg)				-	-	-	-	-	-	-	-	-	-	-	-	-
4,4' -DDE	1.8	17	0.02	-	-	-	-	-	-	-	-	ND<0.024	0.079	0.034	-	-
4,4' -DDT	1.8	17	0.02	-	-	-	-	-	-	-	-	ND<0.24	0.079	0.051	-	-
Chlorinated Herbicides (mg/kg)	NE	NE	NA	-	-	-	-	-	-	-	-	BRL	BRL	BRL	-	-
PCBs (mg/kg)	1	10	NA	-	BRL	-	-	-	-	-	-	-	-	-	BRL	BRL
Metals (mg/kg)				-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	27	8,200	NA	-	-	ND<2.3	ND<2.3	ND<2.3	ND<2.3	2.7	ND<2.3	-	-	-	-	-
Arsenic	10	10	NA	-	-	2.5	1.8	2.2	3.1	4.5	2.3	-	-	-	-	-
Cadmium	34	1000	NA	-	-	ND<0.58	ND<0.58	ND<0.58	ND<0.58	0.68	ND<0.58	-	-	-	-	-
Chromium	3,900	51,000	NA	-	-	7.5	7.8	9.3	8.9	23	9.3	-	-	-	-	-
Copper	2,500	76,000	NA	-	-	9.1	3.8	8.2	11	170	21	-	-	-	-	-
Lead	400	1,000	NA	-	-	27	3.3	17	49	780	22	530	430	150	-	-
Mercury	20	610	NA	-	-	ND<0.23	ND<0.24	0.26	ND<0.23	ND<0.24	ND<0.23	-	-	-	-	-
Nickel	1,400	7,500	NA	-	-	4.5	4	5.6	5.5	8.2	6	-	-	-	-	-
Selenium	340	10,000	NA	-	-	2.4	2	3.1	2.5	3.6	2.7	-	-	-	-	-
Zinc	20,000	610,000	NA	-	-	150	12	36	37	230	47	-	-	-	-	-

Notes:
 ETPH - Extractable Total petroleum Hydrocarbons
 VOCs - Volatile Organic Compounds
 SVOCs - Semi Volatile Organic Compounds
 PCB - Polychlorinated Biphenyl
 mg/Kg - milligrams per kilogram
 ug/Kg - micrograms per kilogram
 CT DEEP RSRs - Connecticut Department of Energy and Environment Protection Remediation Standard Regulations
 RES DEC - Residential Direct Exposure Criteria
 I/C DEC - Industrial/Commercial Direct Exposure Criteria
 GB PMC - Pollutant Mobility Criteria for groundwater class GB
 ND - Not detected above laboratory limits
 NE - CT RSR Criteria not established
 NA - Not Applicable
 Compounds not listed on Summary Table were reported as ND in the laboratory analytical report.
 Bolded and boxed - Concentration exceeds RSR value
 Boxed and *italicized*** - Concentration exceeds CT DEEP Additional Polluting Substance
 - Sample not analyzed
 BRL - Below laboratory reporting limits

Table 1
 Conceptual Site Model
 Groton Heights School
 244 Monument Street
 Groton, CT

AOC	AOC Description	Potential COCs	Confirmed COCs	Potential Release Mechanisms and Pathways	Potential Receptors	Status	Sampling Locations		Summary
							Soil Borings		
1	Boiler Room	ETPH, PCBs	ETPH	Potential surface releases onto the boiler room concrete floor surface and migration through cracks in building slab or sump pump to sub-slab soils. Potential releases from adjacent boiler blow of valve. Migration from subslab soils to groundwater would be unlikely due to a lack of precipitation infiltration below the concrete floor.	Direct exposure through building demolition activities.	A release was identified beneath the building slab in the boiler room.	SB-15 and SB-16	Staining was observed on the concrete floor beneath four drip pans adjacent to two boilers and two air compressors in the boiler room during the Phase I ESA. Two soil borings were advanced beneath the drip pan adjacent to a boiler (SB-15) and one adjacent to an air compressor (SB-16) to evaluate the potential for a release to sub slab soils. COCs associated with storage of these materials include ETPH and PCBs. ETPH concentrations were reported for SB-16 above RES DEC. ETPH concentration were reported for SB-15 above laboratory reporting limits but below CT DEEP RSR criteria. PCBs were not reported above laboratory detection limits in SB-15 and SB-16. The potential risk of direct human exposure to impacted soils is unlikely, as the soils in AOC-1 are located beneath a concrete floor. The potential for contaminant migration from sub slab soils to groundwater is also unlikely, as groundwater was not encountered during Phase II activities and the soils are environmentally isolated.	
2	Heating Oil USTs	ETPH, VOCs, PAHs	None	Potential sub-surface releases from leaking USTs or UST piping and migration from overburden soils to groundwater.	Direct exposure through construction or redevelopment activities.	A release was not identified. A second potential UST was identified using GPR to the east of the known UST.	SB-1	One soil boring (SB-1) was advanced around the 3,000-gallon heating oil UST. A release of oil was not observed during advancement of this boring. Soil samples collected from this area were analyzed for ETPH, PAHs, and VOCs. These constituents were not reported above laboratory reporting limits for the sample submitted for laboratory analysis. Ground penetrating radar (GPR) data collected at the site on January 19, 2016 reported a potential UST to the east of the known UST, roughly four feet BGS. The existing UST and the potential second UST are slated to be removed in summer 2016, at which time additional soil assessment will be completed and impacted soils can be removed, if identified. COC were not reported above laboratory detection limits; therefore, it is unlikely that a release occurred from USTs in AOC-2.	
3	Historic Pesticides and Herbicides	Pesticides, Herbicides, Metals	Pesticides*	Releases/application to the ground surface. Migration into shallow surficial soils.	Direct exposure through redevelopment or soil disturbance activities, including landscaping	A release was identified in flower beds to the south and west of the school building.	SB-10 through SB-12	Pesticides and herbicides may have been used at the site from its construction in 1912, and until 2007 when the school closed. Three shallow soil samples (zero to three inches BGS) were collected from soil borings SB-10, SB-11, and SB-12, located in garden beds to the west and south of the school building. Pesticide concentrations in SB-11 and SB-12 were reported above CT DEEP Additional Polluting Substance RES DEC, I/C DEC, and GB PMC, indicating a release or application of pesticides likely occurred in AOC-3. Additionally, coal ash and building material debris was observed in all three sample locations. Lead concentrations were reported above laboratory reporting limits in the samples, and above RES DEC in SB-10 and SB-11. The elevated lead concentrations reported in AOC-3 may be associated with historic pesticide applications as well as disposal of coal ash (AOC-4), fill material (AOC-7), and lead based paint (AOC-8) used on the site. Herbicides were not reported above laboratory reporting limits in any of the samples. There is potential for direct human exposure to impacted soils located in the top three inches of soil. Contaminant migration from soils to groundwater is unlikely, as groundwater was not encountered during drilling activities.	
4	Coal Storage Area	ETPH, PAHs, Metals	None	Potential coal storage area would be in direct contact with surficial soils.	Direct exposure through redevelopment or soil disturbance activities.	A release was not identified	SB-2	The Groton Heights School reportedly burned coal to heat the building from 1912 through the 1950's, at which time heating oil was used to heat the school. Coal was reportedly stored on the east side of the building. One soil boring (SB-2) was installed to the east of the boiler room, in the asphalt parking area to evaluate the potential for a release from the coal storage area. During drilling, a pea gravel layer was identified at three to four feet BGS, and drilling was stopped to avoid striking a potential underground structure. During drilling, coal or coal ash was not observed in SB-2.	
5	Potential Coal Ash Disposal Areas	ETPH, PAHs, Metals	Lead*	Potential ash disposal areas would be in direct contact with surficial soils.	Direct exposure through redevelopment or soil disturbance activities.	Coal ash was identified in flower beds to the south and west of the school building, as well as in the grassy area to the east, west and north of the building	SB-4 through SB-14, SB-17	The Groton Heights School was reportedly heated with coal from 1912 through the 1950's, during which time coal ash was potentially disposed of on site. An ash disposal area was visually observed at one to three feet BGS in borings SB-6 through SB-9 and one foot BGS in soil borings SB-10 through SB-12. COCs associated with coal ash include ETPH, PAHs, VOCs, and metals. Coal ash was identified in four of the six soil borings SB-6, (1-3'), SB-7 (1-3'), SB-8 (1-3'), and SB-9 (1-3') and in all three shallow surface samples (SB-10 (0-3'), SB-11 (0-3'), and SB-12 (0-3')) conducted in AOC-4. Ash material was observed from 1 to 3 feet in SB-5 through SB 9 and to depths of one foot BGS in SB-10 through SB-12. Various metals including antimony, arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, and zinc were reported in the soil borings at concentrations below CTDEEP RSR criteria. Lead was reported in SB-8, SB-10, and SB-11 reported at concentrations above RES DEC criteria. Based on observations during soil borings, coal ash is present in flower beds around the school building to the west and south of the site, as well at various locations in the grassy areas to the north, west, and east of the building. The elevated lead concentrations reported in AOC-5 may be associated with historic pesticide applications (AOC-3) as well as one site coal ash disposal (AOC-5), fill material (AOC-7) and lead based paint (AOC-8). There is potential for direct human exposure to impacted soils located in the top three inches of soil. Contaminant migration from soils to groundwater is unlikely, as groundwater was not encountered during drilling activities.	
6	Transformer Pad	ETPH, PCBs	None	Releases onto the ground surface. Migration into shallow surficial soils.	Direct exposure through redevelopment or soil disturbance activities.	A release was not identified	SB-3	One shallow surface soil sample was collected at a depth of zero to three inches BGS to evaluate the potential for a release from a transformer located to the east of the school building. The transformer was labeled as non-PCB containing, however, previous transformers may have been installed at this location. COCs from the transformer include ETPH and PCBs. ETPH and PCBs were not reported above laboratory reporting limits, indicating a surface release from the transformer is unlikely.	
7	Fill	ETPH, PAHs, Metals	Metals	Potential fill material would be in direct contact with surficial soils.	Direct exposure through redevelopment or soil disturbance activities.	Fill material was identified in flower beds to the south and west of the school building, as well as in the grassy area to the east, west and north of the building	SB-4 through SB-14, SB-17	Building material debris and fill material were observed in soil borings SB-6 through SB-12. Building material debris and coal ash was observed at depths of one to three feet in SB-6 through SB-9 and one foot BGS in SB-10 through SB-12. COCs include ETPH, PAHs, and Metals. Various metals including antimony, arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, and zinc were reported in the soil borings at concentrations below CTDEEP RSR criteria. Lead was reported in SB-8, SB-10, and SB-11 at concentrations above RES DEC criteria. The elevated lead concentrations reported in AOC-7 may be associated with historic pesticide applications (AOC-3) disposal of coal ash (AOC-4), fill material (AOC-7), and lead based paint (AOC-8) used on the site. There is potential for direct human exposure to impacted soils located in the top three inches of soil. Contaminant migration from soils to groundwater is unlikely, as groundwater was not encountered during drilling activities. Additional soil borings were during soil borings, coal ash is present in flower beds around the school build	
8	Hazardous Building Material	Lead	Lead	Releases of lead containing paint chips	Direct exposure through redevelopment or soil disturbance activities.	High lead concentrations were identified in flower beds to the south and west of the school building. This may be the result of flaking paint which was fallen onto the ground.	SB-10, SB-11, SB-12	Shallow surface soil samples (zero to three inches BGS) were collected from soil borings SB-10, SB-11, and SB-12 located in flower beds beneath windows reportedly painted with lead based paint. COCs include lead. Building material debris and coal ash was observed at depths of one foot in all soil borings in AOC-8. Lead concentrations were reported above laboratory reporting limits for all shallow soil samples and above RES DEC criteria in SB-10 (0-3") and SB-11 (0-3"). The elevated lead concentrations reported in AOC-8 may be from lead based paint on windows located above the sample locations, historic pesticide applications (AOC-3), potential on site disposal of coal ash (AOC-5), or fill material (AOC-7) used on site. There is potential for direct human exposure to impacted soils located in the top three inches of soil. Contaminant migration from soils to groundwater is unlikely, as groundwater was not encountered during drilling activities.	

Notes:
 * - Exceedance Reported for COC



Tighe & Bond



Client: Mr. Harley Langford
Tighe & Bond
213 Court St Suite 900
Middletown, CT 06457

Analytical Report

CET# 6010289

Report Date: January 28, 2016
Project: Groton Heights School, Groton
Project Number: G-06741

Connecticut Laboratory Certificate: PH 0116
Massachusetts laboratory Certificate: M-CT903



New York Certification: 11982
Rhode Island Certification: 199

CET # : 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

SAMPLE SUMMARY

The sample(s) were received at 1.1°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
SB-1 6-8ft	6010289-01	Soil	1/18/2016 8:30	01/19/2016
SB-3 0-3in	6010289-02	Soil	1/18/2016 9:30	01/19/2016
SB-4 2-4ft	6010289-03	Soil	1/18/2016 9:45	01/19/2016
SB-5 4-6ft	6010289-04	Soil	1/18/2016 10:00	01/19/2016
SB-6 1-3ft	6010289-05	Soil	1/18/2016 10:15	01/19/2016
SB-7 1-3ft	6010289-06	Soil	1/18/2016 10:20	01/19/2016
SB-8 1-3ft	6010289-07	Soil	1/18/2016 10:45	01/19/2016
SB-9 1-3ft	6010289-08	Soil	1/18/2016 11:15	01/19/2016
SB-10 0-3in	6010289-09	Soil	1/18/2016 11:45	01/19/2016
SB-11 0-3in	6010289-10	Soil	1/18/2016 12:15	01/19/2016
SB-12 0-3in	6010289-11	Soil	1/18/2016 12:45	01/19/2016

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Analyte: Total Solids [EPA 160.3 modified]

Analyst: JF

Matrix: Soil

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
6010289-01	SB-1 6-8ft	84	1.0	%	1	B6A2101	01/21/2016	01/21/2016 16:12	
6010289-02	SB-3 0-3in	83	1.0	%	1	B6A2101	01/21/2016	01/21/2016 16:12	
6010289-03	SB-4 2-4ft	86	1.0	%	1	B6A2101	01/21/2016	01/21/2016 16:12	
6010289-04	SB-5 4-6ft	84	1.0	%	1	B6A2101	01/21/2016	01/21/2016 16:12	
6010289-05	SB-6 1-3ft	87	1.0	%	1	B6A2101	01/21/2016	01/21/2016 16:12	
6010289-06	SB-7 1-3ft	87	1.0	%	1	B6A2101	01/21/2016	01/21/2016 16:12	
6010289-07	SB-8 1-3ft	82	1.0	%	1	B6A2101	01/21/2016	01/21/2016 16:12	
6010289-08	SB-9 1-3ft	85	1.0	%	1	B6A2101	01/21/2016	01/21/2016 16:12	
6010289-09	SB-10 0-3in	81	1.0	%	1	B6A2101	01/21/2016	01/21/2016 16:12	
6010289-10	SB-11 0-3in	84	1.0	%	1	B6A2101	01/21/2016	01/21/2016 16:12	
6010289-11	SB-12 0-3in	83	1.0	%	1	B6A2101	01/21/2016	01/21/2016 16:12	

Analyte: Mercury [EPA 7471B]

Analyst: KP

Matrix: Soil

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
6010289-03	SB-4 2-4ft	ND	0.23	mg/kg dry	1	B6A2103	01/21/2016	01/21/2016 13:41	
6010289-04	SB-5 4-6ft	ND	0.24	mg/kg dry	1	B6A2103	01/21/2016	01/21/2016 13:44	
6010289-05	SB-6 1-3ft	0.26	0.23	mg/kg dry	1	B6A2103	01/21/2016	01/21/2016 13:54	
6010289-06	SB-7 1-3ft	ND	0.23	mg/kg dry	1	B6A2103	01/21/2016	01/21/2016 13:56	
6010289-07	SB-8 1-3ft	ND	0.24	mg/kg dry	1	B6A2103	01/21/2016	01/21/2016 13:59	
6010289-08	SB-9 1-3ft	ND	0.23	mg/kg dry	1	B6A2103	01/21/2016	01/21/2016 14:02	

Analyte: Total Lead [EPA 6010C]

Analyst: SS

Prep: EPA 3050B

Matrix: Soil

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
6010289-09	SB-10 0-3in	530	2.5	mg/kg dry	1	B6A2122	01/21/2016	01/22/2016 19:32	
6010289-10	SB-11 0-3in	430	2.4	mg/kg dry	1	B6A2122	01/21/2016	01/22/2016 19:37	
6010289-11	SB-12 0-3in	150	2.4	mg/kg dry	1	B6A2122	01/21/2016	01/22/2016 19:41	

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-1 6-8ft

Lab ID: 6010289-01

Conn. Extractable TPH

Analyst: MH

Method: CT-ETPH

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
ETPH	ND	60	1	EPA 3550C	B6A2134	01/21/2016	01/21/2016 20:55	
<i>Surrogate: Octacosane</i>	63.6 %	50 - 150			B6A2134	01/21/2016	01/21/2016 20:55	

Semivolatile Organics

Analyst: ALB

Method: EPA 8270D

Matrix: Soil

Analyte	Result (ug/kg dry)	RL (ug/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Naphthalene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 01:17	
2-Methyl Naphthalene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 01:17	
Acenaphthylene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 01:17	
Acenaphthene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 01:17	
Fluorene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 01:17	
Phenanthrene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 01:17	
Anthracene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 01:17	
Fluoranthene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 01:17	
Pyrene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 01:17	
Benzo[a]anthracene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 01:17	
Chrysene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 01:17	
Benzo[b]fluoranthene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 01:17	
Benzo[k]fluoranthene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 01:17	
Benzo[a]pyrene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 01:17	
Indeno[1,2,3-cd]pyrene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 01:17	
Dibenz[a,h]anthracene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 01:17	
Benzo[g,h,i]perylene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 01:17	
<i>Surrogate: Nitrobenzene-d5</i>	80.9 %	30 - 130			B6A2011	01/20/2016	01/22/2016 01:17	
<i>Surrogate: 2-Fluorobiphenyl</i>	81.9 %	30 - 130			B6A2011	01/20/2016	01/22/2016 01:17	
<i>Surrogate: Terphenyl-d14</i>	95.4 %	30 - 130			B6A2011	01/20/2016	01/22/2016 01:17	

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-1 6-8ft

Lab ID: 6010289-01

Volatile Organics
Method: EPA 8260C

Analyst: TWF

Matrix: Soil

Analyte	Result (ug/kg dry)	RL (ug/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Dichlorodifluoromethane	ND	17	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	*F1*C1
Chloromethane	ND	11	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Vinyl Chloride	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Bromomethane	ND	11	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Chloroethane	ND	11	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Trichlorofluoromethane	ND	46	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Acetone	ND	170	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Acrylonitrile	ND	9.2	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Trichlorotrifluoroethane	ND	46	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,1-Dichloroethene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Methylene Chloride	ND	57	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Carbon Disulfide	ND	11	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	*F1
Methyl-t-Butyl Ether (MTBE)	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
trans-1,2-Dichloroethene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,1-Dichloroethane	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
2-Butanone (MEK)	ND	29	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
2,2-Dichloropropane	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
cis-1,2-Dichloroethene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Chloroform	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Tetrahydrofuran	ND	29	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,1,1-Trichloroethane	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Carbon Tetrachloride	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,1-Dichloropropene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Benzene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,2-Dichloroethane	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Trichloroethene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,2-Dichloropropane	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Dibromomethane	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	*C1
Bromodichloromethane	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Methyl Isobutyl Ketone	ND	29	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
cis-1,3-Dichloropropene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Toluene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
trans-1,3-Dichloropropene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
2-Hexanone	ND	29	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,1,2-Trichloroethane	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-1 6-8ft

Lab ID: 6010289-01

Volatile Organics
Method: EPA 8260C

Analyst: TWF
Matrix: Soil

Analyte	Result (ug/kg dry)	RL (ug/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Tetrachloroethene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	*C1
1,3-Dichloropropane	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Dibromochloromethane	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,2-Dibromoethane	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
trans-1,4-Dichloro-2-Butene	ND	29	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Chlorobenzene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,1,1,2-Tetrachloroethane	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Ethylbenzene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
m+p Xylenes	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
o-Xylene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Styrene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Bromoform	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	*C1
Isopropylbenzene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,1,1,2,2-Tetrachloroethane	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Bromobenzene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,2,3-Trichloropropane	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
n-Propylbenzene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
2-Chlorotoluene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
4-Chlorotoluene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,3,5-Trimethylbenzene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
tert-Butylbenzene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,2,4-Trimethylbenzene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
sec-Butylbenzene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,3-Dichlorobenzene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
4-Isopropyltoluene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,4-Dichlorobenzene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,2-Dichlorobenzene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
n-Butylbenzene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,2-Dibromo-3-Chloropropane	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,2,4-Trichlorobenzene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
Hexachlorobutadiene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	*C1
Naphthalene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
1,2,3-Trichlorobenzene	ND	5.7	1.92	EPA 5035A-L	B6A2024	01/20/2016	01/20/2016 18:03	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>126 %</i>	<i>70 - 130</i>			B6A2024	01/20/2016	<i>01/20/2016 18:03</i>	
<i>Surrogate: Toluene-d8</i>	<i>101 %</i>	<i>70 - 130</i>			B6A2024	01/20/2016	<i>01/20/2016 18:03</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>75.3 %</i>	<i>70 - 130</i>			B6A2024	01/20/2016	<i>01/20/2016 18:03</i>	

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-3 0-3in

Lab ID: 6010289-02

Conn. Extractable TPH

Method: CT-ETPH

Analyst: MH

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
ETPH	ND	60	1	EPA 3550C	B6A2134	01/21/2016	01/21/2016 21:18	
<i>Surrogate: Octacosane</i>	<i>65.9 %</i>	<i>50 - 150</i>			B6A2134	01/21/2016	<i>01/21/2016 21:18</i>	

PCBs by ASE

Method: EPA 8082A

Analyst: MP

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
PCB-1016	ND	0.24	1	EPA 3545A	B6A2210	01/22/2016	01/25/2016 14:27	
PCB-1221	ND	0.24	1	EPA 3545A	B6A2210	01/22/2016	01/25/2016 14:27	
PCB-1232	ND	0.24	1	EPA 3545A	B6A2210	01/22/2016	01/25/2016 14:27	
PCB-1242	ND	0.24	1	EPA 3545A	B6A2210	01/22/2016	01/25/2016 14:27	
PCB-1248	ND	0.24	1	EPA 3545A	B6A2210	01/22/2016	01/25/2016 14:27	
PCB-1254	ND	0.24	1	EPA 3545A	B6A2210	01/22/2016	01/25/2016 14:27	
PCB-1260	ND	0.24	1	EPA 3545A	B6A2210	01/22/2016	01/25/2016 14:27	
PCB-1268	ND	0.24	1	EPA 3545A	B6A2210	01/22/2016	01/25/2016 14:27	
<i>Surrogate: TCMX</i>	<i>88.0 %</i>	<i>50 - 150</i>			B6A2210	01/22/2016	<i>01/25/2016 14:27</i>	
<i>Surrogate: DCB</i>	<i>75.1 %</i>	<i>50 - 150</i>			B6A2210	01/22/2016	<i>01/25/2016 14:27</i>	

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-4 2-4ft

Lab ID: 6010289-03

Total Metals

Method: EPA 6010C

Analyst: SS

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Lead	27	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:46	
Selenium	2.4	1.2	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:46	
Cadmium	ND	0.58	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:46	
Chromium	7.5	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:46	
Arsenic	2.5	1.2	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:46	
Silver	ND	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:46	
Copper	9.1	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:46	
Nickel	4.5	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:46	
Zinc	150	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:46	
Beryllium	ND	1.2	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:46	
Antimony	ND	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:46	
Thallium	ND	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:46	

Conn. Extractable TPH

Method: CT-ETPH

Analyst: MH

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
ETPH	ND	58	1	EPA 3550C	B6A2134	01/21/2016	01/21/2016 21:41	
<i>Surrogate: Octacosane</i>	<i>70.5 %</i>	<i>50 - 150</i>			B6A2134	01/21/2016	<i>01/21/2016 21:41</i>	

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-4 2-4ft

Lab ID: 6010289-03

Semivolatile Organics

Analyst: ALB

Method: EPA 8270D

Matrix: Soil

Analyte	Result (ug/kg dry)	RL (ug/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Naphthalene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 02:15	
2-Methyl Naphthalene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 02:15	
Acenaphthylene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 02:15	
Acenaphthene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 02:15	
Fluorene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 02:15	
Phenanthrene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 02:15	
Anthracene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 02:15	
Fluoranthene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 02:15	
Pyrene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 02:15	
Benzo[a]anthracene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 02:15	
Chrysene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 02:15	
Benzo[b]fluoranthene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 02:15	
Benzo[k]fluoranthene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 02:15	
Benzo[a]pyrene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 02:15	
Indeno[1,2,3-cd]pyrene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 02:15	
Dibenz[a,h]anthracene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 02:15	
Benzo[g,h,i]perylene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 02:15	

<i>Surrogate: Nitrobenzene-d5</i>	70.0 %	30 - 130			B6A2011	01/20/2016	01/22/2016 02:15	
<i>Surrogate: 2-Fluorobiphenyl</i>	76.9 %	30 - 130			B6A2011	01/20/2016	01/22/2016 02:15	
<i>Surrogate: Terphenyl-d14</i>	94.6 %	30 - 130			B6A2011	01/20/2016	01/22/2016 02:15	

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-5 4-6ft

Lab ID: 6010289-04

Total Metals

Method: EPA 6010C

Analyst: SS

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Lead	3.3	2.4	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:50	
Selenium	2.0	1.2	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:50	
Cadmium	ND	0.60	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:50	
Chromium	7.8	2.4	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:50	
Arsenic	1.8	1.2	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:50	
Silver	ND	2.4	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:50	
Copper	3.8	2.4	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:50	
Nickel	4.0	2.4	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:50	
Zinc	12	2.4	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:50	
Beryllium	ND	1.2	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:50	
Antimony	ND	2.4	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:50	
Thallium	ND	2.4	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 18:50	

Conn. Extractable TPH

Method: CT-ETPH

Analyst: MH

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
ETPH	ND	60	1	EPA 3550C	B6A2134	01/21/2016	01/21/2016 22:04	
<i>Surrogate: Octacosane</i>	<i>63.1 %</i>	<i>50 - 150</i>			B6A2134	01/21/2016	<i>01/21/2016 22:04</i>	

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-5 4-6ft

Lab ID: 6010289-04

Semivolatile Organics

Analyst: ALB

Method: EPA 8270D

Matrix: Soil

Analyte	Result (ug/kg dry)	RL (ug/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Naphthalene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 03:13	
2-Methyl Naphthalene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 03:13	
Acenaphthylene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 03:13	
Acenaphthene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 03:13	
Fluorene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 03:13	
Phenanthrene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 03:13	
Anthracene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 03:13	
Fluoranthene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 03:13	
Pyrene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 03:13	
Benzo[a]anthracene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 03:13	
Chrysene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 03:13	
Benzo[b]fluoranthene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 03:13	
Benzo[k]fluoranthene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 03:13	
Benzo[a]pyrene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 03:13	
Indeno[1,2,3-cd]pyrene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 03:13	
Dibenz[a,h]anthracene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 03:13	
Benzo[g,h,i]perylene	ND	360	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 03:13	

Surrogate: Nitrobenzene-d5 73.0 % 30 - 130 B6A2011 01/20/2016 01/22/2016 03:13

Surrogate: 2-Fluorobiphenyl 75.7 % 30 - 130 B6A2011 01/20/2016 01/22/2016 03:13

Surrogate: Terphenyl-d14 90.2 % 30 - 130 B6A2011 01/20/2016 01/22/2016 03:13

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-6 1-3ft

Lab ID: 6010289-05

Total Metals

Method: EPA 6010C

Analyst: SS

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Lead	17	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:03	
Selenium	3.1	1.1	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:03	
Cadmium	ND	0.57	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:03	
Chromium	9.3	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:03	
Arsenic	2.2	1.1	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:03	
Silver	ND	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:03	
Copper	8.2	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:03	
Nickel	5.6	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:03	
Zinc	36	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:03	
Beryllium	ND	1.1	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:03	
Antimony	ND	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:03	
Thallium	ND	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:03	

Conn. Extractable TPH

Method: CT-ETPH

Analyst: MH

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
ETPH	ND	57	1	EPA 3550C	B6A2134	01/21/2016	01/21/2016 22:27	
<i>Surrogate: Octacosane</i>	<i>68.7 %</i>	<i>50 - 150</i>			B6A2134	01/21/2016	<i>01/21/2016 22:27</i>	

CET # : 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-6 1-3ft

Lab ID: 6010289-05

Semivolatile Organics

Analyst: ALB

Method: EPA 8270D

Matrix: Soil

Analyte	Result (ug/kg dry)	RL (ug/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Naphthalene	ND	340	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 04:11	
2-Methyl Naphthalene	ND	340	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 04:11	
Acenaphthylene	ND	340	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 04:11	
Acenaphthene	ND	340	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 04:11	
Fluorene	ND	340	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 04:11	
Phenanthrene	ND	340	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 04:11	
Anthracene	ND	340	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 04:11	
Fluoranthene	ND	340	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 04:11	
Pyrene	ND	340	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 04:11	
Benzo[a]anthracene	ND	340	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 04:11	
Chrysene	ND	340	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 04:11	
Benzo[b]fluoranthene	ND	340	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 04:11	
Benzo[k]fluoranthene	ND	340	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 04:11	
Benzo[a]pyrene	ND	340	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 04:11	
Indeno[1,2,3-cd]pyrene	ND	340	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 04:11	
Dibenz[a,h]anthracene	ND	340	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 04:11	
Benzo[g,h,i]perylene	ND	340	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 04:11	

<i>Surrogate: Nitrobenzene-d5</i>	<i>55.3 %</i>	<i>30 - 130</i>			B6A2011	01/20/2016	<i>01/22/2016 04:11</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>59.3 %</i>	<i>30 - 130</i>			B6A2011	01/20/2016	<i>01/22/2016 04:11</i>	
<i>Surrogate: Terphenyl-d14</i>	<i>122 %</i>	<i>30 - 130</i>			B6A2011	01/20/2016	<i>01/22/2016 04:11</i>	

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-7 1-3ft

Lab ID: 6010289-06

Total Metals

Method: EPA 6010C

Analyst: SS

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Lead	49	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:07	
Selenium	2.5	1.2	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:07	
Cadmium	ND	0.58	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:07	
Chromium	8.9	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:07	
Arsenic	3.1	1.2	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:07	
Silver	ND	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:07	
Copper	11	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:07	
Nickel	5.5	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:07	
Zinc	37	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:07	
Beryllium	ND	1.2	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:07	
Antimony	ND	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:07	
Thallium	ND	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:07	

Conn. Extractable TPH

Method: CT-ETPH

Analyst: MH

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
ETPH	ND	58	1	EPA 3550C	B6A2134	01/21/2016	01/21/2016 22:49	
<i>Surrogate: Octacosane</i>	<i>62.6 %</i>	<i>50 - 150</i>			B6A2134	01/21/2016	<i>01/21/2016 22:49</i>	

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-7 1-3ft

Lab ID: 6010289-06

Semivolatile Organics

Analyst: ALB

Method: EPA 8270D

Matrix: Soil

Analyte	Result (ug/kg dry)	RL (ug/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Naphthalene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 05:09	
2-Methyl Naphthalene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 05:09	
Acenaphthylene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 05:09	
Acenaphthene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 05:09	
Fluorene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 05:09	
Phenanthrene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 05:09	
Anthracene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 05:09	
Fluoranthene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 05:09	
Pyrene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 05:09	
Benzo[a]anthracene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 05:09	
Chrysene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 05:09	
Benzo[b]fluoranthene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 05:09	
Benzo[k]fluoranthene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 05:09	
Benzo[a]pyrene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 05:09	
Indeno[1,2,3-cd]pyrene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 05:09	
Dibenz[a,h]anthracene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 05:09	
Benzo[g,h,i]perylene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 05:09	

<i>Surrogate: Nitrobenzene-d5</i>	75.4 %	30 - 130			B6A2011	01/20/2016	01/22/2016 05:09
<i>Surrogate: 2-Fluorobiphenyl</i>	78.0 %	30 - 130			B6A2011	01/20/2016	01/22/2016 05:09
<i>Surrogate: Terphenyl-d14</i>	93.9 %	30 - 130			B6A2011	01/20/2016	01/22/2016 05:09

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-8 1-3ft

Lab ID: 6010289-07

Total Metals

Method: EPA 6010C

Analyst: SS

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Lead	780	2.4	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:11	
Selenium	3.6	1.2	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:11	
Cadmium	0.68	0.61	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:11	
Chromium	23	2.4	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:11	
Arsenic	4.5	1.2	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:11	
Silver	ND	2.4	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:11	
Copper	170	2.4	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:11	
Nickel	8.2	2.4	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:11	
Zinc	230	2.4	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:11	
Beryllium	ND	1.2	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:11	
Antimony	2.7	2.4	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:11	
Thallium	ND	2.4	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:11	

Conn. Extractable TPH

Method: CT-ETPH

Analyst: MH

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
ETPH	ND	61	1	EPA 3550C	B6A2134	01/21/2016	01/21/2016 23:12	
<i>Surrogate: Octacosane</i>	64.1 %	50 - 150			B6A2134	01/21/2016	01/21/2016 23:12	

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-8 1-3ft

Lab ID: 6010289-07

Semivolatile Organics

Analyst: ALB

Method: EPA 8270D

Matrix: Soil

Analyte	Result (ug/kg dry)	RL (ug/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Naphthalene	ND	370	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 06:07	
2-Methyl Naphthalene	ND	370	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 06:07	
Acenaphthylene	ND	370	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 06:07	
Acenaphthene	ND	370	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 06:07	
Fluorene	ND	370	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 06:07	
Phenanthrene	ND	370	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 06:07	
Anthracene	ND	370	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 06:07	
Fluoranthene	ND	370	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 06:07	
Pyrene	ND	370	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 06:07	
Benzo[a]anthracene	ND	370	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 06:07	
Chrysene	ND	370	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 06:07	
Benzo[b]fluoranthene	ND	370	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 06:07	
Benzo[k]fluoranthene	ND	370	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 06:07	
Benzo[a]pyrene	ND	370	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 06:07	
Indeno[1,2,3-cd]pyrene	ND	370	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 06:07	
Dibenz[a,h]anthracene	ND	370	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 06:07	
Benzo[g,h,i]perylene	ND	370	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 06:07	

<i>Surrogate: Nitrobenzene-d5</i>	78.5 %	30 - 130			B6A2011	01/20/2016	01/22/2016 06:07
<i>Surrogate: 2-Fluorobiphenyl</i>	77.2 %	30 - 130			B6A2011	01/20/2016	01/22/2016 06:07
<i>Surrogate: Terphenyl-d14</i>	90.2 %	30 - 130			B6A2011	01/20/2016	01/22/2016 06:07

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-9 1-3ft

Lab ID: 6010289-08

Total Metals

Method: EPA 6010C

Analyst: SS

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Lead	22	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:16	
Selenium	2.7	1.2	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:16	
Cadmium	ND	0.59	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:16	
Chromium	9.3	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:16	
Arsenic	2.3	1.2	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:16	
Silver	ND	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:16	
Copper	21	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:16	
Nickel	6.0	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:16	
Zinc	47	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:16	
Beryllium	ND	1.2	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:16	
Antimony	ND	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:16	
Thallium	ND	2.3	1	EPA 3050B	B6A2122	01/21/2016	01/22/2016 19:16	

Conn. Extractable TPH

Method: CT-ETPH

Analyst: MH

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
ETPH	ND	59	1	EPA 3550C	B6A2134	01/21/2016	01/21/2016 23:35	
<i>Surrogate: Octacosane</i>	<i>66.4 %</i>	<i>50 - 150</i>			B6A2134	01/21/2016	<i>01/21/2016 23:35</i>	

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-9 1-3ft

Lab ID: 6010289-08

Semivolatile Organics

Analyst: ALB

Method: EPA 8270D

Matrix: Soil

Analyte	Result (ug/kg dry)	RL (ug/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Naphthalene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 07:03	
2-Methyl Naphthalene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 07:03	
Acenaphthylene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 07:03	
Acenaphthene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 07:03	
Fluorene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 07:03	
Phenanthrene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 07:03	
Anthracene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 07:03	
Fluoranthene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 07:03	
Pyrene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 07:03	
Benzo[a]anthracene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 07:03	
Chrysene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 07:03	
Benzo[b]fluoranthene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 07:03	
Benzo[k]fluoranthene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 07:03	
Benzo[a]pyrene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 07:03	
Indeno[1,2,3-cd]pyrene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 07:03	
Dibenz[a,h]anthracene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 07:03	
Benzo[g,h,i]perylene	ND	350	1	EPA 3545A	B6A2011	01/20/2016	01/22/2016 07:03	

Surrogate: Nitrobenzene-d5 69.3 % 30 - 130 B6A2011 01/20/2016 01/22/2016 07:03

Surrogate: 2-Fluorobiphenyl 70.1 % 30 - 130 B6A2011 01/20/2016 01/22/2016 07:03

Surrogate: Terphenyl-d14 77.9 % 30 - 130 B6A2011 01/20/2016 01/22/2016 07:03

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-10 0-3in

Lab ID: 6010289-09

Chlorinated Pesticides

Method: EPA 8081B

Analyst: SJ

Matrix: Soil

Analyte	Result (ug/kg dry)	RL (ug/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Alpha-BHC	ND	62	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
Gamma-BHC	ND	15	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
Heptachlor	ND	11	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
Aldrin	ND	31	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
Beta-BHC	ND	31	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
Delta-BHC	ND	62	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
Heptachlor Epoxide	ND	19	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
Endosulfan I	ND	62	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
4,4-DDE	ND	25	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
Dieldrin	ND	6.2	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
Endrin	ND	62	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
4,4-DDD	ND	37	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
Endosulfan II	ND	25	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
4,4-DDT	ND	25	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
Endrin Aldehyde	ND	62	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
4,4-Methoxychlor	ND	62	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
Endosulfan Sulfate	ND	62	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
Endrin Ketone	ND	62	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
Chlordane	ND	62	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
Toxaphene	ND	250	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	
Alachlor	ND	250	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:28	

Surrogate: TCMX 93.2 % 50 - 150 B6A2211 01/22/2016 01/22/2016 17:28

Surrogate: DCB 124 % 50 - 150 B6A2211 01/22/2016 01/22/2016 17:28

Chlorinated Herbicides

Method: EPA 8151A

Analyst: SJ

Matrix: Soil

Analyte	Result (ug/kg dry)	RL (ug/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Dalapon	ND	620	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 14:57	*F1

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-10 0-3in

Lab ID: 6010289-09

Chlorinated Herbicides

Method: EPA 8151A

Analyst: SJ

Matrix: Soil

Analyte	Result (ug/kg dry)	RL (ug/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
3,5-Dichlorobenzoic acid	ND	25	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 14:57	
4-Nitrophenol	ND	120	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 14:57	
Dicamba	ND	25	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 14:57	
Dichloroprop	ND	120	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 14:57	
2,4-D	ND	120	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 14:57	
PCP	ND	31	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 14:57	
Silvex	ND	25	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 14:57	
2,4,5-T	ND	25	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 14:57	
Dinoseb	ND	25	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 14:57	
2,4-DB	ND	250	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 14:57	
Picloram	ND	25	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 14:57	*C2

Surrogate: DCPAA

82.0 %

50 - 150

B6A2227

01/22/2016

01/27/2016 14:57

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-11 0-3in

Lab ID: 6010289-10

Chlorinated Pesticides

Method: EPA 8081B

Analyst: SJ

Matrix: Soil

Analyte	Result (ug/kg dry)	RL (ug/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Alpha-BHC	ND	59	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
Gamma-BHC	ND	14	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
Heptachlor	ND	11	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
Aldrin	ND	30	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
Beta-BHC	ND	30	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
Delta-BHC	ND	59	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
Heptachlor Epoxide	ND	18	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
Endosulfan I	ND	59	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
4,4-DDE	79	24	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
Dieldrin	ND	5.9	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
Endrin	ND	59	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
4,4-DDD	ND	36	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
Endosulfan II	ND	24	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
4,4-DDT	79	24	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
Endrin Aldehyde	ND	59	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
4,4-Methoxychlor	ND	59	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
Endosulfan Sulfate	ND	59	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
Endrin Ketone	ND	59	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
Chlordane	ND	59	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
Toxaphene	ND	240	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	
Alachlor	ND	240	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:44	

Surrogate: TCMX 91.4 % 50 - 150 B6A2211 01/22/2016 01/22/2016 17:44

Surrogate: DCB 118 % 50 - 150 B6A2211 01/22/2016 01/22/2016 17:44

Chlorinated Herbicides

Method: EPA 8151A

Analyst: SJ

Matrix: Soil

Analyte	Result (ug/kg dry)	RL (ug/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Dalapon	ND	590	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:24	*F1

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-11 0-3in

Lab ID: 6010289-10

Chlorinated Herbicides

Method: EPA 8151A

Analyst: SJ

Matrix: Soil

Analyte	Result (ug/kg dry)	RL (ug/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
3,5-Dichlorobenzoic acid	ND	24	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:24	
4-Nitrophenol	ND	120	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:24	
Dicamba	ND	24	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:24	
Dichloroprop	ND	120	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:24	
2,4-D	ND	120	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:24	
PCP	ND	30	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:24	
Silvex	ND	24	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:24	
2,4,5-T	ND	24	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:24	
Dinoseb	ND	24	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:24	
2,4-DB	ND	240	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:24	
Picloram	ND	24	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:24	*C2
<i>Surrogate: DCPAA</i>	<i>95.1 %</i>	<i>50 - 150</i>			<i>B6A2227</i>	<i>01/22/2016</i>	<i>01/27/2016 15:24</i>	

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-12 0-3in

Lab ID: 6010289-11

Chlorinated Pesticides

Method: EPA 8081B

Analyst: SJ

Matrix: Soil

Analyte	Result (ug/kg dry)	RL (ug/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Alpha-BHC	ND	60	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
Gamma-BHC	ND	14	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
Heptachlor	ND	11	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
Aldrin	ND	30	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
Beta-BHC	ND	30	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
Delta-BHC	ND	60	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
Heptachlor Epoxide	ND	18	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
Endosulfan I	ND	60	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
4,4-DDE	34	24	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
Dieldrin	ND	6.0	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
Endrin	ND	60	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
4,4-DDD	ND	36	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
Endosulfan II	ND	24	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
4,4-DDT	51	24	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
Endrin Aldehyde	ND	60	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
4,4-Methoxychlor	ND	60	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
Endosulfan Sulfate	ND	60	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
Endrin Ketone	ND	60	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
Chlordane	ND	60	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
Toxaphene	ND	240	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	
Alachlor	ND	240	1	EPA 3545A	B6A2211	01/22/2016	01/22/2016 17:59	

Surrogate: TCMX 93.1 % 50 - 150 B6A2211 01/22/2016 01/22/2016 17:59

Surrogate: DCB 102 % 50 - 150 B6A2211 01/22/2016 01/22/2016 17:59

Chlorinated Herbicides

Method: EPA 8151A

Analyst: SJ

Matrix: Soil

Analyte	Result (ug/kg dry)	RL (ug/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
Dalapon	ND	600	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:51	*F1

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-12 0-3in

Lab ID: 6010289-11

Chlorinated Herbicides

Method: EPA 8151A

Analyst: SJ

Matrix: Soil

Analyte	Result (ug/kg dry)	RL (ug/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
3,5-Dichlorobenzoic acid	ND	24	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:51	
4-Nitrophenol	ND	120	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:51	
Dicamba	ND	24	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:51	
Dichloroprop	ND	120	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:51	
2,4-D	ND	120	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:51	
PCP	ND	30	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:51	
Silvex	ND	24	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:51	
2,4,5-T	ND	24	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:51	
Dinoseb	ND	24	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:51	
2,4-DB	ND	240	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:51	
Picloram	ND	24	1	EPA 3545A	B6A2227	01/22/2016	01/27/2016 15:51	*C2

Surrogate: DCPAA

106 %

50 - 150

B6A2227

01/22/2016

01/27/2016 15:51

Questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,



David Ditta
Laboratory Director

Report Comments:

Sample Result Flags:

- E- The result is estimated, above the calibration range.
- H- The surrogate recovery is above the control limits.
- L- The surrogate recovery is below the control limits.
- B- The compound was detected in the laboratory blank.
- P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
- D- The RPD between the sample and the sample duplicate is high. Sample Homogeneity may be a problem.
- + - The Surrogate was diluted out.
- *C1- The Continuing Calibration did not meet method specifications and was biased low for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased low.
- *C2- The Continuing Calibration did not meet method specifications and was biased high for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased high.
- *F1- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the low side.
- *F2- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the high side.
- I- The Analyte exceeds %RSD limits for the Initial Calibration. This is a non-directional bias.

All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

ND is None Detected at the specified detection limit

All analyses were performed in house unless a Reference Laboratory is listed.

Samples will be disposed of 30 days after the report date.

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>CT-ETPH in Soil</i>	
ETPH	CT
<i>EPA 6010C in Soil</i>	
Lead	CT,NY
Selenium	CT,NY
Cadmium	CT,NY
Chromium	CT,NY
Arsenic	CT,NY
Silver	CT,NY
Copper	CT,NY
Nickel	CT,NY
Zinc	CT,NY
Beryllium	CT,NY
Antimony	CT,NY
Thallium	CT,NY
<i>EPA 7471B in Soil</i>	
Mercury	CT,NY
<i>EPA 8081B in Soil</i>	
Alpha-BHC	CT,NY
Gamma-BHC	CT,NY
Heptachlor	CT,NY
Aldrin	CT,NY
Beta-BHC	CT,NY
Delta-BHC	CT,NY
Heptachlor Epoxide	CT,NY
Endosulfan I	CT,NY
4,4-DDE	CT,NY
Dieldrin	CT,NY
Endrin	CT,NY
4,4-DDD	CT,NY
Endosulfan II	CT,NY
4,4-DDT	CT,NY
Endrin Aldehyde	CT,NY
4,4-Methoxychlor	CT,NY
Endosulfan Sulfate	CT,NY
Endrin Ketone	CT,NY
Chlordane	CT,NY
Toxaphene	CT,NY
Alachlor	CT
<i>EPA 8082A in Soil</i>	
PCB-1016	CT,NY
PCB-1221	CT,NY
PCB-1232	CT,NY
PCB-1242	CT,NY

CET # : 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 8082A in Soil	
PCB-1248	CT,NY
PCB-1254	CT,NY
PCB-1260	CT,NY
PCB-1268	CT
EPA 8151A in Soil	
Dalapon	CT
4-Nitrophenol	CT
Dicamba	CT,NY
Dichloroprop	CT,NY
2,4-D	CT,NY
PCP	CT,NY
Silvex	CT,NY
2,4,5-T	CT,NY
Dinoseb	CT,NY
2,4-DB	CT,NY
EPA 8260C in Soil	
Dichlorodifluoromethane	CT,NY
Chloromethane	CT,NY
Vinyl Chloride	CT,NY
Bromomethane	CT,NY
Chloroethane	CT,NY
Trichlorofluoromethane	CT,NY
Acetone	CT,NY
Acrylonitrile	CT,NY
Trichlorotrifluoroethane	CT,NY
1,1-Dichloroethene	CT,NY
Methylene Chloride	CT,NY
Carbon Disulfide	CT,NY
Methyl-t-Butyl Ether (MTBE)	CT,NY
trans-1,2-Dichloroethene	CT,NY
1,1-Dichloroethane	CT,NY
2-Butanone (MEK)	CT,NY
2,2-Dichloropropane	CT,NY
cis-1,2-Dichloroethene	CT,NY
Chloroform	CT,NY
Tetrahydrofuran	CT
1,1,1-Trichloroethane	CT,NY
Carbon Tetrachloride	CT,NY
1,1-Dichloropropene	CT,NY
Benzene	CT,NY
1,2-Dichloroethane	CT,NY
Trichloroethene	CT,NY
1,2-Dichloropropane	CT,NY
Dibromomethane	CT,NY

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 8260C in Soil</i>	
Bromodichloromethane	CT,NY
Methyl Isobutyl Ketone	CT,NY
cis-1,3-Dichloropropene	CT,NY
Toluene	CT,NY
trans-1,3-Dichloropropene	CT,NY
2-Hexanone	CT,NY
1,1,2-Trichloroethane	CT,NY
Tetrachloroethene	CT,NY
1,3-Dichloropropane	CT,NY
Dibromochloromethane	CT,NY
1,2-Dibromoethane	CT,NY
trans-1,4-Dichloro-2-Butene	CT,NY
Chlorobenzene	CT,NY
1,1,1,2-Tetrachloroethane	CT,NY
Ethylbenzene	CT,NY
m+p Xylenes	CT,NY
o-Xylene	CT,NY
Styrene	CT,NY
Bromoform	CT,NY
Isopropylbenzene	CT,NY
1,1,2,2-Tetrachloroethane	CT,NY
Bromobenzene	CT,NY
1,2,3-Trichloropropane	CT,NY
n-Propylbenzene	CT,NY
2-Chlorotoluene	CT,NY
4-Chlorotoluene	CT,NY
1,3,5-Trimethylbenzene	CT,NY
tert-Butylbenzene	CT,NY
1,2,4-Trimethylbenzene	CT,NY
sec-Butylbenzene	CT,NY
1,3-Dichlorobenzene	CT,NY
4-Isopropyltoluene	CT,NY
1,4-Dichlorobenzene	CT,NY
1,2-Dichlorobenzene	CT,NY
n-Butylbenzene	CT,NY
1,2-Dibromo-3-Chloropropane	CT,NY
1,2,4-Trichlorobenzene	CT,NY
Hexachlorobutadiene	CT,NY
Naphthalene	CT,NY
1,2,3-Trichlorobenzene	CT
<i>EPA 8270D in Soil</i>	
Naphthalene	CT,NY
2-Methyl Naphthalene	CT,NY
Acenaphthylene	CT,NY

CET #: 6010289

Project: Groton Heights School, Groton

Project Number: G-06741

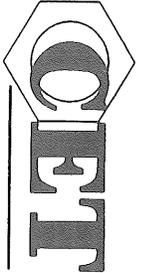
CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 8270D in Soil</i>	
Acenaphthene	CT,NY
Fluorene	CT,NY
Phenanthrene	CT,NY
Anthracene	CT,NY
Fluoranthene	CT,NY
Pyrene	CT,NY
Benzo[a]anthracene	CT,NY
Chrysene	CT,NY
Benzo[b]fluoranthene	CT,NY
Benzo[k]fluoranthene	CT,NY
Benzo[a]pyrene	CT,NY
Indeno[1,2,3-cd]pyrene	CT,NY
Dibenz[a,h]anthracene	CT,NY
Benzo[g,h,i]perylene	CT,NY

Complete Environmental Testing operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Public Health	PH0116	09/30/2016
NY	New York Certification (NELAC)	11982	04/01/2016



COMPLETE ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY

Volatile Soils Only:
Date and Time in Freezer
Client:
CET:

80 Lupes Drive
Stratford, CT 06615
Tel: (203) 377-9984
Fax: (203) 377-9952
e-mail: cet1@cellabs.com
Bottle Request e-mail: bottleorders@cellabs.com

Table with columns: Sample ID, Sample Depths (Units), Collection Date/Time, Matrix (A=Air, S=Soil, W=Water, DW=Drinking Water, O=Cassette, Solid, Wipe, Other), Turnaround Time (check one), Same Day, Next Day, 2-3 Days, Std (5-7 Days)

Table with columns: Organics (8260 CT List, 8260 Aromatics, 8260 Halogens, 624, CT ETPH, 8270 CT List, 8270 PNAs, PCBs, Pesticides), Metals (13 Priority Poll, 8 RCRA, TOTAL, TCLP, SPLP, Field Filtered, Lab To Filter), Additional Analysis, TOTAL # OF CONT., NOTE #

Project Contact: Harley Longford
Project: Groton Heights School
Location: Groton CT
Project #: G-06741
Collector(s): DKA
Data Report: [] PDF [] EDD - Specify Format [] RCP Pkg * [] DOAW *
[] Site Specific (M/S/M/S/D) * [] Other
[] GA [] GB [] SWP [] RI [] MA
[] CT [] NY [] Other
Evidence of Cooling: [] Y [] N
Temp Upon Receipt: [] °C
SHEET OF

* Additional charge may apply. ** TAT begins when the samples are received at the Lab and all issues are resolved. TAT for samples received after 3 p.m. will start on the next business day. REV:06/14



Client: Mr. Harley Langford
Tighe & Bond
213 Court St Suite 900
Middletown, CT 06457

Analytical Report

CET# 6010390

Report Date: January 29, 2016
Project: Groton Heights School, Groton
Project Number: G-06741
PO Number: G-06741

Connecticut Laboratory Certificate: PH 0116
Massachusetts laboratory Certificate: M-CT903



New York Certification: 11982
Rhode Island Certification: 199

CET #: 6010390

Project: Groton Heights School, Groton

Project Number: G-06741

SAMPLE SUMMARY

The sample(s) were received at 0.7°C.

This report contains analytical data associated with following samples only.

Sample ID	Laboratory ID	Matrix	Collection Date/Time	Receipt Date
SB-15 0-1ft	6010390-01	Soil	1/20/2016 8:00	01/21/2016
SB-16 0-1ft	6010390-02	Soil	1/20/2016 8:15	01/21/2016

Analyte: Total Solids [EPA 160.3 modified]

Analyst: MH

Matrix: Soil

Laboratory ID	Client Sample ID	Result	RL	Units	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
6010390-01	SB-15 0-1ft	95	1.0	%	1	B6A2516	01/25/2016	01/26/2016 00:00	
6010390-02	SB-16 0-1ft	94	1.0	%	1	B6A2516	01/25/2016	01/26/2016 00:00	

CET #: 6010390

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-15 0-1ft

Lab ID: 6010390-01

Conn. Extractable TPH

Method: CT-ETPH

Analyst: MH

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
ETPH	56	53	1	EPA 3550C	B6A2403	01/24/2016	01/25/2016 01:30	1

Surrogate: Octacosane 90.2 % 50 - 150 B6A2403 01/24/2016 01/25/2016 01:30
 1 C18-C36 may be PNA Related

PCBs by ASE

Method: EPA 8082A

Analyst: SJ

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
PCB-1016	ND	0.21	1	EPA 3545A	B6A2614	01/26/2016	01/28/2016 01:47	
PCB-1221	ND	0.21	1	EPA 3545A	B6A2614	01/26/2016	01/28/2016 01:47	
PCB-1232	ND	0.21	1	EPA 3545A	B6A2614	01/26/2016	01/28/2016 01:47	
PCB-1242	ND	0.21	1	EPA 3545A	B6A2614	01/26/2016	01/28/2016 01:47	
PCB-1248	ND	0.21	1	EPA 3545A	B6A2614	01/26/2016	01/28/2016 01:47	
PCB-1254	ND	0.21	1	EPA 3545A	B6A2614	01/26/2016	01/28/2016 01:47	
PCB-1260	ND	0.21	1	EPA 3545A	B6A2614	01/26/2016	01/28/2016 01:47	
PCB-1268	ND	0.21	1	EPA 3545A	B6A2614	01/26/2016	01/28/2016 01:47	

Surrogate: TCMX 76.9 % 50 - 150 B6A2614 01/26/2016 01/28/2016 01:47
Surrogate: DCB 82.2 % 50 - 150 B6A2614 01/26/2016 01/28/2016 01:47

CET #: 6010390

Project: Groton Heights School, Groton

Project Number: G-06741

Client Sample ID SB-16 0-1ft

Lab ID: 6010390-02

Conn. Extractable TPH

Method: CT-ETPH

Analyst: MH

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
ETPH	830	53	1	EPA 3550C	B6A2404	01/24/2016	01/25/2016 03:52	1

Surrogate: Octacosane 91.8 % 50 - 150 B6A2404 01/24/2016 01/25/2016 03:52
 1 C18-C36 may be PNA Related

PCBs by ASE

Method: EPA 8082A

Analyst: SJ

Matrix: Soil

Analyte	Result (mg/kg dry)	RL (mg/kg dry)	Dilution	Prep Method	Batch	Prepared	Date/Time Analyzed	Notes
PCB-1016	ND	0.21	1	EPA 3545A	B6A2614	01/26/2016	01/28/2016 02:05	
PCB-1221	ND	0.21	1	EPA 3545A	B6A2614	01/26/2016	01/28/2016 02:05	
PCB-1232	ND	0.21	1	EPA 3545A	B6A2614	01/26/2016	01/28/2016 02:05	
PCB-1242	ND	0.21	1	EPA 3545A	B6A2614	01/26/2016	01/28/2016 02:05	
PCB-1248	ND	0.21	1	EPA 3545A	B6A2614	01/26/2016	01/28/2016 02:05	
PCB-1254	ND	0.21	1	EPA 3545A	B6A2614	01/26/2016	01/28/2016 02:05	
PCB-1260	ND	0.21	1	EPA 3545A	B6A2614	01/26/2016	01/28/2016 02:05	
PCB-1268	ND	0.21	1	EPA 3545A	B6A2614	01/26/2016	01/28/2016 02:05	

Surrogate: TCMX 87.6 % 50 - 150 B6A2614 01/26/2016 01/28/2016 02:05
Surrogate: DCB 93.9 % 50 - 150 B6A2614 01/26/2016 01/28/2016 02:05

CET # : 6010390

Project: Groton Heights School, Groton

Project Number: G-06741

QUALITY CONTROL SECTION

Batch B6A2403 - CT-ETPH

Analyte	Result (mg/kg)	RL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B6A2403-BLK1)					Prepared: 1/24/2016 Analyzed: 1/24/2016				
ETPH	ND	50							
<i>Surrogate: Octacosane</i>					88.4	50 - 150			
LCS (B6A2403-BS1)					Prepared: 1/24/2016 Analyzed: 1/24/2016				
ETPH	1210	50	1,500.000		80.5	60 - 120			
<i>Surrogate: Octacosane</i>					89.2	50 - 150			

CET # : 6010390

Project: Groton Heights School, Groton

Project Number: G-06741

Batch B6A2404 - CT-ETPH

Analyte	Result (mg/kg)	RL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B6A2404-BLK1)					Prepared: 1/24/2016 Analyzed: 1/25/2016				
ETPH	ND	50							
<i>Surrogate: Octacosane</i>					91.9	50 - 150			
LCS (B6A2404-BS1)					Prepared: 1/24/2016 Analyzed: 1/25/2016				
ETPH	1310	50	1,500.000		87.6	60 - 120			
<i>Surrogate: Octacosane</i>					92.6	50 - 150			
Duplicate (B6A2404-DUP1)		Source: 6010390-02			Prepared: 1/24/2016 Analyzed: 1/25/2016				
ETPH	882	53		828			6.21	30	
<i>Surrogate: Octacosane</i>					89.9	50 - 150			
Matrix Spike (B6A2404-MS1)		Source: 6010390-02			Prepared: 1/24/2016 Analyzed: 1/25/2016				
ETPH	1870	53	1,593.082	828	65.4	50 - 150			
<i>Surrogate: Octacosane</i>					90.4	50 - 150			
Matrix Spike Dup (B6A2404-MSD1)		Source: 6010390-02			Prepared: 1/24/2016 Analyzed: 1/25/2016				
ETPH	1840	53	1,593.082	828	63.3	50 - 150	1.80	30	
<i>Surrogate: Octacosane</i>					90.5	50 - 150			

CET # : 6010390

Project: Groton Heights School, Groton

Project Number: G-06741

Batch B6A2614 - EPA 8082A

Analyte	Result (mg/kg)	RL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Blank (B6A2614-BLK1)					Prepared: 1/26/2016 Analyzed: 1/27/2016				
PCB-1016	ND	0.20							
PCB-1221	ND	0.20							
PCB-1232	ND	0.20							
PCB-1242	ND	0.20							
PCB-1248	ND	0.20							
PCB-1254	ND	0.20							
PCB-1260	ND	0.20							
PCB-1268	ND	0.20							
<i>Surrogate: TCMX</i>					78.8	50 - 150			
<i>Surrogate: DCB</i>					84.1	50 - 150			
LCS (B6A2614-BS1)					Prepared: 1/26/2016 Analyzed: 1/27/2016				
PCB-1016	1.03	0.20	1.000		103	50 - 150			
PCB-1260	1.08	0.20	1.000		108	50 - 150			
<i>Surrogate: TCMX</i>					87.0	50 - 150			
<i>Surrogate: DCB</i>					86.9	50 - 150			



80 Lupes Drive
Stratford, CT 06615

Tel: (203) 377-9984
Fax: (203) 377-9952
email: cet1@cetlabs.com

Quality Control Definitions and Abbreviations

Internal Standard (IS)	An Analyte added to each sample or sample extract. An internal standard is used to monitor retention time, calculate relative response, and quantify analytes of interest.
Surrogate Recovery	The % recovery for non-tarer organic compounds that are spiked into all samples. Used to determine method performance.
Continuing Calibration Batch	An analytical standard analyzed with each set of samples to verify initial calibration of the system. Samples that are analyzed together with the same method, sequence and lot of reagents within the same time period.
ND	Not detected
RL	Reporting Limit
Dilution	Multiplier added to detection levels (MDL) and/or sample results due to interferences and/or high concentration of target compounds.
Duplicate Result	Result from the duplicate analysis of a sample. Amount of analyte found in a sample.
Spike Level	Amount of analyte added to a sample
Matrix Spike Result	Amount of analyte found including amount that was spiked.
Matrix Spike Dup	Amount of analyte foun in duplicate spikes including amount that was spike.
Matrix Spike % Recovery	% Recovery of spiked amount in sample.
Matrix Spike Dup % Recovery	% Recovery of spiked duplicate amount in sample.
RPD	Relative percent difference between Matrix Spike and Matrix Spike Duplicate.
Blank	Method Blank that has been taken through all steps of the analysis.
LCS % Recovery	Laboratory Control Sample percent recovery. The amount of analyte recovered from a fortified sample.
Recovery Limits	A range within which specified measurements results must fall to be compliant.
CC	Calibration Verification

- Flags:
- H- Recovery is above the control limits
 - L- Recovery is below the control limits
 - B- Compound detected in the Blank
 - P- RPD of dual column results exceeds 40%
 - #- Sample result too high for accurate spike recovery.



Connecticut Laboratory Certification PH0116
Massachussets Laboratory Certification M-CT903

New York Certification 11982
Rhode Island Certification 199

CET #: 6010390

Project: Groton Heights School, Groton

Project Number: G-06741

Questions related to this report should be directed to David Ditta, Timothy Fusco, or Robert Blake at 203-377-9984.

Sincerely,



David Ditta
Laboratory Director

Report Comments:

Sample Result Flags:

- E- The result is estimated, above the calibration range.
- H- The surrogate recovery is above the control limits.
- L- The surrogate recovery is below the control limits.
- B- The compound was detected in the laboratory blank.
- P- The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
- D- The RPD between the sample and the sample duplicate is high. Sample Homogeneity may be a problem.
- + - The Surrogate was diluted out.
- *C1- The Continuing Calibration did not meet method specifications and was biased low for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased low.
- *C2- The Continuing Calibration did not meet method specifications and was biased high for this analyte. Increased uncertainty is associated with the reported value which is likely to be biased high.
- *F1- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the low side.
- *F2- The Laboratory Control Sample recovery is outside of control limits. Reported value for this analyte is likely to be biased on the high side.
- I- The Analyte exceeds %RSD limits for the Initial Calibration. This is a non-directional bias.

All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

Complete Environmental Testing is only responsible for the certified testing and is not directly responsible for the integrity of the sample before laboratory receipt.

ND is None Detected at the specified detection limit

All analyses were performed in house unless a Reference Laboratory is listed.

Samples will be disposed of 30 days after the report date.

CET #: 6010390

Project: Groton Heights School, Groton

Project Number: G-06741

CERTIFICATIONS

Certified Analyses included in this Report

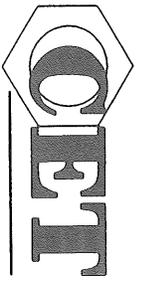
Analyte	Certifications
<i>CT-ETPH in Soil</i>	
ETPH	CT
<i>EPA 8082A in Soil</i>	
PCB-1016	CT,NY
PCB-1221	CT,NY
PCB-1232	CT,NY
PCB-1242	CT,NY
PCB-1248	CT,NY
PCB-1254	CT,NY
PCB-1260	CT,NY
PCB-1268	CT

Complete Environmental Testing operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Public Health	PH0116	09/30/2016
NY	New York Certification (NELAC)	11982	04/01/2016



6010390



COMPLETE ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY

Volatile Soils Only:

Date and Time in Freezer

Client:

CET:

80 Lupes Drive
 Stratford, CT 06615
 Tel: (203) 377-9984
 Fax: (203) 377-9952
 e-mail: cet1@cetlabs.com
 Bottle Request e-mail: bottleorders@cetlabs.com

Sample ID	Sample Depths (Units)	Collection Date/Time	Matrix A=Air S=Soil W=Water DW=Drinking Water C=Cassette S=Solid W=Wipe Other (Specify)	Turnaround Time ** (check one)			
				Same Day *	Next Day *	2-3 Days *	Std (5-7 Days)
CB-13 0-1		12/16/08	S				X
CB-16 0-1		12/16/08	S				X

Organics	Metals (check all that apply)	Additional Analysis
8260 CT List		
8260 Aromatics		
8260 Halogens		
624		
CT ETPH		
8270 CT List		
8270 PNAs		
PCBs		
Pesticides		
13 Priority Poll		
8 RCRA		
TOTAL		
TCLP		
SPLP		
Field Filtered		
Lab To Filter		

Soil VOCs Only (M=MeOH B=Bisulfate W=Water F=Emply E=Expore)
 CONTAINER TYPE (P-Plastic, G-Glass, V-Vial, O-Other)
 PRESERVATIVE (Cl-HCl, N-HNO₃, S-H₂SO₄, Na-NaOH, C-Cool, O-Other)
 RELINQUISHED BY: [Signature] DATE/TIME: 1-21-16 17:53 RECEIVED BY: [Signature] DATE/TIME: 1-21-16 17:53

Client / Reporting Information
 Company Name: Harley Corp
 Address: 133 West St
 City: Stratford State: CT Zip: 06615
 Report To: Harley Corp E-mail: [Blank]
 Phone #: [Blank] Fax #: [Blank]

Project Information
 Project Contact: Harley Corp PO #: 606741
 Project: Cotton Targets Site Project #: 606741
 Location: Stratford, CT Collector(s): DEA
 QA/QC: Std Site Specific (N/S/M/S/D) * RCP Pkg * DOAW *
 EDD - Specify Format GA GB SWP Other
 RSR Reporting Limits (check one) CT NY RI MA
 Laboratory Certification Needed (check one) Evidence of Cooling: N SHEET 1 OF 1
 Temp Upon Receipt: 27 °C