# REMEDIAL ACTION PLAN

**FORMER GONG BELL SITE**

**103 MAIN STREET**

**EAST HAMPTON, CONNECTICUT**

**Prepared for:**

**Town of East Hampton**
**20 High Hill Road**
**East Hampton, Connecticut**

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## 1.0 INTRODUCTION

AECOM USA, Inc. was contracted by the Town of East Hampton ("Town") to prepare this Remedial Action Plan (RAP) for the remediation of the former Gong Bell property (site) located at 103 Main Street, East Hampton, Connecticut. The property is to be remediated in accordance with the Connecticut Remediation Standard Regulations (CTDEP, January 1996).

In accordance with the United States Environmental Protection Agency (USEPA) Grant requirements, the site has been entered into the CTDEP Voluntary Remediation Program defined in the Regulations of Connecticut State Agencies (RSCA) Section 22a-133x.

This RAP focuses on a permanent solution for the remediation of soils at the site, to be performed in conjunction with the redevelopment of the site for future use as a town parking lot. In general, soil remediation activities will consist of the relocation and rough grading of soils present at the site, placement of an impermeable barrier (engineered control), placement of clean fill and other materials associated with the redevelopment construction such as pavement and topsoil), and finished grading of the redeveloped site to promote stormwater runoff and minimize infiltration. The placement of the engineered control is intended to address both direct exposure and pollutant mobility concerns at the site. Land use restrictions are proposed to prevent future disturbance of the impermeable barrier and underlying soils.

Compounds above RSR criteria have also been detected in groundwater at the site. However, the groundwater data are limited and further monitoring will be necessary to evaluate RSR compliance issues. Post-remediation groundwater monitoring will be conducted as part of the operation and maintenance activities for the proposed soil

remediation activities. This post-remediation groundwater monitoring will further assess the groundwater conditions at the site. Alternatives to address remaining groundwater issues will be evaluated at that time. Active groundwater remediation is not anticipated for this site. The plan for groundwater monitoring will be presented in the Soil Remedial Action Report. Therefore this RAP addresses soil remediation only.

Details regarding pertinent site history and specific tasks and procedures associated with implementing this RAP are provided herein.

### 1.1 Site Setting and History

The site, referenced by the East Hampton Tax Assessor's Office as Map 06A Block 57, Lot 2B, is comprised of approximately 0.45-acres, located at 103 Main Street in East Hampton, Connecticut (Figure 1). The site is zoned commercial, and is located in a mixed residential and commercial area. The site has been owned by the Town of East Hampton since October 2003. At least a portion of the site is located within the 100 year flood plain.

The site was occupied by the Gong Bell Manufacturing Company between approximately the late 1800s through the 1960s. The Gong Bell Manufacturing Company manufactured cast-iron and wooden toys. Previous investigations have suggested that painting and merchandise storage may also have occurred at the site, although this has not been confirmed. A sheet metal manufacturing company (BSR Sheet Metal Manufacturing) also occupied the site during the 1970s. The former building had been vacant since approximately 1980, and was used by the East Hampton Fire Department for controlled fire burning exercises during the 1990s. The former building was demolished in approximately 1998, and with the exception of a small, one room brick structure, the site is currently vacant.

### 1.2 Surrounding Properties

Properties nearby the former Gong Bell property have various uses. The site is bound to the north by an industrial complex, to the east and south by Pocotopaug Creek, across which is the Town Library, and to the west by Main Street, across which is Diamond Fuels (former G&S Station).

According to the Tighe & Bond (T&B) Phase I ESA, petroleum releases have been documented at the former G&S Station, although this facility was not considered hydraulically upgradient of the site. Additionally, a former industrial facility (L&W Industries) is located within the vicinity of (and upgradient of) the site. Volatile organic compound (VOC) impacts were previously identified on this property, according to the T&B Phase I ESA.

### 1.3 Site Geology and Hydrogeology

According to the Surficial Materials Map of Connecticut (Janet Radway Stone, et al, 1992), the surficial soils underlying the site are mapped as glacial till. Glacial till is defined as glacial drift composed of an unconsolidated, poorly sorted mixture of clay, silt, sand, gravel, and boulders. According to the Middlesex County Soil Survey, surficial soils at the site are classified as "Udorthents", which refers to urban soils that have been extensively altered by cutting or filling activities. This is consistent with observations made during previous site investigations. Historic fill containing ash, cinders, coal, brick, glass, brick, and wood fragments have been observed to a depth of approximately six feet bgs across most of the site during previous site subsurface investigations.

In addition, during recent bridge construction work adjacent to the southwestern corner of the site, a non-native, imported fill material was reportedly placed across most of the open areas on the western, southwestern portion of the site. This imported fill material reportedly originated from stream sediment dredging which occurred around the footings of the bridge during construction. Observations during a previous investigation identified imported fill up to a thickness of approximately two feet and consisting primarily of medium to fine sand and gravel with some silt. Native materials observed beneath the historic fill at the site consisted primarily of medium to fine sand, silt, and gravel, with coarser sands in the saturated soils.

The CTDEP has designated the groundwater quality in the area of the site as GA/GAA which suggests that groundwater is suitable for drinking without treatment; however, groundwater may not meet the GA/GAA water quality standards since the CTDEP previously ordered the Town of East Hampton to construct a public water supply system to provide potable drinking water to 19 properties in the Village Center due to the detection of VOCs in groundwater. According to previous site investigations, depth of

groundwater on the site ranged between three and eight feet bgs and flows in a south, southwesterly direction toward Pocotopaug Creek.

Pocotopaug Creek abuts the site on the southern and eastern site boundaries. The Creek is classified by the CTDEP as C/B. Inland surface waters classified as C/B are those that, due to point or non-point sources of pollution, currently do not meet certain Class B Water Quality Criteria or one or more designated uses. The water quality goal is achievement of Class B criteria and attainment of Class B designated uses. Class B waters are those known or presumed to meet Class B Water Quality Criteria that support the following designated uses: recreational use; fish and wildlife habitat; agricultural and industrial supply and other legitimate uses, including navigation.

### 1.4 Previous Investigations

Previous environmental investigations conducted at the site have included a Phase I Environmental Site Assessment (ESA) conducted in 2003 and a Phase I ESA Update conducted in 2005, a Phase II ESA conducted in 2005, and a Remedial Investigation conducted in 2010. A summary of each of the previous site investigations is provided below.

Based on these previous investigations, a layer of historic fill to a depth of approximately six feet bgs containing ash, cinders, glass, brick, and wood fragments, has been identified across most of the site, with the exception of the northeastern corner of the site, and the southeastern corner of the site adjacent to the Pocotopaug Creek. Both recent and historic data indicate that various COCs are present above their respective RSR criteria in this fill layer. Specifically, select PAHs and metals (antimony, arsenic, copper, and lead) have exceeded their respective Res DEC and/or I/C DEC, and leachable concentrations of copper and lead have been identified above the GA PMC in the unsaturated soils. Historic data also indicate an exceedance of mercury at one location.

A new AOC was also identified and investigated during the most recent site investigation. A layer of imported fill material from an unconfirmed origin was identified covering most of the open area of the southwestern-central portion of the site. ETPH and PAHs were identified in this material above their respective DEC, and ETPH and

metals were identified above their respective GA PMC. The vertical extent of this material appears to consist of the upper (approximate) two feet of fill in the open areas of the site; however, the exact vertical and horizontal limits have not been delineated.

During previous investigations, several metals were detected in groundwater at the site at concentrations that exceeded certain RSR criteria. In 2005, antimony, lead, and zinc were detected in groundwater at concentrations that exceeded their respective GWPC and/or SWPC. In 2009, arsenic and copper were detected in groundwater at concentrations that exceeded their respective SWPC.

Historic soil and groundwater data from previous site investigations are presented in Appendix B.

***Phase I ESA and Phase I ESA Update, Tighe & Bond, 2003 and 2005***

A Phase I ESA was completed by T&B in 2003, and was subsequently updated in 2005. Four potential areas of concern (pAOC) were identified by T&B during the 2005 Phase I ESA Update. The pAOCs identified at the site included the following:

- pAOC 1 Historic On-Site Fill;
- pAOC 2 Suspected Former Underground Storage Tank (UST);
- pAOC 3 Former Industrial Building; and
- pAOC 4 Former Wastewater Disposal System.

Contaminants of Concern (COCs) identified include the following:

- Volatile Organic Compounds (VOCs);
- Extractable Total Petroleum Hydrocarbons (ETPH);
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Polychlorinated Biphenyls (PCBs); and
- Metals - 13 Priority Pollutant Metals (PP-13 Metals), including Silver, Arsenic, Beryllium, Cadmium, Chromium, Copper, Mercury, Nickel, Lead, Antimony, Selenium, Thallium, and Zinc.

According to the T&B Phase I ESA, the CTDEP ordered the installation of a public supply water system in 1992 after VOCs were detected in the East Hampton Village Center. The source of the VOCs has not been identified. Source water for the Village Center water system, provided by two bedrock wells, is also treated for VOCs before distribution. Quarterly monitoring of the Village wells has shown VOC levels to be decreasing steadily from 1990 to at least 2002.

***Phase II ESA, Tighe & Bond 2005***

A Phase II ESA was conducted by T&B in 2005, subsequent to completion of the Phase I ESA update. A total of 13 soil borings and four monitoring wells were completed at the site at that time. In addition, three sediment samples were collected from Pocotopaug Creek as part of the Phase II investigation. Borings completed and monitoring wells installed are shown on Figure 2.

During the Phase II ESA, no evidence of the suspected former UST (pAOC 2) was found, and no significant petroleum impacts were identified. Evidence of pAOC 1, historic on-site fill, including ash, coal, brick, glass, and wood were observed in several borings completed on the central and southern portions of the site. The historic fill was identified at depths ranging between one to six feet below ground surface (bgs). Observations made during completion of the Phase II ESA suggested the historic fill exists over most of the site, with the exception of possibly the far eastern portion, and the northern and western boundaries.

The former wastewater disposal system (pAOC 4) was suspected to have impacted sediments in Pocotopaug Creek through potential direct discharge of wastewater to the creek. During the Phase II ESA, it was suggested that, based on off-site sediment sampling analysis, a release impacting the sediments of Pocotopaug Creek had occurred. Several metals, PAHs, and ETPH were detected; however, there are no remediation standards for freshwater sediment. Additionally, based on the available data and proximity of surrounding area industrial facilities with respect to the stream, the presence of impacts to stream sediments may not be directly attributable to releases resulting specifically from the site at this time.

T&B found little information available pertaining to waste management history or industrial practices including discharges to the ground surface at the site. Based on previous site operations, various paints, solvents, oils, and/or metals containing products are likely to have been used. Impacts of several COCs, including metals (antimony, arsenic, copper, and lead), ETPH, and PAHs were identified in historic fill samples collected, primarily within the former building footprint, and ranging in depth from one to six feet below ground surface (bgs). Exceedances of RSR criteria observed included metals (antimony, arsenic, copper and lead) and PAHs. Based on the similarity of concentrations of metals and PAHs observed in soil and groundwater samples from within and outside of the building footprint, RSR exceedances were attributed to contaminants associated with the fill materials rather than specific industrial activities.

Select soil samples were also analyzed for PCBs; one soil sample from within the footprint of the former industrial building, one soil sample from an area outside the footprint of the former building, and three sediment samples. No PCBs were detected above 1 mg/kg in these samples; therefore PCBs were ruled out as a potential COC for this site.

In addition, antimony, lead, and zinc were detected in groundwater samples collected at concentrations that exceeded their respective GWPC and/or SWPC. The site is located upgradient of the Town Library, which has a community water supply well on the property. Several private residences also utilize private supply wells within approximately one half mile of the site (T&B, 2005). On this basis, the Town filed a Significant Environmental Hazard (SEH) report with the CTDEP due to an exceedance of the GWPC in groundwater within 500 feet of a public supply well. The Town Library supply well was sampled in 2005.

In response to the SEH report filed, CTDEP requested that a receptor survey be performed to locate supply wells within 500-feet of 103 Main Street. Tighe & Bond conducted this receptor survey and documented the activities and results of this survey in their letter-report dated September 29, 2005. A copy of this receptor survey is provided in Appendix C. This receptor survey identified a number of properties within

500 feet of the subject site, many of which contain supply wells. The receptor survey was used by the Chatham Health Department to conduct sampling at the identified properties. The results of this sampling were summarized in a draft Tighe & Bond letter report dated January 12, 2007 (also included in Appendix C).

***Remedial Investigation, AECOM, 2010***

A Remedial Investigation (RI) was completed by AECOM in 2010. The RI was performed to refine the lateral extents of impacted soil at the site exceeding regulatory criteria. A secondary objective of the RI was to further evaluate groundwater quality, with a specific focus on the upgradient portion of the site, where previous investigations indicated a potential for off-site metals contamination to migrate onto the site. In addition, the RI evaluated the environmental condition of imported fill material which had recently been spread across portions of the site from a nearby bridge project.

A total of 8 soil borings and one monitoring well were completed in May 2009 for this investigation. Boring and monitoring well locations are shown on Figure 2. Historic fill materials at the site, previously described as pAOC 1 Historic Site-Wide Fill, were observed in the upper (approximate) six feet bgs in all soil borings completed at the site with the exception of B-14 (northeastern boundary) and B-15 (eastern perimeter, adjacent to the stream). Historic fill materials observed contained black sand, ash, cinders, brick, and some coal slag, glass, and wood fragments. Additionally, an imported fill material was observed in the upper (approximate) two feet in the southwestern-central, open area of the site (B-17, B-20, and B-21). The exact area of this recently imported material is not currently known, although it is believed to be present across the approximate south-southwestern one-third to one-half of the site. The vertical extent of this material appears to be present over the upper (approximate) two feet of the historic fill in the open areas of the site; however, the exact limits have not been delineated.

Up to two sample aliquots were collected from each soil boring. One aliquot was collected from the shallow, 0-5 foot interval (which was typically collected in the historic fill layer). A deeper sample was also collected at some locations from the native site materials, typically spanning the water table, to evaluate impacts potentially resulting

from the historic fill or historic site activities. An additional shallow sample was collected from the imported fill encountered at boring B-17, and shallow sampling was performed on this imported fill material in borings B-20 and B-21. Soil samples collected from the primary soil borings (i.e., original planned locations) were analyzed for one or more of the following parameters: VOCs, ETPH, SVOCs and SPLP SVOCs, and RCRA 8 Metals plus antimony and copper and SPLP Metals. Due to the unconfirmed origin of the recently imported fill material, samples that were collected from this material were also analyzed for the following: Connecticut 15 RSR Metals, Pesticides, and PCBs.

PAHs and metals (antimony, arsenic, copper, and lead) were identified above their respective DEC in the unsaturated soils comprising the upper (approximate) six feet of the site in the historic fill material. Unsaturated soils were also identified to contain leachable concentrations of select metals (copper and lead) in exceedance of their respective GA PMC. In addition to the historic fill material, the newly placed imported fill material was found to contain ETPH and PAH concentrations in exceedance of their respective DEC, as well as ETPH and leachable metals in concentrations exceeding their respective PMC.

During the soil boring program, the water table was encountered at approximately three to 3.5 feet bgs on the southeastern portion of the site in borings completed adjacent to the stream (B-15 and B-16), and approximately seven feet bgs along the northern (MW-5 and B-19) and western (B-17) site boundary. Groundwater was encountered slightly deeper (approximately eight feet bgs) in the northwestern corner of the site (B-18). One monitoring well (MW-5) was completed, installed to a depth of 15 feet bgs, with 10 feet of slotted screen spanning the water table. Groundwater measurements in the new and existing monitoring wells indicated a southwesterly groundwater flow direction across the site toward Main Street and the Pocotopaug Creek.

Five groundwater monitoring wells (four existing, one new) were sampled in June 2009 and analyzed for one or more of the following: VOCs, ETPH, PAHs, and RCRA 8 Metals plus antimony and copper. VOCs, ETPH, and PAHs were not detected in any of these groundwater samples. The concentration of arsenic detected in MW-4 and copper detected in MW-3 exceeded their respective SWPC. Although the concentration of

arsenic was reported slightly above the Connecticut Department of Health (DOH) revised drinking water action level of 0.01 mg/L that is recommended for comparison in the CTDEP RSR summary table, this concentration is still below the 1996 RSR GWPC, therefore no exceedance of the GWPC at this location was considered, specifically with respect to potential SEH reporting. Low concentrations (well below criteria) of silver were also detected in two monitoring wells (MW-2 and MW-3).

### 1.5 Remediation Criteria

Based on the GA groundwater designation in the area and the potential land uses of the site following redevelopment, the RSR criteria that apply to soil at this site are the GA PMC and Res DEC. The RSR criteria that apply to groundwater at this site are the GWPC, SWPC, and Res VC. The less stringent I/C DEC and I/C VC may be used at the site if residential use of the site is restricted and an Environmental Land Use Restriction (ELUR) is recorded on the land deed.

### 1.6 Overview of Remedial Action Plan

This RAP includes an evaluation of select soil remedial alternatives, a discussion of RSR compliance issues, and a description of the proposed soil remediation approach, as well as site management issues such as health and safety protocols, waste management procedures, soil sampling and analytical protocols, project scheduling, site security, record-keeping protocols, and post-remediation groundwater monitoring protocols to be implemented at the site. Preliminary remediation plans and construction details are also provided for reference.

Groundwater contamination issues include apparent SWPC exceedances as well as an arsenic exceedance of the DOH revised drinking water action level (although the concentration is below the GWPC). However, the groundwater data are limited and further monitoring will be necessary to evaluate RSR compliance issues. Post-remediation groundwater monitoring will be conducted as part of the operation and maintenance activities for the site. The plan for groundwater monitoring will be presented in the Soil Remedial Action Report. Therefore this RAP addresses soil remediation only.

In conjunction with the site remediation and redevelopment, the small existing structure toward the southeastern corner of the property will be demolished and removed. The existing foundation remains in the northwestern corner will also be removed.

In addition to the soil and groundwater impacts identified at the site, one of the potential AOCs associated with the site pertains primarily to potential impacts to the adjacent Pocotopaug Creek surface water quality and sediments. This AOC is not addressed as part of this RAP; however, the Town of East Hampton is planning to address sediment and surface water quality issues in Pocotopaug Creek along the reach running through the Village Center area once additional funding is obtained from the USEPA (T&B, 2006).

## 2.0 EVALUATION OF REMEDIAL ALTERNATIVES

Several remedial alternatives were considered to address both direct exposure and pollutant mobility exceedances in soil at the site and meet the requirements of the RSRs. Alternatives considered were:

1. Removal and off-site disposal of all contaminated soil, to concentrations below regulatory levels or to the water table;

2. Construction of an engineered control (impermeable pavement) across the surface of the site; and

3. Relocation/regrading of upper contaminated surface soils and installation of an engineered control (impermeable liner) and clean fill.

***Alternative 1. Remove all contaminated soil***

Based on the results of existing sample data, soil consisting of historic fill contaminated with PAHs and metals above regulatory levels extends to a depth of approximately 6 feet throughout much of the site. In addition, a recently imported fill layer up to 2 feet in depth is present across a portion of the site and contains ETPH, PAHs and metals above regulatory levels. To remove and dispose of this contaminated soil throughout the site to these depths would require meeting several challenges: construction support for Main Street adjacent to the site and the associated utilities existing in this street right of way, construction support for the site perimeter along Pocotopaug Creek to the south and east of the site, and construction support to avoid disturbing the abutting developed property to the north. The estimated cost to implement this type of excavation and to transport and dispose of this volume of soil, including the cost to backfill the resulting excavation would be significantly more than other remedial alternatives evaluated herein. Due to this cost, plus construction challenges due to excavation alongside a roadway and the Pocotopaug Creek, this option is not considered feasible.

***Alternative 2. Surficial Engineered Control (impermeable pavement)***

One approach to address both direct exposure and pollutant mobility issues is to construct an impermeable pavement at the surface. One such product, MatCon©, has been used at other sites where infiltration of precipitation is a concern. This technology is available locally; however, in conversations with the proprietor of the technology, AECOM was told that it was only feasible to install this material at sites 1 acre in size or greater. In addition, as part of the development of this site and other sites within the Village Center, the town prefers that the site includes grassed and landscaped areas in addition to the proposed parking lot. Thus, this option was considered less desirable as well as infeasible.

***Alternative 3. Surficial Soil Removal and Subsurface Engineered Control***

To address both direct exposure and pollutant mobility concerns, an engineered control (or impermeable barrier, with permeability less then $10^{-6}$ cm/sec) would be constructed below existing grade, supplemented with a long term maintenance and monitoring plan and groundwater monitoring program. By placing an impermeable barrier in the subsurface, the site could be restored with pavement, lawn, landscaping, or other materials as desired, which would improve the aesthetics of the site and provide a greater beneficial reuse potential. In addition, this approach would allow the contaminated soil to remain on-site, avoiding the cost for transport and off-site disposal. Surface soils would be relocated/reused on-site as necessary to allow for the installation of the impermeable barrier above these soils. The impermeable barrier would cover essentially the entire site, terminating at the perimeter.

The approach of using an impermeable cap to isolate contaminated materials beneath it has been widely used for many years and a variety of applications including landfills and soil remediation. The capital cost for implementing this remedial action alternative is estimated to be significantly less than the other remedial options discussed above. Based on the benefits of significantly lower cost, standard engineering practice, less construction concerns, and flexibility for redevelopment plans, this alternative is preferred.

## 2.1 Evaluation of Engineered Control

East Hampton proposes to implement Alternative 3, which would be considered an engineered control under the RSRs. This approach to soil remediation at the site will address soil throughout the entire site (and AOCs related to contaminated soil at the site). Existing groundwater monitoring wells will be maintained to allow for future evaluation of groundwater RSR compliance issues. Active remediation of groundwater is not anticipated for this site.

This approach can be effectively implemented with the proposed site redevelopment plans and after remediation and redevelopment are complete, the site will be returned to productive use and will complement and benefit the surrounding area. With proper design, construction and site controls (Town ownership and ELUR), the risk that this impermeable cap will fail is very low. Should the cap accidentally be penetrated in the future, repair of the damaged liner and cap section is straightforward. Any such failure can be quickly repaired and would pose little short-term risk to human health and the environment.

CTDEP has approved the use of an impermeable cap as an engineered control for soil remediation at a number of sites in CT including the Farmers Market site on Canal Street in Shelton. Section 22a-133k-2(f)(2) of the RSRs specifies that an engineered control may be approved by the Commissioner as a variance to the pollutant mobility and direct exposure criteria if certain conditions are met. CTDEP has issued a Guidance Document (Feb 2009) outlining the requirements for an Engineered Control (EC) request. This document includes a two part application process and associated application and transmittal forms as well as instructions for completing the application. Documentation pertaining to the CTDEP approval of the EC variance for this site is located in Appendix D.

## 2.2 Engineered Control Requirements

The RSRs contain certain requirements for the use of engineered controls. These requirements pertain to: groundwater monitoring, public notice, financial surety, inspection and maintenance, and ELURs. Each of these requirements will be addressed

as the design and implementation of the site remediation (and the associated EC) proceeds.

## 3.0 REMEDIATION PLANNING

The following sections describe the remediation planning tasks to be performed in conjunction with the implementation of the remediation activities.

### 3.1 Health and Safety

AECOM has prepared a Health and Safety Plan (HASP) for site activities previously conducted at the site which meets the requirements of 29 CFR 1910.120. Prior to initiating field remediation activities, the existing HASP will be updated to incorporate these proposed activities. All work will be conducted in accordance with the HASP. The HASP is intended to cover AECOM employees and site visitors only. Remediation contractors will be required to develop and follow their own HASP during all site activities. All soil remediation work will be conducted by personnel that have 40 hour OSHA training.

The objective of the HASP will be as follows:

- To protect the health and safety of on-site personnel.
- To limit exposure of the public to hazardous substances, pollutants, or contaminants.

The HASP will include the following:

- Brief Site Description
- Site Safety Hazards
- Chemical Compounds of Concern
- Project Personnel
- Site Training/Medical Surveillance Requirements
- Personnel Protective Equipment (PPE) Requirements
- Air Monitoring Requirements
- Decontamination Procedures
- Work Zones
- Remediation Derived Waste Disposal/Handling
- Emergency Response

- Special Operations Safety Requirements
- Emergency Resources
- Generic First Aid

### 3.2 Permits and Approvals

The following permits and approvals from federal, state, or local governments are anticipated for this project.

1. Local Inland Wetlands
2. Local Building Demolition Permit
3. Local Floodplain Disturbance Approval

As this project is an Licensed Environmental Professional (LEP)-lead site, with work being conducted in accordance with the Connecticut General Statutes 22a-133x, CTDEP approvals for these activities are not required. However, CTDEP approval is required for the Engineered Control variance as discussed previously.

### 3.3 Public Notification

In accordance with the Connecticut RSRs, the CT VRP, as well as the USEPA cleanup fund, public notice for these activities is required. To satisfy the VRP, the public notification process will be conducted in accordance with Connecticut General Statute 22a-134(a)(h)(2)(i). This process includes a requirement for public notice of remediation activities to be placed in appropriate local newspapers a minimum of 45 days prior to the start of the soil remediation activities and notification to the Director of Public Health for the Town. Additionally, either notice of the planned remediation activities must be mailed to each owner of record of property which abuts the parcel, at the address for such property on the last-completed grand list for the Town or a sign must be placed at the site which is visible from the road which states that an environmental clean-up is in progress at the site. In accordance with the referenced General Statute, if a sign is posted at the site, it will not be less than six feet by four feet, clearly visible from the road and include a name and telephone number of a person who can provide additional information about the project.

To satisfy USEPA requirements, a public meeting will be held prior to start of remediation activities.

### 3.4 Waste Management

Several waste streams will be generated during remedial activities at the site. The following presents a summary of the anticipated waste streams and the proposed management processes.

1. Contaminated soil from the site will be relocated and reused on-site for grading purposes. If any excess contaminated soil requires off-site disposal, the excavated soil will be temporarily stockpiled on-site, characterized, and subsequently loaded into transport vehicles for shipping to an off-site disposal facility permitted to accept this waste. Any stockpiles of contaminated soil to be disposed of will be covered with weatherproof tarps and secured with sand bags and haybales.

2. Stumps will be generated for disposal during site clearing activities. Surficial soil will be brushed off and removed from the stumps and left on-site. After soil has been removed, stumps will be classified as land-clearing debris and transported to an appropriate off-site disposal facility.

3. Demolition debris will be generated from the demolition of the existing brick structure at the site. If asbestos containing material (ACM) and/or lead based paint (LBP) is present, affected materials will be separated from the demolition debris as necessary and transported for disposal at off-site facilities permitted to accept such wastes. Demolition debris not affected by ACM or LBP will be classified as construction and demolition (C&D) waste and will be transported for disposal at an appropriate off-site facility.

4. Demolition debris will be generated from the removal of portions of the existing building foundations at the site. Where possible, the foundation demolition debris will be left on-site and mixed with the contaminated soil to be placed beneath the cap. Where this is not possible, the foundation demolition debris will be disposed

off-site. Surficial soil will be brushed off and removed from the debris and the soil will be left with other existing soil on-site. After soil is removed, the debris will be visually inspected for signs of contamination (such as staining). Debris with signs of contamination will be sampled and characterized for disposal as necessary. If contaminated debris is identified, it will be segregated from other debris and transported for disposal at an off-site disposal facility permitted to accept such waste. Non-contaminated concrete debris will be transported for disposal at an appropriate off-site recycling facility.

5. All decontamination media will be collected, characterized and transported for off-site disposal at a facility permitted to accept these wastes. Liquid materials will be segregated from solid materials, and will be temporarily containerized on-site subsequent to disposal at an off-site facility.

6. Other solid materials (such as plastic sheeting, hay bales, personal protective equipment, etc.) used during the remediation activities will be segregated from other waste streams. If solid materials come into contact with contaminated materials, the solid materials will be disposed of along with the contaminated materials. If the solid materials do not come into contact with contaminated materials, they will be disposed of as municipal solid waste.

Prior to being transported off-site, wastes will be properly characterized and profiled for disposal when necessary. Waste disposal will be approved as required and the intended facility will confirm their acceptance of the waste prior to transport. Regulated waste will be disposed of at a facility permitted to accept such wastes.

Waste removal from the site will be documented by manifest or bill of lading. The Town of East Hampton will be named as the generator of the waste and a representative of the Town will sign waste profile forms and manifests. The waste disposal subcontractor will prepare disposal manifests or bills of lading and documentation for the town's use. The disposal documentation will be included in the RAR.

### 3.5 Sedimentation and Erosion Control

Prior to the excavation and grading of contaminated soils at the site, an erosion and sedimentation control system (hay bales and/or silt fence) will be installed around the site. Site erosion and sedimentation controls will be installed and maintained in accordance with the Connecticut Guidelines for Soil Erosion and Sediment Control. To prevent off-site migration of materials, all equipment will be decontaminated prior to leaving the site and work will not be performed during heavy precipitation events.

### 3.6 Dust Control and Air Monitoring

To minimize the potential for the COCs at the site to be released in particulate form during site activities, dust control measures will be implemented if dust is observed during remedial activities. Throughout the remediation activities, air monitoring will be performed, by the contractor, in conjunction with project health and safety requirements to monitor the total dust and particulate emissions at the site during remedial activities. It is anticipated this will consist of the use of a portable dust meter. Further details on air monitoring will be included in the remediation contractor-prepared Health and Safety Plan (HASP).

The dust control measures will include the use of water to pre-wet soil to prevent airborne migration. Water will also be sprayed, where necessary, onto active work areas and other areas of the site that may be subject to the release of dust. Water may also be used in high-traffic areas to minimize dust emissions caused by vehicular traffic.

### 3.7 Decontamination

Decontamination of on-site heavy equipment will be performed as necessary to minimize the potential spreading of contamination. Brushing, high pressure water, or a steam cleaner will be used for equipment decontamination, with decontamination fluids collected for infiltration back onto the site.

All vehicular traffic entering and leaving the site will utilize the established construction entrance where an anti-tracking pad will help to miminize tracking of material from the site onto the street.

## 3.8 Site Restoration

Following installation of the cap (including liner and sand drainage/buffer layer), site restoration will consist of constructing a bituminous concrete parking lot and landscaping the areas outside the limits of the parking lot with topsoil and vegetation. Layout and design of these site restoration surface features will be in accordance with redevelopment plans prepared by CLA Engineers (included in Appendix E). The bituminous concrete parking will include a processed aggregate base and two courses of bituminous concrete above the cap section. The landscaped areas will include 6 inches of topsoil and low cover vegetation with shallow root systems.

## 3.9 Site Security

Temporary fencing will be used at the property to provide security during remediation activities. Signage will be used to alert the public to the site conditions, the nature of the project activities and to provide contact information.

## 3.10 Demobilization

Environmental contractor equipment, excess materials and wastes shall be demobilized following completion of soil remediation activities at the site.

## 4.0 SOIL REMEDIATION

The following sections describe the remediation plan to be implemented at the site with the intent of achieving compliance with the RSRs. Appendix E contains preliminary engineering drawings and details for the proposed remedial activities.

### 4.1 Areas of Remedial Activity

Due to the small size of the site and the likely widespread nature of the polluted fill, soil remediation does not focus on specific areas of concern. Instead, it is the intent of this plan to address the nearly the entire site within its property boundaries.

### 4.2 Approach to Soil Remediation

The approach for site remediation includes the grading and relocation of contaminated soil on-site (to avoid off-site contaminated soil disposal), followed by the placement of an impermeable barrier below a layer of clean backfill, and subsequent site restoration/redevelopment activities including construction of a parking lot and surrounding landscaped areas. Specifically, the tasks are as follows:

- Site preparation activities
- Grading and on-site relocation of surface soil
- Installation of impermeable barrier
- Backfill and site restoration, including construction of a new parking lot

***Site Preparation Activities***

Site preparation will include the establishment of site controls using silt fence and/or hay bales around the perimeter, as required, for prevention of soil erosion and temporary fencing for security and safety. A construction entrance with an anti-tracking pad will be established to allow access to the site and prevent cross contamination of the adjacent road surfaces. For control of traffic, it is anticipated that local police details will be provided during periods of high activity affecting public streets.

Site preparation will also include clearing and grubbing designated areas of vegetation to allow for cap installation. All surficial soil will be brushed off the stumps generated during the clearing activities and the soil will be left on-site. After the soil has been removed, stumps will be transported off-site for recycling or disposal.

As part of the site preparation activities, the small existing brick building in the southeast corner of the site will be demolished. To prepare for demolition, a screening survey will be conducted by a licensed professional to examine (and test if necessary) for the presence of ACM, lead-based paint (LBP) and/or PCB-containing building materials. If any such materials are present, affected materials will be separated from the demolition debris as necessary and transported for off-site disposal. All ACM, LBP, and PCB removal /disposal activities will be performed by a contractor licensed for such work and these activities will be inspected by a licensed consultant. These activities will follow all applicable local, state and federal laws and regulations including but not limited to proper notification, handling, and disposal requirements. Demolition debris not affected by ACM, LBP or PCBs will be classified as construction and demolition (C&D) waste and will be transported for off-site disposal.

The existing concrete foundation to the demolished building and the other foundation remains in the northwest corner of the site (and other possible foundation remains from the former site building) will be demolished and removed to a depth of at least 6 inches below the geomembrane liner to be installed. Where possible, the foundation demolition debris will be left on-site and mixed with the contaminated soil to be placed beneath the cap. Where this is not possible, the foundation demolition debris will be disposed off-site. All soil will be brushed off the debris and the soil will remain on-site. The foundation demolition debris will be visually inspected for contamination and sampled if warranted. Any contaminated debris will be segregated from unaffected debris and transported for off-site disposal. Concrete that is not contaminated will be transported off-site for recycling.

***Grading and On-site Relocation of Surface Soil***

Contaminated soil throughout the site will be relocated, graded and reused on-site. The goal of the site earthwork is to minimize off-site contaminated soil disposal. Surface soil

will be graded as shown on the site design drawings to facilitate the installation of an impermeable cap throughout the site and subsequently install a parking lot and surrounding landscaping.

The relocation / reuse of existing contaminated soil throughout the site is limited by the following site conditions:

- Existing site boundaries (property and street lines);
- Existing banks of Pocotopaug Creek adjacent to the site.

Approximately the upper 2 to 3 feet of soil at the site will be graded to prepare for the impermeable cap installation. A berm of soil (up to approximately 8 feet in height) will be created along the eastern side of the site and another berm of soil (up to approximately 5 feet in height) will be created along the northern side of the site. The berms will allow for additional volumes of soil reuse on-site and will serve as landscaped visual buffers when the site is fully restored. Approximately 800 cubic yards, or 1,200 tons of soil will be relocated / reused on-site.

To avoid truck travel over the contaminated soil, bulldozers will be used to strip the soil and relocate and grade throughout the site as necessary. All vehicles leaving the site during soil relocation / reuse activities will be decontaminated (loose soil removed). To prevent tracking of mud, earthwork will not occur during heavy rain events.

***Installation of Impermeable Barrier***

When the soil relocation throughout the site is complete, an impermeable barrier (cap) will be installed throughout the site. The cap will be installed to the practical construction limits within the site – approximately 2 feet from property lines and several feet from the top of the Pocotopaug Creek bank. The impermeable cap will consist of a sand cushion layer, a geomembrane, and a sand buffer layer. The final site redevelopment surfaces of pavement or landscaping will be constructed above this cap section.

To prepare for installation of the impermeable barrier, the soil surface will be graded to the proper elevations throughout the site. All stones, debris and other protrusions will be

removed from the surface and the surface will be compacted with a smooth roller. A cap bedding will be installed on the prepared subgrade by placing a buffer layer of sand (up to 4 inches thick). A 40-mil low density polyethylene geomembrane (textured on both sides) will be installed on top of the sand layer. The geomembrane will be placed and welded to form one continuous layer with a permeability of less than $10^{-6}$ cm/s.

Underground conduits and concrete light pole bases will be installed in conjunction with the liner installation to facilitate the final site redevelopment. Geomembrane construction will include installation boots or other means of securing the liner to existing monitoring wells and the new light pole bases.

As part of construction quality control for the liner, testing will be required to demonstrate the liner's placement. Such testing will include vacuum box testing and trial weld seams. Details of the liner installation quality requirements will be included in the project specifications used for competitively bidding the remediation work.

A sand buffer/drainage layer will be installed directly upon the geomembrane. The sand drainage layer will be tied directly into a perimeter cap drain piping along the downgradient limit of the liner. This cap perimeter drain will consist of a 6-inch perforated pipe which will outlet to the adjacent creek bank. This cap drainage system will collect stormwater infiltration which reaches the liner surface and convey this to the adjacent creek.

***Backfill and Site Restoration***

A layer of sand backfill will be placed immediately on top of the geomembrane. This material will not contain large particles that could damage the liner. The layer of sand will range from 9 to 12 inches in depth. Heavy equipment will not be allowed on the liner. Low ground pressure equipment will be used for placing and spreading the clean fill materials (sand) over the liner. In addition, the liner manufacturer's quality control results will be required for submission and review prior to spreading backfill on the liner.

Final site restoration will consist of a paved parking lot in the center of the site surrounded by landscaped areas. The landscaped areas will be established on a 6-inch

layer of topsoil and will only contain plantings with shallow root structures. The finished surface will be graded to direct precipitation away from the site and into the adjacent creek.

### 4.3 Post Remediation Monitoring

For monitoring the groundwater after the completion of the soil remediation activities, it is anticipated that all of the existing wells will remain in place. These wells will be used as part of the site monitoring program that will be proposed in the RAR. In general, the program will include the collection and analyses of groundwater samples on a periodic basis, and the submission of the data to the CTDEP in monitoring reports.

## 5.0 SAMPLING AND ANALYSIS PLAN

Soil sampling for remediation will include sampling of clean fill materials prior to their delivery to the site, and waste characterization sampling. The sampling and analysis plan will be submitted to the USEPA in a Quality Assurance Project Plan (QAPP) for USEPA review and approval prior to implementation of remediation activities.

### 5.1 On-Site Soil Quality Evaluation Sampling

Following relocation and grading of the surface soil across the site, no sampling will be performed on the existing soil at the site prior to installation of the impermeable cap. Surficial soil throughout the site consists of widespread historic fill and is similar in nature, characteristics, and contaminants. These soils have been thoroughly characterized in previous site investigations and the entire site will be completely covered by an impermeable cap once remediation is complete. Therefore, no additional sampling of existing soil at the site is proposed in conjunction with the site soil remediation activities specified herein.

### 5.2 Clean Fill Sampling

Construction of the impermeable cap will include backfill with clean sand and site restoration will include placement of topsoil in landscaped areas. Prior to delivery of off-site materials to the site, representative samples of each will be collected and analyzed. The sampling frequency for clean fill materials to be brought on site will be one sample per every 2000 cubic yards of material. Based on the anticipated volumes of material to be imported, one composite sample of the sand and one composite sample of the topsoil will be submitted under chain of custody for laboratory analysis. As an alternative, the suppliers may issue recent analyses for materials from the same source. All data will be reviewed prior to delivery of off-site materials to the site.

### 5.3 Waste Characterization Sampling

Waste characterization sampling will be performed when necessary to supplement existing information and data for the purposes of satisfying the requirements of the disposal facility. Sampling frequency and analytical parameters/procedures will be in

accordance with the disposal facility requirements. Waste characterization samples will be submitted under chain of custody for laboratory analysis.

### 5.4 Sampling Protocol

The typical equipment requirements and collection procedures used to sample soil are described below.

Equipment

- Stainless Steel (SS) Trowels, Spoons, or Scoops
- SS Spade or Hand Auger
- SS Bowls
- Sample Containers (provided by the laboratory)

Sample Collection Procedures

Soil samples will be collected according to the following procedure. Changes to these procedures must be justified and recorded in the field logbook.

1. Decontaminate sampling equipment.
2. Record the weather conditions and other notable site conditions.
3. Sketch and record the sampling conditions on the site map and in the field notebook.
4. Photograph the sampling location and conditions.
5. Collect the fill sample in a manner that is appropriate for the depth of the samples and the physical access.
6. Samples for the analysis of volatile organic compounds (VOCs) should not be composited or mixed. These samples should be placed into sample containers as quickly as possible with minimal disturbance. Sample containers should be filled to minimize headspace.
7. Mix the remainder of the sample. Fill containers at least ¾ full for all parameters.
8. Immediately label and refrigerate/ice the sample.
9. Stake location and record in logbook.
10. Submit the samples to the laboratory under chain of custody protocol.

Documentation

The following information is typical of that documented and reported in the field logbook when collecting confirmatory samples:

- Description of the sample that is being submitted to the laboratory including the physical characteristics of the sample (e.g., color, odor, and texture), and unusual characteristics.
- Type of sample (grab).
- Sample designation and location.

## 5.5 Laboratory Analysis

All proposed laboratory analyses will be performed by a laboratory certified to perform such analyses in the State of CT. Detection limits will be selected to be below the applicable RSR and/or disposal criteria. The SOP laboratory protocols specific to the laboratory subcontractor will be applied. Details regarding the laboratory analytical methods will be provided in the Quality Assurance Project Plan (QAPP) that accompanies this project.

Clean fill material will be analyzed for the following parameters: volatile organic compounds (VOCs) by USEPA method 8260, semi-volatile organic compounds (SVOCs) by USEPA Method 8270, ETPH, pesticides by USEPA Method 8082, chlorinated herbicides by USEPA Method 8150, PCBs by USEPA method 8081, and CT DEP metals by USEPA Method 6000 and 7000 series. Synthetic precipitation leaching procedure (SPLP) analyses will also be conducted on certain samples based on the total mass analytical results.

As indicated above, waste characterization samples will be dependent upon the disposal facility's criteria.

## 5.6 Quality Assurance/Quality Control

The analytical laboratory will be required to perform all of the internal quality control procedures that are specified in the analytical methods. These include, but are not limited to:

- Blanks – The laboratory will analyze method blanks prepared and analyzed with each set of samples. These are a check of the accuracy of the system and indicate if there are positive biases.
- Calibration Checks – These are standards, generally from a different source than the calibration standards that are analyzed along with the samples. The purpose of the calibration checks is to determine if the analytical equipment is functioning accurately.

Field QA/QC samples will be submitted along with the laboratory samples. A description of each of the sample QC types is described below:

- Field duplicates – Field supplicates provide an indication of the overall precision of the field sampling and analytical method. Approximately one field duplicate will be collected for every 20 samples analyzed.

Upon receipt of the laboratory data, AECOM will perform a review of the data to evaluate its usability. This will include checking of such items as:

- Holding times;
- Field and laboratory blanks;
- Field and laboratory duplicates;
- Surrogate recoveries, if applicable;
- Calibration checks;
- Spike recoveries, if applicable, and
- Analytical method detection limits (MDLs).

Items such as GC/MS tuning, initial calibrations, calculations, and raw data will be checked by the laboratory.

The SOP laboratory protocols for the project laboratory subcontractor will be applied.

A USEPA-approved Quality Assurance Project Plan will be prepared because USEPA funding is being used for the remediation.

## 6.0 DOCUMENTATION AND REPORTING

The Town or its designated agent will oversee remediation activities and prepare and maintain a record of the activities performed. The Town or its agent will be responsible for documenting that the project is completed in accordance with the specifications of this RAP, and generally accepted industry/engineering standards.

### 6.1 Field Documentation

The following list identifies the specific documentation and reporting requirements that will be required for this project.

- Maintaining an accounting of materials entering and leaving the site, including waste soils and other materials;
- Photographic documentation of completed excavations, previously unknown areas of contamination, completed remediation areas, and other pertinent observations;
- Documenting segregation, storage, and accounting of wastes that may be stockpiled at the site;
- Documenting and reporting of any spills, leaks, or other discharges occurring at the site;
- Documenting and reporting of any disruption/damage to utility structures;
- Documenting that erosion control and site security measures are adequately maintained throughout the project;
- Maintaining transportation/disposal documentation; and
- Documenting decontamination prior to demobilization.

### 6.2 Post-Remediation Reporting

Following completion of remediation activities, a Remedial Action Report will be prepared for the site and submitted to CT DEP. The report will describe the completed work at the site, and will contain the following specific items:

- Project narrative;

- Record site plans(s) showing the vertical and horizontal limits of the site contaminated soil relocation / reuse on-site as well as the final grades (A-2 survey);
- Sample analytical data in tabular form;
- Complete laboratory reports;
- Waste disposal documentation (manifests, bills-of-lading, certificates of disposal, etc.);
- Waste disposal summary indicating the weights, volumes, and disposition of excavated materials;
- Documentation of all materials incorporated into the project (sand, topsoil, etc.);
- Documentation related to the liner manufacturer's and the liner installer's quality control for the liner material and the welds made to secure the liner;
- Photographs of remediation activities; and
- Recommendations for future actions, including groundwater monitoring and establishing an ELUR.

## 7.0 POST REMEDIATION CONCEPTUAL SITE MODEL

Upon completion of the soil remediation, the significant migration pathways described in this RAP will be eliminated. These include the potential direct exposure migration pathways of dermal contact, ingestion, and inhalation; and the potential pollutant mobility pathway of precipitation infiltrating through and leaching contaminants from the remaining soils.

In order to monitor the effectiveness of soil remediation and to evaluate groundwater compliance with the RSRs, a post remediation groundwater monitoring program will be prepared and implemented.

Potential impacts from the site on the adjacent Pocotopaug Creek surface water quality and sediments are not addressed as part of this RAP. The Town of East Hampton is planning to address sediment and surface water quality issues in Pocotopaug Creek along the reach running through the Village Center area once additional funding is obtained from the USEPA.

An ELUR will be recorded on the land records to ensure that remedial efforts will not be disturbed by future site activities. If site disturbance is required, the Town will request a temporary release of the ELUR and will provide soil management plans to CT DEP.

## 8.0 SCHEDULE

Appendix F contains the proposed project schedule. As shown on this schedule, project planning and selection of a contractor is planned to be completed by the end of September. Site remediation activities are planned to occur in October and November with completion targeted for the end of November. This schedule will be coordinated with the weather conditions throughout the late fall and early winter and adjusted if necessary.

## 9.0 REFERENCES

Metcalf & Eddy (M&E). 2004. *Generic Sampling and Analysis Plan for Brownfields Targeted Site Assessments*. Revision 01. RFA 04266. Prepared for the U.S. Environmental Protection Agency. December 2004.

Tighe & Bond. 2005. *Phase I Environmental Site Assessment 103 Main Street*. Prepared for Town of East Hampton, CT.

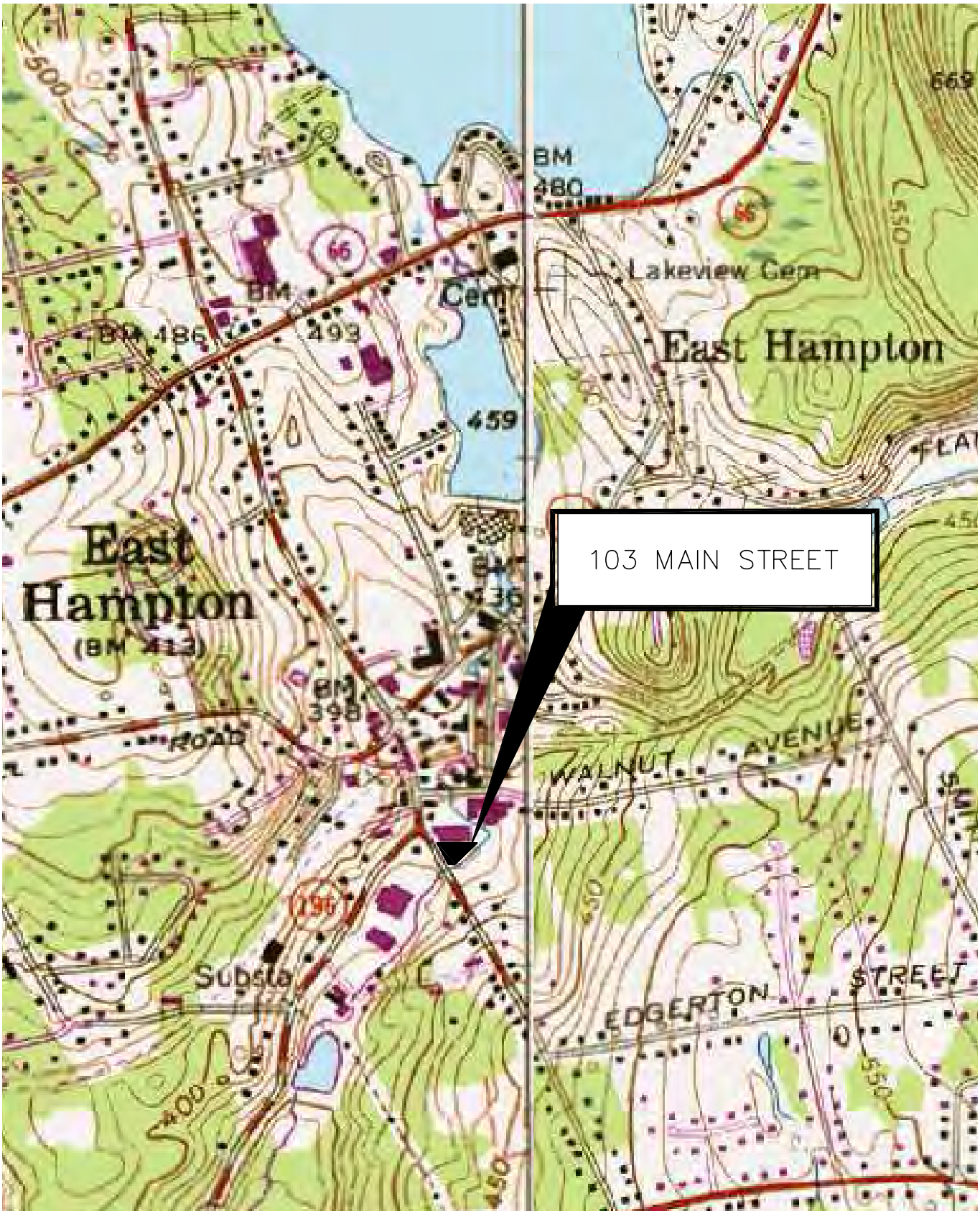
Tighe & Bond. 2005. *Phase II Environmental Site Assessment 103 Main Street*. Prepared for Town of East Hampton, CT.

Tighe & Bond, 2006. *Phase II Environmental Site Assessment Water Tower Property, East Hampton, CT.* Prepared for The Town of East Hampton, CT.

AECOM USA, Inc. 2009. *Quality Assurance Project Plan for Pre-Remediation Sampling Program Former Gong Bell Site 103 Main Street, East Hampton, Connecticut.* Prepared for US Environmental Protection Agency and the Town of East Hampton, CT. April 2009.

AECOM, Inc. 2009. *Remedial Investigation Report, Former Gong Bell Site, 103 Main St., East Hampton, CT.* Prepared for Town of East Hampton, CT. July 2009.

# FIGURES




AECOM

103 MAIN STREET
EAST HAMPTON, CONNECTICUT
FIGURE 1
SITE LOCATION MAP

DATE: JULY 2010

PATH/FILENAME: X:\60046844 (GONG BELL EAST HAMPTON)\500 PROJECT SUBMITTAL-DELIVERABLES\FIGURES CAD\SAMPLE LOCATION.DWG
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PLOT DATE: Monday, March 07, 2005 9:26:54 PM
LAST UPDATE: Wednesday, June 09, 2010 11:59:33 AM

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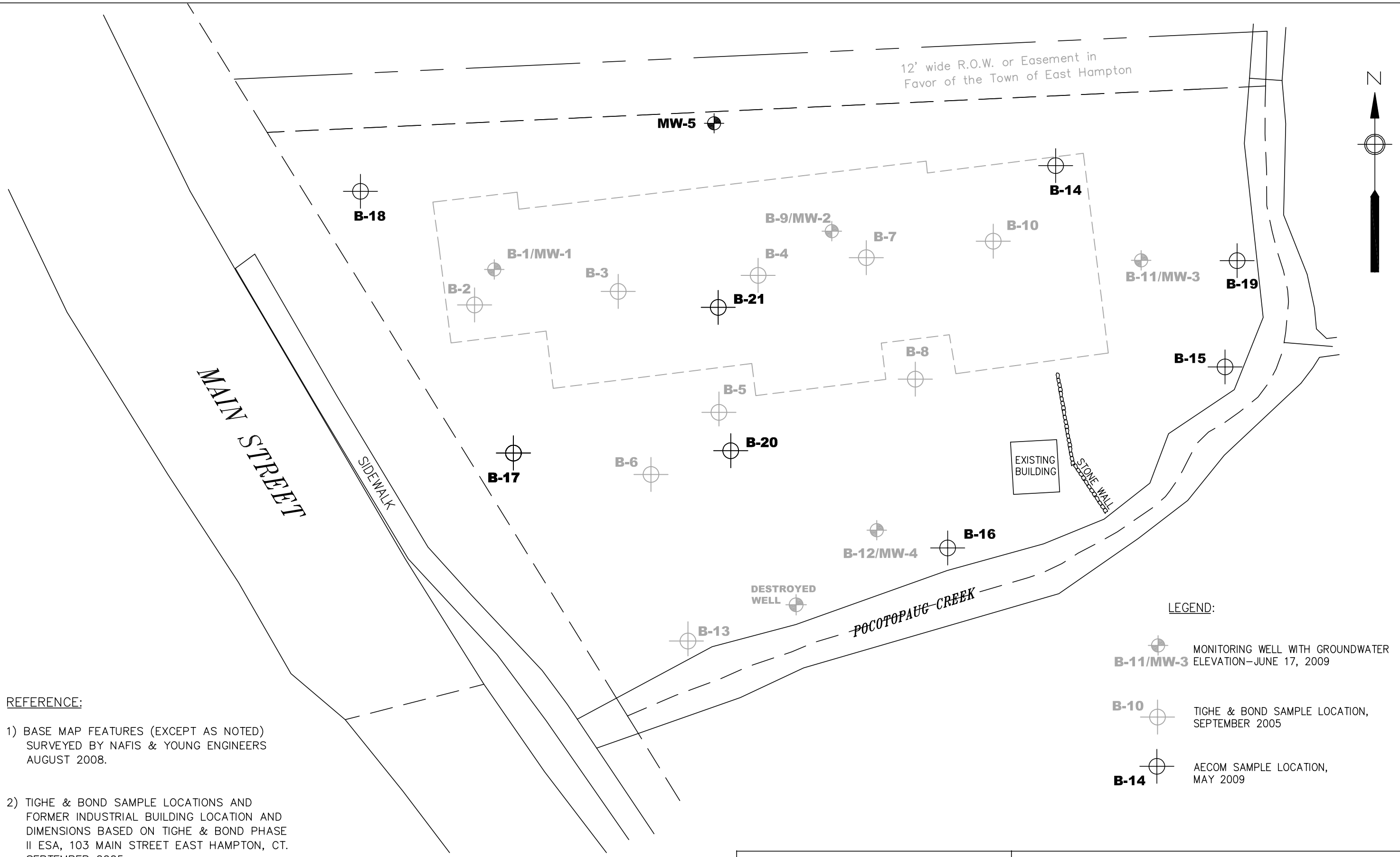
ANSI B - 5-11-06
LAST UPDATE: Wednesday, June 09, 2010 11:59:33 AM
PLOT DATE: Monday, March 07, 2005 9:26:54 PM




REFERENCE:

1) BASE MAP FEATURES (EXCEPT AS NOTED) SURVEYED BY NAFIS & YOUNG ENGINEERS AUGUST 2008.

2) TIGHE & BOND SAMPLE LOCATIONS AND FORMER INDUSTRIAL BUILDING LOCATION AND DIMENSIONS BASED ON TIGHE & BOND PHASE II ESA, 103 MAIN STREET EAST HAMPTON, CT. SEPTEMBER 2005.

NOTE:

1) RSR EXCEEDANCES BASED ON 2009 SAMPLING DATA ONLY

LEGEND:

B-11/MW-3 — MONITORING WELL WITH GROUNDWATER ELEVATION–JUNE 17, 2009

B-10 — TIGHE & BOND SAMPLE LOCATION, SEPTEMBER 2005

B-14 — AECOM SAMPLE LOCATION, MAY 2009

AECOM

FORMER GONG BELL SITE
EAST HAMPTON, CONNECTICUT
REMEDIAL ACTION PLAN
SITE PLAN WITH PREVIOUS SAMPLING LOCATIONS

SCALE: 1"=20 FT | DATE: JULY 2010 | FIGURE 2

# APPENDIX A

# Statement of Limitations

# STATEMENT OF LIMITATIONS

The data presented and the opinions expressed in this report are qualified as follows:

1. The sole purpose of the investigation and of this report is to assess the physical characteristics of the Site with respect to the presence or absence in the environment of oil or hazardous materials and substances as defined in the applicable state and federal environmental laws and regulations and to gather information regarding current and past environmental conditions at the Site.

2. AECOM USA, Inc. derived the data in this report primarily from visual inspections, examinations of records provided by the Client, interviews with individuals with information about the Site, and a limited number of subsurface explorations made on the dates indicated. The passage of time, manifestation of latent conditions or occurrence of future events may require further exploration at the Site, analysis of the data, and reevaluation of the findings, observations, and conclusions expressed in the report.

3. In preparing this report, AECOM has relied upon and presumed accurate certain information (or the absence thereof) about the Site and adjacent properties provided by governmental officials and agencies, the Client, and others identified herein. Except as otherwise stated in the report, AECOM has not attempted to verify the accuracy or completeness of any such information.

4. The data reported and the findings, observations, and conclusions expressed in the report are limited by the Scope of Services, including the extent of subsurface exploration and other tests. The Scope of Services was defined by the requests of the Client, the time and budgetary constraints imposed by the Client, and the availability of access to the Site.

5. Because of the limitations stated above, the findings, observations, and conclusions expressed by AECOM in this report are not, and should not be considered, an opinion concerning the compliance of any past or present owner or operator of the site with any federal, state or local law or regulation. No warranty or guarantee, whether express or implied, is made with respect to the data reported or findings, observations, and conclusions expressed in this report. Further, such data, findings, observations, and conclusions are based solely upon site conditions in existence at the time of investigation.

6. This report has been prepared on behalf of and for the exclusive use of the Client, and is subject to and issued in connection with the Agreement and the provisions thereof.

# APPENDIX B

## Previous Site Investigation Data Tables

# Phase II Environmental Site Assessment 103 Main Street

## East Hampton, CT

Prepared For:

The Town of East Hampton, Connecticut


September 2005

Tighe&Bond

**Table 1**
**Potential Areas of Concern with Sample Identifications**
Phase II ESA
103 Main Street
East Hampton, CT

| pAOC | Sample ID | Rationale | Matrix | Parameters |
|---|---|---|---|---|
| pAOC 1 | B-1, B-2, B-3, B-4, B-7, B-9, B-10,B-11 | Investigate soils located throughout property to determine if contaminated fill is present | Soil | ETPH, VOCs, PP-13 Metals (Mass and SPLP), PCBs, and PAHs |
| pAOC 2 | B-12 | Investigate soil near above ground tank cradle | Soil | ETPH, VOCs, PP-13 Metals (Mass and SPLP), PCBs, and PAHs |
| pAOC 3 | B-5, B-6, B-8, B-13 | Investigate soils located inside former industrial building to determine releases from previous site activities | Soil | ETPH, VOCs, PP-13 Metals (Mass and SPLP), PCBs, and PAHs |
| pAOC 4 | Sed-1, Sed-2, Sed-3 | Investigate sediment in Pocotopaug Creek | Sediment | ETPH, VOCs, PAHs, PP-13 Metals, PCBs |

*Notes:*

*pAOC - Potential Area of Concern*
*ETPH - Extractable Total Petroleum Hydrocarbons*
*PAH - Polycyclic Aromatic Hydrocarbons*
*PCBs - Polychlorinated Biphenyls*
*VOC - Volatile Organic Compounds*
*PP-13 Metals - Priority Pollutant 13 Metals*

**Table 2**
**Well Construction Details with Relative Groundwater Elevations**
Phase II ESA
103 Main Street
East Hampton, CT

| Well ID | Relative Elevation (ft) | | | Well Depth (ft) | Screened Interval (ft) | Formation | Groundwater | |
|---|---|---|---|---|---|---|---|---|
| | Ground | Top of Casing | Top of PVC | | | | Depth * (ft) | Relative Elevation (ft) |
| MW-1 | 96.36 | 101.36 | 101.06 | 15.12 | 5-15 | Sand and Gravel | 9.12 | 91.94 |
| MW-2 | 96.52 | 101.52 | 101.12 | 15.08 | 5-15 | Sand and Gravel | 9.01 | 92.12 |
| MW-3 | 97.70 | 102.70 | 102.1 | 15.45 | 5-15 | Sand and Gravel | 10.12 | 91.98 |
| MW-4 | 94.35 | 99.35 | 99.05 | 15.23 | 5-15 | Sand and Gravel | 8.75 | 90.30 |

*Notes:*
** Water level measurements collected on July 26, 2005*
*Elevations based on an arbitrary benchmark of 100 feet*

**Table 3**
**Summary of Soil Data**
**Phase II ESA**
**103 Main Street**
**East Hampton, CT**

| Parameter/Monitoring Well | RES DEC | I/C DEC | GA PMC | B-1 MS 2-4 feet 7/22/2005 | B-2 MS 2-3 feet 7/18/2005 | B-3 MS 3-4 feet 7/18/2005 | B-3D MS 3-4 feet 7/18/2005 | B-4 MS 4-6 feet 7/18/2005 | B-5 MS 0-2 feet 7/21/2005 | B-6 MS 3-4 feet 7/22/2005 | B-7 MS 4-5 feet 7/18/2005 | B-8 MS 3-4 feet 7/22/2005 | B-9 MS 0-2 feet 7/21/2005 | B-10 MS 5-6 feet 7/18/2005 | B-11 3-4 feet 7/21/2005 | B-12 0-2 feet 7/21/2005 | B-13 2-3 feet 7/21/2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Cyanide (mg/kG)** | 1,400 | 41,000 | NE[1] | 11 | | | | | | | | | | | | | |
| **Total Metals (mg/kG)** | | | | | | | | | | | | | | | | | |
| Antimony | 27 | 8,200 | NE[1] | 43 | | 160 | 360 | | 23 | 44 | | | ND <2.5 | 960 | ND <6.2 | ND <6.0 | ND <5.9 |
| Arsenic | 10 | 10 | NE[1] | 16 | | 32 | 24 | | 13 | 10 | | | 4.9 | 28 | 3.3 | 11 | ND <2.9 |
| Beryllium | 2 | 2 | NE[1] | ND <0.72 | | ND<0.75 | ND <1.4 | | 0.66 | ND <1.1 | | | ND<0.25 | ND < 1.2 | ND <0.62 | ND <0.6 | ND <0.59 |
| Cadmium | 34 | 1,000 | NE[1] | 13 | | 6.2 | 3 | | ND <0.61 | 1.6 | | | ND<0.25 | ND < 1.2 | ND <0.62 | 0.75 | ND <0.59 |
| Chromium | 3,900 | 51,000 | NE[1] | 70 | | 510 | 1,800 | | 13 | 16 | | | 8.7 | 19 | 37 | 13 | 6.9 |
| Copper | 2,500 | 76,000 | NE[1] | 5,300 | | 3,600 | 3,200 | | 1,700 | 4,500 | | | 12 | 1,500 | 82 | 180 | 53 |
| Lead | 500 | 1,000 | NE[1] | 2,000 | | 5,200 | 13,000 | | 1,300 | 2,600 | | | 10 | 3,900 | 49 | 230 | 35 |
| Mercury | 20 | 610 | NE[1] | 0.67 | | 15 | 1.9 | | 2 | 0.43 | | | ND <0.020 | 4.4 | 0.096 | 0.42 | 0.045 |
| Nickel | 1,400 | 7,500 | NE[1] | 83 | | 97 | 57 | | 130 | 370 | | | 5.5 | 76 | 28 | 28 | 17 |
| Selenium | 340 | 10,000 | NE[1] | ND <3.6 | | ND <3.8 | ND <6.8 | | ND <3.1 | ND <5.7 | | | ND <1.2 | ND <6.2 | ND <3.1 | ND <3.0 | ND <2.9 |
| Silver | 340 | 10,000 | NE[1] | ND <3.6 | | 4.7 | ND <6.8 | | ND <3.1 | ND <5.7 | | | ND <1.2 | 13 | ND <3.1 | ND <3.0 | ND <2.9 |
| Thallium | 5 | 160 | NE[1] | ND <3.6 | | ND < 7.5 | ND <6.8 | | ND <3.1 | ND <5.7 | | | ND <1.2 | ND <6.2 | ND <3.1 | ND <3.0 | ND <2.9 |
| Zinc | 20,000 | 610,000 | NE[1] | 3,500 | | 2,700 | 1,500 | | 1,500 | 6,900 | | | 23 | 570 | 230 | 180 | 76 |
| **SPLP Metals (mg/L)** | | | | | | | | | | | | | | | | | |
| Antimony | NE[2] | NE[2] | 0.006 | 0.053 | 0.015 | 0.061 | | | | ND <0.0060 | | | | | ND <0.020 | ND <0.020 | |
| Arsenic | NE[2] | NE[2] | 0.050 | ND <0.010 | ND <0.010 | ND <0.010 | | | | ND <0.010 | | | | | ND <0.010 | ND <0.010 | |
| Beryllium | NE[2] | NE[2] | 0.004 | ND <0.0010 | ND <0.0010 | ND <0.0010 | | | | ND <0.0010 | | | | | ND <0.0010 | ND <0.0010 | |
| Cadmium | NE[2] | NE[2] | 0.005 | 0.0017 | ND <0.0010 | ND <0.0010 | | | | ND <0.0010 | | | | | ND <0.0010 | ND <0.0010 | |
| Chromium | NE[2] | NE[2] | 0.050 | 0.015 | 0.37 | 0.14 | | | | ND <0.005 | | | | | ND <0.050 | ND <0.050 | |
| Copper | NE[2] | NE[2] | 1.3 | 0.85 | 0.078 | 0.21 | | | | 0.049 | | | | | ND <0.010 | 0.033 | |
| Lead | NE[2] | NE[2] | 0.015 | 0.21 | 0.2 | 0.22 | | | | 0.023 | | | | | 0.0065 | 0.043 | |
| Mercury | NE[2] | NE[2] | 0.002 | ND <0.20 | ND <0.60 | 0.0016 | | | | 0.31 | | | | | ND <0.010 | ND <0.20 | |
| Nickel | NE[2] | NE[2] | 0.1 | 0.016 | ND <0.010 | ND <0.010 | | | | ND <0.010 | | | | | ND <0.010 | ND <0.010 | |
| Selenium | NE[2] | NE[2] | 0.050 | ND <0.010 | ND < 0.010 | ND < 0.010 | | | | ND < 0.010 | | | | | ND <0.010 | ND <0.010 | |
| Silver | NE[2] | NE[2] | 0.036 | ND <0.0050 | ND <0.0050 | ND <0.0050 | | | | ND <0.0050 | | | | | ND <0.0050 | ND <0.0050 | |
| Thallium | NE[2] | NE[2] | 0.005 | ND <0.010 | ND <0.010 | ND <0.010 | | | | ND <0.010 | | | | | ND <0.010 | ND <0.010 | |
| Zinc | NE[2] | NE[2] | 5 | 0.77 | 0.091 | 0.12 | | | | 0.063 | | | | | ND <0.050 | ND <0.050 | |
| **Extractable Petroleum Hydrocarbons (CTETPH) (mg/Kg)** | 500 | 2,500 | 500 | 130 | 240 | 69 | 150 | 5.6 | 63 | 350 | ND <3.8 | 280 | 26 | 48 | 4.4 | 190 | 2,300 |
| **Volatile Organic Compounds (µg/Kg)** | | | | | | | | | | | | | | | | | |
| Benzene | 21,000 | 200,000 | 20 | ND <6.5 | | 15 | 9.4 | | ND <5 | | | | ND <5.3 | ND <5.0 | | ND <550 | ND <3.8 |
| Toluene | 500,000 | 1,000,000 | 20,000 | ND <6.5 | | 7.5 | 5.7 | | ND <5 | | | | ND <5.3 | ND <5.0 | | 1,200 | ND <3.8 |
| Ethylbenzene | 500,000 | 1,000,000 | 10,100 | ND <6.5 | | 5.9 | ND <5.6 | | ND <5 | | | | ND <5.3 | ND <5.0 | | ND <550 | ND <3.8 |
| Xylenes (total) [3] | 500,000 | 1,000,000 | 19,500 | ND <6.5 | | 30 | 22.3 | | ND <5 | | | | ND <5.3 | ND <5.0 | | 680 | ND <3.8 |
| **Polycyclic Aromatic Hydrocarbons (PAHs) (µg/Kg)** | | | | | | | | | | | | | | | | | |
| Acenaphthylene | 1,000,000 | 2,500,000 | 8,400 | | | ND <1,100 | ND <1,100 | | ND <190 | 7,200 | | ND <10,000 | ND <180 | ND <190 | ND <200 | ND <920 | ND <17,000 |
| Fluorene | 1,000,000 | 2,500,000 | 5,600 | | | ND <1,100 | ND <1,100 | | ND <190 | 10,000 | | ND <10,000 | ND <180 | ND <190 | ND <200 | ND <920 | ND <17,000 |
| Phenanthrene | 1,000,000 | 2,500,000 | 4,000 | | | ND <1,100 | 970 | | ND <190 | 64,000 | | 29,000 | 250 | ND <190 | 250 | 2,300 | 11,000 |
| Anthracene | 1,000,000 | 2,500,000 | 40,000 | | | ND <1,100 | ND <1,100 | | ND <190 | 18,000 | | 7,300 | ND <180 | ND <190 | ND <200 | ND <920 | ND <17,000 |
| Fluoranthene | 1,000,000 | 2,500,000 | 5,600 | | | 1,500 | 1,100 | | ND <190 | 67,000 | | 32,000 | 510 | ND <190 | 420 | 5,000 | 18,000 |
| Pyrene | 1,000,000 | 2,500,000 | 4,000 | | | 1,500 | 1,500 | | ND <190 | 51,000 | | 23,000 | 430 | ND <190 | 390 | 4,300 | 13,000 |
| Benzo (a) anthracene | 1,000 | 7,800 | 1,000 | | | 980 | 910 | | ND <190 | 27,000 | | 14,000 | 180 | ND <190 | 190 | 2,200 | 9,100 |
| Chrysene | 84,000 | 780,000 | 1,000 | | | 1,200 | 590 | | ND <190 | 26,000 | | 13,000 | 240 | ND <190 | 240 | 3,100 | 9,800 |
| Benzo (b) fluoranthene | 1,000 | 7,800 | 1,000 | | | 1,400 | 1,900 | | ND <190 | 23,000 | | 14,000 | 270 | ND <190 | 200 | 2,900 | 15,000 |
| Benzo (k) flouranthene | 8,400 | 78,000 | 1,000 | | | ND <1,100 | 540 | | ND <190 | 16,000 | | ND <10,000 | ND <180 | ND <190 | ND <200 | 2,500 | ND <17,000 |
| Benzo (a) pyrene | 1,000 | 1,000 | 1,000 | | | 1,300 | 810 | | ND <190 | 27,000 | | 12,000 | 240 | ND <190 | 210 | 2,700 | 12,000 |
| Indeno (1,2,3 -cd) pyrene | 1,000 | 7,800 | 1,000 | | | 750 | ND <1,100 | | ND <190 | 8,400 | | ND <10,000 | 92 | ND <190 | ND <200 | 1,100 | 8,800 |
| Dibenzo (a,h) anthracene | 1,000 | 1,000 | 1,000 | | | ND <1,100 | ND <1,100 | | ND <190 | ND <9,100 | | ND <10,000 | ND <180 | ND <190 | ND <200 | 550 | ND <17,000 |
| Benzo (ghi) perylene | 1,000,000 | 2,500,000 | 4,200 | | | 840 | ND <1,100 | | ND <190 | 7,600 | | ND <10,000 | 100 | ND <190 | ND <200 | 1,100 | 8,900 |
| **SPLP Polycyclic Aromatic Hydrocarbons (PAHs) (mg/L)** | | | | | | | | | | | | | | | | | |
| Phenanthrene | NE | NE | NE | | | | | | | 0.0090 | | | | | | | |
| **PCB Analysis (µg/Kg)** | 1,000 | 10,000 | NE | | | | | | | | | | ND <110 | | | | ND <100 |

*Notes:*
*Values bolded and shaded exceed applicable standards*
*NE - No Established Criteria*
*NE[1] - No Established Criteria- Refer to SPLP standards*
*NE[2] - No Established Criteria- Refer to Total Metal standards*
*Xylenes (total) [3] The total of meta, para and ortho xylenes*

*RSR - Remediation Standard Regulation*
*ug/L - micrograms per liter or parts per billion*
*ND - Not Detected*
*NA - Not Analyzed*

*RES DEC - Residential Direct Exposure Criteria*
*I/C DEC - Industrial Commercial Direct Exposure Criteria*
*GA PMC - GA Pollutant Mobility Criteria*
*GB PMC - GB Pollutant Mobility Criteria*

**Table 4**
**Summary of Groundwater Data**
Phase II ESA
103 Main Street
East Hampton, CT

| Parameter | Connecticut Remediation Standard Regulations (RSRs) | | | | MS MW-1 8/6/05 | MS MW-2 8/3/05 | MS MW-3 8/3/05 | MS MW-4 8/4/05 |
|---|---|---|---|---|---|---|---|---|
| | GWPC | SWPC | RES VC | I/C VC | | | | |
| **pH (SU)*** | NE | NE | NE | NE | 6.59 | 6.83 | 6.11 | 6.78 |
| **Specific Conductance (umhos/cm)*** | NE | NE | NE | NE | 210 | 258 | 291 | 189 |
| **Total Metals (ug/L)** | | | | | | | | |
| Antimony | 6 | 86,000 | NE | NE | ND <6.0 | **10** | ND <6.0 | ND <6.0 |
| Arsenic | 50 | 4 | NE | NE | ND <10.0 | ND <10.0 | ND <10.0 | **16** |
| Beryllium | 4 | 4 | NE | NE | ND <1.0 | ND <1.0 | ND <1.0 | ND <1.0 |
| Cadmium | 5 | 6 | NE | NE | ND <1.0 | ND <1.0 | ND <1.0 | ND <1.0 |
| Chromium | 50 | 1,200 | NE | NE | 5.6 | 6.6 | ND <5.0 | 7.3 |
| Copper | 1,300 | 48 | NE | NE | 21 | **66** | ND <10.0 | 28 |
| Lead | 15 | 13 | NE | NE | 11 | **70** | ND <5.0 | **18** |
| Nickel | 100 | 880 | NE | NE | 11 | ND <10.0 | ND <10.0 | ND <10.0 |
| Mercury | 2 | 0.4 | NE | NE | ND <0.2 | ND <0.2 | ND <0.2 | **0.46** |
| Selenium | 50 | 50 | NE | NE | ND <10.0 | ND <10.0 | ND <10.0 | ND <10.0 |
| Silver | 36 | 12 | NE | NE | ND <5 | ND <5 | ND <5 | ND <5 |
| Thallium | 5 | 63 | NE | NE | ND <10.0 | ND <10.0 | ND <10.0 | ND <10.0 |
| Zinc | 5,000 | 123 | NE | NE | ND <50 | ND <50 | ND <50 | ND <50 |
| | | | | | | | | |
| **Extractable Petroleum Hydrocarbons (CTETPH) (mg/L)** | 100 | NE | NE | NE | ND <0.1 | ND <0.1 | ND <0.1 | ND <0.1 |
| **Volatile Organic Compounds (ug/L)**** | | | | | | | | |
| Chloromethane | 3 | NE | 390 | 5,500 | 1.00 | 0.51 | ND <2.0 | ND <2.0 |

*Notes:*

*Values bolded and shaded exceed applicable standards*
** - pH and specific conductance readings were averaged over the time period of sampling.*
*** - Only detected VOCs were included in the report. The full analyte list for EPA Method 8260 was performed.*
*NE - No Established Criteria*
*ND - Not Detected*
*NA - Not Analyzed*
*RSR - Remediation Standard Regulation*
*GWPC - Groundwater Protection Criteria*
*SWPC - Surface Water Protection Criteria*
*RES VC - Residential Volatilization Criteria*
*I/C VC - Industrial / Commercial Volatilization Criteria*
*SU - Standard Units*
*umhos/cm - microsiemens per centimeter*
*ug/L - micrograms per liter or parts per billion*
*mgL - milligeam per liter or parts per milllion*

Table 5
Summary of Sediment Analytical Data
Phase II ESA
103 Main Street
East Hampton, CT

| Parameter/Monitoring Well | Threshold Effects Conc. (TEC) [1] | Ontario MOE Standards (Low) [2] | SED-1 Upstream 8/6/2005 | SED-2 Midstream 8/6/2005 | SED-3 Downstream 8/6/2005 |
|---|---|---|---|---|---|
| **SW846 9060M Total Organic Carbon (%)** | | | | | |
| Total Organic Carbon (Average) | NE | NE | 0.50 | 0.23 | 0.25 |
| Total Organic Carbon (TOC1) | NE | NE | 0.65 | 0.35 | 0.28 |
| Total Organic Carbon (TOC2) | NE | NE | 0.37 | 0.25 | ND <0.2 |
| | | | | | |
| **Method 160.3 Solids (%)** | NE | NE | 78.4 | 83.5 | 86.3 |
| **Particle Size of Soils by ASTM D422** | | | | | |
| Gravel | NE | NE | 4.7 | 7.9 | 28.9 |
| Sand | NE | NE | 87.9 | 87.2 | 68.8 |
| Coarse Sand | NE | NE | 3.3 | 6.3 | 22.4 |
| Medium Sand | NE | NE | 32.8 | 44.5 | 37.8 |
| Fine Sand | NE | NE | 51.8 | 36.4 | 8.6 |
| Fines | NE | NE | 7.4 | 4.9 | 2.3 |
| | | | | | |
| **Total Metals (mg/kG)** | | | | | |
| Antimony | NE | NE | 20 | ND <2.6 | 13 |
| Arsenic | 9.79 | 6 | 1.4 | ND <1.3 | 3 |
| Beryllium | NE | NE | ND <0.26 | ND<0.26 | ND<0.24 |
| Cadmium | 0.99 | 0.60 | ND <0.26 | ND <0.26 | ND <0.24 |
| Chromium | 43.4 | 26 | 7.6 | 4 | 5.5 |
| Copper | 31.6 | 16 | **160** | **110** | **1,000** |
| Lead | 35.8 | 31 | **850** | **85** | **1,100** |
| Mercury | 0.18 | 0 | ND <0.031 | ND <0.029 | ND <0.026 |
| Nickel | 22.7 | 16.0 | 14 | 5.6 | **19** |
| Selenium | NE | NE | ND <1.3 | ND <1.3 | ND <1.2 |
| Silver | NE | NE | ND <1.3 | ND <1.3 | ND <1.2 |
| Thallium | NE | NE | 1.5 | ND<1.3 | 4.3 |
| Zinc | 121 | 120 | **300** | **250** | **2,600** |
| | | | | | |
| **Extractable Petroleum Hydrocarbons (CTETPH) (mg/Kg)** | NE | NE | 130 | 330 | 86 |
| | | | | | |
| **Volatile Organic Compounds (µg/Kg)** | NE | NE | ND<2.6 | ND <2.2 | ND <180 |
| **Polycyclic Aromatic Hydocarbons (PAHs) (µg/Kg)** | | | | | |
| Phenanthrene | 204 | 560 | **1,000** | **3,100** | ND<1,900 |
| Fluoranthene | 423 | 750 | **2,000** | **3,400** | **910** |
| Pyrene | 195 | 490 | **2,700** | **5,100** | **1,400** |
| Benzo (a) anthracene | 108 | 320 | **790** | **1,300** | ND<950 |
| Chrysene | 166 | 340 | **1,000** | **1,400** | **560** |
| Benzo (b) fluoranthene | NE | NE | 920 | 1,300 | 540 |
| Benzo (k) flouranthene | NE | 240 | **960** | **1,200** | **460** |
| Benzo (a) pyrene | 150 | 370 | **1,100** | **1,400** | **580** |
| Indeno (1,2,3 -cd) pyrene | NE | 200 | ND <1,100 | **700** | ND<1,900 |
| Benzo (ghi) perylene | NE | 170 | **570** | **750** | ND<1,900 |
| | | | | | |
| **PCB Analysis (µg/Kg)** | 59.8 | 70 | ND <110 | ND<110 | ND<110 |

*Notes:*
*Values bolded and shaded exceed applicable standards*
*NE - No Established Criteria*
*ND - Not Detected*
*ug/Kg - micrograms per kilogram or parts per billion*
[1] *Consensus based threshold effect concentrations (TECs) for the 28 chemicals listed in MacDonald et al. (2000) for use in screening freshwater sediment for risk to benthic organisms.*
[2] *Ontario Ministry of the Environment (MOE) lowest effect level and is the 5th percentile of the screening level concentrations.*

Prepared for:
**Town of East Hampton**
**East Hampton, CT**

# Remedial Investigation Report

Former Gong Bell Site

103 Main St, East Hampton, CT

AECOM, Inc.
July 2009
**Document No.: 60046844**

AECOM

**Table 1**
**Summary of Groundwater Elevation Data**
**June 2009**
**Former Gong Bell Site**
**East Hampton, Connecticut**

| Monitoring Well ID | Measurement Date | PVC Elevation (ft) | Top of Casing Elevation (ft) | Depth to Water (ft) | Water Table Elevation (ft) |
|---|---|---|---|---|---|
| MW-1 | 6/17/2009 | 375.43 | 375.53 | 8.22 | 367.21 |
| MW-2 | 6/17/2009 | 376.23 | 376.29 | 8.57 | 367.66 |
| MW-3 | 6/17/2009 | 378.06 | 378.12 | 8.58 | 369.48 |
| MW-4 | 6/17/2009 | 373.47 | 373.66 | 6.56 | 366.91 |
| MW-5 | 6/17/2009 | UNK | UNK | 10.47 | — |

Notes:
Monitoring wells were surveyed by Nafis & Young in August 2008 (with the exception of MW-5)
MW-1 through MW-4 were previously installed by Tighe & Bond in 2005.
UNK - Unknown Elevation

# Table 2
## Summary of Soil Sampling Analytical Results
## Former Gong Bell Site
## East Hampton, Connecticut

| Parameter | Connecticut RSR Criteria | | | SAMPLING LOCATION | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | B-14(2-3ft) | B-15(1-1.5ft) | B-16(2-3ft) | B-16(5-6ft) | B-17(0.5-1.5ft) Ψ | B-17(4-5ft) | B-17(4-5ft)DUP | B-18(3.5-4.5FT) | B-19(2-3.5FT) | B-19(4-5FT) | B-20(0.5-1.5FT) Ψ | B-21(0.5-1.5FT) Ψ | MW-5 |
| Sampling Date | | | | 5/21/2009 9:00:00 AM | 5/21/2009 10:40:00 AM | 5/21/2009 12:15:00 PM | 5/21/2009 12:25:00 PM | 5/21/2009 12:40:00 PM | 5/21/2009 12:45:00 PM | 5/21/2009 12:45:00 PM | 5/21/2009 11:35:00 AM | 5/21/2009 10:15:00 AM | 5/21/2009 10:20:00 AM | 5/21/2009 1:15:00 PM | 5/21/2009 1:25:00 PM | 5/21/2009 1:25:00 PM |
| Sample Depth | | | | 2-3 Feet | 1-1.5 Feet | 2-3 Feet | 5-6 Feet | 0.5-1.5 Feet | 4-5 Feet | 4-5 Feet | 3.5-4.5 Feet | 2-3.5 Feet | 4-5 Feet | 0.5-1.5 Feet | 0.5-1.5 Feet | 0.5-1.5 Feet |
| Laboratory Report Number | I/C DEC | RES DEC | GA PMC | 09E0468 | 09E0468 | 09E0468 | 09E0468 | 09E0468 | 09E0468 | 09E0468 | 09E0468 | 09E0468 | 09E0468 | 09E0468 | 09E0468 | 09E0468 |
| **CTDEP ETPH (mg/Kg dry)** | | | | | | | | | | | | | | | | |
| ETPH | 2500 | 500 | 500 | ND (11) | 530 | 15 | 12 | 230 | 490 | 490 | 350 | 49 | ND (11) | 530 | 16 | NT |
| **Metals (mg/Kg)[10]** | | | | | | | | | | | | | | | | |
| Antimony | 8200 | 27 | NDC | 17 | 9.2 | 240 | 14 | ND/4.3UJ† | 53 | 35 | 32 | 15 | ND/4.3UJ† | ND/4.4UJ† | ND/4.4UJ† | ND (4.4) |
| Arsenic | 10 | 10 | NDC | 5.9 | 5.3 | 64 | 9 | 6.3 | 13 | 9.5 | 14 | 20 | ND/2.6UJ† | 5 | 7.1 | ND (2.7) |
| Barium | 140000 | 4700 | NDC | 120 | 47 | 70 | 66 | 85 | 64 | 59 | 59 | 79 | 18 | 63 | 40 | NT |
| Beryllium | 2 | 2 | NDC | NT | NT | NT | NT | 0.8 | NT | NT | NT | NT | NT | 0.68 | 0.63 | NT |
| Cadmium | 1000 | 34 | NDC | 0.34 | 2.4 | 0.69 | ND (0.29) | 0.45 | 0.65 | 0.67 | 1.5 | 0.95 | ND (0.26) | 0.3 | 0.36 | NT |
| Chromium | ~ | ~ | NDC | 36 | 49 | 8.3 | 31 | 20 | 9.2 | 7.7 | 15 | 18 | 3.9 | 14 | 6.8 | NT |
| Copper | 76000 | 2500 | NDC | 55 | 620 | 600 | 570 | 420 | 1500 | 1200 | 7100 | 4100 | 22 | 240 | 13 | 3.0 |
| Lead | 1000 | 400 | NDC | 9.5 | 520 | 2900 | 400 | 150 | 1500 | 940 | 2000 | 2400 | 6.8 | 120 | 6.8 | 3.9 |
| Mercury | 610 | 20 | NDC | 0.054 | 0.17 | 15 | 1.4 | 0.18 | 0.57J | 0.3J | 0.35 | 1.1 | 0.015 | 0.14 | ND (0.021) | NT |
| Nickel | 7500 | 1400 | NDC | NT | NT | NT | NT | 53 | NT | NT | NT | NT | NT | 14 | 5.4 | NT |
| Silver | 10000 | 340 | NDC | ND (0.54) | ND (0.57) | 51 | 2.6 | ND (0.54) | ND (0.58) | ND (0.55) | 0.73 | ND (0.67) | ND (0.53) | ND (0.55) | ND (0.55) | NT |
| Vanadium | 14000 | 470 | NDC | NT | NT | NT | NT | 37 | NT | NT | NT | NT | NT | 31 | 15 | NT |
| Zinc | 610000 | 20000 | NDC | NT | NT | NT | NT | 450 | NT | NT | NT | NT | NT | 240 | 21 | NT |
| **Pesticides 8081A (mg/Kg dry)** | | | | | | | | | | | | | | | | |
| Varies | Varies | Varies | Varies | NT | NT | NT | NT | ND | NT | NT | NT | NT | NT | ND | ND | NT |
| **PCBs 8082 (mg/Kg dry)** | 10 | 1 | NDC | NT | NT | NT | NT | ND | NT | NT | NT | NT | NT | ND | ND | NT |
| **VOCs 8260B (mg/Kg dry)** | | | | | | | | | | | | | | | | |
| Acetone | 1000 | 500 | 14 | ND (0.081) | ND (0.12) | ND (0.090) | ND (0.096) | ND (0.081) | ND (0.14) | ND (0.18) | ND (0.15) | ND (0.11) | ND (0.11) | ND (0.052) | 0.21J | NT |
| 2-Butanone (MEK) | 1000 | 500 | 8 | ND (0.032) | ND (0.048) | ND (0.036) | ND (0.039) | ND (0.032) | ND (0.056) | ND (0.072) | ND (0.060) | ND (0.043) | ND (0.044) | ND (0.021) | 0.15J | NT |
| **SVOCs 8270C (mg/Kg dry)** | | | | | | | | | | | | | | | | |
| Acenaphthylene | 2500 | 1000 | 8.4 | ND (0.18) | 0.53 | ND (0.19) | ND (0.20) | 0.27 | 0.73 | 0.6 | ND (0.22) | ND (0.23) | ND (0.18) | 0.85 | ND (0.19) | NT |
| Anthracene | 2500 | 1000 | 40 | ND (0.18) | 0.52 | ND (0.19) | ND (0.20) | 0.24 | 0.29 | 0.2 | 0.25 | ND (0.23) | ND (0.18) | 0.83 | ND (0.19) | NT |
| Benzo(a)anthracene | 7.8 | 1 | 1 | ND (0.18) | 3.3J** | ND (0.19) | ND (0.20) | 1.7** | 3.1J** | 2.3J** | 1.1** | ND (0.23) | ND (0.18) | 5.1J*** | 0.24 | NT |
| Benzo(a)pyrene | 1 | 1 | 1 | ND (0.18) | 3.7J*** | ND (0.19) | ND (0.20) | 1.8** | 4J** | 3.1J** | 1.2** | ND (0.23) | ND (0.18) | 4.8J*** | 0.26 | NT |
| Benzo(b)fluoranthene | 7.8 | 1 | 1 | ND (0.18) | 5.1J** | ND (0.19) | ND (0.20) | 2.6** | 6.2J** | 4.9J** | 1.8** | 0.26 | ND (0.18) | 7.3J*** | 0.4 | NT |
| Benzo(g,h,i)perylene | 2500 | 1000 | 4.2 | ND (0.18) | 1.3** | ND (0.19) | ND (0.20) | 0.7 | 1.6 | 1.3 | 0.47 | ND (0.23) | ND (0.18) | 1.7 | ND (0.19) | NT |
| Benzo(k)fluoranthene | 78 | 8.4 | 1 | ND (0.18) | 1.9** | ND (0.19) | ND (0.20) | 0.95 | 2.1** | 1.7** | 0.64 | ND (0.23) | ND (0.18) | 2.7*** | ND (0.19) | NT |
| Bis(2-ethylhexyl)phthalate | 410 | 44 | 1 | ND (0.37) | 2.9** | ND (0.39) | ND (0.40) | ND (0.36) | ND (0.39) | ND (0.38) | ND (0.44) | ND (0.45) | ND (0.36) | ND (0.38) | ND (0.37) | NT |
| Chrysene | 780 | 84 | 1 | ND (0.18) | 4.4J** | ND (0.19) | ND (0.20) | 2** | 4J** | 3.2J** | 1.4** | ND (0.23) | ND (0.18) | 6.2J*** | 0.3 | NT |
| Dibenz(a,h)anthracene | 1 | 1 | 1 | ND (0.18) | ND (0.20) | ND (0.19) | ND (0.20) | ND (0.18) | 0.43 | ND (0.19) | ND (0.22) | ND (0.23) | ND (0.18) | 0.52 | ND (0.19) | NT |
| Fluoranthene | 2500 | 1000 | 5.6 | ND (0.18) | 6.1J*** | ND (0.19) | ND (0.20) | 2.8 | 4J‡ | 2.8J‡ | 1.9 | 0.29 | ND (0.18) | 9.6J*** | 0.51 | NT |
| Fluorene | 2500 | 1000 | 5.6 | ND (0.18) | 0.31 | ND (0.19) | ND (0.20) | ND (0.18) | ND (0.20) | ND (0.19) | ND (0.22) | ND (0.23) | ND (0.18) | 0.42 | ND (0.19) | NT |
| Phenanthrene | 2500 | 1000 | 4 | ND (0.18) | 4.5J** | ND (0.19) | ND (0.20) | 1.3 | 1.2J‡ | 0.86J‡ | 1.3 | 0.26 | ND (0.18) | 6.4J*** | 0.3 | NT |
| Pyrene | 2500 | 1000 | 4 | ND (0.18) | 6J** | ND (0.19) | ND (0.20) | 2.8 | 3.5J‡ | 2.8J‡ | 1.8 | 0.24 | ND (0.18) | 8.8J*** | 0.43 | NT |
| **SPLP Metals 6020A (mg/L)** | | | | | | | | | | | | | | | | |
| Antimony | NDC | NDC | 0.006 | NT | NT | 0.0052 | NT | NT | NT | NT | NT | NT | NT | NT | NT | 0.022 |
| Arsenic | 10 | 10 | 0.012 | 0.012 | ND (0.005) | NT | NT | 0.0055 | 0.018 | NT | 0.018 | NT | NT | ND (0.005) | ND (0.005) | ND (0.002) |
| Cadmium | 1000 | 34 | 0.005 | ND (0.0025) | 0.0061 | NT | NT | ND (0.0025) | NT | NT | NT | NT | NT | ND (0.0025) | ND (0.0025) | NT |
| Copper | NDC | NDC | 1.3 | NT | NT | NT | NT | NT | NT | NT | NT | 3.3 | NT | NT | NT | 0.46 |
| Lead | NDC | NDC | 0.015 | NT | NT | 0.21 | NT | NT | NT | NT | NT | 0.46 | NT | NT | NT | 0.3 |
| Zinc | 610000 | 20000 | 5 | NT | NT | NT | NT | ND (0.100) | NT | NT | NT | NT | NT | 0.92 | NT | NT |
| **SPLP PAHs 8270C (mg/L)** | | | GWPC | | | | | | | | | | | | | |
| Acenaphthylene | NDC | NDC | 0.42 | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | ND (0.00030)UJ | NT | NT |
| Fluoranthene | NDC | NDC | 0.28 | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | 0.00079J | NT | NT |
| Phenanthrene | NDC | NDC | 0.2 | NT | NT | NT | NT | NT | NT | NT | NT | NT | NT | 0.001J | NT | NT |

**Notes:**

1. An asterisk (*) following a detection limit indicates that the minumum laboratory reporting limit exceeds one or more of the regulatory criteria.
2. NT = Not tested.
3. ~ = No Standard available
4. Detected compounds only are shown on this table (with the exception of SPLP metals, all are shown). For a complete analyte list, see laboratory analytical reports.
5. Bolded values indicate the compound was reported at the concentration indicated.
6. Soil samples with shaded values exceed the RSR Direct Exposure Criteria (DEC) for the parameter.
7. Soil samples with bolded outline exceed the RSR PMC for the parameter.
8. RSR criteria are in same units as analyte.
9. If detected, SPLP PAH results are compared to the GWPCx10.
10. Soil samples collected from B-14, B-15, B-16, B-17 (4-5'), B-18 and B-19 were analyzed for RCRA 8 metals plus antimony and copper. Soil samples collected from B-20, B-21 and B-17 (0.5-1.5 ft) were analyzed for the CTRSR 15 metals

** Based on comparison of mass analyses results to SPLP results from other samples, mass analytical results may not exceed the GA PMC if the sample was reanalyzed for SPLP.

*** Based on SPLP results from this sample, mass analyses results do not exceed the GA PMC.

Ψ Sample from newly placed fill

RSRs = Remediation Standard Regulations
Res DEC = Residential Direct Exposure Criteria
I/C DEC = Industrial/Commercial Direct Exposure Criteria
PMC = Pollutant Mobility Criteria

VOCs = Volatile Organic Compounds
SVOCs = Semi-Volatile Organic Compounds
ETPH = Extractable Petroleum Hydrocarbons
PCBs = Poly Chlorinated Biphenyls
ND = Not Detected above laboratory detection limit (shown in parenthesis)

NT = Not Tested
NDC = Not Directly Comparable based on the analytical method

EB= analyte was detected in the associated equipment blank and there is an indeterminate amount of error in the result presented
J = concentration is an estimate
UJ =reporting limit is an estimate
† = UJ indicates qualified result; results near detection limits are biased low
‡ = J indicates estimated result; reported results are over verified calibration range

**Table 3**
**Summary of Groundwater Analytical Results**
**Former Gong Bell Site**
**East Hampton, Connecticut**

| Parameter | Connecticut RSR Criteria | | | | SAMPLING LOCATION | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | GA GWPC | I/C VC | RES VC | SWPC | MW-1 | MW-2 | MW-3 | MW-4 | MW-5 | MW-5 Dup |
| Sampling Date | | | | | 6/17/2009 4:44:00 PM | 6/17/2009 3:33:00 PM | 6/17/2009 12:43:00 PM | 6/17/2009 2:37:00 PM | 6/17/2009 10:39:00 AM | 6/17/2009 10:39:00 AM |
| Sample Depth | | | | | 0- Feet | 0- Feet | 0- Feet | 0- Feet | 0- Feet | 0- Feet |
| Laboratory Report Number | | | | | 09F0406 | 09F0406 | 09F0406 | 09F0406 | 09F0406 | 09F0406 |
| **CTDEP ETPH (mg/L)** | | | | | | | | | | |
| ETPH | 0.1 | ~ | ~ | ~ | NT | NT | NT | ND (0.075) | ND (0.075) | ND (0.075) |
| **15 RSR METALS (mg/L)** | | | | | | | | | | |
| Arsenic | 0.01 | ~ | ~ | 0.004 | ND (0.010) | ND (0.010) | ND (0.010) | **0.016** | ND (0.010) | ND (0.010) |
| Copper | 1.3 | ~ | ~ | 0.048 | **0.013** | ND (0.010) | **0.094** | **0.033** | ND (0.010) | ND (0.010) |
| Silver | 0.036 | ~ | ~ | 0.012 | ND (0.0050) | **0.0085** | **0.0058** | ND (0.0050) | ND (0.0050) | ND (0.0050) |
| **VOCs 8270B (µg/L)** | | | | | | | | | | |
| Varies | ~ | Varies | Varies | Varies | NT | ND | NT | ND | ND | ND |
| **SVOCs 8270C (µg/L)** | | | | | | | | | | |
| Varies | ~ | ~ | ~ | Varies | ND | ND | ND | ND | ND | ND |

**NOTES:**
1. An asterisk (*) following a detection limit indicates that the minumum laboratory reporting limit exceeds one or more of the regulatory criteria.
2. NT = Not tested.
3. ~ = No Standard available
4. Detected compounds only are shown on this table. For a complete analyte list, see laboratory analytical reports.
5. Bolded values indicate the compound was reported at the concentration indicated.
6. Groundwater samples with shaded values exceed the RSR Surface Water Protection Criteria (SWPC) for the parameter.
7. Groundwater samples with bolded outline exceed the proposed RSR VC for the parameter.
8. RSR criteria are in the same units as the analyte.

RSRs = Remediation Standard Regulations
Res VC = Residential Volatilization Criteria
I/C VC = Industrial/Commercial Volatilization Criteria
SWPC = Surface Water Protection Criteria
VOCs = Volatile Organic Compounds
SVOCs = Semi-Volatile Organic Compounds
ETPH = Extractable Petroleum Hydrocarbons
ND = Not Detected above laboratory detection limit (shown in parenthesis)

**Table 4**
**Conceptual Site Model**
**Former Gong Bell Site**
**East Hampton, Connecticut**

| AOC | Description | Relase Mechanism | Migration Pathway | COCs and Affected Media | | Potential Exposure Pathway | Potential Receptors | Status |
|---|---|---|---|---|---|---|---|---|
| | | | | Unsaturated Soils | Groundwater | | | |
| 1 | Historic Fill | Placement of Fill Materials | Leach to groundwater and lateral flow of groundwater | Copper, Lead, Zinc, PAHs | Arsenic, Antimony, Copper, Lead, Mercury, PAHs | Ingestion/ Dermal Contact; Discharge to Surface Water | Human and Ecological; Surface Water; Residential Potable Supply Wells | Impacts due to fill materials. 2005 T&B Investigation identified evidence of coal ash and charred materials on-site. Mecury in GW finding not reproducible. 2009 AECOM further refined the extents of the fill. |
| 2 | Potential Former USTs | Leaks | Leach to groundwater and lateral flow of groundwater | None | None | Discharges to Groundwater and/or Surface Water | Surface Water, Residential Potable Supply Wells | 2005 T&B investigation did not identify evidence of UST. AST cradle was discovered. No evidence of significant fuel release. No further action was conducted during 2009 AECOM investigation. |
| 3 | Former Industrial Building | Leaks, Spills, Dumping | Leach to groundwater and lateral flow of groundwater | Copper, Lead, Zinc, PAHs, ETPH | Arsenic, Antimony, Copper, Lead, Mercury, PAHs | Ingestion/ Dermal Contact; Discharge to Surface Water | Human and Ecological; Surface Water; Residential Potable Supply Wells | Impacts due to fill materials. 2005 T&B Investigation identified evidence of coal ash and charred materials on-site. Mecury in GW finding not reproducible. 2009 AECOM further refined the extents of the fill. |
| 4 | Former Wastwater Disposal System | Discharges, leaks | Migration Downstream | Copper, Lead, Zinc, PAHs | Copper, Lead, Zinc PAHs | Ingestion/ Dermal Contact; Discharge to Surface Water | Human and Ecological; Surface Water; Residential Potable Supply Wells | 2005 T&B investigation indicated metals and PAH impacts to adjacent stream sediments. Impacts were attributed to overland flow, subsurface leaching potential, and discharges from potential on-site and/or off-site sources. Stream sediments not evaluated in 2009 AECOM investigation. |
| 5 | Newly Placed Fill | Placement of Fill Materials | Leach to groundwater and lateral flow of groundwater | PAHs, ETPH | PAHs, ETPH | Ingestion/ Dermal Contact; Discharge to Surface Water | Human and Ecological; Surface Water; Residential Potable Supply Wells | 2009 AECOM investigation included three samples of the fill. PAHs and ETPH were identified above RSR criteria. |

# APPENDIX C

## Sensitive Receptor Information

Tighe&Bond
*Consulting Engineers*
*Environmental Specialists*

126136-11
September 29, 2005

Mr. Alan Bergren
Town Manager
Town of East Hampton
20 East High Street
East Hampton, CT 06424

Re: Receptor Survey for Reporting of
Environmental Hazards
13 Watrous Street and 103 Main Street
East Hampton Village Center

Dear Mr. Bergren:

Tighe & Bond prepared the Significant Environmental Hazard reports for 13 Watrous Street and 103 Main Street (sites) and submitted them to the Connecticut Department of Environmental Protection (CTDEP) on August 26, 2005 as required by Public Act 98-134. The reports were required because the Significant Environmental Hazard of "Drinking Water Well Threatened" was identified during the Phase II Environmental Site Assessment at both sites. Specifically, trichloroethene (TCE) was detected in the groundwater at 13 Watrous Street above the Groundwater Protection Criteria (GWPC). Additionally, antimony and lead were detected above the GWPC in the groundwater at 103 Main Street.

During preparation of the Significant Environmental Hazard reports for the two sites, the Town of East Hampton proactively sampled two water supply wells located at 13 Watrous Street. One of the wells is currently is inactive but was formerly used to supply the facility. The other well supplies two residences located adjacent to the facility. TCE was not detected in the well that supplies the residences but was detected in the former facility well. Additionally pesticides were detected in the former facility well including chlordane, dieldrin, and trans-nonachlor. Tighe & Bond verbally notified Gilbert Richards of the CTDEP by voicemail of the detections of pesticides on September 27 and 29, 2005. It is assumed that analysis for pesticides will be included in the analysis of water supply wells identified by this receptor survey.

CTDEP acknowledged receipt of the reports in letters dated September 13, 2005. The letters contained specific requirements of the CTDEP including a receptor survey to locate supply wells within 500-feet of 13 Watrous street and 103 Main Street and sampling of identified properties with wells for the constituents of concern.

The methodology used in generating the receptor survey is provided in this report. A list of properties within a 500-foot radius of the 103 Main Street and 13 Watrous Street is provided as

Tables 1 and 2, respectively. A list of properties within a ¼-mile radius of 103 Main Street and 13 Watrous Street is included in Tables 2 and 4, respectively. A figure illustrating the locations of properties within a 500-foot and ¼-mile radius of both property boundaries is provided in Figure 1. A figure depicting the aerial view of the properties within the two buffers of both properties is provided in Figure 2. A ¼-mile radius was used for both properties to provide additional water supply well information for potential use in the assessment of other brownfield sites in the Village Center.

**Creation of Receptor Area**

ArcView 3.3 Geographical Information Systems (3.3) was used to create two sets of buffers around the sites, 1/4-mile and 500-ft. The ¼-mile radius buffer overlaps between sites for a contiguous area of 216 acres (Figure 1). The northern extent of the buffer includes portions of Lake Pocotopaug. The southern extent of the buffer ends near Edgerton Street. The entire Village Center Area is included within the buffer.

A digitized parcel map, last updated in 2002, was provided by the Midstate Regional Planning Authority and overlain on the buffered areas. The number of parcels contained within or touching the buffer numbered 126 properties.

A similar buffer was generated with a radius of 500-feet from the property boundaries of both sites (Figure 1). Once again, the 500-foot buffer contained an overlap between the two sites for a contiguous area of 51 acres. The northern extent of the buffer extends to the Bevin Manufacturing Company and the southern extent almost to Niles Street. The area encompasses the majority of the Village Center area. The number of parcels contained within or touching the buffer numbered 71 properties.

Both buffers were also overlain on an aerial photograph provided by SBC taken in 2001 (Figure 2). The photograph provides the locations of houses and landmarks within the 500-foot and ¼-mile buffered areas.

**Community Water System**

On September 1, 2005 Tighe & Bond personnel interviewed Vince Susco of the Water Pollution Control Authority. Mr. Susco identified the 29 properties served by the Village Center Community Water System. The Village Center Water System became operational in August of 1992 and has been owned and operated by the East Hampton Water Pollution Control Authority. The properties served by the water system are highlighted in blue on Figure 1. Mr. Susco subsequently reviewed the map and verified that the correct locations were identified. The properties are also shaded on the tables. Mr. Susco stated that all of the properties connected to the community water system were required to abandon their supply wells.

**Windshield Survey**

On September 1, 2005 Tighe & Bond personnel conducted a windshield survey of the receptor area. The purpose of the windshield survey was to identify street addresses within a ¼-mile radius of the sites and to note visible wellhead locations within the same area. Figure 1 contains the locations of the 58 visible wellheads.

**Additional Address Information**

In addition to the windshield survey, Tighe and Bond personnel researched additional property information provided by the East Hampton Real Estate Management Services website: http://www.rmsreval.com. This website provided additional information including mailing addresses for property owners. This additional information is provided in Tables 1 and 2.

**Conclusions**

The 500-ft and ¼ mile buffer areas for 13 Watrous Street and 103 Main Street overlap forming contiguous areas. The majority of properties within these distances contain supply wells. The community water system supplies 29 nearby properties. All of the properties connected to the community water system were required to abandon their supply wells when the municipal system was established.

Based on the preparation of this receptor survey, 62 properties are within the 500-foot contiguous potential receptor areas. CTDEP requires any drinking water wells located on these properties to be sampled for the Constituents of Concern (COCs) including TCE, lead, and antimony. Tighe & Bond recommends that the former facility well be re-sampled for pesticides. It is also recommended that CTDEP be consulted for sampling of wells for pesticides in the potential receptor areas.

Tighe & Bond recommends that the well sampling be conducted by Thad King of the Chatham Health District. The sampling and analyses should be prioritized to include the wells nearest each site first and in accordance with PA 98-134 the work needs to be completed by October 16, 2005.

If you have any questions or comments, please contact me at (860)704-4761.

Very truly yours,

TIGHE & BOND, INC.

James T. Olsen, LEP
Senior Hydrogeologist / Office Manager



213 Court Street, Suite 900 Middletown, CT 06457 Tel. 860-704-4760 Fax. 860-704-4775

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Enclosures
Copy: Gilbert Richards – CTDEP
Dave Terry – Chairman East Hampton Brownfields Steering Committee
Dan Wolfram – East Hampton Brownfields Steering Committee
Thad King – Director of Health, Chatham Health District

**Table 1**
**Properties Contained within 500-foot Radius**
**Receptor Survey**
**103 Main Street**
**East Hampton, CT.**

| First Name | Last Name | Parcel ID | | | Property Address | Mailing Street Address (if different) | Mailing Town Address | Zip Code |
|---|---|---|---|---|---|---|---|---|
| | | Map | Block | Lot | | | | |
| Richard & Sandra | Mooney | 6A | 60 | 1 | 89 Main Street | 188 Young Street | | |
| Brookside Industrial Park Company | | 6A | 60 | 2 | Walnut Avenue | 11 Skinner Street | | |
| BIZMO ENTERPRISES LLC | | 6A | 60 | 3 | 91 Main Street | 73 Bay Road | | |
| JMJJ LLC | | 6A | 60 | 2A | 93 Main Street | | | |
| Dorino | Bastiani | 6A | 58 | 1 | 29 Watrous Street | 21 East Street | Hebron | 06248 |
| Allen & Rita | Dunham | 6A | 58 | 2 | Watrous Street | 15 Walnut Avenue | | |
| Allen & Rita | Dunham | 6A | 58 | 2A | 5 Walnut Avenue | 15 Walnut Avenue | | |
| R A W PROPERTIES LLC | | 6A | 57 | 1 | 95 Main Street | 8 Emily Road | Marlborough | 06447 |
| Ruitto | Llena | 6A | 57 | 1A | 97 Main Street | 474 Glastonbury Turnpike | Portland | |
| Sumner & Sheila | Eihhorn | 6A | 57 | 2 | 101 Main Street | 715 Middletown Road | Colchester | |
| Bonito | Fins Stoddard | 6A | 57 | 2A | 8 Walnut Avenue | P.O. Box 150 | | |
| | | 6A | 57 | 24 | Walnut Avenue | | | |
| | | 6A | 57 | 23 | Walnut Avenue | | | |
| Karen & Keith | Wesner | 6A | 57 | 5J-7 | 47 Chatham Fields Road | | | |
| Fadi & Maureen | Maalouf | 6A | 57 | 5J-6 | 45 Chatham Fields Road | | | |
| Town of East Hampton | | 6A | 57 | 3 | 105 Main Street | 20 East High Street | | |
| Masonic Temple Assoc. of E. Hampton | | 6A | 57 | 4 | 111 Main Street | P.O. Box 112 | | |
| Rebecca | Thompson | 6A | 57 | 3A | 107 Main Street | | | |
| Town of East Hampton | | 6A | 57 | 2B | 103 Main Street | 20 East High Street | | |
| Robert | McKinney | 2A | 48A | 1 | 88 Main Street | P.O. Box 141 | Middle Haddam | 06456 |
| John | Peterson | 2A | 48A | 2 | 90 Main Street | 62 Barton Hill Road | | |
| | | 2A | 48A | 2A | Main Street | | | |
| Town of East Hampton | | 2A | 48A | 3 | 94 Main Street | 20 East High Street | | |
| | | 2A | 48A | 4 | Station Road | | | |
| | | 2A | 48A | 5 | Station Road | | | |
| | | 2A | 48A | 6 | Station Road | | | |
| | | 2A | 48A | 7 | Station Road | | | |
| | | 2A | 48A | 8 | Skinner Street | | | |
| Chesner Associates LLC | | 2A | 48A | 9B | 16 Skinner Street | 38 Gypsy Lane | Meriden | 06450 |
| JCB Real Estate LLC | | 2A | 49 | 1-1 | 11 Skinner Street | | | |
| Leroy | Goff | 2A | 49 | 2 | 100 Main Street | | | |
| BENSON ENTERPRISES INC | | 2A | 49 | 3-1 | 102 Main Street | P.O. Box 19 | East Glastonbury | 06025 |
| David & Carrissa | Tomczyk | 2A | 49 | 3 | 108 Main Street | | | |
| William | Spencer | 2A | 49 | 4 | 112 Main Street | P.O. Box 90 | | |
| Galen & Cheryl | Tyler | 2A | 49 | 5 | 116 Main Street | | | |
| Jay & Michelle | Larson | 2A | 49 | 7 | 6 Niles Street | | | |

Note:
Shaded rows indicate property served by community water system

**Table 2**
**Properties Contained within 500-foot Radius**
**Receptor Survey**
**13 Watrous Street**
**East Hampton, CT**

| First Name | Last Name | Parcel ID | | | Property Address | Mailing Street Address (if different) | Mailing Town Address | Zip Code |
|---|---|---|---|---|---|---|---|---|
| | | Map | Block | Lot | | | | |
| Bruce | Weitzman | 5A | 62A | 22 | 2 Bevin Court | | | |
| | | 5A | 62A | 19 | Summit Street | | | |
| | | 5A | 62A | 57 | Bevin Road | | | |
| Bevin Bros MFG Co. | | 5A | 62A | 58 | Bevin Road | | | |
| | | 5A | 62A | 1A | Bevin Boulevard | | | |
| | | 5A | 62A | 56 | Bevin Boulevard | | | |
| | | 5A | 62A | 20 | Summit Street | | | |
| R & D Enterprise | | 6A | 61 | 1 | 12 Summit Street | | | |
| | | 6A | 61 | 1A | Watrous Street | | | |
| Carl E. Vale Properties LLC | | 6A | 61 | 2 | 10 Summit Street | 58 Barton Hill | | |
| Lionel | Valluzzo | 6A | 61 | 2A | 8 Summit Street | 8-B Summit Street | | |
| Larry & Mary | Bair | 6A | 61 | 3 | 6 Summit Street | | | |
| William | Devine | 6A | 61 | 4 | 4 Summit Street | 43 Main Street | | |
| | | 6A | 61 | 5 | Main Street | | | |
| | | 6A | 61 | 6 | Main Street | | | |
| Myrialis | Lambis | 6A | 61 | 7 | 87 Main Street | 31 Donna Drive | Burlington | 06013 |
| | | 6A | 61 | 7A | Summit Street | | | |
| Michael | Cummings | 6A | 61 | 8 | 22 Watrous Street | 91 St. Nicholas Avenue | New York, Ny | 10032 |
| Keith | Erbe | 6A | 59 | 12A | 1 Watrous Street | 14 Summit Street | | |
| Victor | Biondi | 6A | 59 | 13 | 2 Starr Place | | | |
| Town of East Hampton | | 6A | 59 | 12 | 13 Watrous Street | 20 East High Street | | |
| B B ENTERPRISES LLC | | 6A | 59 | 11 | 4 Starr Place | 77 Peterson Street | Vernon | 06066 |
| Donna | Daigle | 6A | 59 | 10 | 6 Starr Place | 11 Valli Drive | | |
| Merry | Atikinson | 6A | 59 | 9 | 8 Starr Place | | | |
| | | 6A | 59 | 6 | Railroad Avenue | | | |
| Pheonix Redevelopment | | 6A | 59 | 8 | 17 Watrous Street | P.O. Box 278 | Higganum | 06441 |
| Mark & Melody | Philhower | 6A | 59 | 7 | Railroad Avenue | 21 White Birch Road | | |
| John & Sheri | Deheny | 6A | 59 | 5 | 5 Railroad Avenue | | | |
| Tina | Velasquez | 6A | 59 | 4 | 7 Railroad Avenue | | | |
| Robert & Lorraine | Valli | 6A | 59 | 3 | 9 Railroad Avenue | | | |
| Carol | Caplan | 6A | 59 | 2 | 11 Railroad Avenue | | | |
| Carol | Caplan | 6A | 59 | 1 | Railroad Avenue | 11 Railroad Avenue | | |
| Wendy & Donald | Flis | 6A | 59 | 14 | 11 Starr Place | | | |
| Richard | Wood | 6A | 59 | 15A | 9 Starr Place | | | |

**Table 2**
**Properties Contained within 500-foot Radius**
**Receptor Survey**
**13 Watrous Street**
**East Hampton, CT**

| First Name | Last Name | Parcel ID | | | Property Address | Mailing Street Address (if different) | Mailing Town Address | Zip Code |
|---|---|---|---|---|---|---|---|---|
| | | Map | Block | Lot | | | | |
| Edward | Roy | 6A | 59 | 15 | 7 Starr Place ✓ | | | |
| William & Michelle | Drotar | 6A | 59 | 16 | 5 Starr Place ✓ | | | |
| Jason | Baltrucki | 6A | 59 | 17A | 3 Starr Place ✓ | | | |
| Eleanor | Lancey | 6A | 59 | 17 | 1 Starr Place ✓ | | | |
| | | 6A | 59 | 18 | Starr Place | | | |
| | | 6A | 59 | 19 | Starr Place | | | |
| Dorino | Bastiani | 6A | 58 | 1 | 29 Watrous Street | 21 East Street | Hebron | 06248 |
| Allen & Rita | Dunham | 6A | 58 | 2 | Watrous Street ✓ | 15 Walnut Avenue | | |
| Allen & Rita | Dunham | 6A | 58 | 2A | 5 Walnut Avenue ✓ | 15 Walnut Avenue | | |
| Allen & Rita | Dunham | 6A | 58 | 3 | 9 Walnut Avenue ✓ | 15 Walnut Avenue | | |
| John & Linda | Grenman | 6A | 58 | 2B | 17 Walnut Avenue ✓ | | | |
| Richard & Sandra | Mooney | 6A | 60 | 1 | 89 Main Street ✓ | 188 Young Street | | |
| Brookside Industrial Park Company | | 6A | 60 | 2 | Walnut Avenue ✓ | 11 Skinner Street → Abandoned - Industrial | | |
| BIZMO ENTERPRISES LLC | | 6A | 60 | 3 | 91 Main Street ✓ | 73 Bay Road | | |
| JMJJ LLC | | 6A | 60 | 2A | 93 Main Street ✓ | | | |

Note:
Shaded rows indicate property served by community water system

**Table 3**
**Properties Contained within 1/4-Mile Radius**
**Receptor Survey**
**103 Main Street**
**East Hampton, CT**

| First Name | Last Name | Parcel ID | | | Property Address | Mailing Street Address (if different) | Mailing Town Address | Zip Code |
|---|---|---|---|---|---|---|---|---|
| | | Map | Block | Lot | | | | |
| Richard & Sandra | Mooney | 6A | 60 | 1 | 89 Main Street | 188 Young Street | | |
| Brookside Industrial Park Company | | 6A | 60 | 2 | Walnut Avenue | 11 Skinner Street | | |
| BIZMO ENTERPRISES LLC | | 6A | 60 | 3 | 91 Main Street | 73 Bay Road | | |
| JMJJ LLC | | 6A | 60 | 2A | 93 Main Street | | | |
| Dorino | Bastiani | 6A | 58 | 1 | 29 Watrous Street | 21 East Street | Hebron | 06248 |
| Allen & Rita | Dunham | 6A | 58 | 2 | Watrous Street | 15 Walnut Avenue | | |
| Allen & Rita | Dunham | 6A | 58 | 2A | 5 Walnut Avenue | 15 Walnut Avenue | | |
| R A W PROPERTIES LLC | | 6A | 57 | 1 | 95 Main Street | 8 Emily Road | Marlborough | 06447 |
| Ruitto | Llena | 6A | 57 | 1A | 97 Main Street | 474 Glastonbury Turnpike | Portland | |
| Sumner & Sheila | Eihhorn | 6A | 57 | 2 | 101 Main Street | 715 Middletown Road | Colchester | |
| Bonito | Fins Stoddard | 6A | 57 | 2A | 8 Walnut Avenue | P.O. Box 150 | | |
| | | 6A | 57 | 24 | Walnut Avenue | | | |
| | | 6A | 57 | 23 | Walnut Avenue | | | |
| Karen & Keith | Wesner | 6A | 57 | 5J-7 | 47 Chatham Fields Road | | | |
| Fadi & Maureen | Maalouf | 6A | 57 | 5J-6 | 45 Chatham Fields Road | | | |
| Town of East Hampton | | 6A | 57 | 3 | 105 Main Street | 20 East High Street | | |
| Masonic Temple Assoc. of E. Hampton | | 6A | 57 | 4 | 111 Main Street | P.O. Box 112 | | |
| Rebecca | Thompson | 6A | 57 | 3A | 107 Main Street | | | |
| Town of East Hampton | | 6A | 57 | 2B | 103 Main Street | 20 East High Street | | |
| Robert | McKinney | 2A | 48A | 1 | 88 Main Street | P.O. Box 141 | Middle Haddam | 06456 |
| John | Peterson | 2A | 48A | 2 | 90 Main Street | 62 Barton Hill Road | | |
| | | 2A | 48A | 2A | Main Street | | | |
| Town of East Hampton | | 2A | 48A | 3 | 94 Main Street | 20 East High Street | | |
| | | 2A | 48A | 4 | Station Road | | | |
| | | 2A | 48A | 5 | Station Road | | | |
| | | 2A | 48A | 6 | Station Road | | | |
| | | 2A | 48A | 7 | Station Road | | | |
| | | 2A | 48A | 8 | Skinner Street | | | |
| Chesner Associates LLC | | 2A | 48A | 9B | 16 Skinner Street | 38 Gypsy Lane | Meriden | 06450 |
| JCB Real Estate LLC | | 2A | 49 | 1-1 | 11 Skinner Street | | | |
| Leroy | Goff | 2A | 49 | 2 | 100 Main Street | | | |
| BENSON ENTERPRISES INC | | 2A | 49 | 3-1 | 102 Main Street | P.O. Box 19 | East Glastonbury | 06025 |
| David & Carrissa | Tomczyk | 2A | 49 | 3 | 108 Main Street | | | |
| William | Spencer | 2A | 49 | 4 | 112 Main Street | P.O. Box 90 | | |
| Galen & Cheryl | Tyler | 2A | 49 | 5 | 116 Main Street | | | |
| Jay & Michelle | Larson | 2A | 49 | 7 | 6 Niles Street | | | |
| | | | | | 8 Niles Street | | | |
| | | | | | 10 Niles Street | | | |
| | | | | | 118 Main Street | | | |
| | | | | | 122 Main Street | | | |
| | | | | | 124 Main Street | | | |
| | | | | | 126 Main Street | | | |
| | | | | | 128 Main Street | | | |
| | | | | | 133 Main Street | | | |
| | | | | | 134 Main Street | | | |
| | | | | | 136 Main Street | | | |
| | | | | | 142 Main Street | | | |
| | | | | | 146 Main Street | | | |

**Table 4**
**Properties Contained within 1/4-mile Radius**
**Receptor Survey**
**13 Watrous Street**
**East Hampton, CT**

| First Name | Last Name | Parcel ID | | | Property Address | Mailing Street Address (if different) | Mailing Town Address | Zip Code |
|---|---|---|---|---|---|---|---|---|
| | | Map | Block | Lot | | | | |
| Bruce | Weitzman | 5A | 62A | 22 | 2 Bevin Court | | | |
| | | | | | 4 Bevin Court | | | |
| | | | | | 5 Bevin Court | | | |
| | | 5A | 62A | 19 | Summit Street | | | |
| | | 5A | 62A | 57 | Bevin Road | | | |
| Bevin Bros MFG Co. | | 5A | 62A | 58 | Bevin Road | | | |
| | | 5A | 62A | 1A | Bevin Boulevard | | | |
| | | 5A | 62A | 56 | Bevin Boulevard | | | |
| | | | | | 12 Bevin Boulevard | | | |
| | | | | | 14 Bevin Boulevard | | | |
| | | | | | 15 Bevin Boulevard | | | |
| | | | | | 18 Bevin Boulevard | | | |
| | | | | | 19 Bevin Boulevard | | | |
| | | | | | 24 Bevin Boulevard | | | |
| | | | | | 28 Bevin Boulevard | | | |
| | | | | | 32 Bevin Boulevard | | | |
| | | | | | 34 Bevin Boulevard | | | |
| | | 5A | 62A | 20 | Summit Street | | | |
| R & D Enterprise | | 6A | 61 | 1 | 12 Summit Street | | | |
| | | 6A | 61 | 1A | Watrous Street | | | |
| Carl E. Vale Properties LLC | | 6A | 61 | 2 | 10 Summit Street | 58 Barton Hill | | |
| Lionel | Valluzzo | 6A | 61 | 2A | 8 Summit Street | 8-B Summit Street | | |
| Larry & Mary | Bair | 6A | 61 | 3 | 6 Summit Street | | | |
| William | Devine | 6A | 61 | 4 | 4 Summit Street | 43 Main Street | | |
| | | 6A | 61 | 5 | Main Street | | | |
| | | 6A | 61 | 6 | Main Street | | | |
| Myrialis | Lambis | 6A | 61 | 7 | 87 Main Street | 31 Donna Drive | Burlington | 06013 |
| | | 6A | 61 | 7A | Summit Street | | | |
| Michael | Cummings | 6A | 61 | 8 | 22 Watrous Street | 91 St. Nicholas Avenue | New York, Ny | 10032 |
| Keith | Erbe | 6A | 59 | 12A | 1 Watrous Street | 14 Summit Street | | |
| Victor | Biondi | 6A | 59 | 13 | 2 Starr Place | | | |
| Town of East Hampton | | 6A | 59 | 12 | 13 Watrous Street | 20 East High Street | | |
| B B ENTERPRISES LLC | | 6A | 59 | 11 | 4 Starr Place | 77 Peterson Street | Vernon | 06066 |
| Donna | Daigle | 6A | 59 | 10 | 6 Starr Place | 11 Valli Drive | | |
| Merry | Atikinson | 6A | 59 | 9 | 8 Starr Place | | | |
| | | 6A | 59 | 6 | Railroad Avenue | | | |
| Pheonix Redevelopment | | 6A | 59 | 8 | 17 Watrous Street | P.O. Box 278 | Higganum | 06441 |
| Mark & Melody | Philhower | 6A | 59 | 7 | Railroad Avenue | 21 White Birch Road | | |

**Table 4**
**Properties Contained within 1/4-mile Radius**
**Receptor Survey**
**13 Watrous Street**
**East Hampton, CT**

| First Name | Last Name | Parcel ID | | | Property Address | Mailing Street Address (if different) | Mailing Town Address | Zip Code |
|---|---|---|---|---|---|---|---|---|
| | | Map | Block | Lot | | | | |
| John & Sheri | Deheny | 6A | 59 | 5 | 5 Railroad Avenue | | | |
| Tina | Velasquez | 6A | 59 | 4 | 7 Railroad Avenue | | | |
| Robert & Lorraine | Valli | 6A | 59 | 3 | 9 Railroad Avenue | | | |
| Carol | Caplan | 6A | 59 | 2 | 11 Railroad Avenue | | | |
| Carol | Caplan | 6A | 59 | 1 | Railroad Avenue | 11 Railroad Avenue | | |
| Wendy & Donald | Flis | 6A | 59 | 14 | 11 Starr Place | | | |
| Richard | Wood | 6A | 59 | 15A | 9 Starr Place | | | |
| Edward | Roy | 6A | 59 | 15 | 7 Starr Place | | | |
| William & Michelle | Drotar | 6A | 59 | 16 | 5 Starr Place | | | |
| Jason | Baltrucki | 6A | 59 | 17A | 3 Starr Place | | | |
| Eleanor | Lancey | 6A | 59 | 17 | 1 Starr Place | | | |
| | | 6A | 59 | 18 | Starr Place | | | |
| | | 6A | 59 | 19 | Starr Place | | | |
| Dorino | Bastiani | 6A | 58 | 1 | 29 Watrous Street | 21 East Street | Hebron | 06248 |
| Allen & Rita | Dunham | 6A | 58 | 2 | Watrous Street | 15 Walnut Avenue | | |
| Allen & Rita | Dunham | 6A | 58 | 2A | 5 Walnut Avenue | 15 Walnut Avenue | | |
| Allen & Rita | Dunham | 6A | 58 | 3 | 9 Walnut Avenue | 15 Walnut Avenue | | |
| John & Linda | Grenman | 6A | 58 | 2B | 17 Walnut Avenue | | | |
| Richard & Sandra | Mooney | 6A | 60 | 1 | 89 Main Street | 188 Young Street | | |
| Brookside Industrial Park Company | | 6A | 60 | 2 | Walnut Avenue | 11 Skinner Street | | |
| BIZMO ENTERPRISES LLC | | 6A | 60 | 3 | 91 Main Street | 73 Bay Road | | |
| JMJJ LLC | | 6A | 60 | 2A | 93 Main Street | | | |
| | | | | | 2 Bishop Hill Road | | | |
| | | | | | 4 Bishop Hill Road | | | |
| | | | | | 5 Bishop Hill Road | | | |
| | | | | | 6 Bishop Hill Road | | | |
| | | | | | 10 Bishop Hill Road | | | |
| | | | | | 12 Bishop Hill Road | | | |
| | | | | | 13 Bishop Hill Road | | | |
| | | | | | 14 Bishop Hill Road | | | |
| | | | | | 15 Bishop Hill Road | | | |
| | | | | | 16 Bishop Hill Road | | | |
| | | | | | 17Bishop Hill Road | | | |
| | | | | | 12 Summit Street | | | |
| | | | | | 13 Summit Street | | | |
| | | | | | 15 Summit Street | | | |
| | | | | | 17 Summit Street | | | |
| | | | | | 19 Summit Street | | | |

KARA HOWGETH


**LEGEND**

- Approximate location of visible wellhead. Observed during windshield survey.
- Town-owned property
- East Hampton parcels/property boundaries
- Community water customer
- 500-foot buffer of town-owned property
- 1/4-mile buffer of town-owned property

0.1 0 0.1 0.2 Miles

600 0 600 1200 Feet

Site

Receptor Survey

East Hampton Village Center
East Hampton, CT

Tighe&Bond, Inc.
Consulting Engineers
213 Court Street, Suite 900 - Middletown, CT 06457

| Job No. | Drawn By: | Date |
|---|---|---|
| 126136 | BCC | 9/21/05 |

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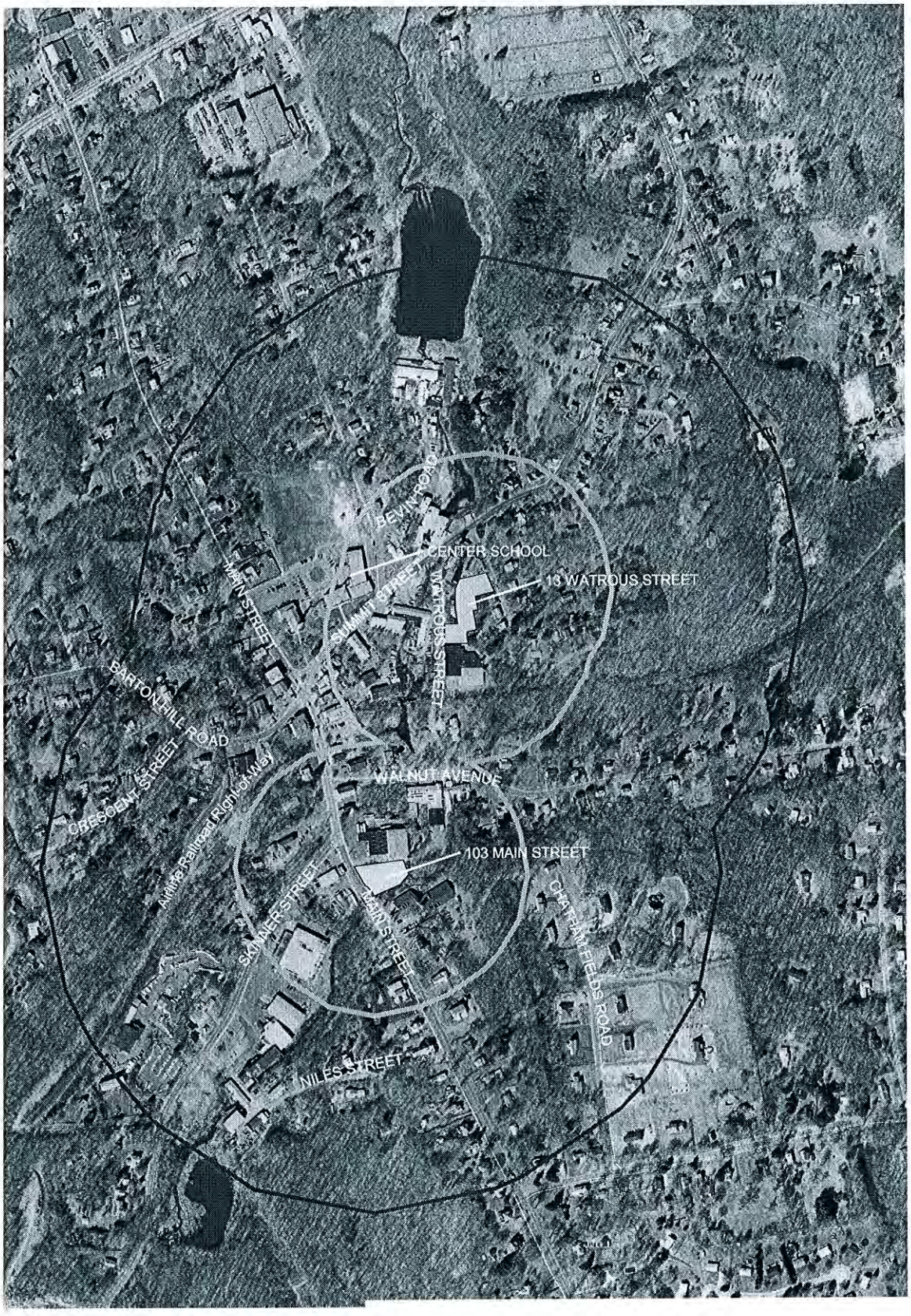
Figure 1




0 500 1000 1500 Feet

0 0.1 0.2 0.3 Miles

**LEGEND**

N W E S

500-foot buffer of town-owned properties

1/4-mile buffer of town-owned properties

Site

## Receptor Survey

East Hampton Village Center
East Hampton, CT

**Tighe&Bond, Inc.**
Consulting Engineers
213 Court Street, Suite 900 - Middletown, CT 06457

| Job No. | Drawn By: | Date: |
|---|---|---|
| 126136 | BCC | 9/20/05 |

File: /6136/Figures/Figure1.pdf

Figure 2

12-6136
January 12, 2007

Mr. Gilbert Richards
Bureau of Waste Management
Department of Environmental Protection
Hartford, CT 06106-5127

Re: Significant Hazard Report
13 Watrous Street and 103 Main Street
East Hampton Village Center

Dear Mr. Richards:

Tighe & Bond has prepared this combined Significant Environmental Hazard report for 13 Watrous Street and 103 Main Street (sites). This report provides the actions, including analytical results, status of untested wells, and recommended further actions and monitoring as required by Connecticut Public Act 98-134. This report represents one component of an Environmental Protection Agency (EPA) Brownfields Assessment Grant awarded to the Town of East Hampton.

**Background**

Tighe & Bond performed Phase I and II environmental site assessments (ESAs) on 13 Watrous and 103 Main Street. The Town of East Hampton submitted two Significant Environmental Reports to the Connecticut Department of Environmental Protection (CTDEP) on August 26, 2005 as required by Public Act 98-134. The reports were required because the Significant Environmental Hazard of "Drinking Water Well Threatened" was identified during the Phase II Environmental Site Assessment at both sites. Specifically, trichloroethene (TCE) was detected in the groundwater at 13 Watrous Street above the Groundwater Protection Criteria (GWPC). Additionally, antimony and lead were detected above the GWPC in the groundwater at 103 Main Street.

During preparation of the Significant Environmental Hazard reports for the two sites, the Town of East Hampton proactively sampled two water supply wells located at 13 Watrous Street. One of the wells, located with the interior of the building, is currently inactive but was formerly used to supply the facility. The other well, exterior to the building, formerly supplied two residences located adjacent to the facility. TCE was not detected in the exterior well but was detected in the former interior facility well. Additionally pesticides were detected in the interior well including chlordane, dieldrin, and trans-nonachlor. Tighe & Bond verbally

notified Gilbert Richards of the CTDEP by voicemail of the detections of pesticides on September 27 and 29, 2005. The analysis for pesticides was included in the analysis of water supply wells identified within the receptor survey.

CTDEP acknowledged receipt of the reports in a letter for each site dated September 13, 2005. The letters contained specific requirements of the CTDEP including a receptor survey to locate supply wells within 500-feet of 13 Watrous Street and 103 Main Street and sampling of identified properties with wells for the constituents of concern (COCs).

Tighe & Bond prepared a receptor survey report on September 27, 2005. This report was provided to the Town of East Hampton, Gil Richards of the CTDEP, and Thad King of the Chatham Health Department. Tighe & Bond used ArcView 3.3 Geographical Information Systems (3.3) to create two sets of buffers around the sites, 1/4-mile and 500-foot (Figure 1). The 500-foot buffer contained an overlap between the two sites for a contiguous area of 51 acres. The buffer extends north to the Bevin Manufacturing Company and the south to Niles Street. The area encompasses the majority of the Village Center area. A digitized parcel map, last updated in 2002, was provided by the Midstate Regional Planning Authority and overlain on the buffered areas. The number of parcels contained within or touching the buffer numbered 71 properties. Both buffers were also overlain on an aerial photograph provided by SBC taken in 2001 (Figure 2). The photograph provides the locations of houses and landmarks within the 500-foot and ¼-mile buffered areas.

On September 1, 2005 Tighe & Bond personnel interviewed Vince Susco of the Water Pollution Control Authority. Mr. Susco identified the 29 properties served by the Village Center Community Water System. The Village Center Water System became operational in August of 1992 and has been owned and operated by the East Hampton Water Pollution Control Authority. The properties served by the water system are highlighted in blue on Figure 1. Mr. Susco subsequently reviewed the map and verified that the correct locations were identified. The properties are also shaded on the tables. Mr. Susco stated that all of the properties connected to the community water system were required to abandon their supply wells.

On September 1, 2005 Tighe & Bond personnel conducted a windshield survey of the receptor area. The purpose of the windshield survey was to identify street addresses within a ¼-mile radius of the sites and to note visible wellhead locations within the same area. Figure 1 contains the locations of the 58 visible well heads.

**Results**

The receptor survey was used by The Chatham Health Department to conduct sampling at the properties. All of the data presented in this report was collected by the Chatham Health Department and provided to Tighe & Bond for this report. The data is provided at the end of this report. All sampling analysis was performed by the Department of Public Health Laboratory in Hartford, Connecticut. It should be noted that additional historic drinking water

results collected from sites within the study area are available through the Chatham Health District. However, this data was not collected as part of the Significant Hazard Reporting requirements and therefore not included within this report.

Table 1 provides the results of the 45 residences sampled between October 2005 and June 2006. The data is compared to the following standards:

- National Primary Drinking Water Regulations promulgated by the EPA.
- Action Limits for Private Wells, promulgated by the Connecticut Department of Public Health.
- The Connecticut Remediation Standard Regulation Groundwater Protection Criteria.

Three analytical methods were employed: EPA Method 524.2 for volatile organic compounds (VOCs), EPA Method 505 for pesticides and polychlorinated biphenyls (PCBs), and EPA Method 200.8 for lead and antimony. The proximity of the property to either 103 Main Street or 13 Watrous Street determined which analytical method was performed. All of the analytical results used within this report are provided in Appendix A. Figure 3 provides an illustration of the sampling results.

VOC analysis was performed on 34 properties located within proximity to 13 Watrous Street. Table 1 provides the 12 analytes detected in a supply well in at least one property. No VOC detections exceeded drinking water standards.

- Groundwater samples collected from 13 Watrous and 17 Watrous Street contained detections of TCE at 3.9 and 2.3 $\mu$g/L, respectively.
- Groundwater samples collected from 17 Watrous and 22 Watrous Street contained cis-1,2-dichloroethylene, a breakdown product of TCE, at a concentration of 0.6 $\mu$g/L.
- Methyl Tert Buytl-Ether (MTBE) was detected in well water from three sites, 107 and 111 Main Street and 5 Railroad Avenue, at concentrations ranging from 0.5 to 0.6 $\mu$g/L. The MTBE on Main Street is likely attributed to the documented release at the Food Bag located at 1 Colchester Avenue.
- Toluene was detected in supply wells at two properties including 2 and 6 Starr Place at concentrations of 0.8 and 1.4 $\mu$g/L, respectively.
- Groundwater collected from the interior drilled well at 13 Watrous Street contained a detection of trichloroflouroethene at 7.8 $\mu$g/L.
- The remaining compounds detected in the samples are grouped and regulated under Federal drinking water standards as trihalomethanes. None of the properties contained concentrations approaching these Federal limits.

Pesticide analysis was performed on 30 properties located within proximity to 13 Watrous Street. Table 1 provides the four pesticides detected. Eight properties contained groundwater with pesticide concentrations above drinking water standards.

- Alpha Chlordane was detected above drinking water standards at three properties located at 15, 16, and 19 Summit Street. The constituent was also detected, below applicable standards, in the groundwater collected from the interior supply well at 13 Watrous Street.

- Gamma Chlordane was only detected, below applicable standards, in the groundwater collected from the interior well located at 13 Watrous Street.

- Dieldrin was detected in groundwater from eight sample locations. Due to the low standard (0.03 $\mu$g/L) all eight detections were exceedences.

- Trans-nonachlor was detected in the groundwater samples collected from 13 Watrous Street below applicable standards.

Lead and antimony analysis was performed on 16 properties located within proximity to 103 Main Street. Table 1 provides the results. No lead or antimony detections exceeded drinking water standards.

- Antimony was not detected above reporting limits in any of the groundwater samples.

- Lead was detected at 4 $\mu$g/L for two samples collected from properties located at 1 Starr Place and 116 Main Street.

According to the Chatham Health Department, all of the property owners sampled were notified of the results. The Chatham Health Department has notified the CTDEP of all of the drinking water exceedences. The CTDEP placed five of the properties containing pesticides immediately on bottled water. Three properties, 2 Starr Place, 13 and 17 Watrous Street are used for commercial purpose and therefore do not qualify for state response. Thad King of the Chatham Health Department indicated that the owners of 2 Starr Place and 17 Watrous Street have been informed of the drinking water exceedances and their obligation to notify their employees of potential workplace exposure. The Town of East Hampton owns the property at 13 Watrous Street which is currently vacant. CTDEP has indicated that filtration systems have been provided for the residences at 29 Watrous Street and 2 Bevin Court. All five residential properties will be provided with filtration systems and removed from bottle water.

**Recommendations for Further Actions**

The Chatham Health Department is performing additional sampling within the Village Center. A third significant hazard notification, to be addressed as a separate report, was triggered during a Phase II ESA at 3 Walnut Avenue (Water Tower Property). CTDEP is currently conducting additional testing of residential wells as part of their investigation into the pesticide

groundwater contamination. It is recommended that the data gathered from both efforts continue to be exchanged to address any data gaps. Figure 3 depicts the locations of wells that have not been sampled and identified during this investigation as possible data gaps. In particular, no data was provided for 11, 13, 17 and 20 Summit Street. These locations should be sampled for VOCs and pesticides in accordance with the Significant Hazard Notification.

The Town of East Hampton, Chatham Health Department, and CTDEP have been in regular communication to eliminate the health risks posed by the contaminated groundwater within the Village Center area. We recommend that these parties continue to work in a collaborative fashion. Additional recommendations include requesting the Chatham Health Department to conduct a quarterly monitoring program to further define and identify the spatial distribution of the affected wells. Based on the results provided in this report, we recommend the following monitoring program:

**Vicinity of 13 Watrous Street**

- 17 Watrous Street
- 22 Watrous Street
- 29 Watrous Street
- 2 Starr Place
- 4 Starr Place
- 6 Starr Place
- 8 Starr Place
- 10 Starr Place
- 5 Railroad Avenue
- 15 Summit Street
- 16 Summit Street
- 19 Summit Street
- 2 Bevin Court

**Vicinity of 103 Main Street**

- 105 Main Street
- 107 Main Street

The locations of these properties are provided as Figure 4. Wells in the vicinity of 13 Watrous Street should be analyzed for VOCs and pesticides/herbicides. Wells in the vicinity of 103 Main Street should be analyzed for priority pollutant 13 metals. It is recommended that the CTDEP continue to investigate wells impacted by the confirmed petroleum release at the Food Bag on 1 Colchester Street. The release appears to have impacted wells located south of 103 Main Street.

The scope and frequency of the monitoring program should be reviewed annually and as additional data are available to maintain effectiveness. As indicated above, the CTDEP is leading the investigation into pesticide/herbicide impact and additional monitoring points should be added as appropriate. Additional recommendations for the program will be provided

following completion of the Significant Environmental Hazard report for 3 Walnut Avenue (Water Tower Property). The Chatham Health Department should also research well construction details and conditions. This data will provide a more accurate depiction of the contaminant plume.

If you have any questions or comments, please contact Brian Conte at (860) 704-4763 or James Olsen (860) 704-4761.

Very truly yours,

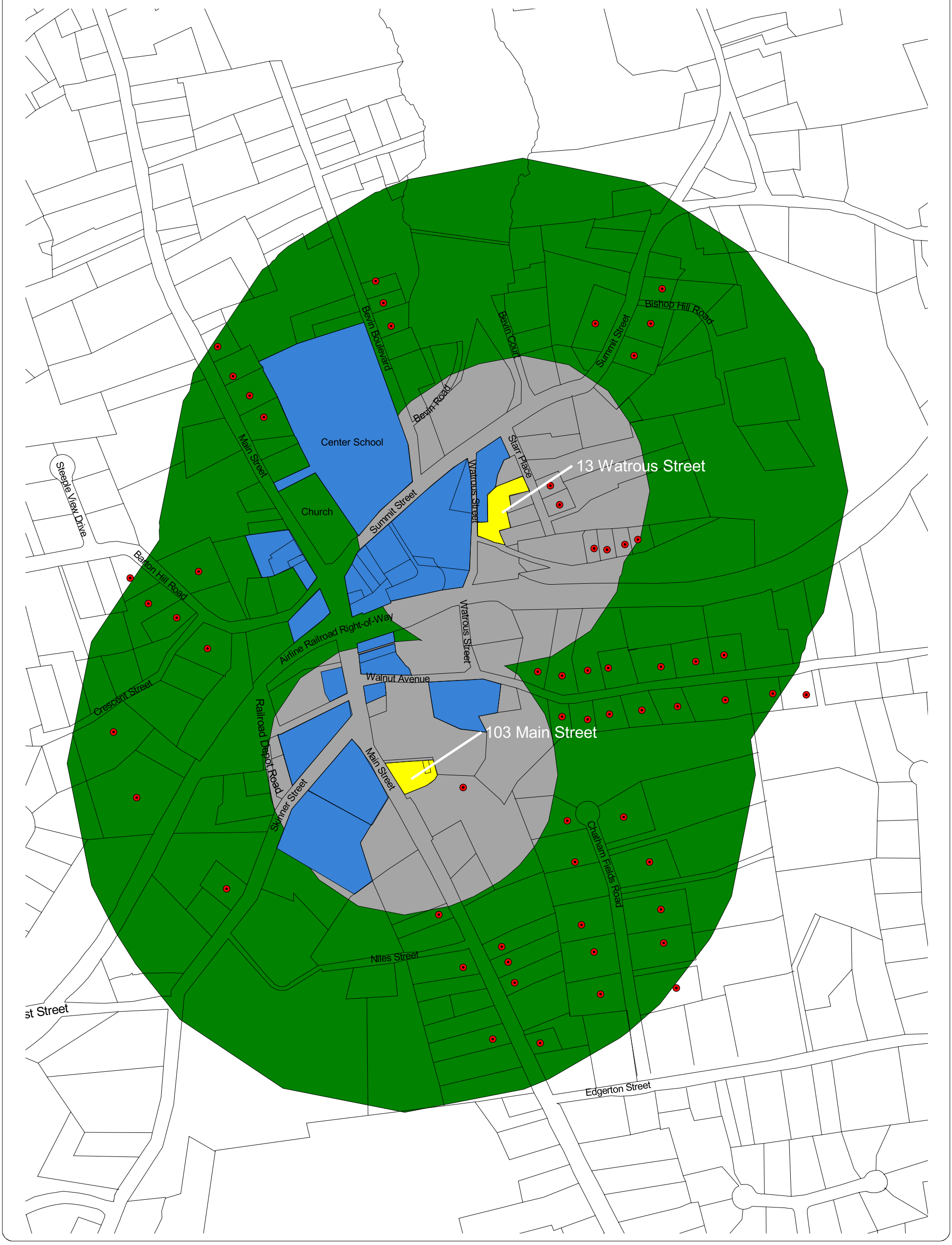
TIGHE & BOND, INC.

James T. Olsen, LEP
Senior Hydrogeologist / Office Manager

Brian C. Conte
Environmental Scientist

J:\C\6136\Reports\Significant Environmental Hazard Report\Report.doc

Enclosures
Copy: Alan Bergren – Town Manager, Town of East Hampton
Dave Terry – Chairman East Hampton Brownfields Steering Committee
Dan Wolfram – East Hampton Brownfields Steering Committee
Thad King – Director of Health, Chatham Health District




## LEGEND

- Approximate location of visible wellhead. Observed during windshield survey.
- Town-owned property
- East Hampton parcels/property boundaries
- Community water customer
- 500-foot buffer of town-owned property
- 1/4-mile buffer of town-owned property

0.1 0 0.1 0.2 Miles

600 0 600 1200 Feet

N W E S

Site

# Receptor Survey

East Hampton Village Center
East Hampton, CT

Tighe&Bond, Inc.
Consulting Engineers
213 Court Street, Suite 900 - Middletown, CT 06457

| Job No. | Drawn By: | Date: |
|---|---|---|
| 126136 | BCC | 9/21/05 |

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Figure 1


0 500 1000 1500 Feet

0 0.1 0.2 0.3 Miles

**LEGEND**

N W E S

500-foot buffer of town-owned properties

1/4-mile buffer of town-owned properties

Site

# Receptor Survey

East Hampton Village Center
East Hampton, CT

Tighe&Bond, Inc.
Consulting Engineers
213 Court Street, Suite 900 - Middletown, CT 06457

| Job No. | Drawn By: | Date: |
|---|---|---|
| 126136 | BCC | 9/20/05 |

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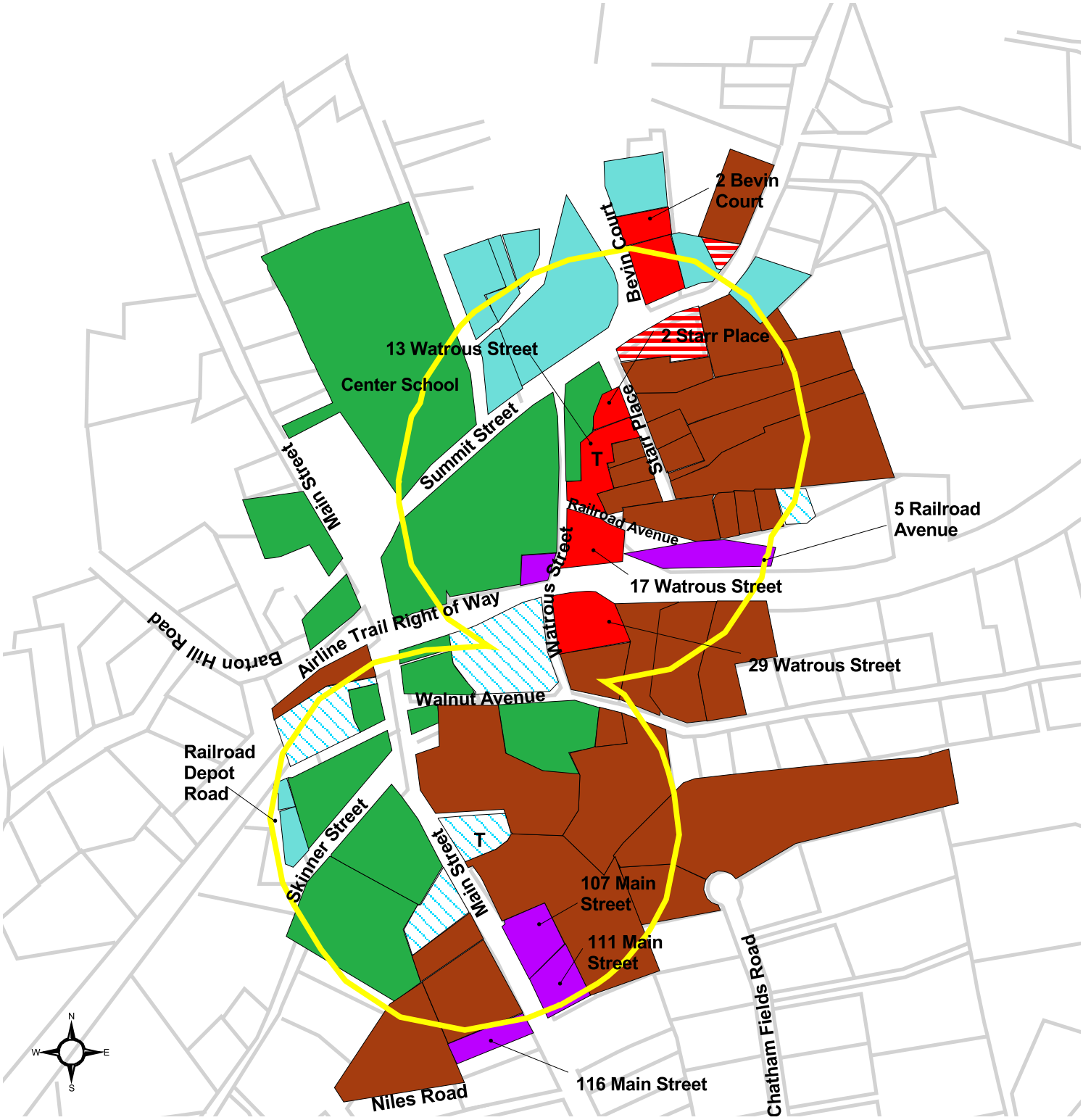
Figure 2




**LEGEND**

- Possible vacant property / no well available
- Possible data gap
- Parcel contained the presence of dieldrin
- Parcel contained the presence of dieldrin and chlordane
- Parcel contained the presence of a volatile organic compound
- Parcel contained no detectable concentration of a pesticide and/or volatile organic compound
- Parcel boundaries
- Parcels connected to community water system according to Vince Susco
- Areas contained with 500-ft buffer of town-owned properties triggering receptor survey

SCALE: 1 inch = 340 feet

T Town-owned properties triggering receptor survey

Tighe&Bond
Consulting Engineers
Environmental Specialists

Job Number: 126136

Drawn By: BCC

Last Revised 1/10/07

FIGURE 3


0 500 1000 1500 Feet

Proposed Sampling Location

N
W E
S

Site

# Proposed Sampling Locations

East Hampton Village Center
East Hampton, CT

Tighe&Bond, Inc.
Consulting Engineers
213 Court Street, Suite 900 - Middletown, CT 06457

| Job No. | Drawn By: | Date: |
|---|---|---|
| 126136 | BCC | 9/7/05 |

File: /6136/Figures/Figure1.pdf

Figure 4

**Table 1**
**Significant Environmental Hazard Report**
**East Hampton Village Center**

| | National Primary Drinking Water Regulations | CTDPH Action Level | GWPC | 2 Bevin Court | 45 Chatham Fields Road | 47 Chatham Field Road | 64 Main Street | 88 Main Street | 91 Main Street | 95 Main Street | 101 Main Street | 105 Main Street | 107 Main Street | 108 Main Street | 111 Main Street | 112 Main Street | 116 Main Street | 6 Niles Street |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Sampled | | | | 11/2/2005 | 10/27/2005 | 10/27/2005 | 10/27/2005 | 10/27/2005 | 10/27/2005 | 10/27/2005 | 10/27/2005 | 10/27/2005 | 10/27/2005 | 10/27/2005 | 10/27/2005 | 10/27/2005 | 10/27/2005 | 10/27/2005 |
| **VOCs via EPA Method 524.2 1 (µg/L)** | | | | | | | | | | | | | | | | | | |
| Toluene | 1,000 | 1,000 | 1,000 | ND | ND | ND | | ND | ND | | | ND | ND | ND | ND | ND | ND | ND |
| Methyl Tert Butyl Ethylene (MTBE) | NS | 70 | 100 | ND | ND | ND | | J<0.5 | J<0.5 | | | J<0.5 | 0.6 | ND | 0.6 | J<0.5 | 0.7 | J<0.5 |
| Methylene Chloride | NS | NS | 5 | ND | ND | ND | | ND | ND | | | ND | ND | ND | ND | ND | ND | ND |
| Trichloroethylene | 5 | 5 | 5 | ND | ND | ND | | ND | ND | | | ND | ND | ND | ND | ND | ND | ND |
| Chloroform | 80 [2] | NS | 6 | ND | ND | ND | | ND | ND | | | ND | ND | ND | ND | ND | ND | ND |
| Bromoform | 80 [2] | NS | 4 | ND | ND | ND | | 0.9 | 0.9 | | | ND | ND | ND | ND | ND | ND | ND |
| Dibromochloromethane | 80 [2] | NS | NS | ND | ND | ND | | 0.7 | 0.8 | | | ND | ND | ND | ND | ND | ND | ND |
| Bromodichoromethane | 80 [2] | NS | 0.56 | ND | ND | ND | | J<0.5 | 0.5 | | | ND | ND | ND | ND | ND | ND | ND |
| Chloroethane | NS | NS | NS | ND | ND | ND | | ND | ND | | | ND | ND | ND | ND | ND | ND | ND |
| Trichloroflouroethene | NS | NS | 20,000 | ND | ND | ND | | ND | ND | | | ND | ND | ND | ND | ND | ND | ND |
| cis-1,2-Dichloroethylene | 70 | NS | 70 | | | | | J<0.5 | J<0.5 | | | ND | ND | ND | ND | ND | ND | ND |
| Tetrachloroethylene | 5 | 5 | 5 | ND | ND | ND | | ND | ND | | | ND | ND | ND | ND | ND | ND | ND |
| **Pesticides via EPA Method 505 [1] (µg/L)** | | | | | | | | | | | | | | | | | | |
| Alpha Chlordane | 2 | 0.3 | 0.3 | ND<0.008 | | | | | | | | | | | | | | |
| Gamma Chlordane | 2 | 0.3 | 0.3 | ND<0.006 | | | | | | | | | | | | | | |
| Dieldrin | NS | 0.03 | 0.002 | **0.060** | | | | | | | | | | | | | | |
| Trans-nonachlor | NS | NS | NS | ND<0.006 | | | | | | | | | | | | | | |
| **Metals via EPA Method 200.8 (µg/L)** | | | | | | | | | | | | | | | | | | |
| Lead | 15 | NS | 15 | ND<3 | | ND<3 | ND<3 | ND<3 | ND<3 | ND<3 | ND<3 | ND<3 | | ND<3 | ND<3 | ND<3 | 4 | ND<3 |
| Antimony | 6 | NS | 6 | ND<5 | | ND<5 | ND<5 | ND<5 | ND<5 | ND<5 | ND<5 | ND<5 | | ND<5 | ND<5 | ND<5 | ND<5 | ND<5 |

**Notes:**

1 - Only detected analytes listed
2 - Total trihalomethane standard applies.
GWPC - The Connecticut Remediation Standard Regulations Groundwater Protection Criteria
CTDPH - Connecticut Department of Public Health Action Limit for Private Wells, Updated March 2004
National Primary Drinking Water Regulations, update May 2005
Results with border and bold typeface indicate an exceedance of one or more drinking water standards
All results reported in micrograms per liter
VOC - Volatile Organic Compounds
NS - No standard
J - Constituent detected below reporting limit
ND - Not detected. Note: No reporting limits were provided for analytical method 524.2.
All results provided by the Chatham Health Department

**Table 1 (continued)**
**Significant Environmental Hazard Report**
**East Hampton Village Center**

| | National Primary Drinking Water Regulations | CTDPH Action Level | GWPC | 4 Railroad Avenue | 5 Railroad Avenue | 7 Railroad Avenue | 9 Railroad Avenue | 1 Starr Place | 2 Starr Place | 3 Starr Place | 4 Starr Place | 5 Starr Place | 6 Starr Place | 7 Starr Place | 8 Starr Place | 9 Starr Place | 10 Starr Place |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Sampled | | | | 12/8/2005 | 10/13/2005 | 10/13/2005 | 10/13/2005 | 11/2/2005 | 10/13/2005 | 10/13/2005 | 6/30/2006 | 10/13/2005 | 10/13/2005 | 10/13/2005 | 10/13/2005 | 10/13/2005 | 6/30/2006 |
| **VOCs via EPA Method 524.2 1 (µg/L)** | | | | | | | | | | | | | | | | | |
| Toluene | 1,000 | 1,000 | 1,000 | | ND | | | ND | 0.8 | ND | ND | ND | 1.4 | | ND | | ND |
| Methyl Tert Butyl Ethylene (MTBE) | NS | 70 | 100 | | 0.5 | | | ND | ND | ND | ND | ND | J<0.5 | | ND | | ND |
| Methylene Chloride | NS | NS | 5 | | ND | | | ND | ND | ND | ND | ND | ND | | J<0.5 | | ND |
| Trichloroethylene | 5 | 5 | 5 | | ND | | | ND | ND | ND | ND | ND | ND | | J<0.5 | | ND |
| Chloroform | 80 [2] | NS | 6 | | ND | | | ND | ND | ND | ND | ND | ND | | ND | | ND |
| Bromoform | 80 [2] | NS | 4 | | ND | | | ND | ND | ND | ND | ND | ND | | ND | | ND |
| Dibromochloromethane | 80 [2] | NS | NS | | ND | | | ND | ND | ND | J<0.5 | ND | ND | | ND | | ND |
| Bromodichoromethane | 80 [2] | NS | 0.56 | | ND | | | ND | ND | ND | J<0.5 | ND | ND | | ND | | ND |
| Chloroethane | NS | NS | NS | | ND | | | ND | ND | ND | ND | ND | ND | | ND | | ND |
| Trichloroflouroethene | NS | NS | ##### | | ND | | | ND | ND | ND | ND | ND | ND | | ND | | ND |
| cis-1,2-Dichloroethylene | 70 | NS | 70 | | ND | | | ND | ND | ND | ND | ND | ND | | ND | | ND |
| Tetrachloroethylene | 5 | 5 | 5 | | ND | | | ND | J<0.5 | ND | ND | ND | ND | | ND | | ND |
| **Pesticides via EPA Method 505 [1] (µg/L)** | | | | | | | | | | | | | | | | | |
| Alpha Chlordane | 2 | 0.3 | 0.3 | ND<0.008 | ND<0.008 | ND<0.008 | ND<0.008 | ND<0.008 | ND<0.008 | ND<0.008 | ND<0.008 | ND<0.008 | ND<0.008 | ND<0.008 | ND<0.008 | ND<0.008 | ND<0.008 |
| Gamma Chlordane | 2 | 0.3 | 0.3 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 |
| Dieldrin | NS | 0.03 | 0.002 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | 0.333 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.008 |
| Trans-nonachlor | NS | NS | NS | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 |
| **Metals via EPA Method 200.8 (µg/L)** | | | | | | | | | | | | | | | | | |
| Lead | 15 | NS | 15 | | | | | 4 | | | | | | | | | |
| Antimony | 6 | NS | 6 | | | | | ND<3 | | | | | | | | | |

**Notes:**

1 - Only detected analytes listed
2 - Total trihalomethane standard applies.
GWPC - The Connecticut Remediation Standard Regulations Groundwater Protection Criteria
CTDPH - Connecticut Department of Public Health Action Limit for Private Wells, Updated March 2004
National Primary Drinking Water Regulations, update May 2005
Results with border and bold typeface indicate an exceedance of one or more drinking water standards
All results reported in micrograms per liter
VOC - Volatile Organic Compounds
NS - No standard
J - Constituent detected below reporting limit
ND - Not detected. Note: No reporting limits were provided for analytical method 524.2.
All results provided by the Chatham Health Department

**Table 1 (continued)**
**Significant Environmental Hazard Report**
**East Hampton Village Center**

| | National Primary Drinking Water Regulations | CTDPH Action Level | GWPC | 11 Starr Place | 15 Summit Street | 16 Summit Street | 18 Summit Street | 19 Summit Street | 23 Summit Street | 8 Walnut Avenue | 9 Walnut Avenue | 10 Walnut Avenue | 12 Walnut Avenue | 17 Walnut Avenue | 13 Watrous Street Interior Well | 13 Watrous Street Exterior Well | 17 Watrous Street | 22 Watrous Street | 29 Watrous Street |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Sampled | | | | 10/13/2005 | 10/13/2005 | 10/13/2005 | 10/13/2005 | 10/13/2005 | 11/2/2005 | 11/2/2005 | 10/13/2005 | 10/13/2005 | 10/13/2005 | 10/13/2005 | 8/10/2005 | 7/12/2005 | 7/12/2005 | 6/30/2006 | 6/30/2006 |
| **VOCs via EPA Method 524.2 1 (µg/L)** | | | | | | | | | | | | | | | | | | | |
| Toluene | 1,000 | 1,000 | 1,000 | | ND | ND | ND | ND | ND | ND | ND | ND | | | ND | ND | ND | ND | ND |
| Methyl Tert Butyl Ethylene (MTBE) | NS | 70 | 100 | | ND | ND | ND | ND | ND | ND | ND | ND | | | ND | ND | ND | J<0.5 | J<0.5 |
| Methylene Chloride | NS | NS | 5 | | ND | ND | ND | ND | ND | ND | ND | ND | | | J<0.5 | ND | ND | ND | ND |
| Trichloroethylene | 5 | 5 | 5 | | ND | ND | ND | ND | ND | ND | ND | ND | | | 3.9 | ND | 2.3 | ND | J<0.5 |
| Chloroform | 80 [2] | NS | 6 | | ND | ND | ND | ND | ND | ND | ND | ND | | | J<0.5 | ND | ND | 2.6 | ND |
| Bromoform | 80 [2] | NS | 4 | | ND | ND | ND | ND | ND | 0.6 | ND | ND | | | ND | ND | ND | 1.8 | ND |
| Dibromochloromethane | 80 [2] | NS | NS | | ND | ND | ND | ND | ND | 0.6 | ND | ND | | | ND | ND | ND | 3.5 | ND |
| Bromodichoromethane | 80 [2] | NS | 0.56 | | ND | ND | ND | ND | ND | J<0.5 | ND | ND | | | ND | ND | ND | 3.7 | ND |
| Chloroethane | NS | NS | NS | | ND | ND | ND | ND | ND | ND | ND | ND | | | ND | ND | ND | J<0.5 | ND |
| Trichloroflouroethene | NS | NS | #### | | ND | ND | ND | ND | ND | ND | ND | ND | | | 7.8 | ND | ND | ND | ND |
| cis-1,2-Dichloroethylene | 70 | NS | 70 | | ND | ND | ND | ND | ND | J<0.5 | ND | ND | | | ND | ND | 0.6 | 0.6 | ND |
| Tetrachloroethylene | 5 | 5 | 5 | | ND | ND | ND | ND | ND | ND | ND | ND | | | J<0.5 | ND | ND | ND | ND |
| **Pesticides via EPA Method 505 [1] (µg/L)** | | | | | | | | | | | | | | | | | | | |
| Alpha Chlordane | 2 | 0.3 | 0.3 | ND<0.008 | **3.66** | **0.346** | ND<0.008 | **0.38** | ND<0.008 | ND<0.008 | ND<0.008 | ND<0.008 | ND<0.008 | ND<0.008 | 0.056 | ND | ND<0.008 | | ND<0.006 |
| Gamma Chlordane | 2 | 0.3 | 0.3 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | 0.056 | ND | ND<0.006 | | ND<0.006 |
| Dieldrin | NS | 0.03 | 0 | ND<0.008 | **6.52** | **2.05** | ND<0.008 | **2.04** | ND<0.008 | ND<0.008 | ND<0.008 | ND<0.008 | ND<0.008 | ND<0.008 | **1.063** | ND | **0.096** | | **0.091** |
| Trans-nonachlor | NS | NS | NS | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | ND<0.006 | 0.03 | ND | ND<0.006 | | ND<0.006 |
| **Metals via EPA Method 200.8 (µg/L)** | | | | | | | | | | | | | | | | | | | |
| Lead | 15 | NS | 15 | | | | | | | ND<3 | | | | | | | | | |
| Antimony | 6 | NS | 6 | | | | | | | ND<3 | | | | | | | | | |

**Notes:**

1 - Only detected analytes listed
2 - Total trihalomethane standard applies.
GWPC - The Connecticut Remediation Standard Regulations Groundwater Protection Criteria
CTDPH - Connecticut Department of Public Health Action Limit for Private Wells, Updated March 2004
National Primary Drinking Water Regulations, update May 2005
Results with border and bold typeface indicate an exceedance of one or more drinking water standards
All results reported in micrograms per liter
VOC - Volatile Organic Compounds
NS - No standard
J - Constituent detected below reporting limit
ND - Not detected. Note: No reporting limits were provided for analytical method 524.2.
All results provided by the Chatham Health Department

# APPENDIX D

# CTDEP Engineered Control Approval

# APPENDIX E

## Preliminary Remediation Drawings

## EROSION & SEDIMENTATION CONTROL NARRATIVE

1. EROSION CONTROL AND STABILIZATION METHODS ARE CRITICAL FOR THIS PROJECT AND THEIR INSTALLATION SHALL BE STRICTLY ENFORCED.

2. CONTRACTOR TO INSPECT ALL EROSION AND SEDIMENT CONTROL MEASURES AT LEAST WEEKLY AND AFTER EVERY STORM EVENT AND REPAIR AND MAINTAIN AS NECESSARY.

3. SEDIMENT CONTROL SHALL BE INSTALLED UNDER THE GRATES OF ALL CATCH BASINS AT THE TIME OF INSTALLATION.

4. STAKED HAY BALE SILT BARRIERS OR SILT FENCE SHALL BE INSTALLED AROUND ANY TEMPORARY STOCKPILE AREAS.

5. TOPSOIL SHALL BE RE-APPLIED TO PROVIDE A MINIMUM DEPTH OF FOUR INCHES ON DISTURBED AREAS.

6. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED AND PLANTINGS INSTALLED. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL VEGETATION IS RE-ESTABLISHED.

7. SEEDING SHOULD TAKE PLACE BETWEEN APRIL 1 AND JUNE 1 OR AUGUST 15 AND OCTOBER 1.

8. THE FOLLOWING SEEDING MIXTURES SHALL BE PROVIDED ON ALL DISTURBED AREAS.

| | |
|---|---|
| CREEPING RED FESCUE | 20 LB's/AC |
| KENTUCKY BLUEGRASS | 20 LB's/AC |
| PERENNIAL RYEGRASS | 5 LB's/AC |

9. DURING THE STABILIZATION PERIOD ANY EROSION WHICH OCCURS WITHIN THE DISTURBED AREAS SHALL BE IMMEDIATELY REPAIRED, RESEEDED AND STABILIZED.

10. NO EROSION AND SEDIMENT CONTROL DEVICES SHALL BE REMOVED UNTIL ALL DISTURBED AREAS ARE STABILIZED AND REMOVAL IS APPROVED BY THE EAST HAMPTON WETLANDS OFFICER.

11. UNFORESEEN PROBLEMS WHICH ARE ENCOUNTERED IN THE FIELD SHALL BE SOLVED ACCORDING TO CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.

## CONSTRUCTION SEQUENCE

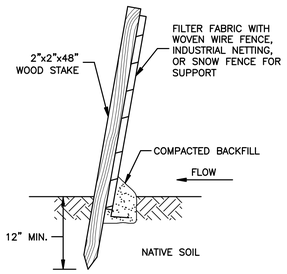
1. INSTALL SILT FENCE ALONG LIMITS OF DISTURBANCE AS SHOWN ON PLANS. INSTALL SEDIMENT CONTROL IN CATCH BASIN.

2. CLEAR & GRUB SITE WITHIN LIMITS OF DISTURBANCE. REMOVE AND DISPOSE OF EXISTING ON-SITE STRUCTURES.

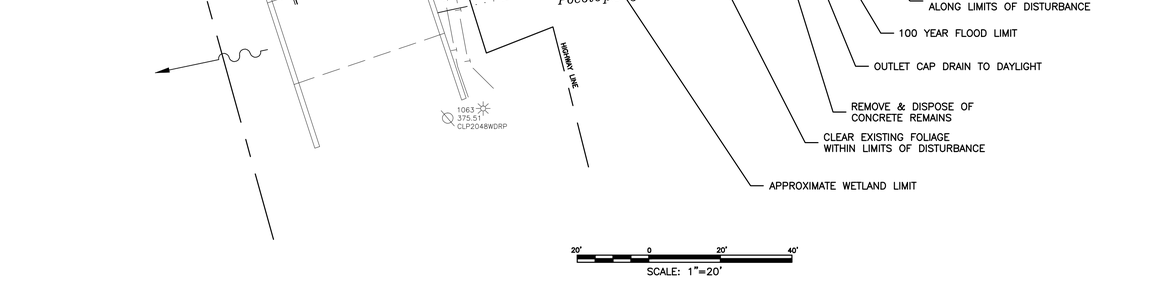
3. ESTABLISH ROUGH GRADES FOR LINER PLACEMENT. REMOVE EXCESS MATERIAL TO AN APPROVED OFF-SITE DISPOSAL FACILITY. INSTALL LINER.

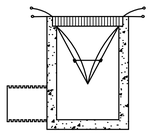
4. INSTALL LIGHTING, GUIDE RAIL, PAVEMENT AND LANDSCAPING.

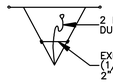
5. REMOVE SEDIMENT CONTROL AS DIRECTED BY THE TOWN WETLANDS OFFICER ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED.



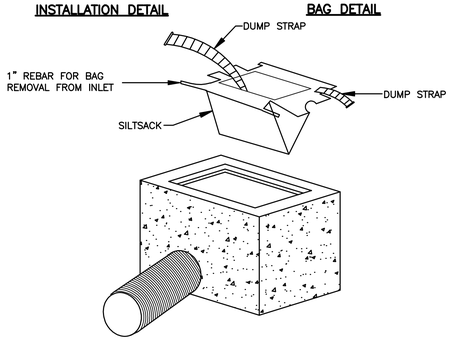

**SILT FENCE DETAIL**
NOT TO SCALE



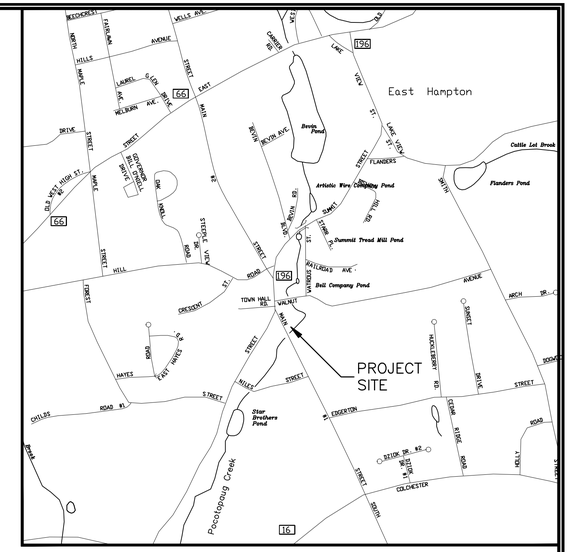






**INSTALLATION DETAIL** **BAG DETAIL**




**INLET SEDIMENT CONTROL DEVICE DETAIL**
NOT TO SCALE




**LOCATION MAP**
SCALE: 1"= 1000'

## GENERAL NOTES

1. EXISTING UTILITIES AND UNDERGROUND STRUCTURES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. ALL UTILITIES SHALL BE LOCATED IN THE FIELD BY THE CONTRACTOR. NEITHER THE ENGINEER NOR THE OWNER WARRANTS OR GUARANTEES THE CONDITIONS SHOWN ON THE DRAWINGS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING PAVEMENT AND ROADWAYS, AND SHALL REPAIR SUCH DAMAGE AT NO ADDITIONAL COST TO THE OWNER.

3. ALL STREET SIGNS, MAILBOXES, PLANTINGS, ORNAMENTAL OBJECTS, LIGHTS, LANDSCAPE SHRUBBERY, ETC., SHALL BE PROTECTED FROM DAMAGE AND SHALL BE REPLACED IN THE SAME OR BETTER CONDITION BY THE CONTRACTOR IF DISTURBED OR DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION.

4. SUITABLE MATERIAL – IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVELLED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT,ORGANIC MATTER, TOPSOIL, ALL WET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL AND ALL ROCKS OVER 6" IN LARGEST DIMENSION, OR ANY MATERIAL WHICH WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION.

5. PRIOR TO CONSTRUCTION CONTACT "CALL-BEFORE-YOU-DIG" TO LOCATE ALL EXISTING UTILITIES 1-800-922-4455.

6. THE CONTRACTOR SHALL PERFORM A PREBLAST SURVEY PRIOR TO ANY BLASTING DONE ON SITE.

7. ALL SIGNS SHALL BE PROTECTED AND REINSTALLED TO THE SATISFACTION OF THE TOWN.

8. EXISTING PROPERTY LINES AND RIGHT-OF-WAY LINES WHERE SHOWN ARE APPROXIMATE AND ARE INTENDED FOR GENERAL INFORMATION ONLY.

9. ALL PROPOSED WORK MY BE VARIED IN THE FIELD BY THE OWNER TO MATCH EXISTING CONDITIONS.

10. UPON COMPLETION OF THE WORK, ALL DISTURBED AREAS SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTED PRIOR TO CONSTRUCTION.

11. PRIOR TO BIDDING THE PROJECT, THE CONTRACTOR SHALL VISIT THE SITE TO VERIFY CONDITIONS.

12. INFORMATION SHOWN ON THE DRAWINGS RELATING TO MATERIALS, CONDITIONS, AND OR LOCATIONS OF EXISTING STRUCTURES AND UTILITIES HAS BEEN COMPLIED FROM AVAILABLE INFORMATION INCLUDING FIELD SURVEY, UTILITY AND COMPANY TOWN RECORD MAPS AND DRAWINGS, AND IS NOT GUARANTEED ACCURATE OR COMPLETE.

| No. | DATE | REVISION |
|---|---|---|
| 2 | 6/22/10 | GRADING REVISIONS |
| 1 | 6/8/10 | MISC. REVISIONS |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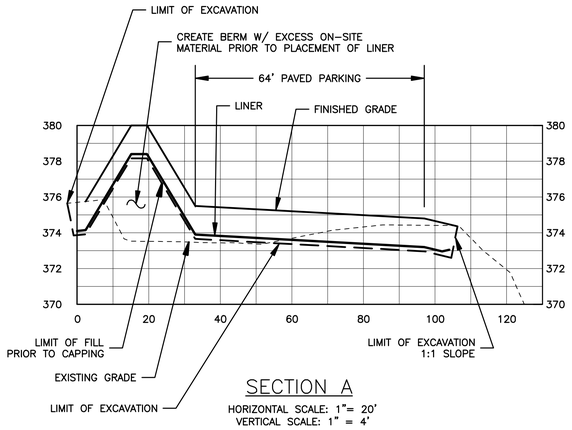
TOWN OF EAST HAMPTON

# MAIN STREET PARKING LOT

EXCAVATION PLAN

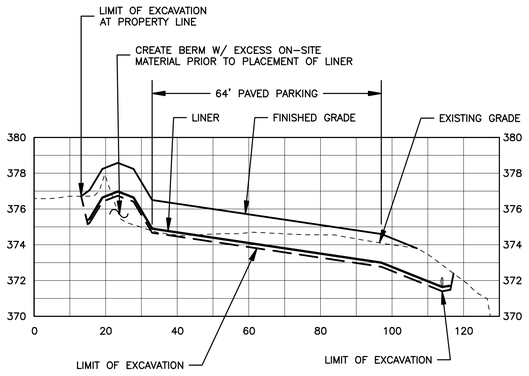
| | |
|---|---|
| Project No. | CLA-4617 |
| Proj. Engineer | B.R.L. |
| Date: | APRIL 2010 |
| Sheet No. | 1 |

CLA



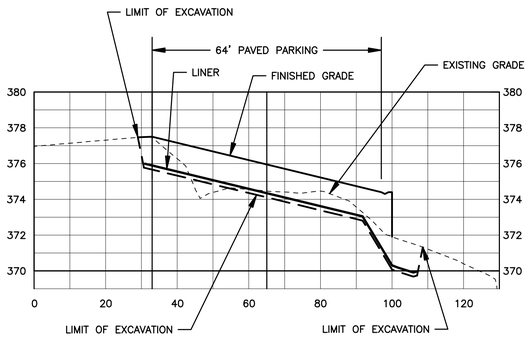

## SECTION A

HORIZONTAL SCALE: 1"= 20'
VERTICAL SCALE: 1" = 4'



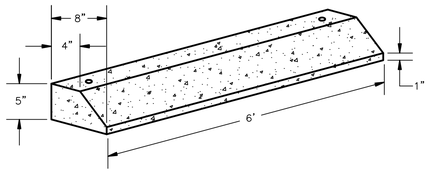

## SECTION B

HORIZONTAL SCALE: 1"= 20'
VERTICAL SCALE: 1" = 4'




## SECTION C

HORIZONTAL SCALE: 1"= 20'
VERTICAL SCALE: 1" = 4'

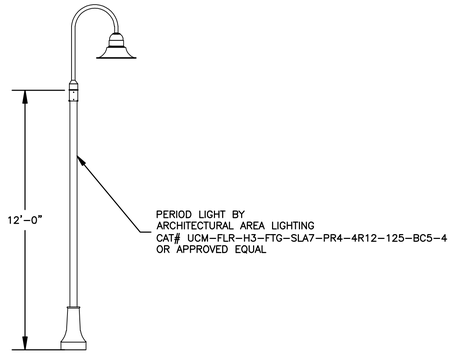



### DESIGN NOTES

1. CONCRETE, 4000 P.S.I., 28 DAYS.
2. WEIGHT: 195 LBS.
3. REINFORCEMENT: 2 #4 BARS.
4. (2) 3/4" HOLES CAST IN FOR ANCHORING.

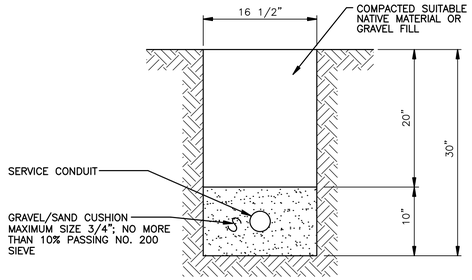
## CONCRETE WHEEL STOP

NOT TO SCALE




## PERIOD LIGHT

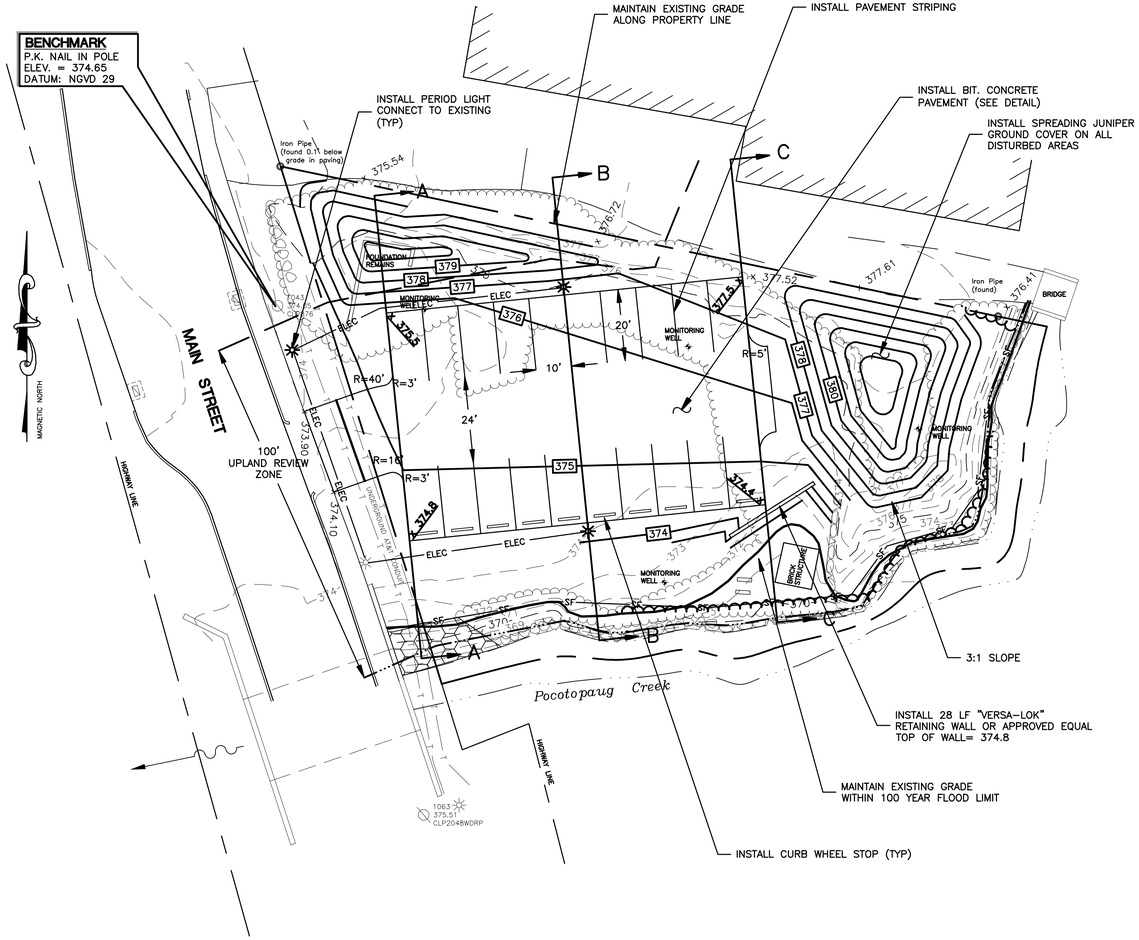
NOT TO SCALE

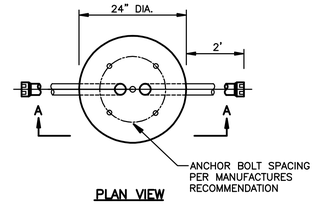



1. MINIMUM OF 3" ENCASEMENT ALL AROUND
2. IN THE EVENT OF CONFLICTING DEPTHS WITH EXISTING UTILITIES THE NEW CONDUIT AND DUCT BANK SHALL BE INSTALLED BENEATH THE EXISTING UTILITY UNLESS APPROVED OTHERWISE BY THE ENGINEER

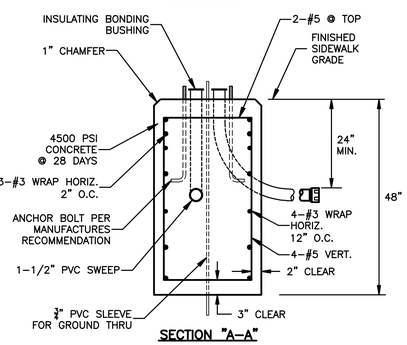
## ELECTRICAL SERVICE CONDUIT

NOT TO SCALE



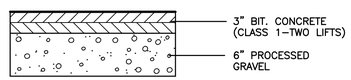

### PLAN VIEW




### SECTION "A-A"

## PERIOD LIGHT FOUNDATION

NOT TO SCALE




## PAVING SECTION

NOT TO SCALE

| No. | DATE | REVISION |
|---|---|---|
| 2 | 6/22/10 | GRADING REVISIONS |
| 1 | 6/8/10 | MISC. REVISIONS |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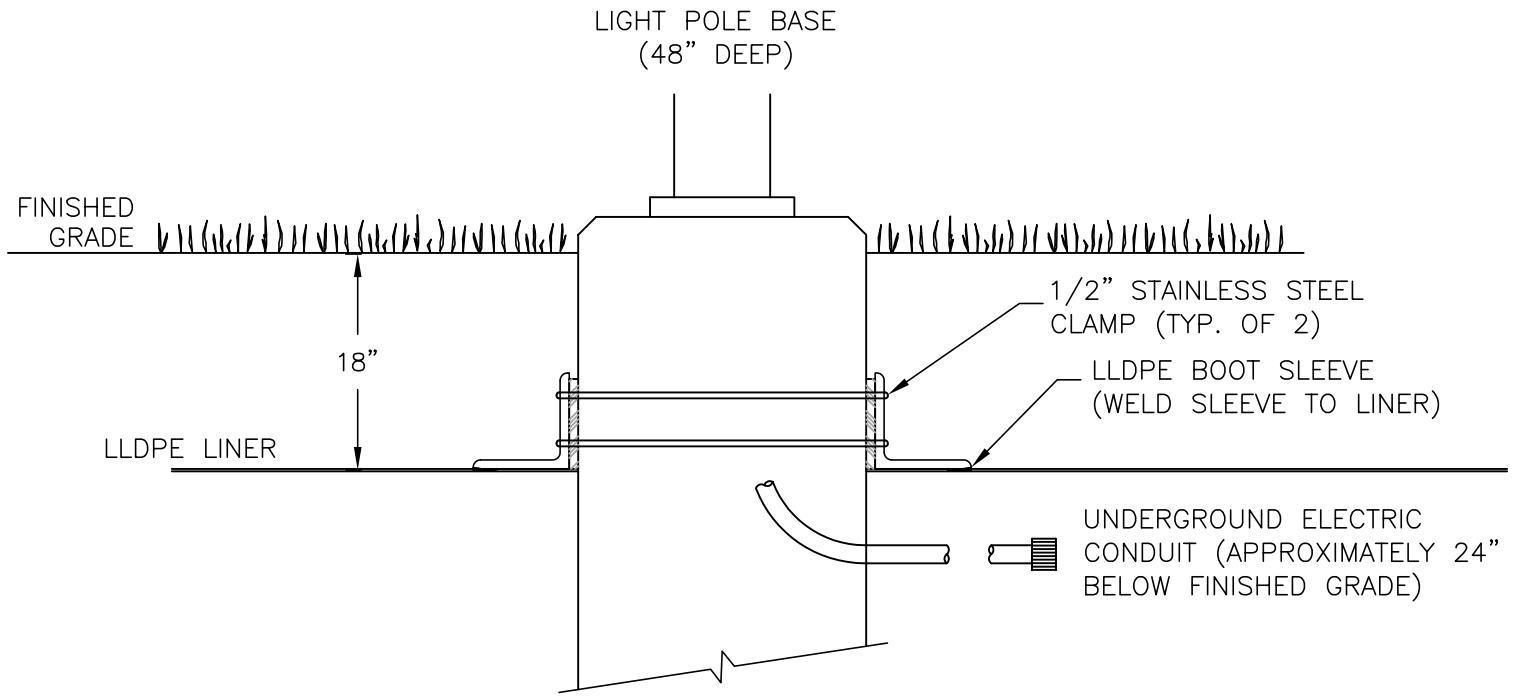
TOWN OF EAST HAMPTON

# MAIN STREET PARKING LOT

LAYOUT / GRADING PLAN

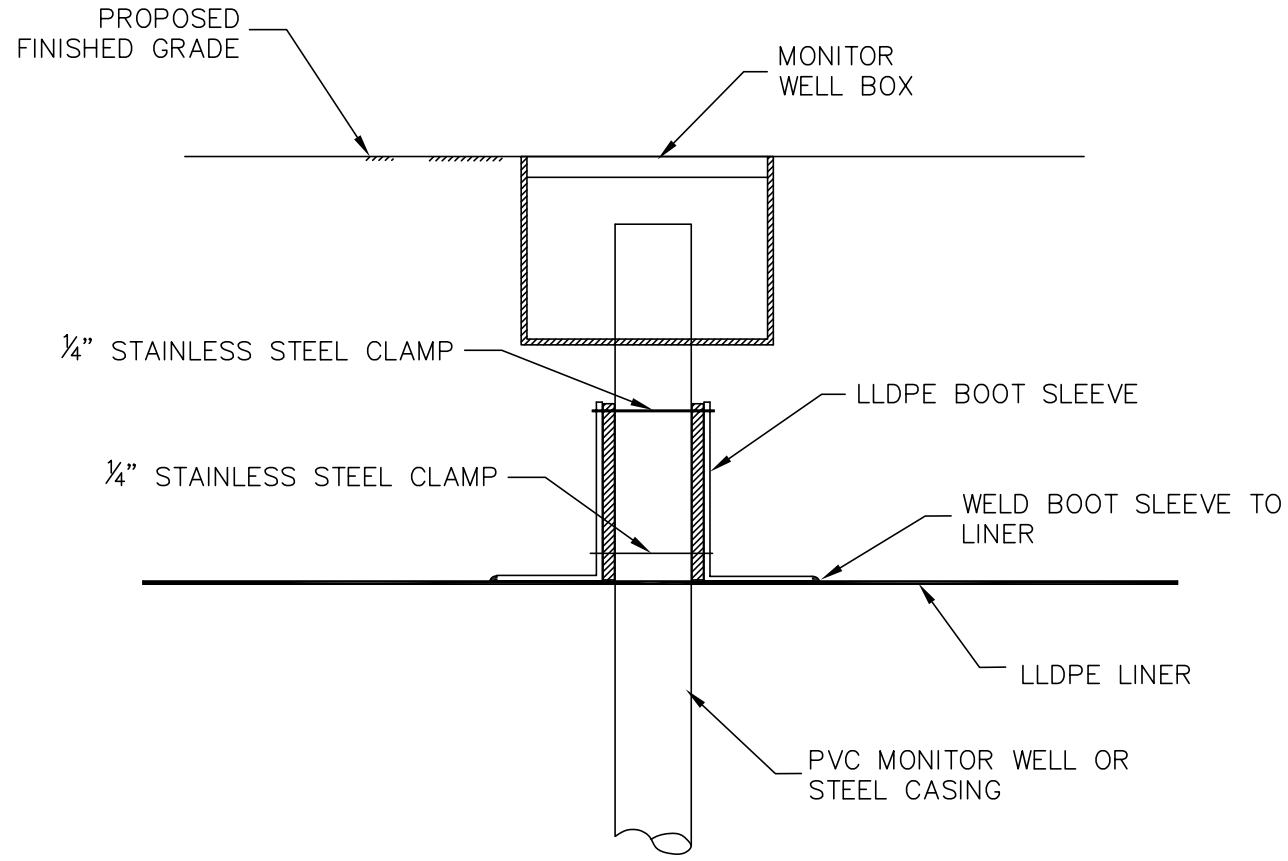
Project No. CLA-4617
Proj. Engineer B.R.L.
Date: APRIL 2010
Sheet No. **2**

CLA



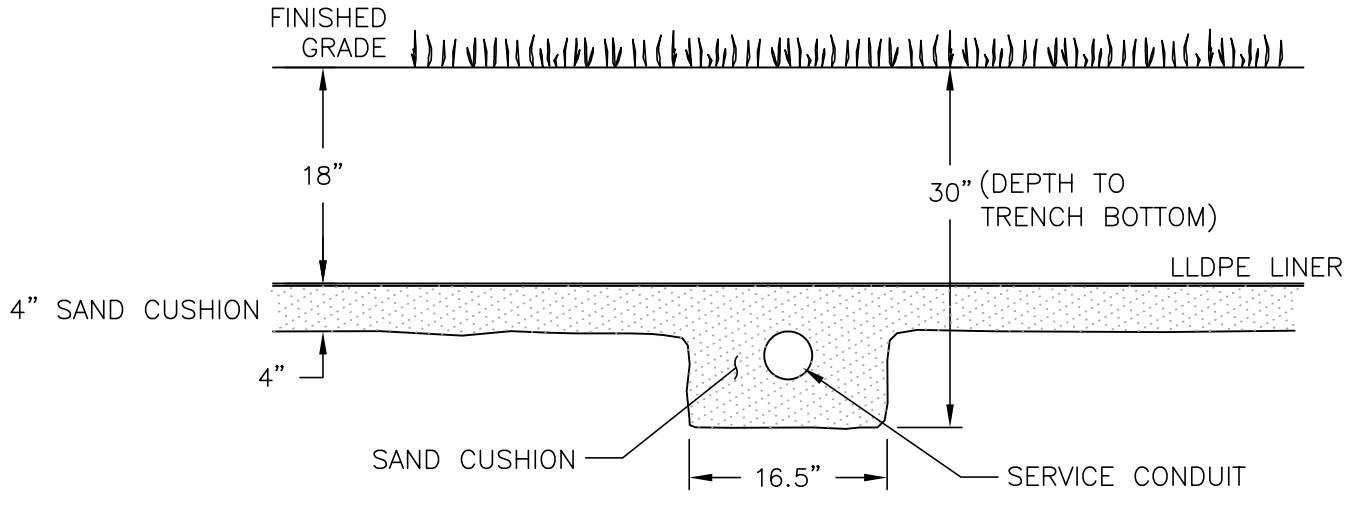

## 1 LIGHT POLE BASE LINER PENETRATION

NOT TO SCALE




## 3 PIPE BOOT SEALING SYSTEM

NOT TO SCALE




NOTE : MINIMUM OF 3" ENCASEMENT ALL AROUND CONDUIT

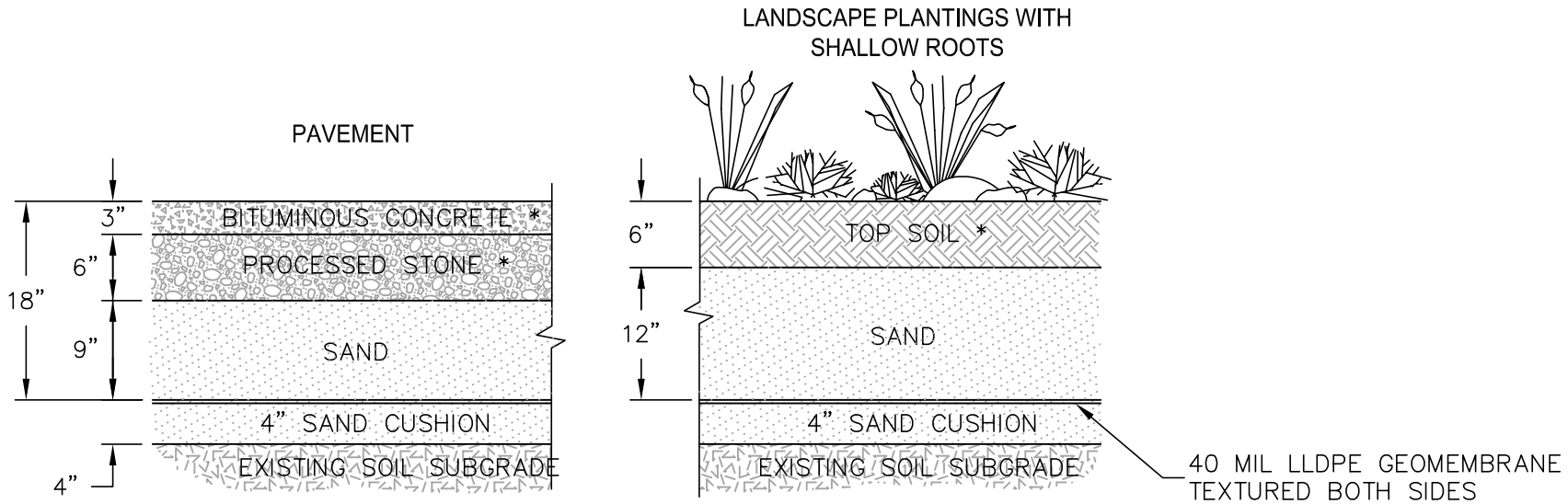
## 2 ELECTRIC SERVICE BENEATH CAP

NOT TO SCALE

AECOM

FORMER GONG BELL SITE
EAST HAMPTON, CONNECTICUT
REMEDIAL ACTION PLAN
DETAILS – SHEET 1

| REFERENCE: | SCALE: NONE | DATE: JULY 2010 | |
|---|---|---|---|

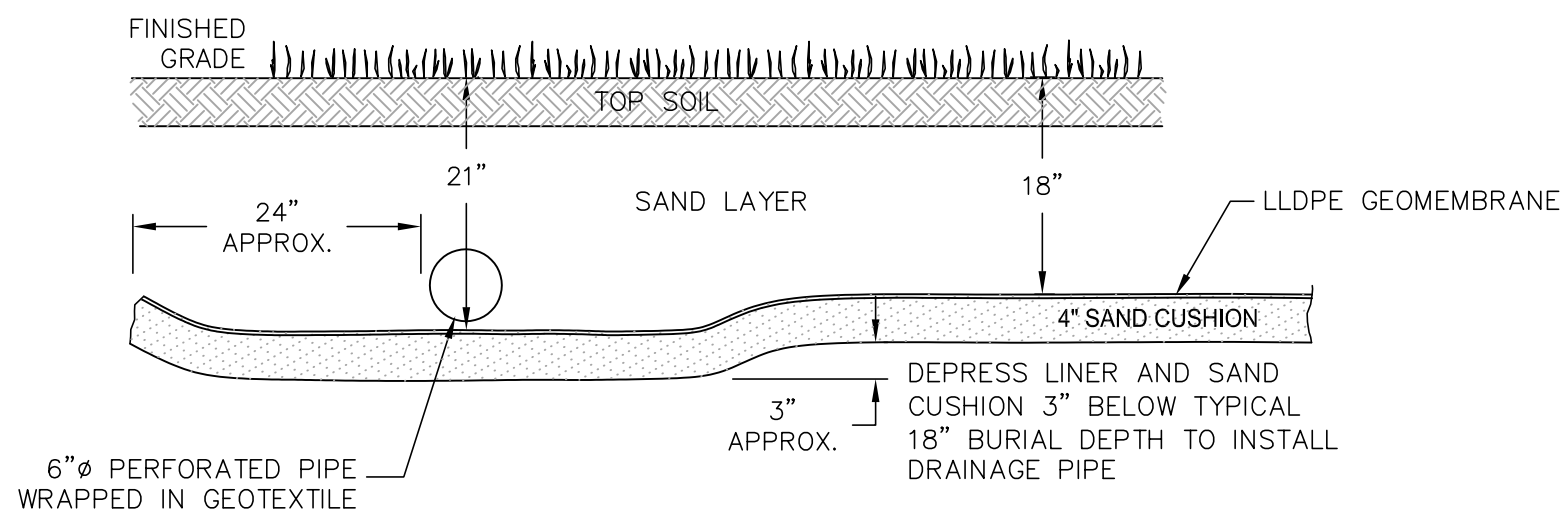



EXISTING SOIL SUBGRADE – GRADE TO PROPER ELEVATION.
REMOVE ANY ROCKS, DEBRIS, OR PROTRUSIONS FROM SUBGRADE.
ROLL SMOOTH WITH SMOOTH DRUM ROLLER

* PAVEMENT AND LANDSCAPED SURFACE TREATMENTS AS SPECIFIED BY OTHERS

## 4 IMPERMEABLE CAP CROSS SECTION

NOT TO SCALE




NOTE : INSTALL CAP DRAINAGE PIPING ALONG ENTIRE DOWN GRADIENT EDGE OF LINER (AS SHOWN ON PLANS)

## 5 CAP DOWN-GRADIENT PERIMETER DRAINAGE PIPING

NOT TO SCALE

| | | | |
|---|---|---|---|
| AECOM | FORMER GONG BELL SITE<br>EAST HAMPTON, CONNECTICUT<br>REMEDIAL ACTION PLAN<br>DETAILS – SHEET 2 | | |
| REFERENCE: | SCALE: NONE | DATE: JULY 2010 | |

# APPENDIX F

# Project Schedule

SOIL REMEDIATION
103 Main Street
East Hampton, CT
Planning Level Schedule
AECOM
July 27, 2010

| Project tracking by Month | Jul-10 | | Aug-10 | | | | Sep-10 | | | | Oct-10 | | | | | Nov - 10 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Week Ending | 7/23 | 7/30 | 8/6 | 8/13 | 8/20 | 8/27 | 9/3 | 9/10 | 9/17 | 9/24 | 10/1 | 10/8 | 10/15 | 10/22 | 10/29 | 11/5 | 11/12 | 11/19 | 11/26 |
| Task | | | | | | | | | | | | | | | | | | | |
| AECOM Scope(s) of Work / Contract Amendment(s) | | | | | | | | | | | | | | | | | | | |
| Regulatory Program/Remediation Planning | | | | | | | | | | | | | | | | | | | |
| Remedial Action Plan Development/Town Approval | | | | | | | | | | | | | | | | | | | |
| CTDEP Engineered Control Application - Preparation/Town Approval | | | | | | | | | | | | | | | | | | | |
| CTDEP Engineered Control - CTDEP review and approval | | | | | | | | | | | | | | | | | | | |
| QAPP preparation, submittal and EPA approval | | | | | | | | | | | | | | | | | | | |
| Assessment of Brownfield Cleanup Alternatives (ABCA) | | | | | | | | | | | | | | | | | | | |
| Community Relations Plan | | | | | | | | | | | | | | | | | | | |
| Public Notice/Review/Comment (DEP and EPA requirements) | | | | | | | | | | | | | | | | | | | |
| Public Meeting | | | | | | | | | | | | | | | | | | | |
| Pre-bid solicitation notice and prospective bidder's site walk | | | | | | | | | | | | | | | | | | | |
| Planning and Specifications | | | | | | | | | | | | | | | | | | | |
| Bid Solicitation and Selection Process | | | | | | | | | | | | | | | | | | | |
| *Permits* | | | | | | | | | | | | | | | | | | | |
| Local Building Demolition Permit | | | | | | | | | | | | | | | | | | | |
| Inland/Wetlands - Approved | | | | | | | | | | | | | | | | | | | |
| Demolition/Remediation/Re-development | | | | | | | | | | | | | | | | | | | |
| Mobilization | | | | | | | | | | | | | | | | | | | |
| Site Preparation - erosion controls, clearing and grubbing | | | | | | | | | | | | | | | | | | | |
| Building Hazardous Material Testing | | | | | | | | | | | | | | | | | | | |
| Building Hazardous Material abatement, demolition, debris disposal | | | | | | | | | | | | | | | | | | | |
| Soil relocation and grading | | | | | | | | | | | | | | | | | | | |
| Cap installation - liner, sand cushion and sand drainage layer | | | | | | | | | | | | | | | | | | | |
| Redevelopment activities - paving and landscaping | | | | | | | | | | | | | | | | | | | |
| Closeout Procedures | | | | | | | | | | | | | | | | | | | |
| Survey, Remedial Action Report | | | | | | | | | | | | | | | | | | | |

Notes:
Assumes no historical structures or artifacts onsite.
Schedule depends on accelerated CTDEP approval of Engineered Control application and USEPA approval of QAPP.
Schedule assumes an aggressive contractor selection and mobilization timeframes.
Schedule is for soil remediation work only. Additional remediation activities will be required for the site following the soil remediation (including post-remediation groundwater monitoring and CTDEP annual reporting).