



# PHASE II - ENVIRONMENTAL SITE ASSESSMENT

## Bartlett Arboretum, Stamford, CT

*Prepared for*



**City of Stamford**  
Stamford, CT

*Prepared by:*



Windsor, Connecticut

July 2011



**PHASE II  
ENVIRONMENTAL INVESTIGATION  
REPORT  
BARTLETT ARBORETUM  
STAMFORD, CONNECTICUT**

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**City of Stamford**  
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TRC Project No. 176301.0000.0000

June 2011

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## **1.0 INTRODUCTION**

### **1.1 Overview**

TRC Environmental Corporation (TRC), under contract to the City of Stamford has been retained to characterize the environmental conditions at the site known as the Bartlett Arboretum located at 151 Brookdale Road, Stamford, Connecticut (the Site). The site location is depicted on Figure 1. The City of Stamford acquired the site from the State of Connecticut in 2001. This document details the procedures and results of the Phase II investigation, which was conducted in March (GPR Survey) and April 2011. This Phase II Environmental Investigation was conducted in accordance with the policies and procedures presented in the CTDEP Site Characterization Guidance Document (December 2010).

### **1.2 Objectives and Scope**

The general objectives of this investigation were designed to obtain data sufficient to determine whether or not releases to the environment have occurred in the AOCs identified to date for the Site, and to address data gaps identified during TRC's review of the previous work completed at the Site. The Phase II scope of work was designed and completed to confirm the presence or absence of a release of contaminants on the site. The Phase II scope of work was presented in a Work Plan reviewed by the City prior to the initiation of the field work. More specific investigation objectives included the following:

- to evaluate the site geology and hydrogeology;
- to determine background soil and ground water quality;
- to determine potential impacts to the surface and subsurface soils on the site; and
- to evaluate potential impacts to site ground water quality.

To meet these objectives, the Phase II Environmental investigation consisted of the following activities:

- A Ground Penetrating Radar (GPR) Survey to verify locations of active or abandoned in place USTs and to confirm locations of suspected septic tanks or leaching pits;
- The advancement of 43 soil borings across the Site;
- The installation of 7 temporary monitoring wells;
- The collection and laboratory analysis of 64 soil samples and 7 ground water samples.

### 1.3 Report Organization

This report is divided into five sections and includes a series of tables, figures, and appendices that provide supporting information to the main text. This section of the report, Section 1, summarizes the site description, site history, regional setting and environmental history. Section 2 presents an overview of the field investigation, including the scope and methodology for each field investigation activity. Section 3 provides a description of the quality control and quality assurance procedures followed during this investigation. Section 4 presents the results for those sampling activities described in Section 2. Section 5 provides recommendations for further work.

### 1.4 Site Background

#### 1.4.1 Site Description

The Bartlett Arboretum and Gardens (see Figure 2), currently owned by the City of Stamford, has been undergoing development as an arboretum since 1965 when the Site was purchased by the State of Connecticut from the F. A. Bartlett Tree Expert Company. Prior to 1965 the F.A. Bartlett Tree Expert Company used the site as a tree research and training facility (see Section 1.4.2 for additional information). Other activities that have taken place at the Site since 1965 have included various educational courses (including an arborists training program and a master gardener training program) and limited amounts of research. The parcel of land on which the Site is located consists of approximately 64 acres.

There are currently five structures located in the southwestern portion of the Site, including the visitor center (which is also known as the main house), a cottage (which is used primarily for storage), a maintenance garage, a greenhouse, and the Silver Education Center (which is currently under construction). A previous structure (the former education center building) was located within the footprint of the under-construction Silver Education Center. The former education center building was demolished during the summer of 2010. The remainder of the southwestern portion of the Site contains two small asphalt-paved parking areas, lawn areas, and numerous gardens and plant collections.

The majority of the central portion of the Site is comprised of forested land, several acres of wetlands, and a small pond. A small cemetery, known locally as Potter's Field, is located in the northwestern portion of the Site and, according to a placard located adjacent to the cemetery, was used from 1870 through 1970. A small open meadow is located in the eastern portion of the Site, along High Ridge Road.

The area surrounding the Site is comprised primarily of residential and institutional properties, with the exception of the Scofield Magnet School, which is present to the northwest of the Site.

#### 1.4.2 Site History

Development of the site began in 1913, when the F.A. Bartlett Tree Expert Company purchased approximately 30 acres of the present-day property and began using the site as a tree research and training facility. In 1927, The Bartlett Tree Research Laboratories were established at the site, and occupied the (former) education center building until 1965, when the laboratories were moved out of state. By that time, the property owned by the F.A. Bartlett Tree Expert Company had expanded from the original 30 acres to approximately 64 acres. According to various sources of historical information, activities conducted at the Site by the F.A. Bartlett Tree Expert Company and the Bartlett Tree Research Laboratories included training of arborists, development of techniques used in managing shade and ornamental trees, and research involving the characterization of various tree diseases and insect infestations. Much of the research conducted at the Bartlett Tree Research Laboratories focused on controlling such diseases/infestations and involved experiments in applying various pesticides and insecticides. Research involving various methods of weed control was also conducted during the time the Site was occupied by the Bartlett Tree Research Laboratories.

### 1.5 Regional Site Setting

#### 1.5.1 Bedrock Geology

As indicated on the Bedrock Geologic Map of Connecticut (Rogers, 1985), the Site is located in the Western Uplands. The Site is underlain by a schist and granulite member of the Trap Falls Formation, which is described as an interlayered gray to silvery, medium- to course-

grained schist and fine-grained granofels. Bedrock was encountered between 2 and 18 feet below grade during the course of this investigation.

### 1.5.2 Surficial Geology

According to the Surficial Materials Map of Connecticut (Stone et al, 1992), the majority of the Site is underlain by thin till. According to additional information presented on the mapping, areas of thin till are characterized as areas where till is generally less than 15 feet thick and include areas of bedrock outcrop where till is absent. These areas are generally comprised of upper till and are loose to moderately compact, generally sandy and commonly stony. Observations made in the field are consistent with the information presented on the Surficial Materials Map of Connecticut.

### 1.5.3 Hydrogeology

The Site is depicted on the United States Geological Survey (USGS) Pound Ridge, New York quadrangle topographic map (Figure 1). The Site elevation is approximately 267 ft above mean sea level (MSL); local topography slopes to the east. The anticipated direction of ground water flow is to the east. In general, ground water was encountered in the borings advanced across the site at depths ranging from 1 to 15 feet below grade. Note that the direction of ground water flow was not confirmed as part of this investigation. The CTDEP has designated ground water in the vicinity of the Site with the “GA” ground water classification.

## 1.6 Environmental History

The following section provides a summary of the investigations and remedial actions conducted at the site to date (both prior to and during TRC’s involvement at the site).

### 1.6.1 Tank Removal Report, Fuss & O'Neill, Inc. July 1996

This report outlined activities associated with the abandonment of a 275-gallon No. 2 fuel oil Underground Storage Tank (UST) at the Bartlett Arboretum which was performed by Site Remediation Services as part of the Connecticut Department of Public Works Underground Storage Tank Program in May 1996. Fuss & O'Neill collected two soil samples during this USTs abandonment, one from the soil that was stockpiled when the UST was exposed and one

from beneath the UST. The samples were analyzed for volatile organic compounds (VOCs, EPA method 8010/8020) and total petroleum hydrocarbons (TPH, EPA method 418.1). VOCs were not detected in either sample and the reported concentrations of TPH in both of the samples were below regulatory action levels. Fuss & O'Neill recommended that no further remediation or investigation take place.

#### 1.6.2 Final Site Reassessment Scofieldtown Road Park, Weston Solutions, Inc. - Superfund Technical Assessment and Response Team III, December 2008

This report outlined the results of a Site Reassessment conducted for the Scofieldtown Road Park (which is located approximately one-half mile to the northwest of the Site) by Weston Solutions, Inc., in March 2008. As part of the Reassessment of the Scofieldtown Road Park, samples from nearby private drinking water supply wells were collected and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), Target Analyte List (TAL) metals and cyanide. Both of the wells located on the Bartlett Arboretum were sampled as part of the Reassessment. There were no concentrations of VOCs, SVOCs, pesticides, PCBs or cyanide that were reported above laboratory detection limits in either of the two samples. The reported concentrations of TAL metals detected in both of the samples did not exceed any regulatory action levels.

#### 1.6.3 Soil Sampling Report, Bartlett Arboretum, TRC, May 2010

This report outlined the results of soil sampling conducted by TRC at the Bartlett Arboretum in May 2010. This sampling, and the sampling described in the July 20, 2010 report (see below), was conducted to characterize soil to be excavated during the demolition and reconstruction of the former education center building. The sampling was not designed to investigate areas of concerns (AOCs) but to pre-characterize soil for proper disposal.

Eight soil samples were collected from five soil borings that were advanced in areas where excavation activities were to be conducted as part of the construction of a new education center building. The soil samples were analyzed for VOCs, SVOCs, total and leachable RCRA 8 metals and potassium, pesticides, herbicides, PCBs, cyanide and extractable total petroleum hydrocarbons (ETPH). None of the soil samples collected contained detectable concentrations of VOCs, herbicides, PCBs, cyanide or ETPH. Six of the eight soil samples collected exhibited

detectable concentrations of one or more chlorinated pesticides. Concentrations of pesticides that exceeded one or more applicable CTDEP Remediation Standards Regulations (RSR) criteria were reported in three of these samples. These samples were collected from the shallow soils near the former education center building and in the area of the proposed septic system leaching field. The reported concentration of arsenic in one of the soil samples collected from the proposed septic system leaching field area exceeded the applicable RSR criteria.

#### 1.6.4 Below Slab Soil Sampling Report, Bartlett Arboretum, TRC, July 2010

This report outlined the results of soil sampling conducted by TRC at the Bartlett Arboretum in July, 2010. Two soil samples were collected from directly beneath the concrete slab of the education center building, immediately following its removal. Both of the soil samples were analyzed for VOCs, SVOCs, total and leachable RCRA 8 metals and potassium, pesticides, herbicides, PCBs, cyanide and ETPH. The soil samples were not reported to contain concentrations of VOCs, SVOCs, herbicides, PCBs, cyanide or ETPH above method detection limits, nor were there any concentrations of chlorinated pesticides reported to be present in one of the soil samples. The reported concentrations of total and leachable RCRA 8 metals in both of the soil samples were below applicable RSR criteria. Two chlorinated pesticides, 4,4-DDE and 4,4-DDT, were detected in one of the soil samples at concentrations that exceeded the applicable RSR criteria. Based on the results of these two sampling events, TRC recommended that soils removed from around the building and from the area around the floor drain and its associated piping be stockpiled and properly disposed of.

#### 1.6.5 Tank Closure Report, Bartlett Arboretum Education Building, Hygenix, Inc., August 2010

This report outlined closure activities associated with the removal of a 1,000-gallon fuel oil UST that was located near the southwestern side of the former education center building. According to the closure report, the fiberglass coated steel UST was noted to be in excellent condition upon its removal, with no apparent signs of deterioration. No staining or odors were noted in the tank's grave, nor were there any elevated PID readings measured from the tank's grave. A single soil sample was collected from the bottom of the tank grave and analyzed for

VOCs and ETPH. There were no concentrations of VOCs or ETPH that were reported by the laboratory in this sample.

1.6.6 Sampling associated with the construction of the new education center, TRC, August 2010

TRC was present at the Site during the excavation of the area around the former floor drain and its associated piping and collected confirmatory soil samples once the excavation was complete. TRC also collected soil samples from beneath the area planned to be excavated for the construction of new building foundations, along the area of the existing foundation to remain, and from topsoil being stripped for reuse. TRC also oversaw the removal of a 550-gallon fuel oil UST that was located beneath the area where the new education center is being constructed. TRC collected soil samples from this tank location for closure purposes. The following briefly describes the results of these soil sampling efforts.

Former Floor Drain Area Sampling:

Based on the results of the below slab soil sampling completed in July 2010, TRC identified an area surrounding the former floor drain and its associated piping where soils would require excavation, management and disposal. TRC oversaw the excavation activities that took place in the area of the former floor drain and its associated piping on August 12 and 13, 2010.

TRC collected five confirmation soil samples from the area that was excavated on August 13, 2010. Four soil samples were obtained from the western and eastern sidewalls of the excavation and one sample was collected from the bottom. The sidewalls were excavated to a point beyond the foundation construction area to insure that any future investigation or excavation would not require that the new foundation walls be disturbed. The soil samples were analyzed for pesticides, RCRA 8 metals and Synthetic Leaching Procedure (SPLP) RCRA 8 metals. All of the soil samples collected exhibited detectable concentrations of 4,4-DDE and 4,4-DDT. None of the reported concentrations of 4,4-DDE exceeded the RDEC, however, the reported concentration of 4,4-DDT in one soil sample exceeded the RDEC. Chlordane was reported to be present at concentrations exceeding the GAPMC in two of the samples collected from the eastern sidewall of the excavation. No other pesticides were detected in any of the soil

samples collected from the excavation. The reported concentration of arsenic in one soil sample exceeded the RDEC.

The results of the over-excavation of the foundation in one area indicated that contaminants were present at that location and would require further investigation. Since the location of this sample was far enough from the new foundation wall to allow future unimpeded investigation and was known to be present in one of the areas of concern identified in the Phase I ESA, no further excavation was conducted.

#### *New Building Foundation Excavation Sampling*

TRC collected nine soil samples from beneath the area planned to be excavated to remove soil for the construction of new building foundations, along the area of the existing foundation to remain and from topsoil being stripped for reuse on August 12, 13 and 27, 2010.

Four of the soil samples were collected from two locations along the length of the former western foundation wall on August 12, 2010 where no previous soil sampling had been conducted. These samples were collected for the purpose of determining if soils generated as a result of excavations for a new basement area would require environmental management and/or disposal. These samples were analyzed for pesticides and total and SPLP RCRA 8 metals.

The soil samples collected along the former western foundation wall contained reported concentrations of 4,4-DDE and 4,4-DDT. None of these concentrations of 4,4-DDE or 4,4-DDT exceeded the RDEC. SPLP lead was detected in two of the soil samples exceeding the GA PMC for lead.

Based on the presence of elevated concentrations of SPLP lead with respect to the GA PMC, TRC recommended that all soils excavated along the former western foundation wall be stockpiled and re-sampled for total and SPLP RCRA 8 metals at a later date. A composite soil sample (identified as AC-Stockpile) was collected from the stockpiled materials by TRC on August 27, 2010 and submitted to CET. The reported concentrations of total RCRA 8 metals in this sample were below the RDEC. Only leachable barium was reported above laboratory detection limits in this sample, at a concentration well below the GA PMC. Based on this information, TRC determined that these soils were suitable for on-site reuse.

TRC collected three soil samples from along the former eastern foundation wall (an area in the approximate center of the new building), the former southern foundation wall (the location

that coincides with the southern foundation wall for the new building) and from a location along the new eastern foundation wall. Only the pesticide 4,4-DDT was detected in one of the soil samples at a concentration below the RDEC. Chlordane, 4,4-DDE and 4,4-DDT were detected in two of the soil samples at concentrations that did not exceed the RDEC. The reported concentrations of chlordane in the soil samples exceeded the GA PMC.

Based on this information, TRC determined that additional removal of soils from beneath the area of the new foundation would not be necessary.

TRC collected a composite soil sample (identified as Topsoil) from stockpiled topsoil at the Arboretum on August 13, 2010 and was initially submitted to CET for pesticide analysis, total RCRA 8 metals and SPLP RCRA 8 metals.

The pesticides chlordane, 4,4-DDE and 4,4-DDT were detected in the topsoil sample. None of the reported concentrations of pesticides exceeded the RDEC. The reported concentration of chlordane exceeded the GA PMC. Based on these results and to provide a better comparison to the GA PMC, TRC requested that the laboratory also analyze this sample for SPLP pesticides. There were no concentrations of SPLP pesticides reported above laboratory detection limits in this sample.

Metals were reported above laboratory detection limits in the topsoil sample. The reported concentration of arsenic slightly exceeded the RDEC. Barium was the only leachable metal detected in the topsoil sample. The reported concentration of 0.013 ppm did not exceed the GA PMC. Based on the analytical results of the topsoil sample, TRC determined that the stockpiled topsoil was suitable for onsite reuse.

#### Former 550-gallon UST Removal Confirmatory Sampling

TRC collected five soil samples from the UST excavation and submitted them to CET for analysis August 17, 2010. All of the samples were analyzed for extractable total petroleum hydrocarbons. As there were no field indications of impacts in the UST excavation, the soil sample from the bottom of the UST excavation was also analyzed for VOCs and SVOCs. There were no VOCs or SVOCs detected above laboratory reporting limits in the bottom soil sample. ETPH was detected in the soil sample taken from the eastern sidewall at a concentration below the RDEC and the GAPMC. ETPH was not reported above laboratory detection limits in any of the other confirmation samples collected from the tank excavation.

Based on the lack of evidence of contamination in the tank excavation, TRC recommended that the excavation be backfilled.

#### *New Stormwater Infiltration System Sampling*

The previous soil sampling conducted in this area by TRC identified elevated concentrations of several pesticides, particularly chlordane, in the vicinity of the planned stormwater infiltration system. Based on that result, TRC recommended that a more aggressive soil sampling program be implemented in this area to more fully characterize the soil quality. TRC oversaw the excavation of 12 shallow test pits, spaced approximately 15 feet apart, in the approximately 30 x 45 foot area that was planned to be excavated to construct the subsurface stormwater infiltration system on August 17, 2010. While one of these test pits was being advanced, a narrow stone-lined structure (which had a concrete cap) was encountered approximately one-foot below the ground surface. A clay pipe was observed entering the portion of the structure that was visible in the test pit. This pipe was oriented east to west and is the same type of piping that was seen emanating from the former floor drain in the education center building. As the soils that were located adjacent to the floor drain had previously been documented to contain elevated concentrations of pesticides, it was considered likely that soils surrounding this suspected leaching pit may contain similar concentrations of pesticides. To evaluate the soil conditions surrounding this structure, TRC collected two soil samples adjacent to the suspected leaching pit on August 17, 2010 and submitted them for pesticide analysis. Chlordane, 4,4-DDE and 4,4-DDT were detected in both of the soil samples. The reported concentration of chlordane in one sample exceeded the GA PMC but did not exceed the RDEC. The reported concentration of chlordane in the other sample exceeded both the GA PMC and the RDEC. The reported concentrations of 4,4-DDE and 4,4-DDT did not exceed the GA PMC or the RDEC. Based on the results of this sampling, the stormwater infiltration system was redesigned. Additional soil sampling was recommended in this area.

#### 1.6.7 Phase I Environmental Site Assessment, Bartlett Arboretum. TRC, September 2010

The purpose of this assessment was to complete a thorough site inspection and fully research the history of the site. Based on the information acquired in the Phase I, a preliminary conceptual site model was developed for the site. The Phase I ESA documented that the site was

originally developed for use by the F.A. Bartlett Tree Expert Company in 1913 which operated through 1965. The Bartlett Tree Research Laboratory was founded in 1927. According to information obtained from scientific journals, research was initiated on the property in 1927 and included "investigations of injurious insects and fungus diseases and methods for their control, feeding and fertilizing of trees, and methods and materials used in [tree] cavity work". It is evident that a substantial amount of research conducted at the site involved experimental, and, at the time, legal applications of various pesticides, including lead arsenate, potassium sulfide, calcium cyanide, various nicotine solutions, paradichlorobenzene, chlordane and 4,4-DDT. Up until 1965, pesticides and herbicides were likely applied to the vegetation and the ground surface and may have been disposed of in the on-site former septic system and/or dry well. Sensitive receptors in the area include wetlands on the site, surface water (including Poorhouse Brook) and private drinking water wells in the area. Testing of wells in the immediate area conducted by the City of Stamford has not identified adjacent well contamination.

Since 1965, at the time that the site was sold to the State of Connecticut, much of the activity at the site has involved developing the site as an arboretum without the use of significant amounts of chemicals or contaminants. According to interviewed sources at the University of Connecticut and the Arboretum, most of the research equipment that the Bartlett Tree Research Laboratories had maintained at the site was removed by the F.A. Bartlett Tree Expert Company when the property was sold in 1965. Reportedly, activities conducted at the site after the year 1965 focused on the monitoring of gypsy moth populations, a horticultural therapy program and a small program which evaluated rhododendron breeding. In addition, training courses for arborists, a master gardeners program, and credit courses in horticulture were also taught at the site. In 2001, the site was transferred to the City of Stamford in partnership with the Bartlett Arboretum Association and activities at the site now include research related to floristics, plant ecology and invasive species as well as training (the master gardener program is still run at the site) and access to the Arboretum for the general public. Current use and storage of hazardous materials is minimal and, with the exception of the USTs on site, are not likely to have resulted in a release to the environment.

The following AOCs (and RECs) were identified as a result of the Phase I ESA: AOC-1: The Southwestern Portion of the Site, AOC-2: The Former Education Center Building/Tree Research Laboratory, AOC-3: The Former Septic Systems, AOCs-4A, 4B and 4C: Active or

Recently Active Fuel Oil USTs, AOCs-5A, 5B and 5C: Abandoned-In-Place USTs and AOC-6: The Former One-Story Frame Barn.

Additional Potential Areas of Concern (PAOCs) were identified during a January 2011 Site visit and include PAOC-7: The Historic Dumpsite, PAOC-8: The Former Insectarium, PAOC-9: The Former Tree Surgery School, PAOC-10: The Demonstration Area, PAOC-11: The Southern Parcel, PAOC-12: The Visitor Parking Lot and PAOC-13: Poorhouse Brook.

## **2.0 SITE INVESTIGATION**

This section of the report provides information on the field investigation activities conducted at the Bartlett Arboretum in March and April, 2011. As discussed, the Phase II field activities conducted by TRC were preceded by a Phase I environmental investigation and various other investigation activities conducted during the period from 1996 to 2010. Based upon the findings of the previous work and on-site meetings with facility personnel and other interested parties, a sampling work plan was developed. The field investigation activities were conducted in accordance with a work plan prepared by TRC in March, 2011. This work plan was approved by the City of Stamford prior to the commencement of the field work at the site.

Figure 2 shows the potential areas of concern addressed as part of this investigation. Table 1 presents the sampling locations including the area of concern by title and number, the sample location identification number and any additional information needed to describe the location.

The field investigation activities included shallow and deep soil sampling and ground water sampling. The analyses conducted on the samples from each location were chosen to reflect the suspected contaminants of concern in each area. Analysis of the samples was conducted by Complete Environmental Testing, Inc. (CET) of Stratford, Connecticut.

### **2.1 Ground Penetrating Radar Survey**

TRC subcontracted Subsurface Information Surveys, Inc. (SIS) to complete the ground penetrating radar (GPR) survey. The geophysical survey was completed by a technician from SIS using a subsurface interface radar system (SIR-3000 and SIR-2000) on March 25, 2011. The system consisted of a power supply, graphic recorder, video display unit, computer and transmitting/receiving antenna. SIS used a subsurface interface radar and computer with a depth setting of 15 feet to locate any existing and unknown anomalies. The purpose of the survey was to confirm the location and orientation of the abandoned in place USTs and the active USTs. The GPR survey was also conducted in the suspected location of the former insectarium (PAOC-8) and across the main visitor parking lot (PAOC-12). The details of the survey are documented in the SIS report located in Appendix C.

## 2.2 Soil Boring Investigation

### ***Methodology***

Soil borings were drilled around the site to assess the characteristics of the soil in areas previously identified as known or potential areas of concern. The soil borings were completed by Haz-Probe, LLC of Hampden, Massachusetts using both a truck-mounted GeoProbe<sup>®</sup> unit and a skid-steer mounted GeoProbe<sup>®</sup> unit. Drilling supervision was provided by TRC. The soil boring locations are shown on Figure 2. Soil samples were collected for laboratory analysis from each of the 40 soil borings that were advanced via Geoprobe and three borings that were collected utilizing a hand auger. A sample summary indicating sample designations, sample depths and analyses performed is provided in Table 2.

In general, soil cores were collected continuously at each location from the ground surface to the depth of the water table or to the depth of refusal (see the boring logs for details). Soil borings that were designed to investigate the UST locations were advanced to a depth that corresponded to the bottom of the UST. Each soil core sample collected was logged for geology and screened using a photoionization detector (PID) immediately upon being opened. As none of the soil cores exhibited signs of contamination (i.e., elevated PID readings, staining or odors), samples were collected from the interval that would be most likely to exhibit impacts based on the most likely release mechanism for each AOC.

A total of 64 soil samples and the associated QA/QC samples (i.e., duplicates, field rinsate blanks, and de-ionized water and methanol solvent blanks) were submitted to the laboratory for analysis. The analyses conducted on the soil samples (volatile organic compound (VOC) analysis by Methods 5035/8260, poly-nuclear aromatic hydrocarbons (PAHs) analysis by Method 8270, extractable total petroleum hydrocarbon (ETPH) analysis by Connecticut's method, pesticide analysis by Method 8081B (total and SPLP) and CT RSR 15 metals analysis by Methods 6010/7471 (total and SPLP) are specified in Table 2.

Soil samples submitted to the laboratory for VOC analyses were collected according to the methods outlined for de-ionized water (low level range) and methanol (mid-level range) preservation (EPA Method 5035).

Soil samples collected for all but VOC analyses were transferred from the Macro-Core sample sleeve to a stainless-steel bowl. The samples were then homogenized by mixing with a stainless-steel spoon prior to placement into the appropriate laboratory-supplied sample

containers. Sampling equipment not dedicated to each sample location (e.g., the housing for the Macro-Core liners) was decontaminated prior to each use as described in TRC's work plan, or in the case of the bowls and spoons, was laboratory decontaminated prior to use in the field.

Geologic descriptions and other sample characteristics and observations (e.g., stains, odors, moisture, presence of fill material, FID/PID readings) were recorded for use in developing soil boring logs for each location. The soil boring logs are presented in Appendix A.

### ***Field Observations***

In general, the site is underlain primarily by fine to medium sand, with varying amounts of coarse-grained sand, silt and gravel. Bedrock was encountered at depths ranging from two to 18 feet below grade across the site.

There were no elevated PID readings, staining or odors observed in any of the soil borings that were advanced across the site.

### **2.3 Grab Ground Water Sampling**

Grab ground water samples were collected from seven temporary monitoring wells that were installed in seven of the soil borings drilled across the site on April 15 and 18, 2011. Clean, small-diameter PVC pipe (5-feet of screen and riser to reach the ground surface) was installed within the borings such that the screen intersected the water table. The formation was allowed to collapse around the screen and riser sections. The grab ground water samples were analyzed for the same parameters selected for the soil samples as shown in Table 2.

### ***Methodology***

Prior to ground water sampling, water was purged from each well using a peristaltic pump outfitted with dedicated polyethylene and silicon tubing. The ground water extracted during purging was monitored for turbidity, using a Lamotte 2020 turbidity meter as outlined in TRC's work plan in an effort to obtain a clear sample. Note that the 30 NTU criterion specified in the work plan was not achievable at any of the temporary well points, likely due to the very silty subsurface. Ground water sampling was conducted immediately following the purging.

Ground water samples were collected directly from the peristaltic pump output into laboratory supplied containers. For the aliquots of each sample that were submitted for dissolved

metals analysis, a 0.45 micron filter was connected in-line with the peristaltic pump output prior to sample collection. The analyses conducted on the ground water samples (VOCs by Method 8260, ETPH, PAHs, pesticides and CT RSR 15 metals analysis (total and dissolved) are specified in Table 2.

### ***Field Observations***

All of the ground water samples collected from the temporary well points were noted to be very turbid (over 1,000 NTUs), in spite of efforts to allow the water to run clear prior to sampling. No odors or sheens were present in any of the water samples collected.

## **2.4 Quality Assurance/Quality Control**

### **2.4.1 Sample Handling**

All of the samples were handled and shipped in accordance with the procedures outlined in TRC's site-specific work plan.

### **2.4.2 Laboratory Quality Assurance/Quality Control**

The overall quality assurance objective for laboratory analysis of environmental samples is to provide a laboratory quality assurance/quality control (QA/QC) program that is sufficient to ensure that data quality methods are achieved. The quality control limits for precision and accuracy of laboratory analyses are governed by the methods and equipment used. All soil and ground water samples collected as part of this investigation was subjected to the RCP protocol.

The Phase II investigation scope was fully described in the Work Plan submitted to the City of Stamford. During this investigation, the laboratory data was reviewed within the procedures defined in the Work Plan that included reviewing of laboratory reports and narratives, chains of custody and blanks, duplicates and control samples results. The review of these data concluded that the results were sufficient to confirm that releases had occurred at the site and were sufficient to adequately characterize the AOCs.

### 2.4.3 Field Quality Control Samples

During this investigation, TRC's followed Standard Operating Procedures (SOPs) for the collection of field quality control samples. These procedures were also described in the Work Plan prepared prior to this investigation.

Field blanks were collected to determine the effectiveness of the decontamination of sample collection equipment. The field blanks were collected by pouring laboratory-supplied, HPLC-grade, ASTM Type II water over the decontaminated sample collection equipment (i.e., stainless steel spoon, stainless steel bowls, etc.) and into the appropriate sample containers. Field blanks were collected at the beginning of the day's sampling events and accompanied the samples collected that day. Field blanks were analyzed for the same analytical parameters as the sample matrix. Field blanks were labeled (FB followed by the date) according to the proper chain-of-custody procedures, and stored and shipped or delivered with the collected samples.

One solvent blank was submitted for VOC analysis as part of this investigation. Solvent blanks are used to evaluate the effect of sample storage and shipment on sample integrity, and to ensure proper sample container preparation and handling techniques. Vials of methanol and de-ionized water to be used for VOC soil sampling were prepared by the laboratory. One vial of each chemical was submitted to the laboratory to assess the integrity of the chemicals coming from the lab and to ensure that the field handling of the chemicals was not in any way affecting the integrity of the results.

An aqueous trip blank was prepared by the laboratory for the shipment of ground water samples that were submitted to the laboratory for VOC analysis. The trip blank sample was shipped with the containers from the lab and remained on ice in the sample coolers during the collection of the ground water samples. The sample was designated with "TB" followed by the date of collection. One trip blank associated with the ground water sampling was submitted for analysis.

Duplicate samples consist of two separate samples taken from the same source. Duplicate samples were collected, homogenized, and split. The procedure for collecting duplicate samples consisted of alternating the collection of the sample between the sample collection bottle and the duplicate collection bottle. Field duplicates were collected generally at one duplicate sample per 20 samples collected, per analysis. Duplicate samples were sent as "blind" (unknown duplicate samples) to the laboratory responsible for the sample analysis.

#### 2.4.4 Sample Custody, Shipping and Handling

Sample custody procedures were observed to ensure the validity of the data generated during each investigation. Appropriate sample containers were used so no chemical alteration could occur between the collection of samples in the field, and the receipt of samples at the laboratory. The sample bottles were prepared and shipped to TRC's by the subcontracted analytical laboratory. Sample containers were selected to ensure compatibility with the potential contaminants and to minimize breakage during transportation. Requirements for sample bottles, analytical methods, preservation and holding times were adhered to for all samples. Sample labels were filled out at the time of sampling and were be affixed to each container to identify the project name and/or sample location, sample number, sampler's initials, date and time of collection, number of containers per analyte (i.e., 1 of 2, etc.), preservatives added, and analyses requested for the sample.

After the bottles for a given sample location were filled, they were placed in a shipping cooler. Samples were stored in such a way as to protect them from temperature extremes, light, breakage, and water damage. Each glass sample vial was placed in an individual bubble wrap bag before being placed in the cooler. Field personnel added bags of crushed ice or ice packs to the shipping coolers as the samples were collected.

A chain-of-custody record was prepared and accompanied all samples to provide documentation of all samples collected and to track sample possession. Samples were delivered to the laboratory for analysis as soon as practical after the sampling, usually the same day the samples were collected.

#### 2.5 Field Equipment Decontamination Procedures

Sampling equipment which was used during the field activities, such as stainless steel spoons or spatulas, stainless steel mixing bowls, and hand augers were decontaminated in a laboratory using the following procedures.

1. Wash and scrub with low phosphate detergent in tap water;
2. Rinse with tap water;
3. Rinse with distilled and deionized (ASTM Type II) water;
4. Rinse with 10% ultra pure nitric acid;

5. Rinse with distilled and deionized (ASTM Type II) water rinse;
6. Rinse with acetone - pesticide grade solvents or better;
7. Air dry - on clean polyethylene sheeting;
8. Distilled and deionized (HPLC-grade, ASTM Type II) water rinse;
9. Wrap in aluminum foil, shiny side out for transport (if not being used immediately).

## 2.6 Analytical Procedures

EPA-approved methods were used for all analyses. The analyses slated for each of the soil and ground water samples collected as part of this investigation were described in the Work Plan.

## 2.7 Data Validation and Reporting

Data validation is the process of reviewing data and associated quality control criteria, and accepting, qualifying, or rejecting it on the basis of sound criteria.

### 2.7.1 Field Data Validation

Field sampling data was validated by the TRC Project Manager following the field activities, based on a judgment of the representativeness of the sample, the maintenance and cleanliness of sampling equipment, and adherence to the written sample collection procedure.

The following criteria were used to evaluate the field sampling data:

- Use of approved sampling procedures, and
- Proper chain-of-custody maintained and documented.

### 2.7.2 Analytical Data Validation

Analytical data validation included procedures within the laboratory and independent of the laboratory.

Data from laboratory analyses was reviewed by the laboratory prior to release. The data was analyzed by CET. TRC is aware that CET's Laboratory QC Coordinator validated the data prior to release to TRC by the using criteria outlined below:

- Use of approved analytical procedures;
- Use of properly operating and calibrated instrumentation; and
- Acceptable results from analyses of laboratory control samples;

Results from all QA/QC procedures including field and laboratory method blanks, replicate samples, equipment rinsates and internal QC samples were used to validate analytical results from each sampling event.

### 2.7.3 QA/QC Data Assessment Process

As part of the project, TRC conducted reviews of QA/QC parameters and laboratory information. This review was conducted to evaluate the effect of variances from these parameters on the overall quality of the project and data usability. The following summarizes these parameters that were applied to this investigation and any applicable relevant concerns.

- Sampling Design – During this investigation, soil and ground water samples were collected at the locations as defined in Work Plan.
- Field Equipment (Preventative Maintenance, Calibration and Corrective Action) – The photoionization detectors (PID) and ground water parameter monitoring equipment were calibrated as specified in TRC’s Standard Operating Procedures (SOPs) and/or according to the manufacturer’s instructions. There were no corrective actions taken regarding the equipment used for this project.
- Decontamination – Decontamination of all equipment was completed as specified in TRC’s SOPs.
- Sample Handling and Custody – Information in the field file indicated that environmental samples were handled in accordance with the procedures outlined in the Work Plan. Holding times were adhered to as well as shipping and preservation procedures.
- Field Quality Control – All blank and duplicate samples were collected for analysis as specified in the work plan.
- Data Management and Documentation – The field log books were maintained as specified in the work plan.
- Analytical Methods – All samples were subjected to the proposed analyses by the analytical methods outlined in the work plan.
- Laboratory Equipment (Preventative Maintenance, Calibration and Corrective Action) – The lab did not identify any noteworthy issues in relation to the operation of the laboratory equipment. The lab did identify instances when the laboratory control spikes were either too high or too low for particular compounds.

#### 2.7.4 RCP Data Quality Assessment (DQA) and Data Usability Evaluation (DUE)

DQAs and DUEs in accordance with CTDEP guidance were completed for this investigation using RCP protocols. This assessment reviewed the data for analysis of each of the soil and ground water samples plus duplicates, field blanks, solvent blanks and trip blanks collected as part of this investigation. The data collected as part of this investigation was used to determine if releases of COCs have occurred at the site.

During this investigation, continuing calibration or laboratory control samples exhibited bias for poor performing compounds and several other compounds, some of which are COCs for the site. One sample was analyzed past the holding time for PAHs and ETPH.

The DQA and DUE completed for this project indicate the analytical data collected was of sufficient quality, accuracy, precision, and sensitivity to identify release areas.

### **3.0 SAMPLING RESULTS**

This section of the report provides a summary of the results of sampling in the identified known and potential areas of concern. A summary of samples collected as part of this investigation is provided in Table 2. The analytical results are summarized in Table 3 and Table 4 the laboratory data reports are provided in Appendix B.

Consistent with the scope of work, soil and ground water samples were submitted for a variety of analyses including: VOCs, PAHs, pesticides and metals.

While the goal of the Phase II investigation is to determine if COCs are present or absent from a given AOC, thereby confirming whether a release has occurred in that location, it is important to understand the magnitude of the concentrations of the hazardous materials that have been released to the environment. Therefore, for the purposes of soil and ground water data evaluation, the applicable standards from the Connecticut Remediation Standard Regulations (RSRs) (Section 22a-133k) are presented in the analytical data summary tables for each sample type to present a framework in which to compare relative concentrations of contaminants. In the soil evaluation, the Residential Direct Exposure Criteria (RDEC), the Industrial/Commercial Direct Exposure Criteria (I/CDEC), and the Class GA Pollutant Mobility (GAPMC) criteria are presented for comparison purposes. In the ground water evaluation, the Ground Water Protection Criteria (GWPC), Residential Volatilization Criteria (RVC) and the Industrial/Commercial Volatilization Criteria (I/C VC) are presented for comparison purposes.

#### **3.1 AOC Evaluation**

A total of 43 soil borings were completed as part of this investigation at 12 AOCs and PAOCs. Forty of the soil borings were advanced using a Geoprobe while three of the borings were advanced using a hand auger. Soil samples were collected from these borings, as indicated in Table 2, the sample summary table. A summary of the analytical results for the soil and ground water samples can be found in Tables 3 and 4. The following sections present an evaluation of each AOC.

#### **3.2 AOC-1: The South Western Portion of the Site**

Information obtained during the Phase I indicated that most of the cultivation of various plants occurred in this portion of the Site, during the time the Bartlett Tree Expert Company

occupied the property (early 1900s through 1965). Research involving various types of pesticides is suspected to have occurred in various experimental plots (the exact the locations of which are not known) across this area during this time period. Analysis of the soil samples from other AOCs located within this larger AOC were also reported to contain elevated concentrations of chlorinated pesticides and metals.

In order to evaluate soil and groundwater conditions across this AOC, TRC advanced ten soil borings (SB-1 through SB-10) and installed two temporary well points (TW-4 and TW-7) within the area. Soil boring locations are depicted on Figure 2. Soil and ground water samples were collected and submitted for laboratory analysis as indicated in Table 2.

### *Soil*

As shown in Table 3, concentrations of dieldrin (14 parts per billion (ppb)), 4,4-DDE (62 ppb to 3,600 ppb), delta-BHC (23 ppb), 4,4-DDT (34 ppb to 6,000 ppb), 4,4-DDD (150 ppb to 880 ppb) and heptachlor epoxide (23 ppb) were reported in one or more samples collected across the area. The reported estimated concentrations of 4,4-DDE and 4,4-DDT in the soil sample SB-10(0-2) exceeded the RDEC. The reported concentrations of dieldrin and heptachlor epoxide in the soil sample SB-3(0-2) exceeded the GA PMC. The reported total concentrations of arsenic in the soil samples SB-5(0-2) (18 parts per million (ppm)), SB-6(0-2) (68 ppm) and SB-10(0-2) (29 ppm) exceeded the RDEC. The remaining concentrations of total metals that were reported in each of the soil samples were well below the RSR criteria.

To determine if the metals detected in the soil sample SB-5(0-2) were leachable, this sample was subjected to SPLP extraction and analysis. The reported leachable concentrations of arsenic (0.022 ppm) and lead (0.032 ppm) exceeded the GA PMC. A low concentration of leachable zinc was also detected in this sample.

### *Ground Water*

As shown in Table 4, there were no concentrations of pesticides reported above laboratory detection limits in the grab ground water samples collected from TW-4 and TW-7. Ground water was observed between 4.7 feet below grade (TW-7) and 12 feet below grade (TW-4). Ground water was not encountered in the remaining borings advanced across this area. The

reported concentrations of several total metals exceeded the GWPC in both of these samples. The only dissolved metal reported in both of the grab ground water samples was barium.

### *Conclusions*

Detectable concentrations of pesticides were reported in six of the 17 soil samples collected in this AOC. All six of the samples which exhibited detectable concentrations of pesticides were collected from the shallow (0 to 2 feet below grade) interval. Based on the lack of pesticide concentrations in any of the soil samples collected from deeper intervals, the presence of pesticides in the shallow soil samples is likely indicative of their historic, localized routine non-research application to either the ground surface or near ground surface.

The reported concentrations of most of the total metals in the soil samples were generally consistent across this AOC and are likely indicative of naturally occurring or background conditions. The elevated concentrations of arsenic and lead in some samples may also be indicative of background conditions. However, three soil samples that exhibited total arsenic in excess of the RDEC and the one soil sample that exhibited leachable arsenic and lead were collected from shallow (0-2 feet below grade) intervals. The presence of elevated arsenic and lead concentrations in these shallow soils may be related to historic applications of arsenical pesticides to vegetation at or near the ground surface. .

As mentioned previously, every effort to obtain clear grab ground water samples was made. In spite of those efforts, the grab ground water samples were noted to be very turbid. The presence of elevated concentrations of total metals in all of the grab ground water samples is likely related to the large amount of suspended sediment in the sample. This is further evidenced by the general lack of detections of concentrations of dissolved metals.

### 3.3 AOC-2: The Former Education Center Building

Information obtained during the Phase I indicated that the former education center building was utilized as a research laboratory by the Bartlett Tree Expert Company until 1965. Previous sampling in this area had identified elevated concentrations of pesticides and metals to the east and south of the foot print of the new education center building.

To evaluate soil conditions across this AOC, TRC advanced four soil borings (SB-11 through SB-14) to the east and to the south of the new education center building. As ground

water was not encountered above the depth of drilling refusal in any of these borings, no grab ground water sampling was conducted. Soil boring locations are depicted on Figure 2. Soil samples were collected and submitted for laboratory analysis as indicated in Table 2.

### ***Soil***

As shown in Table 3, concentrations of VOCs, PAHs and ETPH were not reported above laboratory detection limits in any of the soil samples collected within this AOC. Detectable concentrations of chlordane (320 ppb), 4,4-DDE (44 ppb to 120 ppb), delta-BHC (67 ppb), and 4,4-DDT (36 ppb to 320 ppb) were reported in one or more samples collected across the area. None of the reported concentrations of pesticides exceeded the RDEC. The reported concentrations of chlordane in the soil sample SB-13(0-2) exceeded the GA PMC. The reported total concentration of arsenic in the soil sample SB-14(1-2) (13 ppm) exceeded the RDEC. The remaining concentrations of total metals that were reported in each of the soil samples were well below the RSR criteria. In order to determine if the arsenic detected in the soil sample SB-14(0-2) were leachable, this sample was subjected to SPLP extraction and analysis. Leachable metals were not reported above laboratory detection limits in this sample.

### ***Ground Water***

While no temporary monitoring wells were installed in the borings that were attributed to this AOC, (ground water was not encountered in any of the borings advanced in this AOC) several temporary well points were installed with AOC-3, is located to the east of AOC-2. The results of the grab ground water sampling conducted within that area will be discussed in the following section.

### ***Conclusions***

Detectable concentrations of pesticides were reported in two of the nine soil samples collected in this AOC. All three of the samples which contained concentrations of pesticides were collected from the shallow (0 to 2 feet below grade) interval. The reported concentration of chlordane in the soil sample SB-13(0-2) which was collected just to the east of the area that had been excavated during the construction of the new education center is consistent with the reported concentration of chlordane in one of the soil samples that was collected from the eastern

sidewall of that excavation. As none of the deeper samples collected from within this AOC exhibited detectable concentrations of pesticides, their presence in the shallow soils is likely the result of historic, routine non-research applications to the ground surface.

The reported concentrations of most of the total metals in the soil samples were generally consistent across this AOC (and others) and are likely indicative of naturally occurring or background conditions. The one soil sample that exhibited total arsenic slightly in excess of the RDEC was collected from the shallow (0-2 feet below grade) interval. As no leachable metals were detected in this sample, the reported total concentration of arsenic in this sample is most likely indicative of naturally occurring or background conditions, as opposed to a release of arsenical pesticides in this area.

#### 3.4 AOC-3: The Former Septic Systems

During the course of the Phase I ESA and subsequent soil sampling activities performed by TRC during the summer of 2010, the locations of certain components of the former septic systems were identified. Note that an additional component of the former septic system was identified during site reconnaissance performed in March 2011, prior to the commencement of the Phase II activities. This component appeared similar to the suspected leaching pit that was identified in the summer of 2010. Soil samples collected from the area immediately adjacent to the leaching pit that was identified in the summer of 2010 exhibited elevated concentrations of pesticides. Elevated concentrations of pesticides were also identified in shallow soil samples that were collected to the east and west of the former septic system area.

In order to evaluate soil and ground water conditions across this AOC, TRC advanced four soil borings (SB-15 through SB-18) and installed three temporary well points (TW-15, TW-16 and TW-17) within this area. Borings SB-16 and SB-17 were advanced approximately 15 feet to the east (in the presumed downgradient direction) of the suspected leaching pit that was identified during the summer of 2010 in order to determine the extent of the previously identified impacts to the soils immediately adjacent to this structure. Boring SB-15 was advanced adjacent to the recently identified leaching pit and SB-18 was advanced approximately 15 feet to the east of SB-15 (in the presumed downgradient direction). Soil boring locations are depicted on Figure 2. Soil samples were collected and submitted for laboratory analysis as indicated in Table 2.

### ***Soil***

As shown in Table 3, detectable concentrations of chlordane (63 ppb), 4,4-DDE (53 ppb to 120 ppb) and 4,4-DDT (43 ppb to 44 ppb) were reported in one or more samples collected across the area. None of the reported concentrations of pesticides exceeded the RDEC or the GA PMC. All of the reported concentrations of total metals that were reported in each of the soil samples were well below the RSR criteria.

### ***Ground Water***

Ground water was observed in three of the four borings advanced across this area at depths ranging from 4.0 to 5.6 feet below grade. The VOC tetrahydrofuran was detected in the grab ground water sample collected from the temporary well point TW-15 at a concentration of 190 ppb. There is no established RSR criterion for tetrahydrofuran. There were no PAHS, ETPH or pesticides reported above laboratory detection limits in the grab ground water samples collected from TW-15, TW-16 and TW-17. The reported concentrations of several total metals exceeded the GWPC in these samples. The only dissolved metal reported in the grab ground water sample was barium.

### ***Conclusions***

Detectable concentrations of pesticides were reported in two of the nine soil samples collected in this AOC. Both of the samples which exhibited detectable concentrations of pesticides were collected from the shallow (0 to 2 feet below grade) interval. As none of the deeper samples collected from within this AOC exhibited detectable concentrations of pesticides, their presence in the shallow soils is most likely a result of historic routine non-research applications to the ground surface.

The reported concentrations of most of the total metals in the soil samples were generally consistent across this AOC and are likely indicative of naturally occurring or background conditions.

As mentioned previously, every effort to obtain clear grab ground water samples was made. In spite of those efforts, the grab ground water samples collected from this AOC were noted to be very turbid. The presence of elevated concentrations of total metals in all of the grab

ground water samples is likely related to the large amount of suspended sediment in the samples. This is further evidenced by the general lack of the presence of dissolved metals.

### 3.5 AOCs-4A,- 4B,-4C,-5B and -5C: USTs

The Phase I ESA identified several current and former underground storage tanks (USTs) at the site. A total of 13 soil borings were advanced across the site with the primary purpose of documenting soil conditions around each active or abandoned in place UST at the site. The soil borings that were advanced around AOC-4A were intended to properly document that USTs closure. Table 2 identifies the specific investigation activities that were conducted for each UST. The analytical results of the soil samples collected from each boring are presented in Table 3.

#### *Soil*

As shown in Table 3, there were no concentrations of VOCs, PAHs, ETPH or pesticides reported above laboratory detection limits in any of the sample collected in association with these AOCs. The reported concentrations of metals reported in each of the soil samples were generally consistent and likely representative of naturally occurring or background conditions.

#### *Ground Water*

As there were no impacts identified in the soils surrounding each of the USTs, ground water was not evaluated at any of the AOCs associated with them. Note that ground water was not encountered in any of the borings that were advanced in these AOCs.

#### *Conclusions*

The results of this investigation indicate that it is unlikely that releases from any of the current and former USTs has occurred.

### 3.6 AOC-6: The Former 1-Story Frame Barn

Information obtained during the course of the Phase I ESA indicated that a small barn was located in the eastern portion of the Site. The Stamford Health Department ordered the Bartlett Arboretum to remove improperly stored pesticides from this structure in 1970. The Arboretum reportedly removed these pesticides. No evidence of this former structure has been

identified to date. Soil boring locations are depicted on Figure 2. Soil samples were collected and submitted for laboratory analysis as indicated in Table 2.

### ***Soil***

As shown in Table 3, detectable concentrations of 4,4-DDE (31 ppb) and 4,4-DDT (51 ppb to 100 ppb) were reported in two of the soil samples collected in this area. None of the reported concentrations of pesticides exceeded the RDEC or the GA PMC. In general, the reported concentrations of metals in the soil samples were consistent and were well below the RDEC. The reported concentration of total arsenic in the soil sample SB-20(0-2) (280 ppm) exceeds the RDEC. This sample was also subjected to SPLP extraction and analysis. The reported concentration of leachable arsenic in this sample (0.26 ppm) exceeded the GA PMC. The remaining reported concentrations of leachable metals were below the GA PMC.

### ***Ground Water***

Ground water was encountered at a depth of 4 feet below grade in one of the borings (SB-15) advanced within this AOC. There were no pesticides reported above laboratory detection limits in the grab ground water samples collected from TW-15. The reported concentrations of several total metals exceeded the GWPC in this sample. The only dissolved metal reported in the grab ground water sample was zinc.

### ***Conclusions***

Detectable concentrations of pesticides were reported in two of the four soil samples collected in this AOC. Both of the samples which exhibited detectable concentrations of pesticides were collected from the shallow (0 to 2 feet below grade) interval. Drilling refusal was encountered at shallow depths (approximately two feet below grade) at three of the four soil boring locations. As such, deeper soil samples were not collected from these locations. The presence of pesticides in the two of the three soil samples collected in this area is likely the result of minor, historic applications to the ground surface.

The reported concentrations of most of the total metals in the soil samples were generally consistent across this AOC and are likely indicative of naturally occurring or background

conditions across the site. The elevated concentrations of total and leachable arsenic in the soil sample SB-20(0-2) may be the result of an isolated release of arsenic in this area.

As with other AOCs, the grab ground water sample collected from this AOC was noted to be very turbid. The presence of elevated concentrations of total metals in the grab ground water sample is likely related to the large amount of suspended sediment in the sample. This is further evidenced by the general lack of concentrations of dissolved metals in the filtered sample.

### 3.7 PAOC-7 and PAOC-8: The Historic Dumpsite and the Suspected Location of the former Insectarium:

A small trash pile was identified in the southwestern portion of the property during a recent site visit. Materials that may have been disposed of in this small area are unknown. In addition, historical information indicates that a small insectarium building was located just to the north of the cottage. Research involving pesticides and herbicides may have been conducted in this building. One soil boring was advanced in each of these areas (SB-22 and SB-23). Ground water was not evaluated at either of these PAOCs. Soil boring locations are depicted on Figure 2. Soil samples were collected and submitted for laboratory analysis as indicated in Table 2

#### ***Soil***

As shown in Table 3, there were no detectable concentrations of VOCs, PAHs or ETPH detected in the soil samples collected from PAOC-7. Pesticides were not detected above laboratory reporting limits in any of the soil samples collected from PAOC-7 and PAOC-8. The reported concentrations of metals in the soil samples were consistent and were well below the RDEC.

#### ***Ground Water***

Indications of ground water (wet or saturated soils) were not observed were not observed in either of the borings associated with these PAOC's.

#### ***Conclusions***

Given the lack of detections of pesticides in any of the soil samples collected in either of these two areas, it appears unlikely that a release of pesticides has occurred in these areas. The

reported concentrations of metals in these samples are likely indicative of naturally occurring or background conditions.

### 3.8 PAOC-9 and PAOC-10: The former Tree Surgery School and the Demonstration Area:

Historical information indicates that a tree surgery school was located just to the west of Brookdale Pond. Research involving pesticides and herbicides may have been conducted in this building. During a recent site visit, a small demonstration area was identified in the eastern portion of the site. Pesticide use may have been demonstrated in this area. As both of these areas could not be accessed by the drilling equipment, the soil borings (SB-24 and SB-25 for PAOC-9 and SB-26 for PAOC-10) in these areas were advanced utilizing a hand auger. Ground water was not evaluated in either area. Soil boring locations are depicted on Figure 2. Soil samples were collected and submitted for laboratory analysis as indicated in Table 2.

#### *Soil*

As shown in Table 3, detectable concentrations of 4,4-DDE (140 ppb to 6,600 ppb) 4,4-DDT (150 ppb to 15,000 ppb) and 4,4-DDD (860 ppb to 3,200 ppb) were reported in one or more of the soil samples collected in these two areas. The reported concentrations of one or more pesticides in the soil samples SB-24(0-2) and SB-25(0-2) exceeded the RDEC. Both of these samples were also submitted for SPLP extraction and analysis. Detectable concentrations of dieldrin (0.002 ppb) and 4,4-DDT (0.14 ppb) were reported in the soil sample SB-24(0-2). The reported concentrations of metals in the soil samples were consistent and were well below the RDEC.

#### *Conclusion*

The presence of elevated concentrations of pesticides respect to the RDEC within PAOC-9 is indicative of a release of pesticides to the ground surface in this area. The reported concentrations of metals in the samples collected from both areas are likely indicative of naturally occurring or background conditions.

### 3.9 PAOC-11 and PAOC-12: The Southern Parcel and the Main Visitor Parking Lot:

Historical information indicates that testing of various pesticides may have taken place across the southern parcel. Anecdotal historic information indicates that pesticides may have been stored in this area. In order to evaluate soil and ground water conditions across the southern parcel, three soil borings (SB-27 through SB-29) and one temporary well point (TW-28) were installed across PAOC-11. One soil boring was installed in PAOC-12. Soil boring locations are depicted on Figure 2. Soil samples were collected and submitted for laboratory analysis as indicated in Table 2.

#### *Soil*

As shown in Table 3, there were no detectable concentrations of pesticides reported in any of the soil samples collected from PAOC-11. The pesticides 4,4-DDE (25 ppb) and 4,4-DDT (30 ppb to 63 ppb) were reported to be present in the soil samples that were collected from PAOC-12. The reported concentrations of pesticides in these samples did not exceed the RDEC or the GA PMC. The reported concentrations of metals in the soil samples were consistent and were generally well below the RDEC, with the exception of arsenic in the soil samples SB-27(0-2) (27 ppm) and SB-29(0-2) (12 ppm). The soil sample SB-27(0-2) was also subject to SPLP extraction and analysis. Only leachable zinc was detected in this sample.

#### *Ground Water*

Ground water was observed in one of the borings advanced in this AOC (SB-28) at a depth of 1.5 feet below grade. Ground water was not encountered in the other two borings advanced in this AOC. There were no pesticides reported above laboratory detection limits in the grab ground water samples collected from TW-28. The reported concentrations of several total metals exceeded the GWPC in this sample. The only dissolved metal reported in the grab ground water sample was barium.

#### *Conclusion*

Detectable concentrations of pesticides were reported in two of the six soil samples collected these AOCs. The presence of pesticides in these two soil samples collected from SB-30 is likely the result of minor, historic applications to the ground surface.

The reported concentrations of most of the total metals in the soil samples were generally consistent across this AOC and are likely indicative of naturally occurring or background conditions. The slightly elevated concentrations of total arsenic in two of the soil samples may also be indicative of naturally occurring or background conditions.

The grab ground water sample collected from PAOC-11 was noted to be very turbid. The presence of elevated concentrations of total metals in the grab ground water sample is likely related to the large amount of suspended sediment in the sample. The filtered sample did not contain concentrations of dissolved metals.

#### **4.0 RECOMMENDATIONS**

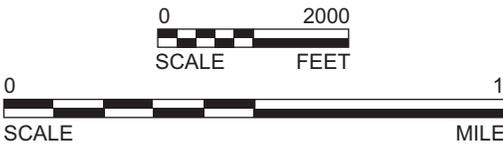
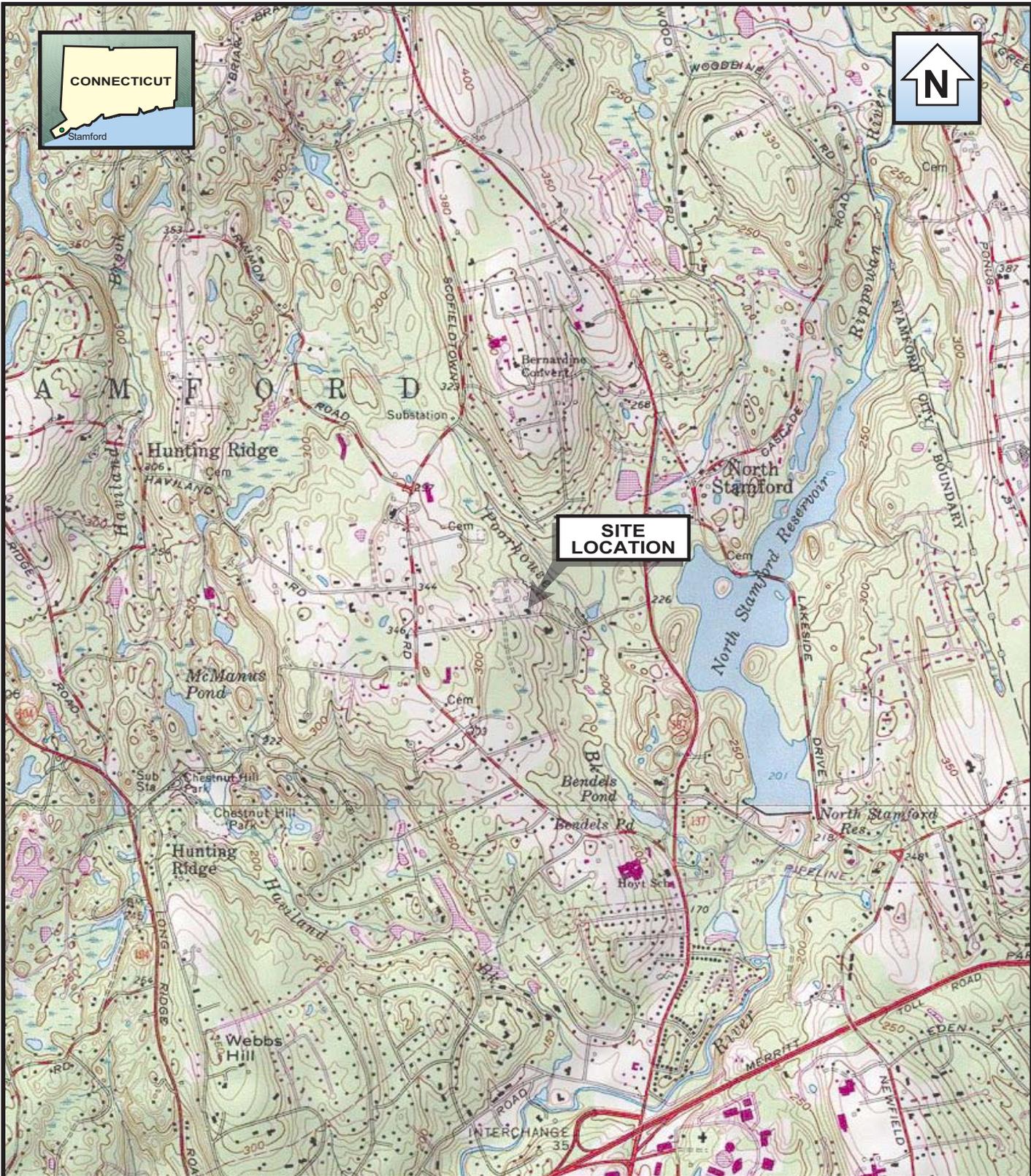
Based on the findings and conclusions of this report, TRC makes the following recommendations with regard to the site.

##### ***Soil***

Additional investigations to delineate the horizontal extent of pesticide impacted soils in the vicinity of SB-3 and SB-10 within AOC-1 are warranted. Additional investigation to delineate the horizontal extent of pesticide impacted soils in the vicinity of SB-24 and SB-25 is also warranted. TRC also recommends that the leaching pits identified within AOC-3 be properly abandoned. Additional investigation or remediation of soils in the vicinity of SB-20, which exhibited a significantly elevated concentration of arsenic should also be conducted.

##### ***Ground Water***

None of the grab ground water samples collected contained concentrations of pesticides over the method detection limits. The elevated concentrations of total metals detected in the grab ground water samples is most likely attributable to the high suspended sediment content observed in each of the samples, as evidenced by the low concentrations of dissolved metals reported in each of the filtered samples. No further investigation of ground water is recommended at this time.



1:24000

BASE CREATED WITH TOPO™ © 1996 WILDFLOWERS PRODUCTIONS, www.topo.com 7.5' USGS TOPOGRAPHIC MAP



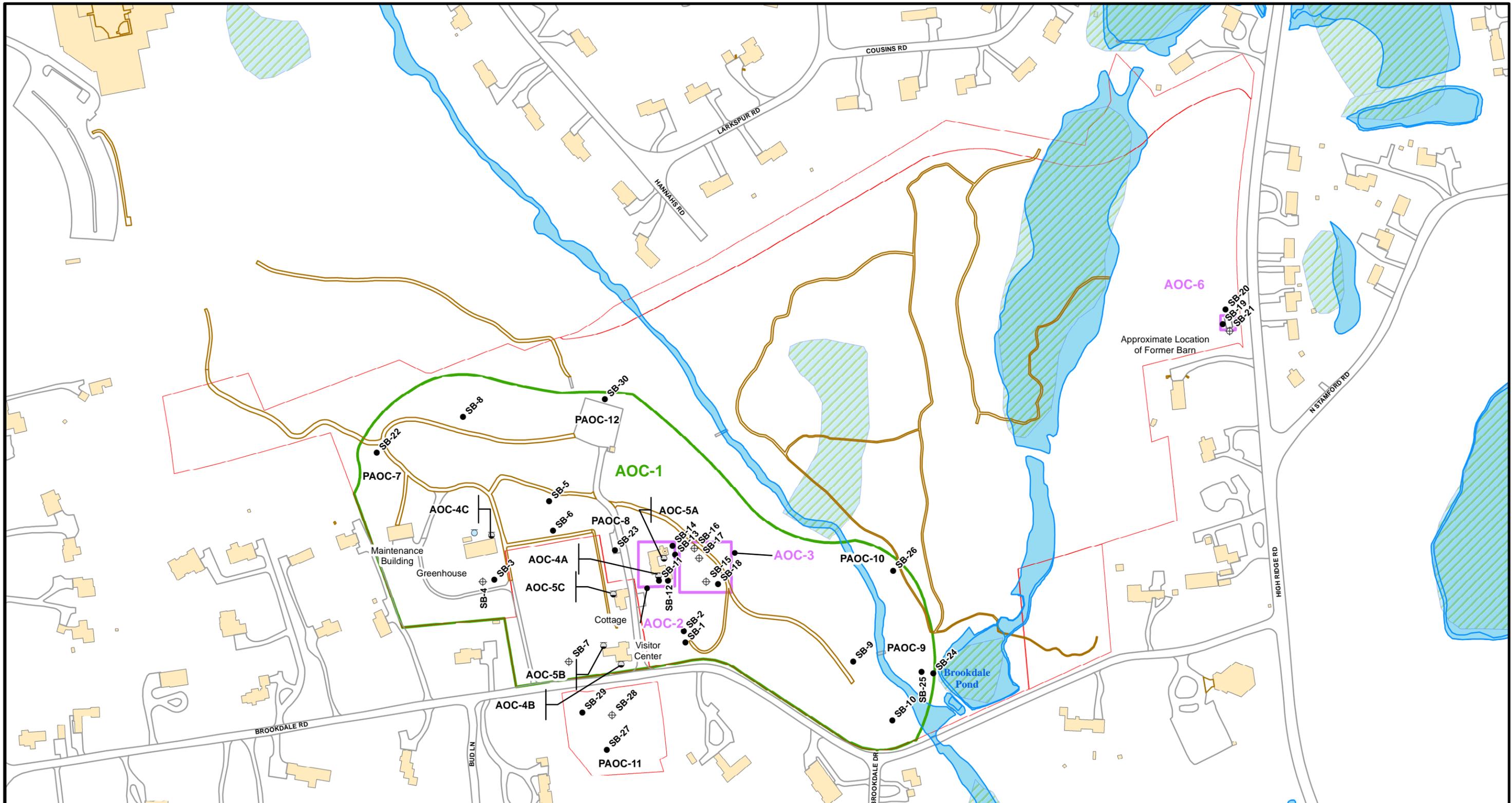
21 Griffin Road North  
Windsor, CT 06095  
(860) 298-9692

**BARTLETT ARBORETUM  
STAMFORD, CONNECTICUT**

### FIGURE 1 WORK PLAN

Date: 06/11

Project No. 176301.0000.000000



**Legend**

- Subject Property
- Stream
- Wetland
- Former Structure
- Walkway
- Roadways
- Building Footprint

**AOC Areas**

- AOC-2, 3 & 6
- AOC-1

**Features**

- Drain
- Leach Pit
- Prop Tank
- UST

**Sampling Locations**

- Boring/Well
- Soil Boring



21 Griffin Road North  
Windsor, CT 06095  
(860) 298-9692

**Bartlett Arboretum  
Stamford, Connecticut**

**Phase II Sample Locations**

Figure: 2 | Date: 5/18/11 | Project No: 177467.0000.0000

**Table 1**  
**Phase II Sampling Locations**  
**Bartlett Arboretum**  
**Stamford, Connecticut**

Area Number	Potential Area of Concern	Boring Identification Numbers	General Notes / Comments
1	The Southwestern Portion of the Site	SB-1, SB-2, SB-3, SB-4, SB-5, SB-6, SB-7, SB-8, SB-9 and SB-10	Ten soil borings drilled as proposed. Two temporary well points, (rather than the four that were proposed) were also installed in SB-4 and in SB-7 (identified as TW-4 and TW-7 respectively). Ground water was not encountered in the other two proposed locations.
2	The Former Education Center Building	SB-11, SB-12, SB-13 and SB-14	Four soil borings drilled as proposed. As ground water was not encountered in the borings in this area, no temporary well points were installed.
3	The Former Septic Systems	SB-15, SB-16, SB-17 and SB-18	Four soil borings drilled as proposed. Three temporary wells points were installed in the soil borings SB-15, SB-16 and SB-17 and identified as TW-15, TW-16 and TW-17 respectively.
4A	Recently Active UST associated with the Former Education Center Building	SB-40, SB-41, SB-42 and SB-43	Four soil borings drilled as proposed. Note that the soil borings were advanced to depth of the former tank grave, approximately 16 feet below grade.
4B	Active UST associated with the Visitor Center	SB-38 and SB-39	Two soil borings drilled (rather than the proposed four) due to the limited space surrounding the UST.
4C	Active UST associated with the Greenhouse	SB-31, SB-32 and SB-33	Three soil borings drilled (rather than the proposed four) due to the limited space surrounding the UST.
5B	Abandoned in Place UST associated with the Visitor Center	SB-37	One soil boring drilled (rather than the proposed four) due to the limited space surrounding the UST.
5C	Abandoned in Place UST associated with the Cottage	SB-34, SB-35 and SB-36	Three soil borings drilled (rather than the proposed four) due to the limited space surrounding the UST.
6	Former 1-Story Frame Barn	SB-19, SB-20 and SB-21	Three soil borings drilled as proposed. One temporary well point was installed in the boring SB-21 and identified as TW-21.
7	Historic Dumpsite/Trash Pile	SB-22	One soil boring drilled as proposed.
8	Suspected Location of former Insectarium	SB-23	One soil boring drilled as proposed.
9	Former Tree Surgery School	SB-24 and SB-25	Two hand auger borings completed as proposed.
10	Demonstration Area	SB-26	One hand auger boring completed as proposed
11	Parcel on South Side of Brookdale Road	SB-27, SB-28 and SB-29	Three soil borings installed as proposed. One temporary well point was installed in the boring SB-28 and identified as TW-28
12	The Main Visitor Parking Lot	SB-30	One soil boring drilled as proposed.

**Table 2**  
**Sample Summary Log**  
**Bartlett Arboretum**  
**Stamford, Connecticut**

<b>Sample Identification</b>	<b>Sample Area (Area Number)</b>	<b>Sample Depth (ftbg)</b>	<b>Date Collected</b>	<b>Laboratory Analyses</b>
<b>Soil Boring Samples (with depth)</b>				
SB-1(0-2)	AOC-1	0-2'	4/15/2011	Pesticides, CT RSR 15 Metals
SB-1(4-5)	AOC-1	4-5'	4/15/2011	Pesticides, CT RSR 15 Metals
SB-2(0-2)	AOC-1	0-2'	4/15/2011	Pesticides, CT RSR 15 Metals
SB-2(4-6)	AOC-1	4-6'	4/15/2011	Pesticides, CT RSR 15 Metals
SB-3(0-2)	AOC-1	0-2'	4/13/2011	Pesticides, CT RSR 15 Metals
SB-3(2-4)	AOC-1	2-4'	4/13/2011	Pesticides, CT RSR 15 Metals
SB-4(0-2)	AOC-1	0-2'	4/13/2011	Pesticides, CT RSR 15 Metals
SB-4(10-11)	AOC-1	10-11'	4/13/2011	Pesticides, CT RSR 15 Metals
SB-5(0-2)	AOC-1	0-2'	4/13/2011	Pesticides, CT RSR 15 Metals
SB-5(4-6)	AOC-1	4-6'	4/13/2011	Pesticides, CT RSR 15 Metals
SB-6(0-2)	AOC-1	0-2'	4/13/2011	Pesticides, CT RSR 15 Metals
SB-6(4-6)	AOC-1	4-6'	4/13/2011	Pesticides, CT RSR 15 Metals
SB-7(0-2)	AOC-1	0-2'	4/13/2011	Pesticides, CT RSR 15 Metals
SB-8(0-2)	AOC-1	0-2'	4/13/2011	Pesticides, CT RSR 15 Metals
SB-8(4-6)	AOC-1	4-6'	4/13/2011	Pesticides, CT RSR 15 Metals
SB-9(0-2)	AOC-1	0-2'	4/14/2011	Pesticides, CT RSR 15 Metals
SB-10(0-2)	AOC-1	0-2'	4/14/2011	Pesticides, CT RSR 15 Metals
SB-11(0-2)	AOC-2	0-2'	4/15/2011	Pesticides, CT RSR 15 Metals
SB-11(6-8)	AOC-2	6-8'	4/15/2011	Pesticides, CT RSR 15 Metals
SB-12(0-2)	AOC-2	0-2'	4/15/2011	Pesticides, CT RSR 15 Metals
SB-12(5-6)	AOC-2	5-6'	4/15/2011	Pesticides, CT RSR 15 Metals
SB-13(0-2)	AOC-2	0-2'	4/15/2011	Pesticides, CT RSR 15 Metals
SB-13(6-8)	AOC-2	6-8'	4/15/2011	Pesticides, CT RSR 15 Metals
SB-14(1-2)	AOC-2	1-2'	4/15/2011	Pesticides, CT RSR 15 Metals
SB-14(5-6)	AOC-2	5-6'	4/15/2011	Pesticides, CT RSR 15 Metals
SB-15(0-2)	AOC-3	0-2'	4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
SB-15(5-6)	AOC-3	5-6'	4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
SB-16(0-2)	AOC-3	0-2'	4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
SB-16(6-8)	AOC-3	6-8'	4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
SB-17(0-2)	AOC-3	0-2'	4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
SB-17(6-8)	AOC-3	6-8'	4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
SB-18(0-2)	AOC-3	0-2'	4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
SB-18(6-8)	AOC-3	6-8'	4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
SB-19(0-2)	AOC-6	0-2'	4/14/2011	Pesticides, CT RSR 15 Metals
SB-20(0-2)	AOC-6	0-2'	4/14/2011	Pesticides, CT RSR 15 Metals
SB-21(0-2)	AOC-6	0-2'	4/14/2011	Pesticides, CT RSR 15 Metals
SB-21(4-5)	AOC-6	4-5'	4/14/2011	Pesticides, CT RSR 15 Metals

**Table 2**  
**Sample Summary Log**  
**Bartlett Arboretum**  
**Stamford, Connecticut**

<b>Sample Identification</b>	<b>Sample Area (Area Number)</b>	<b>Sample Depth (ftbg)</b>	<b>Date Collected</b>	<b>Laboratory Analyses</b>
SB-22(0-2)	PAOC-7	0-2'	4/13/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
SB-22(4-6)	PAOC-7	4-6'	4/13/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
SB-23(0-2)	PAOC-8	0-2'	4/13/2011	Pesticides, CT RSR 15 Metals
SB-23(4-6)	PAOC-8	4-6'	4/13/2011	Pesticides, CT RSR 15 Metals
SB-24(0-2)	PAOC-9	0-2'	4/18/2011	Pesticides, CT RSR 15 Metals
SB-25(0-2)	PAOC-9	0-2'	4/18/2011	Pesticides, CT RSR 15 Metals
SB-26(0-2)	PAOC-10	0-2'	4/18/2011	Pesticides, CT RSR 15 Metals
SB-27(0-2)	PAOC-11	0-2'	4/14/2011	Pesticides, CT RSR 15 Metals
SB-27(4-6)	PAOC-11	4-6'	4/14/2011	Pesticides, CT RSR 15 Metals
SB-28(0-2)	PAOC-11	0-2'	4/14/2011	Pesticides, CT RSR 15 Metals
SB-29(0-2)	PAOC-11	0-2'	4/14/2011	Pesticides, CT RSR 15 Metals
SB-29(4-6)	PAOC-11	4-6'	4/14/2011	Pesticides, CT RSR 15 Metals
SB-30(0-2)	PAOC-12	0-2'	4/13/2011	Pesticides, CT RSR 15 Metals
SB-30(4-6)	PAOC-12	4-6'	4/13/2011	Pesticides, CT RSR 15 Metals
SB-31(4-6)	AOC-4C	4-6'	4/13/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
SB-32(4-6)	AOC-4C	4-6'	4/13/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
SB-33(4-6)	AOC-4C	4-6'	4/13/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
SB-34(6-8)	AOC-5C	6-8'	4/13/2011	Pesticides, VOCs, PAHS, ETPH
SB-35(6-8)	AOC-5C	6-8'	4/13/2011	Pesticides, VOCs, PAHS, ETPH
SB-36(6-8)	AOC-5C	6-8'	4/13/2011	Pesticides, VOCs, PAHS, ETPH
SB-37(6-8)	AOC-5B	6-8'	4/13/2011	Pesticides, VOCs, PAHS, ETPH
SB-38(6-8)	AOC-4B	6-8'	4/14/2011	Pesticides, VOCs, PAHS, ETPH
SB-39(6-8)	AOC-4B	6-8'	4/14/2011	Pesticides, VOCs, PAHS, ETPH
SB-40(15-16)	AOC-4A	15-16'	4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
SB-41(16-17)	AOC-4A	16-17'	4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
SB-42(15-16)	AOC-4A	15-16'	4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
SB-43(15-16)	AOC-4A	15-16'	4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
<b><u>QA/QC Samples</u></b>				
SB-39A(6-8)	Duplicate		4/14/2011	Same as SB-39(6-8)
SB-17A(6-8)	Duplicate		4/15/2011	Same as SB-17(6-8)
FB041311	Field Blank		4/13/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
FB041411	Field Blank		4/14/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
FB041511	Field Blank		4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
FB041811	Field Blank		4/18/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
SB041511	Solvent Blank		4/15/2011	VOCs
TB041511	Trip Blank		4/15/2011	VOCs

**Table 2**  
**Sample Summary Log**  
**Bartlett Arboretum**  
**Stamford, Connecticut**

Sample Identification	Sample Area	Date Collected	Laboratory Analyses
<b><u>Grab Ground Water Samples</u></b>			
TW-4	AOC-1	4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
TW-7	AOC-1	4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
TW-15	AOC-3	4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
TW-16	AOC-3	4/18/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
TW-17	AOC-3	4/18/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
TW-21	PAOC-6	4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
TW-28	PAOC-11	4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
<b><u>QA/QC Samples</u></b>			
TW-51	Duplicate Sample	4/15/2011	Same as TW-15
FB041311	Field Blank	4/13/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
FB041411	Field Blank	4/14/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
FB041511	Field Blank	4/15/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
FB041811	Field Blank	4/18/2011	Pesticides, CT RSR 15 Metals, VOCs, PAHS, ETPH
TB032703	Trip Blank	4/15/2011	VOCs

**NOTES:**

VOCs: Volatile Organic Analysis (Method 8260)

PAHs: Polynuclear Aromatic Hydrocarbons (Method 8082)

ETPH: Extractable Total Petroleum Hydrocarbons

**Table 3**  
**Phase II Soil Sample Analytical Results**  
**Bartlett Arboretum**  
**Stamford, CT**

Sample Designation: Sample Area Sample Interval (ft bgs): Sample Date:	Units	SB-1(0-2)	SB-1(4-5)	SB-2(0-2)	SB-2(4-6)	SB-3(0-2)	SB-3(2-4)	SB-4(0-2)	SB-4(10-11)	SB-5(0-2)	SB-5(4-6)	SB-6(0-2)	SB-6(4-6)	SB-7(0-2)	SB-8(0-2)	SB-8(4-6)	SB-9(0-2)	SB-10(0-2)	FB041311	FB041411	FB041511	FB041811	SB041511	CT RSR Criteria		
		AOC-1	AOC-1	AOC-1	AOC-1	AOC-1	AOC-1	AOC-1	AOC-1	AOC-1	AOC-1	AOC-1	Field Blank	Field Blank	Field Blank	Field Blank	Solvent Blank	RES DEC	GA PMC							
		0-2	4-5	0-2	4-6	0-2	2-4	0-2	10-11	0-2	4-6	0-2	4-6	0-2	0-2	0-2	4-6	0-2	0-2	--	--	--	--	--	--	--
<b>VOCs by EPA Method 8260</b>	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	--	--								
<b>PAHs by EPA Method 8270C</b>	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	NA										
<b>CT Extractable Total Petroleum Hydrocarbons</b>																										
ETPH	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	NA	500	500								
<b>Chlorinated Pesticides by EPA Method 8081B</b>																										
Chlordane	ug/kg	ND	ND	ND	ND		ND	ND	ND		ND		ND		ND	ND			ND	ND	ND	ND	NA	490	66	
Dieldrin	ug/kg					14																		38	7	
4,4-DDE	ug/kg					62				160		43		31				550E	<b>3,600E</b>					1,800	NE	
Delta-BHC	ug/kg					23																		97	NE	
4,4-DDT	ug/kg					34												820E	<b>6,000E</b>					1,800	NE	
4,4-DDD	ug/kg																	150	880					2,600	NE	
Heptachlor Epoxide	ug/kg					23																		67	20	
<b>SPLP Chlorinated Pesticides by EPA Method 8081B</b>																										
Dieldrin	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	--	10 x GWPC								
4,4-DDT	ug/L																							--	0.02	
<b>Total CT RSR 15 Metals by EPA Method 6010</b>																				ND	ND	ND	ND	NA		
Arsenic	mg/kg	4.1		2.3		9.2		6.9		<b>18</b>	2.8	<b>68</b>	2.9	6.2	8.3	2.6	4.9	<b>29</b>						10	--	
Barium	mg/kg	47	47	35	27	39	130	56	87	66	96	79	71	74	71	120	57	51						4,700	--	
Cadmium	mg/kg																							34	--	
Chromium	mg/kg	20	16	18	11	15	29	17	23	11	27	20	32	21	24	37	20	28						NE	--	
Copper	mg/kg	13	14	10	8.8	9.7	21	10	47	13	18	25	28	18	16	26	18	49						2,500	--	
Lead	mg/kg	14	3.9	7.2	2.9	36	7.9	23	10	72	13	240	11	42	42	12	50	89						400	--	
Nickel	mg/kg	14	11	11	6.9	6.6	20	11	20	6.9	19	15	22	15	13	20	15	15						1,400	--	
Vanadium	mg/kg	32	20	27	16	16	39	25	32	14	38	34	40	26	32	46	31	49						470	--	
Zinc	mg/kg	42	31	31	19	37	55	46	56	52	53	70	47	61	56	65	60	79						20,000	--	
<b>Total Mercury by EPA Method 7471</b>	mg/kg	ND	ND	ND	ND	1.6	ND	0.44	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20	--	
<b>SPLP CT RSR 15 Metals by EPA Method 6020A</b>																										
Arsenic	mg/L	NA	0.022	NA	ND	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	--	0.01								
Lead	mg/L									0.032														--	0.015	
Zinc	mg/L									0.034														--	5	

Notes:  
included in this table.  
2) mg/kg = milligrams per kilogram; mg/L = milligrams per liter  
GA PMC = GA Pollutant Mobility Criteria  
4) Total metals concentrations are comparable to the RES DEC only; SPLP concentrations are comparable to the GA PMC.  
5) NE = Not established; ND = the analyte was not detected above the method detection limit (MDL).  
6) Numbers in **BOLD** indicate the detected concentration exceeds the RES DEC. Numbers that are shaded indicate the detected concentration exceeds the GA PMC. Numbers which are bold and shaded indicate the detected concentration exceeds both the RES DEC and the GA PMC.  
7) "E" qualifier indicates the result is an estimated value, above the calibration range

Table 3, continued  
Phase II Soil Sample Analytical Results  
Bartlett Arboretum  
Stamford, CT

Sample Designation: Sample Area Sample Interval (ft bgs): Sample Date:	Units	SB-11(0-2)	SB-11(6-8)	SB-12(0-2)	SB-12(5-6)	SB-13(0-2)	SB-13(6-8)	SB-14(1-2)	SB-14(5-6)	SB-15(0-2)	SB-15(5-6)	SB-16(0-2)	SB-16(6-8)	SB-17(0-2)	SB-17A(0-2)	SB-17(6-8)	SB-18(0-2)	SB-18(6-8)	FB041311	FB041411	FB041511	FB041811	SB041511	CT RSR Criteria		
		AOC-2	AOC-3	AOC-3	AOC-3	AOC-3	AOC-3	AOC-3	AOC-3	AOC-3	AOC-3	Field Blank	Field Blank	Field Blank	Field Blank	Solvent Blank	RES DEC	GA PMC								
		0-2	6-8	0-2	5-6	0-2	6-8	1-2	5-6	0-2	0-2	5-6	6-8	6-8	0-2	0-2	6-8	0-2	6-8	--	--	--	--	--		
<b>VOCs by EPA Method 8260</b>	ug/kg	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--								
<b>PAHs by EPA Method 8270C</b>	ug/kg	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA										
<b>CT Extractable Total Petroleum Hydrocarbons</b>																										
ETPH	mg/kg	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	500	500								
<b>Chlorinated Pesticides by EPA Method 8081B</b>																										
Chlordane	ug/kg	ND	ND		ND	<b>320</b>	ND		ND	ND	ND	63	ND	ND	ND	ND		ND	ND	ND	ND	NA	490	66		
Dieldrin	ug/kg											53											38	7		
4,4-DDE	ug/kg			44		61		120															1,800	NE		
Delta-BHC	ug/kg			67																			97	NE		
4,4-DDT	ug/kg			36		320		100				44					43						1,800	NE		
4,4-DDD	ug/kg																						2,600	NE		
Heptachlor Epoxide	ug/kg																						67	20		
<b>SPLP Chlorinated Pesticides by EPA Method 8081B</b>																										
Dieldrin	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	--	10 x GWPC														
4,4-DDT	ug/L																						NA	--	0.02	
<b>Total CT RSR 15 Metals by EPA Method 6010</b>																				ND	ND	ND	ND	NA		
Arsenic	mg/kg			3.7		6.8		<b>13</b>		2.5	2.4	5.7		4.7	3.4	1.9	6.3						10	--		
Barium	mg/kg	32	80	46	41	66	52	35	32	47	65	61	84	67	61	96	30	55					4,700	--		
Cadmium	mg/kg																						34	--		
Chromium	mg/kg	11	23	15	15	24	16	17	10	20	18	26	23	29	22	32	18	18					NE	--		
Copper	mg/kg	12	15	28	17	20	12	13	11	8.3	16	14	20	14	9.3	15	23	13					2,500	--		
Lead	mg/kg	4.3	7.4	24	4.7	25	5.3	36	2.7	12	7	20	4.9	14	13	5.6	19	4.7					400	--		
Nickel	mg/kg	11	15	12	11	15	13	11	10	13	15	17	19	17	13	18	11	15					1,400	--		
Vanadium	mg/kg	17	31	30	20	29	21	25	14	31	31	39	24	43	33	26	28	23					470	--		
Zinc	mg/kg	29	42	56	30	52	37	43	21	39	40	55	45	49	42	34	38	45					20,000	--		
<b>Total Mercury by EPA Method 7471</b>	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	20	--														
<b>SPLP CT RSR 15 Metals by EPA Method 6020A</b>																										
Arsenic	mg/L	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	--	0.01							
Lead	mg/L																							--	0.015	
Zinc	mg/L																							--	5	

Notes:

- 1) included in this table.
- 2) mg/kg = milligrams per kilogram; mg/L = milligrams per liter
- GA PMC = GA Pollutant Mobility Criteria
- 4) Total metals concentrations are comparable to the RES DEC only; SPLP concentrations are comparable to the GA PMC.
- 5) NE = Not established; ND = the analyte was not detected above the method detection limit (MDL).
- 6) Numbers in **BOLD** indicate the detected concentration exceeds the RES DEC. Numbers that are shaded indicate the detected concentration exceeds the GA PMC. Numbers which are bold and shaded indicate the detected concentration exceeds both the RES DEC and the GA PMC.
- 7) "E" qualifier indicates the result is an estimated value, above the calibration range

Table 3, continued  
Phase II Soil Sample Analytical Results  
Bartlett Arboretum  
Stamford, CT

Sample Designation: Sample Area Sample Interval (ft bgs): Sample Date:	Units	SB-31(4-6)	SB-32(4-6)	SB-33(4-6)	SB-34(6-8)	SB-35(6-8)	SB-36(6-8)	SB-37(6-8)	SB-38(6-8)	SB-39(6-8)	SB-39A(6-8)	SB-40(15-16)	SB-41(16-17)	SB-42(15-16)	SB-43(15-16)	FB041311	FB041411	FB041511	FB041811	SB041511	CT RSR Criteria	
		AOC-4C	AOC-4C	AOC-4C	AOC-5C	AOC-5C	AOC-5C	AOC-5B	AOC-4B	AOC-4B	AOC-4B	AOC-4A	AOC-4A	AOC-4A	AOC-4A	Field Blank	Field Blank	Field Blank	Field Blank	Solvent Blank	RES DEC	GA PMC
		4-6	4-6	4-6	6-8	6-8	6-8	6-8	6-8	6-8	6-8	15-16	16-17	15-16	15-16	--	--	--	--	--	--	--
<b>VOCs by EPA Method 8260</b>	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--									
<b>PAHs by EPA Method 8270C</b>		NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA										
<b>CT Extractable Total Petroleum Hydrocarbons</b>																						
ETPH	mg/kg	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	500	500								
<b>Chlorinated Pesticides by EPA Method 8081B</b>		ND	ND	ND	ND	ND	ND	ND	ND	ND	NA											
Chlordane	ug/kg																				490	66
Dieldrin	ug/kg																				38	7
4,4-DDE	ug/kg																				1,800	NE
Delta-BHC	ug/kg																				97	NE
4,4-DDT	ug/kg																				1,800	NE
4,4-DDD	ug/kg																				2,600	NE
Heptachlor Epoxide	ug/kg																				67	20
<b>SPLP Chlorinated Pesticides by EPA Method 8081B</b>		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA											
Dieldrin	ug/L																				--	10 x GWPC
4,4-DDT	ug/L																				--	0.02
<b>Total CT RSR 15 Metals by EPA Method 6010</b>					NA	NA	NA		NA	NA	NA					ND	ND	ND	ND	NA		
Arsenic	mg/kg	1.8	2	6.4																	10	--
Barium	mg/kg	66	69	69				46				82	87	95	100						4,700	--
Cadmium	mg/kg																				34	--
Chromium	mg/kg	29	24	29				16				20	24	23	29						NE	--
Copper	mg/kg	16	16	17				12				14	15	14	19						2,500	--
Lead	mg/kg	10	8.3	31				3.5				5.1	6.8	4.8	7.5						400	--
Nickel	mg/kg	18	17	17				10				14	15	14	20						1,400	--
Vanadium	mg/kg	34	27	33				22				27	35	38	41						470	--
Zinc	mg/kg	49	170	50				34				40	43	43	59						20,000	--
<b>Total Mercury by EPA Method 7471</b>	mg/kg	ND	ND	ND	NA	NA	NA	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	20	--
<b>SPLP CT RSR 15 Metals by EPA Method 6020A</b>		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA											
Arsenic	mg/L																				--	0.01
Lead	mg/L																				--	0.015
Zinc	mg/L																				--	5

- Notes:  
1) included in this table.  
2) mg/kg = milligrams per kilogram; mg/L = milligrams per liter  
GA PMC = GA Pollutant Mobility Criteria  
4) Total metals concentrations are comparable to the RES DEC only; SPLP concentrations are comparable to the GA PMC.  
5) NE = Not established; ND = the analyte was not detected above the method detection limit (MDL).  
6) Numbers in **BOLD** indicate the detected concentration exceeds the RES DEC. Numbers that are shaded indicate the detected concentration exceeds the GA PMC. Numbers which are bold and shaded indicate the detected concentration exceeds both the RES DEC and the GA PMC.  
7) "E" qualifier indicates the result is an estimated value, above the calibration range

Table 3, continued  
Phase II Soil Sample Analytical Results  
Bartlett Arboretum  
Stamford, CT

Sample Designation: Sample Area Sample Interval (ft bgs): Sample Date:	Units	SB-19(0-2)	SB-20(0-2)	SB-21(0-2)	SB-21(4-5)	SB-22(0-2)	SB-22(4-6)	SB-23(0-2)	SB-23(4-6)	SB-24(0-2)	SB-25(0-2)	SB-26(0-2)	SB-27(0-2)	SB-27(4-6)	SB-28(0-2)	SB-29(0-2)	SB-29(4-6)	SB-30(0-2)	SB-30(4-6)	FB041311	FB041411	FB041511	FB041811	SB041511	CT RSR Criteria		
		AOC-6	AOC-6	AOC-6	AOC-6	PAOC-7	PAOC-7	PAOC-8	PAOC-8	PAOC-9	PAOC-9	PAOC-10	PAOC-11	PAOC-11	PAOC-11	PAOC-11	PAOC-11	PAOC-11	PAOC-12	PAOC-12	Field Blank	Field Blank	Field Blank	Field Blank	Solvent Blank	RES DEC	GA PMC
		0-2	0-2	0-2	4-5	0-2	4-6	0-2	4-6	0-2	0-2	0-2	0-2	4-6	0-2	0-2	0-2	4-6	0-2	4-6	--	--	--	--	--	4/15/2011	
<b>VOCs by EPA Method 8260</b>	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	--	--	
<b>PAHs by EPA Method 8270C</b>		NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	NA			
<b>CT Extractable Total Petroleum Hydrocarbons</b>																											
ETPH	mg/kg	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	NA	500	500	
<b>Chlorinated Pesticides by EPA Method 8081B</b>			ND		ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	NA			
Chlordane	ug/kg																								490	66	
Dieldrin	ug/kg																								38	7	
4,4-DDE	ug/kg	31								<b>6,600E</b>	<b>2,100</b>	140						25							1,800	NE	
Delta-BHC	ug/kg																								97	NE	
4,4-DDT	ug/kg	100		51						<b>15,000E</b>	<b>5,100E</b>	150						63	30						1,800	NE	
4,4-DDD	ug/kg									<b>3,200</b>	860														2,600	NE	
Heptachlor Epoxide	ug/kg																								67	20	
<b>SPLP Chlorinated Pesticides by EPA Method 8081B</b>																											
Dieldrin	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	0.002	ND	NA	NA	NA	NA	NA	NA	--	10 x GWPC								
4,4-DDT	ug/L									0.14															--	0.02	
<b>Total CT RSR 15 Metals by EPA Method 6010</b>																				ND	ND	ND	ND	NA			
Arsenic	mg/kg	7.4	<b>280</b>	4.5	5.6	4.9				5.9	9.1	7.5	<b>27</b>	1.7	7.4	<b>12</b>	2.9	6.5	3.2						10	--	
Barium	mg/kg	49	56	71	79	49	46	65	93	80	52	36	44	65	87	46	89	100	54						4,700	--	
Cadmium	mg/kg		1.5							1.3															34	--	
Chromium	mg/kg	22	30	30	30	17	17	25	24	39	25	23	20	27	27	17	24	25	20						NE	--	
Copper	mg/kg	15	18	15	17	15	9.5	15	11	27	16	22	28	16	22	23	20	26	11						2,500	--	
Lead	mg/kg	62	65	16	12	32	3.7	7.4	4.9	100	39	72	60	7.6	80	27	9.7	64	26						400	--	
Nickel	mg/kg	13	18	15	19	11	11	17	16	16	13	12	12	16	17	11	16	17	12						1,400	--	
Vanadium	mg/kg	38	40	41	43	25	20	30	30	36	37	45	36	39	36	27	33	36	26						470	--	
Zinc	mg/kg	71	460	82	83	55	27	44	54	120	54	49	54	43	110	47	47	98	52						20,000	--	
<b>Total Mercury by EPA Method 7471</b>	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20	--	
<b>SPLP CT RSR 15 Metals by EPA Method 6020A</b>																											
Arsenic	mg/L	NA	<b>0.26</b>	NA	NA	NA	NA	NA	NA		ND	NA		NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	--	0.01	
Lead	mg/L		0.014																						--	0.015	
Zinc	mg/L		0.11							0.042			0.033												--	5	

Notes:  
1) included in this table.  
2) mg/kg = milligrams per kilogram; mg/L = milligrams per liter  
GA PMC = GA Pollutant Mobility Criteria  
4) Total metals concentrations are comparable to the RES DEC only; SPLP concentrations are comparable to the GA PMC.  
5) NE = Not established; ND = the analyte was not detected above the method detection limit (MDL).  
6) Numbers in **BOLD** indicate the detected concentration exceeds the RES DEC. Numbers that are shaded indicate the detected concentration exceeds the GA PMC. Numbers which are bold and shaded indicate the detected concentration exceeds both the RES DEC and the GA PMC.  
7) "E" qualifier indicates the result is an estimated value, above the calibration range

**Table 4**  
**Ground Water Sample Analytical Results**  
**Phase II Subsurface Investigation**  
**Bartlett Arboretum , Stamford, Connecticut**  
**TRC Project No. 176301.000000.000000**

Sample ID: Sample Date: PAOC: Screened Interval (ftbg):	TW-4	TW-7	TW-15	TW-51	TW-16	TW-17	TW-21	TW-28	FB041311	FB041411	FB041511	FB041811	TB041511	GWPC	R GWVC	I/C GWVC
	4/15/2011 1 10-15	4/15/2011 1 5-10	4/15/2011 3 5-10	4/15/2011 3 5-10	4/18/2011 3 6-11	4/18/2011 3 5-10	4/15/2011 6 5-10	4/15/2011 11 4-9	4/13/2011 -- Field Blank	4/14/2011 -- Field Blank	4/15/2011 -- Field Blank	4/18/2011 -- Field Blank	4/15/2011 -- Trip Blank			
<b>Volatile Organic Compounds - ug/l</b> <b>Method 8260</b> Tetrahydrofuran	NA	NA	190	190	ND	ND	NA	NA	ND	ND	ND	ND	ND	NE	NE	NE
<b>PAHs by EPA method 8270C - ug/l</b> <b>Method 8270</b>	NA	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	--	--	--
<b>Extractable Total Petroleum Hydrocarbons - mg/l</b> <b>CTDEP-Approved Method</b>	NA	NA	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NE	NE	NE
<b>Chlorinated Pesticides by EPA method 8081B - ug/l</b> <b>Method 8081</b>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	--	--	--
<b>Total CT RSR 15 Metals - mg/l</b> <b>Methods 6010/7471</b>									ND	ND	ND	ND	NA			
Arsenic	<b>0.011</b>	0.01			<b>0.026</b>		<b>0.026</b>	<b>0.026</b>						0.01	NE	NE
Barium	<b>1.3</b>	0.5	0.41	0.41	<b>1.2</b>	0.093	0.78	0.95						1	NE	NE
Chromium	<b>0.34</b>	<b>0.11</b>	0.083	0.083	<b>0.35</b>		<b>0.27</b>	<b>0.18</b>						0.1	NE	NE
Copper	0.42	0.15	0.11	0.11	0.38		0.24	0.16						1.3	NE	NE
Lead	<b>0.12</b>	<b>0.075</b>	<b>0.04</b>	<b>0.04</b>	<b>0.25</b>	0.013	<b>0.076</b>	<b>0.12</b>						0.015	NE	NE
Nickel	<b>0.16</b>	0.074	0.076	0.075	<b>0.28</b>		<b>0.19</b>	<b>0.14</b>						0.1	NE	NE
Zinc	0.5	0.19	0.48	0.49	0.62	0.059	0.64	0.34						5	NE	NE
Vanadium	<b>0.28</b>	<b>0.13</b>	<b>0.11</b>	<b>0.11</b>	<b>0.35</b>		<b>0.23</b>	<b>0.25</b>						0.05	NE	NE
<b>Dissolved CT RSR 15 Metals - mg/l</b> <b>Methods 6010/7471</b>									ND	ND	ND	ND	NA			
Barium	0.058	0.052	0.18	0.18	0.082			0.063						1	NE	NE
Zinc							0.037							5	NE	NE

**NOTES:**  
ND - Not Detected  
NA - Not Analyzed  
NE - Not Established  
ftbg - feet below grade

Underlined value indicates an exceedance of the Surface Water Protection Criteria (SWPC)  
Shaded value indicates an exceedance of the Ground Water Volatilization Criteria (GWVC)  
**Bold** value indicates an exceedance of the Ground Water Protection Criteria (GWPC)

APPENDIX A  
Soil Boring Logs



21 Griffin Road North  
 Windsor, CT 06095  
 Telephone: 860-298-9692  
 Fax: 860-298-6399

BORING NUMBER: **SB-1**  
 Page 1 of 1

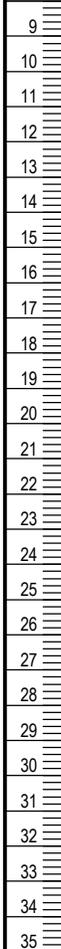
PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/15/11</b>	Date Completed: <b>4/15/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	▼ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						medium brown, SILT, little fine to medium sand, trace coarse sand to fine gravel, dry, no odor, no stain				
2	UD-0-4		4.0	2.5		medium brown, SILT, some fine to medium sand, little fine gravel, dry, no odor, no stain				
3										
4										
5						light to medium brown, fine SAND, some medium to coarse sand, little fine to coarse gravel, dry, no odor, no stain				
6	UD-4-8		4.0	1.0						
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ





21 Griffin Road North  
 Windsor, CT 06095  
 Telephone: 860-298-9692  
 Fax: 860-298-6399

BORING NUMBER: **SB-2**  
 Page 1 of 1

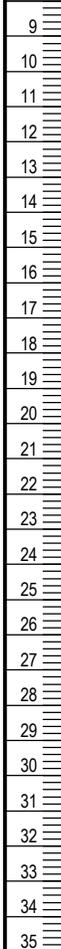
PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/15/11</b>	Date Completed: <b>4/15/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	▼ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						medium brown, SILT, little fine to medium sand, trace fine gravel, dry, no odor, no stain				
2	UD-0-4		4.0	2.8		medium brown, fine SAND and SILT, dry, no odor, no stain				
3										
4										
5						medium brown, fine SAND and SILT, trace medium to coarse sand, dry, no odor, no stain. Refusal at 8ft below grade				
6	UD-4-8		4.0	2.9						
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ





21 Griffin Road North  
 Windsor, CT 06095  
 Telephone: 860-298-9692  
 Fax: 860-298-6399

BORING NUMBER: **SB-3**  
 Page 1 of 1

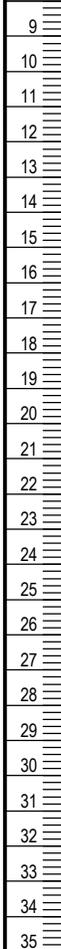
PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/13/11</b>	Date Completed: <b>4/13/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>
Client: <b>City of Stamford</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>			
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	2.5		light brown, fine SAND and SILT, little fine gravel, damp, no odor, no stain				
3										
4										
5						light brown, fine SAND and SILT, little fine gravel, damp, no odor, no stain				
6	UD-4-8		4.0	4.0						
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ





21 Griffin Road North  
 Windsor, CT 06095  
 Telephone: 860-298-9692  
 Fax: 860-298-6399

BORING NUMBER: **SB-4**  
 Page 1 of 1

PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>16</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/13/11</b>	Date Completed: <b>4/13/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1					Woodchips					
2	UD-0-4		4.0	2.9		medium brown, SILT, some fine sand, trace fine gravel, dry, no odor, no stain				
3						light brown, fine to medium SAND, some silt, little fine gravel, damp, no odor, no stain				
4										
5						light brown, fine to medium SAND, little silt, little fine gravel, dry, no odor, no stain				
6	UD-4-8		4.0	4.0						
7										
8										
9						light brown, fine to medium SAND, little silt, little fine gravel, dry, no odor, no stain				
10	UD-8-12		4.0	4.0						
11										
12										
13						medium brown, fine to medium SAND, little silt, little coarse sand, trace fine gravel, wet.				
14	UD-12-16		4.0	3.0		Refusal at 15ft below grade				
15										
16										

Bottom of borehole at 16.0 feet.



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BORING NUMBER: **SB-5**  
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PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/13/11</b>	Date Completed: <b>4/13/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	2.4		light brown, SILT, little fine sand, trace fine gravel, dry, no odor, no stain				
3										
4										
5						light brown, SILT, some fine sand, trace fine gravel, damp, no odor, no stain				
6	UD-4-8		4.0	4.0						
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD U.S.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ

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BORING NUMBER: **SB-6**  
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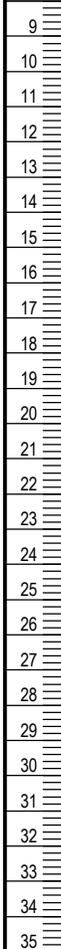
PROJECT INFORMATION	BORING INFORMATION
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b> Hole Diameter: <b>2</b>
Project Location: <b>Stamford</b>	Date Started: <b>4/13/11</b> Date Completed: <b>4/13/11</b>
Project Number: <b>176301.0000.0000</b>	Coordinate System: _____
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b> East: <b>Not Surveyed</b>
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum: _____ Ground Elevation: <b>Not Surveyed</b>
Checked By: _____	

DRILLING INFORMATION	GROUND WATER OBSERVATIONS		
Drilling Contractor: <b>Haz-Prob</b>	MEASUREMENT	▼ At Time of Drilling	▼ At End of Drilling
Driller(s): <b>Frank &amp; Jeremy</b>	DATE		
Drilling Method: <b>Geoprobe</b>	DEPTH (ft.bgs.)		
Equipment/Model: _____	REFERENCE		
Sampler: <b>4' macro core</b>	STABILIZATION		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	2.9		dark brown, SILT, trace fine gravel, dry, no odor, no stain				
3						medium brown, SILT, some fine sand, trace fine gravel, damp, no odor, no stain				
4										
5	UD-4-8		4.0	3.6		medium brown, SILT, some fine sand, trace fine gravel, damp, no odor, no stain				
6						light brown, fine SAND and SILT, some fine gravel, damp, no odor, no stain				
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD U.S.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ







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BORING NUMBER: **SB-8**  
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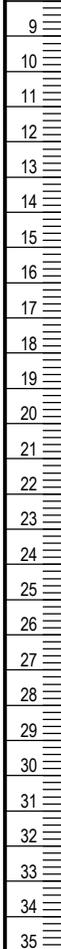
PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/13/11</b>	Date Completed: <b>4/13/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>
Client: <b>City of Stamford</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Checked By:		

DRILLING INFORMATION		GROUND WATER OBSERVATIONS		
Drilling Contractor: <b>Haz-Prob</b>	MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>	DATE			
Drilling Method: <b>Geoprobe</b>	DEPTH (ft.bgs.)			
Equipment/Model:	REFERENCE			
Sampler: <b>4' macro core</b>	STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1					Topsoil					
2	UD-0-4		4.0	2.3	Rock					
3					light brown, SILT, some fine sand, damp, no odor, no stain					
4										
5					light brown, SILT, some fine sand, damp, no odor, no stain					
6	UD-4-8		4.0	4.0	medium brown, fine to medium SAND, some silt, trace fine gravel, damp, no odor, no stain					
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ







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BORING NUMBER: **SB-10**  
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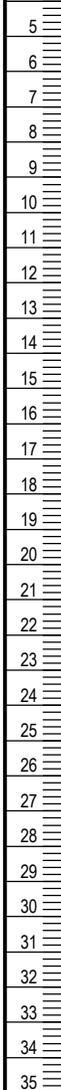
PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>4</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/13/11</b>	Date Completed: <b>4/13/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	▼ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	1.7		medium brown, SILT and fine SAND, little fine gravel, damp, no odor, no stain. Refusal at 2ft below grade. Offsets yield same result				
3										
4										

Bottom of borehole at 4.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ





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BORING NUMBER: **SB-11**  
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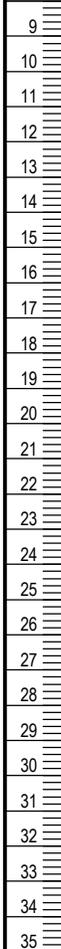
PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/15/11</b>	Date Completed: <b>4/15/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>
Client: <b>City of Stamford</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>			
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>	MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling	
Driller(s): <b>Frank &amp; Jeremy</b>	DATE				
Drilling Method: <b>Geoprobe</b>	DEPTH (ft.bgs.)				
Equipment/Model:	REFERENCE				
Sampler: <b>4' macro core</b>	STABILIZATION				

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						medium brown, SILT, trace fine to medium sand and fine gravel, dry, no odor, no stain				
2	UD-0-4		4.0	2.3		medium brown, fine SAND, little medium to coarse sand, dry, no odor, no stain				
3										
4										
5						medium brown, fine SAND, little medium to coarse sand, dry, no odor, no stain				
6	UD-4-8		4.0	4.0		medium brown, fine SAND, little medium to coarse sand, dry, no odor, no stain				
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ





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BORING NUMBER: **SB-12**  
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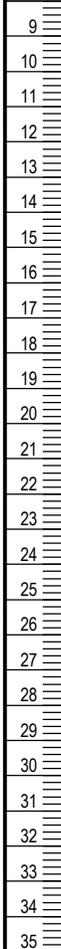
PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/15/11</b>	Date Completed: <b>4/15/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>
Client: <b>City of Stamford</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Checked By:		

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>	Driller(s): <b>Frank &amp; Jeremy</b>	MEASUREMENT	▼ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
Drilling Method: <b>Geoprobe</b>	Equipment/Model:	DATE			
Sampler: <b>4' macro core</b>		DEPTH (ft.bgs.)			
		REFERENCE			
		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						dark brown, SILT, trace fine to medium sand, dry, no odor, no stain				
2	UD-0-4		4.0	1.4		light brown, fine SAND and SILT, dry, no odor, no stain				
3										
4										
5						medium brown, fine SAND, some silt, little medium to coarse sand, trace fine to coarse gravel, dry, no odor, no stain. Refusal at 6ft below grade				
6	UD-4-8		4.0	2.0						
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ





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BORING NUMBER: **SB-13**  
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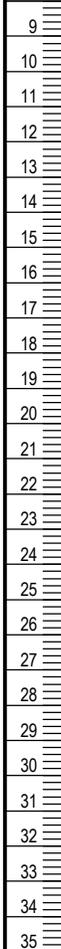
PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/15/11</b>	Date Completed: <b>4/15/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1	UD-0-4	[Red]	4.0	2.5	[Red]	medium brown, SILT, little fine to coarse sand, trace fine to coarse gravel, dry, no odor, no stain				
2										
3										
4	UD-4-8	[Red]	4.0	3.2	[Red]	medium brown, fine SAND, some silt, little fine to medium sand, trace coarse gravel				
5										
6						medium brown, fine SAND, little medium to coarse sand, trace fine to coarse gravel, dry, no odor, no stain				
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ





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BORING NUMBER: **SB-14**  
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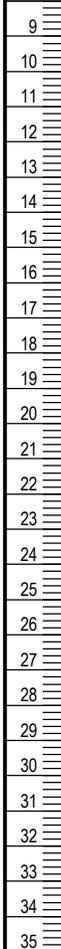
PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/15/11</b>	Date Completed: <b>4/15/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Wood/Cobbles, dry, no odor, no stain				
2	UD-0-4		4.0	2.7		medium brown, SILT, little fine to coarse sand, trace fine gravel, dry, no odor, no stain				
3										
4										
5						medium brown, fine SAND, little medium to coarse sand, trace fine to coarse gravel, dry, no odor, no stain				
6	UD-4-8		4.0	2.1						
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ





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BORING NUMBER: **SB-15**  
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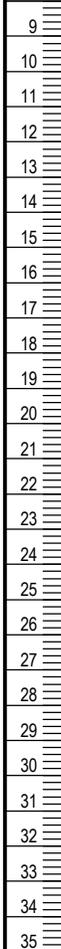
PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/15/11</b>	Date Completed: <b>4/15/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1	UD-0-4	[Redacted]	4.0	2.5	[Orange Stripes]	medium orange brown, SILT, little fine sand, trace medium to coarse sand and fine gravel, dry, no odor, no stain				
2										
3										
4										
5	UD-4-8	[Redacted]	4.0	2.0	[Redacted]	medium brown, fine to medium SAND, some silt, little coarse sand and fine gravel, damp at bottom, no odor, no stain				
6						medium brown, SILT, damp, no odor, no stain				
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ









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BORING NUMBER: **SB-18**  
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PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>12</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/15/11</b>	Date Completed: <b>4/15/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						medium brown, SILT, trace fine sand, cobble at 0.9', dry, no odor, no stain				
2	UD-0-4		4.0	2.3		medium brown, SILT, little fine sand, trace fine gravel, dry, no odor, no stain				
3										
4										
5						light brown, SILT, little fine sand, trace medium to coarse sand, dry, no odor, no stain				
6	UD-4-8		4.0	3.4		light brown, fine SAND, little medium to coarse sand, trace fine to coarse gravel, dry, no odor, no stain				
7										
8										
9						medium brown, SILT, little fine to coarse sand, dry, no odor, no stain				
10	UD-8-12		4.0	0.5						
11										
12										

Bottom of borehole at 12.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ

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BORING NUMBER: **SB-19**  
 Page 1 of 1

PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>4</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/14/11</b>	Date Completed: <b>4/14/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	▼ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	1.7		dark brown, SILT, trace fine sand, dry, no odor, no stain. Refusal at 2ft below grade. Several offsets yeild same result				
3										
4										

Bottom of borehole at 4.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD U.S.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ

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BORING NUMBER: **SB-20**  
 Page 1 of 1

PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>4</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/14/11</b>	Date Completed: <b>4/14/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	▼ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	1.0		medium brown, SILT and fine SAND, dry, no odor, no stain				
3										
4										

Bottom of borehole at 4.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ

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BORING NUMBER: **SB-22**  
 Page 1 of 1

PROJECT INFORMATION	BORING INFORMATION
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b> Hole Diameter: <b>2</b>
Project Location: <b>Stamford</b>	Date Started: <b>4/13/11</b> Date Completed: <b>4/13/11</b>
Project Number: <b>176301.0000.0000</b>	Coordinate System: _____
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b> East: <b>Not Surveyed</b>
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum: _____ Ground Elevation: <b>Not Surveyed</b>
Checked By: _____	

DRILLING INFORMATION	GROUND WATER OBSERVATIONS		
Drilling Contractor: <b>Haz-Prob</b>	MEASUREMENT	▼ At Time of Drilling	▼ At End of Drilling
Driller(s): <b>Frank &amp; Jeremy</b>	DATE		
Drilling Method: <b>Geoprobe</b>	DEPTH (ft.bgs.)		
Equipment/Model: _____	REFERENCE		
Sampler: <b>4' macro core</b>	STABILIZATION		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						light brown, fine to medium SAND, some silt, trace fine gravel, damp, no odor, no stain				
2	UD-0-4		4.0	3.5		light brown, SILT, litte fine sand, trace fine gravel, damp, no odor, no stain				
3										
4						Topsoil				
5						light brown, SILT, some fine gravel, damp, no odor, no stain				
6	UD-4-8		4.0	3.0		light brown, fine to medium SAND, trace fine gravel, damp, no odor, no stain				
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ



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BORING NUMBER: **SB-23**  
 Page 1 of 1

PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/13/11</b>	Date Completed: <b>4/13/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	2.4		light brown, SILT, some medium gravel, little fine sand, damp, no odor, no stain				
3										
4										
5						light brown, fine SAND, little silt, little fine gravel, dry, no odor, no stain				
6	UD-4-8		4.0	4.0						
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD U.S.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ



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BORING NUMBER: **SB-27**  
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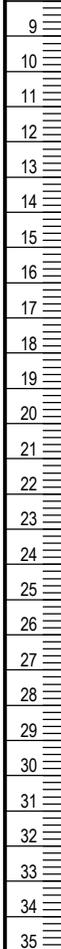
PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/14/11</b>	Date Completed: <b>4/14/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>
Client: <b>City of Stamford</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Checked By:		

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>	MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling	
Driller(s): <b>Frank &amp; Jeremy</b>	DATE				
Drilling Method: <b>Geoprobe</b>	DEPTH (ft.bgs.)				
Equipment/Model:	REFERENCE				
Sampler: <b>4' macro core</b>	STABILIZATION				

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	2.3		light brown, SILT and fine SAND, trace fine gravel, damp, no odor, no stain				
3										
4										
5						light brown, fine SAND, some silt, trace fine gravel, damp, no odor, no stain				
6	UD-4-8		4.0	3.5						
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ





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BORING NUMBER: **SB-28**  
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PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/14/11</b>	Date Completed: <b>4/14/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>
Client: <b>City of Stamford</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>			
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>	MEASUREMENT	<input checked="" type="checkbox"/> At Time of Drilling	<input checked="" type="checkbox"/> At End of Drilling	<input checked="" type="checkbox"/> After Drilling	
Driller(s): <b>Frank &amp; Jeremy</b>	DATE				
Drilling Method: <b>Geoprobe</b>	DEPTH (ft.bgs.)				
Equipment/Model:	REFERENCE				
Sampler: <b>4' macro core</b>	STABILIZATION				

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	2.7		dark brown, SILT, trace fine sand, damp, no odor, no stain				
3						medium brown, SILT and fine SAND, wet, no odor, no stain				
4										
5	UD-4-8		4.0	4.0		medium brown, SILT and fine SAND, wet, no odor, no stain				
6										
7										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ

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BORING NUMBER: **SB-29**  
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PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/14/11</b>	Date Completed: <b>4/14/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	2.6		medium brown, SILT, little fine sand, trace fine gravel				
3						light brown, fine SAND and SILT, damp, no odor, no stain				
4	UD-4-8		4.0	4.0		light brown, fine SAND and SILT, little fine gravel, damp, no odor, no stain				
5										
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8						Bottom of borehole at 8.0 feet.				
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SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ



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BORING NUMBER: **SB-30**  
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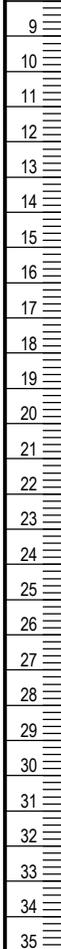
PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/13/11</b>	Date Completed: <b>4/13/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	1.8		Pulverized Rock				
3						dark brown, SILT, trace fine gravel, damp, no odor, no stain				
4						Rock				
5						light brown, SILT, damp, no odor, no stain				
6	UD-4-8		4.0	3.0		light brown, SILT, trace fine sand, damp, no odor, no stain				
7						Rock. Refusal at 7 feet below grade				

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ





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BORING NUMBER: **SB-31**  
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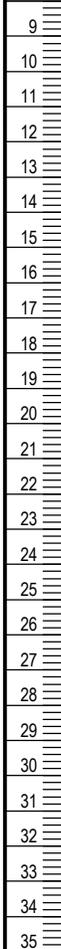
PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/13/11</b>	Date Completed: <b>4/13/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	2.4		light brown, fine to medium SAND, some silt, trace fine gravel, damp, no odor, no stain				
3										
4										
5						light brown, fine to medium SAND, some silt, trace fine gravel, saturated, no odor, no stain				
6	UD-4-8		4.0	2.0						
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ





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BORING NUMBER: **SB-32**  
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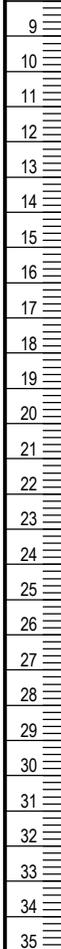
PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/13/11</b>	Date Completed: <b>4/13/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>
Client: <b>City of Stamford</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Checked By:		

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>	Driller(s): <b>Frank &amp; Jeremy</b>	MEASUREMENT	▼ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
Drilling Method: <b>Geoprobe</b>	Equipment/Model:	DATE			
Sampler: <b>4' macro core</b>		DEPTH (ft.bgs.)			
		REFERENCE			
		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	1.7		light brown, fine SAND and SILT, damp, no odor, no stain				
3										
4										
5						light brown, fine SAND and SILT, damp, no odor, no stain				
6	UD-4-8		4.0	2.0		light brown, fine to medium SAND, little silt, trace fine gravel, damp, no odor, no stain				
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ





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BORING NUMBER: **SB-33**  
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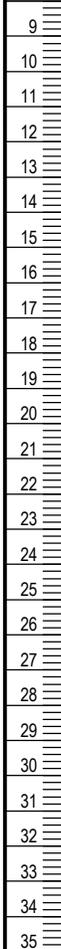
PROJECT INFORMATION	BORING INFORMATION
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b> Hole Diameter: <b>2</b>
Project Location: <b>Stamford</b>	Date Started: <b>4/13/11</b> Date Completed: <b>4/13/11</b>
Project Number: <b>176301.0000.0000</b>	Coordinate System:
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b> East: <b>Not Surveyed</b>
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum: Ground Elevation: <b>Not Surveyed</b>
Checked By:	

DRILLING INFORMATION	GROUND WATER OBSERVATIONS		
Drilling Contractor: <b>Haz-Prob</b>	MEASUREMENT	▼ At Time of Drilling	▼ At End of Drilling
Driller(s): <b>Frank &amp; Jeremy</b>	DATE		▼ After Drilling
Drilling Method: <b>Geoprobe</b>	DEPTH (ft.bgs.)		
Equipment/Model:	REFERENCE		
Sampler: <b>4' macro core</b>	STABILIZATION		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	2.3		light brown, SILT, trace fine sand, trace fine gravel, damp, no odor, no stain				
3										
4										
5						light brown, SILT, trace fine sand, trace fine gravel, damp, no odor, no stain				
6	UD-4-8		4.0	2.0						
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ





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BORING NUMBER: **SB-34**  
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PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/13/11</b>	Date Completed: <b>4/13/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	1.5		medium brown, SILT, little fine sand, trace fine gravel, dry, no odor, no stain				
3										
4										
5						medium brown, SILT, little fine to medium sand, trace fine gravel, dry, no odor, no stain				
6	UD-4-8		4.0	3.5						
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ

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BORING NUMBER: **SB-35**  
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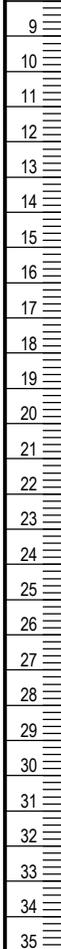
PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/13/11</b>	Date Completed: <b>4/13/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	2.8		medium brown, SILT, some fine sand				
3										
4										
5						light brown, SILT, little fine sand, trace fine gravel, dry, no odor, no stain				
6	UD-4-8		4.0	4.0						
7						light brown gray, SILT, little fine sand, trace fine gravel, no odor, no stain				
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ





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BORING NUMBER: **SB-36**  
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PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/13/11</b>	Date Completed: <b>4/13/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>
Client: <b>City of Stamford</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>			
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS		
Drilling Contractor: <b>Haz-Prob</b>	MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>	DATE			
Drilling Method: <b>Geoprobe</b>	DEPTH (ft.bgs.)			
Equipment/Model:	REFERENCE			
Sampler: <b>4' macro core</b>	STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil, wood fragments				
2	UD-0-4		4.0	2.7		light brown, SILT, little fine sand, trace fine gravel, dry, no odor, no stain				
3										
4										
5						light brown, fine SAND and SILT, little fine gravel, dry, no odor, no stain				
6	UD-4-8		4.0	3.5						
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD U.S.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ



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BORING NUMBER: **SB-37**  
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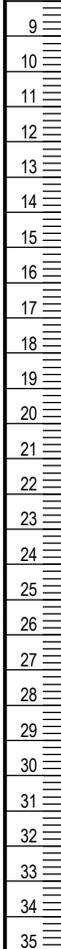
PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/13/11</b>	Date Completed: <b>4/13/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	2.0		medium brown, SILT, little fine sand, trace fine gravel, damp, no odor, no stain				
3										
4										
5						medium brown, SILT, little fine sand, trace fine gravel, damp, no odor, no stain				
6	UD-4-8		4.0	3.5		light brown, fine SAND, some silt, little medium sand, trace fine gravel, damp, no odor, no stain				
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ





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BORING NUMBER: **SB-38**  
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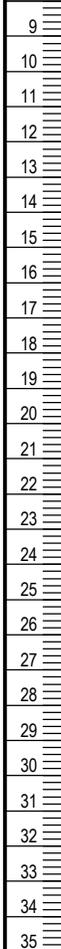
PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/14/11</b>	Date Completed: <b>4/14/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	2.3		light brown, fine SAND, some silt, trace fine gravel, no odor, no stain				
3						Peastone				
4										
5	UD-4-8		4.0	3.6		Peastone				
6										
7										
8						light brown, fine SAND and SILT, trace fine gravel, dry, no odor, no stain				

Bottom of borehole at 8.0 feet.

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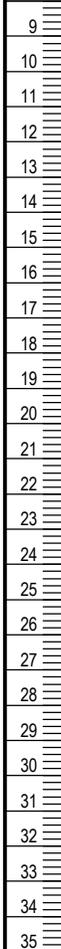
PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>8</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/14/11</b>	Date Completed: <b>4/14/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>
Client: <b>City of Stamford</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>			
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>	MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling	
Driller(s): <b>Frank &amp; Jeremy</b>	DATE				
Drilling Method: <b>Geoprobe</b>	DEPTH (ft.bgs.)				
Equipment/Model:	REFERENCE				
Sampler: <b>4' macro core</b>	STABILIZATION				

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Topsoil				
2	UD-0-4		4.0	2.5		light brown, fine SAND and SILT, trace peastone, damp, no odor, no stain				
3										
4										
5						light brown, fine SAND and SILT, trace fine gravel, damp, no odor, no stain				
6	UD-4-8		4.0	3.2						
7										
8										

Bottom of borehole at 8.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD US.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ





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BORING NUMBER: **SB-40**  
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PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>16</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/15/11</b>	Date Completed: <b>4/15/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

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DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)
							20 40 60 80
1						Fill	
2	UD-0-4		4.0				
3							
4							
5						Fill	
6	UD-4-8		4.0				
7							
8							
9	UD-8-12		2.0			Fill	
10							
11	UD-10-12		2.0	2.0		medium brown, SILT, little fine to coarse sand, trace fine to coarse gravel, dry, no odor, no stain	
12							
13						medium brown, fine SAND and SILT, some medium to coarse sand, little fine to coarse gravel, dry, no odor, no stain. Refusal at 16ft below grade	
14	UD-12-16		4.0	4.0			
15							
16							

Bottom of borehole at 16.0 feet.



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BORING NUMBER: **SB-41**  
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PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>20</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/15/11</b>	Date Completed: <b>4/15/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>
Client: <b>City of Stamford</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>			
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>	MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling	
Driller(s): <b>Frank &amp; Jeremy</b>	DATE				
Drilling Method: <b>Geoprobe</b>	DEPTH (ft.bgs.)				
Equipment/Model:	REFERENCE				
Sampler: <b>4' macro core</b>	STABILIZATION				

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Fill				
2	UD-0-4		4.0			Fill				
3										
4										
5						Fill				
6	UD-4-8		4.0							
7										
8										
9	UD-8-10		2.0			Fill				
10										
11	UD-10-12		2.0	2.0		medium brown, fine SAND, some silt, little medium to coarse sand, dry, no odor, no stain				
12										
13						medium brown, fine SAND, some silt, little medium to coarse sand, dry, no odor, no stain				
14	UD-12-16		4.0	4.0						
15										
16										
17						medium brown, fine SAND and SILT, trace medium to coarse sand and fine gravel, dry, no odor, no stain				
18	UD-16-20		4.0	1.0						
19										
20										

Bottom of borehole at 20.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD U.S.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ



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BORING NUMBER: **SB-42**  
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PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>16</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/15/11</b>	Date Completed: <b>4/15/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:		
Client: <b>City of Stamford</b>	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>		MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling
Driller(s): <b>Frank &amp; Jeremy</b>		DATE			
Drilling Method: <b>Geoprobe</b>		DEPTH (ft.bgs.)			
Equipment/Model:		REFERENCE			
Sampler: <b>4' macro core</b>		STABILIZATION			

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)			
							20	40	60	80
1						Fill				
2	UD-0-4		4.0							
3										
4										
5						Fill				
6	UD-4-8		4.0							
7										
8										
9	UD-8-10		2.0			Fill				
10										
11	UD-10-12		2.0	2.0		medium brown, fine SAND and SILT, little medium to coarse sand and fine gravel, dry, no odor, no stain				
12										
13						medium brown, fine to medium SAND, some silt, little coarse sand to fine gravel, dry, no odor, no stain. Refusal at 16ft				
14	UD-12-16		4.0	4.0						
15										
16										

Bottom of borehole at 16.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD U.S.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ



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BORING NUMBER: **SB-43**  
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PROJECT INFORMATION		BORING INFORMATION	
Project Name: <b>Bartlett Arboretum Phase II</b>	Boring Depth: <b>16</b>	Hole Diameter: <b>2</b>	
Project Location: <b>Stamford</b>	Date Started: <b>4/15/11</b>	Date Completed: <b>4/15/11</b>	
Project Number: <b>176301.0000.0000</b>	Coordinate System:	North: <b>Not Surveyed</b>	East: <b>Not Surveyed</b>
Client: <b>City of Stamford</b>	Vertical Datum:	Ground Elevation: <b>Not Surveyed</b>	
TRC Eng./Geol: <b>Chris Lindahl</b>			
Checked By:			

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor: <b>Haz-Prob</b>	MEASUREMENT	∇ At Time of Drilling	∇ At End of Drilling	∇ After Drilling	
Driller(s): <b>Frank &amp; Jeremy</b>	DATE				
Drilling Method: <b>Geoprobe</b>	DEPTH (ft.bgs.)				
Equipment/Model:	REFERENCE				
Sampler: <b>4' macro core</b>	STABILIZATION				

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)
							20 40 60 80
1						Fill	
2	UD-0-4		4.0				
3							
4							
5						Fill	
6	UD-4-8		4.0				
7							
8							
9	UD-8-10		2.0			Fill	
10							
11	UD-10-12		2.0	2.0		medium brown, fine to medium SAND, some silt, little coarse sand and fine gravel, dry, no odor, no stain	
12							
13						medium brown, fine SAND and SILT, some medium to coarse sand, trace fine to coarse gravel, dry, no odor, no stain. Refusal at 16ft	
14	UD-12-16		4.0	4.0			
15							
16							

Bottom of borehole at 16.0 feet.

SOIL BORING / WELL COMPLETION - TRC-STD U.S.GDT - 7/1/11 10:13 - H:\HAZMAT\GINT\PROJECTS\BARTLETT ARBORETUM\BARTLETT ARBORETUM PHASE II.GPJ

## APPENDIX B

### Laboratory Analytical Data



80 Lupes Drive  
Stratford, CT 06615

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

Client: Mr. Chris Lindahl  
TRC Environmental Consultants  
21 Griffin Rd., North  
Windsor, CT 06095

# Analytical Report

## CET # 11040665

**Report Date: May 9, 2011**  
**Client Project: Bartlett Arboretum, Stamford**

Connecticut Laboratory Certification PH 0116  
Massachusetts Laboratory Certification M-CT903  
Rhode Island Certification 199



New York Certification 11982  
Florida Laboratory Certification E871064

CET#: 11040665

Project: Bartlett Arboretum, Stamford

**SAMPLE SUMMARY:**

This report contains analytical data associated with the following samples only:

CETID	Client Sample ID	Matrix	Collection Date	Collection Time	Receipt Date
AE68478	SB-6 0-2	Soil	4/13/2011	13:20	04/14/2011
AE68479	SB-5 0-2	Soil	4/13/2011	13:35	04/14/2011
AE68480	SB-14 1-2	Soil	4/15/2011	11:30	04/18/2011
AE68481	SB-10 0-2	Soil	4/14/2011	11:40	04/18/2011
AE68482	SB-29 0-2	Soil	4/14/2011	10:00	04/18/2011
AE68483	SB-20 0-2	Soil	4/14/2011	11:05	04/18/2011
AE68484	SB-27 0-2	Soil	4/14/2011	10:50	04/18/2011
AE68485	SB-25 0-2	Soil	4/18/2011	11:45	04/18/2011
AE68486	SB-24 0-2	Soil	4/18/2011	11:50	04/18/2011

Sample temperature upon receipt was 4.3 degrees C

**PREP ANALYSIS:****Liquid-Liquid Ext Pest. [EPA 3510C]**

Client ID	SB-10 0-2	SB-25 0-2	SB-24 0-2
CET ID	AE68481	AE68485	AE68486
Date Analyzed	5/2/2011	5/2/2011	5/2/2011

**SPLP, Metals [EPA 1312]**

Client ID	SB-6 0-2	SB-5 0-2	SB-14 1-2	SB-10 0-2	SB-29 0-2
CET ID	AE68478	AE68479	AE68480	AE68481	AE68482
Date Analyzed	4/18/2011	4/18/2011	4/22/2011	4/25/2011	4/25/2011

**SPLP, Metals [EPA 1312]**

Client ID	SB-20 0-2	SB-27 0-2	SB-25 0-2	SB-24 0-2
CET ID	AE68483	AE68484	AE68485	AE68486
Date Analyzed	4/26/2011	4/26/2011	4/19/2011	4/19/2011

**SPLP Extraction , Pesticides [EPA 1312]**

Client ID	SB-10 0-2	SB-25 0-2	SB-24 0-2
CET ID	AE68481	AE68485	AE68486
Date Analyzed	4/25/2011	4/19/2011	4/19/2011

CET#: 11040665

Project: Bartlett Arboretum, Stamford

**ANALYSIS:****SPLP Mercury [EPA 6020A] Units: mg/l**

Client ID	SB-6 0-2	SB-5 0-2	SB-14 1-2	SB-10 0-2	SB-29 0-2
CET ID	AE68478	AE68479	AE68480	AE68481	AE68482
Date Analyzed	4/19/2001	4/19/2001	4/25/2001	5/9/2011	5/9/2011
SPLP Mercury	ND < 0.002				

**SPLP Mercury [EPA 6020A] Units: mg/l**

Client ID	SB-20 0-2	SB-27 0-2	SB-25 0-2	SB-24 0-2
CET ID	AE68483	AE68484	AE68485	AE68486
Date Analyzed	5/9/2011	5/9/2011	4/20/2001	4/20/2001
SPLP Mercury	ND < 0.002	ND < 0.002	ND < 0.002	ND < 0.002

**SPLP Metals [EPA 6020A] Units: mg/l**

Client ID	SB-6 0-2	SB-5 0-2	SB-14 1-2	SB-10 0-2	SB-29 0-2
CET ID	AE68478	AE68479	AE68480	AE68481	AE68482
Date Analyzed	4/19/2001	4/19/2001	4/25/2001	5/9/2011	5/9/2011
Dilution	1.0	1.0	1.0	1.0	1.0
Lead	ND < 0.013	0.032	ND < 0.013	ND < 0.013	ND < 0.013
Selenium	ND < 0.01				
Cadmium	ND < 0.005				
Chromium	ND < 0.05				
Arsenic	ND < 0.009	0.022	ND < 0.009	ND < 0.009	ND < 0.009
Barium	ND < 0.05				
Silver	ND < 0.02				
Copper	ND < 0.04				
Nickel	ND < 0.05				
Zinc	ND < 0.02	0.034	ND < 0.02	ND < 0.02	ND < 0.02
Beryllium	ND < 0.004				
Antimony	ND < 0.006				
Thallium	ND < 0.005				
Vanadium	ND < 0.05				

**SPLP Metals [EPA 6020A] Units: mg/l**

Client ID	SB-20 0-2	SB-27 0-2	SB-25 0-2	SB-24 0-2
CET ID	AE68483	AE68484	AE68485	AE68486
Date Analyzed	5/9/2011	5/9/2011	4/20/2001	4/20/2001
Dilution	1.0	1.0	1.0	1.0
Lead	0.014	ND < 0.013	ND < 0.013	ND < 0.013
Selenium	ND < 0.01	ND < 0.01	ND < 0.01	ND < 0.01
Cadmium	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005
Chromium	ND < 0.05	ND < 0.05	ND < 0.05	ND < 0.05
Arsenic	0.26	ND < 0.009	ND < 0.009	ND < 0.009
Barium	ND < 0.05	ND < 0.05	ND < 0.05	ND < 0.05

CET#: 11040665

Project: Bartlett Arboretum, Stamford

**SPLP Metals [EPA 6020A] Units: mg/l**

Client ID	SB-20 0-2	SB-27 0-2	SB-25 0-2	SB-24 0-2
Silver	ND < 0.02	ND < 0.02	ND < 0.02	ND < 0.02
Copper	ND < 0.04	ND < 0.04	ND < 0.04	ND < 0.04
Nickel	ND < 0.05	ND < 0.05	ND < 0.05	ND < 0.05
Zinc	0.11	0.033	ND < 0.02	0.042
Beryllium	ND < 0.004	ND < 0.004	ND < 0.004	ND < 0.004
Antimony	ND < 0.006	ND < 0.006	ND < 0.006	ND < 0.006
Thallium	ND < 0.005	ND < 0.005	ND < 0.005	ND < 0.005
Vanadium	ND < 0.05	ND < 0.05	ND < 0.05	ND < 0.05

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/l Matrix: SPLP Ext.**

Client ID	SB-10 0-2	SB-25 0-2	SB-24 0-2
CET ID	AE68481	AE68485	AE68486
Date Analyzed	5/2/2011	5/2/2011	5/2/2011
Dilution	1	1	1
Alpha-BHC	ND < 0.10	ND < 0.10	ND < 0.10
Gamma-BHC	ND < 0.10	ND < 0.10	ND < 0.10
Heptachlor	ND < 0.05	ND < 0.05	ND < 0.05
Aldrin	ND < 0.10	ND < 0.10	ND < 0.10
Beta-BHC	ND < 0.10	ND < 0.10	ND < 0.10
Delta-BHC	ND < 0.10	ND < 0.10	ND < 0.10
Heptachlor Epoxide	ND < 0.05	ND < 0.05	ND < 0.05
Endosulfan I	ND < 0.10	ND < 0.10	ND < 0.10
4,4-DDE	ND < 0.10	ND < 0.10	ND < 0.10
Dieldrin	ND < 0.002	ND < 0.002	0.002
Endrin	ND < 0.10	ND < 0.10	ND < 0.10
4,4-DDD	ND < 0.10	ND < 0.10	ND < 0.10
Endosulfan II	ND < 0.10	ND < 0.10	ND < 0.10
4,4-DDT	ND < 0.10	ND < 0.10	0.14
Endrin Aldehyde	ND < 0.10	ND < 0.10	ND < 0.10
4,4-Methoxychlor	ND < 0.10	ND < 0.10	ND < 0.10
Endosulfan Sulfate	ND < 0.10	ND < 0.10	ND < 0.10
Endrin Ketone	ND < 0.10	ND < 0.10	ND < 0.10
Chlordane	ND < 0.20	ND < 0.20	ND < 0.20
Toxaphene	ND < 0.80	ND < 0.80	ND < 0.80
TCMX (Surr 1) 50-150	59	64	74
DCB (Surr 2) 50-150	69	66	80

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

Sincerely,



David Ditta

Laboratory Director

CET#: 11040665

Project: Bartlett Arboretum, Stamford

Report Comments:

1. ND is None Detected at the specified detection limit.
2. All analyses were performed in house unless a Reference Laboratory is listed.
3. Samples will be disposed of 30 days after the report date.
4. Sample Result Flags:
  - E - The result is estimated, above the calibration range.
  - H - The surrogate recovery is above the control limits.
  - L - The surrogate recovery is below the control limits.
  - B - The compound was detected in the laboratory blank.
  - P - The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
  - D - The RPD between the sample and the sample duplicate is high. Sample homogeneity may be a problem.
5. All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

CET#: 11040665

Project: Bartlett Arboretum, Stamford



COMPLETE ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

CET # 11040665  
 Volatile Soils Only:  
 Date and Time in Freezer  
 Client: YAN  
 Date: 12/23

80 Lupes Drive Stamford, CT 06615 Tel: (203) 377-9984 Fax: (203) 377-9952 e-mail: cet1@celtds.com		Matrix Air Soil Water Wastewater Drinking W. C-Case Solid Wipe Other (Specify)		Turnaround Time ** (check one) Same Day * Next Day * 2-3 Days * Std (5-7 Days)		Organics 8260 CT List 8260 Aromatics 8260 Halogens SPLP 8260 TCLP 8260 CT ETPH 8270 CT List 8270 PNAs PCBs Pesticides Herbicides 13 Priority Poll 8 RCRA TOTAL <u>8215</u> TCLP SPLP Field Filtered Lab To Filter Additional Analysis										Metals (check all that apply) TOTAL # OF CONT. NOTE #									
Sample ID	Date/Time	Matrix	Turnaround Time **	8260 CT List	8260 Aromatics	8260 Halogens	SPLP 8260	TCLP 8260	CT ETPH	8270 CT List	8270 PNAs	PCBs	Pesticides	Herbicides	13 Priority Poll	8 RCRA	TOTAL <u>8215</u>	TCLP	SPLP	Field Filtered	Lab To Filter	Additional Analysis	TOTAL # OF CONT.	NOTE #	
SR-3 (0-2)	4/13/11 / 1200	S		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SR-3 (A-4)				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SR-4 (0-2)				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SR-4 (0-11)				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SR-6 (4-6)				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SR-5 (4-6)				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SR-23 (0-2)				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SR-23 (4-6)				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

\* Additional charge may apply. \*\* TAT begins when the samples are received at the Lab and all issues are resolved. TAT for samples received after 3 p.m. will start on the next business day. REV 7/1/10

RELEASING BY: [Signature] DATE/TIME: 4/13/11 1200  
 RECEIVED BY: [Signature]  
 RELEASING BY: [Signature] DATE/TIME: 4/13/11 1200  
 RECEIVED BY: [Signature]

NOTES:  
See Page 1

Client / Reporting Information  
 Company Name: See Page 1  
 Address: See Page 1  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Report To: \_\_\_\_\_ E-mail: \_\_\_\_\_  
 Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

Project Information  
 Project Contact: \_\_\_\_\_ PO #: \_\_\_\_\_  
 Project #: \_\_\_\_\_  
 Location: \_\_\_\_\_ Collector(s): \_\_\_\_\_  
 OAMOC:  SD  Site Specific (USMSCD) \*  RCP Pkg \*  DQAW \*  
 Data Report:  Email  PDF  Excel  Other  
 RSP Reporting Limits (check one):  GA  GE  SPP  Other (Specify)  
 Lab Use:  Evidence of Cooling: W or N  
 Temp/Upon Receipt: W or N  
 SHEET 2 OF 3

CET#: 11040665

Project: Bartlett Arboretum, Stamford



COMPLETE ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

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

Sample ID	Date/Time	Matrix Aqueous Soil Wastewater On-Campus Solid Wipe Other (Specify)	Turnaround Time ** (check one) Same Day * Next Day * 2-3 Days * Std (5-7 Days)	Organics	Metals (check all that apply)	TOTAL # OF CONT.	NOTE #
SR-13 (6-8)	4/15/11 / 1120	S	X	8260 CT List 8260 Aromatics 8260 Halogens SPLP 8260 TCLP 8260 CT ETPH 8270 CT List 8270 PNAs PCBs Pesticides Herbicides 13 Priority Poll	8 RCRA TOTAL RCRA TCLP SPLP Field Filled Lab To Filter	1	
SR-14 (5-6)	1130					1	
SR-12 (0-2)	1140					1	
SR-12 (5-6)	1145					1	
SR-11 (0-2)	1235					1	
SR-11 (6-8)	1240					1	
SR-1 (0-2)	1250					1	
SR-1 (4-5)	1255					1	
SR-2 (0-2)	1310					1	

CONTAINER TYPE (P-Plastic, G-Glass, V-Vial, O-Other)

Soil VOCs Only: MethOH, Ben, Spolium, Wasther, F-Vial, Empty, E-Enconal, B-Biosorb

REQUISITION BY: [Signature] DATE/TIME: 4/14/11 0815 RECEIVED BY: [Signature]

REINVOICED BY: [Signature] DATE/TIME: 4/18/11 1511 RECEIVED BY: [Signature]

Client / Reporting Information  
Company Name: TVC  
Address: 21 Griffin Road North  
City: Windsor State: CT Zip: 06095  
Report To: Chris Lindahl Email: chris.lindahl@ct.gov  
Phone #: 860-298-6899

Project Information  
Project Contact: Chris Lindahl PO #: [Blank]  
Project #: [Blank]  
Location: Stratford, CT Collector(s): K. Sheffield  
QA/QC:  Std  Site Specific (MSMSD) \*  
Data Report:  Email  PCF  Excel  Other  
RSH Reporting Limits (check one):  GA  GB  SWP  Other (specify)

Lab Use: Evidence of Cooling:  N Temp Upon Receipt:  N

NOTES:  
SPD extraction for all soil samples. Hold for possible RSR metals + pesticide analysis

CET # 11040665

Volatile Soils Only:

Date and Time in Freezer

Client: chris.lindahl@ct.gov

CET: 4/15/11 11:20

Additional Analysis

\* Additional charge may apply. \*\* TAT begins when the samples are received at the Lab and all issues are resolved. TAT for samples received after 3 p.m. will start on the next business day. REV 2/1/10

CET#: 11040665

Project: Bartlett Arboretum, Stamford



COMPLETE ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

Volatile Solids Only: *10/10/09*  
 Date and Time in Freezer: *4/11/11 / 0815*

80 Lupes Drive  
 Stratford, CT 06815  
 Tel: (203) 377-9984  
 Fax: (203) 377-9952  
 e-mail: cet@celtdbs.com

Sample ID	Date/Time	Matrix Soil Sediment Water Other (Specify)	Turnaround Time ** (check one)			Organics	Metals (check all that apply)	Additional Analysis	TOTAL # OF CONT.	NOTE #
			Same Day	24 Hours	2-3 Days					
SB-2(4-6)	4/15/11/1315	S				X				
SB-4(1/5-16)	1/14/30					X				
SB-4(1/12-17)	1/15/00					X				
SB-4(2/5-16)	1/15/30					X				
SB-13(5-16)	1/16/00					X				
SB-21(6-2)	4/11/11/1140					X				
SB-21(4-5)	1/11/15					X				
SB-29(4-6)	1/10/00					X				
SB-29(4-6)	1/10/05					X				

REQUISITION BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
<i>M. W. W.</i>	<i>4/11/11/0815</i>	<i>TBC S. J. Sweeney</i>	<i>4/11/11/0815</i>
<i>PRINCE</i>	<i>4-18-11/1345</i>	<i>PRINCE</i>	<i>4-18-11/1345</i>
<i>PRINCE</i>	<i>4-18-11/1500</i>	<i>PRINCE</i>	<i>4-18-11/1500</i>

CONTAINER TYPE (P-Plastic, G-Glass, S-HSO, N-NHO, NE-NHO, O-Cool, O-Other)

SOIL VOCs ONLY (Methoxy Be, Benzo(a)P, Benzo(b)F, Benzo(k)F, Benzo(e)P, Benzo(a)A, Benzo(a)H, Benzo(b)H, Benzo(k)H, Benzo(e)H, Benzo(f)H, Benzo(g)H, Benzo(i)H, Benzo(j)H, Benzo(l)H, Benzo(m)H, Benzo(n)H, Benzo(o)H, Benzo(p)H, Benzo(q)H, Benzo(r)H, Benzo(s)H, Benzo(t)H, Benzo(u)H, Benzo(v)H, Benzo(w)H, Benzo(x)H, Benzo(y)H, Benzo(z)H)

PREPARED BY: *PRINCE* DATE/TIME: *4-18-11/1345*

RECEIVED BY: *PRINCE* DATE/TIME: *4-18-11/1345*

RECEIVED BY: *PRINCE* DATE/TIME: *4-18-11/1500*

Project Information:  
 Project Contact: *Chris Lindahl*  
 Project: *Bartlett Arboretum*  
 Location: *Stratford CT*  
 Collector(s): *K. Shaffell / C. Lindahl*  
 PO #:  
 Project #:  
 QA/QC:  SW  Site Specific (MSMSD) \*  RCP Pkg \* *QDEAD*  
 Data Report:  Email  PDF  Excel  Other  
 RSR Reporting Limits (check one):  EPA  GB  SWP  Other (Specify)

Notes:  
 SLP extraction for all soil samples. Hold for possible RSR metals & pesticide analysis

Company Name: *TPC*  
 Address: *21 Cedar Road North*  
 City: *Windsor* State: *CT* Zip: *06095*  
 Report To: *Chris Lindahl* E-mail: *clindahl@tpcsolutions.com*  
 Phone # *860-298-1207* Fax # *860-298-6339*

\* Additional charge may apply. \*\* TAT begins when the samples are received at the Lab. TAT for samples received after 3 p.m. will start on the next business day.







80 Lupes Drive  
Stratford, CT 06615

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

Client: Mr. Chris Lindahl  
TRC Environmental Consultants  
21 Griffin Rd., North  
Windsor, CT 06095

# Analytical Report

## CET # 11040415r

**Report Date: May 3, 2011**  
**Client Project: Bartlett Arboretum, Stamford**

Connecticut Laboratory Certification PH 0116  
Massachusetts Laboratory Certification M-CT903  
Rhode Island Certification 199



New York Certification 11982  
Florida Laboratory Certification E871064

CET#: 11040415r

Project: Bartlett Arboretum, Stamford

**SAMPLE SUMMARY:**

This report contains analytical data associated with the following samples only:

CETID	Client Sample ID	Matrix	Collection Date	Collection Time	Receipt Date
AE67562	SB-18 0-2	Soil	4/15/2011	9:35	04/18/2011
AE67563	SB-18 6-8	Soil	4/15/2011	9:40	04/18/2011
AE67564	SB-15 0-2	Soil	4/15/2011	9:50	04/18/2011
AE67565	SB-15 5-6	Soil	4/15/2011	9:55	04/18/2011
AE67566	SB-17 0-2	Soil	4/15/2011	10:15	04/18/2011
AE67567	SB-17A 0-2	Soil	4/15/2011	10:25	04/18/2011
AE67568	SB-17 6-8	Soil	4/15/2011	10:35	04/18/2011
AE67569	SB-16 0-2	Soil	4/15/2011	11:00	04/18/2011
AE67570	SB-16 6-8	Soil	4/15/2011	11:05	04/18/2011
AE67571	SB-13 0-2	Soil	4/15/2011	11:15	04/18/2011
AE67572	SB-13 6-8	Soil	4/15/2011	11:20	04/18/2011
AE67573	SB-14 1-2	Soil	4/15/2011	11:30	04/18/2011
AE67574	SB-14 5-6	Soil	4/15/2011	11:35	04/18/2011
AE67575	SB-12 0-2	Soil	4/15/2011	11:40	04/18/2011
AE67576	SB-12 5-6	Soil	4/15/2011	11:45	04/18/2011
AE67577	SB-11 0-2	Soil	4/15/2011	12:35	04/18/2011
AE67578	SB-11 6-8	Soil	4/15/2011	12:40	04/18/2011
AE67579	SB-1 0-2	Soil	4/15/2011	12:50	04/18/2011
AE67580	SB-1 4-5	Soil	4/15/2011	12:55	04/18/2011
AE67581	SB-2 0-2	Soil	4/15/2011	13:10	04/18/2011
AE67582	SB-2 4-6	Soil	4/15/2011	13:15	04/18/2011
AE67583	SB-40 15-16	Soil	4/15/2011	14:30	04/18/2011
AE67584	SB-41 16-17	Soil	4/15/2011	15:00	04/18/2011
AE67585	SB-42 15-16	Soil	4/15/2011	15:30	04/18/2011
AE67586	SB-43 15-16	Soil	4/15/2011	16:00	04/18/2011
AE67587	SB-10 0-2	Soil	4/14/2011	11:40	04/18/2011
AE67588	SB-21 0-2	Soil	4/14/2011	11:10	04/18/2011
AE67589	SB-21 4-5	Soil	4/14/2011	11:15	04/18/2011
AE67590	SB-29 0-2	Soil	4/14/2011	10:00	04/18/2011
AE67591	SB-29 4-6	Soil	4/14/2011	10:05	04/18/2011
AE67592	SB-9 0-2	Soil	4/14/2011	11:50	04/18/2011
AE67593	SB-28 0-2	Soil	4/14/2011	10:25	04/18/2011
AE67594	SB-20 0-2	Soil	4/14/2011	11:05	04/18/2011
AE67595	SB-27 0-2	Soil	4/14/2011	10:50	04/18/2011
AE67596	SB-27 4-6	Soil	4/14/2011	10:55	04/18/2011
AE67597	SB-19 0-2	Soil	4/14/2011	11:00	04/18/2011
AE67598	SB041511	Soil	4/15/2011	16:15	04/18/2011

Sample temperature upon receipt was 4.3 degrees C

**PREP ANALYSIS:****Acid Digestion [EPA 3050B]**

Client ID	SB-18 0-2	SB-18 6-8	SB-15 0-2	SB-15 5-6	SB-17 0-2
CET ID	AE67562	AE67563	AE67564	AE67565	AE67566
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011

CET#: 11040415r

Project: Bartlett Arboretum, Stamford

**Acid Digestion [EPA 3050B]**

Client ID	SB-17A 0-2	SB-17 6-8	SB-16 0-2	SB-16 6-8	SB-13 0-2
CET ID	AE67567	AE67568	AE67569	AE67570	AE67571
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011

**Acid Digestion [EPA 3050B]**

Client ID	SB-13 6-8	SB-14 1-2	SB-14 5-6	SB-12 0-2	SB-12 5-6
CET ID	AE67572	AE67573	AE67574	AE67575	AE67576
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011

**Acid Digestion [EPA 3050B]**

Client ID	SB-11 0-2	SB-11 6-8	SB-1 0-2	SB-1 4-5	SB-2 0-2
CET ID	AE67577	AE67578	AE67579	AE67580	AE67581
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011

**Acid Digestion [EPA 3050B]**

Client ID	SB-2 4-6	SB-40 15-16	SB-41 16-17	SB-42 15-16	SB-43 15-16
CET ID	AE67582	AE67583	AE67584	AE67585	AE67586
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/20/2011

**Acid Digestion [EPA 3050B]**

Client ID	SB-10 0-2	SB-21 0-2	SB-21 4-5	SB-29 0-2	SB-29 4-6
CET ID	AE67587	AE67588	AE67589	AE67590	AE67591
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011

**Acid Digestion [EPA 3050B]**

Client ID	SB-9 0-2	SB-28 0-2	SB-20 0-2	SB-27 0-2	SB-27 4-6
CET ID	AE67592	AE67593	AE67594	AE67595	AE67596
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011

**Acid Digestion [EPA 3050B]**

Client ID	SB-19 0-2
CET ID	AE67597
Date Analyzed	4/20/2011

**Accelerated Solvent Ext.- Pest [EPA 3545]**

Client ID	SB-18 0-2	SB-18 6-8	SB-15 0-2	SB-15 5-6	SB-17 0-2
CET ID	AE67562	AE67563	AE67564	AE67565	AE67566
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011

**Accelerated Solvent Ext.- Pest [EPA 3545]**

Client ID	SB-17A 0-2	SB-17 6-8	SB-16 0-2	SB-16 6-8	SB-13 0-2
CET ID	AE67567	AE67568	AE67569	AE67570	AE67571
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011

CET#: 11040415r

Project: Bartlett Arboretum, Stamford

**Accelerated Solvent Ext.- Pest [EPA 3545]**

Client ID	SB-13 6-8	SB-14 1-2	SB-14 5-6	SB-12 0-2	SB-12 5-6
CET ID	AE67572	AE67573	AE67574	AE67575	AE67576
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011

**Accelerated Solvent Ext.- Pest [EPA 3545]**

Client ID	SB-11 0-2	SB-11 6-8	SB-1 0-2	SB-1 4-5	SB-2 0-2
CET ID	AE67577	AE67578	AE67579	AE67580	AE67581
Date Analyzed	4/20/2011	4/21/2011	4/21/2011	4/21/2011	4/21/2011

**Accelerated Solvent Ext.- Pest [EPA 3545]**

Client ID	SB-2 4-6	SB-40 15-16	SB-41 16-17	SB-42 15-16	SB-43 15-16
CET ID	AE67582	AE67583	AE67584	AE67585	AE67586
Date Analyzed	4/21/2011	4/21/2011	4/21/2011	4/21/2011	4/21/2011

**Accelerated Solvent Ext.- Pest [EPA 3545]**

Client ID	SB-10 0-2	SB-21 0-2	SB-21 4-5	SB-29 0-2	SB-29 4-6
CET ID	AE67587	AE67588	AE67589	AE67590	AE67591
Date Analyzed	4/21/2011	4/21/2011	4/21/2011	4/21/2011	4/21/2011

**Accelerated Solvent Ext.- Pest [EPA 3545]**

Client ID	SB-9 0-2	SB-28 0-2	SB-20 0-2	SB-27 0-2	SB-27 4-6
CET ID	AE67592	AE67593	AE67594	AE67595	AE67596
Date Analyzed	4/21/2011	4/21/2011	4/21/2011	4/21/2011	4/21/2011

**Accelerated Solvent Ext.- Pest [EPA 3545]**

Client ID	SB-19 0-2
CET ID	AE67597
Date Analyzed	4/20/2011

**Ultrasonic Extraction-ETPH [EPA 3550C]**

Client ID	SB-18 0-2	SB-18 6-8	SB-15 0-2	SB-15 5-6	SB-17 0-2
CET ID	AE67562	AE67563	AE67564	AE67565	AE67566
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011

**Ultrasonic Extraction-ETPH [EPA 3550C]**

Client ID	SB-17A 0-2	SB-17 6-8	SB-16 0-2	SB-16 6-8	SB-40 15-16
CET ID	AE67567	AE67568	AE67569	AE67570	AE67583
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011

**Ultrasonic Extraction-ETPH [EPA 3550C]**

Client ID	SB-41 16-17	SB-42 15-16	SB-43 15-16
CET ID	AE67584	AE67585	AE67586
Date Analyzed	4/22/2011	4/22/2011	4/22/2011

CET#: 11040415r

Project: Bartlett Arboretum, Stamford

**Closed System P&T Extraction [EPA 5035A]**

Client ID	SB041511
CET ID	AE67598
Date Analyzed	4/22/2011

**Closed System P&T Extraction [EPA 5035A]**

Client ID	SB-18 0-2	SB-18 6-8	SB-15 0-2	SB-15 5-6	SB-17 0-2
CET ID	AE67562	AE67563	AE67564	AE67565	AE67566
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011

**Closed System P&T Extraction [EPA 5035A]**

Client ID	SB-17A 0-2	SB-17 6-8	SB-16 0-2	SB-16 6-8	SB-40 15-16
CET ID	AE67567	AE67568	AE67569	AE67570	AE67583
Date Analyzed	4/20/2011	4/21/2011	4/21/2011	4/21/2011	4/21/2011

**Closed System P&T Extraction [EPA 5035A]**

Client ID	SB-41 16-17	SB-42 15-16	SB-43 15-16	SB041511
CET ID	AE67584	AE67585	AE67586	AE67598
Date Analyzed	4/21/2011	4/21/2011	4/21/2011	4/21/2011

**Accelerated Solvent Extraction [EPA 3545]**

Client ID	SB-18 0-2	SB-18 6-8	SB-15 0-2	SB-15 5-6	SB-17 0-2
CET ID	AE67562	AE67563	AE67564	AE67565	AE67566
Date Analyzed	4/21/2011	4/21/2011	4/21/2011	4/21/2011	4/21/2011

**Accelerated Solvent Extraction [EPA 3545]**

Client ID	SB-17A 0-2	SB-17 6-8	SB-16 0-2	SB-16 6-8	SB-40 15-16
CET ID	AE67567	AE67568	AE67569	AE67570	AE67583
Date Analyzed	4/21/2011	4/21/2011	4/21/2011	4/21/2011	4/21/2011

**Accelerated Solvent Extraction [EPA 3545]**

Client ID	SB-41 16-17	SB-42 15-16	SB-43 15-16
CET ID	AE67584	AE67585	AE67586
Date Analyzed	4/21/2011	4/21/2011	4/21/2011

**SPLP, Metals [EPA 1312]**

Client ID	SB-18 0-2	SB-18 6-8	SB-15 0-2	SB-15 5-6	SB-17 0-2
CET ID	AE67562	AE67563	AE67564	AE67565	AE67566
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011

**SPLP, Metals [EPA 1312]**

Client ID	SB-17A 0-2	SB-17 6-8	SB-16 0-2	SB-16 6-8	SB-13 0-2
CET ID	AE67567	AE67568	AE67569	AE67570	AE67571
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011

CET#: 11040415r

Project: Bartlett Arboretum, Stamford

**SPLP, Metals [EPA 1312]**

Client ID	SB-13 6-8	SB-14 1-2	SB-14 5-6	SB-12 0-2	SB-12 5-6
CET ID	AE67572	AE67573	AE67574	AE67575	AE67576
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011

**SPLP, Metals [EPA 1312]**

Client ID	SB-11 0-2	SB-11 6-8	SB-1 0-2	SB-1 4-5	SB-2 0-2
CET ID	AE67577	AE67578	AE67579	AE67580	AE67581
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011

**SPLP, Metals [EPA 1312]**

Client ID	SB-2 4-6	SB-40 15-16	SB-41 16-17	SB-42 15-16	SB-43 15-16
CET ID	AE67582	AE67583	AE67584	AE67585	AE67586
Date Analyzed	4/25/2011	4/25/2011	4/25/2011	4/25/2011	4/25/2011

**SPLP, Metals [EPA 1312]**

Client ID	SB-10 0-2	SB-21 0-2	SB-21 4-5	SB-29 0-2	SB-29 4-6
CET ID	AE67587	AE67588	AE67589	AE67590	AE67591
Date Analyzed	4/25/2011	4/25/2011	4/25/2011	4/25/2011	4/25/2011

**SPLP, Metals [EPA 1312]**

Client ID	SB-9 0-2	SB-28 0-2	SB-20 0-2	SB-27 0-2	SB-27 4-6
CET ID	AE67592	AE67593	AE67594	AE67595	AE67596
Date Analyzed	4/26/2011	4/26/2011	4/26/2011	4/26/2011	4/26/2011

**SPLP, Metals [EPA 1312]**

Client ID	SB-19 0-2
CET ID	AE67597
Date Analyzed	4/26/2011

**SPLP Extraction , Pesticides [EPA 1312]**

Client ID	SB-18 0-2	SB-18 6-8	SB-15 0-2	SB-15 5-6	SB-17 0-2
CET ID	AE67562	AE67563	AE67564	AE67565	AE67566
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011

**SPLP Extraction , Pesticides [EPA 1312]**

Client ID	SB-17A 0-2	SB-17 6-8	SB-16 0-2	SB-16 6-8	SB-13 0-2
CET ID	AE67567	AE67568	AE67569	AE67570	AE67571
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011

**SPLP Extraction , Pesticides [EPA 1312]**

Client ID	SB-13 6-8	SB-14 1-2	SB-14 5-6	SB-12 0-2	SB-12 5-6
CET ID	AE67572	AE67573	AE67574	AE67575	AE67576
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011

CET#: 11040415r

Project: Bartlett Arboretum, Stamford

**SPLP Extraction , Pesticides [EPA 1312]**

Client ID	SB-11 0-2	SB-11 6-8	SB-1 0-2	SB-1 4-5	SB-2 0-2
CET ID	AE67577	AE67578	AE67579	AE67580	AE67581
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011

**SPLP Extraction , Pesticides [EPA 1312]**

Client ID	SB-2 4-6	SB-40 15-16	SB-41 16-17	SB-42 15-16	SB-43 15-16
CET ID	AE67582	AE67583	AE67584	AE67585	AE67586
Date Analyzed	4/25/2011	4/25/2011	4/25/2011	4/25/2011	4/25/2011

**SPLP Extraction , Pesticides [EPA 1312]**

Client ID	SB-10 0-2	SB-21 0-2	SB-21 4-5	SB-29 0-2	SB-29 4-6
CET ID	AE67587	AE67588	AE67589	AE67590	AE67591
Date Analyzed	4/25/2011	4/25/2011	4/25/2011	4/25/2011	4/25/2011

**SPLP Extraction , Pesticides [EPA 1312]**

Client ID	SB-9 0-2	SB-28 0-2	SB-20 0-2	SB-27 0-2	SB-27 4-6
CET ID	AE67592	AE67593	AE67594	AE67595	AE67596
Date Analyzed	4/26/2011	4/26/2011	4/26/2011	4/26/2011	4/26/2011

**SPLP Extraction , Pesticides [EPA 1312]**

Client ID	SB-19 0-2
CET ID	AE67597
Date Analyzed	4/26/2011

**ANALYSIS:****Mercury Dup Result [EPA 7471B] Units: mg/kg (Dry Wt)**

Client ID	SB-13 0-2	SB-10 0-2
CET ID	AE67571	AE67587
Date Analyzed	4/25/2011	4/22/2011
Mercury Dup Result	ND < 0.30	ND < 0.30

**Total Mercury [EPA 7471B] Units: mg/kg (Dry Wt)**

Client ID	SB-18 0-2	SB-18 6-8	SB-15 0-2	SB-15 5-6	SB-17 0-2
CET ID	AE67562	AE67563	AE67564	AE67565	AE67566
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Total Mercury	ND < 0.30				

**Total Mercury [EPA 7471B] Units: mg/kg (Dry Wt)**

Client ID	SB-17A 0-2	SB-17 6-8	SB-16 0-2	SB-16 6-8	SB-13 0-2
CET ID	AE67567	AE67568	AE67569	AE67570	AE67571
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/25/2011
Total Mercury	ND < 0.30	ND < 0.30	ND < 0.30	ND < 0.30	ND < 0.30

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**Total Mercury [EPA 7471B] Units: mg/kg (Dry Wt)**

Client ID	SB-13 6-8	SB-14 1-2	SB-14 5-6	SB-12 0-2	SB-12 5-6
CET ID	AE67572	AE67573	AE67574	AE67575	AE67576
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011
Total Mercury	ND < 0.30				

**Total Mercury [EPA 7471B] Units: mg/kg (Dry Wt)**

Client ID	SB-11 0-2	SB-11 6-8	SB-1 0-2	SB-1 4-5	SB-2 0-2
CET ID	AE67577	AE67578	AE67579	AE67580	AE67581
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011
Total Mercury	ND < 0.30				

**Total Mercury [EPA 7471B] Units: mg/kg (Dry Wt)**

Client ID	SB-2 4-6	SB-40 15-16	SB-41 16-17	SB-42 15-16	SB-43 15-16
CET ID	AE67582	AE67583	AE67584	AE67585	AE67586
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011
Total Mercury	ND < 0.30	ND < 0.30	ND < 0.30	ND < 0.30	ND < 0.30

**Total Mercury [EPA 7471B] Units: mg/kg (Dry Wt)**

Client ID	SB-10 0-2	SB-21 0-2	SB-21 4-5	SB-29 0-2	SB-29 4-6
CET ID	AE67587	AE67588	AE67589	AE67590	AE67591
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011
Total Mercury	ND < 0.30				

**Total Mercury [EPA 7471B] Units: mg/kg (Dry Wt)**

Client ID	SB-9 0-2	SB-28 0-2	SB-20 0-2	SB-27 0-2	SB-27 4-6
CET ID	AE67592	AE67593	AE67594	AE67595	AE67596
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/25/2011
Total Mercury	ND < 0.30				

**Total Mercury [EPA 7471B] Units: mg/kg (Dry Wt)**

Client ID	SB-19 0-2
CET ID	AE67597
Date Analyzed	4/25/2011
Total Mercury	ND < 0.30

**Total Solids [EPA 160.3 mo] Units: percent**

Client ID	SB-18 0-2	SB-18 6-8	SB-15 0-2	SB-15 5-6	SB-17 0-2
CET ID	AE67562	AE67563	AE67564	AE67565	AE67566
Date Analyzed	4/21/2011	4/21/2011	4/21/2011	4/21/2011	4/21/2011
Total Solids	82	93	82	86	78

**Total Solids [EPA 160.3 mo] Units: percent**

Client ID	SB-17A 0-2	SB-17 6-8	SB-16 0-2	SB-16 6-8	SB-13 0-2
CET ID	AE67567	AE67568	AE67569	AE67570	AE67571
Date Analyzed	4/21/2011	4/21/2011	4/21/2011	4/21/2011	4/21/2011
Total Solids	78	89	79	89	90

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**Total Solids [EPA 160.3 mo] Units: percent**

Client ID	SB-13 6-8	SB-14 1-2	SB-14 5-6	SB-12 0-2	SB-12 5-6
CET ID	AE67572	AE67573	AE67574	AE67575	AE67576
Date Analyzed	4/21/2011	4/21/2011	4/21/2011	4/21/2011	4/21/2011
Total Solids	85	85	94	89	91

**Total Solids [EPA 160.3 mo] Units: percent**

Client ID	SB-11 0-2	SB-11 6-8	SB-1 0-2	SB-1 4-5	SB-2 0-2
CET ID	AE67577	AE67578	AE67579	AE67580	AE67581
Date Analyzed	4/21/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011
Total Solids	92	89	85	93	80

**Total Solids [EPA 160.3 mo] Units: percent**

Client ID	SB-2 4-6	SB-40 15-16	SB-41 16-17	SB-42 15-16	SB-43 15-16
CET ID	AE67582	AE67583	AE67584	AE67585	AE67586
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011
Total Solids	84	91	90	91	91

**Total Solids [EPA 160.3 mo] Units: percent**

Client ID	SB-10 0-2	SB-21 0-2	SB-21 4-5	SB-29 0-2	SB-29 4-6
CET ID	AE67587	AE67588	AE67589	AE67590	AE67591
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011
Total Solids	69	71	82	80	87

**Total Solids [EPA 160.3 mo] Units: percent**

Client ID	SB-9 0-2	SB-28 0-2	SB-20 0-2	SB-27 0-2	SB-27 4-6
CET ID	AE67592	AE67593	AE67594	AE67595	AE67596
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011
Total Solids	79	74	82	74	77

**Total Solids [EPA 160.3 mo] Units: percent**

Client ID	SB-19 0-2	SB041511
CET ID	AE67597	AE67598
Date Analyzed	4/22/2011	4/18/2011
Total Solids	72	100

**Total Metals [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-18 0-2	SB-18 6-8	SB-15 0-2	SB-15 5-6	SB-17 0-2
CET ID	AE67562	AE67563	AE67564	AE67565	AE67566
Date Analyzed	4/19/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Dilution	1.0	1.0	1.0	1.0	1.0
Lead	19	4.7	12	7.0	14
Selenium	ND < 1.5				
Cadmium	ND < 1.0				
Chromium	18	18	20	18	29

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**Total Metals [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-18 0-2	SB-18 6-8	SB-15 0-2	SB-15 5-6	SB-17 0-2
Arsenic	6.3	ND < 1.5	2.5	2.4	4.7
Barium	30	55	47	65	67
Silver	ND < 2.5	ND < 2.5	ND < 2.5	ND < 2.5	ND < 3.0
Copper	23	13	8.3	16	14
Nickel	11	15	13	15	17
Zinc	38	45	39	40	49
Beryllium	ND < 1.5				
Antimony	ND < 2.5	ND < 2.5	ND < 2.5	ND < 2.5	ND < 3.0
Thallium	ND < 2.5	ND < 2.5	ND < 2.5	ND < 2.5	ND < 3.0
Vanadium	28	23	31	31	43

**Total Metals [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-17A 0-2	SB-17 6-8	SB-16 0-2	SB-16 6-8	SB-13 0-2
CET ID	AE67567	AE67568	AE67569	AE67570	AE67571
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Dilution	1.0	1.0	1.0	1.0	1.0
Lead	13	5.6	20	4.9	25
Selenium	ND < 1.5	ND < 1.5	ND < 1.5	ND < 1.5	ND < 1.5
Cadmium	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0
Chromium	22	32	26	23	24
Arsenic	3.4	1.9	5.7	ND < 1.5	6.8
Barium	61	96	61	84	66
Silver	ND < 3.0	ND < 2.5	ND < 3.0	ND < 2.5	ND < 2.5
Copper	9.3	15	14	20	20
Nickel	13	18	17	19	15
Zinc	42	34	55	45	52
Beryllium	ND < 1.5	ND < 1.5	ND < 1.5	ND < 1.5	ND < 1.5
Antimony	ND < 3.0	ND < 2.5	ND < 3.0	ND < 2.5	ND < 2.5
Thallium	ND < 3.0	ND < 2.5	ND < 3.0	ND < 2.5	ND < 2.5
Vanadium	33	26	39	24	29

**Total Metals [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-13 6-8	SB-14 1-2	SB-14 5-6	SB-12 0-2	SB-12 5-6
CET ID	AE67572	AE67573	AE67574	AE67575	AE67576
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Dilution	1.0	1.0	1.0	1.0	1.0
Lead	5.3	36	2.7	24	4.7
Selenium	ND < 1.5				
Cadmium	ND < 1.0				
Chromium	16	17	10	15	15
Arsenic	ND < 1.5	13	ND < 1.5	3.7	ND < 1.5
Barium	52	35	32	46	41
Silver	ND < 2.5				
Copper	12	13	11	28	17
Nickel	13	11	10	12	11
Zinc	37	43	21	56	30
Beryllium	ND < 1.5				
Antimony	ND < 2.5				
Thallium	ND < 2.5				
Vanadium	21	25	14	30	20

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**Total Metals [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-11 0-2	SB-11 6-8	SB-1 0-2	SB-1 4-5	SB-2 0-2
CET ID	AE67577	AE67578	AE67579	AE67580	AE67581
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Dilution	1.0	1.0	1.0	1.0	1.0
Lead	4.8	7.4	14	3.9	7.2
Selenium	ND < 1.5				
Cadmium	ND < 1.0				
Chromium	12	23	20	16	18
Arsenic	ND < 1.5	ND < 1.5	4.1	ND < 1.5	2.3
Barium	35	80	47	47	35
Silver	ND < 2.5				
Copper	14	15	13	14	10
Nickel	13	15	14	11	11
Zinc	31	42	42	31	31
Beryllium	ND < 1.5				
Antimony	ND < 2.5				
Thallium	ND < 2.5				
Vanadium	19	31	32	20	27

**Total Metals [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-2 4-6	SB-40 15-16	SB-41 16-17	SB-42 15-16	SB-43 15-16
CET ID	AE67582	AE67583	AE67584	AE67585	AE67586
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Dilution	1.0	1.0	1.0	1.0	1.0
Lead	2.9	5.1	6.8	4.8	7.6
Selenium	ND < 1.5	ND < 1.5	ND < 1.5	ND < 1.5	ND < 1.5
Cadmium	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0
Chromium	11	20	24	23	27
Arsenic	ND < 1.5	ND < 1.5	ND < 1.5	ND < 1.5	ND < 1.5
Barium	27	82	87	95	99
Silver	ND < 2.5	ND < 2.5	ND < 2.5	ND < 2.5	ND < 2.5
Copper	8.8	14	15	14	19
Nickel	6.9	14	15	14	22
Zinc	19	40	43	43	63
Beryllium	ND < 1.5	ND < 1.5	ND < 1.5	ND < 1.5	ND < 1.5
Antimony	ND < 2.5	ND < 2.5	ND < 2.5	ND < 2.5	ND < 2.5
Thallium	ND < 2.5	ND < 2.5	ND < 2.5	ND < 2.5	ND < 2.5
Vanadium	16	27	35	38	37

**Total Metals [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-10 0-2	SB-21 0-2	SB-21 4-5	SB-29 0-2	SB-29 4-6
CET ID	AE67587	AE67588	AE67589	AE67590	AE67591
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Dilution	1.0	1.0	1.0	1.0	1.0
Lead	89	16	12	27	9.7
Selenium	ND < 1.5				
Cadmium	ND < 1.0				
Chromium	28	30	30	17	24
Arsenic	29	4.5	5.6	12	2.9

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**Total Metals [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-10 0-2	SB-21 0-2	SB-21 4-5	SB-29 0-2	SB-29 4-6
Barium	51	71	79	46	89
Silver	ND < 3.0	ND < 3.0	ND < 2.5	ND < 2.5	ND < 2.5
Copper	49	15	17	23	20
Nickel	15	15	19	11	16
Zinc	79	82	83	47	47
Beryllium	ND < 1.5				
Antimony	ND < 3.0	ND < 3.0	ND < 2.5	ND < 2.5	ND < 2.5
Thallium	ND < 3.0	ND < 3.0	ND < 2.5	ND < 2.5	ND < 2.5
Vanadium	49	41	43	27	33

**Total Metals [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-9 0-2	SB-28 0-2	SB-20 0-2	SB-27 0-2	SB-27 4-6
CET ID	AE67592	AE67593	AE67594	AE67595	AE67596
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Dilution	1.0	1.0	1.0	1.0	1.0
Lead	50	80	65	60	7.6
Selenium	ND < 1.5				
Cadmium	ND < 1.0	ND < 1.0	1.5	ND < 1.0	ND < 1.0
Chromium	20	27	30	20	27
Arsenic	4.9	7.4	280	27	1.7
Barium	57	87	56	44	65
Silver	ND < 3.0	ND < 3.0	ND < 2.5	ND < 3.0	ND < 3.0
Copper	18	22	18	28	16
Nickel	15	17	18	12	16
Zinc	60	110	460	54	43
Beryllium	ND < 1.5				
Antimony	ND < 3.0	ND < 3.0	ND < 2.5	ND < 3.0	ND < 3.0
Thallium	ND < 3.0	ND < 3.0	ND < 2.5	ND < 3.0	ND < 3.0
Vanadium	31	36	40	36	39

**Total Metals [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-19 0-2
CET ID	AE67597
Date Analyzed	4/20/2011
Dilution	1.0
Lead	62
Selenium	ND < 1.5
Cadmium	ND < 1.0
Chromium	22
Arsenic	7.4
Barium	49
Silver	ND < 3.0
Copper	15
Nickel	13
Zinc	71
Beryllium	ND < 1.5
Antimony	ND < 3.0
Thallium	ND < 3.0
Vanadium	38

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**Total Metals Dup Result [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-11 0-2	SB-43 15-16
CET ID	AE67577	AE67586
Date Analyzed	4/20/2011	4/20/2011
Dilution	1.0	1.0
Lead	4.3	7.5
Selenium	ND < 1.5	ND < 1.5
Cadmium	ND < 1.0	ND < 1.0
Chromium	11	29
Arsenic	ND < 1.5	ND < 1.5
Barium	32	100
Silver	ND < 2.5	ND < 2.5
Copper	12	19
Nickel	11	20
Zinc	29	59
Beryllium	ND < 1.5	ND < 1.5
Antimony	ND < 2.5	ND < 2.5
Thallium	ND < 2.5	ND < 2.5
Vanadium	17	41

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-18 0-2	SB-18 6-8	SB-15 0-2	SB-15 5-6	SB-17 0-2
CET ID	AE67562	AE67563	AE67564	AE67565	AE67566
Date Analyzed	4/26/2011	4/25/2011	4/25/2011	4/26/2011	4/26/2011
Dilution	1	1	1	1	1
Alpha-BHC	ND < 61	ND < 54	ND < 61	ND < 59	ND < 65
Gamma-BHC	ND < 25	ND < 22	ND < 25	ND < 24	ND < 26
Heptachlor	ND < 10	ND < 9.0	ND < 10	ND < 10	ND < 11
Aldrin	ND < 31	ND < 27	ND < 31	ND < 30	ND < 33
Beta-BHC	ND < 61	ND < 54	ND < 61	ND < 59	ND < 65
Delta-BHC	ND < 61	ND < 54	ND < 61	ND < 59	ND < 65
Heptachlor Epoxide	ND < 15	ND < 13	ND < 15	ND < 14	ND < 16
Endosulfan I	ND < 61	ND < 54	ND < 61	ND < 59	ND < 65
4,4-DDE	ND < 25	ND < 22	ND < 25	ND < 24	ND < 26
Dieldrin	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 6.0
Endrin	ND < 61	ND < 54	ND < 61	ND < 59	ND < 65
4,4-DDD	ND < 37	ND < 33	ND < 37	ND < 35	ND < 39
Endosulfan II	ND < 61	ND < 54	ND < 61	ND < 59	ND < 65
4,4-DDT	43	ND < 22	ND < 25	ND < 24	ND < 26
Endrin Aldehyde	ND < 61	ND < 54	ND < 61	ND < 59	ND < 65
4,4-Methoxychlor	ND < 61	ND < 54	ND < 61	ND < 59	ND < 65
Endosulfan Sulfate	ND < 61	ND < 54	ND < 61	ND < 59	ND < 65
Endrin Ketone	ND < 61	ND < 54	ND < 61	ND < 59	ND < 65
Chlordane	ND < 49	ND < 44	ND < 49	ND < 47	ND < 52
Toxaphene	ND < 250	ND < 220	ND < 250	ND < 240	ND < 260
TCMX (Surr 1) 50-150	82	75	86	78	75
DCB (Surr 2) 50-150	77	74	75	66	70

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**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-17A 0-2	SB-17 6-8	SB-16 0-2	SB-16 6-8	SB-13 0-2
CET ID	AE67567	AE67568	AE67569	AE67570	AE67571
Date Analyzed	4/26/2011	4/26/2011	4/26/2011	4/26/2011	4/26/2011
Dilution	1	1	1	1	1
Alpha-BHC	ND < 65	ND < 57	ND < 64	ND < 57	ND < 56
Gamma-BHC	ND < 26	ND < 23	ND < 26	ND < 23	ND < 23
Heptachlor	ND < 11	ND < 9.0	ND < 11	ND < 9.0	ND < 9.0
Aldrin	ND < 33	ND < 29	ND < 32	ND < 29	ND < 28
Beta-BHC	ND < 65	ND < 57	ND < 64	ND < 57	ND < 56
Delta-BHC	ND < 65	ND < 57	ND < 64	ND < 57	ND < 56
Heptachlor Epoxide	ND < 16	ND < 14	ND < 16	ND < 14	ND < 14
Endosulfan I	ND < 65	ND < 57	ND < 64	ND < 57	ND < 56
4,4-DDE	ND < 26	ND < 23	35	ND < 23	61
Dieldrin	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Endrin	ND < 65	ND < 57	ND < 64	ND < 57	ND < 56
4,4-DDD	ND < 39	ND < 34	ND < 38	ND < 34	ND < 34
Endosulfan II	ND < 65	ND < 57	ND < 64	ND < 57	ND < 56
4,4-DDT	ND < 26	ND < 23	44	ND < 23	320
Endrin Aldehyde	ND < 65	ND < 57	ND < 64	ND < 57	ND < 56
4,4-Methoxychlor	ND < 65	ND < 57	ND < 64	ND < 57	ND < 56
Endosulfan Sulfate	ND < 65	ND < 57	ND < 64	ND < 57	ND < 56
Endrin Ketone	ND < 65	ND < 57	ND < 64	ND < 57	ND < 56
Chlordane	ND < 52	ND < 45	63	ND < 45	320
Toxaphene	ND < 260	ND < 230	ND < 260	ND < 230	ND < 230
TCMX (Surr 1) 50-150	70	80	78	69	75
DCB (Surr 2) 50-150	59	70	69	60	70

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-13 6-8	SB-14 1-2	SB-14 5-6	SB-12 0-2	SB-12 5-6
CET ID	AE67572	AE67573	AE67574	AE67575	AE67576
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011
Dilution	1	1	1	1	1
Alpha-BHC	ND < 59	ND < 59	ND < 54	ND < 57	ND < 55
Gamma-BHC	ND < 24	ND < 24	ND < 22	ND < 23	ND < 22
Heptachlor	ND < 10	ND < 10	ND < 9.0	ND < 9.0	ND < 9.0
Aldrin	ND < 30	ND < 30	ND < 27	ND < 29	ND < 28
Beta-BHC	ND < 59	ND < 59	ND < 54	ND < 57	ND < 55
Delta-BHC	ND < 59	ND < 59	ND < 54	67	ND < 55
Heptachlor Epoxide	ND < 15	ND < 15	ND < 13	ND < 14	ND < 14
Endosulfan I	ND < 59	ND < 59	ND < 54	ND < 57	ND < 55
4,4-DDE	ND < 24	120	ND < 22	44	ND < 22
Dieldrin	ND < 5.0				
Endrin	ND < 59	ND < 59	ND < 54	ND < 57	ND < 55
4,4-DDD	ND < 36	ND < 36	ND < 32	ND < 34	ND < 33
Endosulfan II	ND < 59	ND < 59	ND < 54	ND < 57	ND < 55
4,4-DDT	ND < 24	100	ND < 22	36	ND < 22
Endrin Aldehyde	ND < 59	ND < 59	ND < 54	ND < 57	ND < 55
4,4-Methoxychlor	ND < 59	ND < 59	ND < 54	ND < 57	ND < 55

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**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-13 6-8	SB-14 1-2	SB-14 5-6	SB-12 0-2	SB-12 5-6
Endosulfan Sulfate	ND < 59	ND < 59	ND < 54	ND < 57	ND < 55
Endrin Ketone	ND < 59	ND < 59	ND < 54	ND < 57	ND < 55
Chlordane	ND < 48	ND < 48	ND < 43	ND < 45	ND < 44
Toxaphene	ND < 240	ND < 240	ND < 220	ND < 230	ND < 220
TCMX (Surr 1) 50-150	85	94	81	79	79
DCB (Surr 2) 50-150	74	100	78	69	64

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-11 0-2	SB-11 6-8	SB-1 0-2	SB-1 4-5	SB-2 0-2
CET ID	AE67577	AE67578	AE67579	AE67580	AE67581
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011
Dilution	1	1	1	1	1
Alpha-BHC	ND < 55	ND < 57	ND < 59	ND < 54	ND < 63
Gamma-BHC	ND < 22	ND < 23	ND < 24	ND < 22	ND < 25
Heptachlor	ND < 9.0	ND < 9.0	ND < 10	ND < 9.0	ND < 10
Aldrin	ND < 28	ND < 29	ND < 30	ND < 27	ND < 32
Beta-BHC	ND < 55	ND < 57	ND < 59	ND < 54	ND < 63
Delta-BHC	ND < 55	ND < 57	ND < 59	ND < 54	ND < 63
Heptachlor Epoxide	ND < 14	ND < 14	ND < 15	ND < 13	ND < 15
Endosulfan I	ND < 55	ND < 57	ND < 59	ND < 54	ND < 63
4,4-DDE	ND < 22	ND < 23	ND < 24	ND < 22	ND < 25
Dieldrin	ND < 5.0				
Endrin	ND < 55	ND < 57	ND < 59	ND < 54	ND < 63
4,4-DDD	ND < 33	ND < 34	ND < 36	ND < 33	ND < 38
Endosulfan II	ND < 55	ND < 57	ND < 59	ND < 54	ND < 63
4,4-DDT	ND < 22	ND < 23	ND < 24	ND < 22	ND < 25
Endrin Aldehyde	ND < 55	ND < 57	ND < 59	ND < 54	ND < 63
4,4-Methoxychlor	ND < 55	ND < 57	ND < 59	ND < 54	ND < 63
Endosulfan Sulfate	ND < 55	ND < 57	ND < 59	ND < 54	ND < 63
Endrin Ketone	ND < 55	ND < 57	ND < 59	ND < 54	ND < 63
Chlordane	ND < 44	ND < 45	ND < 48	ND < 44	ND < 50
Toxaphene	ND < 220	ND < 230	ND < 240	ND < 220	ND < 250
TCMX (Surr 1) 50-150	86	95	94	109	111
DCB (Surr 2) 50-150	80	87	103	97	95

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-2 4-6	SB-40 15-16	SB-41 16-17	SB-42 15-16	SB-43 15-16
CET ID	AE67582	AE67583	AE67584	AE67585	AE67586
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011
Dilution	1	1	1	1	1
Alpha-BHC	ND < 60	ND < 55	ND < 56	ND < 55	ND < 55
Gamma-BHC	ND < 24	ND < 22	ND < 23	ND < 22	ND < 22
Heptachlor	ND < 10	ND < 9.0	ND < 9.0	ND < 9.0	ND < 9.0
Aldrin	ND < 30	ND < 28	ND < 28	ND < 28	ND < 28
Beta-BHC	ND < 60	ND < 55	ND < 56	ND < 55	ND < 55
Delta-BHC	ND < 60	ND < 55	ND < 56	ND < 55	ND < 55
Heptachlor Epoxide	ND < 15	ND < 14	ND < 14	ND < 14	ND < 14
Endosulfan I	ND < 60	ND < 55	ND < 56	ND < 55	ND < 55

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**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-2 4-6	SB-40 15-16	SB-41 16-17	SB-42 15-16	SB-43 15-16
4,4-DDE	ND < 24	ND < 22	ND < 23	ND < 22	ND < 22
Dieldrin	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0
Endrin	ND < 60	ND < 55	ND < 56	ND < 55	ND < 55
4,4-DDD	ND < 36	ND < 33	ND < 34	ND < 33	ND < 33
Endosulfan II	ND < 60	ND < 55	ND < 56	ND < 55	ND < 55
4,4-DDT	ND < 24	ND < 22	ND < 23	ND < 22	ND < 22
Endrin Aldehyde	ND < 60	ND < 55	ND < 56	ND < 55	ND < 55
4,4-Methoxychlor	ND < 60	ND < 55	ND < 56	ND < 55	ND < 55
Endosulfan Sulfate	ND < 60	ND < 55	ND < 56	ND < 55	ND < 55
Endrin Ketone	ND < 60	ND < 55	ND < 56	ND < 55	ND < 55
Chlordane	ND < 48	ND < 44	ND < 45	ND < 44	ND < 44
Toxaphene	ND < 240	ND < 220	ND < 230	ND < 220	ND < 220
TCMX (Surr 1) 50-150	94	109	108	86	113
DCB (Surr 2) 50-150	78	108	112	85	107

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-10 0-2	SB-21 0-2	SB-21 4-5	SB-29 0-2	SB-29 4-6
CET ID	AE67587	AE67588	AE67589	AE67590	AE67591
Date Analyzed	4/23/2011	4/23/2011	4/23/2011	4/23/2011	4/23/2011
Dilution	1	1	1	1	1
Alpha-BHC	ND < 73	ND < 71	ND < 61	ND < 63	ND < 58
Gamma-BHC	ND < 29	ND < 29	ND < 25	ND < 25	ND < 23
Heptachlor	ND < 12	ND < 12	ND < 10	ND < 10	ND < 10
Aldrin	ND < 37	ND < 36	ND < 31	ND < 32	ND < 29
Beta-BHC	ND < 73	ND < 71	ND < 61	ND < 63	ND < 58
Delta-BHC	ND < 73	ND < 71	ND < 61	ND < 63	ND < 58
Heptachlor Epoxide	ND < 18	ND < 17	ND < 15	ND < 15	ND < 14
Endosulfan I	ND < 73	ND < 71	ND < 61	ND < 63	ND < 58
4,4-DDE	3600E	ND < 29	ND < 25	ND < 25	ND < 23
Dieldrin	ND < 6.0	ND < 6.0	ND < 5.0	ND < 5.0	ND < 5.0
Endrin	ND < 73	ND < 71	ND < 61	ND < 63	ND < 58
4,4-DDD	440E	ND < 43	ND < 37	ND < 38	ND < 35
Endosulfan II	ND < 73	ND < 71	ND < 61	ND < 63	ND < 58
4,4-DDT	6000E	51	ND < 25	ND < 25	ND < 23
Endrin Aldehyde	ND < 73	ND < 71	ND < 61	ND < 63	ND < 58
4,4-Methoxychlor	ND < 73	ND < 71	ND < 61	ND < 63	ND < 58
Endosulfan Sulfate	ND < 73	ND < 71	ND < 61	ND < 63	ND < 58
Endrin Ketone	ND < 73	ND < 71	ND < 61	ND < 63	ND < 58
Chlordane	ND < 58	ND < 57	ND < 49	ND < 50	ND < 46
Toxaphene	ND < 290	ND < 290	ND < 250	ND < 250	ND < 230
TCMX (Surr 1) 50-150	87	123	96	106	88
DCB (Surr 2) 50-150	100	94	86	106	86

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**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-9 0-2	SB-28 0-2	SB-20 0-2	SB-27 0-2	SB-27 4-6
CET ID	AE67592	AE67593	AE67594	AE67595	AE67596
Date Analyzed	4/26/2011	4/27/2011	4/26/2011	4/26/2011	4/26/2011
Dilution	1	1	1	1	1
Alpha-BHC	ND < 64	ND < 68	ND < 61	ND < 68	ND < 65
Gamma-BHC	ND < 26	ND < 28	ND < 25	ND < 28	ND < 26
Heptachlor	ND < 11	ND < 11	ND < 10	ND < 11	ND < 11
Aldrin	ND < 32	ND < 34	ND < 31	ND < 34	ND < 33
Beta-BHC	ND < 64	ND < 68	ND < 61	ND < 68	ND < 65
Delta-BHC	ND < 64	ND < 68	ND < 61	ND < 68	ND < 65
Heptachlor Epoxide	ND < 16	ND < 17	ND < 15	ND < 17	ND < 16
Endosulfan I	ND < 64	ND < 68	ND < 61	ND < 68	ND < 65
4,4-DDE	510E	ND < 28	ND < 25	ND < 28	ND < 26
Dieldrin	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0	ND < 6.0
Endrin	ND < 64	ND < 68	ND < 61	ND < 68	ND < 65
4,4-DDD	84	ND < 41	ND < 37	ND < 41	ND < 39
Endosulfan II	ND < 64	ND < 68	ND < 61	ND < 68	ND < 65
4,4-DDT	820E	ND < 28	ND < 25	ND < 28	ND < 26
Endrin Aldehyde	ND < 64	ND < 68	ND < 61	ND < 68	ND < 65
4,4-Methoxychlor	ND < 64	ND < 68	ND < 61	ND < 68	ND < 65
Endosulfan Sulfate	ND < 64	ND < 68	ND < 61	ND < 68	ND < 65
Endrin Ketone	ND < 64	ND < 68	ND < 61	ND < 68	ND < 65
Chlordane	ND < 51	ND < 55	ND < 49	ND < 55	ND < 52
Toxaphene	ND < 260	ND < 280	ND < 250	ND < 280	ND < 260
TCMX (Surr 1) 50-150	76	66	67	72	75
DCB (Surr 2) 50-150	67	68	53	59	59

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-19 0-2
CET ID	AE67597
Date Analyzed	4/25/2011
Dilution	1
Alpha-BHC	ND < 70
Gamma-BHC	ND < 28
Heptachlor	ND < 12
Aldrin	ND < 35
Beta-BHC	ND < 70
Delta-BHC	ND < 70
Heptachlor Epoxide	ND < 17
Endosulfan I	ND < 70
4,4-DDE	31
Dieldrin	ND < 6.0
Endrin	ND < 70
4,4-DDD	ND < 42
Endosulfan II	ND < 70
4,4-DDT	100
Endrin Aldehyde	ND < 70
4,4-Methoxychlor	ND < 70

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**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-19 0-2
Endosulfan Sulfate	ND < 70
Endrin Ketone	ND < 70
Chlordane	ND < 56
Toxaphene	ND < 280
TCMX (Surr 1) 50-150	77
DCB (Surr 2) 50-150	75

**EPA 8081B Chlorinated Dup Result [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-18 6-8	SB-27 4-6
CET ID	AE67563	AE67596
Date Analyzed	4/25/2011	4/27/2011
Dilution	1.0	1.0
Alpha-BHC	ND < 54	ND < 65
Gamma-BHC	ND < 22	ND < 26
Heptachlor	ND < 9.0	ND < 11
Aldrin	ND < 27	ND < 33
Beta-BHC	ND < 54	ND < 65
Delta-BHC	ND < 54	ND < 65
Heptachlor Epoxide	ND < 13	ND < 16
Endosulfan I	ND < 54	ND < 65
4,4-DDE	ND < 22	ND < 26
Dieldrin	ND < 5.0	ND < 6.0
Endrin	ND < 54	ND < 65
4,4-DDD	ND < 33	ND < 39
Endosulfan II	ND < 54	ND < 65
4,4-DDT	ND < 22	ND < 26
Endrin Aldehyde	ND < 54	ND < 65
4,4-Methoxychlor	ND < 54	ND < 65
Endosulfan Sulfate	ND < 54	ND < 65
Endrin Ketone	ND < 54	ND < 65
Chlordane	ND < 44	ND < 52
Toxaphene	ND < 220	ND < 260
TCMX (Surr 1) 50-150	80	73
DCB (Surr 2) 50-150	81	55

**EPA 8081B Chlorinated Pest. Dilu [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-10 0-2	SB-9 0-2
CET ID	AE67587	AE67592
Date Analyzed	4/26/2011	4/27/2011
Dilution	100	10
Alpha-BHC	ND < 5000	ND < 500
Gamma-BHC	ND < 2000	ND < 200
Heptachlor	ND < 1000	ND < 100
Aldrin	ND < 2500	ND < 250
Beta-BHC	ND < 2500	ND < 250
Delta-BHC	ND < 5000	ND < 500
Heptachlor Epoxide	ND < 1500	ND < 150
Endosulfan I	ND < 5000	ND < 500

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**EPA 8081B Chlorinated Pest. Dilu [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-10 0-2	SB-9 0-2
4,4-DDE	2600	530
Dieldrin	ND < 500	ND < 50
Endrin	ND < 5000	ND < 500
4,4-DDD	880	150
Endosulfan II	ND < 5000	ND < 500
4,4-DDT	2100	590
Endrin Aldehyde	ND < 5000	ND < 500
4,4-Methoxychlor	ND < 5000	ND < 500
Endosulfan Sulfate	ND < 5000	ND < 500
Endrin Ketone	ND < 5000	ND < 500
Chlordane	ND < 5000	ND < 500
Toxaphene	ND < 20000	ND < 2000
TCMX (Surr 1) 50-150	+	83
DCB (Surr 2) 50-150	+	91

+Surrogate diluted out

**Semi-Volatile Organics [EPA 8270D] Units: ug/kg (Dry Wt)**

Client ID	SB-18 0-2	SB-18 6-8	SB-15 0-2	SB-15 5-6	SB-17 0-2
CET ID	AE67562	AE67563	AE67564	AE67565	AE67566
Date Analyzed	4/22/2011	4/22/2011	4/22/2011	4/22/2011	4/22/2011
Dilution	1.0	1.0	1.0	1.0	1.0
Naphthalene	ND < 366	ND < 323	ND < 366	ND < 349	ND < 385
2-Methyl Naphthalene	ND < 366	ND < 323	ND < 366	ND < 349	ND < 385
Acenaphthylene	ND < 366	ND < 323	ND < 366	ND < 349	ND < 385
Acenaphthene	ND < 366	ND < 323	ND < 366	ND < 349	ND < 385
Fluorene	ND < 366	ND < 323	ND < 366	ND < 349	ND < 385
Phenanthrene	ND < 366	ND < 323	ND < 366	ND < 349	ND < 385
Anthracene	ND < 366	ND < 323	ND < 366	ND < 349	ND < 385
Fluoranthene	ND < 366	ND < 323	ND < 366	ND < 349	ND < 385
Pyrene	ND < 366	ND < 323	ND < 366	ND < 349	ND < 385
Benzo[a]anthracene	ND < 366	ND < 323	ND < 366	ND < 349	ND < 385
Chrysene	ND < 366	ND < 323	ND < 366	ND < 349	ND < 385
Benzo[b]fluoranthene	ND < 366	ND < 323	ND < 366	ND < 349	ND < 385
Benzo[k]fluoranthene	ND < 366	ND < 323	ND < 366	ND < 349	ND < 385
Benzo[a]pyrene	ND < 366	ND < 323	ND < 366	ND < 349	ND < 385
Indeno[1,2,3-cd]pyrene	ND < 366	ND < 323	ND < 366	ND < 349	ND < 385
Dibenz[a,h]anthracene	ND < 366	ND < 323	ND < 366	ND < 349	ND < 385
Benzo[g,h,i]perylene	ND < 366	ND < 323	ND < 366	ND < 349	ND < 385
Nitrobenzene-d5(Surr) 30-130	52.8	59.6	57.4	54.3	49.7
2-Fluorobiphenyl (Surr) 30-130	45	62.6	51.5	55.7	52.5
Terphenyl-d14 (Surr) 30-130	42.3	47.6	44.8	42.5	48.3

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**Semi-Volatile Organics [EPA 8270D] Units: ug/kg (Dry Wt)**

Client ID	SB-17A 0-2	SB-17 6-8	SB-16 0-2	SB-16 6-8	SB-40 15-16
CET ID	AE67567	AE67568	AE67569	AE67570	AE67583
Date Analyzed	4/22/2011	4/23/2011	4/23/2011	4/23/2011	4/23/2011
Dilution	1.0	1.0	1.0	1.0	1.0
Naphthalene	ND < 385	ND < 338	ND < 380	ND < 338	ND < 330
2-Methyl Naphthalene	ND < 385	ND < 338	ND < 380	ND < 338	ND < 330
Acenaphthylene	ND < 385	ND < 338	ND < 380	ND < 338	ND < 330
Acenaphthene	ND < 385	ND < 338	ND < 380	ND < 338	ND < 330
Fluorene	ND < 385	ND < 338	ND < 380	ND < 338	ND < 330
Phenanthrene	ND < 385	ND < 338	ND < 380	ND < 338	ND < 330
Anthracene	ND < 385	ND < 338	ND < 380	ND < 338	ND < 330
Fluoranthene	ND < 385	ND < 338	ND < 380	ND < 338	ND < 330
Pyrene	ND < 385	ND < 338	ND < 380	ND < 338	ND < 330
Benzo[a]anthracene	ND < 385	ND < 338	ND < 380	ND < 338	ND < 330
Chrysene	ND < 385	ND < 338	ND < 380	ND < 338	ND < 330
Benzo[b]fluoranthene	ND < 385	ND < 338	ND < 380	ND < 338	ND < 330
Benzo[k]fluoranthene	ND < 385	ND < 338	ND < 380	ND < 338	ND < 330
Benzo[a]pyrene	ND < 385	ND < 338	ND < 380	ND < 338	ND < 330
Indeno[1,2,3-cd]pyrene	ND < 385	ND < 338	ND < 380	ND < 338	ND < 330
Dibenz[a,h]anthracene	ND < 385	ND < 338	ND < 380	ND < 338	ND < 330
Benzo[g,h,i]perylene	ND < 385	ND < 338	ND < 380	ND < 338	ND < 330
Nitrobenzene-d5(Surr) 30-130	54.2	52.4	49.9	45.5	43.1
2-Fluorobiphenyl (Surr) 30-130	55	54.4	52.2	45.8	44.5
Terphenyl-d14 (Surr) 30-130	44.9	42.5	42.7	43.8	40.6

**Semi-Volatile Organics [EPA 8270D] Units: ug/kg (Dry Wt)**

Client ID	SB-41 16-17	SB-42 15-16	SB-43 15-16
CET ID	AE67584	AE67585	AE67586
Date Analyzed	4/23/2011	4/23/2011	4/23/2011
Dilution	1.0	1.0	1.0
Naphthalene	ND < 334	ND < 330	ND < 330
2-Methyl Naphthalene	ND < 334	ND < 330	ND < 330
Acenaphthylene	ND < 334	ND < 330	ND < 330
Acenaphthene	ND < 334	ND < 330	ND < 330
Fluorene	ND < 334	ND < 330	ND < 330
Phenanthrene	ND < 334	ND < 330	ND < 330
Anthracene	ND < 334	ND < 330	ND < 330
Fluoranthene	ND < 334	ND < 330	ND < 330
Pyrene	ND < 334	ND < 330	ND < 330
Benzo[a]anthracene	ND < 334	ND < 330	ND < 330
Chrysene	ND < 334	ND < 330	ND < 330
Benzo[b]fluoranthene	ND < 334	ND < 330	ND < 330
Benzo[k]fluoranthene	ND < 334	ND < 330	ND < 330
Benzo[a]pyrene	ND < 334	ND < 330	ND < 330
Indeno[1,2,3-cd]pyrene	ND < 334	ND < 330	ND < 330
Dibenz[a,h]anthracene	ND < 334	ND < 330	ND < 330
Benzo[g,h,i]perylene	ND < 334	ND < 330	ND < 330
Nitrobenzene-d5(Surr) 30-130	55.2	70	51.9
2-Fluorobiphenyl (Surr) 30-130	53.8	72.6	54
Terphenyl-d14 (Surr) 30-130	61.4	66.9	49.3

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**Conn. Extractable TPH Dup [CT DEP] Units: mg/kg (Dry Wt)**

Client ID	SB-43 15-16
CET ID	AE67586
Date Analyzed	4/23/2011
Dilution	1.0
ETPH	ND < 55
Octacosane (surr)	109

**Conn. Extractable TPH [CT DEP] Units: mg/kg (Dry Wt)**

Client ID	SB-18 0-2	SB-18 6-8	SB-15 0-2	SB-15 5-6	SB-17 0-2
CET ID	AE67562	AE67563	AE67564	AE67565	AE67566
Date Analyzed	4/23/2011	4/23/2011	4/23/2011	4/23/2011	4/23/2011
Dilution	1.0	1.0	1.0	1.0	1.0
ETPH	ND < 61	ND < 54	ND < 61	ND < 59	ND < 65
Octacosane (surr) 50-150	100	106	117	104	102

**Conn. Extractable TPH [CT DEP] Units: mg/kg (Dry Wt)**

Client ID	SB-17A 0-2	SB-17 6-8	SB-16 0-2	SB-16 6-8	SB-40 15-16
CET ID	AE67567	AE67568	AE67569	AE67570	AE67583
Date Analyzed	4/23/2011	4/23/2011	4/23/2011	4/23/2011	4/23/2011
Dilution	1.0	1.0	1.0	1.0	1.0
ETPH	ND < 65	ND < 57	ND < 64	ND < 57	ND < 55
Octacosane (surr) 50-150	109	112	124	111	103

**Conn. Extractable TPH [CT DEP] Units: mg/kg (Dry Wt)**

Client ID	SB-41 16-17	SB-42 15-16	SB-43 15-16
CET ID	AE67584	AE67585	AE67586
Date Analyzed	4/23/2011	4/23/2011	4/23/2011
Dilution	1.0	1.0	1.0
ETPH	ND < 56	ND < 55	ND < 55
Octacosane (surr) 50-150	95.9	113	106

**Volatile Organics [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB-18 0-2	SB-18 6-8	SB-15 0-2	SB-15 5-6	SB-17 0-2
CET ID	AE67562	AE67563	AE67564	AE67565	AE67566
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011
Dilution	1.8	2.0	1.9	1.5	1.7
Dichlorodifluoromethane	ND < 17	ND < 17	ND < 18	ND < 13	ND < 17
Chloromethane	ND < 11	ND < 11	ND < 12	ND < 9.0	ND < 12
Vinyl Chloride	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Bromomethane	ND < 11	ND < 11	ND < 12	ND < 9.0	ND < 12
Chloroethane	ND < 11	ND < 11	ND < 12	ND < 9.0	ND < 12
Acetone	ND < 160	ND < 160	ND < 170	ND < 130	ND < 170
Acrylonitrile	ND < 9.0	ND < 9.0	ND < 10	ND < 7.0	ND < 9.0

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**Volatile Organics [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB-18 0-2	SB-18 6-8	SB-15 0-2	SB-15 5-6	SB-17 0-2
Trichlorofluoromethane	ND < 44	ND < 44	ND < 46	ND < 35	ND < 45
Trichlorotrifluoroethane	ND < 44	ND < 44	ND < 46	ND < 35	ND < 45
1,1-Dichloroethene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Methylene Chloride	ND < 55	ND < 55	ND < 58	ND < 43	ND < 56
Carbon Disulfide	ND < 11	ND < 11	ND < 12	ND < 9.0	ND < 12
Methyl-t-Butyl Ether (MTBE)	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
trans-1,2-Dichloroethene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
1,1-Dichloroethane	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
2-Butanone (MEK)	ND < 28	ND < 28	ND < 29	ND < 22	ND < 28
2,2-Dichloropropane	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
cis-1,2-Dichloroethene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Chloroform	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Tetrahydrofuran	ND < 28	ND < 28	ND < 29	ND < 22	ND < 28
1,1,1-Trichloroethane	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Carbon Tetrachloride	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
1,1-Dichloropropene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Benzene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
1,2-Dichloroethane	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Methyl Isobutyl Ketone	ND < 28	ND < 28	ND < 29	ND < 22	ND < 28
Trichloroethene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
1,2-Dichloropropane	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Dibromomethane	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Bromodichloromethane	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
2-Hexanone	ND < 28	ND < 28	ND < 29	ND < 22	ND < 28
cis-1,3-Dichloropropene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Toluene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
trans-1,3-Dichloropropene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
1,1,2-Trichloroethane	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Tetrachloroethene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
1,3-Dichloropropane	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Dibromochloromethane	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
1,2-Dibromoethane	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
trans-1,4-Dichloro-2-Butene	ND < 28	ND < 28	ND < 29	ND < 22	ND < 28
Chlorobenzene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
1,1,1,2-Tetrachloroethane	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Ethylbenzene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
m+p Xylenes	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
o-Xylene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Styrene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Bromoform	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Isopropylbenzene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
1,1,2,2-Tetrachloroethane	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Bromobenzene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
1,2,3-Trichloropropane	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
n-Propylbenzene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
2-Chlorotoluene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
4-Chlorotoluene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
1,3,5-Trimethylbenzene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
tert-Butylbenzene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
1,2,4-Trimethylbenzene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
sec-Butylbenzene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
1,3-Dichlorobenzene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
4-Isopropyltoluene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0

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**Volatile Organics [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB-18 0-2	SB-18 6-8	SB-15 0-2	SB-15 5-6	SB-17 0-2
1,4-Dichlorobenzene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
1,2-Dichlorobenzene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
n-Butylbenzene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
1,2-Dibromo-3-Chloropropane	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
1,2,4-Trichlorobenzene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Hexachlorobutadiene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
Naphthalene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
1,2,3-Trichlorobenzene	ND < 6.0	ND < 6.0	ND < 6.0	ND < 5.0	ND < 6.0
1,2 Dichloroethane-d4 (SURR) 70-130	97.1	97.9	91.9	100	93
toluene-d8 (SURR) 70-130	101	100	100	103	100
4-bromofluorobenzene (SURR) 70-130	93.7	95	95.5	97.2	95.6

**Volatile Organics [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB-17A 0-2	SB-17 6-8	SB-16 0-2	SB-16 6-8	SB-40 15-16
CET ID	AE67567	AE67568	AE67569	AE67570	AE67583
Date Analyzed	4/19/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Dilution	1.7	1.7	1.9	1.7	1.8
Dichlorodifluoromethane	ND < 16	ND < 15	ND < 18	ND < 15	ND < 15
Chloromethane	ND < 11	ND < 10	ND < 12	ND < 10	ND < 10
Vinyl Chloride	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Bromomethane	ND < 11	ND < 10	ND < 12	ND < 10	ND < 10
Chloroethane	ND < 11	ND < 10	ND < 12	ND < 10	ND < 10
Acetone	ND < 160	ND < 140	ND < 180	ND < 150	ND < 150
Acrylonitrile	ND < 9.0	ND < 8.0	ND < 10	ND < 8.0	ND < 8.0
Trichlorofluoromethane	ND < 43	ND < 38	ND < 48	ND < 39	ND < 39
Trichlorotrifluoroethane	ND < 43	ND < 38	ND < 48	ND < 39	ND < 39
1,1-Dichloroethene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Methylene Chloride	ND < 54	ND < 48	ND < 59	ND < 49	ND < 49
Carbon Disulfide	ND < 11	ND < 10	ND < 12	ND < 10	ND < 10
Methyl-t-Butyl Ether (MTBE)	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
trans-1,2-Dichloroethene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,1-Dichloroethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
2-Butanone (MEK)	ND < 27	ND < 24	ND < 30	ND < 25	ND < 25
2,2-Dichloropropane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
cis-1,2-Dichloroethene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Chloroform	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Tetrahydrofuran	ND < 27	ND < 24	ND < 30	ND < 25	ND < 25
1,1,1-Trichloroethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Carbon Tetrachloride	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,1-Dichloropropene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Benzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2-Dichloroethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Methyl Isobutyl Ketone	ND < 27	ND < 24	ND < 30	ND < 25	ND < 25
Trichloroethene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2-Dichloropropane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Dibromomethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Bromodichloromethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
2-Hexanone	ND < 27	ND < 24	ND < 30	ND < 25	ND < 25
cis-1,3-Dichloropropene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Toluene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0

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Project: Bartlett Arboretum, Stamford

**Volatile Organics [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB-17A 0-2	SB-17 6-8	SB-16 0-2	SB-16 6-8	SB-40 15-16
trans-1,3-Dichloropropene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,1,2-Trichloroethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Tetrachloroethene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,3-Dichloropropane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Dibromochloromethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2-Dibromoethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
trans-1,4-Dichloro-2-Butene	ND < 27	ND < 24	ND < 30	ND < 25	ND < 25
Chlorobenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,1,1,2-Tetrachloroethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Ethylbenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
m+p Xylenes	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
o-Xylene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Styrene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Bromoform	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Isopropylbenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,1,2,2-Tetrachloroethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Bromobenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2,3-Trichloropropane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
n-Propylbenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
2-Chlorotoluene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
4-Chlorotoluene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,3,5-Trimethylbenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
tert-Butylbenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2,4-Trimethylbenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
sec-Butylbenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,3-Dichlorobenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
4-Isopropyltoluene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,4-Dichlorobenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2-Dichlorobenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
n-Butylbenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2-Dibromo-3-Chloropropane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2,4-Trichlorobenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Hexachlorobutadiene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Naphthalene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2,3-Trichlorobenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2 Dichloroethane-d4 (SURR) 70-130	93.8	91.6	96.1	97.4	93.9
toluene-d8 (SURR) 70-130	101	101	102	101	102
4-bromofluorobenzene (SURR) 70-130	94.7	97.4	93	98.2	96.5

**Volatile Organics [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB-41 16-17	SB-42 15-16	SB-43 15-16	SB041511
CET ID	AE67584	AE67585	AE67586	AE67598
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Dilution	1.8	1.9	1.8	1.0
Dichlorodifluoromethane	ND < 15	ND < 16	ND < 15	ND < 8.0
Chloromethane	ND < 10	ND < 11	ND < 10	ND < 5.0
Vinyl Chloride	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Bromomethane	ND < 10	ND < 11	ND < 10	ND < 5.0
Chloroethane	ND < 10	ND < 11	ND < 10	ND < 5.0
Acetone	ND < 150	ND < 160	ND < 150	ND < 75

CET#: 11040415r

Project: Bartlett Arboretum, Stamford

**Volatile Organics [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB-41 16-17	SB-42 15-16	SB-43 15-16	SB041511
Acrylonitrile	ND < 8.0	ND < 9.0	ND < 8.0	ND < 4.0
Trichlorofluoromethane	ND < 40	ND < 42	ND < 40	ND < 20
Trichlorotrifluoroethane	ND < 40	ND < 42	ND < 40	ND < 20
1,1-Dichloroethene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Methylene Chloride	ND < 50	ND < 52	ND < 50	ND < 25
Carbon Disulfide	ND < 10	ND < 11	ND < 10	ND < 5.0
Methyl-t-Butyl Ether (MTBE)	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
trans-1,2-Dichloroethene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,1-Dichloroethane	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
2-Butanone (MEK)	ND < 25	ND < 26	ND < 25	ND < 13
2,2-Dichloropropane	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
cis-1,2-Dichloroethene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Chloroform	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Tetrahydrofuran	ND < 25	ND < 26	ND < 25	ND < 13
1,1,1-Trichloroethane	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Carbon Tetrachloride	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,1-Dichloropropene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Benzene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,2-Dichloroethane	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Methyl Isobutyl Ketone	ND < 25	ND < 26	ND < 25	ND < 13
Trichloroethene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,2-Dichloropropane	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Dibromomethane	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Bromodichloromethane	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
2-Hexanone	ND < 25	ND < 26	ND < 25	ND < 13
cis-1,3-Dichloropropene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Toluene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
trans-1,3-Dichloropropene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,1,2-Trichloroethane	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Tetrachloroethene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,3-Dichloropropane	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Dibromochloromethane	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,2-Dibromoethane	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
trans-1,4-Dichloro-2-Butene	ND < 25	ND < 26	ND < 25	ND < 13
Chlorobenzene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,1,1,2-Tetrachloroethane	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Ethylbenzene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
m+p Xylenes	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
o-Xylene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Styrene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Bromoform	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Isopropylbenzene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,1,2,2-Tetrachloroethane	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Bromobenzene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,2,3-Trichloropropane	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
n-Propylbenzene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
2-Chlorotoluene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
4-Chlorotoluene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,3,5-Trimethylbenzene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
tert-Butylbenzene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,2,4-Trimethylbenzene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
sec-Butylbenzene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,3-Dichlorobenzene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0

CET#: 11040415r

Project: Bartlett Arboretum, Stamford

**Volatile Organics [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB-41 16-17	SB-42 15-16	SB-43 15-16	SB041511
4-Isopropyltoluene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,4-Dichlorobenzene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,2-Dichlorobenzene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
n-Butylbenzene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,2-Dibromo-3-Chloropropane	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,2,4-Trichlorobenzene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Hexachlorobutadiene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
Naphthalene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,2,3-Trichlorobenzene	ND < 5.0	ND < 6.0	ND < 5.0	ND < 3.0
1,2 Dichloroethane-d4 (SURR) 70-130	96.4	92.3	93.6	95
toluene-d8 (SURR) 70-130	103	100	101	101
4-bromofluorobenzene (SURR) 70-130	96.8	97.6	97.4	95.5

**Vol. Org. Dup Result [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB041511
CET ID	AE67598
Date Analyzed	4/21/2011
Dilution	1.0
Dichlorodifluoromethane	ND < 8.0
Chloromethane	ND < 5.0
Vinyl Chloride	ND < 3.0
Bromomethane	ND < 5.0
Chloroethane	ND < 5.0
Acetone	ND < 75
Acrylonitrile	ND < 4.0
Trichlorofluoromethane	ND < 8.0
Trichlorotrifluoroethane	ND < 15
1,1-Dichloroethene	ND < 3.0
Methylene Chloride	ND < 25
Carbon Disulfide	ND < 5.0
Methyl-t-Butyl Ether (MTBE)	ND < 3.0
trans-1,2-Dichloroethene	ND < 3.0
1,1-Dichloroethane	ND < 3.0
2-Butanone (MEK)	ND < 13
2,2-Dichloropropane	ND < 3.0
cis-1,2-Dichloroethene	ND < 3.0
Chloroform	ND < 3.0
Tetrahydrofuran	ND < 13
1,1,1-Trichloroethane	ND < 3.0
Carbon Tetrachloride	ND < 3.0
1,1-Dichloropropene	ND < 3.0
Benzene	ND < 3.0
1,2-Dichloroethane	ND < 3.0
Methyl Isobutyl Ketone	ND < 13
Trichloroethene	ND < 3.0
1,2-Dichloropropane	ND < 3.0
Dibromomethane	ND < 3.0
Bromodichloromethane	ND < 3.0
2-Hexanone	ND < 13
cis-1,3-Dichloropropene	ND < 3.0

CET#: 11040415r

Project: Bartlett Arboretum, Stamford

**Vol. Org. Dup Result [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB041511
Toluene	ND < 3.0
trans-1,3-Dichloropropene	ND < 3.0
1,1,2-Trichloroethane	ND < 3.0
Tetrachloroethene	ND < 3.0
1,3-Dichloropropane	ND < 3.0
Dibromochloromethane	ND < 3.0
1,2-Dibromoethane	ND < 3.0
trans-1,4-Dichloro-2-Butene	ND < 13
Chlorobenzene	ND < 3.0
1,1,1,2-Tetrachloroethane	ND < 3.0
Ethylbenzene	ND < 3.0
m+p Xylenes	ND < 3.0
o-Xylene	ND < 3.0
Styrene	ND < 3.0
Bromoform	ND < 3.0
Isopropylbenzene	ND < 3.0
1,1,2,2-Tetrachloroethane	ND < 3.0
Bromobenzene	ND < 3.0
1,2,3-Trichloropropane	ND < 3.0
n-Propylbenzene	ND < 3.0
2-Chlorotoluene	ND < 3.0
4-Chlorotoluene	ND < 3.0
1,3,5-Trimethylbenzene	ND < 3.0
tert-Butylbenzene	ND < 3.0
1,2,4-Trimethylbenzene	ND < 3.0
sec-Butylbenzene	ND < 3.0
1,3-Dichlorobenzene	ND < 3.0
4-Isopropyltoluene	ND < 3.0
1,4-Dichlorobenzene	ND < 3.0
1,2-Dichlorobenzene	ND < 3.0
n-Butylbenzene	ND < 3.0
1,2-Dibromo-3-Chloropropane	ND < 3.0
1,2,4-Trichlorobenzene	ND < 3.0
Hexachlorobutadiene	ND < 3.0
Naphthalene	ND < 3.0
1,2,3-Trichlorobenzene	ND < 3.0
1,2 Dichloroethane-d4 (SURR) 70-130	105
toluene-d8 (SURR) 70-130	101
4-bromofluorobenzene (SURR) 70-130	97

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

Sincerely,



David Ditta  
Laboratory Director

CET#: 11040415r

Project: Bartlett Arboretum, Stamford

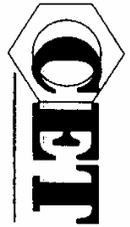
Report Comments:

1. ND is None Detected at the specified detection limit.
2. All analyses were performed in house unless a Reference Laboratory is listed.
3. Samples will be disposed of 30 days after the report date.
4. Sample Result Flags:
  - E - The result is estimated, above the calibration range.
  - H - The surrogate recovery is above the control limits.
  - L - The surrogate recovery is below the control limits.
  - B - The compound was detected in the laboratory blank.
  - P - The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
  - D - The RPD between the sample and the sample duplicate is high. Sample homogeneity may be a problem.
5. All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

Revision: Original report dated 4/28/11; Changed Metals analysis from RCRA 8 Metals list to CT DEP 15 Metals list per client request.

CET#: 11040415r

Project: Bartlett Arboretum, Stamford



COMPLETE ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

CET # 11040415r

Volatile Soils Only:

Date and Time in Freezer

Client: 4/16/11 / 0815

CET: 4/16/11 12:00

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

Sample ID	Date/Time	Matrix A-Air S-Soil W-Water DM=Drinking W. C=Cassette Solid Wipe Other (Specify)	Turnaround Time ** (check one)				Organics												Metals (check all that apply)				TOTAL # OF CONT.	NOTE #			
			Same Day *	Next Day *	2-3 Days *	Std (5-7 Days)	8260 CT List	8260 Aromatics	8260 Halogens	SPLP 8260	TCLP 8260	CT ETPH	8270 CT List	8270 PNAs	PCBs	Pesticides	Herbicides	13 Priority Poll	8 RCRA	TOTAL RCRA	TCLP	SPLP			Field Filtered	Lab To Filter	Additional Analysis
SB-18 (0-2)	4/15/11 / 0935	S				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4	
SB-18 (0-8)	4/15/11 / 0940	S				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4	
SB-15 (0-2)	4/15/11 / 0950	S				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4	
SB-15 (5-10)	4/15/11 / 0955	S				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4	
SB-17 (0-2)	4/15/11 / 1015	S				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4	
SB-17A (0-2)	4/15/11 / 1025	S				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4	
SB-17 (0-8)	4/15/11 / 1035	S				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4	
SB-10 (0-2)	4/15/11 / 1100	S				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4	
SB-10 (0-8)	4/15/11 / 1105	S				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4	
SB-13 (0-2)	4/15/11 / 1115	S				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	
PRESERVATIVE (Cl-HCl, N-HNO <sub>3</sub> , S-H <sub>2</sub> SO <sub>4</sub> , Na-NaOH, G-Cool, O-Other)																											
CONTAINER TYPE (P-Plastic, G-Glass, V-Vial, O-Other)																											
Soil VOCs Only (M-MeOH B-Sodium W-Water F-Empty E-Emptore)																											
REQUISITED BY: <i>TRC</i>	DATE/TIME: <i>4/16/11</i>	RECEIVED BY: <i>TRC</i>	DATE/TIME: <i>4/16/11</i>																								
RELINQUISHED BY: <i>Chris Lindahl</i>	DATE/TIME: <i>4/16/11</i>	RECEIVED BY: <i>Chris Lindahl</i>	DATE/TIME: <i>4/16/11</i>																								
RELINQUISHED BY: <i>Chris Lindahl</i>	DATE/TIME: <i>4/16/11</i>	RECEIVED BY: <i>Chris Lindahl</i>	DATE/TIME: <i>4/16/11</i>																								
<b>Client/Reporting Information</b>																											
Company Name: <i>TRC</i>																											
Address: <i>21 Griffin Road North</i>																											
City: <i>Stamford</i> State: <i>CT</i> Zip: <i>06895</i>																											
Report to: <i>Chris Lindahl</i> E-mail: <i>clindahl@trcsolutions.com</i>																											
Phone #: <i>800-298-6267</i> Fax #: <i>800-298-6899</i>																											
* Additional charge may apply. ** TAT begins when the samples are received at the Lab and all issues are resolved. TAT for samples received after 3 p.m. will start on the next business day. REV: 7/1/10																											

NOTES:  
Please use SPX extraction for all soil samples.  
Hold for possible RSR metals & pesticide analysis.

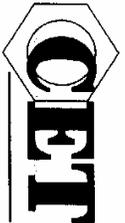
Project Contact: *Chris Lindahl* PO #:  
Project #: *11040415r*  
Collector(s): *K. Sheffield*

Location: *Stamford, CT*  
QA/QC:  Std  Site Specific (MS/MSD) \*  
Data Report:  Email  PDF  Excel  Other  
RSR Reporting Limits (check one):  GA  GB  SWP  Other (Specify)  
Lab Use: Evidence of Cooling: *430* °C or N  
Temp Upon Receipt: *430* °C  
SHEET *29* OF *37*



CET#: 11040415r

Project: Bartlett Arboretum, Stamford



COMPLETE ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

Volatile Soils Only: 11040415  
 Date and Time in Freezer  
 Client: 4/12/11 / 0815  
 CET: 4/18/11 / 0710

80 Lupes Drive Stratford, CT 06615 Tel: (203) 377-9994 Fax: (203) 377-9952 e-mail: cet@cetlabs.com		Matrix A=Air S=Soil W=Water DW=Drinking W. C=Cassette Solid Other (Specify)		Turnaround Time ** (check one) Same Day 24 Hours 2-3 Days Standard		Organics 8260 CT List 8260 Aromatics 8260 Halogens SPLP 8260 TCLP 8260 TPH (418.1) CT ETPH 8270 CT List 8270 PNAs PCBs Pesticides 13 Priority Poll 8 RCRA TOTAL PCRA8 TCLP SPLP Field Filtered Lab To Filter PAHs										Metals (check all that apply) Additional Analysis		TOTAL # OF CONT. NOTE #							
Sample ID	Date/Time	Matrix	Turnaround Time **	8260 CT List	8260 Aromatics	8260 Halogens	SPLP 8260	TCLP 8260	TPH (418.1)	CT ETPH	8270 CT List	8270 PNAs	PCBs	Pesticides	13 Priority Poll	8 RCRA	TOTAL PCRA8	TCLP	SPLP	Field Filtered	Lab To Filter	PAHs	TOTAL # OF CONT.	NOTE #	
SB-2(4-4)	4/15/11/1315	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1		
SB-40(15-16)	4/15/11/1430	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4		
SB-41(16-17)	4/15/11/1500	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4		
SB-42(15-16)	4/15/11/1530	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4		
SB-43(15-16)	4/15/11/1600	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4		
SB-10(0-2)	4/17/11/1143	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1		
SB-21(0-2)	4/17/11/1110	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1		
SB-21(4-5)	4/17/11/1115	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1		
SB-29(0-2)	4/18/11/1000	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1		
SB-29(4-6)	4/18/11/1065	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1		
PRESERVATIVE (G-HCl, N-HNO <sub>3</sub> , S-H <sub>2</sub> SO <sub>4</sub> , Na-NaOH, G-Cool, O-Other)																								22	
CONTAINER TYPE (P-Plastic, G-Glass, V-Vial, O-Other)																									
Soil VOCs Only (M=MeOH B= Bisulfite W=Water F= Empty E=Encore)																									
REMOVED BY: <i>[Signature]</i>	DATE/TIME: 4/16/11/0815	RECEIVED BY: <i>[Signature]</i>	DATE/TIME: 4/18/11/1345																						
REMOVED BY: <i>[Signature]</i>	DATE/TIME: 4/18/11/1510	RECEIVED BY: <i>[Signature]</i>	DATE/TIME: 4/18/11/1510																						
Client / Reporting Information		Project Information		NOTES: SPLP extraction for all soil samples. Hold for possible RSP metals & pesticide analysis																					
Company Name: <i>REC</i>		Project Contact: <i>Chris Lindahl</i>																							
Address: <i>21 Giffen Road North</i>		Project: <i>Bartlett Arboretum</i>																							
City: <i>Windsor</i>		Location: <i>Stamford, CT</i>																							
State: <i>CT</i>		Collector(s): <i>K. Shaffield / C. Lindahl</i>																							
Zip: <i>06095</i>		QA/QC: <input type="checkbox"/> Std <input type="checkbox"/> Site Specific (MSMSD) *																							
Report To: <i>Chris Lindahl</i>		Data Report: <input type="checkbox"/> Email <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> Excel <input type="checkbox"/> Other																							
Phone #: <i>860-298-6207</i>		RSR Reporting Limits (check one) <input checked="" type="checkbox"/> RCP Pkg * <input checked="" type="checkbox"/> DQAD																							
Fax #: <i>860-298-6399</i>		Lab Use: <input type="checkbox"/> Evidence of Cooling <input checked="" type="checkbox"/> Temp Upon Receipt <input type="checkbox"/>																							
		SHEET <i>430</i> OF <i>430</i>																							

\* Additional charge may apply. \*\* TAT begins when the samples are received at the Lab. TAT for samples received after 3 p.m. will start on the next business day.





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Stratford, CT 06615

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Client: Mr. Chris Lindahl  
TRC Environmental Consultants  
21 Griffin Rd., North  
Windsor, CT 06095

# Analytical Report

## CET # 11040408r

**Report Date: May 3, 2011**  
**Client Project: Bartlett Abrotorium, Stamford**



Connecticut Laboratory Certification PH 0116  
Massachusetts Laboratory Certification M-CT903  
Rhode Island Certification 199

New York Certification 11982  
Florida Laboratory Certification E871064

CET#: 11040408r

Project: Bartlett Abrotorium, Stamford

**SAMPLE SUMMARY:**

This report contains analytical data associated with the following samples only:

CETID	Client Sample ID	Matrix	Collection Date	Collection Time	Receipt Date
AE67522	SB-25 0-2	Soil	4/18/2011	11:45	04/18/2011
AE67523	SB-24 0-2	Soil	4/18/2011	11:50	04/18/2011
AE67524	SB-26 0-2	Soil	4/18/2011	12:00	04/18/2011
AE67525	TW-17	Water	4/18/2011	12:15	04/18/2011
AE67526	TW-16	Water	4/18/2011	12:45	04/18/2011
AE67527	FB041811	Water	4/18/2011	13:00	04/18/2011

Sample temperature upon receipt was 3.1 degrees C

**PREP ANALYSIS:****Acid Digestion of Waters [EPA 3005A]**

Client ID	TW-17	TW-16	FB041811
CET ID	AE67525	AE67526	AE67527
Date Analyzed	4/22/2011	4/22/2011	4/22/2011

**Acid Digestion [EPA 3050B]**

Client ID	SB-25 0-2	SB-24 0-2	SB-26 0-2
CET ID	AE67522	AE67523	AE67524
Date Analyzed	4/19/2011	4/19/2011	4/19/2011

**Liquid-Liquid Extraction EPH [EPA 3510C]**

Client ID	TW-17	TW-16	FB041811
CET ID	AE67525	AE67526	AE67527
Date Analyzed	4/23/2011	4/23/2011	4/23/2011

**Liquid-Liquid Ext Pest. [EPA 3510C]**

Client ID	TW-17	TW-16	FB041811
CET ID	AE67525	AE67526	AE67527
Date Analyzed	4/19/2011	4/19/2011	4/19/2011

**Accelerated Solvent Ext.- Pest [EPA 3545]**

Client ID	SB-25 0-2	SB-24 0-2	SB-26 0-2
CET ID	AE67522	AE67523	AE67524
Date Analyzed	4/20/2011	4/20/2011	4/20/2011

**Field Filtration for Diss Metals [Dissolved]**

Client ID	TW-17	TW-16	FB041811
CET ID	AE67525	AE67526	AE67527
Date Analyzed	4/25/2011	4/25/2011	4/25/2011
Field Filtration for Diss Metals	Field Filtered	Field Filtered	Field Filtered

CET#: 11040408r

Project: Bartlett Abrotorium, Stamford

**Liquid-Liquid Extraction [EPA 3510C]**

Client ID	TW-17	TW-16	FB041811
CET ID	AE67525	AE67526	AE67527
Date Analyzed	4/22/2011	4/22/2011	4/22/2011

**SPLP, Metals [EPA 1312]**

Client ID	SB-25 0-2	SB-24 0-2	SB-26 0-2
CET ID	AE67522	AE67523	AE67524
Date Analyzed	4/19/2011	4/19/2011	4/19/2011

**SPLP Extraction , Pesticides [EPA 1312]**

Client ID	SB-25 0-2	SB-24 0-2	SB-26 0-2
CET ID	AE67522	AE67523	AE67524
Date Analyzed	4/19/2011	4/19/2011	4/19/2011

**ANALYSIS:****Mercury Dup Result [EPA 7470] Units: mg/l**

Client ID	TW-17
CET ID	AE67525
Date Analyzed	4/23/2011
Mercury Dup Result	ND < 0.0004

**Total Mercury [EPA 7470A] Units: mg/l**

Client ID	TW-17	TW-16	FB041811
CET ID	AE67525	AE67526	AE67527
Date Analyzed	4/23/2011	4/23/2011	4/23/2011
Total Mercury	ND < 0.0004	ND < 0.0004	ND < 0.0004

**Dissolved Mercury [EPA 200.8] Units: mg/l**

Client ID	TW-17	TW-16	FB041811
CET ID	AE67525	AE67526	AE67527
Date Analyzed	4/25/2011	4/25/2011	4/25/2011
Dissolved Mercury	ND < 0.0004	ND < 0.0004	ND < 0.0004

**Total Mercury [EPA 7471B] Units: mg/kg (Dry Wt)**

Client ID	SB-25 0-2	SB-24 0-2	SB-26 0-2
CET ID	AE67522	AE67523	AE67524
Date Analyzed	4/20/2011	4/20/2011	4/20/2011
Total Mercury	ND < 0.30	ND < 0.30	ND < 0.30

**Total Solids [EPA 160.3 mo] Units: percent**

Client ID	SB-25 0-2	SB-24 0-2	SB-26 0-2
CET ID	AE67522	AE67523	AE67524
Date Analyzed	4/21/2011	4/21/2011	4/21/2011
Total Solids	75	74	68

CET#: 11040408r

Project: Bartlett Abrotorium, Stamford

**Total Metals [EPA 200.7] Units: mg/l**

Client ID	TW-17	TW-16	FB041811
CET ID	AE67525	AE67526	AE67527
Date Analyzed	4/22/2011	4/22/2011	4/22/2011
Dilution	1.0	1.0	1.0
Lead	0.013	0.25	ND < 0.013
Selenium	ND < 0.01	ND < 0.01	ND < 0.01
Cadmium	ND < 0.005	ND < 0.005	ND < 0.005
Chromium	ND < 0.05	0.35	ND < 0.05
Arsenic	ND < 0.004	0.026	ND < 0.004
Barium	0.093	1.2	ND < 0.05
Silver	ND < 0.012	ND < 0.012	ND < 0.012
Copper	ND < 0.04	0.38	ND < 0.04
Nickel	ND < 0.05	0.28	ND < 0.05
Zinc	0.059	0.62	ND < 0.02
Beryllium	ND < 0.004	ND < 0.004	ND < 0.004
Antimony	ND < 0.05	ND < 0.05	ND < 0.05
Thallium	ND < 0.05	ND < 0.05	ND < 0.05
Vanadium	ND < 0.05	0.35	ND < 0.05

**Total Metals [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-25 0-2	SB-24 0-2	SB-26 0-2
CET ID	AE67522	AE67523	AE67524
Date Analyzed	4/19/2011	4/19/2011	4/19/2011
Dilution	1.0	1.0	1.0
Lead	39	100	72
Selenium	ND < 1.5	ND < 1.5	ND < 1.5
Cadmium	ND < 1.0	1.3	ND < 1.0
Chromium	25	39	23
Arsenic	9.1	5.9	7.5
Barium	52	80	36
Silver	ND < 3.0	ND < 3.0	ND < 3.0
Copper	16	27	22
Nickel	13	16	12
Zinc	54	120	49
Beryllium	ND < 1.5	ND < 1.5	ND < 1.5
Antimony	ND < 3.0	ND < 3.0	ND < 3.0
Thallium	ND < 3.0	ND < 3.0	ND < 3.0
Vanadium	37	36	45

**Dissolved Metals [EPA 200.8] Units: mg/l**

Client ID	TW-17	TW-16	FB041811
CET ID	AE67525	AE67526	AE67527
Date Analyzed	4/25/2011	4/25/2011	4/25/2011
Dilution	1.0	1.0	1.0
Lead	ND < 0.013	ND < 0.013	ND < 0.013
Selenium	ND < 0.01	ND < 0.01	ND < 0.01
Cadmium	ND < 0.005	ND < 0.005	ND < 0.005
Chromium	ND < 0.05	ND < 0.05	ND < 0.05
Arsenic	ND < 0.004	ND < 0.004	ND < 0.004

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Project: Bartlett Abrotorium, Stamford

**Dissolved Metals [EPA 200.8] Units: mg/l**

Client ID	TW-17	TW-16	FB041811
Barium	ND < 0.05	0.082	ND < 0.05
Silver	ND < 0.012	ND < 0.012	ND < 0.012
Copper	ND < 0.04	ND < 0.04	ND < 0.04
Nickel	ND < 0.05	ND < 0.05	ND < 0.05
Zinc	ND < 0.02	ND < 0.02	ND < 0.02
Beryllium	ND < 0.004	ND < 0.004	ND < 0.004
Antimony	ND < 0.006	ND < 0.006	ND < 0.006
Thallium	ND < 0.005	ND < 0.005	ND < 0.005
Vanadium	ND < 0.05	ND < 0.05	ND < 0.05

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/l**

Client ID	TW-17	TW-16	FB041811
CET ID	AE67525	AE67526	AE67527
Date Analyzed	4/20/2011	4/20/2011	4/20/2011
Dilution	1	1	1
Alpha-BHC	ND < 0.10	ND < 0.10	ND < 0.10
Gamma-BHC	ND < 0.10	ND < 0.10	ND < 0.10
Heptachlor	ND < 0.05	ND < 0.05	ND < 0.05
Aldrin	ND < 0.10	ND < 0.10	ND < 0.10
Beta-BHC	ND < 0.10	ND < 0.10	ND < 0.10
Delta-BHC	ND < 0.10	ND < 0.10	ND < 0.10
Heptachlor Epoxide	ND < 0.05	ND < 0.05	ND < 0.05
Endosulfan I	ND < 0.10	ND < 0.10	ND < 0.10
4,4-DDE	ND < 0.10	ND < 0.10	ND < 0.10
Dieldrin	ND < 0.002	ND < 0.002	ND < 0.002
Endrin	ND < 0.10	ND < 0.10	ND < 0.10
4,4-DDD	ND < 0.10	ND < 0.10	ND < 0.10
Endosulfan II	ND < 0.10	ND < 0.10	ND < 0.10
4,4-DDT	ND < 0.10	ND < 0.10	ND < 0.10
Endrin Aldehyde	ND < 0.10	ND < 0.10	ND < 0.10
4,4-Methoxychlor	ND < 0.10	ND < 0.10	ND < 0.10
Endosulfan Sulfate	ND < 0.10	ND < 0.10	ND < 0.10
Endrin Ketone	ND < 0.10	ND < 0.10	ND < 0.10
Chlordane	ND < 0.20	ND < 0.20	ND < 0.20
Toxaphene	ND < 0.80	ND < 0.80	ND < 0.80
TCMX (Surr 1) 50-150	35 L	45 L	63
DCB (Surr 2) 50-150	59	57	50

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-25 0-2	SB-24 0-2	SB-26 0-2
CET ID	AE67522	AE67523	AE67524
Date Analyzed	4/25/2011	4/25/2011	4/25/2011
Dilution	1	1	1
Alpha-BHC	ND < 67	ND < 68	ND < 74
Gamma-BHC	ND < 27	ND < 28	ND < 30
Heptachlor	ND < 11	ND < 11	ND < 12
Aldrin	ND < 34	ND < 34	ND < 37
Beta-BHC	ND < 67	ND < 68	ND < 74

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**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-25 0-2	SB-24 0-2	SB-26 0-2
Delta-BHC	ND < 67	ND < 68	ND < 74
Heptachlor Epoxide	ND < 16	ND < 17	ND < 18
Endosulfan I	ND < 67	ND < 68	ND < 74
4,4-DDE	1900E	6600E	140
Dieldrin	ND < 6.0	ND < 6.0	ND < 6.0
Endrin	ND < 67	ND < 68	ND < 74
4,4-DDD	420E	1900E	ND < 45
Endosulfan II	ND < 67	ND < 68	ND < 74
4,4-DDT	5100E	15000E	150
Endrin Aldehyde	ND < 67	ND < 68	ND < 74
4,4-Methoxychlor	ND < 67	ND < 68	ND < 74
Endosulfan Sulfate	ND < 67	ND < 68	ND < 74
Endrin Ketone	ND < 67	ND < 68	ND < 74
Chlordane	ND < 54	ND < 55	ND < 59
Toxaphene	ND < 270	ND < 280	ND < 300
TCMX (Surr 1) 50-150	76	110	126
DCB (Surr 2) 50-150	77	97	93

**EPA 8081B Chlorinated Pest. Dilu [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-25 0-2	SB-24 0-2
CET ID	AE67522	AE67523
Date Analyzed	4/27/2011	4/27/2011
Dilution	20	200
Alpha-BHC	ND < 1000	ND < 10000
Gamma-BHC	ND < 400	ND < 4000
Heptachlor	ND < 200	ND < 2000
Aldrin	ND < 500	ND < 5000
Beta-BHC	ND < 500	ND < 5000
Delta-BHC	ND < 1000	ND < 10000
Heptachlor Epoxide	ND < 300	ND < 3000
Endosulfan I	ND < 1000	ND < 10000
4,4-DDE	2100	5500
Dieldrin	ND < 100	ND < 1000
Endrin	ND < 1000	ND < 10000
4,4-DDD	860	3200
Endosulfan II	ND < 1000	ND < 10000
4,4-DDT	3400	7400
Endrin Aldehyde	ND < 1000	ND < 10000
4,4-Methoxychlor	ND < 1000	ND < 10000
Endosulfan Sulfate	ND < 1000	ND < 10000
Endrin Ketone	ND < 1000	ND < 10000
Chlordane	ND < 1000	ND < 10000
Toxaphene	ND < 4000	ND < 40000
TCMX (Surr 1) 50-150	106	+
DCB (Surr 2) 50-150	106	+

+Surrogate diluted out

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**Conn. Extractable TPH [CT DEP] Units: mg/l**

Client ID	TW-17	TW-16	FB041811
CET ID	AE67525	AE67526	AE67527
Date Analyzed	4/26/2011	4/26/2011	4/26/2011
Dilution	1.0	1.0	1.0
ETPH	ND < 0.10	ND < 0.10	ND < 0.10
Octacosane (surr) 50-150	110	98	98

**Polynuclear Arom. (SIM) [8270D SIM] Units: ug/l**

Client ID	TW-17	TW-16	FB041811
CET ID	AE67525	AE67526	AE67527
Date Analyzed	4/26/2011	4/26/2011	4/26/2011
Dilution	1.0	1.0	1.0
Naphthalene	ND < 1.0	ND < 1.0	ND < 1.0
2-Methyl Naphthalene	ND < 1.0	ND < 1.0	ND < 1.0
Acenaphthylene	ND < 0.30	ND < 0.30	ND < 0.30
Acenaphthene	ND < 1.0	ND < 1.0	ND < 1.0
Fluorene	ND < 1.0	ND < 1.0	ND < 1.0
Phenanthrene	ND < 0.077	ND < 0.077	ND < 0.077
Anthracene	ND < 1.0	ND < 1.0	ND < 1.0
Fluoranthene	ND < 1.0	ND < 1.0	ND < 1.0
Pyrene	ND < 1.0	ND < 1.0	ND < 1.0
Benzo[a]anthracene	ND < 0.06	ND < 0.06	ND < 0.06
Chrysene	ND < 1.0	ND < 1.0	ND < 1.0
Benzo[b]fluoranthene	ND < 0.08	ND < 0.08	ND < 0.08
Benzo[k]fluoranthene	ND < 0.30	ND < 0.30	ND < 0.30
Benzo[a]pyrene	ND < 0.20	ND < 0.20	ND < 0.20
Indeno[1,2,3-cd]pyrene	ND < 0.20	ND < 0.20	ND < 0.20
Dibenz[a,h]anthracene	ND < 0.20	ND < 0.20	ND < 0.20
Benzo[g,h,i]perylene	ND < 1.0	ND < 1.0	ND < 1.0
Nitrobenzene-d5(Surr) 40-140	72	76	78
2-Fluorobiphenyl (Surr) 40-140	77	86	85
Terphenyl-d14 (Surr) 40-140	78	87	87

**Volatile Organics [EPA 8260C] Units: ug/l**

Client ID	TW-17	TW-16	FB041811
CET ID	AE67525	AE67526	AE67527
Date Analyzed	4/20/2011	4/22/2011	4/20/2011
Dilution	1.0	1.0	1.0
Dichlorodifluoromethane	ND < 10	ND < 10	ND < 10
Chloromethane	ND < 2.7	ND < 2.7	ND < 2.7
Vinyl Chloride	ND < 1.6	ND < 1.6	ND < 1.6
Bromomethane	ND < 5.0	ND < 5.0	ND < 5.0
Chloroethane	ND < 5.0	ND < 5.0	ND < 5.0
Acetone	ND < 50	ND < 50	ND < 50
Acrylonitrile	ND < 0.50	ND < 0.50	ND < 0.50
Trichlorofluoromethane	ND < 25	ND < 25	ND < 25
Trichlorotrifluoroethane	ND < 25	ND < 25	ND < 25
1,1-Dichloroethene	ND < 1.0	ND < 1.0	ND < 1.0
Methylene Chloride	ND < 5.0	ND < 5.0	ND < 5.0

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**Volatile Organics [EPA 8260C] Units: ug/l**

Client ID	TW-17	TW-16	FB041811
Carbon Disulfide	ND < 5.0	ND < 5.0	ND < 5.0
Methyl-t-Butyl Ether (MTBE)	ND < 5.0	ND < 5.0	ND < 5.0
trans-1,2-Dichloroethene	ND < 1.0	ND < 1.0	ND < 1.0
1,1-Dichloroethane	ND < 1.0	ND < 1.0	ND < 1.0
2-Butanone (MEK)	ND < 25	ND < 25	ND < 25
2,2-Dichloropropane	ND < 1.0	ND < 1.0	ND < 1.0
cis-1,2-Dichloroethene	ND < 1.0	ND < 1.0	ND < 1.0
Chloroform	ND < 1.0	ND < 1.0	ND < 1.0
Tetrahydrofuran	ND < 5.0	ND < 5.0	ND < 5.0
1,1,1-Trichloroethane	ND < 1.0	ND < 1.0	ND < 1.0
Carbon Tetrachloride	ND < 1.0	ND < 1.0	ND < 1.0
1,1-Dichloropropene	ND < 1.0	ND < 1.0	ND < 1.0
Benzene	ND < 1.0	ND < 1.0	ND < 1.0
1,2-Dichloroethane	ND < 1.0	ND < 1.0	ND < 1.0
Methyl Isobutyl Ketone	ND < 25	ND < 25	ND < 25
Trichloroethene	ND < 1.0	ND < 1.0	ND < 1.0
1,2-Dichloropropane	ND < 1.0	ND < 1.0	ND < 1.0
Dibromomethane	ND < 1.0	ND < 1.0	ND < 1.0
Bromodichloromethane	ND < 0.50	ND < 0.50	ND < 0.50
2-Hexanone	ND < 25	ND < 25	ND < 25
cis-1,3-Dichloropropene	ND < 0.50	ND < 0.50	ND < 0.50
Toluene	ND < 1.0	ND < 1.0	ND < 1.0
trans-1,3-Dichloropropene	ND < 0.50	ND < 0.50	ND < 0.50
1,1,2-Trichloroethane	ND < 1.0	ND < 1.0	ND < 1.0
Tetrachloroethene	ND < 1.0	ND < 1.0	ND < 1.0
1,3-Dichloropropane	ND < 0.50	ND < 0.50	ND < 0.50
Dibromochloromethane	ND < 0.50	ND < 0.50	ND < 0.50
1,2-Dibromoethane	ND < 0.50	ND < 0.50	ND < 0.50
trans-1,4-Dichloro-2-Butene	ND < 10	ND < 10	ND < 10
Chlorobenzene	ND < 1.0	ND < 1.0	ND < 1.0
1,1,1,2-Tetrachloroethane	ND < 1.0	ND < 1.0	ND < 1.0
Ethylbenzene	ND < 1.0	ND < 1.0	ND < 1.0
m+p Xylenes	ND < 1.0	ND < 1.0	ND < 1.0
o-Xylene	ND < 1.0	ND < 1.0	ND < 1.0
Styrene	ND < 1.0	ND < 1.0	ND < 1.0
Bromoform	ND < 1.0	ND < 1.0	ND < 1.0
Isopropylbenzene	ND < 1.0	ND < 1.0	ND < 1.0
1,1,2,2-Tetrachloroethane	ND < 0.50	ND < 0.50	ND < 0.50
Bromobenzene	ND < 1.0	ND < 1.0	ND < 1.0
1,2,3-Trichloropropane	ND < 1.0	ND < 1.0	ND < 1.0
n-Propylbenzene	ND < 1.0	ND < 1.0	ND < 1.0
2-Chlorotoluene	ND < 1.0	ND < 1.0	ND < 1.0
4-Chlorotoluene	ND < 1.0	ND < 1.0	ND < 1.0
1,3,5-Trimethylbenzene	ND < 1.0	ND < 1.0	ND < 1.0
tert-Butylbenzene	ND < 1.0	ND < 1.0	ND < 1.0
1,2,4-Trimethylbenzene	ND < 1.0	ND < 1.0	ND < 1.0
sec-Butylbenzene	ND < 1.0	ND < 1.0	ND < 1.0
1,3-Dichlorobenzene	ND < 1.0	ND < 1.0	ND < 1.0
4-Isopropyltoluene	ND < 1.0	ND < 1.0	ND < 1.0
1,4-Dichlorobenzene	ND < 1.0	ND < 1.0	ND < 1.0
1,2-Dichlorobenzene	ND < 1.0	ND < 1.0	ND < 1.0

CET#: 11040408r

Project: Bartlett Abrotorium, Stamford

**Volatile Organics [EPA 8260C] Units: ug/l**

Client ID	TW-17	TW-16	FB041811
n-Butylbenzene	ND < 1.0	ND < 1.0	ND < 1.0
1,2-Dibromo-3-Chloropropane	ND < 1.0	ND < 1.0	ND < 1.0
1,2,4-Trichlorobenzene	ND < 1.0	ND < 1.0	ND < 1.0
Hexachlorobutadiene	ND < 0.45	ND < 0.45	ND < 0.45
Naphthalene	ND < 1.0	ND < 1.0	ND < 1.0
1,2,3-Trichlorobenzene	ND < 1.0	ND < 1.0	ND < 1.0
1,2 Dichloroethane-d4 (SURR) 70-130	99.9	98.4	99.4
toluene-d8 (SURR) 70-130	96.6	102	95.2
4-bromofluorobenzene (SURR) 70-130	103	106	101

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

Sincerely,



David Ditta  
Laboratory Director

Report Comments:

1. ND is None Detected at the specified detection limit.
2. All analyses were performed in house unless a Reference Laboratory is listed.
3. Samples will be disposed of 30 days after the report date.
4. Sample Result Flags:
  - E - The result is estimated, above the calibration range.
  - H - The surrogate recovery is above the control limits.
  - L - The surrogate recovery is below the control limits.
  - B - The compound was detected in the laboratory blank.
  - P - The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
  - D - The RPD between the sample and the sample duplicate is high. Sample homogeneity may be a problem.
5. All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

Revision: Original report dated 4/27/11; Changed Metals analysis from RCRA 8 Metals list to CT DEP 15 list per client request.





80 Lupes Drive  
Stratford, CT 06615

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Client: Ms. Sarah Trombetta  
TRC Environmental Consultants  
21 Griffin Rd., North  
Windsor, CT 06095

## Analytical Report

# CET # 11040393

**Report Date: April 26, 2011**  
**Client Project: Bartlett Arboretum Phase II, Stamford**  
**Client Project #: 176301.0000.0000**



Connecticut Laboratory Certification PH 0116  
Massachusetts Laboratory Certification M-CT903

Rhode Island Certification 199  
Florida Laboratory Certification E871064

**SAMPLE SUMMARY:**

This report contains analytical data associated with the following samples only:

CETID	Client Sample ID	Matrix	Collection Date	Collection Time	Receipt Date
AE67488	TW21	Water	4/15/2011	11:15	04/15/2011
AE67489	TW4	Water	4/15/2011	11:55	04/15/2011
AE67490	TW7	Water	4/15/2011	12:30	04/15/2011
AE67491	TW28	Water	4/15/2011	13:00	04/15/2011
AE67492	TW15	Water	4/15/2011	13:45	04/15/2011
AE67493	TW51	Water	4/15/2011	14:00	04/15/2011
AE67494	TB041511	Water	4/15/2011	11:00	04/15/2011

Sample temperature upon receipt was 5.8 degrees C

**PREP ANALYSIS:****Acid Digestion of Waters [EPA 3005A]**

Client ID	TW21	TW4	TW7	TW28	TW15
CET ID	AE67488	AE67489	AE67490	AE67491	AE67492
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/22/2011	4/22/2011

**Acid Digestion of Waters [EPA 3005A]**

Client ID	TW51
CET ID	AE67493
Date Analyzed	4/22/2011

**Liquid-Liquid Extraction EPH [EPA 3510C]**

Client ID	TW15	TW51
CET ID	AE67492	AE67493
Date Analyzed	4/21/2011	4/21/2011

**Liquid-Liquid Ext Pest. [EPA 3510C]**

Client ID	TW21	TW4	TW7	TW28	TW15
CET ID	AE67488	AE67489	AE67490	AE67491	AE67492
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011

**Liquid-Liquid Ext Pest. [EPA 3510C]**

Client ID	TW51
CET ID	AE67493
Date Analyzed	4/19/2011

**Field Filtration for Diss Metals [Dissolved]**

Client ID	TW21	TW4	TW7	TW28	TW15
CET ID	AE67488	AE67489	AE67490	AE67491	AE67492
Date Analyzed	4/25/2011	4/25/2011	4/25/2011	4/25/2011	4/25/2011
Field Filtration for Diss Metals	Field Filtered				

**Field Filtration for Diss Metals [Dissolved]**

Client ID	TW51
CET ID	AE67493
Date Analyzed	4/25/2011
Field Filtration for Diss Metals	Field Filtered

**Liquid-Liquid Extraction [EPA 3510C]**

Client ID	TW15	TW51
CET ID	AE67492	AE67493
Date Analyzed	4/19/2011	4/19/2011

**ANALYSIS:****Total Mercury [EPA 7470A] Units: mg/l**

Client ID	TW21	TW4	TW7	TW28	TW15
CET ID	AE67488	AE67489	AE67490	AE67491	AE67492
Date Analyzed	4/23/2011	4/23/2011	4/23/2011	4/23/2011	4/23/2011
Total Mercury	ND < 0.0004				

**Total Mercury [EPA 7470A] Units: mg/l**

Client ID	TW51
CET ID	AE67493
Date Analyzed	4/23/2011
Total Mercury	ND < 0.0004

**Dissolved Mercury [EPA 200.8] Units: mg/l**

Client ID	TW21	TW4	TW7	TW28	TW15
CET ID	AE67488	AE67489	AE67490	AE67491	AE67492
Date Analyzed	4/25/2011	4/25/2011	4/25/2011	4/25/2011	4/25/2011
Dissolved Mercury	ND < 0.0004				

**Dissolved Mercury [EPA 200.8] Units: mg/l**

Client ID	TW51
CET ID	AE67493
Date Analyzed	4/25/2011
Dissolved Mercury	ND < 0.0004

CET#: 11040393

Project: Bartlett Arboretum Phase II, Stamford

**Total Metals [EPA 200.7] Units: mg/l**

Client ID	TW21	TW4	TW7	TW28	TW15
CET ID	AE67488	AE67489	AE67490	AE67491	AE67492
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/22/2011	4/22/2011
Dilution	1.0	1.0	1.0	1.0	1.0
Lead	0.076	0.12	0.075	0.12	0.040
Selenium	ND < 0.01				
Cadmium	ND < 0.005				
Chromium	0.27	0.34	0.11	0.18	0.083
Arsenic	0.026	0.011	0.010	0.026	ND < 0.004
Barium	0.78	1.3	0.50	0.95	0.41
Silver	ND < 0.012				
Copper	0.24	0.42	0.15	0.16	0.11
Nickel	0.19	0.16	0.074	0.14	0.076
Zinc	0.64	0.50	0.19	0.34	0.48
Beryllium	ND < 0.004				
Antimony	ND < 0.05				
Thallium	ND < 0.05				
Vanadium	0.23	0.28	0.13	0.25	0.11

**Total Metals [EPA 200.7] Units: mg/l**

Client ID	TW51
CET ID	AE67493
Date Analyzed	4/22/2011
Dilution	1.0
Lead	0.040
Selenium	ND < 0.01
Cadmium	ND < 0.005
Chromium	0.083
Arsenic	ND < 0.004
Barium	0.41
Silver	ND < 0.012
Copper	0.11
Nickel	0.075
Zinc	0.49
Beryllium	ND < 0.004
Antimony	ND < 0.05
Thallium	ND < 0.05
Vanadium	0.11

**Dissolved Metals [EPA 200.8] Units: mg/l**

Client ID	TW21	TW4	TW7	TW28	TW15
CET ID	AE67488	AE67489	AE67490	AE67491	AE67492
Date Analyzed	4/25/2011	4/25/2011	4/25/2011	4/25/2011	4/25/2011
Dilution	1.0	1.0	1.0	1.0	1.0
Lead	ND < 0.013				
Selenium	ND < 0.01				
Cadmium	ND < 0.005				
Chromium	ND < 0.05				
Arsenic	ND < 0.004				

**Dissolved Metals [EPA 200.8] Units: mg/l**

Client ID	TW21	TW4	TW7	TW28	TW15
Barium	ND < 0.05	0.058	0.052	0.063	ND < 0.05
Silver	ND < 0.012				
Copper	ND < 0.04				
Nickel	ND < 0.05				
Zinc	0.027	ND < 0.02	ND < 0.02	ND < 0.02	0.18
Beryllium	ND < 0.004				
Antimony	ND < 0.006				
Thallium	ND < 0.005				
Vanadium	ND < 0.05				

**Dissolved Metals [EPA 200.8] Units: mg/l**

Client ID	TW51
CET ID	AE67493
Date Analyzed	4/25/2011
Dilution	1.0
Lead	ND < 0.013
Selenium	ND < 0.01
Cadmium	ND < 0.005
Chromium	ND < 0.05
Arsenic	ND < 0.004
Barium	ND < 0.05
Silver	ND < 0.012
Copper	ND < 0.04
Nickel	ND < 0.05
Zinc	0.18
Beryllium	ND < 0.004
Antimony	ND < 0.006
Thallium	ND < 0.005
Vanadium	ND < 0.05

**Duplicate for Dissolved Metals [EPA 200.8] Units: mg/l**

Client ID	TW21
CET ID	AE67488
Date Analyzed	4/25/2011
Dilution	1.0
Lead	ND < 0.013
Selenium	ND < 0.01
Cadmium	ND < 0.005
Chromium	ND < 0.05
Arsenic	ND < 0.004
Barium	ND < 0.05
Silver	ND < 0.012
Copper	ND < 0.04
Nickel	ND < 0.05
Zinc	0.037
Beryllium	ND < 0.004
Antimony	ND < 0.006
Thallium	ND < 0.005
Vanadium	ND < 0.05

CET#: 11040393

Project: Bartlett Arboretum Phase II, Stamford

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/l**

Client ID	TW21	TW4	TW7	TW28	TW15
CET ID	AE67488	AE67489	AE67490	AE67491	AE67492
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011
Dilution	1	1	1	1	1
Alpha-BHC	ND < 0.10				
Gamma-BHC	ND < 0.10				
Heptachlor	ND < 0.05				
Aldrin	ND < 0.10				
Beta-BHC	ND < 0.10				
Delta-BHC	ND < 0.10				
Heptachlor Epoxide	ND < 0.05				
Endosulfan I	ND < 0.10				
4,4-DDE	ND < 0.10				
Dieldrin	ND < 0.002				
Endrin	ND < 0.10				
4,4-DDD	ND < 0.10				
Endosulfan II	ND < 0.10				
4,4-DDT	ND < 0.10				
Endrin Aldehyde	ND < 0.10				
4,4-Methoxychlor	ND < 0.10				
Endosulfan Sulfate	ND < 0.10				
Endrin Ketone	ND < 0.10				
Chlordane	ND < 0.20				
Toxaphene	ND < 0.80				
TCMX (Surr 1) 50-150	43 L	39 L	33 L	41 L	42 L
DCB (Surr 2) 50-150	70	63	49 L	55	82

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/l**

Client ID	TW51
CET ID	AE67493
Date Analyzed	4/20/2011
Dilution	1
Alpha-BHC	ND < 0.10
Gamma-BHC	ND < 0.10
Heptachlor	ND < 0.05
Aldrin	ND < 0.10
Beta-BHC	ND < 0.10
Delta-BHC	ND < 0.10
Heptachlor Epoxide	ND < 0.05
Endosulfan I	ND < 0.10
4,4-DDE	ND < 0.10
Dieldrin	ND < 0.002
Endrin	ND < 0.10
4,4-DDD	ND < 0.10
Endosulfan II	ND < 0.10
4,4-DDT	ND < 0.10
Endrin Aldehyde	ND < 0.10
4,4-Methoxychlor	ND < 0.10
Endosulfan Sulfate	ND < 0.10

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/l**

Client ID	TW51
Endrin Ketone	ND < 0.10
Chlordane	ND < 0.20
Toxaphene	ND < 0.80
TCMX (Surr 1) 50-150	40 L
DCB (Surr 2) 50-150	52

**Conn. Extractable TPH [CT DEP] Units: mg/l**

Client ID	TW15	TW51
CET ID	AE67492	AE67493
Date Analyzed	4/22/2011	4/22/2011
Dilution	1.0	1.0
ETPH	ND < 0.10	ND < 0.10
Octacosane (surr) 50-150	82	78

**Polynuclear Arom. (SIM) [8270D SIM] Units: ug/l**

Client ID	TW15	TW51
CET ID	AE67492	AE67493
Date Analyzed	4/21/2011	4/21/2011
Dilution	1.0	1.0
Naphthalene	ND < 1.0	ND < 1.0
2-Methyl Naphthalene	ND < 1.0	ND < 1.0
Acenaphthylene	ND < 0.30	ND < 0.30
Acenaphthene	ND < 1.0	ND < 1.0
Fluorene	ND < 1.0	ND < 1.0
Phenanthrene	ND < 0.077	ND < 0.077
Anthracene	ND < 1.0	ND < 1.0
Fluoranthene	ND < 1.0	ND < 1.0
Pyrene	ND < 1.0	ND < 1.0
Benzo[a]anthracene	ND < 0.06	ND < 0.06
Chrysene	ND < 1.0	ND < 1.0
Benzo[b]fluoranthene	ND < 0.08	ND < 0.08
Benzo[k]fluoranthene	ND < 0.30	ND < 0.30
Benzo[a]pyrene	ND < 0.20	ND < 0.20
Indeno[1,2,3-cd]pyrene	ND < 0.20	ND < 0.20
Dibenz[a,h]anthracene	ND < 0.20	ND < 0.20
Benzo[g,h,i]perylene	ND < 1.0	ND < 1.0
Nitrobenzene-d5(Surr) 40-140	100	100
2-Fluorobiphenyl (Surr) 40-140	95	93
Terphenyl-d14 (Surr) 40-140	100	98

**Volatile Organics [EPA 8260C] Units: ug/l**

Client ID	TW15	TW51	TB041511
CET ID	AE67492	AE67493	AE67494
Date Analyzed	4/20/2011	4/20/2011	4/20/2011
Dilution	1.0	1.0	1.0
Dichlorodifluoromethane	ND < 10	ND < 10	ND < 10
Chloromethane	ND < 2.7	ND < 2.7	ND < 2.7
Vinyl Chloride	ND < 1.6	ND < 1.6	ND < 1.6
Bromomethane	ND < 5.0	ND < 5.0	ND < 5.0
Chloroethane	ND < 5.0	ND < 5.0	ND < 5.0
Acetone	ND < 50	ND < 50	ND < 50
Acrylonitrile	ND < 0.50	ND < 0.50	ND < 0.50
Trichlorofluoromethane	ND < 25	ND < 25	ND < 25
Trichlorotrifluoroethane	ND < 25	ND < 25	ND < 25
1,1-Dichloroethene	ND < 1.0	ND < 1.0	ND < 1.0
Methylene Chloride	ND < 5.0	ND < 5.0	ND < 5.0
Carbon Disulfide	ND < 5.0	ND < 5.0	ND < 5.0
Methyl-t-Butyl Ether (MTBE)	ND < 5.0	ND < 5.0	ND < 5.0
trans-1,2-Dichloroethene	ND < 1.0	ND < 1.0	ND < 1.0
1,1-Dichloroethane	ND < 1.0	ND < 1.0	ND < 1.0
2-Butanone (MEK)	ND < 25	ND < 25	ND < 25
2,2-Dichloropropane	ND < 1.0	ND < 1.0	ND < 1.0
cis-1,2-Dichloroethene	ND < 1.0	ND < 1.0	ND < 1.0
Chloroform	ND < 1.0	ND < 1.0	ND < 1.0
Tetrahydrofuran	190	190	ND < 5.0
1,1,1-Trichloroethane	ND < 1.0	ND < 1.0	ND < 1.0
Carbon Tetrachloride	ND < 1.0	ND < 1.0	ND < 1.0
1,1-Dichloropropene	ND < 1.0	ND < 1.0	ND < 1.0
Benzene	ND < 1.0	ND < 1.0	ND < 1.0
1,2-Dichloroethane	ND < 1.0	ND < 1.0	ND < 1.0
Methyl Isobutyl Ketone	ND < 25	ND < 25	ND < 25
Trichloroethene	ND < 1.0	ND < 1.0	ND < 1.0
1,2-Dichloropropane	ND < 1.0	ND < 1.0	ND < 1.0
Dibromomethane	ND < 1.0	ND < 1.0	ND < 1.0
Bromodichloromethane	ND < 0.50	ND < 0.50	ND < 0.50
2-Hexanone	ND < 25	ND < 25	ND < 25
cis-1,3-Dichloropropene	ND < 0.50	ND < 0.50	ND < 0.50
Toluene	ND < 1.0	ND < 1.0	ND < 1.0
trans-1,3-Dichloropropene	ND < 0.50	ND < 0.50	ND < 0.50
1,1,2-Trichloroethane	ND < 1.0	ND < 1.0	ND < 1.0
Tetrachloroethene	ND < 1.0	ND < 1.0	ND < 1.0
1,3-Dichloropropane	ND < 0.50	ND < 0.50	ND < 0.50
Dibromochloromethane	ND < 0.50	ND < 0.50	ND < 0.50
1,2-Dibromoethane	ND < 0.50	ND < 0.50	ND < 0.50
trans-1,4-Dichloro-2-Butene	ND < 10	ND < 10	ND < 10
Chlorobenzene	ND < 1.0	ND < 1.0	ND < 1.0
1,1,1,2-Tetrachloroethane	ND < 1.0	ND < 1.0	ND < 1.0
Ethylbenzene	ND < 1.0	ND < 1.0	ND < 1.0
m+p Xylenes	ND < 1.0	ND < 1.0	ND < 1.0
o-Xylene	ND < 1.0	ND < 1.0	ND < 1.0
Styrene	ND < 1.0	ND < 1.0	ND < 1.0
Bromoform	ND < 1.0	ND < 1.0	ND < 1.0
Isopropylbenzene	ND < 1.0	ND < 1.0	ND < 1.0
1,1,2,2-Tetrachloroethane	ND < 0.50	ND < 0.50	ND < 0.50
Bromobenzene	ND < 1.0	ND < 1.0	ND < 1.0

**Volatile Organics [EPA 8260C] Units: ug/l**

Client ID	TW15	TW51	TB041511
1,2,3-Trichloropropane	ND < 1.0	ND < 1.0	ND < 1.0
n-Propylbenzene	ND < 1.0	ND < 1.0	ND < 1.0
2-Chlorotoluene	ND < 1.0	ND < 1.0	ND < 1.0
4-Chlorotoluene	ND < 1.0	ND < 1.0	ND < 1.0
1,3,5-Trimethylbenzene	ND < 1.0	ND < 1.0	ND < 1.0
tert-Butylbenzene	ND < 1.0	ND < 1.0	ND < 1.0
1,2,4-Trimethylbenzene	ND < 1.0	ND < 1.0	ND < 1.0
sec-Butylbenzene	ND < 1.0	ND < 1.0	ND < 1.0
1,3-Dichlorobenzene	ND < 1.0	ND < 1.0	ND < 1.0
4-Isopropyltoluene	ND < 1.0	ND < 1.0	ND < 1.0
1,4-Dichlorobenzene	ND < 1.0	ND < 1.0	ND < 1.0
1,2-Dichlorobenzene	ND < 1.0	ND < 1.0	ND < 1.0
n-Butylbenzene	ND < 1.0	ND < 1.0	ND < 1.0
1,2-Dibromo-3-Chloropropane	ND < 1.0	ND < 1.0	ND < 1.0
1,2,4-Trichlorobenzene	ND < 1.0	ND < 1.0	ND < 1.0
Hexachlorobutadiene	ND < 0.45	ND < 0.45	ND < 0.45
Naphthalene	ND < 1.0	ND < 1.0	ND < 1.0
1,2,3-Trichlorobenzene	ND < 1.0	ND < 1.0	ND < 1.0
1,2 Dichloroethane-d4 (SURR) 70-130	101	102	101
toluene-d8 (SURR) 70-130	96.2	95	95.1
4-bromofluorobenzene (SURR) 70-130	102	103	103

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

Sincerely,



David Ditta  
Laboratory Director

**Report Comments:**

1. ND is None Detected at the specified detection limit.
2. All analyses were performed in house unless a Reference Laboratory is listed.
3. Samples will be disposed of 30 days after the report date.
4. Sample Result Flags:
  - E - The result is estimated, above the calibration range.
  - H - The surrogate recovery is above the control limits.
  - L - The surrogate recovery is below the control limits.
  - B - The compound was detected in the laboratory blank.
  - P - The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
  - D - The RPD between the sample and the sample duplicate is high. Sample homogeneity may be a problem.
5. All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.





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Client: Mr. Chris Lindahl  
TRC Environmental Consultants  
21 Griffin Rd., North  
Windsor, CT 06095

## Analytical Report

### CET # 11040331

**Report Date: April 26, 2011**  
**Client Project: Bartlett Arboretum, Stamford**



Connecticut Laboratory Certification PH 0116  
Massachusetts Laboratory Certification M-CT903

Rhode Island Certification 199  
Florida Laboratory Certification E871064

CET#: 11040331

Project: Bartlett Arboretum, Stamford

**SAMPLE SUMMARY:**

This report contains analytical data associated with the following samples only:

CETID	Client Sample ID	Matrix	Collection Date	Collection Time	Receipt Date
AE67262	FB041311	Water	4/13/2011	9:00	04/14/2011
AE67263	SB-30 0-2	Soil	4/13/2011	9:35	04/14/2011
AE67264	SB-30 4-6	Soil	4/13/2011	9:40	04/14/2011
AE67265	SB-8 0-2	Soil	4/13/2011	10:10	04/14/2011
AE67266	SB-8 4-6	Soil	4/13/2011	10:15	04/14/2011
AE67267	SB-22 0-2	Soil	4/13/2011	10:25	04/14/2011
AE67268	SB-22 4-6	Soil	4/13/2011	10:30	04/14/2011
AE67269	SB-31 4-6	Soil	4/13/2011	10:55	04/14/2011
AE67270	SB-32 4-6	Soil	4/13/2011	11:05	04/14/2011
AE67271	SB-33 4-6	Soil	4/13/2011	11:30	04/14/2011
AE67272	SB-3 0-2	Soil	4/13/2011	12:00	04/14/2011
AE67273	SB-3 2-4	Soil	4/13/2011	12:05	04/14/2011
AE67274	SB-4 0-2	Soil	4/13/2011	12:20	04/14/2011
AE67275	SB-4 10-11	Soil	4/13/2011	12:25	04/14/2011
AE67276	SB-6 0-2	Soil	4/13/2011	13:20	04/14/2011
AE67277	SB-6 4-6	Soil	4/13/2011	13:25	04/14/2011
AE67278	SB-5 0-2	Soil	4/13/2011	13:35	04/14/2011
AE67279	SB-5 4-6	Soil	4/13/2011	13:40	04/14/2011
AE67280	SB-23 0-2	Soil	4/13/2011	14:10	04/14/2011
AE67281	SB-23 4-6	Soil	4/13/2011	14:15	04/14/2011
AE67282	SB-34 6-8	Soil	4/13/2011	14:20	04/14/2011
AE67283	SB-35 6-8	Soil	4/13/2011	14:40	04/14/2011
AE67284	SB-36 6-8	Soil	4/13/2011	14:55	04/14/2011
AE67285	SB-7 0-2	Soil	4/13/2011	15:35	04/14/2011
AE67286	SB-37 6-8	Soil	4/13/2011	15:45	04/14/2011
AE67287	FB041411	Water	4/14/2011	8:15	04/14/2011
AE67288	SB-38 6-8	Soil	4/14/2011	8:55	04/14/2011
AE67289	SB-39 6-8	Soil	4/14/2011	9:05	04/14/2011
AE67290	SB-39A 6-8	Soil	4/14/2011	9:10	04/14/2011

Sample temperature upon receipt was 2.8 degrees C

**PREP ANALYSIS:****Acid Digestion of Waters [EPA 3005A]**

Client ID	FB041311	FB041411
CET ID	AE67262	AE67287
Date Analyzed	4/19/2011	4/19/2011

**Acid Digestion [EPA 3050B]**

Client ID	SB-30 0-2	SB-30 4-6	SB-8 0-2	SB-8 4-6	SB-22 0-2
CET ID	AE67263	AE67264	AE67265	AE67266	AE67267
Date Analyzed	4/18/2011	4/18/2011	4/18/2011	4/19/2011	4/19/2011

CET#: 11040331

Project: Bartlett Arboretum, Stamford

**Acid Digestion [EPA 3050B]**

Client ID	SB-22 4-6	SB-31 4-6	SB-32 4-6	SB-33 4-6	SB-3 0-2
CET ID	AE67268	AE67269	AE67270	AE67271	AE67272
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011

**Acid Digestion [EPA 3050B]**

Client ID	SB-3 2-4	SB-4 0-2	SB-4 10-11	SB-6 0-2	SB-6 4-6
CET ID	AE67273	AE67274	AE67275	AE67276	AE67277
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011

**Acid Digestion [EPA 3050B]**

Client ID	SB-5 0-2	SB-5 4-6	SB-23 0-2	SB-23 4-6	SB-7 0-2
CET ID	AE67278	AE67279	AE67280	AE67281	AE67285
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011

**Acid Digestion [EPA 3050B]**

Client ID	SB-37 6-8
CET ID	AE67286
Date Analyzed	4/19/2011

**Liquid-Liquid Extraction EPH [EPA 3510C]**

Client ID	FB041311	FB041411
CET ID	AE67262	AE67287
Date Analyzed	4/19/2011	4/19/2011

**Liquid-Liquid Ext Pest. [EPA 3510C]**

Client ID	FB041311	FB041411
CET ID	AE67262	AE67287
Date Analyzed	4/19/2011	4/19/2011

**Accelerated Solvent Ext.- Pest [EPA 3545]**

Client ID	SB-30 0-2	SB-30 4-6	SB-8 0-2	SB-8 4-6	SB-22 0-2
CET ID	AE67263	AE67264	AE67265	AE67266	AE67267
Date Analyzed	4/14/2011	4/14/2011	4/14/2011	4/14/2011	4/14/2011

**Accelerated Solvent Ext.- Pest [EPA 3545]**

Client ID	SB-22 4-6	SB-31 4-6	SB-32 4-6	SB-33 4-6	SB-3 0-2
CET ID	AE67268	AE67269	AE67270	AE67271	AE67272
Date Analyzed	4/14/2011	4/14/2011	4/14/2011	4/14/2011	4/14/2011

CET#: 11040331

Project: Bartlett Arboretum, Stamford

**Accelerated Solvent Ext.- Pest [EPA 3545]**

Client ID	SB-3 2-4	SB-4 0-2	SB-4 10-11	SB-6 0-2	SB-6 4-6
CET ID	AE67273	AE67274	AE67275	AE67276	AE67277
Date Analyzed	4/14/2011	4/14/2011	4/14/2011	4/14/2011	4/14/2011

**Accelerated Solvent Ext.- Pest [EPA 3545]**

Client ID	SB-5 0-2	SB-5 4-6	SB-23 0-2	SB-23 4-6	SB-34 6-8
CET ID	AE67278	AE67279	AE67280	AE67281	AE67282
Date Analyzed	4/14/2011	4/14/2011	4/14/2011	4/14/2011	4/18/2011

**Accelerated Solvent Ext.- Pest [EPA 3545]**

Client ID	SB-35 6-8	SB-36 6-8	SB-7 0-2	SB-37 6-8	SB-38 6-8
CET ID	AE67283	AE67284	AE67285	AE67286	AE67288
Date Analyzed	4/18/2011	4/18/2011	4/18/2011	4/18/2011	4/18/2011

**Accelerated Solvent Ext.- Pest [EPA 3545]**

Client ID	SB-39 6-8	SB-39A 6-8
CET ID	AE67289	AE67290
Date Analyzed	4/18/2011	4/18/2011

**Ultrasonic Extraction-ETPH [EPA 3550C]**

Client ID	SB-22 0-2	SB-22 4-6	SB-31 4-6	SB-32 4-6	SB-33 4-6
CET ID	AE67267	AE67268	AE67269	AE67270	AE67271
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011

**Ultrasonic Extraction-ETPH [EPA 3550C]**

Client ID	SB-34 6-8	SB-35 6-8	SB-36 6-8	SB-38 6-8	SB-39 6-8
CET ID	AE67282	AE67283	AE67284	AE67288	AE67289
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011

**Ultrasonic Extraction-ETPH [EPA 3550C]**

Client ID	SB-39A 6-8
CET ID	AE67290
Date Analyzed	4/19/2011

**Closed System P&T Extraction [EPA 5035A]**

Client ID	SB-22 0-2	SB-22 4-6	SB-31 4-6	SB-32 4-6	SB-33 4-6
CET ID	AE67267	AE67268	AE67269	AE67270	AE67271
Date Analyzed	4/15/2011	4/15/2011	4/15/2011	4/15/2011	4/15/2011

CET#: 11040331

Project: Bartlett Arboretum, Stamford

**Closed System P&T Extraction [EPA 5035A]**

Client ID	SB-34 6-8	SB-35 6-8	SB-36 6-8	SB-37 6-8	SB-38 6-8
CET ID	AE67282	AE67283	AE67284	AE67286	AE67288
Date Analyzed	4/15/2011	4/15/2011	4/15/2011	4/15/2011	4/15/2011

**Closed System P&T Extraction [EPA 5035A]**

Client ID	SB-39 6-8	SB-39A 6-8
CET ID	AE67289	AE67290
Date Analyzed	4/15/2011	4/15/2011

**Accelerated Solvent Extraction [EPA 3545]**

Client ID	SB-22 0-2	SB-22 4-6	SB-31 4-6	SB-32 4-6	SB-33 4-6
CET ID	AE67267	AE67268	AE67269	AE67270	AE67271
Date Analyzed	4/18/2011	4/18/2011	4/18/2011	4/19/2011	4/19/2011

**Accelerated Solvent Extraction [EPA 3545]**

Client ID	SB-34 6-8	SB-35 6-8	SB-36 6-8	SB-38 6-8	SB-39 6-8
CET ID	AE67282	AE67283	AE67284	AE67288	AE67289
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011

**Accelerated Solvent Extraction [EPA 3545]**

Client ID	SB-39A 6-8
CET ID	AE67290
Date Analyzed	4/19/2011

**Liquid-Liquid Extraction [EPA 3510C]**

Client ID	FB041311	FB041411
CET ID	AE67262	AE67287
Date Analyzed	4/19/2011	4/19/2011

**SPLP, Metals [EPA 1312]**

Client ID	SB-30 0-2	SB-30 4-6	SB-8 0-2	SB-8 4-6	SB-22 0-2
CET ID	AE67263	AE67264	AE67265	AE67266	AE67267
Date Analyzed	4/14/2011	4/14/2011	4/14/2011	4/14/2011	4/14/2011

**SPLP, Metals [EPA 1312]**

Client ID	SB-22 4-6	SB-3 0-2	SB-3 2-4	SB-4 0-2	SB-4 10-11
CET ID	AE67268	AE67272	AE67273	AE67274	AE67275
Date Analyzed	4/14/2011	4/14/2011	4/14/2011	4/14/2011	4/14/2011

CET#: 11040331

Project: Bartlett Arboretum, Stamford

**SPLP, Metals [EPA 1312]**

Client ID	SB-6 0-2	SB-6 4-6	SB-5 0-2	SB-5 4-6	SB-23 0-2
CET ID	AE67276	AE67277	AE67278	AE67279	AE67280
Date Analyzed	4/18/2011	4/18/2011	4/18/2011	4/18/2011	4/18/2011

**SPLP, Metals [EPA 1312]**

Client ID	SB-23 4-6	SB-34 6-8	SB-35 6-8	SB-36 6-8	SB-7 0-2
CET ID	AE67281	AE67282	AE67283	AE67284	AE67285
Date Analyzed	4/18/2011	4/18/2011	4/18/2011	4/18/2011	4/18/2011

**SPLP, Metals [EPA 1312]**

Client ID	SB-37 6-8	SB-38 6-8	SB-39 6-8	SB-39A 6-8
CET ID	AE67286	AE67288	AE67289	AE67290
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011

**SPLP Extraction , Pesticides [EPA 1312]**

Client ID	SB-30 0-2	SB-30 4-6	SB-8 0-2	SB-8 4-6	SB-22 0-2
CET ID	AE67263	AE67264	AE67265	AE67266	AE67267
Date Analyzed	4/14/2011	4/14/2011	4/14/2011	4/14/2011	4/14/2011

**SPLP Extraction , Pesticides [EPA 1312]**

Client ID	SB-22 4-6	SB-3 0-2	SB-3 2-4	SB-4 0-2	SB-4 10-11
CET ID	AE67268	AE67272	AE67273	AE67274	AE67275
Date Analyzed	4/14/2011	4/14/2011	4/14/2011	4/14/2011	4/14/2011

**SPLP Extraction , Pesticides [EPA 1312]**

Client ID	SB-6 0-2	SB-6 4-6	SB-5 0-2	SB-5 4-6	SB-23 0-2
CET ID	AE67276	AE67277	AE67278	AE67279	AE67280
Date Analyzed	4/18/2011	4/18/2011	4/18/2011	4/18/2011	4/18/2011

**SPLP Extraction , Pesticides [EPA 1312]**

Client ID	SB-23 4-6	SB-34 6-8	SB-35 6-8	SB-36 6-8	SB-7 0-2
CET ID	AE67281	AE67282	AE67283	AE67284	AE67285
Date Analyzed	4/18/2011	4/18/2011	4/18/2011	4/18/2011	4/18/2011

**SPLP Extraction , Pesticides [EPA 1312]**

Client ID	SB-37 6-8	SB-38 6-8	SB-39 6-8	SB-39A 6-8
CET ID	AE67286	AE67288	AE67289	AE67290
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011

CET#: 11040331

Project: Bartlett Arboretum, Stamford

**ANALYSIS:****Mercury Dup Result [EPA 7471B] Units: mg/kg (Dry Wt)**

Client ID	SB-5 4-6
CET ID	AE67279
Date Analyzed	4/20/2011
Mercury Dup Result	ND < 0.30

**Total Mercury [EPA 7470A] Units: mg/l**

Client ID	FB041311	FB041411
CET ID	AE67262	AE67287
Date Analyzed	4/15/2011	4/15/2011
Total Mercury	ND < 0.0004	ND < 0.0004

**Total Mercury [EPA 7471B] Units: mg/kg (Dry Wt)**

Client ID	SB-30 0-2	SB-30 4-6	SB-8 0-2	SB-8 4-6	SB-22 0-2
CET ID	AE67263	AE67264	AE67265	AE67266	AE67267
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011
Total Mercury	ND < 0.30				

**Total Mercury [EPA 7471B] Units: mg/kg (Dry Wt)**

Client ID	SB-22 4-6	SB-31 4-6	SB-32 4-6	SB-33 4-6	SB-3 0-2
CET ID	AE67268	AE67269	AE67270	AE67271	AE67272
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011
Total Mercury	ND < 0.30	ND < 0.30	ND < 0.30	ND < 0.30	1.6

**Total Mercury [EPA 7471B] Units: mg/kg (Dry Wt)**

Client ID	SB-3 2-4	SB-4 0-2	SB-4 10-11	SB-6 0-2	SB-6 4-6
CET ID	AE67273	AE67274	AE67275	AE67276	AE67277
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011
Total Mercury	ND < 0.30	0.44	ND < 0.30	ND < 0.30	ND < 0.30

**Total Mercury [EPA 7471B] Units: mg/kg (Dry Wt)**

Client ID	SB-5 0-2	SB-5 4-6	SB-23 0-2	SB-23 4-6	SB-7 0-2
CET ID	AE67278	AE67279	AE67280	AE67281	AE67285
Date Analyzed	4/19/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Total Mercury	ND < 0.50	ND < 0.30	ND < 0.30	ND < 0.30	ND < 0.30

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**Total Mercury [EPA 7471B] Units: mg/kg (Dry Wt)**

Client ID	SB-37 6-8
CET ID	AE67286
Date Analyzed	4/20/2011
Total Mercury	ND < 0.30

**Total Solids [EPA 160.3 mo] Units: percent**

Client ID	SB-30 0-2	SB-30 4-6	SB-8 0-2	SB-8 4-6	SB-22 0-2
CET ID	AE67263	AE67264	AE67265	AE67266	AE67267
Date Analyzed	4/19/2011	4/21/2011	4/21/2011	4/21/2011	4/18/2011
Total Solids	87	83	83	67	80

**Total Solids [EPA 160.3 mo] Units: percent**

Client ID	SB-22 4-6	SB-31 4-6	SB-32 4-6	SB-33 4-6	SB-3 0-2
CET ID	AE67268	AE67269	AE67270	AE67271	AE67272
Date Analyzed	4/18/2011	4/18/2011	4/21/2011	4/21/2011	4/21/2011
Total Solids	83	85	86	83	67

**Total Solids [EPA 160.3 mo] Units: percent**

Client ID	SB-3 2-4	SB-4 0-2	SB-4 10-11	SB-6 0-2	SB-6 4-6
CET ID	AE67273	AE67274	AE67275	AE67276	AE67277
Date Analyzed	4/21/2011	4/21/2011	4/21/2011	4/21/2011	4/21/2011
Total Solids	89	78	90	73	80

**Total Solids [EPA 160.3 mo] Units: percent**

Client ID	SB-5 0-2	SB-5 4-6	SB-23 0-2	SB-23 4-6	SB-34 6-8
CET ID	AE67278	AE67279	AE67280	AE67281	AE67282
Date Analyzed	4/21/2011	4/21/2011	4/21/2011	4/21/2011	4/21/2011
Total Solids	46	83	88	93	90

**Total Solids [EPA 160.3 mo] Units: percent**

Client ID	SB-35 6-8	SB-36 6-8	SB-7 0-2	SB-37 6-8	SB-38 6-8
CET ID	AE67283	AE67284	AE67285	AE67286	AE67288
Date Analyzed	4/21/2011	4/21/2011	4/21/2011	4/21/2011	4/21/2011
Total Solids	91	91	74	88	92

**Total Solids [EPA 160.3 mo] Units: percent**

Client ID	SB-39 6-8	SB-39A 6-8
CET ID	AE67289	AE67290
Date Analyzed	4/21/2011	4/21/2011
Total Solids	90	88

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**Total Metals [EPA 200.7] Units: mg/l**

Client ID	FB041311	FB041411
CET ID	AE67262	AE67287
Date Analyzed	4/19/2011	4/19/2011
Dilution	1.0	1.0
Lead	ND < 0.013	ND < 0.013
Selenium	ND < 0.01	ND < 0.01
Cadmium	ND < 0.005	ND < 0.005
Chromium	ND < 0.05	ND < 0.05
Arsenic	ND < 0.004	ND < 0.004
Barium	ND < 0.05	ND < 0.05
Silver	ND < 0.012	ND < 0.012
Copper	ND < 0.04	ND < 0.04
Nickel	ND < 0.05	ND < 0.05
Zinc	ND < 0.02	ND < 0.02
Beryllium	ND < 0.004	ND < 0.004
Antimony	ND < 0.05	ND < 0.05
Thallium	ND < 0.05	ND < 0.05
Vanadium	ND < 0.05	ND < 0.05

**Total Metals [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-30 0-2	SB-30 4-6	SB-8 0-2	SB-8 4-6	SB-22 0-2
CET ID	AE67263	AE67264	AE67265	AE67266	AE67267
Date Analyzed	4/18/2011	4/18/2011	4/18/2011	4/19/2011	4/19/2011
Dilution	1.0	1.0	1.0	1.0	1.0
Lead	64	26	42	12	30
Selenium	ND < 1.5				
Cadmium	ND < 1.0				
Chromium	25	20	24	37	17
Arsenic	6.5	3.2	8.3	2.6	4.7
Barium	100	54	71	120	46
Silver	ND < 2.5	ND < 2.5	ND < 2.5	ND < 3.0	ND < 2.5
Copper	26	11	16	26	13
Nickel	17	12	13	20	10
Zinc	98	52	56	65	53
Beryllium	ND < 1.5				
Antimony	ND < 2.5	ND < 2.5	ND < 2.5	ND < 3.0	ND < 2.5
Thallium	ND < 2.5	ND < 2.5	ND < 2.5	ND < 3.0	ND < 2.5
Vanadium	36	26	32	46	24

**Total Metals [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-22 4-6	SB-31 4-6	SB-32 4-6	SB-33 4-6	SB-3 0-2
CET ID	AE67268	AE67269	AE67270	AE67271	AE67272
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011
Dilution	1.0	1.0	1.0	1.0	1.0
Lead	3.7	10	8.3	31	36
Selenium	ND < 1.5				
Cadmium	ND < 1.0				
Chromium	17	29	24	29	15
Arsenic	ND < 1.5	1.8	2.0	6.4	9.2

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**Total Metals [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-22 4-6	SB-31 4-6	SB-32 4-6	SB-33 4-6	SB-3 0-2
Barium	46	66	69	69	39
Silver	ND < 2.5	ND < 2.5	ND < 2.5	ND < 2.5	ND < 3.0
Copper	9.5	16	16	17	9.7
Nickel	11	18	17	17	6.6
Zinc	27	49	170	50	37
Beryllium	ND < 1.5	ND < 1.5	ND < 1.5	ND < 1.5	ND < 1.5
Antimony	ND < 2.5	ND < 2.5	ND < 2.5	ND < 2.5	ND < 3.0
Thallium	ND < 2.5	ND < 2.5	ND < 2.5	ND < 2.5	ND < 3.0
Vanadium	20	34	27	33	16

**Total Metals [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-3 2-4	SB-4 0-2	SB-4 10-11	SB-6 0-2	SB-6 4-6
CET ID	AE67273	AE67274	AE67275	AE67276	AE67277
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011
Dilution	1.0	1.0	1.0	1.0	1.0
Lead	7.9	23	10	240	11
Selenium	ND < 1.5	ND < 1.5	ND < 1.5	ND < 1.5	ND < 1.5
Cadmium	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0
Chromium	29	17	23	20	32
Arsenic	ND < 1.5	6.9	ND < 1.5	68	2.9
Barium	130	56	87	79	71
Silver	ND < 2.5	ND < 3.0	ND < 2.5	ND < 3.0	ND < 2.5
Copper	21	10	47	25	28
Nickel	20	11	20	15	22
Zinc	55	46	56	70	47
Beryllium	ND < 1.5	ND < 1.5	ND < 1.5	ND < 1.5	ND < 1.5
Antimony	ND < 2.5	ND < 3.0	ND < 2.5	ND < 3.0	ND < 2.5
Thallium	ND < 2.5	ND < 3.0	ND < 2.5	ND < 3.0	ND < 2.5
Vanadium	39	25	32	34	40

**Total Metals [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-5 0-2	SB-5 4-6	SB-23 0-2	SB-23 4-6	SB-7 0-2
CET ID	AE67278	AE67279	AE67280	AE67281	AE67285
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011
Dilution	1.0	1.0	1.0	1.0	1.0
Lead	72	13	7.4	4.9	42
Selenium	ND < 2.5	ND < 1.5	ND < 1.5	ND < 1.5	ND < 1.5
Cadmium	ND < 1.5	ND < 1.0	ND < 1.0	ND < 1.0	ND < 1.0
Chromium	11	27	25	24	21
Arsenic	18	2.8	ND < 1.5	ND < 1.5	6.2
Barium	66	96	65	93	74
Silver	ND < 4.5	ND < 2.5	ND < 2.5	ND < 2.5	ND < 3.0
Copper	13	18	15	11	18
Nickel	6.9	19	17	16	15
Zinc	52	53	44	54	61
Beryllium	ND < 2.5	ND < 1.5	ND < 1.5	ND < 1.5	ND < 1.5
Antimony	ND < 4.5	ND < 2.5	ND < 2.5	ND < 2.5	ND < 3.0
Thallium	ND < 4.5	ND < 2.5	ND < 2.5	ND < 2.5	ND < 3.0
Vanadium	14	38	30	30	26

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**Total Metals [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-37 6-8
CET ID	AE67286
Date Analyzed	4/19/2011
Dilution	1.0
Lead	3.5
Selenium	ND < 1.5
Cadmium	ND < 1.0
Chromium	16
Arsenic	ND < 1.5
Barium	46
Silver	ND < 2.5
Copper	12
Nickel	10
Zinc	34
Beryllium	ND < 1.5
Antimony	ND < 2.5
Thallium	ND < 2.5
Vanadium	22

**Total Metals Dup Result [EPA 6010C] Units: mg/kg (Dry Wt)**

Client ID	SB-22 0-2
CET ID	AE67267
Date Analyzed	4/19/2011
Dilution	1.0
Lead	32
Selenium	ND < 1.5
Cadmium	ND < 1.0
Chromium	17
Arsenic	4.9
Barium	49
Silver	ND < 2.5
Copper	15
Nickel	11
Zinc	55
Beryllium	ND < 1.5
Antimony	ND < 2.5
Thallium	ND < 2.5
Vanadium	25

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/l**

Client ID	FB041311	FB041411
CET ID	AE67262	AE67287
Date Analyzed	4/19/2011	4/19/2011
Dilution	1	1
Alpha-BHC	ND < 0.10	ND < 0.10
Gamma-BHC	ND < 0.10	ND < 0.10
Heptachlor	ND < 0.05	ND < 0.05
Aldrin	ND < 0.10	ND < 0.10
Beta-BHC	ND < 0.10	ND < 0.10
Delta-BHC	ND < 0.10	ND < 0.10

CET#: 11040331

Project: Bartlett Arboretum, Stamford

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/l**

Client ID	FB041311	FB041411
Heptachlor Epoxide	ND < 0.05	ND < 0.05
Endosulfan I	ND < 0.10	ND < 0.10
4,4-DDE	ND < 0.10	ND < 0.10
Dieldrin	ND < 0.002	ND < 0.002
Endrin	ND < 0.10	ND < 0.10
4,4-DDD	ND < 0.10	ND < 0.10
Endosulfan II	ND < 0.10	ND < 0.10
4,4-DDT	ND < 0.10	ND < 0.10
Endrin Aldehyde	ND < 0.10	ND < 0.10
4,4-Methoxychlor	ND < 0.10	ND < 0.10
Endosulfan Sulfate	ND < 0.10	ND < 0.10
Endrin Ketone	ND < 0.10	ND < 0.10
Chlordane	ND < 0.20	ND < 0.20
Toxaphene	ND < 0.80	ND < 0.80
TCMX (Surr 1) 50-150	54	55
DCB (Surr 2) 50-150	65	57

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-30 0-2	SB-30 4-6	SB-8 0-2	SB-8 4-6	SB-22 0-2
CET ID	AE67263	AE67264	AE67265	AE67266	AE67267
Date Analyzed	4/18/2011	4/18/2011	4/18/2011	4/18/2011	4/18/2011
Dilution	1	1	1	1	1
Alpha-BHC	ND < 58	ND < 61	ND < 61	ND < 75	ND < 63
Gamma-BHC	ND < 23	ND < 25	ND < 25	ND < 30	ND < 25
Heptachlor	ND < 10	ND < 10	ND < 10	ND < 12	ND < 10
Aldrin	ND < 29	ND < 31	ND < 31	ND < 38	ND < 32
Beta-BHC	ND < 58	ND < 61	ND < 61	ND < 75	ND < 63
Delta-BHC	ND < 58	ND < 61	ND < 61	ND < 75	ND < 63
Heptachlor Epoxide	ND < 14	ND < 15	ND < 15	ND < 18	ND < 15
Endosulfan I	ND < 58	ND < 61	ND < 61	ND < 75	ND < 63
4,4-DDE	25	ND < 25	ND < 25	ND < 30	ND < 25
Dieldrin	ND < 5.0	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0
Endrin	ND < 58	ND < 61	ND < 61	ND < 75	ND < 63
4,4-DDD	ND < 35	ND < 37	ND < 37	ND < 45	ND < 38
Endosulfan II	ND < 58	ND < 61	ND < 61	ND < 75	ND < 63
4,4-DDT	63	30	ND < 25	ND < 30	ND < 25
Endrin Aldehyde	ND < 58	ND < 61	ND < 61	ND < 75	ND < 63
4,4-Methoxychlor	ND < 58	ND < 61	ND < 61	ND < 75	ND < 63
Endosulfan Sulfate	ND < 58	ND < 61	ND < 61	ND < 75	ND < 63
Endrin Ketone	ND < 58	ND < 61	ND < 61	ND < 75	ND < 63
Chlordane	ND < 46	ND < 49	ND < 49	ND < 60	ND < 50
Toxaphene	ND < 230	ND < 250	ND < 250	ND < 300	ND < 250
TCMX (Surr 1) 50-150	72	77	75	82	77
DCB (Surr 2) 50-150	71	63	57	65	63

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Project: Bartlett Arboretum, Stamford

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-22 4-6	SB-31 4-6	SB-32 4-6	SB-33 4-6	SB-3 0-2
CET ID	AE67268	AE67269	AE67270	AE67271	AE67272
Date Analyzed	4/18/2011	4/18/2011	4/18/2011	4/18/2011	4/19/2011
Dilution	1	1	1	1	1
Alpha-BHC	ND < 61	ND < 59	ND < 59	ND < 61	ND < 75
Gamma-BHC	ND < 25	ND < 24	ND < 24	ND < 25	ND < 30
Heptachlor	ND < 10	ND < 10	ND < 10	ND < 10	ND < 12
Aldrin	ND < 31	ND < 30	ND < 30	ND < 31	ND < 38
Beta-BHC	ND < 61	ND < 59	ND < 59	ND < 61	ND < 75
Delta-BHC	ND < 61	ND < 59	ND < 59	ND < 61	ND < 75
Heptachlor Epoxide	ND < 15	ND < 15	ND < 14	ND < 15	23
Endosulfan I	ND < 61	ND < 59	ND < 59	ND < 61	ND < 75
4,4-DDE	ND < 25	ND < 24	ND < 24	ND < 25	62
Dieldrin	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0	14
Endrin	ND < 61	ND < 59	ND < 59	ND < 61	ND < 75
4,4-DDD	ND < 37	ND < 36	ND < 35	ND < 37	ND < 45
Endosulfan II	ND < 61	ND < 59	ND < 59	ND < 61	ND < 75
4,4-DDT	ND < 25	ND < 24	ND < 24	ND < 25	34
Endrin Aldehyde	ND < 61	ND < 59	ND < 59	ND < 61	ND < 75
4,4-Methoxychlor	ND < 61	ND < 59	ND < 59	ND < 61	ND < 75
Endosulfan Sulfate	ND < 61	ND < 59	ND < 59	ND < 61	ND < 75
Endrin Ketone	ND < 61	ND < 59	ND < 59	ND < 61	ND < 75
Chlordane	ND < 49	ND < 48	ND < 47	ND < 49	ND < 60
Toxaphene	ND < 250	ND < 240	ND < 240	ND < 250	ND < 300
TCMX (Surr 1) 50-150	79	82	76	79	77
DCB (Surr 2) 50-150	53	64	57	73	66

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-3 2-4	SB-4 0-2	SB-4 10-11	SB-6 0-2	SB-6 4-6
CET ID	AE67273	AE67274	AE67275	AE67276	AE67277
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/19/2011
Dilution	1	1	1	1	1
Alpha-BHC	ND < 57	ND < 65	ND < 56	ND < 69	ND < 63
Gamma-BHC	ND < 23	ND < 26	ND < 23	ND < 28	ND < 25
Heptachlor	ND < 9.0	ND < 11	ND < 9.0	ND < 11	ND < 10
Aldrin	ND < 29	ND < 33	ND < 28	ND < 35	ND < 32
Beta-BHC	ND < 57	ND < 65	ND < 56	ND < 69	ND < 63
Delta-BHC	ND < 57	ND < 65	ND < 56	ND < 69	ND < 63
Heptachlor Epoxide	ND < 14	ND < 16	ND < 14	ND < 17	ND < 15
Endosulfan I	ND < 57	ND < 65	ND < 56	ND < 69	ND < 63
4,4-DDE	ND < 23	ND < 26	ND < 23	43	ND < 25
Dieldrin	ND < 5.0	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0
Endrin	ND < 57	ND < 65	ND < 56	ND < 69	ND < 63
4,4-DDD	ND < 34	ND < 39	ND < 34	ND < 42	ND < 38
Endosulfan II	ND < 57	ND < 65	ND < 56	ND < 69	ND < 63
4,4-DDT	ND < 23	ND < 26	ND < 23	ND < 28	ND < 25
Endrin Aldehyde	ND < 57	ND < 65	ND < 56	ND < 69	ND < 63

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**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-3 2-4	SB-4 0-2	SB-4 10-11	SB-6 0-2	SB-6 4-6
4,4-Methoxychlor	ND < 57	ND < 65	ND < 56	ND < 69	ND < 63
Endosulfan Sulfate	ND < 57	ND < 65	ND < 56	ND < 69	ND < 63
Endrin Ketone	ND < 57	ND < 65	ND < 56	ND < 69	ND < 63
Chlordane	ND < 45	ND < 52	ND < 45	ND < 55	ND < 50
Toxaphene	ND < 230	ND < 260	ND < 230	ND < 280	ND < 250
TCMX (Surr 1) 50-150	79	73	78	74	76
DCB (Surr 2) 50-150	65	68	58	61	54

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-5 0-2	SB-5 4-6	SB-23 0-2	SB-23 4-6	SB-34 6-8
CET ID	AE67278	AE67279	AE67280	AE67281	AE67282
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/19/2011	4/20/2011
Dilution	1	1	1	1	1
Alpha-BHC	ND < 110	ND < 61	ND < 57	ND < 54	ND < 56
Gamma-BHC	ND < 44	ND < 25	ND < 23	ND < 22	ND < 23
Heptachlor	ND < 18	ND < 10	ND < 10	ND < 9.0	ND < 9.0
Aldrin	ND < 55	ND < 31	ND < 29	ND < 27	ND < 28
Beta-BHC	ND < 110	ND < 61	ND < 57	ND < 54	ND < 56
Delta-BHC	ND < 110	ND < 61	ND < 57	ND < 54	ND < 56
Heptachlor Epoxide	ND < 27	ND < 15	ND < 14	ND < 13	ND < 14
Endosulfan I	ND < 110	ND < 61	ND < 57	ND < 54	ND < 56
4,4-DDE	160	ND < 25	ND < 23	ND < 22	ND < 23
Dieldrin	ND < 9.0	ND < 5.0	ND < 5.0	ND < 5.0	ND < 5.0
Endrin	ND < 110	ND < 61	ND < 57	ND < 54	ND < 56
4,4-DDD	ND < 66	ND < 37	ND < 35	ND < 33	ND < 34
Endosulfan II	ND < 110	ND < 61	ND < 57	ND < 54	ND < 56
4,4-DDT	ND < 44	ND < 25	ND < 23	ND < 22	ND < 23
Endrin Aldehyde	ND < 110	ND < 61	ND < 57	ND < 54	ND < 56
4,4-Methoxychlor	ND < 110	ND < 61	ND < 57	ND < 54	ND < 56
Endosulfan Sulfate	ND < 110	ND < 61	ND < 57	ND < 54	ND < 56
Endrin Ketone	ND < 110	ND < 61	ND < 57	ND < 54	ND < 56
Chlordane	ND < 87	ND < 49	ND < 46	ND < 44	ND < 45
Toxaphene	ND < 440	ND < 250	ND < 230	ND < 220	ND < 230
TCMX (Surr 1) 50-150	77	78	80	75	74
DCB (Surr 2) 50-150	72	55	62	55	63

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-35 6-8	SB-36 6-8	SB-7 0-2	SB-37 6-8	SB-38 6-8
CET ID	AE67283	AE67284	AE67285	AE67286	AE67288
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Dilution	1	1	1	1	1
Alpha-BHC	ND < 55	ND < 55	ND < 68	ND < 57	ND < 55
Gamma-BHC	ND < 22	ND < 22	ND < 28	ND < 23	ND < 22
Heptachlor	ND < 9.0	ND < 9.0	ND < 11	ND < 10	ND < 9.0
Aldrin	ND < 28	ND < 28	ND < 34	ND < 29	ND < 28
Beta-BHC	ND < 55	ND < 55	ND < 68	ND < 57	ND < 55
Delta-BHC	ND < 55	ND < 55	ND < 68	ND < 57	ND < 55
Heptachlor Epoxide	ND < 14	ND < 14	ND < 17	ND < 14	ND < 14

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**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-35 6-8	SB-36 6-8	SB-7 0-2	SB-37 6-8	SB-38 6-8
Endosulfan I	ND < 55	ND < 55	ND < 68	ND < 57	ND < 55
4,4-DDE	ND < 22	ND < 22	31	ND < 23	ND < 22
Dieldrin	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Endrin	ND < 55	ND < 55	ND < 68	ND < 57	ND < 55
4,4-DDD	ND < 33	ND < 33	ND < 41	ND < 35	ND < 33
Endosulfan II	ND < 55	ND < 55	ND < 68	ND < 57	ND < 55
4,4-DDT	ND < 22	ND < 22	ND < 28	ND < 23	ND < 22
Endrin Aldehyde	ND < 55	ND < 55	ND < 68	ND < 57	ND < 55
4,4-Methoxychlor	ND < 55	ND < 55	ND < 68	ND < 57	ND < 55
Endosulfan Sulfate	ND < 55	ND < 55	ND < 68	ND < 57	ND < 55
Endrin Ketone	ND < 55	ND < 55	ND < 68	ND < 57	ND < 55
Chlordane	ND < 44	ND < 44	ND < 55	ND < 46	ND < 44
Toxaphene	ND < 220	ND < 220	ND < 280	ND < 230	ND < 220
TCMX (Surr 1) 50-150	78	67	70	82	80
DCB (Surr 2) 50-150	59	56	62	56	57

**EPA 8081B Chlorinated Pesticides [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-39 6-8	SB-39A 6-8
CET ID	AE67289	AE67290
Date Analyzed	4/21/2011	4/21/2011
Dilution	1	1
Alpha-BHC	ND < 56	ND < 57
Gamma-BHC	ND < 23	ND < 23
Heptachlor	ND < 9.0	ND < 10
Aldrin	ND < 28	ND < 29
Beta-BHC	ND < 56	ND < 57
Delta-BHC	ND < 56	ND < 57
Heptachlor Epoxide	ND < 14	ND < 14
Endosulfan I	ND < 56	ND < 57
4,4-DDE	ND < 23	ND < 23
Dieldrin	ND < 5.0	ND < 5.0
Endrin	ND < 56	ND < 57
4,4-DDD	ND < 34	ND < 35
Endosulfan II	ND < 56	ND < 57
4,4-DDT	ND < 23	ND < 23
Endrin Aldehyde	ND < 56	ND < 57
4,4-Methoxychlor	ND < 56	ND < 57
Endosulfan Sulfate	ND < 56	ND < 57
Endrin Ketone	ND < 56	ND < 57
Chlordane	ND < 45	ND < 46
Toxaphene	ND < 230	ND < 230
TCMX (Surr 1) 50-150	83	82
DCB (Surr 2) 50-150	65	65

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**EPA 8081B Chlorinated Dup Result [EPA 8081B] Units: ug/kg (Dry Wt)**

Client ID	SB-22 0-2	SB-38 6-8
CET ID	AE67267	AE67288
Date Analyzed	4/18/2011	4/20/2011
Dilution	1.0	1.0
Alpha-BHC	ND < 63	ND < 55
Gamma-BHC	ND < 25	ND < 22
Heptachlor	ND < 10	ND < 9.0
Aldrin	ND < 32	ND < 28
Beta-BHC	ND < 63	ND < 55
Delta-BHC	ND < 63	ND < 55
Heptachlor Epoxide	ND < 15	ND < 14
Endosulfan I	ND < 63	ND < 55
4,4-DDE	ND < 25	ND < 22
Dieldrin	ND < 5.0	ND < 5.0
Endrin	ND < 63	ND < 55
4,4-DDD	ND < 38	ND < 33
Endosulfan II	ND < 63	ND < 55
4,4-DDT	ND < 25	ND < 22
Endrin Aldehyde	ND < 63	ND < 55
4,4-Methoxychlor	ND < 63	ND < 55
Endosulfan Sulfate	ND < 63	ND < 55
Endrin Ketone	ND < 63	ND < 55
Chlordane	ND < 50	ND < 44
Toxaphene	ND < 250	ND < 220
TCMX (Surr 1) 50-150	72	76
DCB (Surr 2) 50-150	62	54

**Semi-Volatile Organics [EPA 8270D] Units: ug/kg (Dry Wt)**

Client ID	SB-22 0-2	SB-22 4-6	SB-31 4-6	SB-32 4-6	SB-33 4-6
CET ID	AE67267	AE67268	AE67269	AE67270	AE67271
Date Analyzed	4/19/2011	4/19/2011	4/19/2011	4/20/2011	4/20/2011
Dilution	1.0	1.0	1.0	1.0	1.0
Naphthalene	ND < 375	ND < 362	ND < 353	ND < 349	ND < 362
2-Methyl Naphthalene	ND < 375	ND < 362	ND < 353	ND < 349	ND < 362
Acenaphthylene	ND < 375	ND < 362	ND < 353	ND < 349	ND < 362
Acenaphthene	ND < 375	ND < 362	ND < 353	ND < 349	ND < 362
Fluorene	ND < 375	ND < 362	ND < 353	ND < 349	ND < 362
Phenanthrene	ND < 375	ND < 362	ND < 353	ND < 349	ND < 362
Anthracene	ND < 375	ND < 362	ND < 353	ND < 349	ND < 362
Fluoranthene	ND < 375	ND < 362	ND < 353	ND < 349	ND < 362
Pyrene	ND < 375	ND < 362	ND < 353	ND < 349	ND < 362
Benzo[a]anthracene	ND < 375	ND < 362	ND < 353	ND < 349	ND < 362
Chrysene	ND < 375	ND < 362	ND < 353	ND < 349	ND < 362
Benzo[b]fluoranthene	ND < 375	ND < 362	ND < 353	ND < 349	ND < 362
Benzo[k]fluoranthene	ND < 375	ND < 362	ND < 353	ND < 349	ND < 362
Benzo[a]pyrene	ND < 375	ND < 362	ND < 353	ND < 349	ND < 362
Indeno[1,2,3-cd]pyrene	ND < 375	ND < 362	ND < 353	ND < 349	ND < 362
Dibenz[a,h]anthracene	ND < 375	ND < 362	ND < 353	ND < 349	ND < 362
Benzo[g,h,i]perylene	ND < 375	ND < 362	ND < 353	ND < 349	ND < 362
Nitrobenzene-d5(Surr) 30-130	70.9	62.3	51.4	72.3	63
2-Fluorobiphenyl (Surr) 30-130	67.9	62.1	50.1	71.2	55
Terphenyl-d14 (Surr) 30-130	49.5	49.3	46.6	57.9	51

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**Semi-Volatile Organics [EPA 8270D] Units: ug/kg (Dry Wt)**

Client ID	SB-34 6-8	SB-35 6-8	SB-36 6-8	SB-38 6-8	SB-39 6-8
CET ID	AE67282	AE67283	AE67284	AE67288	AE67289
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Dilution	1.0	1.0	1.0	1.0	1.0
Naphthalene	ND < 334	ND < 330	ND < 330	ND < 327	ND < 334
2-Methyl Naphthalene	ND < 334	ND < 330	ND < 330	ND < 327	ND < 334
Acenaphthylene	ND < 334	ND < 330	ND < 330	ND < 327	ND < 334
Acenaphthene	ND < 334	ND < 330	ND < 330	ND < 327	ND < 334
Fluorene	ND < 334	ND < 330	ND < 330	ND < 327	ND < 334
Phenanthrene	ND < 334	ND < 330	ND < 330	ND < 327	ND < 334
Anthracene	ND < 334	ND < 330	ND < 330	ND < 327	ND < 334
Fluoranthene	ND < 334	ND < 330	ND < 330	ND < 327	ND < 334
Pyrene	ND < 334	ND < 330	ND < 330	ND < 327	ND < 334
Benzo[a]anthracene	ND < 334	ND < 330	ND < 330	ND < 327	ND < 334
Chrysene	ND < 334	ND < 330	ND < 330	ND < 327	ND < 334
Benzo[b]fluoranthene	ND < 334	ND < 330	ND < 330	ND < 327	ND < 334
Benzo[k]fluoranthene	ND < 334	ND < 330	ND < 330	ND < 327	ND < 334
Benzo[a]pyrene	ND < 334	ND < 330	ND < 330	ND < 327	ND < 334
Indeno[1,2,3-cd]pyrene	ND < 334	ND < 330	ND < 330	ND < 327	ND < 334
Dibenz[a,h]anthracene	ND < 334	ND < 330	ND < 330	ND < 327	ND < 334
Benzo[g,h,i]perylene	ND < 334	ND < 330	ND < 330	ND < 327	ND < 334
Nitrobenzene-d5(Surr) 30-130	69	71.5	65.8	75.1	70.5
2-Fluorobiphenyl (Surr) 30-130	73.2	78	70.5	76.9	72.5
Terphenyl-d14 (Surr) 30-130	56.2	58.7	55.7	59.7	58.5

**Semi-Volatile Organics [EPA 8270D] Units: ug/kg (Dry Wt)**

Client ID	SB-39A 6-8
CET ID	AE67290
Date Analyzed	4/21/2011
Dilution	1.0
Naphthalene	ND < 341
2-Methyl Naphthalene	ND < 341
Acenaphthylene	ND < 341
Acenaphthene	ND < 341
Fluorene	ND < 341
Phenanthrene	ND < 341
Anthracene	ND < 341
Fluoranthene	ND < 341
Pyrene	ND < 341
Benzo[a]anthracene	ND < 341
Chrysene	ND < 341
Benzo[b]fluoranthene	ND < 341
Benzo[k]fluoranthene	ND < 341
Benzo[a]pyrene	ND < 341
Indeno[1,2,3-cd]pyrene	ND < 341
Dibenz[a,h]anthracene	ND < 341
Benzo[g,h,i]perylene	ND < 341
Nitrobenzene-d5(Surr) 30-130	70.1
2-Fluorobiphenyl (Surr) 30-130	71.4
Terphenyl-d14 (Surr) 30-130	59.6

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**Semi-Vol. Dup Result [EPA 8270D] Units: ug/kg**

Client ID	SB-31 4-6	SB-39A 6-8
CET ID	AE67269	AE67290
Date Analyzed	4/19/2011	4/21/2011
Dilution	1.0	1.0
Naphthalene	ND < 353	ND < 341
2-Methyl Naphthalene	ND < 353	ND < 341
Acenaphthylene	ND < 353	ND < 341
Acenaphthene	ND < 353	ND < 341
Fluorene	ND < 353	ND < 341
Phenanthrene	ND < 353	ND < 341
Anthracene	ND < 353	ND < 341
Fluoranthene	ND < 353	ND < 341
Pyrene	ND < 353	ND < 341
Benzo[a]anthracene	ND < 353	ND < 341
Chrysene	ND < 353	ND < 341
Benzo[b]fluoranthene	ND < 353	ND < 341
Benzo[k]fluoranthene	ND < 353	ND < 341
Benzo[a]pyrene	ND < 353	ND < 341
Indeno[1,2,3-cd]pyrene	ND < 353	ND < 341
Dibenz[a,h]anthracene	ND < 353	ND < 341
Benzo[g,h,i]perylene	ND < 353	ND < 341
Nitrobenzene-d5(Surr) 30-130	48.8	71.2
2-Fluorobiphenyl (Surr) 30-130	48.2	73.1
Terphenyl-d14 (Surr) 30-130	47	57.3

**Conn. Extractable TPH [CT DEP] Units: mg/l**

Client ID	FB041311	FB041411
CET ID	AE67262	AE67287
Date Analyzed	4/20/2011	4/20/2011
Dilution	1.0	1.0
ETPH	ND < 0.10	ND < 0.10
Octacosane (surr) 50-150	96	110

**Conn. Extractable TPH [CT DEP] Units: mg/kg (Dry Wt)**

Client ID	SB-22 0-2	SB-22 4-6	SB-31 4-6	SB-32 4-6	SB-33 4-6
CET ID	AE67267	AE67268	AE67269	AE67270	AE67271
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Dilution	1.0	1.0	1.0	1.0	1.0
ETPH	ND < 63	ND < 61	ND < 59	ND < 59	ND < 61
Octacosane (surr) 50-150	97.9	102	97.5	102	91.4

**Conn. Extractable TPH [CT DEP] Units: mg/kg (Dry Wt)**

Client ID	SB-34 6-8	SB-35 6-8	SB-36 6-8	SB-38 6-8	SB-39 6-8
CET ID	AE67282	AE67283	AE67284	AE67288	AE67289
Date Analyzed	4/20/2011	4/20/2011	4/20/2011	4/20/2011	4/20/2011
Dilution	1.0	1.0	1.0	1.0	1.0
ETPH	ND < 56	ND < 55	ND < 55	ND < 55	ND < 56
Octacosane (surr) 50-150	98.2	97.1	97	101	102

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**Conn. Extractable TPH [CT DEP] Units: mg/kg (Dry Wt)**

Client ID	SB-39A 6-8
CET ID	AE67290
Date Analyzed	4/20/2011
Dilution	1.0
ETPH	ND < 57
Octacosane (surr) 50-150	88

**Polynuclear Arom. (SIM) [8270D SIM] Units: ug/l**

Client ID	FB041311	FB041411
CET ID	AE67262	AE67287
Date Analyzed	4/20/2011	4/20/2011
Dilution	1.0	1.0
Naphthalene	ND < 1.0	ND < 1.0
2-Methyl Naphthalene	ND < 1.0	ND < 1.0
Acenaphthylene	ND < 0.30	ND < 0.30
Acenaphthene	ND < 1.0	ND < 1.0
Fluorene	ND < 1.0	ND < 1.0
Phenanthrene	ND < 0.077	ND < 0.077
Anthracene	ND < 1.0	ND < 1.0
Fluoranthene	ND < 1.0	ND < 1.0
Pyrene	ND < 1.0	ND < 1.0
Benzo[a]anthracene	ND < 0.06	ND < 0.06
Chrysene	ND < 1.0	ND < 1.0
Benzo[b]fluoranthene	ND < 0.08	ND < 0.08
Benzo[k]fluoranthene	ND < 0.30	ND < 0.30
Benzo[a]pyrene	ND < 0.20	ND < 0.20
Indeno[1,2,3-cd]pyrene	ND < 0.20	ND < 0.20
Dibenz[a,h]anthracene	ND < 0.20	ND < 0.20
Benzo[g,h,i]perylene	ND < 1.0	ND < 1.0
Nitrobenzene-d5(Surr) 40-140	99	89
2-Fluorobiphenyl (Surr) 40-140	89	85
Terphenyl-d14 (Surr) 40-140	98	98

**Volatile Organics [EPA 8260C] Units: ug/l**

Client ID	FB041311	FB041411
CET ID	AE67262	AE67287
Date Analyzed	4/14/2011	4/14/2011
Dilution	1.0	1.0
Dichlorodifluoromethane	ND < 10	ND < 10
Chloromethane	ND < 2.7	ND < 2.7
Vinyl Chloride	ND < 1.6	ND < 1.6
Bromomethane	ND < 5.0	ND < 5.0
Chloroethane	ND < 5.0	ND < 5.0
Acetone	ND < 50	ND < 50
Acrylonitrile	ND < 0.50	ND < 0.50
Trichlorofluoromethane	ND < 25	ND < 25
Trichlorotrifluoroethane	ND < 25	ND < 25
1,1-Dichloroethene	ND < 1.0	ND < 1.0
Methylene Chloride	ND < 5.0	ND < 5.0

CET#: 11040331

Project: Bartlett Arboretum, Stamford

**Volatile Organics [EPA 8260C] Units: ug/l**

Client ID	FB041311	FB041411
Carbon Disulfide	ND < 5.0	ND < 5.0
Methyl-t-Butyl Ether (MTBE)	ND < 5.0	ND < 5.0
trans-1,2-Dichloroethene	ND < 1.0	ND < 1.0
1,1-Dichloroethane	ND < 1.0	ND < 1.0
2-Butanone (MEK)	ND < 25	ND < 25
2,2-Dichloropropane	ND < 1.0	ND < 1.0
cis-1,2-Dichloroethene	ND < 1.0	ND < 1.0
Chloroform	ND < 1.0	ND < 1.0
Tetrahydrofuran	ND < 5.0	ND < 5.0
1,1,1-Trichloroethane	ND < 1.0	ND < 1.0
Carbon Tetrachloride	ND < 1.0	ND < 1.0
1,1-Dichloropropene	ND < 1.0	ND < 1.0
Benzene	ND < 1.0	ND < 1.0
1,2-Dichloroethane	ND < 1.0	ND < 1.0
Methyl Isobutyl Ketone	ND < 25	ND < 25
Trichloroethene	ND < 1.0	ND < 1.0
1,2-Dichloropropane	ND < 1.0	ND < 1.0
Dibromomethane	ND < 1.0	ND < 1.0
Bromodichloromethane	ND < 0.50	ND < 0.50
2-Hexanone	ND < 25	ND < 25
cis-1,3-Dichloropropene	ND < 0.50	ND < 0.50
Toluene	ND < 1.0	ND < 1.0
trans-1,3-Dichloropropene	ND < 0.50	ND < 0.50
1,1,2-Trichloroethane	ND < 1.0	ND < 1.0
Tetrachloroethene	ND < 1.0	ND < 1.0
1,3-Dichloropropane	ND < 0.50	ND < 0.50
Dibromochloromethane	ND < 0.50	ND < 0.50
1,2-Dibromoethane	ND < 0.50	ND < 0.50
trans-1,4-Dichloro-2-Butene	ND < 10	ND < 10
Chlorobenzene	ND < 1.0	ND < 1.0
1,1,1,2-Tetrachloroethane	ND < 1.0	ND < 1.0
Ethylbenzene	ND < 1.0	ND < 1.0
m+p Xylenes	ND < 1.0	ND < 1.0
o-Xylene	ND < 1.0	ND < 1.0
Styrene	ND < 1.0	ND < 1.0
Bromoform	ND < 1.0	ND < 1.0
Isopropylbenzene	ND < 1.0	ND < 1.0
1,1,2,2-Tetrachloroethane	ND < 0.50	ND < 0.50
Bromobenzene	ND < 1.0	ND < 1.0
1,2,3-Trichloropropane	ND < 1.0	ND < 1.0
n-Propylbenzene	ND < 1.0	ND < 1.0
2-Chlorotoluene	ND < 1.0	ND < 1.0
4-Chlorotoluene	ND < 1.0	ND < 1.0
1,3,5-Trimethylbenzene	ND < 1.0	ND < 1.0
tert-Butylbenzene	ND < 1.0	ND < 1.0
1,2,4-Trimethylbenzene	ND < 1.0	ND < 1.0
sec-Butylbenzene	ND < 1.0	ND < 1.0
1,3-Dichlorobenzene	ND < 1.0	ND < 1.0
4-Isopropyltoluene	ND < 1.0	ND < 1.0
1,4-Dichlorobenzene	ND < 1.0	ND < 1.0
1,2-Dichlorobenzene	ND < 1.0	ND < 1.0

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**Volatile Organics [EPA 8260C] Units: ug/l**

Client ID	FB041311	FB041411
n-Butylbenzene	ND < 1.0	ND < 1.0
1,2-Dibromo-3-Chloropropane	ND < 1.0	ND < 1.0
1,2,4-Trichlorobenzene	ND < 1.0	ND < 1.0
Hexachlorobutadiene	ND < 0.45	ND < 0.45
Naphthalene	ND < 1.0	ND < 1.0
1,2,3-Trichlorobenzene	ND < 1.0	ND < 1.0
1,2 Dichloroethane-d4 (SURRE) 70-130	96.1	104
toluene-d8 (SURRE) 70-130	90.8	93.9
4-bromofluorobenzene (SURRE) 70-130	93.8	92.3

**Volatile Organics [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB-22 0-2	SB-22 4-6	SB-31 4-6	SB-32 4-6	SB-33 4-6
CET ID	AE67267	AE67268	AE67269	AE67270	AE67271
Date Analyzed	4/14/2011	4/14/2011	4/14/2011	4/14/2011	4/14/2011
Dilution	1.9	1.6	1.8	1.7	1.6
Dichlorodifluoromethane	ND < 18	ND < 15	ND < 16	ND < 15	ND < 15
Chloromethane	ND < 12	ND < 10	ND < 11	ND < 10	ND < 10
Vinyl Chloride	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Bromomethane	ND < 12	ND < 10	ND < 11	ND < 10	ND < 10
Chloroethane	ND < 12	ND < 10	ND < 11	ND < 10	ND < 10
Acetone	ND < 180	ND < 140	ND < 160	ND < 140	ND < 150
Acrylonitrile	ND < 10	ND < 8.0	ND < 9.0	ND < 8.0	ND < 8.0
Trichlorofluoromethane	ND < 18	ND < 15	ND < 16	ND < 15	ND < 15
Trichlorotrifluoroethane	ND < 36	ND < 29	ND < 32	ND < 29	ND < 30
1,1-Dichloroethene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Methylene Chloride	ND < 60	ND < 48	ND < 53	ND < 48	ND < 49
Carbon Disulfide	ND < 12	ND < 10	ND < 11	ND < 10	ND < 10
Methyl-t-Butyl Ether (MTBE)	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
trans-1,2-Dichloroethene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,1-Dichloroethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
2-Butanone (MEK)	ND < 30	ND < 24	ND < 27	ND < 24	ND < 25
2,2-Dichloropropane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
cis-1,2-Dichloroethene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Chloroform	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Tetrahydrofuran	ND < 30	ND < 24	ND < 27	ND < 24	ND < 25
1,1,1-Trichloroethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Carbon Tetrachloride	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,1-Dichloropropene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Benzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2-Dichloroethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Methyl Isobutyl Ketone	ND < 30	ND < 24	ND < 27	ND < 24	ND < 25
Trichloroethene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2-Dichloropropane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Dibromomethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Bromodichloromethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
2-Hexanone	ND < 30	ND < 24	ND < 27	ND < 24	ND < 25
cis-1,3-Dichloropropene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Toluene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
trans-1,3-Dichloropropene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,1,2-Trichloroethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0

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Project: Bartlett Arboretum, Stamford

**Volatile Organics [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB-22 0-2	SB-22 4-6	SB-31 4-6	SB-32 4-6	SB-33 4-6
Tetrachloroethene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,3-Dichloropropane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Dibromochloromethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2-Dibromoethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
trans-1,4-Dichloro-2-Butene	ND < 30	ND < 24	ND < 27	ND < 24	ND < 25
Chlorobenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,1,1,2-Tetrachloroethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Ethylbenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
m+p Xylenes	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
o-Xylene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Styrene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Bromoform	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Isopropylbenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,1,2,2-Tetrachloroethane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Bromobenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2,3-Trichloropropane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
n-Propylbenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
2-Chlorotoluene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
4-Chlorotoluene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,3,5-Trimethylbenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
tert-Butylbenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2,4-Trimethylbenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
sec-Butylbenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,3-Dichlorobenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
4-Isopropyltoluene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,4-Dichlorobenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2-Dichlorobenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
n-Butylbenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2-Dibromo-3-Chloropropane	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2,4-Trichlorobenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Hexachlorobutadiene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Naphthalene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2,3-Trichlorobenzene	ND < 6.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2 Dichloroethane-d4 (SURR) 70-130	90.6	89.9	90.2	89.7	97.6
toluene-d8 (SURR) 70-130	98.4	101	99.4	97.8	99.3
4-bromofluorobenzene (SURR) 70-130	99.1	99.1	96.6	95.6	97

**Volatile Organics [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB-34 6-8	SB-35 6-8	SB-36 6-8	SB-37 6-8	SB-38 6-8
CET ID	AE67282	AE67283	AE67284	AE67286	AE67288
Date Analyzed	4/14/2011	4/15/2011	4/15/2011	4/15/2011	4/15/2011
Dilution	1.6	1.5	1.9	1.6	1.7
Dichlorodifluoromethane	ND < 13	ND < 13	ND < 16	ND < 14	ND < 14
Chloromethane	ND < 9.0	ND < 9.0	ND < 11	ND < 10	ND < 10
Vinyl Chloride	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Bromomethane	ND < 9.0	ND < 9.0	ND < 11	ND < 10	ND < 10
Chloroethane	ND < 9.0	ND < 9.0	ND < 11	ND < 10	ND < 10
Acetone	ND < 130	ND < 130	ND < 160	ND < 140	ND < 140
Acrylonitrile	ND < 7.0	ND < 7.0	ND < 9.0	ND < 8.0	ND < 8.0
Trichlorofluoromethane	ND < 13	ND < 13	ND < 16	ND < 14	ND < 14

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**Volatile Organics [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB-34 6-8	SB-35 6-8	SB-36 6-8	SB-37 6-8	SB-38 6-8
Trichlorotrifluoroethane	ND < 26	ND < 26	ND < 31	ND < 28	ND < 28
1,1-Dichloroethene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Methylene Chloride	ND < 44	ND < 43	ND < 52	ND < 47	ND < 46
Carbon Disulfide	ND < 9.0	ND < 9.0	ND < 11	ND < 10	ND < 10
Methyl-t-Butyl Ether (MTBE)	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
trans-1,2-Dichloroethene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,1-Dichloroethane	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
2-Butanone (MEK)	ND < 22	ND < 22	ND < 26	ND < 24	ND < 23
2,2-Dichloropropane	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
cis-1,2-Dichloroethene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Chloroform	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Tetrahydrofuran	ND < 22	ND < 22	ND < 26	ND < 24	ND < 23
1,1,1-Trichloroethane	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Carbon Tetrachloride	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,1-Dichloropropene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Benzene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2-Dichloroethane	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Methyl Isobutyl Ketone	ND < 22	ND < 22	ND < 26	ND < 24	ND < 23
Trichloroethene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2-Dichloropropane	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Dibromomethane	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Bromodichloromethane	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
2-Hexanone	ND < 22	ND < 22	ND < 26	ND < 24	ND < 23
cis-1,3-Dichloropropene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Toluene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
trans-1,3-Dichloropropene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,1,2-Trichloroethane	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Tetrachloroethene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,3-Dichloropropane	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Dibromochloromethane	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2-Dibromoethane	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
trans-1,4-Dichloro-2-Butene	ND < 22	ND < 22	ND < 26	ND < 24	ND < 23
Chlorobenzene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,1,1,2-Tetrachloroethane	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Ethylbenzene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
m+p Xylenes	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
o-Xylene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Styrene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Bromoform	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Isopropylbenzene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,1,2,2-Tetrachloroethane	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Bromobenzene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2,3-Trichloropropane	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
n-Propylbenzene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
2-Chlorotoluene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
4-Chlorotoluene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,3,5-Trimethylbenzene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
tert-Butylbenzene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2,4-Trimethylbenzene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
sec-Butylbenzene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,3-Dichlorobenzene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0

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**Volatile Organics [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB-34 6-8	SB-35 6-8	SB-36 6-8	SB-37 6-8	SB-38 6-8
4-Isopropyltoluene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,4-Dichlorobenzene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2-Dichlorobenzene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
n-Butylbenzene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2-Dibromo-3-Chloropropane	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2,4-Trichlorobenzene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Hexachlorobutadiene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
Naphthalene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2,3-Trichlorobenzene	ND < 5.0	ND < 5.0	ND < 6.0	ND < 5.0	ND < 5.0
1,2 Dichloroethane-d4 (SURR) 70-130	89.8	91.4	92.1	98	88.7
toluene-d8 (SURR) 70-130	102	99.7	99.2	100	97.9
4-bromofluorobenzene (SURR) 70-130	100	97.9	98.8	96.6	97.6

**Volatile Organics [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB-39 6-8	SB-39A 6-8
CET ID	AE67289	AE67290
Date Analyzed	4/15/2011	4/15/2011
Dilution	1.7	1.6
Dichlorodifluoromethane	ND < 14	ND < 14
Chloromethane	ND < 10	ND < 10
Vinyl Chloride	ND < 5.0	ND < 5.0
Bromomethane	ND < 10	ND < 10
Chloroethane	ND < 10	ND < 10
Acetone	ND < 140	ND < 140
Acrylonitrile	ND < 8.0	ND < 8.0
Trichlorofluoromethane	ND < 14	ND < 14
Trichlorotrifluoroethane	ND < 28	ND < 28
1,1-Dichloroethene	ND < 5.0	ND < 5.0
Methylene Chloride	ND < 47	ND < 46
Carbon Disulfide	ND < 10	ND < 10
Methyl-t-Butyl Ether (MTBE)	ND < 5.0	ND < 5.0
trans-1,2-Dichloroethene	ND < 5.0	ND < 5.0
1,1-Dichloroethane	ND < 5.0	ND < 5.0
2-Butanone (MEK)	ND < 24	ND < 23
2,2-Dichloropropane	ND < 5.0	ND < 5.0
cis-1,2-Dichloroethene	ND < 5.0	ND < 5.0
Chloroform	ND < 5.0	ND < 5.0
Tetrahydrofuran	ND < 24	ND < 23
1,1,1-Trichloroethane	ND < 5.0	ND < 5.0
Carbon Tetrachloride	ND < 5.0	ND < 5.0
1,1-Dichloropropene	ND < 5.0	ND < 5.0
Benzene	ND < 5.0	ND < 5.0
1,2-Dichloroethane	ND < 5.0	ND < 5.0
Methyl Isobutyl Ketone	ND < 24	ND < 23
Trichloroethene	ND < 5.0	ND < 5.0
1,2-Dichloropropane	ND < 5.0	ND < 5.0
Dibromomethane	ND < 5.0	ND < 5.0
Bromodichloromethane	ND < 5.0	ND < 5.0
2-Hexanone	ND < 24	ND < 23
cis-1,3-Dichloropropene	ND < 5.0	ND < 5.0

CET#: 11040331

Project: Bartlett Arboretum, Stamford

**Volatile Organics [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB-39 6-8	SB-39A 6-8
Toluene	ND < 5.0	ND < 5.0
trans-1,3-Dichloropropene	ND < 5.0	ND < 5.0
1,1,2-Trichloroethane	ND < 5.0	ND < 5.0
Tetrachloroethene	ND < 5.0	ND < 5.0
1,3-Dichloropropane	ND < 5.0	ND < 5.0
Dibromochloromethane	ND < 5.0	ND < 5.0
1,2-Dibromoethane	ND < 5.0	ND < 5.0
trans-1,4-Dichloro-2-Butene	ND < 24	ND < 23
Chlorobenzene	ND < 5.0	ND < 5.0
1,1,1,2-Tetrachloroethane	ND < 5.0	ND < 5.0
Ethylbenzene	ND < 5.0	ND < 5.0
m+p Xylenes	ND < 5.0	ND < 5.0
o-Xylene	ND < 5.0	ND < 5.0
Styrene	ND < 5.0	ND < 5.0
Bromoform	ND < 5.0	ND < 5.0
Isopropylbenzene	ND < 5.0	ND < 5.0
1,1,2,2-Tetrachloroethane	ND < 5.0	ND < 5.0
Bromobenzene	ND < 5.0	ND < 5.0
1,2,3-Trichloropropane	ND < 5.0	ND < 5.0
n-Propylbenzene	ND < 5.0	ND < 5.0
2-Chlorotoluene	ND < 5.0	ND < 5.0
4-Chlorotoluene	ND < 5.0	ND < 5.0
1,3,5-Trimethylbenzene	ND < 5.0	ND < 5.0
tert-Butylbenzene	ND < 5.0	ND < 5.0
1,2,4-Trimethylbenzene	ND < 5.0	ND < 5.0
sec-Butylbenzene	ND < 5.0	ND < 5.0
1,3-Dichlorobenzene	ND < 5.0	ND < 5.0
4-Isopropyltoluene	ND < 5.0	ND < 5.0
1,4-Dichlorobenzene	ND < 5.0	ND < 5.0
1,2-Dichlorobenzene	ND < 5.0	ND < 5.0
n-Butylbenzene	ND < 5.0	ND < 5.0
1,2-Dibromo-3-Chloropropane	ND < 5.0	ND < 5.0
1,2,4-Trichlorobenzene	ND < 5.0	ND < 5.0
Hexachlorobutadiene	ND < 5.0	ND < 5.0
Naphthalene	ND < 5.0	ND < 5.0
1,2,3-Trichlorobenzene	ND < 5.0	ND < 5.0
1,2 Dichloroethane-d4 (SURR) 70-130	90.7	92
toluene-d8 (SURR) 70-130	101	98.4
4-bromofluorobenzene (SURR) 70-130	96.2	97.6

**Vol. Org. Dup Result [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB-22 0-2
CET ID	AE67267
Date Analyzed	4/14/2011
Dilution	1.0
Dichlorodifluoromethane	ND < 10
Chloromethane	ND < 7.0
Vinyl Chloride	ND < 4.0
Bromomethane	ND < 7.0
Chloroethane	ND < 7.0

CET#: 11040331

Project: Bartlett Arboretum, Stamford

**Vol. Org. Dup Result [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB-22 0-2
Acetone	ND < 94
Acrylonitrile	ND < 5.0
Trichlorofluoromethane	ND < 10
Trichlorotrifluoroethane	ND < 19
1,1-Dichloroethene	ND < 4.0
Methylene Chloride	ND < 32
Carbon Disulfide	ND < 7.0
Methyl-t-Butyl Ether (MTBE)	ND < 4.0
trans-1,2-Dichloroethene	ND < 4.0
1,1-Dichloroethane	ND < 4.0
2-Butanone (MEK)	ND < 16
2,2-Dichloropropane	ND < 4.0
cis-1,2-Dichloroethene	ND < 4.0
Chloroform	ND < 4.0
Tetrahydrofuran	ND < 16
1,1,1-Trichloroethane	ND < 4.0
Carbon Tetrachloride	ND < 4.0
1,1-Dichloropropene	ND < 4.0
Benzene	ND < 4.0
1,2-Dichloroethane	ND < 4.0
Methyl Isobutyl Ketone	ND < 16
Trichloroethene	ND < 4.0
1,2-Dichloropropane	ND < 4.0
Dibromomethane	ND < 4.0
Bromodichloromethane	ND < 4.0
2-Hexanone	ND < 16
cis-1,3-Dichloropropene	ND < 4.0
Toluene	ND < 4.0
trans-1,3-Dichloropropene	ND < 4.0
1,1,2-Trichloroethane	ND < 4.0
Tetrachloroethene	ND < 4.0
1,3-Dichloropropane	ND < 4.0
Dibromochloromethane	ND < 4.0
1,2-Dibromoethane	ND < 4.0
trans-1,4-Dichloro-2-Butene	ND < 16
Chlorobenzene	ND < 4.0
1,1,1,2-Tetrachloroethane	ND < 4.0
Ethylbenzene	ND < 4.0
m+p Xylenes	ND < 4.0
o-Xylene	ND < 4.0
Styrene	ND < 4.0
Bromoform	ND < 4.0
Isopropylbenzene	ND < 4.0
1,1,2,2-Tetrachloroethane	ND < 4.0
Bromobenzene	ND < 4.0
1,2,3-Trichloropropane	ND < 4.0
n-Propylbenzene	ND < 4.0
2-Chlorotoluene	ND < 4.0
4-Chlorotoluene	ND < 4.0
1,3,5-Trimethylbenzene	ND < 4.0
tert-Butylbenzene	ND < 4.0
1,2,4-Trimethylbenzene	ND < 4.0
sec-Butylbenzene	ND < 4.0

CET#: 11040331

Project: Bartlett Arboretum, Stamford

**Vol. Org. Dup Result [EPA 8260C] Units: ug/kg (Dry Wt)**

Client ID	SB-22 0-2
1,3-Dichlorobenzene	ND < 4.0
4-Isopropyltoluene	ND < 4.0
1,4-Dichlorobenzene	ND < 4.0
1,2-Dichlorobenzene	ND < 4.0
n-Butylbenzene	ND < 4.0
1,2-Dibromo-3-Chloropropane	ND < 4.0
1,2,4-Trichlorobenzene	ND < 4.0
Hexachlorobutadiene	ND < 4.0
Naphthalene	ND < 4.0
1,2,3-Trichlorobenzene	ND < 4.0
1,2 Dichloroethane-d4 (SURR) 70-130	98
toluene-d8 (SURR) 70-130	99
4-bromofluorobenzene (SURR) 70-130	98

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

Sincerely,



David Ditta  
Laboratory Director

Report Comments:

1. ND is None Detected at the specified detection limit.
2. All analyses were performed in house unless a Reference Laboratory is listed.
3. Samples will be disposed of 30 days after the report date.
4. Sample Result Flags:
  - E - The result is estimated, above the calibration range.
  - H - The surrogate recovery is above the control limits.
  - L - The surrogate recovery is below the control limits.
  - B - The compound was detected in the laboratory blank.
  - P - The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
  - D - The RPD between the sample and the sample duplicate is high. Sample homogeneity may be a problem.
5. All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

CET#: 11040331

Project: Bartlett Arboretum, Stamford



COMPLETE ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

CET # 11040331

Volatile Soils Only:

Date and Time in Freezer

Client:

CET: 4-16-11 12:35

Additional Analysis

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

Sample ID	Date/Time	Matrix A=Air S=Soil W=Water DW=Drinking W. C=Cassette Solid Other (Specify)	Turnaround Time ** (check one)				Organics										Metals (check all that apply)					TOTAL # OF CONT.	NOTE #				
			Same Day *	Next Day *	2-3 Days *	Std (5-7 Days)	8260 CT List	8260 Aromatics	8260 Halogens	SPLP 8260	TCLP 8260	CT ETPH	8270 CT List	8270 PNAs	PCBs	Pesticides	Herbicides	13 Priority Poll	8 RCRA	TOTAL MSPLS	TCLP			SPLP	Field Filtered	Lab To Filter	
FR-04(1311)	4/13/11 / 0900	W				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
SR-30 (0-2)	0935	S				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
SR-20 (4-6)	0946					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
SR-2 (0-2)	1010					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
SR-8 (4-6)	1015					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
SR-22 (0-2)	1025					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
SR-22 (4-6)	1030					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
SR-31 (4-6)	1055					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
SR-32 (4-6)	1105					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
SR-33 (4-6)	1130					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		

NOTES: Exhacker soil samples, hold for possible DR metals + Arsenide analysis

Client / Reporting Information

Company Name: TRC  
Address: 21 Ferri Hill Rd North  
City: Windsor State: CT ZIP: 06095  
Report To: Chris Lindahl E-mail: C.Lindahl@trcsolutions.com  
Phone #: 860-298-6267 Fax #: 860-298-6399

Project Information

Project Contact: Chris Lindahl PO #: \_\_\_\_\_  
Project: Bartlett Arboretum Project #: \_\_\_\_\_  
Location: Stamford, CT Collector(s): C. Lindahl  
QA/QC:  Std  Site Specific (MS/MSD) \*  RCP Prg \*  DOAW \*  
Data Report:  Email  PDF  Excel  Other  
RSL Reporting Limits (check one):  GA  GB  SWP  Other (Specify)  
Lab Use: Evidence of Cooling: 2.8 °C or 0 N  
Temp Upon Receipt: 19 °C or N  
SHEET 1 OF 3

\* Additional charge may apply. \*\* TAT begins when the samples are received at the Lab and all issues are resolved. TAT for samples received after 3 p.m. will start on the next business day. REV: 7/1/10

CET#: 11040331

Project: Bartlett Arboretum, Stamford



COMPLETE ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

CET # 11040331

Volatile Soils Only:

Date and Time in Freezer

Client:

CET:

4-14-11 12:55

Additional Analysis

80 Ludes Drive  
Stratford, CT 06615  
Tel: (203) 377-9984  
Fax: (203) 377-9952  
e-mail: cet1@celtabs.com

Sample ID	Date/Time	Matrix A-Air S-Soil W-Water DM-Dinking W. C-Cassette Solid Other (Specify)	Turnaround Time ** (check one)
SR-3 (0-2)	4/13/11/1200	S	X
SR-3 (2-4)	1205		
SR-4 (0-2)	1220		
SR-4 (0-11)	1225		
SR-6 (0-2)	1320		
SR-6 (4-6)	1325		
SR-5 (0-2)	1335		
SR-5 (4-6)	1340		
SR-23 (0-2)	1410		
SR-23 (4-6)	1415		

PRESERVATIVE (Cl-HCl, N-HNO<sub>3</sub>, S-H<sub>2</sub>SO<sub>4</sub>, Na-NaOH, C-Cool, O-Other)  
CONTAINER TYPE (P-Plastic, G-Glass, V-Vial, O-Other)

Soil VOCs Only (M-MeOH B-Bisulfite W-Water F-Empty E-Envelope)  
RELINQUISHED BY: [Signature] DATE/TIME: 4/14/11/1205 RECEIVED BY: [Signature] DATE/TIME: 4/14/11/1205  
RELINQUISHED BY: [Signature] DATE/TIME: 4/14/11/1045 RECEIVED BY: [Signature] DATE/TIME: 4/14/11/1045

**Client / Reporting Information**

Company Name: See Page 1  
Address: See Page 1  
City: State: Zip:

Report To: E-mail:  
Phone #: Fax #:

Organics	Metals (check all that apply)	Additional Analysis
8260 CT List		
8260 Aromatics		
8260 Halogens		
SPLP 8260		
TCLP 8260		
CT ETPH		
8270 CT List		
8270 PNAS		
PCBs		
Pesticides		
Herbicides		
13 Priority Poll		
8 RCRA		
TOTAL <del>15</del> 15		
TCLP		
SPLP		
Field Filtered		
Lab To Filter		
TOTAL # OF CONT.		
NOTE #		

NOTES:  
See Page 1

**Project Information**

Project Contact: PO #:  
Project #: Collector(s):  
Location: Location: Location:  
QA/QC:  Std  Site Specific (MS/MSD) \*  RCP Pkg \*  DOAW \*  
Data Report:  Email  PDF  Excel  Other  
RSR Reporting Limits (check one):  GA  GB  SWP  Other (specify)  
Lab Use: Evidence of Cooling: 1.8 °C or 0 N  
Temp Upon Receipt: SHEET 2 OF 3

\* Additional charge may apply. \*\* TAT begins when the samples are received at the Lab and all issues are resolved. TAT for samples received after 3 p.m. will start on the next business day. REV: 7/11/10





80 Lupes Drive  
Stratford, CT 06615

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

Client: Mr. Chris Lindahl  
TRC Environmental Consultants  
21 Griffin Rd., North  
Windsor, CT 06095

# Analytical Report

## CET # 11050067

**Report Date: May 9, 2011**  
**Client Project: Bartlett Arboretum**



Connecticut Laboratory Certification PH 0116  
Massachusetts Laboratory Certification M-CT903  
Rhode Island Certification 199

New York Certification 11982  
Florida Laboratory Certification E871064

CET#: 11050067

Project: Bartlett Arboretum

**SAMPLE SUMMARY:**

This report contains analytical data associated with the following samples only:

CETID	Client Sample ID	Matrix	Collection Date	Collection Time	Receipt Date
AE68867	SB-37 6-8	Soil	4/13/2011	15:45	04/14/2011

Sample temperature upon receipt was 2.8 degrees C

**PREP ANALYSIS:****Ultrasonic Extraction-ETPH [EPA 3550C]**

Client ID	SB-37 6-8
CET ID	AE68867
Date Analyzed	5/5/2011

**Accelerated Solvent Extraction [EPA 3545]**

Client ID	SB-37 6-8
CET ID	AE68867
Date Analyzed	5/5/2011

**ANALYSIS:****Total Solids [EPA 160.3 mo] Units: percent**

Client ID	SB-37 6-8
CET ID	AE68867
Date Analyzed	5/5/2011
Total Solids	88

**Semi-Volatile Organics [EPA 8270D] Units: ug/kg (Dry Wt)**

Client ID	SB-37 6-8
CET ID	AE68867
Date Analyzed	5/5/2011
Dilution	1.0
Naphthalene	ND < 341
2-Methyl Naphthalene	ND < 341
Acenaphthylene	ND < 341
Acenaphthene	ND < 341
Fluorene	ND < 341
Phenanthrene	ND < 341
Anthracene	ND < 341
Fluoranthene	ND < 341
Pyrene	ND < 341
Benzo[a]anthracene	ND < 341
Chrysene	ND < 341

CET#: 11050067

Project: Bartlett Arboretum

**Semi-Volatile Organics [EPA 8270D] Units: ug/kg (Dry Wt)**

Client ID	SB-37 6-8
Benzo[b]fluoranthene	ND < 341
Benzo[k]fluoranthene	ND < 341
Benzo[a]pyrene	ND < 341
Indeno[1,2,3-cd]pyrene	ND < 341
Dibenz[a,h]anthracene	ND < 341
Benzo[g,h,i]perylene	ND < 341
Nitrobenzene-d5(Surr) 30-130	65.9
2-Fluorobiphenyl (Surr) 30-130	62.4
Terphenyl-d14 (Surr) 30-130	76.6

**Conn. Extractable TPH [CT DEP] Units: mg/kg (Dry Wt)**

Client ID	SB-37 6-8
CET ID	AE68867
Date Analyzed	5/6/2011
Dilution	1.0
ETPH	ND < 57
Octacosane (surr) 50-150	102

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

Sincerely,



David Ditta  
Laboratory Director

**Report Comments:**

1. ND is None Detected at the specified detection limit.
2. All analyses were performed in house unless a Reference Laboratory is listed.
3. Samples will be disposed of 30 days after the report date.
4. Sample Result Flags:
  - E - The result is estimated, above the calibration range.
  - H - The surrogate recovery is above the control limits.
  - L - The surrogate recovery is below the control limits.
  - B - The compound was detected in the laboratory blank.
  - P - The Relative Percent Difference (RPD) of dual column analyses exceeds 40%.
  - D - The RPD between the sample and the sample duplicate is high. Sample homogeneity may be a problem.
5. All results met standard operating procedures unless indicated by a data qualifier next to a sample result, or a narration in the QC report.

CET#: 11050067  
Project: Bartlett Arboretum

VIEW SOURCE FOR THIS MESSAGE

11050067



**From:** CET1 <cet1@cetlabs.com>  
**To:** 'Jacqui Bakos' <jbakos@cetlabs.com>  
**Cc:**  
**Subject:** FW: Additional analysis for Bartlett Arboretum Samples  
**Date:** 5/3/2011  
**Time:** 10:50 AM

**Attachments:** [image001.gif](#)

David Ditta  
Laboratory Director  
Complete Environmental Testing, Inc.  
203-377-9984 phone  
203-377-9952 fax

This e-mail and any attachments contain CET confidential information that may be proprietary or privileged. If you receive this message in error or are not the intended recipient, you should not retain, distribute, disclose or use any of this information and you should destroy the e-mail and any attachments or copies. If you received this message in error please call 203-377-9984.

---

**From:** Lindahl, Christopher (Windsor,CT-US) [mailto:CLindahl@trcsolutions.com]  
**Sent:** Tuesday, May 03, 2011 10:16 AM  
**To:** cet1@cetlabs.com  
**Subject:** Additional analysis for Bartlett Arboretum Samples

In reviewing the reports for the Bartlett Arboretum, I noticed that RCRA-8 metals were requested for the samples in CET report numbers 11040415 and 11040408. Those samples should have been submitted for CT RSR 15 metals. Please re-issue these reports with the CT RSR 15 metals list. Also, in CET report number 11040331, TRC sample number SB-37(6-8) should also have been submitted for ETPH and PAHs. Please run these analysis on this sample and re-issue that report as well. Let me know if you have any questions.

Thank you,

**Chris Lindahl**  
Associate Project Scientist



APPENDIX C  
Geophysical Report

**GROUND PENETRATING RADAR  
SURVEY RESULTS**

**FOR THE LOCATION  
AND INVESTIGATION OF**

*Underground Tanks*

**AT THE FOLLOWING  
LOCATION:**



**151 Brookdale Road  
Stamford, CT**

Quotation #1.4449.11

**PREPARED FOR:**

*TRC Solutions Incorporated  
21 Griffin Road North  
Windsor, CT 06095*

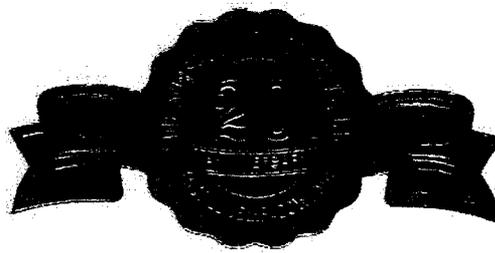
**PREPARED BY:**

*Sub-Surface Informational Surveys Incorporated  
143C Shaker Road, Suite 206  
East Longmeadow, MA 01028-0452*



*"Let us Seek and Find"*

**Surveyed Friday, March 25, 2011**

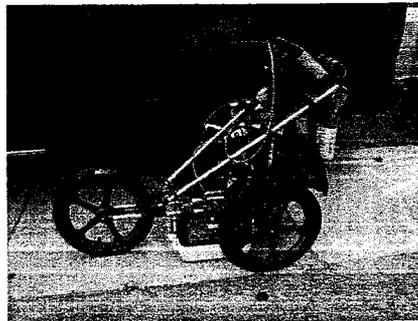


**SUB-SURFACE INFORMATIONAL SURVEYS, INC**  
**SUB-SURFACE INFORMATIONAL SURVEYS, INC./EM DIVISION**

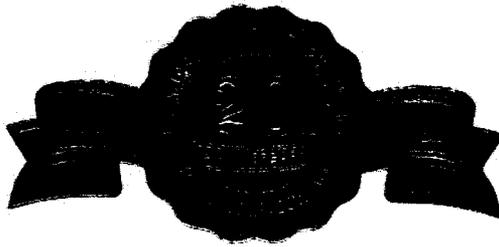
143C Shaker Road  
Suite 206  
Post Office Box 452  
E. Longmeadow, MA 01028-0452

Phone - 413-525-4666  
Fax - 413-525-2887  
Web - [www.subsurfaceinc.com](http://www.subsurfaceinc.com)  
Email - [pbacon@subsurfaceinc.com](mailto:pbacon@subsurfaceinc.com)

<b>1.0</b>	<b>INTRODUCTION</b>	<b>1-1</b>
	<b>1.1</b> <b>Purpose and Scope of Work</b>	
<b>2.0</b>	<b>GEOPHYSICAL SURVEY</b>	<b>2-1</b>
	<b>2.1</b> <b>Geophysical Survey Procedures</b>	
	<b>2.2</b> <b>Geophysical Survey Results</b>	
<b>3.0</b>	<b>GPR ANALYTICAL RESULTS</b>	<b>3-1</b>
	(Data with applicable annotations)	
<b>4.0</b>	<b>SAMPLE GPR PROFILES COLLECTED IN THE FIELD</b>	<b>4-1</b>
<b>5.0</b>	<b>ACQUIRING PROCEDURES</b>	<b>5-1</b>



**SIR-3000/SIR-2000 GPR System  
W/ 400 MHz antenna**



**SUB-SURFACE INFORMATIONAL SURVEYS,  
INC.  
SUB-SURFACE INFORMATIONAL SURVEYS, INC.  
/EM DIVISION**

143C Shaker Road  
Suite 206  
Post Office Box 452  
E. Longmeadow, MA 01028-0452

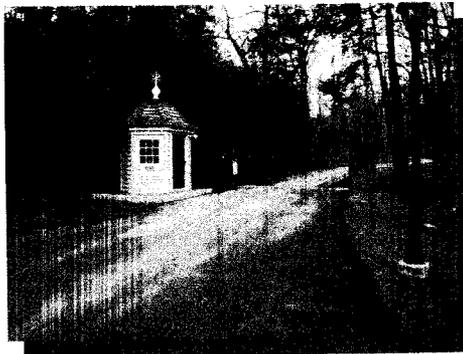
Phone - 413-525-4666  
Fax - 413-525-2887  
Web - [www.subsurfaceinc.com](http://www.subsurfaceinc.com)  
Email - [pbacon@subsurfaceinc.com](mailto:pbacon@subsurfaceinc.com)

## **1.0 Introduction**

In accordance with your authorization, Sub-Surface Informational Surveys, Inc. (SIS) reports to you the results of a ground penetrating radar survey performed on March 25, 2011 at 151 Brookdale Road in the City of Stamford, CT. This survey was directed by your approval of SIS quotation #1.4449.11 dated March 2, 2011.

### **Purpose and Scope**

The purpose of the survey was to investigate for the location and orientation of suspect underground storage tanks.



# Ground Penetrating Radar Survey

## 2.0 Geophysical Survey

Sub-Surface Informational Surveys Incorporated performed a geophysical survey. A transducer operator/supervising GPR technician performed the survey.

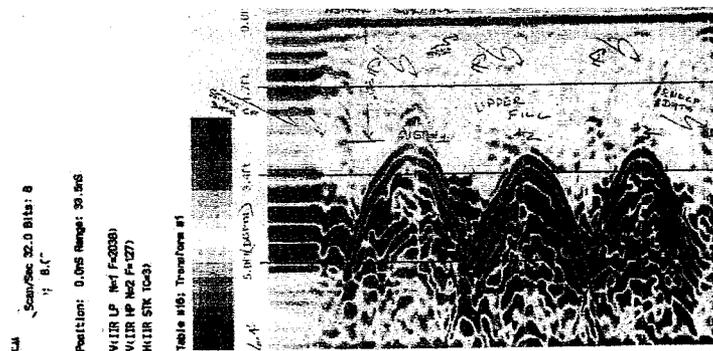
### 2.1 Geophysical Survey Procedures

The depth setting of the GPR survey was approximately 10.0' to locate any existing underground storage tanks (UST's) and/or utilities and unknown anomalies. A traverse grid with a 4.0' minimum spacing was used to conduct the GPR survey. Typically a 5.0' spacing is sufficient to detect all large capacity UST's (500-gallon or greater), septic systems and underground utilities with a high degree of certainty. The spacing of 4.0' was used to better define any existing suspected subsurface anomalies.

The following is an explanation of the equipment used during our survey:

1. The equipment used to conduct the geophysical survey included GPR equipment which consists of **subsurface interface radar** (SIR-3000/2000) computer manufactured by Geophysical Survey Systems, Inc., power supply, graphic recorder, video display unit and transmitting/receiving antenna. The equipment is known collectively as a **GPR** system. The transmitting/receiving antenna transmits electromagnetic signals into the subsurface and then detects, amplifies and displays reflections of the signal on a graphic recorder and a video display unit. As the antenna is moved slowly across the ground surface or surface of contact, a radar image of the subsurface is produced. The maximum depth of penetration of the GPR signal and the resolution of the reflections are a function of the antenna frequency and the electrical properties of the subsurface. As electrical conductivity of the subsurface increases, GPR signal penetration decreases. GPR reflections are produced by spatial changes in the physical properties of the subsurface (I.e., type of material, presence of any subsurface fluid and porosity) and related changes in the electrical properties of the subsurface material in the path of the signals. The greater the difference in the subsurface structures the stronger the GPR reflection seen in the data.

Characteristics that are considered in the interpretation of the GPR data from a given site include the size, shape and amplitude of the reflections. Metallic underground storage tanks (UST's), utilities and conduits have electrical properties uniquely different from those of the soils in which they are buried. As a result, the GPR reflections are usually of high amplitude and have distinctive shapes. For GPR profiles oriented perpendicular to the long axis of the tanks, the signature is similar to a hyperbola. The signature is also a function of the tank diameter.



Above represents a sample of data collected by Sub-Surface Informational Surveys, Inc. on October 17, 1999 at a site in the State of CT. It shows three (3) UST's with the centerline at the top of the parabolas. The top of the tanks is approximately 36" below the surface covered by fill. **NOTE: The above is not part of the data collected for this survey.**

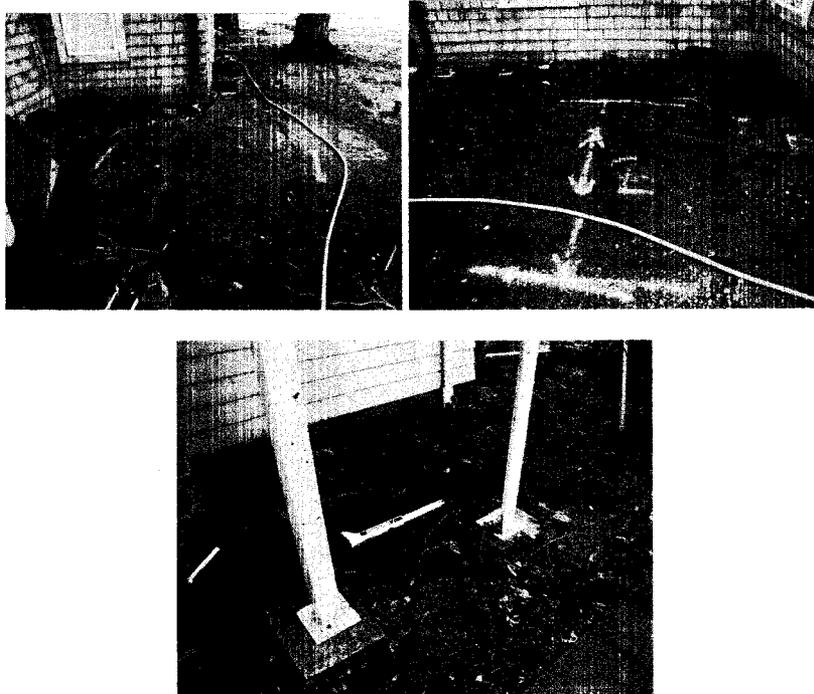
## Ground Penetrating Radar Survey

2. **Pipehorn 500 Dual-Transmitter, Dual-Frequency Locator:** This unit has two separate transmitters. One operates at the highest frequency available in sweeping an area of tracing poor conductors such as iron pipes, fiber optic cable w/tracer tape. A second, low frequency transmitter enables us to quickly isolate a single conductor in congested areas, or to trace for a long distance. **NOT IMPLEMENTED**

3. **The Subsite 75R/75T:** This unit provides digital signal processing for a variety of applications. The unit offers Active, Passive and Beacon locating modes. The unit transmits via direct line connections, induction clamp or induces broadcast signals. An 80 kHz frequency facilitates locating metallic lines with insulators that weaken or block low frequencies. In passive mode, detects signals generated by 50/60 HZ power as well as radiated radio frequencies. **NOT IMPLEMENTED**

### 2.2 Geophysical Survey Results

A Ground Penetrating Radar (GPR) investigation was performed at multiple locations associated the attached site map noting areas of concern (AOC). The purpose was to delineate the existing underground storage tanks associated with the out-buildings shown on the site map. Each of the AOC's were scanned a number of times in multiple directions. Tanks found in the GPR data were painted on site on the day of the survey showing their ends. DZT GPR Data File TRC2 shows the long axis of a tank at the Cottage. This was painted on site as seen in the two photos below showing the long axis (orientation) of the tank.



Above photo shows ferromagnetic magnetometer over the suspect long axis of a tank which did not show up in the GPR data. This showed a strong magnetic signal which was marked on site as the possible tank.

## Ground Penetrating Radar Survey



Above photos show orientation of multiple tank location



The suspect leaching field associated with the Visitor Center could not be surveyed due to the uneven surface along with mature trees. Multiple tree roots mask the parabolic features of a field. To distinguish the difference is impossible since both have the same characteristics. It was determined that there could not be enough of an interface difference in the suspect field.

The last two areas surveyed represented a small parking area adjacent to the Visitor Center as well as the main parking lot near PAOC-12. TRC26 shows a 238.28' piece of data showing to a depth of approximately 10.0' where no parabolic features characteristic of tanks or drums.

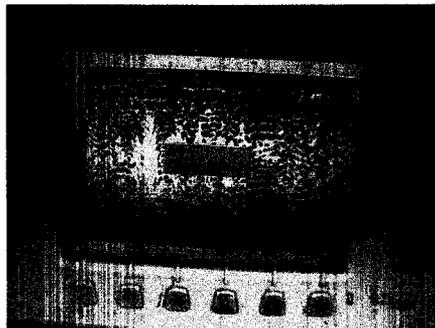
## Ground Penetrating Radar Survey



Small parking area was scanned in this photo



UST profiled on ground surface

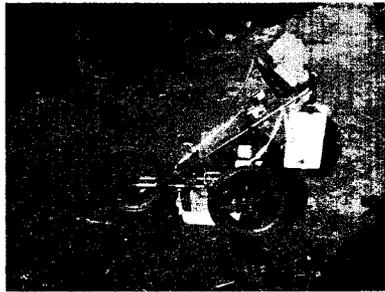
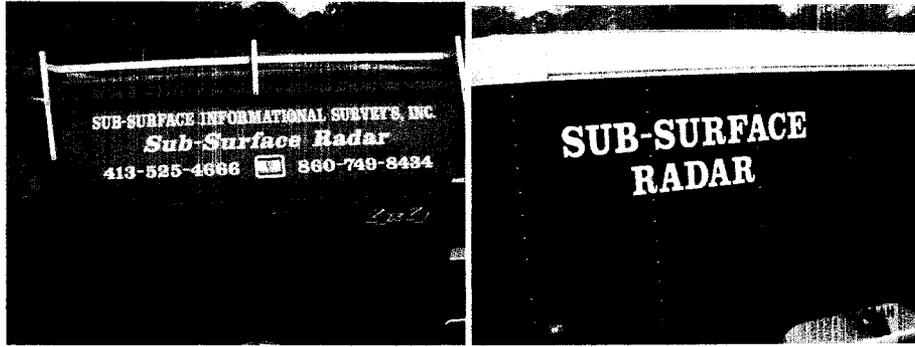


Real-time data collected at your site

**NOTE: Please refer to enclosed DZT GPR Data files with annotations.**

**END OF REPORT**

## Ground Penetrating Radar Survey



SIR-3000 GPR System used in this survey w/400 MHz antenna

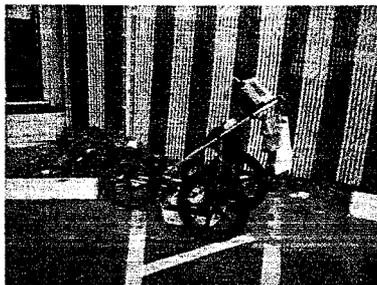


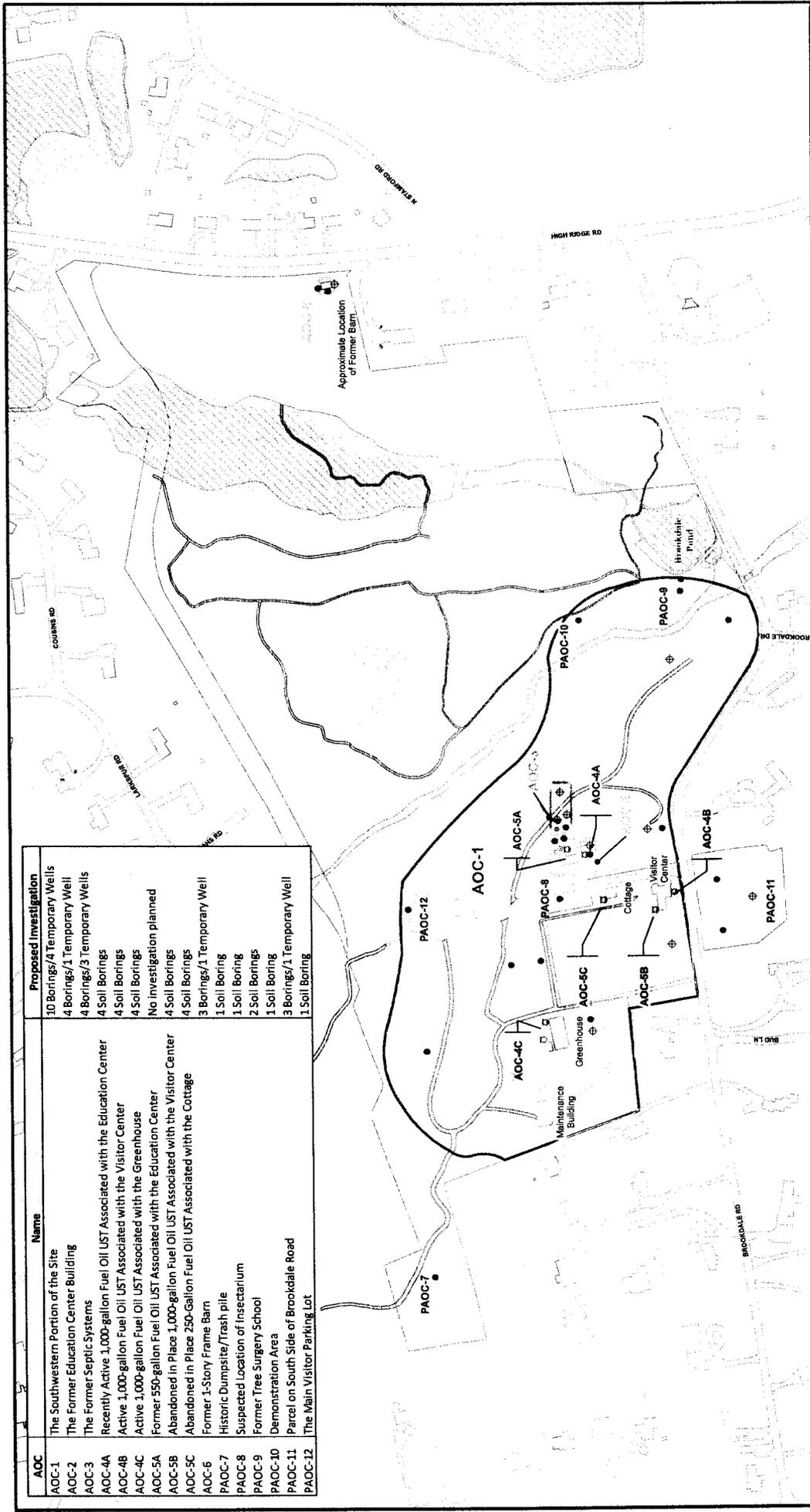
## GPR ANALYTICAL RESULTS--SIR 3000

The attached analytical result are copies of GPR Data Files collected in the field and reproduced at our corporate office. After reviewing the data, selected samples are taken and duplicated for this report.

Copies are made under the following guidelines:

- A. When there are distinctive differences in the collected data. **NOTE:** When one traverse is almost identical in characterization to another, only one copy would be reproduced.
- B. If there is a significant difference with suspected anomaly found within the data.
- C. In the location of anomalies, such as pipes, and/or conduits, underground storage tanks or other specific characteristics important to the investigation, such data is copied and annotated.
- D. Samples of *signal refusal*, (water, clay, or some other highly conductive sub-surface interface).
- E. Requested data.
- F. Specific locations of rebar and conduits using encoder wheel with measured bench marks.





AOC	Name	Proposed Investigation
AOC-1	The Southwestern Portion of the Site	10 Borings/4 Temporary Wells
AOC-2	The Former Education Center Building	4 Borings/1 Temporary Well
AOC-3	The Former Septic Systems	4 Borings/3 Temporary Wells
AOC-4A	Recently Active 1,000-gallon Fuel Oil UST Associated with the Education Center	4 Soil Borings
AOC-4B	Active 1,000-gallon Fuel Oil UST Associated with the Visitor Center	4 Soil Borings
AOC-4C	Active 1,000-gallon Fuel Oil UST Associated with the Greenhouse	No investigation planned
AOC-5A	Former 550-gallon Fuel Oil UST Associated with the Education Center	4 Soil Borings
AOC-5B	Abandoned in Place 1,000-gallon Fuel Oil UST Associated with the Visitor Center	3 Borings/1 Temporary Well
AOC-5C	Abandoned in Place 250-gallon Fuel Oil UST Associated with the Cottage	4 Soil Borings
AOC-6	Former 1-Story Frame Barn	1 Soil Boring
PAOC-7	Historic Dumpsite/Trash pile	1 Soil Boring
PAOC-8	Suspected Location of Insectarium	2 Soil Borings
PAOC-9	Former Tree Surgery School	1 Soil Boring
PAOC-10	Demonstration Area	3 Borings/1 Temporary Well
PAOC-11	Parcel on South Side of Brookdale Road	1 Soil Boring
PAOC-12	The Main Visitor Parking Lot	

**CTRC** 21 Cuffin Road North  
Windsor, CT 06095  
(860) 298-6882

**Bartlett Arboretum**  
Stamford, Connecticut

**DRAFT Sample Locations**

Figure 2 Date: 3/23/2011 Project No: 177487.0000.0000

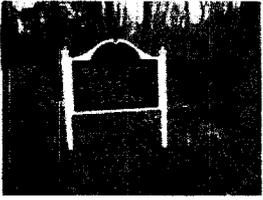
Scale: 0 250 500 Feet

North Arrow

**Legend**

Subject Property	Walkway	Stream	Wetland	Former Structure
AOC-2, 3 & 6	AOC-1	Drain	Leach Pit	Prop Tank
Boring/Well	Soil Boring	UST		

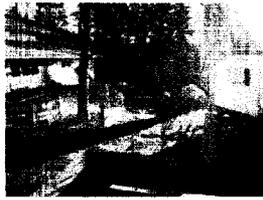
**Proposed Sampling Locations**



IMG\_0001



IMG\_0002



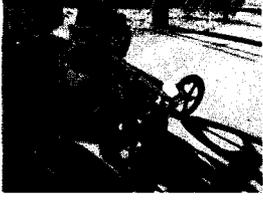
IMG\_0003



IMG\_0004



IMG\_0005



IMG\_0006



IMG\_0007



IMG\_0008



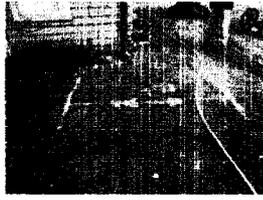
IMG\_0009



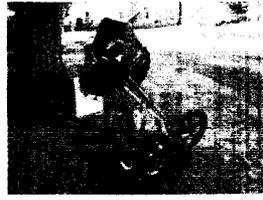
IMG\_0010



IMG\_0011



IMG\_0012



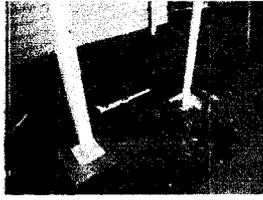
IMG\_0013



IMG\_0014



IMG\_0015



IMG\_0016



IMG\_0017



IMG\_0018



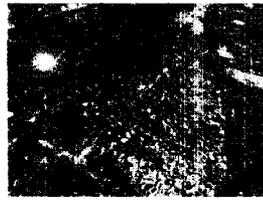
IMG\_0019



IMG\_0020



IMG\_0021



IMG\_0022



IMG\_0023



IMG\_0024



IMG\_0025



IMG\_0026



IMG\_0027



IMG\_0028



IMG\_0029



IMG\_0030



IMG\_0031



IMG\_0032



IMG\_0033



IMG\_0034



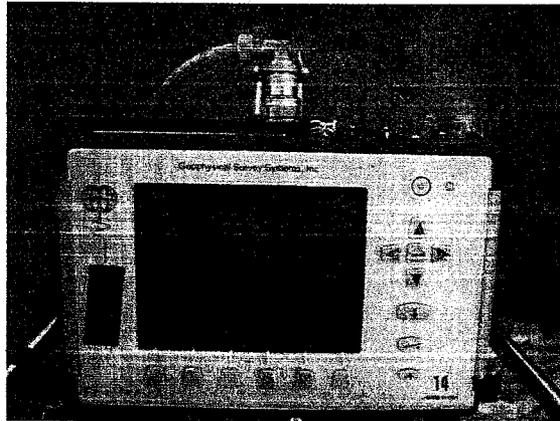
IMG\_0035



## GPR PROFILES OBTAINED IN THE FIELD

The attached copies are reproductions from data acquired in the field from the GSSI, SIR 3000 Geophysical computer. The original copies are downloaded on a T-104 thermal printer and reproduced on our commercial copier. Photo's are taken by a Sony DSC-F707 Digital still camera, using a 128 MB memory stick. The camera has the ability to take pictures in a no-light environment, which is useful for inside low light or no light building interiors, or during overcast days.

The pictures are downloaded in a Photo Suite program and reproduced at 640 X 480: 0.35 mega pixels. In addition, a disc is supplied with most reports of all the important photo's taken at the survey site. The image size duplicated makes it easy for e-mail attachments to be sent to your customer.

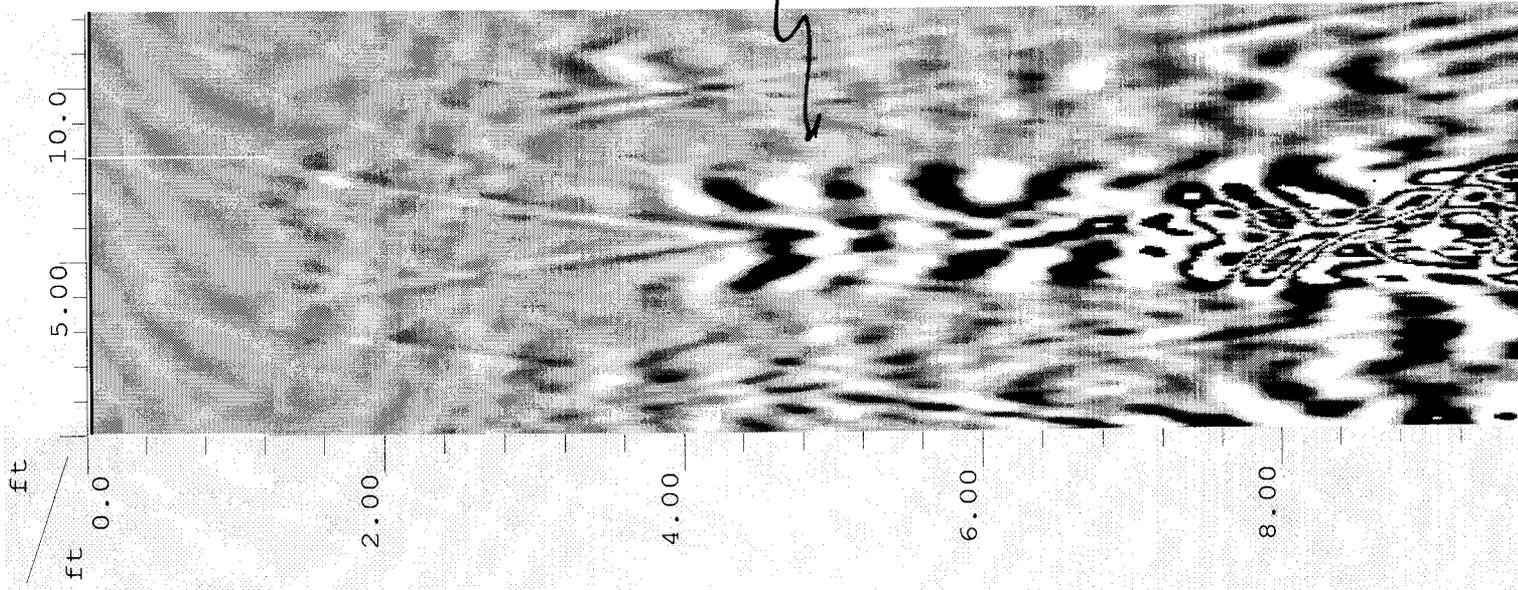


TRC2

Long axis of filled UST painted on site. (Cottage)

Created Mar, 25 2011, 08:34:40 Modified Mar, 25 2011, 08:35:06  
Channel(s) 1 Samples/Scan 512 Bits/Sample 16  
Scans/Second 100 Scans/Meter 59.0551 Meters/Mark 2.4384  
Diel Constant 4

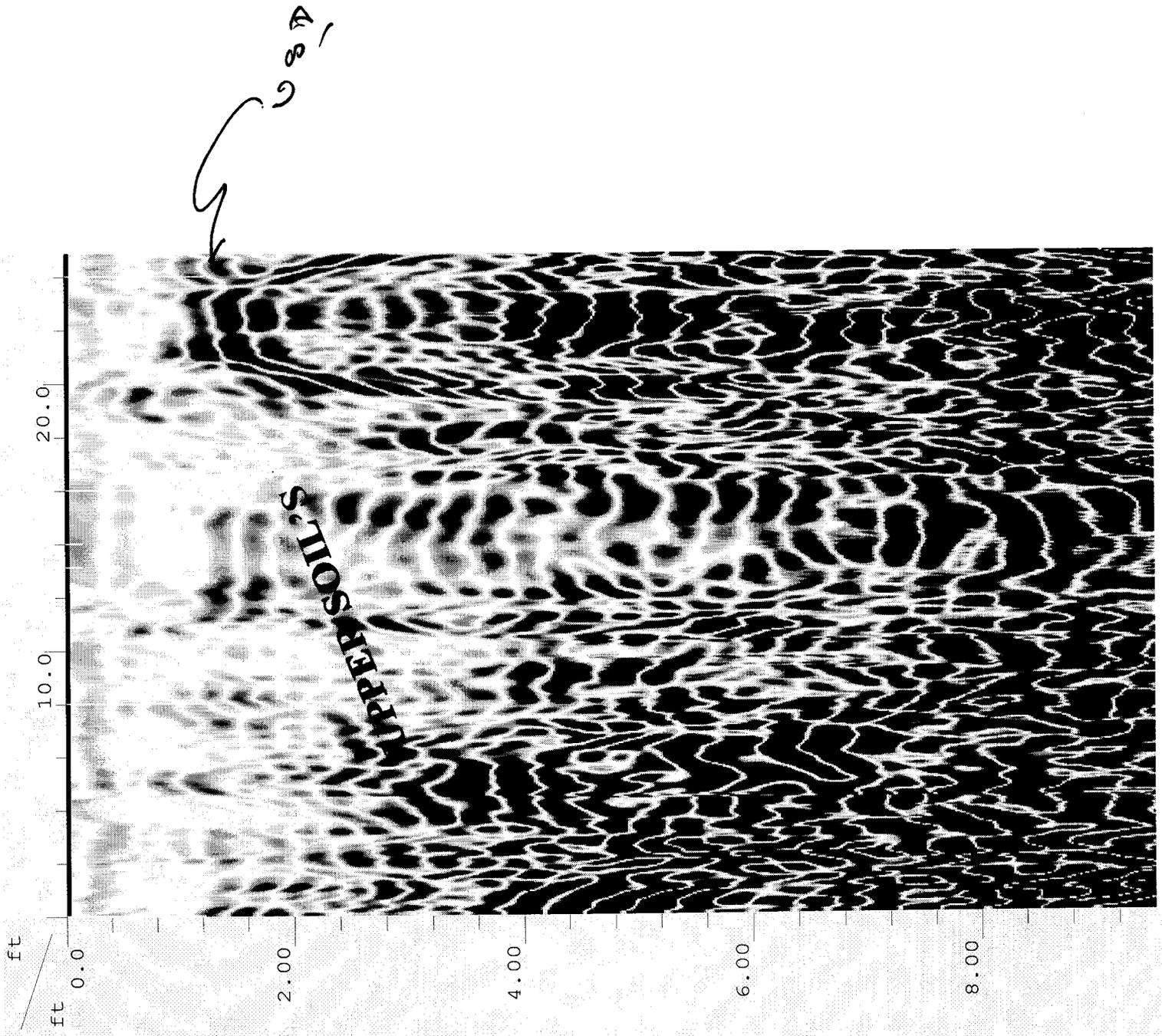
CHANNEL 1 400MHZ  
Position 0 ns Range 40 ns  
Vert IIR LP N =1 F =800 MHz  
Vert IIR HP N =1 F =100 MHz  
Position Correction 6.1 ns  
Range Gain (dB) -16.0 25.0 46.0  
Position Correction 1.02 ns



Parabolic feature of tank at Cottage

Created Mar, 25 2011, 08:35:06 Modified Mar, 25 2011, 08:35:52  
Channel(s) 1 Samples/Scan 512 Bits/Sample 16  
Scans/Second 100 Scans/Meter 59.0551 Meters/Mark 2.4384  
Diel Constant 4

CHANNEL 1 400MHZ  
Position 0 nS Range 40 nS  
Vert IIR LP N =1 F =800 MHz  
Vert IIR HP N =1 F =100 MHz  
Position Correction 6.1 nS  
Range Gain (dB) -16.0 25.0 46.0  
Position Correction 1.41 nS

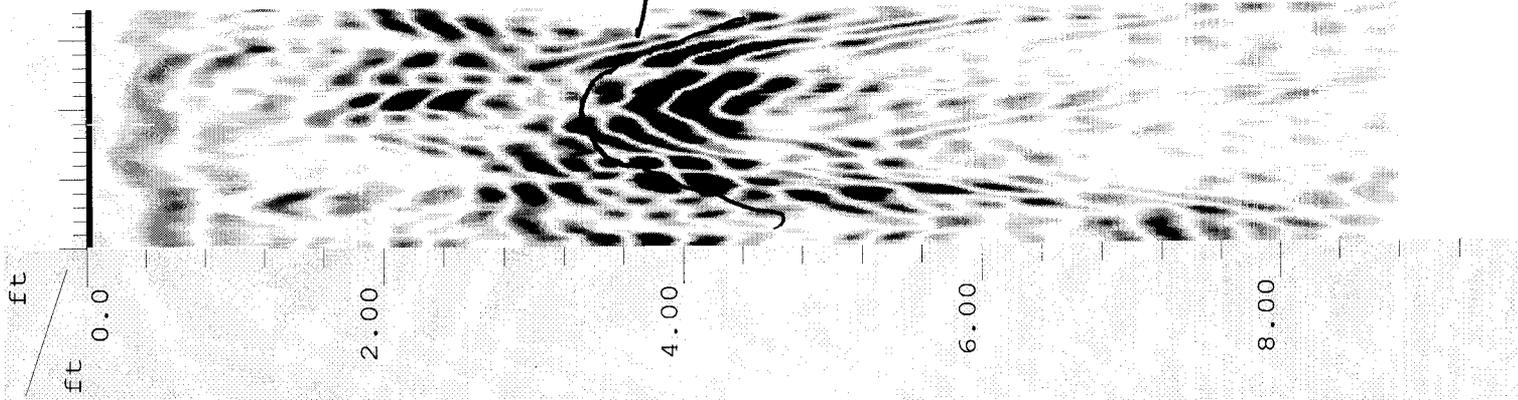


TRC20

Parabolic feature of tank at AOC - 4B.

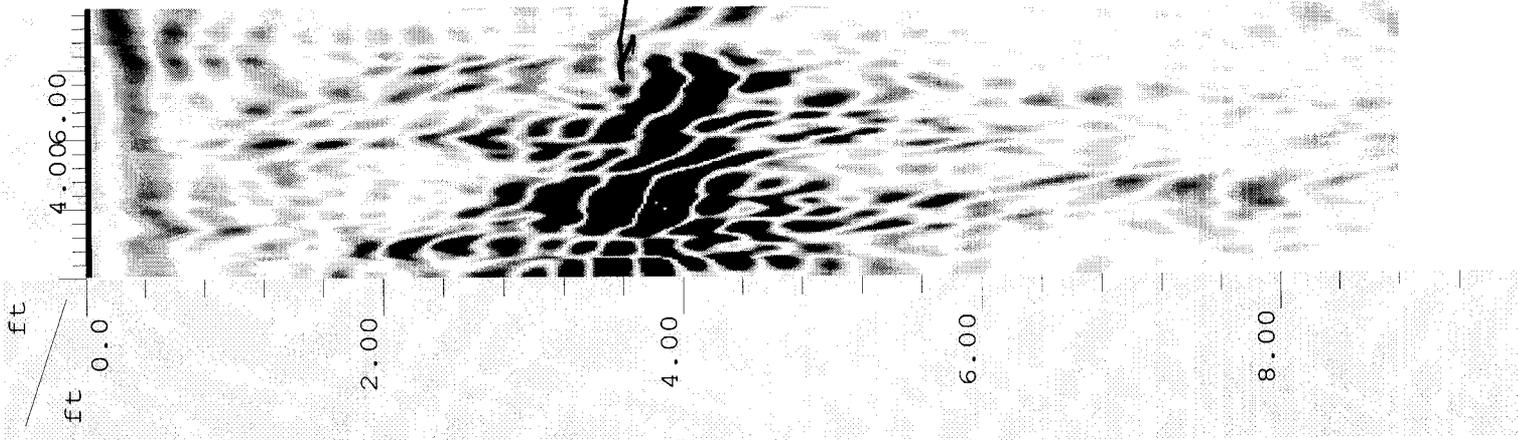
Created Mar, 25 2011, 09:11:22 Modified Mar, 25 2011, 09:12:00  
Channel(s) 1 Samples/Scan 512 Bits/Sample 16  
Scans/Second 100 Scans/Meter 59.0551 Meters/Mark 2.4384  
Dielectric Constant 4

CHANNEL 1 400MHZ  
Position 0 ns Range 40 ns  
Range Gain (dB) -17.0 21.0 25.0  
Position Correction 0.85 ns  
Vert IIR LP N =1 F =800 MHz  
Vert IIR HP N =1 F =100 MHz  
Position Correction 4.22 ns



Created Mar, 25 2011, 09:12:00 Modified Mar, 25 2011, 09:13:16  
Channel(s) 1 Samples/Scan 512 Bits/Sample 16  
Scans/Second 100 Scans/Meter 59.0551 Meters/Mark 2.4384  
Diel Constant 4

CHANNEL 1 400MHZ  
Position 0 ns Range 40 ns  
Range Gain (dB) -17.0 21.0 25.0  
Position Correction 0.85 ns  
Vert IIR LP N =1 F =800 MHz  
Vert IIR HP N =1 F =100 MHz  
Position Correction 4.3 ns

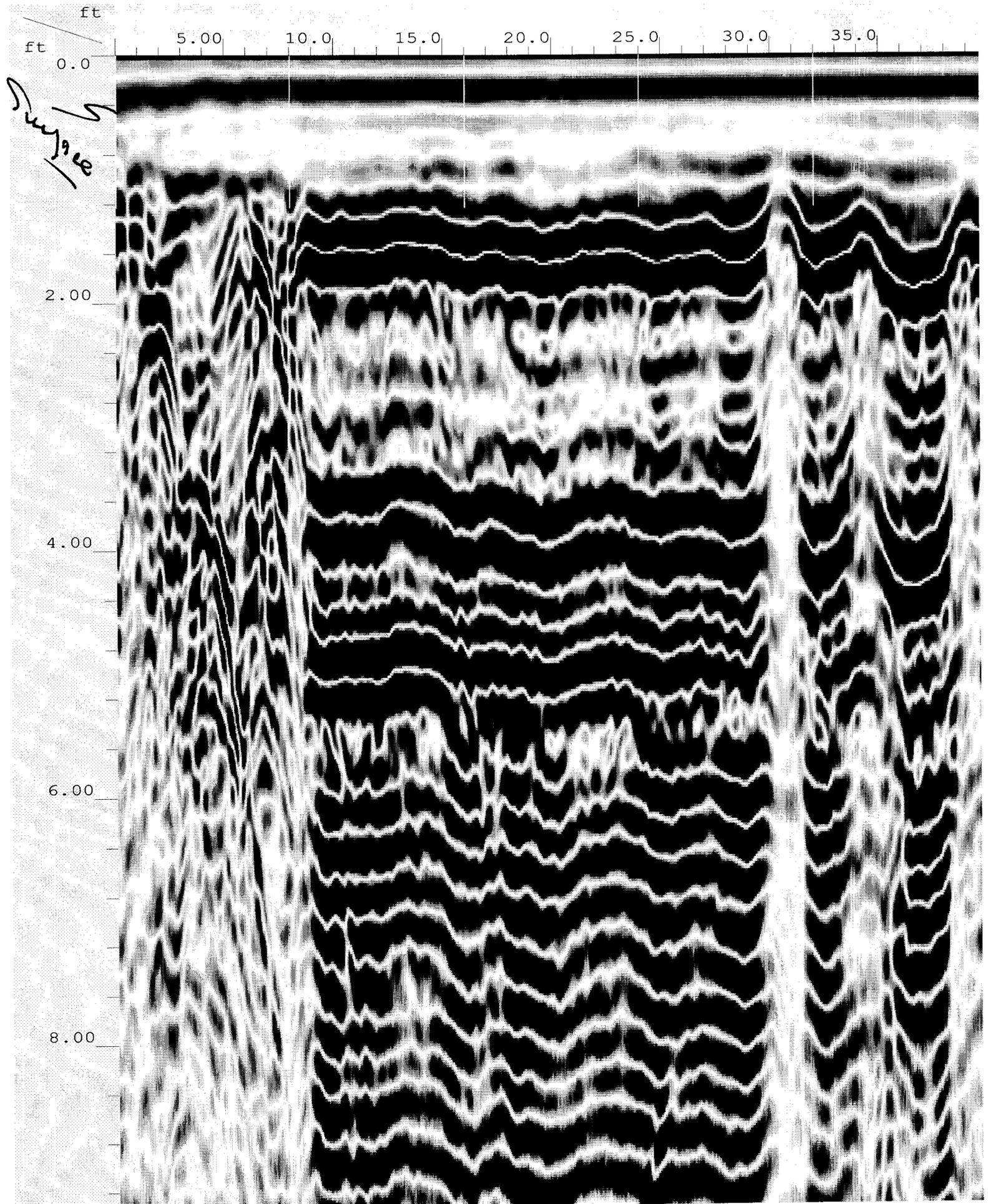


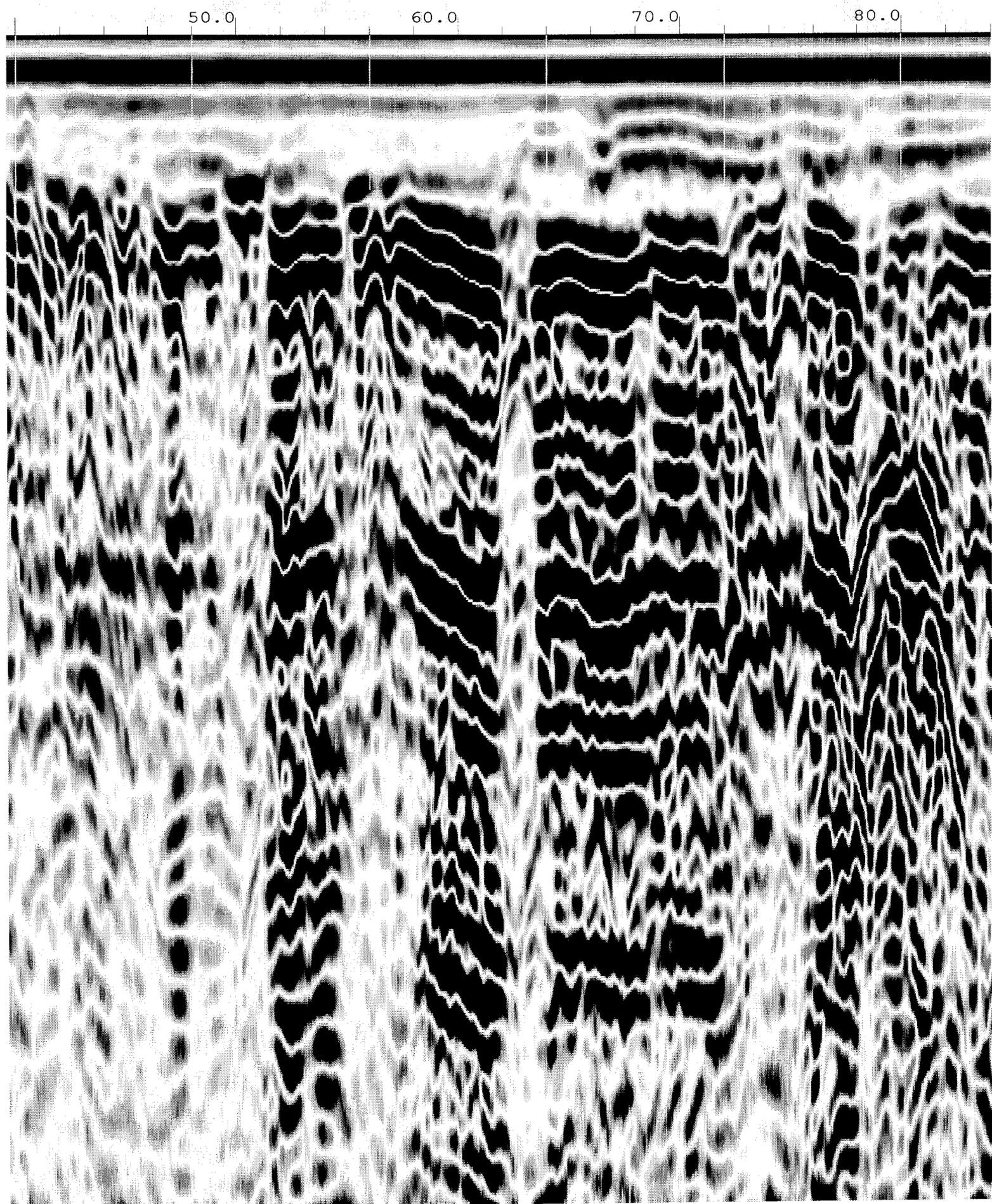
238.28' of continuous-12 data collected in parking lot at PAOC

Created Mar, 25 2011, 10:04:08 Modified Mar, 25 2011, 10:05:26  
Channel(s) 1 Samples/Scan 512 Bits/Sample 16  
Scans/Second 100 Scans/Meter 59.0551 Meters/Mark 2.4384  
Diel Constant 4

CHANNEL 1 400MHZ  
Position 0 nS Range 40 nS  
Vert IIR LP N =1 F =800 MHz  
Vert IIR HP N =1 F =100 MHz  
Position Correction 2.725 nS  
Range Gain (dB) -20.0 27.0 40.0  
Position Correction 2.19 nS

 = 180°



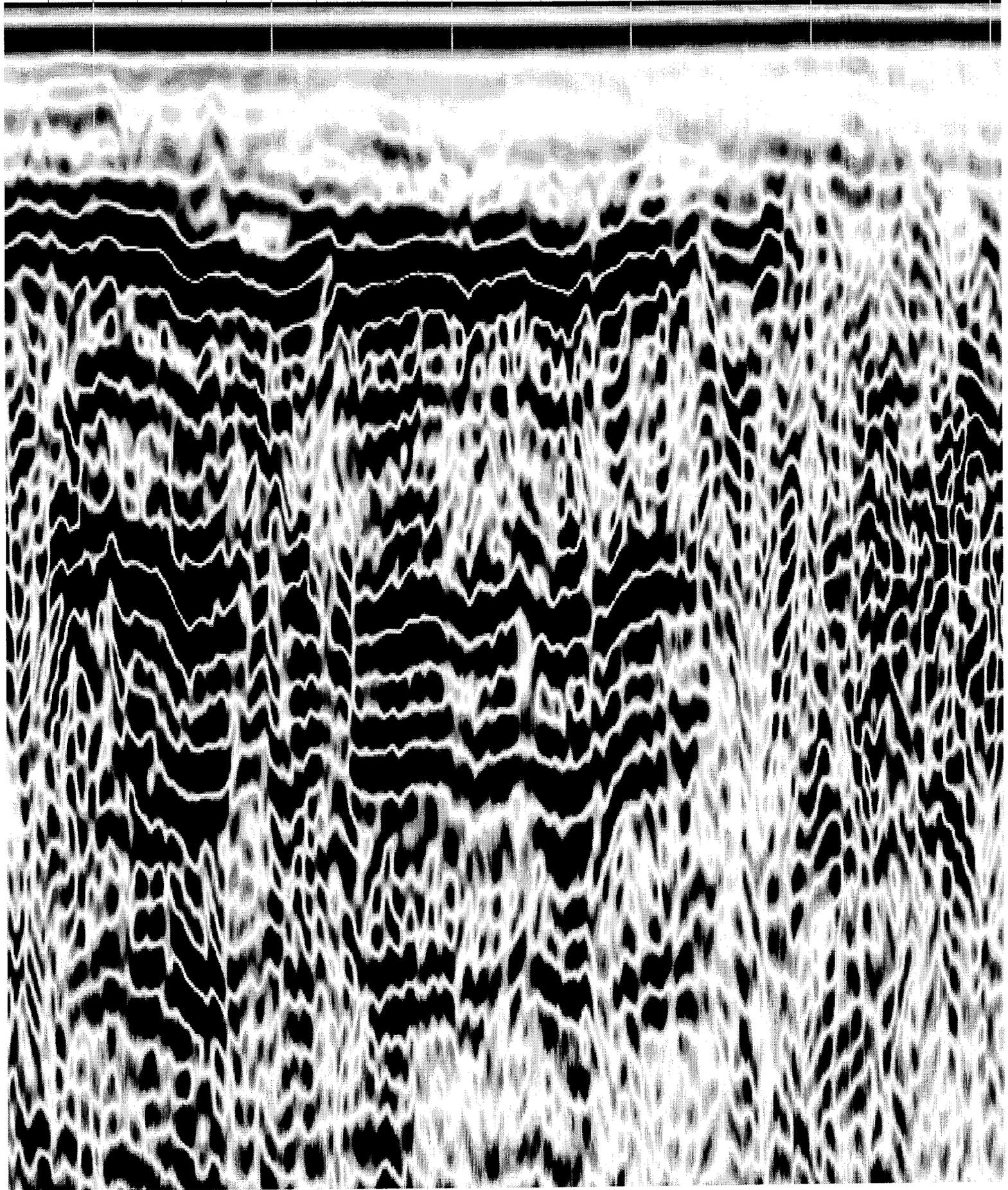


90.0

100

110

120



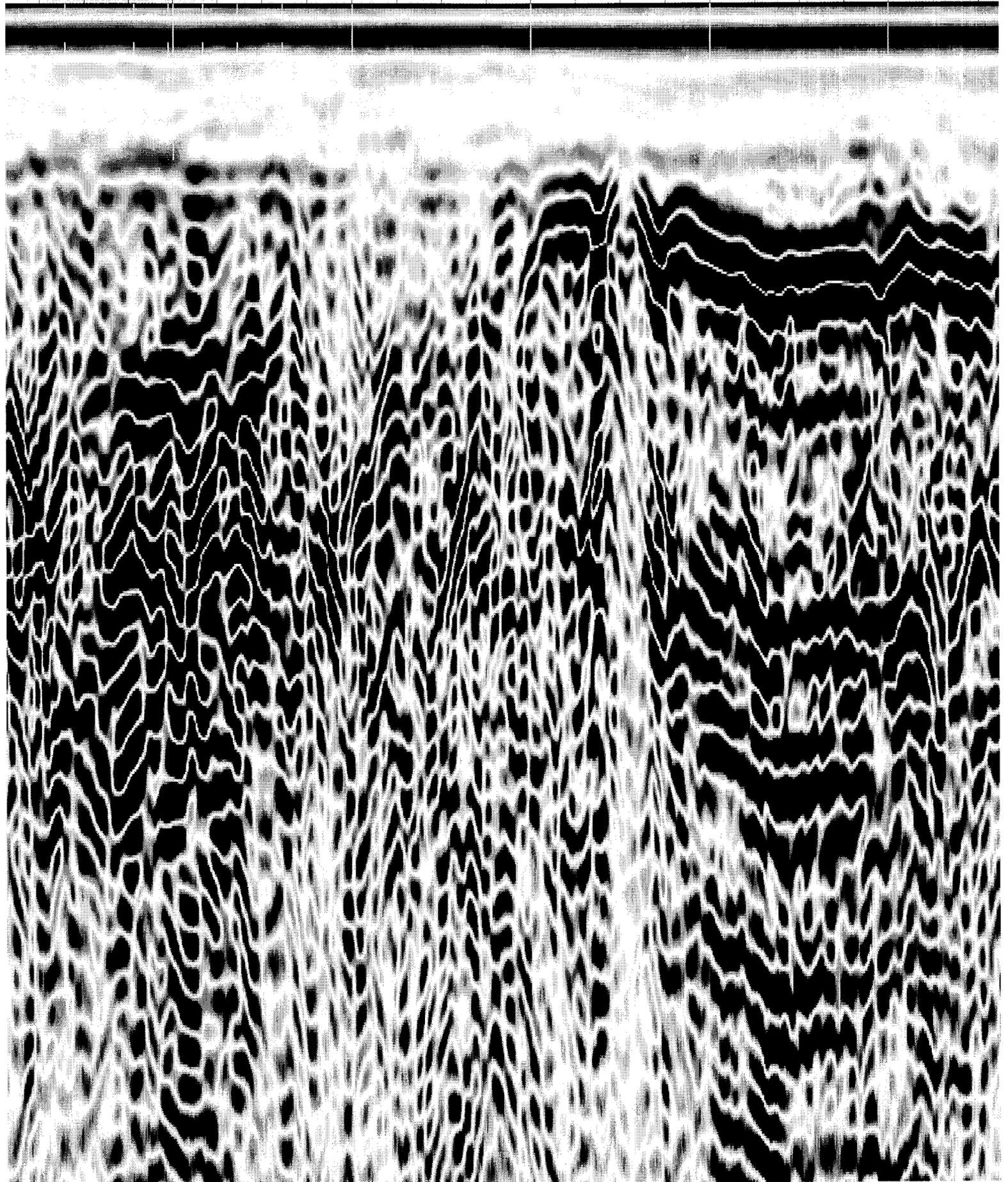


140

150

160

170

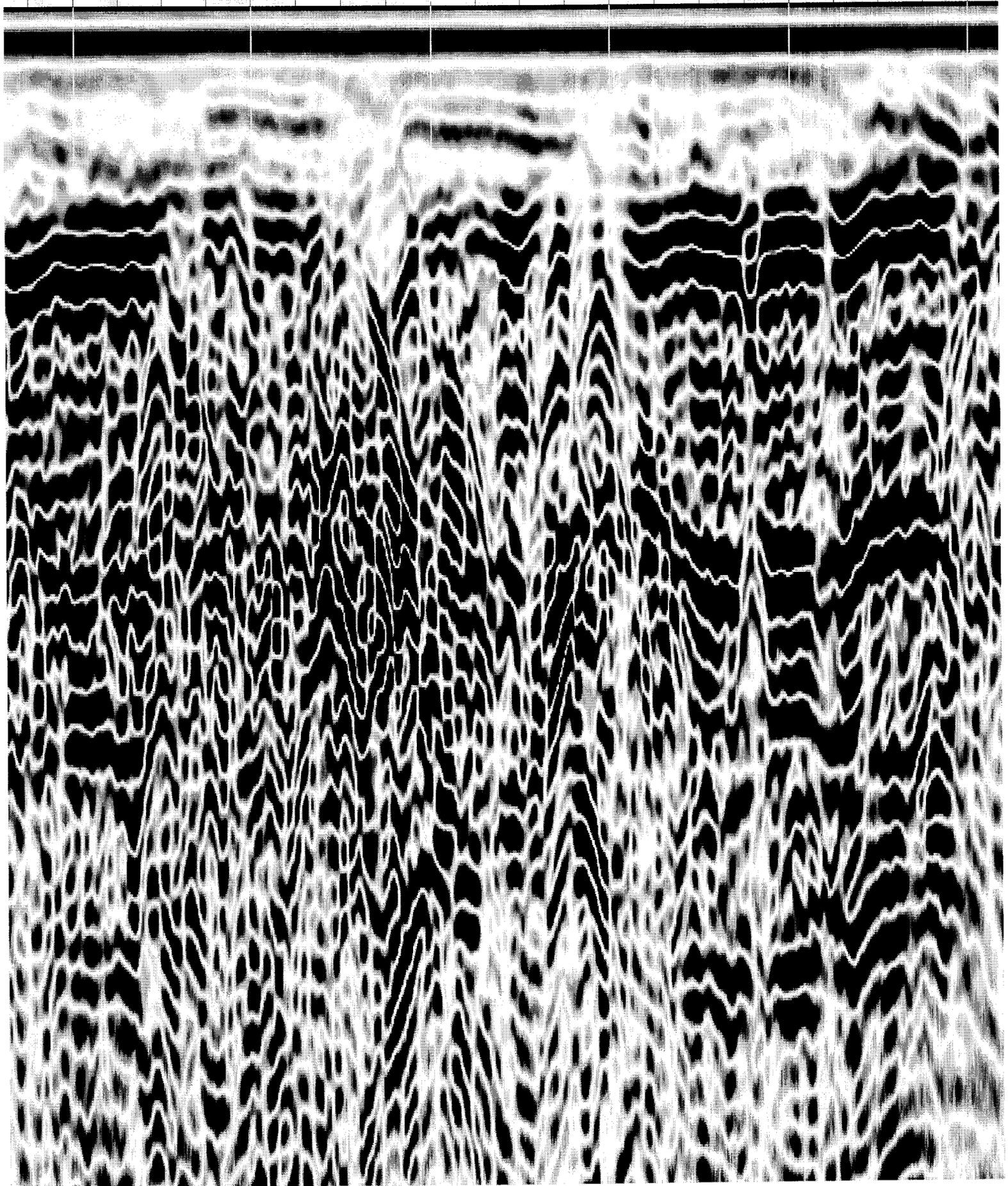


180

190

200

210

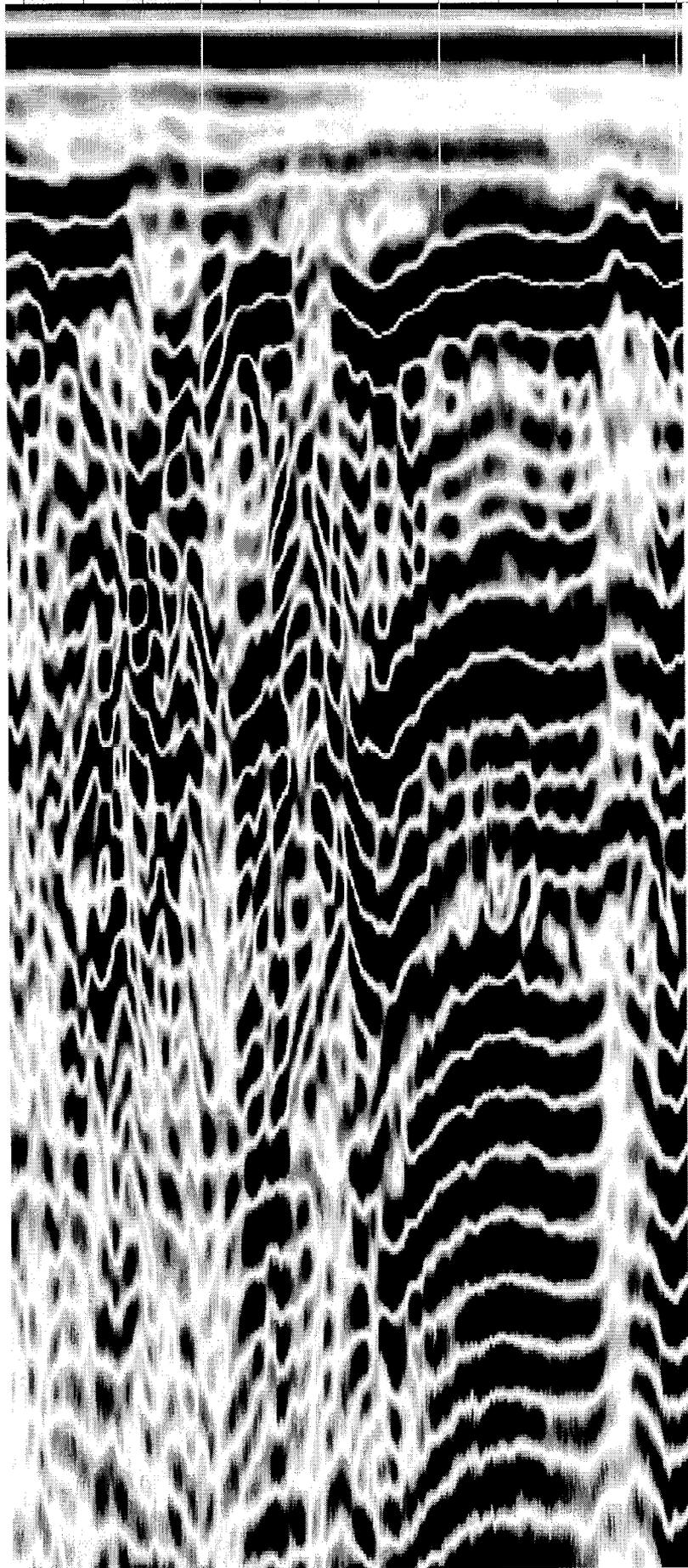


230

240

250

260



## GPR Report

### 5.0 ACQUIRING PROCEDURES

The acquiring of data from the field for the location and orientation of underground storage tanks, utilities, conduits w/in slab, rebar location, grave sites and other specific anomalies has been established by the *ground penetrating radar* for many years. Since 1988, Sub-Surface Informational Surveys, Inc. has completed a multitude of successful investigations covering most phases of the *ground penetrating radar* profession. During an investigation, a cross-section of the project will be recorded on the hard drive of our computer. The data is then transferred, copied and duplicated to be made part of this report.

We do not necessarily record every traverse in most of our investigation since most of the information viewed on our monitor is related to the previous traverse. Traverses (I.e., profiles) are monitored on a constant basis. When a traverse is collected on the hard drive, it is also played back in the field for a second look. Where there is an *out-of-place characteristic*, it may be played back a number of times to determine its location and origin. This is recorded on the hard drive for further analyzing at our office. When specific anomalies are located, *all* are documented for reporting. Anomalies are marked in the field if requested to do so. Measurements are taken to identify the exact location such as a tank or utility.

During the start of all surveys, site characteristics and features must be documented to set the standard for that particular site such as soil conditions, conductive features, etc. While the survey is being conducted, there are periodic documentations which are used as a permanent visual comparison to confirm the standard of that site.

After the completion of our survey, it must be reasonably assured that the information is a true cross-section of the project and the information obtained is accurate according to our best professional efforts.

**GPR PRINCIPLES  
DIELECTRIC CONSTANTS  
TWO-WAY SLOWNESS**

**Dielectric Constant** = This parameter is the value of the dielectric constant used to convert two-way travel time to depth. The value ranges from 1 to 81 and depends upon the dielectric properties of the subsurface materials being profiled. **WARNING:** Dielectric constants for various materials, and thus the resulting depth scales, are only approximations. Additional approximates of various materials are as follows:

<b>MATERIAL</b>	<b>D/C</b>	<b>MATERIAL</b>	<b>D/C</b>
Air	1	Wet Granite	6.5
Snow Firm	1.5	Travertine	8
Dry Loamy/Clayey Soils	2.5	West Limestone	8
Dry Clay	4	West Basalt	8.5
Ice	4	Tills	11
Coal	4.5	Volcanic Ash	13
Asphalt	5	Wet Sands	15
Dry Granite	5	Wet Sandy Soils	23.5
Frozen Sand & Gravel	5	Dry Bauxite	25
Dry Concrete	5.5	Saturated Sands	25
Dry Sand & Gravel	5.5	Wet Clay	27
Potash Ore	5.5	Peats	61.5
Dry Mineral/Sandy Soils	6	Organic Soils	64
Dry Salt	6	Sea Water	81
Frozen Soil/Permafrost	6	Water	81
Wet Sandstone	5	Syenite Porphyry	6
<b>MATERIAL</b>	<b>T/ns/meters/ft</b>	<b>MATERIAL</b>	<b>T/ns/meters/ft</b>
Snow	8/2.5	Water	59/18
Asphalt	14/4.5	Dry Concrete	15/4.5
Wet Concrete	23/7	Dry Sands	13/4
Wet Sands	25.5/7.5	Saturated Sands	33/10
Dry Sand & Gravel	15.5/4.5	Frozen Sand & Gravel	14.5/4.5
Dry Loamy/Clayey Soils	10.5/3	Dry Mineral/Sandy Soils	16/5
Organic Soils	52.5/16	Wet Sandy Soils	32/9.5
Frozen Soil/Permafrost	16/5	Tills	22/6.5
Peats	51.5/15.5	Wet Clay	34/10.5
Dry Clay	13/4	Dry Granite	14.5/4.5
Wet Granite	16.5/5	Wet Basalt	19/6
Volcanic Ash	23.5/7	Potash Ore	15/4.5
Dry Bauxite	33/10	Syenite Porphyry	16/5
Travertine	18.5/5.5	Coal	14/4
Dry Limestone	15.5/4.5	Wet Limestone	18.5/5.5
Wet Sandstone	16/5	Dry Salt	16/5

Compliments of  
Sub-Surface Informational Surveys, Inc.  
E. Longmeadow, MA 01028  
413-525-4666 Fax 413-525-2887

# REPORT NOTES

DATE \_\_\_\_\_

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_