



**Tighe & Bond**

11 Crown Street  
Meriden, Connecticut

## **Phase II Environmental Site Assessment**

Prepared For:

**The Record Journal Publishing  
Company**

November 2013

27-0280  
November 22, 2013

Alfred W. Bertoline  
Chief Financial Officer  
The Record-Journal Publishing Company  
11 Crown Street  
Meriden, CT 06450

Re: **Phase II Environmental Site Assessment  
11 Crown Street  
Meriden, Connecticut**

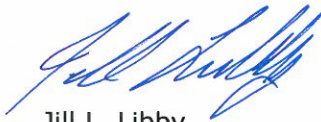
Dear Mr. Bertoline:

Please find enclosed the Phase II Environmental Site Assessment (ESA) report for the property located at 11 Crown Street in Meriden, Connecticut.

We appreciate the opportunity to provide our services. If you have any questions or comments, please contact us.

Very truly yours,

**TIGHE & BOND, INC.**



Jill L. Libby  
Environmental Scientist



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# **Section 1**

## **Introduction**

Tighe & Bond has prepared this Phase II Environmental Site Assessment (ESA) report for the property at 11 Crown Street in Meriden, Connecticut (herein referred to as the "site"). The Phase II ESA was conducted for The Record-Journal Publishing Company (Record-Journal) and in accordance with Tighe & Bond's proposal dated October 9, 2013.

From at least 1905 to 2009 the site was used as a printing, publishing, and distribution facility by various entities. Prior to 1905 the site had a long commercial and industrial history dating back to the late 1800s. Previously, portions of the site were reportedly developed as a foundry and machine shop, an automotive repair garage, a blacksmith, wallpaper and paint store as well as various commercial businesses and residential structures. These former buildings dated back to at least 1884.

This Phase II ESA was conducted in general accordance with the Connecticut Department of Energy and Environmental Protection (CTDEEP) Site Characterization Guidance Document (SCGD), dated September 2007, revised December 2010.

## **Section 2**

# **Objectives**

A Phase I Environmental Site Assessment (Phase I ESA) dated July 2013, was prepared for the site by Lenard Engineering Inc. The Phase I identified Recognized Environmental Conditions (RECs) or Areas of Concern (AOCs) associated with the site. This Phase II ESA was requested by Record-Journal in an effort to evaluate the environmental condition of the site in support of a potential property transfer.

The objective of this Phase II ESA is to determine if releases of Constituents of Concern (COCs) have occurred to the environment at the AOCs identified in the Phase I ESA. Additionally, the Phase II ESA data were evaluated to determine if further investigation and remediation is required.

## **Section 3**

### **Previous Investigations**

A summary of the Phase I ESA completed for the site by Lenard Engineering Inc, in July 2013, is provided below. No other previous investigations are known to exist for the site.

The site is currently owned by the Record-Journal Publishing Company and is developed with a large, multi-story commercial building. The original portion of the building was constructed in approximately 1905 and was then expanded on several occasions until 1979. The building is currently occupied by the Record-Journal newspaper offices. The site is situated in a GB classified groundwater area.

Historically, the site has been used for newspaper printing activities including plate and graphics departments and photo developing lab; an in-house circular printing department in the northern portion of the building on the ground floor, where numerous containers of inks, solvent-based cleaners, varnishes, and oils continue to be stored. The former newspaper press and paper storage rooms are situated in the central and southern portions of the building. Hazardous substances including petrochemical and vegetable inks, solvent-based cleaners, and oils were utilized in these rooms. The concrete floors and the walls are lightly to moderately stained. The southern-most portion of the building continues to contain a small chemical storage area containing press cleaner, oil, de-scaler, and paint.

The Record-Journal Publishing Company was formerly known as the Meriden Record Company prior to September 1990. The Meriden Record Company was formerly known as the Republican Publishing Company prior to 1948. The Meriden Record Company acquired the 1.34-acre portion of the site, with the exception of the northeast corner, from the City of Meriden in 1966 as part of the City's Central Urban Renewal Project. Prior to this time, this portion of the site consisted of at least five separate parcels owned by different individuals. The 0.33-acre northeast corner of the Site was owned by the Republican Publishing Company since 1905.

Overall, the Site has a long commercial and industrial history dating back to the late 1800's. Previously, portions of the site were developed as a foundry and machine shop that manufactured printing presses, an automotive repair garage, a blacksmith, a wallpaper and paint store, and various commercial businesses and residential properties.

The Record-Journal was listed as a conditionally exempt or non-generator of hazardous waste in the DEEP's hazardous waste files. However, manifests on file at the CTDEEP show that the Record-Journal shipped more than 100 kilograms of hazardous waste in single shipments during 1985, 1986, 1992, 1997, and 1999. In fact, a manifest from March 26, 1985, shows that 1,000 gallons (approximately 3,600 kilograms) of hazardous combustible liquid ink was transported off site by Solvents Recovery Services of Southington, Connecticut. Based upon this information the Record-Journal is likely to be an Establishment as the term is defined by the Connecticut Transfer Act at §22a-134 et seq. and as amended by Public Act's 01-204 and 03-218. This determination is based upon the prior generation of more than 100 kg of flammable hazardous waste during 1985, 1986, 1992, 1997, and 1999.

CTDEEP requires Establishments to be investigated and remediated in accordance with SCGD and Remediation Standard Regulations (RSRs) (RCSA 22a-133k January 1996,

amended June 2013) upon sale and transfer of the property. The CTDEEP also requires several documents to be prepared under supervision of a Licensed Environmental Professional (LEP) including an Environmental Condition Assessment Form (ECAAF), Final Investigation Report (FIR) and Competition of Investigation (COI) form, Remedial Action Plan (RAP) (if required), and an LEP Verification form and Report.

A summary of the AOCs that were identified during the Phase I ESA and investigated during this Phase II ESA is provided in Section 4.3.



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## Section 4

### Site Description

#### 4.1 Location

The site consists of 1.67 acres of land at the intersection of Perkins Street and Crown Street. The site location is depicted on Figure 1 (Appendix A). The site is located in close proximity to the downtown and Meriden Railroad Station. The area surrounding the site consists of mixed uses including residential and commercial properties.

#### 4.2 Site Operations and History

Current Use: The site currently has a multi-story building occupied by Record-Journal and associated parking. The current aerial photograph of the site is included as Figure 2.

Previous Uses: The site has been occupied by several printing companies including Record-Journal, The Meriden Record Company, Kelsey Printing, and Republican Publishing. Prior to the 1960's, portions of the site were developed as a foundry and machine shop that manufactured printing presses, an automotive repair garage, a blacksmith, a wallpaper and paint store, and various commercial businesses and residential properties.

#### 4.3 Areas of Concern

The following AOCs were identified by Lenard Engineering Inc., in association with the site during the July 2013 Phase I ESA. The AOCs are depicted on Figure 3 (Appendix A).

AOC-1 Northern Portion of the building:

The former graphics departments and photographic development lab were located on the second floor of this portion of the building. The basement in this area was identified with a garage, boiler room with floor drain, and was reportedly the location of the former printing department which stored inks, solvents, and oils. A paint and wall paper store reportedly existed in this area of the site prior to 1900.

COCs include volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and metals.

AOC-2 Central and Southern Portion of the building:

This portion of the building is currently used for storage of unused chemicals and oils. Formerly this area contained the paper storage room, press room, 3,000-gallon ink tank, and likely stored hazardous chemical wastes. Wastes identified include waste ink mixture that may have contained methylene chloride, benzene, and xylene.

COCs include VOCs, PAHs, and metals.

AOC-3 Loading Dock A:

This loading dock is located along the southern wall of the building and it was reported that hazardous chemicals were likely delivered to and/or removed from this area.

COCs include extractable petroleum hydrocarbons (ETPH), VOCs, PAHs, and metals.

AOC-4 Loading Dock B:

This loading dock is located along the western side of the former paper storage room and it was reported that hazardous chemicals were likely delivered to and/or removed from this area.

COCs include ETPH, VOCs, PAHs, and metals.

AOC-5 Former Automotive Repair Garage:

This area was the former location of the automotive repair shop.

COCs include ETPH, VOCs, PAHs, and metals.

AOC-6 Former Press Manufacturing Company

This area was the location of the former Press Manufacturing Company, which contained a foundry, machine shop, and blacksmith.

COCs include VOCs, PAHs, and metals.

AOC-7 Transformer Pads

There are two transformer pads on site, in the southwest corner and south of loading dock B.

COCs include Polychlorinated biphenyls (PCBs).

AOC-8 Southwestern Parking Log

Site records indicate that a release of 150 gallons of diesel fuel occurred on Crown Street and affected the Record-Journal parking lot and a nearby catch basin.

COCs include ETPH, VOCs, and PAHs.

## Section 5

# Field Investigations

### 5.1 Soil Borings

On October 18, 2013, Martin Geo-Environmental Inc. (Martin), of Belchertown, Massachusetts advanced soil borings under the supervision of Tighe & Bond. Eight soil borings (B-1 through B-4 and B-7 through B-10) were advanced by direct-push (Geoprobe 6610) drilling equipment to depths of 2 to 12 feet below ground (bg). In addition, the collection of five sub-slab samples were attempted within the building and two exterior soil samples (B-5 and B-6) were collected by hand.

The soil borings from this investigation were advanced at the AOCs previously described. The following is a description of the rationale for boring placement.

- **AOC-1: Northern portion of building** – Two sub-slab samples (SS-1 and SS-2) were collected in the northern portion of the building where the garage and boiler room are located.
- **AOC-2: Southern and Central Portion of building** – three sub-slab samples were attempted in the central and southern portion of the building where the chemical storage area and former printing press was located. The sub-slab samples were not collected because the slab was greater than 8 inches thick and the concrete core drill could not penetrate through it.
- **AOC-3: Loading dock A** – Two soil borings (B-1 and B-2) were placed in the area surrounding loading dock A on the south side of the building. B-1 was placed directly west of the loading dock; due to shallow refusal B-2 was placed approximately 50 feet west of the loading dock.
- **AOC-4: Loading dock B** – One boring (B-9) was placed adjacent to loading dock B on the western side of the building.
- **AOC-5: Former auto repair area** – Two soil borings (B-3 and B-8) were placed in the parking lot where the former auto repair garage was located (northwestern part of site).
- **AOC-6: Former press manufacturing company area** – Two soil borings (B-4 and B-7) were placed in the southwest parking lot on the site where the former press company was located.
- **AOC-7: Transformer Pads** – Two shallow (0-3”) borings (B-5 and B-6) were collected by hand around the two transformer pads on site. One pad is located in the southwestern part of the site, the other pad is south of loading dock B.
- **AOC-8: Southeastern parking lot** – One soil boring (B-10) was collected in the southeastern parking lot.

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

- 1) Physical characteristics of soils within each location were observed and documented

- 2) Soils from the macro-core sampler were field-evaluated using a Photoionization Detector (PID) as well as visual and olfactory methods for the presence or absence of contamination
- 3) Select soil samples were collected by Tighe & Bond for laboratory analysis of ETPH, VOCs, PAHs, Reasonable Confidence Protocol (RCP) metals, and PCBs by Phoenix Environmental Laboratories, Inc. (Phoenix) of Manchester, Connecticut (a Connecticut-certified analytical laboratory).

Based upon the above three-step approach, samples were collected from soil borings with a bias towards samples exhibiting evidence of environmental impact (e.g. staining, odors, and/or high PID reading). This collection and screening procedure continued until the soil boring was completed. Following completion of each soil boring, and related soil sample collection activities, the resulting boreholes were backfilled with the drill cuttings. Samples collected for laboratory analysis were transferred directly to the appropriate sample containers. Following collection, the samples were immediately stored in a cooler on ice and immediately delivered from the site to Phoenix via courier.

During advancement of soil borings material consisted of sand and silt, fill material consisting of asphalt and brick fragments was observed at borings B-3 (0-9'), B-4 (0-1'), B-7 (0-1'), B-8 (5-6'), B-9 (6-7') and B-10 (0-1'). Crushed gravel fill was found in borings B-8 (0-5') and B-9 (0-6'). PID readings for the all soil samples were 0 parts per million (ppm) for total VOCs except for a reading of 2.7 ppm in soil boring B-3 (4-8); a sample was collected for VOCs at this depth interval. No obvious signs of contamination (i.e. staining or odors) were observed in soils collected from any boring. Soil was collected for laboratory analysis of COCs based on the AOC the boring was in. VOCs were collected from the area of the former auto repair building. Soil samples for laboratory analysis were generally collected from 2 to 6 feet bg.

Overburden groundwater was not encountered during drilling activities. Refusal of the geoprobe varied across the site from 2 ft to 12 ft. Rock fragments were observed during encounters with refusal. Although soil above refusal was moist, there was no overburden groundwater for monitoring well installation. No monitoring wells were therefore installed during this Phase II ESA.

Soil boring locations are depicted on Figure 3. Soil boring logs are provided in Appendix C.

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## Section 6 Hydrogeology

### 6.1 Geology

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS) data for the State of Connecticut (NRCS Webpage, 2009), the site is identified as containing Udorthents-Urban land soils. Urban land soils is defined by NRCS as land mostly covered by streets, parking lots, buildings, and other structures of urban areas. Udorthents soils are defined as land that has had the original cover removed and replaced with fill material.

According to the *Surficial Materials Map of Connecticut* (United States Geological Survey/Department of Environmental Protection, Connecticut Geological and Natural History Survey, 1992), and CTDEEP Geographic Information Systems (GIS) surficial materials data, soils beneath the site are classified as sands and gravel in individual or alternating beds. Layers are well to poorly sorted; bedding may be distorted and faulted due to post-depositional collapse.

These descriptions are consistent with observations made during the conduct of this investigation. In addition, fill material, consisting of primarily sand with some asphalt, and brick, is found throughout the site to depths of 0-6 feet below grade (bg). The brick and asphalt are likely remnants of the former on-site buildings that were historically demolished.

According to the *Bedrock Geologic Map of Connecticut* (U.S. Geological Survey, 1985), and CTDEEP Geology GIS data, the site is located within the New Haven Arkose formation. Specifically, the site is underlain by a reddish, poorly sorted arkose. Refusal was encountered between 2 and 12 feet across the site, rock fragments encountered during refusal were inferred to be bedrock.

### 6.2 Hydrology

According to the 1984 USGS Meriden Quadrangle Topographic Map, the elevation of the site is approximately 130 to 150 feet above sea level. The contours found on the topographic map indicate the elevation slopes in a north-northwesterly direction.

Groundwater was not encountered in the overburden during drilling.

Groundwater at the site is classified as GB by the CTDEEP. Designated uses include industrial process water and cooling waters and baseflow for hydraulically connected surface water bodies. GB classified groundwater is presumed not suitable for human consumption without treatment.

Harbor Brook runs through an underground culvert approximately 200 feet west of the site. Harbor Brook is classified as a class B stream flowing south towards the Quinnipiac River. According to the CTDEEP, a class B stream is used for recreational use, fish and wildlife habitat, agricultural and industrial supply and other legitimate uses including navigation.

## Section 7

# Remediation Criteria

Analytical results reported in this Phase II ESA are compared to remediation criteria listed in the CTDEEP Remediation Standard Regulations (RSRs) (January 1996, Amended June 2013). CTDEEP's intent in developing the RSRs was to define the following:

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

In general, RSR criteria are used to remediate contaminated environmental media (i.e., soils). RSR criteria are not specifically applicable to building interiors and sediment.

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

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

### 7.1 Soil Remediation Criteria

The CTDEEP soil remediation criteria integrate two risk-based goals:

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

#### 7.1.1 Direct Exposure Criteria

Specific numeric exposure criteria for a broad range of contaminants in soil have been established by the CTDEEP, based on exposure assumptions relative to incidental ingestion of contaminants in soils. The DEC applies to accessible soil to a depth of 15'. The DEC for substances other than PCBs does not apply to inaccessible soil at a release area provided that, if such inaccessible soil is less than 15' below the ground surface, an environmental land-use restriction (ELUR) is in effect with respect to the subject release area. For PCBs, a maximum concentration of 10 milligrams per kilogram (mg/Kg) can remain in soils considered inaccessible. Inaccessible soil generally means polluted soil, which is the following:

- More than 4' below the ground surface
- More than 2' below a paved surface comprised of a minimum of three inches of bituminous pavement or concrete
- Beneath an existing building

- Beneath another permanent structure(s) approved by the CTDEEP Commissioner. Buildings can be constructed and/or clean fill can be placed over contaminated soils rendering them inaccessible

The CTDEEP has established two sets of DEC using exposure assumptions appropriate for residential land use (RES DEC) or for industrial and certain commercial land use (I/C DEC). In general, all sites are required to be remediated to the residential criteria. If the industrial/commercial land use criteria are applicable and used, an ELUR notification is required in accordance with the RSRs.

### **7.1.2 Pollutant Mobility Criteria**

The PMC that will apply to remediation of a site depends on the groundwater classification of the site. The purpose of these criteria is to prevent any contamination to groundwater in GA classified areas, and to prevent unacceptable further degradation to groundwater in GB classified areas. The PMC generally apply to all soil in the unsaturated zone, from the ground surface to the seasonal low water table in GA classified areas. For GB classified areas, the PMC are applicable to all soils from ground surface to the seasonal high water table. The site is situated within a GB classified area. Therefore, the GB PMC was applied to the site. The criteria do not apply to environmentally isolated soils that are polluted with substances other than VOCs provided that an ELUR is recorded for the release area which ensures that such soils will not be exposed (unless approved in writing by the CTDEEP Commissioner). Environmentally isolated soils are defined as certain contaminated soils, which are above the seasonal high water table, beneath an existing building and not a source of ongoing contamination. An ELUR must be recorded for the site, which ensures that such soils will not be exposed as a result of building demolition or other activities. Buildings can be constructed over contaminated soils rendering them environmentally isolated.

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

## Section 8

# Results of Investigation

### 8.1 Soil Analytical Results

Soil analytical results are summarized in Table 1 (Appendix B) and compared to:

- RES DEC
- I/C DEC
- GB PMC

Laboratory reports are provided as Appendix D. Locations of soil samples found to exceed RSR criteria are depicted in Figure 4.

#### 8.1.1 VOCs

Soil samples were collected from one of the soil boring, B-3 (4-6') and analyzed for VOCs via EPA Method 8260C. The following VOCs were detected:

- Acetone, 0.077 mg/Kg

These concentrations are below RSR criteria applicable to the site.

#### 8.1.2 PAHs

Soil samples were collected from eight of the soil borings and both sub-slab samples and analyzed for PAHs via EPA Method 8270D. PAHs were detected in three of the soil boring samples and one of the sub-slab samples. The detections in sub-slab sample SS-2 were not above RSR criteria.

Soil boring samples B-3 (4-6'), B-8 (4.5-5.5'), and B-10 (0-2') had detections of benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene at concentrations above at least one applicable criteria. Additionally, sample B-10 (0-2') had detections of benzo(k)fluoranthene and pyrene above at least one applicable criteria.

All other borings did not have detections of PAHs above laboratory detection limits.

#### 8.1.3 Metals

Soil samples were collected from eight of the soil borings and both sub-slab samples and analyzed for RCP metals (Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc, and Mercury) via EPA Method 6010.

With the exception of B-4 (0-2'), none of the samples were found to contain concentrations of these metals above the RES DEC or I/C DEC. Soil boring B-4 (0-2') was reported as having Lead concentration of 1290 mg/Kg above the RES DEC and I/C DEC.

#### 8.1.4 ETPH

Soil samples were collected from eight of the soil borings and both sub-slab samples and analyzed for ETPH via the Connecticut Department of Public Health (CTDPH) approved method. With the exception of B-10 (0-2') all sample results were below laboratory



detection limits. The ETPH result from B-10 was 580 mg/Kg, which is above the RES DEC.

**8.1.5 PCBs**

Soil samples were collected from two of the borings and analyzed for PCBs via EPA Method 8082A. All samples were below laboratory detection limits for PCBs and below the applicable criteria.

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## Section 9

# Quality Assurance / Quality Control

Field sampling quality assurance included the collection of duplicate and trip blank samples. Quality control checks on field activities were performed to assure collection of data that is representative and valid. Laboratory quality assurance measures are also provided.

### 9.1 Duplicate Samples

Field duplicate samples are collected to provide information on sample collection, handling, shipping, storage, preparation, and analyses. The duplicate samples were obtained by collecting two identical sets of samples from a single sample location. The respective duplicate sample was analyzed for several parameters analyzed in the original sample. The comparison is a measurement of analytical precision.

One duplicate sample was collected during the soil investigation at the site. Dup is the duplicate sample for B-2 (4-6'). Dup was analyzed for PAHs, ETPH, and RCP metals. The relative percent difference (RPD) for all parameters were within 50 percent of the original sample.

### 9.2 Blank Samples

Trip blank sample were used for site activities during VOC sampling activities. The purpose of analyzing this control sample was to determine if potential cross-contamination occurred as a result of improper sample container cleaning, contaminated blank source water, sample contamination during storage and transportation, and other environmental conditions during the sampling event. The trip blank samples consisted of a container of laboratory-supplied reagent-grade water that was kept with the field sample containers from the time they left the laboratory until the time they were returned to the laboratory. One trip blank sample was supplied for each day of VOC sampling for soil.

No VOCs were reported in the trip blank. Accordingly, no VOC cross-contamination likely occurred during the soil sampling event.

### 9.3 Laboratory Quality Control

An analysis of the laboratory results, detected compounds, and collected samples affected by these quality control deficiencies was performed. According to the laboratory results, there were no detections in the laboratory's method blank sample.

According to the laboratory results, MEK was detected in the laboratory control sample and methylene chloride was detected in the laboratory's method blank sample. Additionally there were some issues with regard to surrogate recovery for VOCs. Based on this analysis, the deficiencies identified do not affect the usability of the laboratory data since the parameters were not detected in the samples.

The non-conformances are summarized in Table 2. The case narratives are included in Appendix D.

## 9.4 Data Usability Assessment

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

- Detection limits
- Regulatory criteria
- Matrix effects
- Importance of nonconforming data relative to DQOs

Multiple soil samples were collected throughout the site to provide characterization of the property. Laboratory analysis of soil samples had sufficiently low detection limits in order to identify constituent concentrations approaching the RSR limits. Laboratory reporting limits did not meet the criteria for five SVOCs in B-10 that were reported as being below laboratory detection limits; however, since these parameters were not detected in other samples it is likely that this does not affect the usability of the data. The data derived from this ESA is usable and adequate for the project DQOs. The non-conformances are summarized in Table 2.

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## Section 10

# Conceptual Site Model

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

The CSM includes the following:

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

The CSM is summarized in Table 3.

### 10.1 Description of Site, Environments, and AOCs

A description of the site, history, and operations as derived from previous reports is provided in Section 4. A description of site hydrogeology is provided in Section 6.

### 10.2 Nature and Extent of Contamination

A discussion of the nature and extent of contamination in soil and groundwater is provided below.

The COCs confirmed in the soil at the site include ETPH and PAHs. Detections of these COCs were found in soils ranging in depth from zero to six feet below grade. Furthermore, metals concentrations in soils at the site appear to be somewhat consistent with naturally occurring concentrations. However, elevated concentrations of lead were identified in one of the soil samples. Fill material observed throughout the site may be contributing to some of these elevated metals concentrations. Lead is a COC for the site and was detected above RSR criteria applicable to the site at B-4.

A more detailed description of confirmed and potential COCs for the site is provided below.

#### 10.2.1 VOCs

Although acetone was detected in soil boring B-3, VOCs are not a COC because it was significantly below RSR criteria. Also, acetone is a common laboratory solvent and the detection at B-3 is likely due to laboratory cross contamination.

### 10.2.2 PAHs

Several PAHs were detected in the soil samples collected during this investigation. PAHs are typically found in association with petroleum products. The potential sources of these PAHs at the site are fill material, former auto repair shop, former manufacturing and printing, and former petroleum release. Petroleum-based asphalt fragments were observed in the fill material underlying the site from 2 to 8 feet below ground. Historic records identify a former auto repair building at the location of soil borings B-3 and B-8 and former printing and manufacturing at the location of the sub-slab samples, B-4, and B-7. Records for the site also indicate that there was a release of 150 gallons of diesel fuel on Crown Street that released onto the Record-Journal parking lot, although the area is not specifically defined, soil boring B-10 was located within the Record-Journal parking lot along Crown Street.

PAHs including Benz(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, and Pyrene were detected on the site. Concentrations at B-3 and B-8 were slightly above of the RES DEC and GB PMC. Concentrations at soil boring B-10 were above GB PMC, RES DEC, and I/C DEC. The concentration of Benzo(a)pyrene at B-10 was 32 mg/Kg which is above the Significant Environmental Hazard Condition Notification Threshold Concentration (CGS 22a-6u). The laboratory noted that very fine black material was mixed in with the sample at B-10 which is likely asphalt and biasing the sample result high. When the laboratory reanalyzed the sample from B-10 for PAHs, the concentration for Benzo(a)pyrene was 13 mg/Kg which is below the Significant Environmental Hazard Condition Notification Threshold Concentration but still above GB PMC, RES DEC, and I/C DEC.

### 10.2.3 Metals

Various metals that are naturally occurring were found in soils at varying concentrations. With the exception of soil boring B-4, none of the metals concentrations detected were found to exceed RSR criteria applicable to the site. Lead was reported in exceedance of RES DEC and I/C DEC in soil boring B-4 and elevated above naturally occurring levels at SS-1 and SS-2. Fill material underlying the site may be contributing to the elevated concentrations of lead.

### 10.2.4 ETPH

ETPH was only detected above laboratory reporting limits in one soil boring (B-10). The ETPH concentration of 580 mg/Kg is in exceedance of the RES DEC. The source of this elevated ETPH concentration may be related to the fill material or sub-base material below the asphalt. It is possibly that fine grained asphalt was mixed in with sub-base material and is biasing the concentrations high, similar to PAHs.

### 10.2.5 PCBs

PCBs were not detected in any of the soil samples submitted for analysis of this parameter.

## 10.3 Potential Release Mechanisms

The potential release mechanism at each REC is identified in Table 5. A summary of the potential release mechanisms for each COC at the site are as follows:

PAHs - spills from former manufacturing activities, deposition of fill materials, or deposition of fine grained asphalt mixed with sub-base material below asphalt.

Metals - spills from former manufacturing activities, deposition of fill materials, or naturally occurring in site soils.

ETPH - spills from former manufacturing activities, deposition of fill materials, or deposition of fine grained asphalt mixed with sub-base material below asphalt.

## 10.4 Migration Pathways

Potential migration pathways for each REC are identified in Table 5. The migration pathway or transport mechanisms fall into three general types depending upon the pathway. Various potential exposure pathways were evaluated to determine if possible risks to public health or the environment exists from the on-site contamination. The evaluation is based on the location and depth of contaminants identified at the site

### Soil Migration Pathway

The majority of the site exists as paved parking lots and a multistory building. Impacts to site soils were identified at depths of 0 to 6 feet bg. Based on this information there is limited potential for migration of contaminated soils or exposure through direct contact. Since the site is mostly paved or covered by the on-site building, there is minimal infiltration of precipitation which reduces the opportunity for leaching of soil contaminants into the groundwater.

### Groundwater Migration Pathway

Overburden groundwater was not encountered during site activities. No known uses of groundwater for drinking or otherwise are known to exist in the area surrounding the site. Based on current conditions, the potential for contact with groundwater at the site or surrounding area through direct contact or ingestion is improbable.

### Surface Water Migration Pathway

Although there is no surface water on the site, Harbor Brook is channeled through an underground culvert beneath the property northwest of the site (within 200 feet of the site boundary). Harbor Brook is classified as a class B stream flowing south towards the Quinnipiac River. According to the CTDEEP, a class B stream is used for recreational use, fish and wildlife habitat, agricultural and industrial supply and other legitimate uses including navigation. Since no overburden groundwater was encountered during site activities, the current quality of groundwater is unknown.

### Air Migration Pathway

No significant sources of VOCs were identified in the soil; therefore no significant vapor intrusion issues were identified during the Phase II ESA. However, since groundwater was not encountered the potential for vapor intrusion from groundwater is unknown.

## 10.5 Areas of Concern

A description and current status of each REC is provided below. The previous Phase I ESAs identified the following AOCs:

### **AOC-1 Northern Portion of building:**

Sub-slab borings taken beneath the garage and boiler room in the northern portion of the Record-Journal building did not have detections above RSR criteria. Low level PAHs were detected beneath the boiler room. Lead detected in these borings is elevated above naturally occurring conditions, but not in exceedance of RSR criteria. The sub-slab

material sampled consisted of fine sand with what appeared to be pieces of brick and concrete. It is likely that fill material beneath the building is the source of elevated PAHs and lead.

**AOC-2 Southern and Central Portion of Building:**

Three sub-slab sample locations were attempted in the southern and central portion of the building. The concrete slab beneath the building is greater than 8 inches; as a result samples could not be collected from these locations. The current conditions under the southern and central portion of the building are unknown.

**AOC-3 Loading Dock A:**

There were no detections in soil borings B-1 and B-2 of PAHs or ETPH. Metal detections in these borings are within naturally occurring conditions. Soil boring B-1 had refusal at 2 feet bgs, it was inferred that rock fragments at the base of the boring were bedrock.

**AOC-4 Loading Dock B:**

There were no detections in soil boring B-9 of PAHs or ETPH. Metals detected in this boring are within naturally occurring conditions. Crushed gravel was encountered to 6 feet bgs; it was likely added during development of the Record-Journal building. Fill material was also encountered between 6 and 7 feet bgs.

**AOC-5 Former Automotive Repair Shop:**

PAHs benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene were reported in two samples (B-3 and B-8) at concentrations slightly above of the RES DEC and GB PMC of 1 mg/Kg. The concentration of benzo(a)pyrene in this soil sample also exceeded the I/C DEC of 1 mg/Kg. Elevated levels of lead were reported in these samples but no ETPH or VOCs were detected. No staining, odors, or obvious signs of contamination were observed during site activities. It is likely that these elevated concentrations are indicative of fill material beneath the site and not of a significant release from the automotive repair facility historically located in this area.

**AOC-6 Former Print Manufacturing Activities:**

Soil borings advanced in the southwest area of the site where the former Print Manufacturing was located did not have any detection of ETPH or PAHs. Elevated concentrations of lead above RSR criteria were detected in B-4 (0-2'). Fill material was observed in B-4 at this depth; therefore it is likely that the elevated lead concentration is indicative of fill material.

**AOC-7 Transformer Pads**

No PCBs were detected in the surface samples collected from B-6 and B-7. No significant releases to site soils from transformer oil were identified at the site.

**AOC-8 Southwestern Parking Log**

A documented release of 150 gallons of diesel fuel was reported in 1992 on Crown Street. It was reported that diesel fuel was released onto the road, a catch basin, and the Record-Journal parking lot. Soil boring B-10, advanced within the parking lot along Crown Street, had concentrations of Benz(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, and Pyrene above at least one RSR criterion. Benzo(a)pyrene was reported at 32 mg/Kg, above the Significant Environmental Hazard Condition Notification Threshold Concentration of 30 mg/Kg. ETPH was also reported in soil boring B-10 above the RES DEC.

The laboratory reported significant amounts of fine soft black material, inferred to be asphalt, were present in the sample. Re-analysis of the sample reported concentration of Benzo(a)pyrene to be 13 mg/Kg. Since this sample was taken at the 0-2 feet interval, it is likely that the concentrations of PAHs and ETPH in soil boring B-10 are due to fill material beneath the parking lot and not the documented release of diesel fuel.



# Section 11

## Summary and Recommendations

### 11.1 Summary

Tighe & Bond completed a Phase II ESA at 11 Crown Street, Meriden, Connecticut. The purpose of this investigation was to investigate AOCs identified in the Phase I ESA to determine if a release of COCs has occurred to the environment. Results of the Phase II ESA indicate the following:

- Significant releases of COCs to the environment as a result of former chemical storage and the printing press located in the northern portion of the building **(AOC-1)** were not identified. Fill material was identified beneath the building slab in these areas and is likely the reason for elevated concentrations of lead.
- The condition of soils beneath the southern and central portions of the building **(AOC-2)** were not able to be evaluated during this Phase II ESA.
- Significant releases related to chemical or petroleum releases were not identified at loading dock A or B **(AOC-3 & AOC-4)**. However, fill material at least 1 to 2 feet thick was identified at these locations.
- Significant releases related to the former automotive repair shop **(AOC-5)** were not identified during site activities. Fill material was identified up to 9 feet below the surface, resulting in elevated COCs.
- No significant releases related to the former Press Manufacturing buildings **(AOC-6)** were identified. Fill material, with elevated concentrations of lead, was identified in one boring above RSR criteria.
- No significant releases were identified due to possible leaking transformers **(AOC-7)**.
- Elevated concentrations of COCs above RSR criteria were reported in the southeastern parking lot **(AOC-8)** in an area where a documented release occurred. Based on reanalysis and observation of the sample by the laboratory and field observations it is likely that the elevated concentrations of COCs are due to fill material and not related to the release.

### 11.2 Recommendations

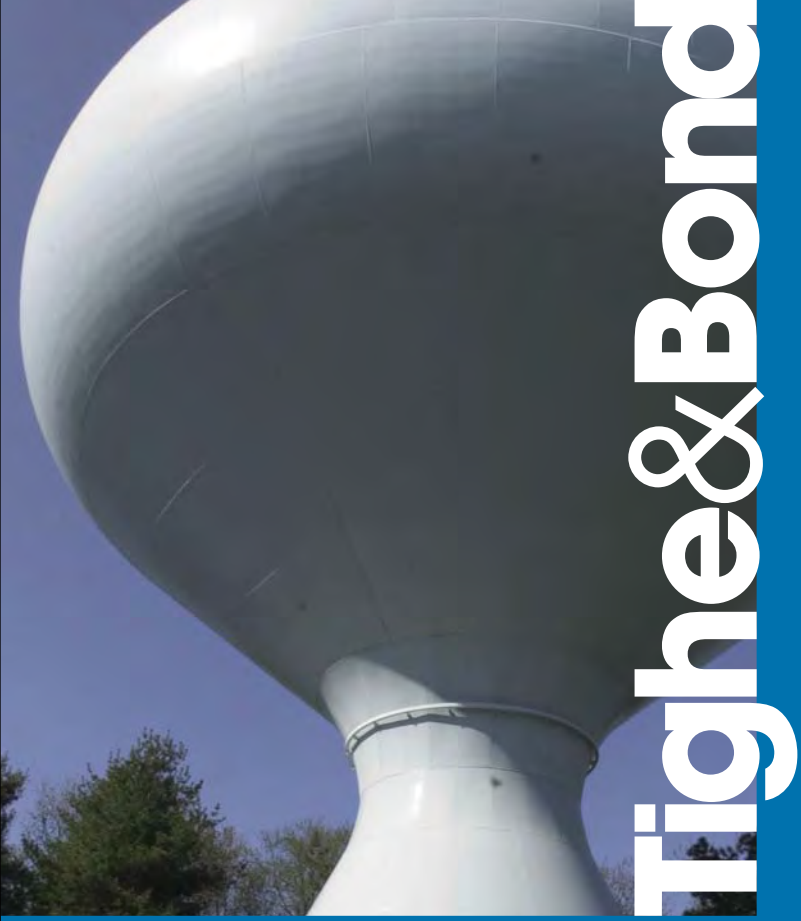
It is our understanding that the site is slated for potential redevelopment activities by the Record-Journal. Based on the findings of this investigation Tighe & Bond recommends that during development activities additional evaluations of fill material be conducted to determine potential soil management requirements and/or disposal options of any soils slated for off-site disposal.

Tighe & Bond recommends that a Phase III ESA be completed in order to further delineate the vertical and horizontal extent of impacts across the site:

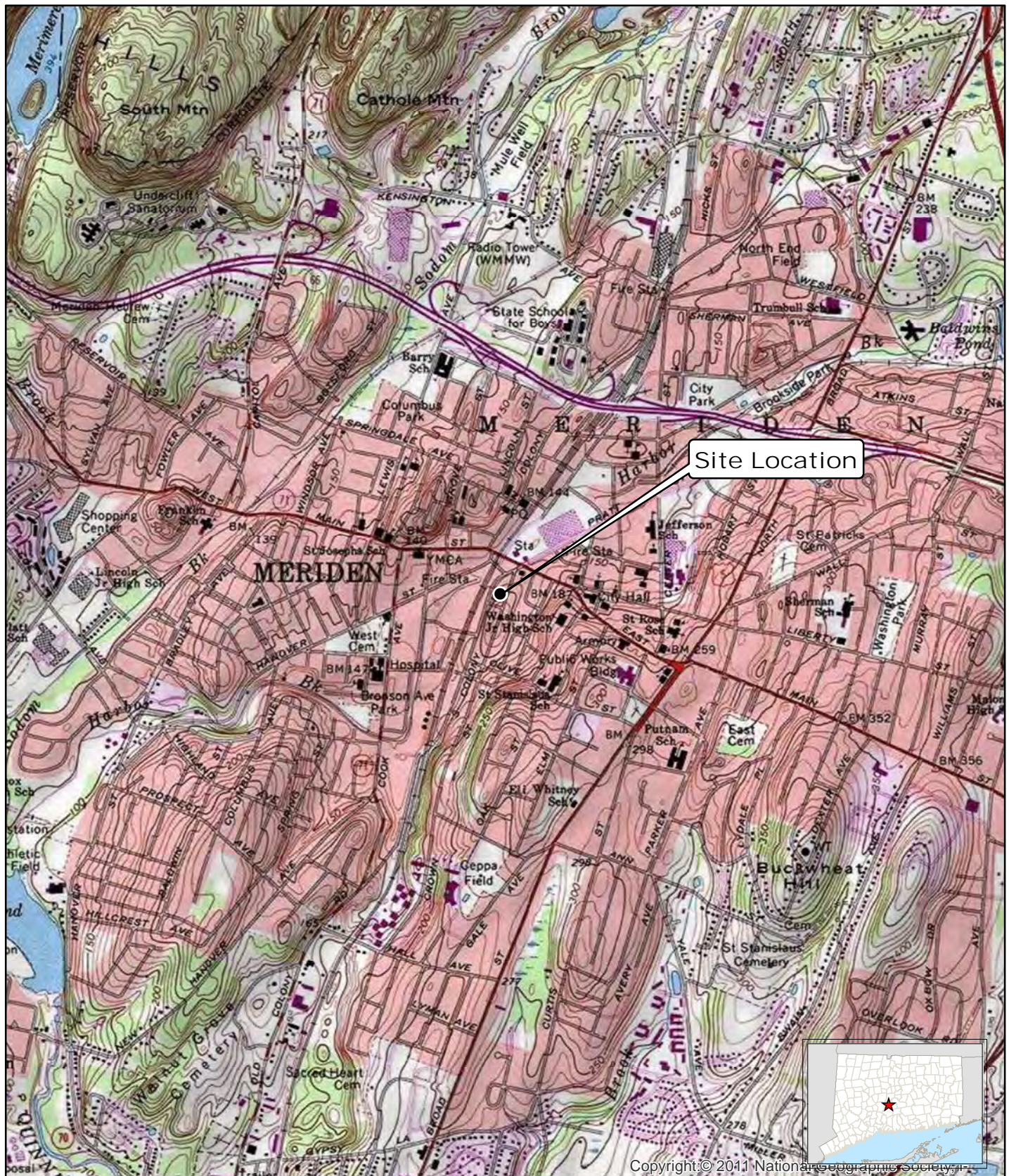
- The significant environmental hazard in the southeastern parking lot (B-10) needs to be further delineated and proper reporting procedures need to be followed with the CTDEEP. Written notice to CTDEEP of a significant hazard is

required within 90 days of being aware of the hazard unless it is abated. According to the CTDEEP RSRs (January 1996, amended June 2013), the direct exposure criteria and pollutant mobility criteria do not apply to incidental sources of ETPH and PAHs due to 'normal paving and maintenance of a consolidated bituminous concrete surface provided such surface has been maintained for its intended purpose'.

- Due to access restraints only two of the five sub-slab samples could be collected. It is unknown whether or not there has been a release of COCs beneath the south and central portions of the building where the printing press and chemical storage was historically located. Additional sub-slab borings will be required within the building to assess the conditions beneath the building.
- Additional borings across the site are needed to determine the horizontal and vertical extent of fill material.
- At least three bedrock borings and wells should be advanced across the site in order to assess the bedrock groundwater conditions and flow direction across the site.







Site Location



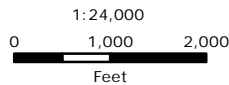
Copyright © 2011 National Geographic Society

**LEGEND**

- Site Location



Source: U.S Geological Survey, in cooperation with CTDEEP, Office of Information Management  
 Based on USGS Topographic Map for Meriden, CT, Rev. 1992, 1:24,000  
 Map Date: November 2013



**FIGURE 1**  
**SITE LOCATION MAP**  
 11 Crown Street  
 Meriden, Connecticut



November 2013





FIGURE 2  
SITE PLAN

LEGEND

-  Approximate Site Boundary
-  Approximate Parcel Boundary

LOCUS MAP



0 25 50  
Feet

Map Scale: 1 " = 50 '

Source:

Ortho Base Map: State of Connecticut 2012 aerial imagery with 1-ft ground resolution provided by CTECO

GIS data layers displayed on this map were obtained from CTDEEP's data library (<http://www.ct.gov/deep>).

11 CROWN STREET  
MERIDEN, CONNECTICUT

Map Date:  
November  
2013






FIGURE  
2

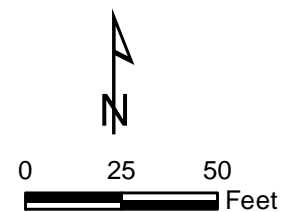


FIGURE 3  
AREAS OF CONCERN

LEGEND

-  Approximate Site Boundary
-  Approximate Parcel Boundary
-  Boring Location
- Areas of Concern (AOCs)**

LOCUS MAP



Map Scale: 1" = 50'

**Notes:**  
AOCs interpreted from Sanborn Fire Insurance Maps from CT State Library

**Source:**  
Ortho Base Map: State of Connecticut 2012 aerial imagery with 1-ft ground resolution provided by CTECO  
GIS data layers displayed on this map were obtained from CTDEEP's data library (<http://www.ct.gov/deep>).

11 CROWN STREET  
MERIDEN, CONNECTICUT

Map Date:  
November  
2013



FIGURE  
3

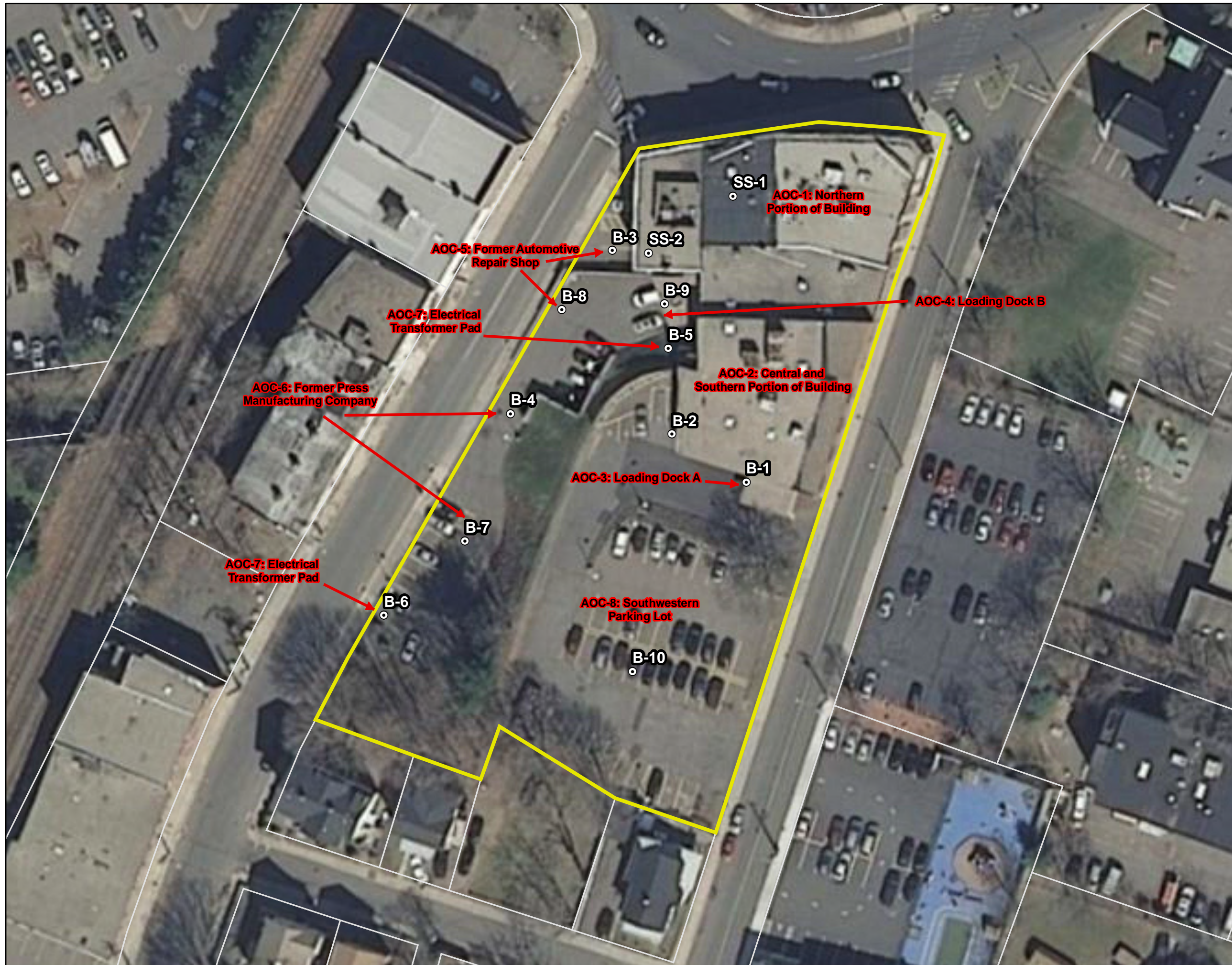





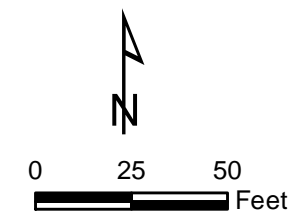


FIGURE 4  
SOIL EXCEEDANCE MAP

LEGEND

-  Approximate Site Boundary
-  Approximate Parcel Boundary
-  Boring Location

LOCUS MAP



Map Scale: 1" = 50'

Notes:  
Only CT RSR exceedances shown  
RES DEC - Residential Direct Exposure Criteria  
I/C DEC - Industrial/Commercial Direct Exposure Criteria  
GB PMC - Potential Mobility Criteria for a GB groundwater class

Source:  
Ortho Base Map: State of Connecticut 2012 aerial imagery with 1-ft ground resolution provided by CTECO  
GIS data layers displayed on this map were obtained from CTDEEP's data library (<http://www.ct.gov/deep>).

11 CROWN STREET  
MERIDEN, CONNECTICUT

Map Date:  
November  
2013



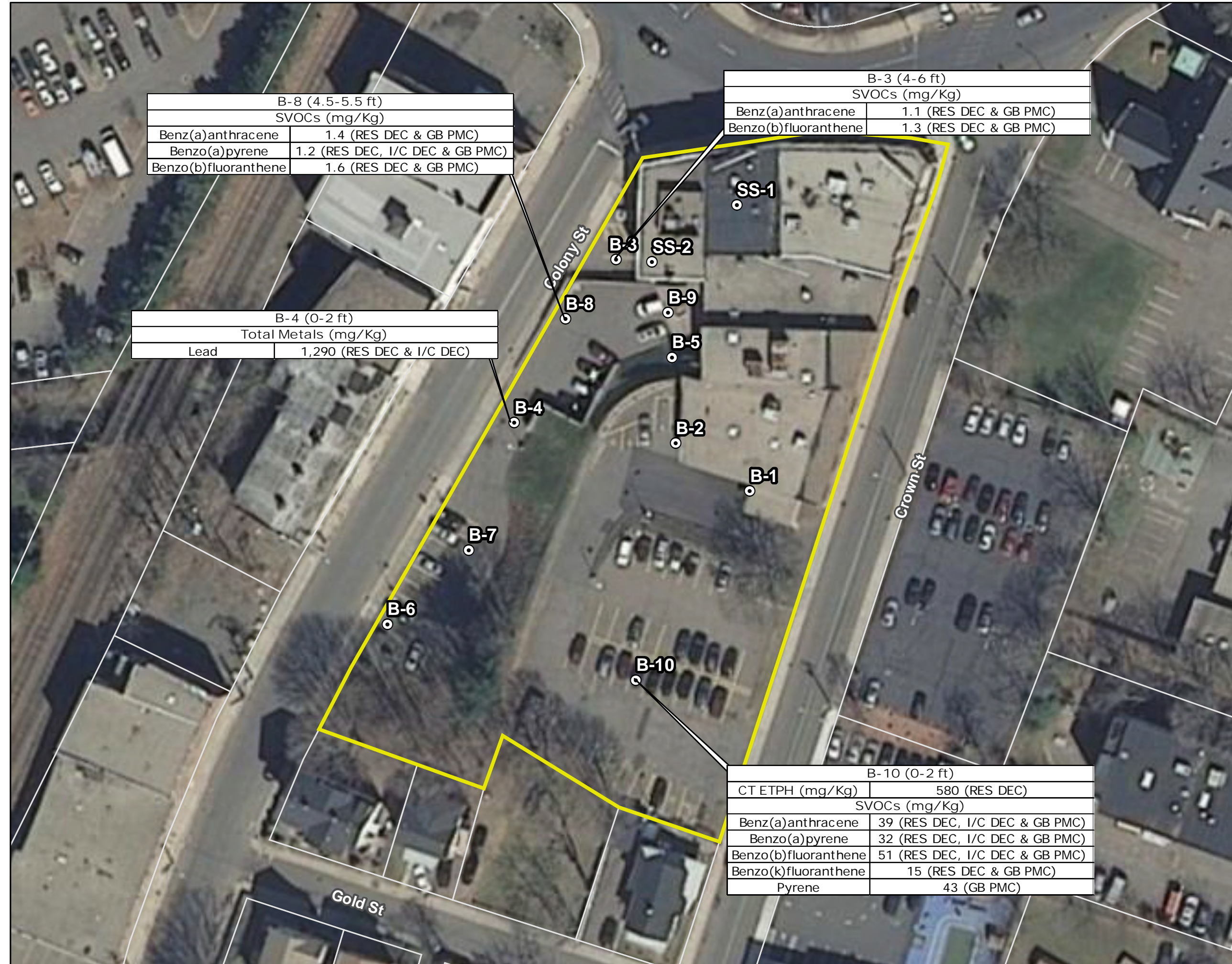
FIGURE  
4

B-8 (4.5-5.5 ft)	
SVOCs (mg/Kg)	
Benz(a)anthracene	1.4 (RES DEC & GB PMC)
Benzo(a)pyrene	1.2 (RES DEC, I/C DEC & GB PMC)
Benzo(b)fluoranthene	1.6 (RES DEC & GB PMC)

B-3 (4-6 ft)	
SVOCs (mg/Kg)	
Benz(a)anthracene	1.1 (RES DEC & GB PMC)
Benzo(b)fluoranthene	1.3 (RES DEC & GB PMC)

B-4 (0-2 ft)	
Total Metals (mg/Kg)	
Lead	1,290 (RES DEC & I/C DEC)

B-10 (0-2 ft)	
CT ETPH (mg/Kg)	580 (RES DEC)
SVOCs (mg/Kg)	
Benz(a)anthracene	39 (RES DEC, I/C DEC & GB PMC)
Benzo(a)pyrene	32 (RES DEC, I/C DEC & GB PMC)
Benzo(b)fluoranthene	51 (RES DEC, I/C DEC & GB PMC)
Benzo(k)fluoranthene	15 (RES DEC & GB PMC)
Pyrene	43 (GB PMC)







# Tight & Bond



Table 1  
 Summary of Soil Analytical Data  
 11 Crown Street  
 Meriden, Connecticut

Parameter Depth Date	CT RSRs			B-1	B-2	DUP	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	SS-1	SS-2	Trip Blank
	RES DEC	I/C DEC	GB PMC	(0-2 ft) 10/18/2013	(4-6 ft) 10/18/2013	(B-2) 10/18/2013	(4-6 ft) 10/18/2013	(0-2 ft) 10/18/2013	(0-6 in) 10/18/2013	(0-6 in) 10/18/2013	(0-10 in) 10/18/2013	(4.5-5.5 ft) 10/18/2013	(6-7 ft) 10/18/2013	(0-2 ft) 10/18/2013	(0-6 in) 10/18/2013	(0-8 in) 10/18/2013	10/18/2013
<b>Total Metals (mg/Kg)</b>																	
Arsenic	10	10	NE	3	2.5	2.2	5.4	5.3	-	-	ND<0.8	3.1	ND<0.7	2.3	2.4	2.8	-
Barium	4,700	140,000	NE	77.1	68.9	70.7	161	157	-	-	63.5	94.9	62	87.4	59.5	126	-
Beryllium	2	2	NE	1.57	0.77	0.79	0.8	1.33	-	-	0.95	1.02	0.54	0.84	0.69	0.68	-
Cadmium	34	1,000	NE	0.58	ND<0.38	0.41	0.69	0.7	-	-	ND<0.40	0.56	0.69	0.64	0.54	0.75	-
Chromium	NE	NE	NE	20.4	10.9	14.4	15	16.9	-	-	11.7	15.5	11.2	20.4	15.4	15.8	-
Copper	2,500	76,000	NE	5.98	8.24	10.7	90.5	37.5	-	-	2.47	23.8	8	27.4	27.2	40.3	-
Lead	400	1,000	NE	20.6	8.83	9.52	317	<b>1,290</b>	-	-	10.4	130	18	36.9	55.5	266	-
Mercury	20	610	NE	ND<0.09	ND<0.08	ND<0.08	0.71	0.85	-	-	ND<0.08	0.2	ND<0.07	ND<0.08	0.1	0.28	-
Nickel	1,400	7,500	NE	16.5	8.84	9.57	12.4	12.2	-	-	8.83	13.4	5.98	16.8	14.7	17	-
Vanadium	470	14000	NE	33	24	28.6	27.1	22.4	-	-	18.9	26.8	24.01	42.7	33	45.2	-
Zinc	20,000	610,000	NE	47.5	25.4	27.4	216	115	-	-	29	70.8	55.4	54.5	48.1	132	-
<b>CT ETPH (mg/Kg)</b>	500	2,500	2,500	ND<63	ND<56	ND<54	ND<64	ND<55	-	-	ND<58	ND<53	ND<52	<b>580</b>	ND<55	ND<54	-
<b>VOCs (mg/kg)</b>																	
Acetone	500	1,000	140	-	-	-	0.077	-	-	-	-	-	-	-	-	-	ND
<b>PAHs (mg/Kg)</b>																	
2-Methylnaphthalene	NE	NE	NE	ND<0.290	ND<0.260	ND<0.250	ND<0.300	ND<0.260	-	-	ND<0.280	ND<0.250	ND<0.240	ND<6.500	ND<0.250	ND<0.250	-
Acenaphthene	NE	NE	NE	ND<0.290	ND<0.260	ND<0.250	ND<0.300	ND<0.260	-	-	ND<0.280	ND<0.250	ND<0.240	ND<6.500	ND<0.250	ND<0.250	-
Acenaphthylene	1000	2500	84	ND<0.290	ND<0.260	ND<0.250	ND<0.300	ND<0.260	-	-	ND<0.280	ND<0.250	ND<0.240	ND<6.500	ND<0.250	ND<0.250	-
Anthracene	1,000	2,500	400	ND<0.290	ND<0.260	ND<0.250	ND<0.300	ND<0.260	-	-	ND<0.280	ND<0.250	ND<0.240	8.2	ND<0.250	0.29	-
Benz(a)anthracene	1	7.8	1	ND<0.290	ND<0.260	ND<0.250	<b>1.1</b>	ND<0.260	-	-	ND<0.280	<b>1.4</b>	ND<0.240	<b>39</b>	ND<0.250	0.91	-
Benzo(a)pyrene	1	1	1	ND<0.290	ND<0.260	ND<0.250	0.99	ND<0.260	-	-	ND<0.280	<b>1.2</b>	ND<0.240	<b>32</b>	ND<0.250	0.57	-
Benzo(b)fluoranthene	1	7.8	1	ND<0.290	ND<0.260	ND<0.250	<b>1.3</b>	ND<0.260	-	-	ND<0.280	<b>1.6</b>	ND<0.240	<b>51</b>	ND<0.250	0.79	-
Benzo(ghi)perylene	NE	NE	NE	ND<0.290	ND<0.260	ND<0.250	0.38	ND<0.260	-	-	ND<0.280	0.42	ND<0.240	10	ND<0.250	ND<0.250	-
Benzo(k)fluoranthene	8.4	78	1	ND<0.290	ND<0.260	ND<0.250	0.45	ND<0.260	-	-	ND<0.280	0.53	ND<0.240	<b>15</b>	ND<0.250	0.33	-
Chrysene	NE	NE	NE	ND<0.290	ND<0.260	ND<0.250	1.1	ND<0.260	-	-	ND<0.280	1.4	ND<0.240	29	ND<0.250	0.77	-
Dibenz(a,h)anthracene	NE	NE	NE	ND<0.290	ND<0.260	ND<0.250	ND<0.300	ND<0.260	-	-	ND<0.280	ND<0.250	ND<0.240	ND<6.500	ND<0.250	ND<0.250	-
Fluoranthene	1,000	2,500	56	ND<0.290	ND<0.260	ND<0.250	2.1	ND<0.260	-	-	ND<0.280	1.9	ND<0.240	56	ND<0.250	1.2	-
Fluorene	1,000	2,500	56	ND<0.290	ND<0.260	ND<0.250	ND<0.300	ND<0.260	-	-	ND<0.280	ND<0.250	ND<0.240	ND<6.500	ND<0.250	ND<0.250	-
Indeno(1,2,3-cd)pyrene	NE	NE	NE	ND<0.290	ND<0.260	ND<0.250	0.38	ND<0.260	-	-	ND<0.280	0.44	ND<0.240	9.4	ND<0.250	ND<0.250	-
Naphthalene	1,000	2,500	56	ND<0.290	ND<0.260	ND<0.250	ND<0.300	ND<0.260	-	-	ND<0.280	ND<0.250	ND<0.240	ND<6.500	ND<0.250	ND<0.250	-
Phenanthrene	1,000	2,500	40	ND<0.290	ND<0.260	ND<0.250	1.3	ND<0.260	-	-	ND<0.280	0.79	ND<0.240	36	ND<0.250	1.3	-
Pyrene	1,000	2,500	40	ND<0.290	ND<0.260	ND<0.250	1.8	ND<0.260	-	-	ND<0.280	1.4	ND<0.240	<b>43</b>	ND<0.250	0.98	-
<b>Total PCBs (mg/Kg)</b>	1	10	NE	-	-	-	-	-	BRL	BRL	-	-	-	-	-	-	-

**Notes:**  
 ND - Not detected above laboratory limits  
 NE - Criteria Not Established  
 ppm - parts per million  
 PAHs - Polynuclear Aromatic Hydrocarbons  
 ETPH - Extractable total petroleum hydrocarbon  
 RES DEC - Residential Direct Exposure Criteria  
 I/C DEC - Industrial/Commercial Direct Exposure Criteria  
 GB PMC - Potential Mobility Criteria for a GB groundwater class  
 CT RSRs - Connecticut Remediation Standard Regulations  
 PCB - Polychlorinated bi-phenyl  
 BRL - Below reporting  
 Bolded and boxed results exceed one or more listed criteria.

**Table 2**

Data Usability Analysis

Phase II ESA

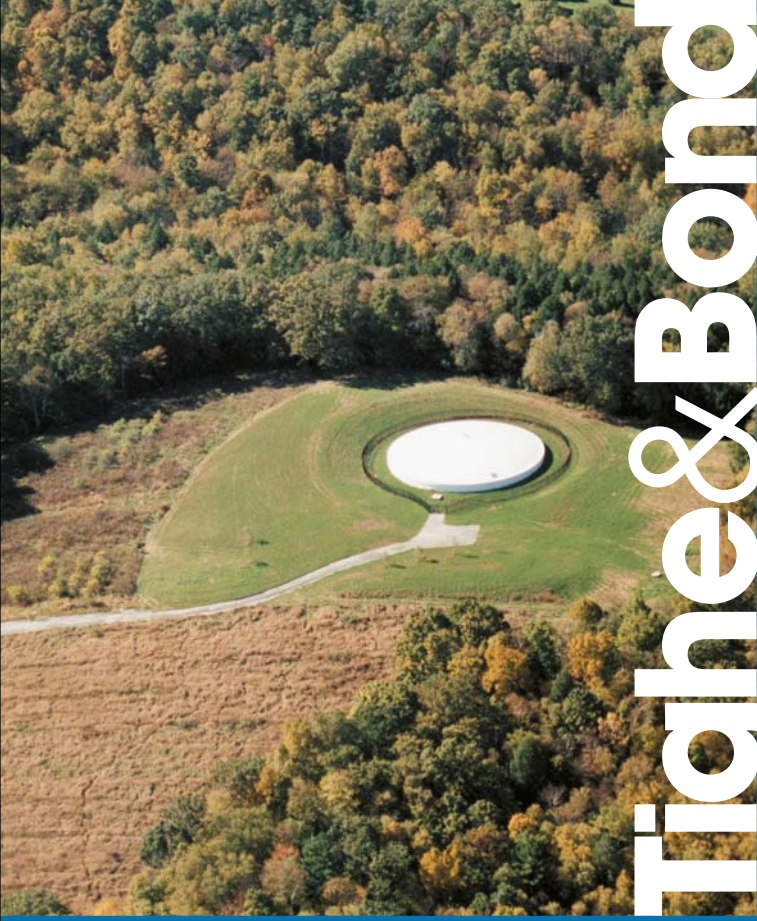
11 Crown Street

Meriden, Connecticut

Lab ID	Sample ID	Compound	QC Outlier	Issue	Bias	Result	DUE Considerations
BF65735	B-10	ETPH, PAHs	Surrogate recovery low	Lab Problem	Low	Varies	Possible interferences in sample due to matrix interference
BF65726	B-1	Lead	MSD recovery low	Lab Problem	Low	74.8%	Possible interferences in sample
BF65727	B-2						
BF65728	B-3						
BF65729	B-4						
BF65732	B-7						
BF65733	B-8						
BF65734	B-9						
BF65735	B-10						
BF65737	SS-1						
BF65738	SS-2						
BF65725	Trip Blank	1,2,3-Trichlorobenzene; 1,2,4-Trichlorobenzene; Naphthalene;	LCSD Recovery High	Lab Problem	High	Varies	All VOCs in trip blank were non-detect. There is no suspected bias in the analytical results.
BF65726	B-1	1,2,3-Trichlorobenzene; 1,2,4-Trichlorobenzene; 2-Hexanone; 4-Methyl-2-pentanone; Acetone; Acrylonitrile; Bromoform; Bromomethane; cis-1,3-Dichloropropene; Hexachlorobutadiene; Naphthalene; trans-1,3-dichloropropene; trans-1,4-dichloro-2-butene	MS/MSD recovery outside of specified limits	Lab Problem	Varies	Varies	Acetone was the only VOC detected. There is no suspected bias in the analytical results.
BF65727	B-2						
BF65728	B-3						
BF65729	B-4						
BF65732	B-7						
BF65733	B-8						
BF65734	B-9						
BF65735	B-10						
BF65737	SS-1						
BF65738	SS-2						

**Table 3**  
 Conceptual Site Model  
 Phase II ESA  
 11 Crown Street  
 Meriden, Connecticut

AOC	AOC Description	Potential COCs	Confirmed COCs	Potential Release Mechanisms and Pathways	Potential Receptors	Status	Sampling Locations	Rationale
							Soil Borings	
1	Northern Portion of Building	VOCs, PAHs, Metals	Metals	Releases onto the ground surface. Migration through building slab to sub-slab soils. Deposition of Fill Material	Direct human exposure through construction activities or demolition. Areas currently capped with asphalt or buildings as noted. Ecological Receptors	No Significant Release was Identified, Fill Material Identified	SS-1 and SS-2	Significant releases of COCs to the environment as a results of former chemical storage and the printing press located in the northern portion of the building were not identified. However, fill material was identified beneath the building slab in these areas and is likely the cause of elevated PAHs and lead concentrations.
2	Southern and Central Portion of Building	VOCs, PAHs, Metals	Not Determined	Releases onto the ground surface. Migration through building slab to sub-slab soils. Deposition of Fill Material	Direct human exposure through construction activities or demolition. Areas currently capped with asphalt or buildings as noted. Ecological Receptors	Area was not assessed	None	The condition of soils beneath the southern and central portions of the building were not able to be evaluated.
3	Loading Dock A (South of Building)	ETPH, VOCs, PAHs, Metals	None	Releases onto the ground surface. Migration through asphalt to soils. Deposition of Fill Material	Direct human exposure through construction activities or demolition. Areas currently capped with asphalt or buildings as noted. Ecological Receptors	No Significant Release was Identified, Fill Material Identified	SB-1 and SB-2	Significant releases related to chemical or petroleum releases were not identified at loading dock A. However, fill material 2 feet thick was identified but did not result in elevated COCs.
4	Loading Dock B (West of Building)	ETPH, VOCs, PAHs, Metals	None	Releases onto the ground surface. Migration through asphalt to soils. Deposition of Fill Material	Direct human exposure through construction activities or demolition. Areas currently capped with asphalt or buildings as noted. Ecological Receptors	No Significant Release was Identified, Fill Material Identified	SB-9	Significant releases related to chemical or petroleum releases were not identified at loading dock B. However, 8 feet of gravel and 1 foot of fill material was identified but did not result in elevated COCs.
5	Former Automotive Repair Shop	ETPH, VOCs, PAHs, Metals	PAHs	Releases onto the ground surface. Migration through asphalt or building slab to soils. Deposition of Fill Material	Direct human exposure through construction activities or demolition. Areas currently capped with asphalt or buildings as noted. Ecological Receptors	No Significant Release was Identified, Impacted Fill Material Identified	SB-3 and SB-8	Significant releases related to the former automotive repair shop were not identified during site activities. Fill material was identified up to 9 feet below the surface, resulting in elevated COCs.
6	Former Press Manufacturing	VOCs, PAHs, Metals	None	Releases onto the ground surface. Migration through asphalt or building slab to soils. Deposition of Fill Material	Direct human exposure through construction activities or demolition. Areas currently capped with asphalt or buildings as noted. Ecological Receptors	No Significant Release was Identified, Fill Material Identified	SB-4 and SB-7	No significant releases related to the former Press Manufacturing buildings were identified. Fill material was identified in the borings that resulted in an elevated concentration of lead.
7	Transformer Pads	PCBs	None	Releases onto the ground surface.	Direct human exposure through construction activities or demolition. Areas currently capped with asphalt or buildings as noted. Ecological Receptors	No Significant Release was Identified	SB-5 and SB-6	No significant releases were identified from transformer leaks.
8	Southwestern Parking Lot	ETPH, VOCs, PAHs	ETPH, PAHs	Releases onto the ground surface. Migration through asphalt to soils. Deposition of Fill Material	Direct human exposure through construction activities or demolition. Areas currently capped with asphalt or buildings as noted. Ecological Receptors	No Significant Release was Identified, Impacted Fill Material Identified	SB-10	Elevated concentrations of COCs were reported in the southeastern parking lot in an area where a documented release occurred. Based on reanalysis and observation of the sample by the laboratory and field observations it is likely that the elevated concentrations of COCs are due to fill material.



# Tighe & Bond

Project: Record Journal  
 Location: 11 Crown Street, Meriden Connecticut  
 Client: Record Journal Publishing Company

Boring No. B-1

Page 1 of 1

File No. R-0280

Checked by: \_\_\_\_\_

Drilling Co.: Martin Geo-Environmental

Foreman: Tim LeFleche  
 T&B Rep.: JLL  
 Date Start: 10/18/13 End: 10/18/13  
 Location: See Exploration Location Plan  
 GS. Elev. \_\_\_\_\_ Datum: \_\_\_\_\_

Type \_\_\_\_\_  
 I.D./O.D. 3 1/4  
 Hammer Wt. \_\_\_\_\_  
 Hammer Fall \_\_\_\_\_  
 Other \_\_\_\_\_

Casing \_\_\_\_\_  
 Sampler Macro Core

Groundwater Readings

Date	Time	Depth	Casing	Sta. Time
No Groundwater Encountered				

Depth (ft.)	PID PPM	Sample No. / Rec. (in)	Sample Depth (ft.)		Sample Description	General Stratigraphy	Notes	Well Construction	
			0	2					
5	0.0	1/ 20	0	2	Top 4": Asphalt and Sub base	ASPHALT	1	No Well Installed	
					Bottom 16": Red, fine SAND and SILT, some Rock Fragments	SAND and SILT			
10					End of Exploration due to Refusal		2		
15									
20									
25									
30									

Notes:  
 1. Sample 0-2 feet.  
 2. Refusal at 2 feet, offset 2 feet west, refusal at 2 feet.

Project: Record Journal  
 Location: 11 Crown Street, Meriden Connecticut  
 Client: Record Journal Publishing Company

Boring No. B-2

Page 1 of 1

File No. R-0280

Checked by: \_\_\_\_\_

Drilling Co.: Martin Geo-Environmental

Foreman: Tim LeFleche  
 T&B Rep.: JLL  
 Date Start: 10/18/13 End: 10/18/13  
 Location: See Exploration Location Plan  
 G.S. Elev. \_\_\_\_\_ Datum: \_\_\_\_\_

Type \_\_\_\_\_  
 I.D./O.D. 3 1/4  
 Hammer Wt. \_\_\_\_\_  
 Hammer Fall \_\_\_\_\_  
 Other \_\_\_\_\_

Casing \_\_\_\_\_  
 Sampler Macro Core

Groundwater Readings

Date	Time	Depth	Casing	Sta. Time
No Groundwater Encountered				

Depth (ft.)	PID PPM	Sample No. / Rec. (in)	Sample Depth (ft.)		Sample Description	General Stratigraphy	Notes	Well Construction
			Start	End				
5	0.0	1 / 6	0	4	Top 4": Asphalt and Sub base Bottom 2": Red, fine SAND and SILT, some Rock Fragments	ASPHALT	1	No Well Installed
						SAND and SILT		
	0.0	2 / 20	4	8	Red, fine SAND and SILT, some Rock Fragments			
10	-	3 / 0	8	11	No Recovery		2	
					End of Exploration due to Refusal			
15								
20								
25								
30								

Notes:  
 1. Sample 4-6' and collect duplicate  
 2. Refusal at 11 feet

Project: Record Journal  
 Location: 11 Crown Street, Meriden Connecticut  
 Client: Record Journal Publishing Company

Boring No. B-3

Page 1 of 1

File No. R-0280

Checked by: \_\_\_\_\_

Drilling Co.: Martin Geo-Environmental

Foreman: Tim LeFleche  
 T&B Rep.: JLL  
 Date Start: 10/18/13 End: 10/18/13  
 Location: See Exploration Location Plan  
 GS. Elev. \_\_\_\_\_ Datum: \_\_\_\_\_

Type \_\_\_\_\_  
 I.D./O.D. 3 1/4  
 Hammer Wt. \_\_\_\_\_  
 Hammer Fall \_\_\_\_\_  
 Other \_\_\_\_\_

Casing \_\_\_\_\_  
 Sampler Macro Core

Groundwater Readings

Date	Time	Depth	Casing	Sta. Time
No Groundwater Encountered				

Depth (ft.)	PID PPM	Sample No. / Rec. (in)	Sample Depth (ft.)		Sample Description	General Stratigraphy	Notes	Well Construction	
5	0.0	1 / 35	0	4	Top 4": Asphalt and Sub-Base Bottom 31": Red to Black, FILL MATERIAL, brick, asphalt, dry	ASPHALT	1	No Well Installed	
	0.0					FILL			
	2.7	2 / 24	4	8	Red to Black, FILL MATERIAL, brick, asphalt, some fine Sand, trace Silt, dry				
10	0.0					SAND and SILT			
	0.0	3 / 24	8	12	Top 12": Red to Black, FILL MATERIAL, brick, asphalt, some fine Sand, trace Silt, dry Bottom 12": Red, fine SAND and SILT, some Gravel, moist				
	0.0								
15	0.0	4 / 2	12	12.5	Red, WEATHERED BEDROCK, some fine Sand, trace Silt, moist	WEATHERED BEDROCK			2
						End of Exploration due to refusal			
20									
25									
30									

Notes:  
 1. Sample 4-6 feet.  
 2. Refusal at 12 feet

Project: Record Journal  
 Location: 11 Crown Street, Meriden Connecticut  
 Client: Record Journal Publishing Company

Boring No. B-4

Page 1 of 1

File No. R-0280

Checked by: \_\_\_\_\_

Drilling Co.: Martin Geo-Environmental

Foreman: Tim LeFleche  
 T&B Rep.: JLL  
 Date Start: 10/18/13 End: 10/18/13  
 Location: See Exploration Location Plan  
 G.S. Elev. \_\_\_\_\_ Datum: \_\_\_\_\_

Type \_\_\_\_\_  
 I.D./O.D. 3 1/4  
 Hammer Wt. \_\_\_\_\_  
 Hammer Fall \_\_\_\_\_  
 Other \_\_\_\_\_

Casing \_\_\_\_\_  
 Sampler Macro Core

Groundwater Readings

Date	Time	Depth	Casing	Sta. Time
No Groundwater Encountered				

Depth (ft.)	PID PPM	Sample No. / Rec. (in)	Sample Depth (ft.)		Sample Description	General Stratigraphy	Notes	Well Construction
			Start	End				
5	0.0	1 / 40	0	4	Top 4": Asphalt and Sub base Middle 12": Red, FILL MATERIAL, brick, some brown Sand, dry Bottom 24": Brown, fine SAND and SILT, dry	ASPHALT FILL MATERIAL	1	No Well Installed
	0.0							
	0.0	2 / 4	4	5.5	Brown, fine SAND and SILT, damp Bottom 1": Wet	SAND and SILT	2	
10					End of Exploration due to Refusal.			
15								
20								
25								
30								

Notes:  
 1. Sample 0 to 2 feet.  
 2. Refusal at 5.5 feet.



Project: Record Journal  
 Location: 11 Crown Street, Meriden Connecticut  
 Client: Record Journal Publishing Company

Boring No. B-5

Page 1 of 1

File No. R-0280

Checked by: \_\_\_\_\_

Drilling Co.: Martin Geo-Environmental

Foreman: Tim LeFleche  
 T&B Rep.: JLL  
 Date Start: 10/18/13 End: 10/18/13  
 Location: See Exploration Location Plan  
 GS. Elev. \_\_\_\_\_ Datum: \_\_\_\_\_

Type \_\_\_\_\_  
 I.D./O.D. 3 1/4  
 Hammer Wt. \_\_\_\_\_  
 Hammer Fall \_\_\_\_\_  
 Other \_\_\_\_\_

Casing	Sampler
_____	Macro Core
_____	_____
_____	_____
_____	_____
_____	_____

Groundwater Readings

Date	Time	Depth	Casing	Sta. Time
No Groundwater Encountered				

Depth (ft.)	PID PPM	Sample No. Rec. (in)	Sample Depth (ft.)		Sample Description	General Stratigraphy	Notes	Well Construction
			0	0.5				
5	0.0	NA	0	0.5	Brown, fine SAND and SILT, some gravel, dry	SAND and SILT	1	No Well Installed
			End of Exploration at 6 inches					
10								
15								
20								
25								
30								

Notes:  
 1. Sample collected by hand.

Project: Record Journal  
 Location: 11 Crown Street, Meriden Connecticut  
 Client: Record Journal Publishing Company

Boring No. B-6

Page 1 of 1

File No. R-0280

Checked by: \_\_\_\_\_

Drilling Co.: Martin Geo-Environmental

Foreman: Tim LeFleche  
 T&B Rep.: JLL  
 Date Start: 10/18/13 End: 10/18/13  
 Location: See Exploration Location Plan  
 GS. Elev. \_\_\_\_\_ Datum: \_\_\_\_\_

Type \_\_\_\_\_  
 I.D./O.D. 3 1/4  
 Hammer Wt. \_\_\_\_\_  
 Hammer Fall \_\_\_\_\_  
 Other \_\_\_\_\_

Casing	Sampler
_____	Macro Core
_____	_____
_____	_____
_____	_____
_____	_____

Groundwater Readings

Date	Time	Depth	Casing	Sta. Time
No Groundwater Encountered				

Depth (ft.)	PID PPM	Sample No. Rec. (in)	Sample Depth (ft.)		Sample Description	General Stratigraphy	Notes	Well Construction
			0	0.5				
5	0.0	NA	0	0.5	Brown, fine SAND and SILT, some gravel, dry	SAND and SILT	1	No Well Installed
			End of Exploration at 6 inches					
10								
15								
20								
25								
30								

Notes:  
1. Sample collected by hand.

Project: Record Journal  
 Location: 11 Crown Street, Meriden Connecticut  
 Client: Record Journal Publishing Company

Boring No. B-7

Page 1 of 1

File No. R-0280

Checked by: \_\_\_\_\_

Drilling Co.: Martin Geo-Environmental

Foreman: Tim LeFleche  
 T&B Rep.: JLL  
 Date Start: 10/18/13 End: 10/18/13  
 Location: See Exploration Location Plan  
 G.S. Elev. \_\_\_\_\_ Datum: \_\_\_\_\_

Type \_\_\_\_\_  
 I.D./O.D. 3 1/4  
 Hammer Wt. \_\_\_\_\_  
 Hammer Fall \_\_\_\_\_  
 Other \_\_\_\_\_

Casing \_\_\_\_\_  
 Sampler Macro Core

Groundwater Readings

Date	Time	Depth	Casing	Sta. Time
No Groundwater Encountered				

Depth (ft.)	PID PPM	Sample No. / Rec. (in)	Sample Depth (ft.)		Sample Description	General Stratigraphy	Notes	Well Construction
			0	3				
5	0.0	1 / 24	0	3	Top 4": Asphalt and Sub base Middle 10": Brown to orange, FILL MATERIAL, brick, some Sand, dry Bottom 10": Red, medium to coarse SAND, rock in macro core tip, dry	ASPHALT	1	No Well Installed
	0.0					FILL		
10					End of Exploration due to Refusal	SAND	2	
15								
20								
25								
30								

Notes:  
 1. Sample 5 to 15 inches.  
 2. Refusal at 4 feet, offset four feet south, refusal at 3 feet.

Project: Record Journal  
 Location: 11 Crown Street, Meriden Connecticut  
 Client: Record Journal Publishing Company

Boring No. B-8

Page 1 of 1

File No. R-0280

Checked by: \_\_\_\_\_

Drilling Co.: Martin Geo-Environmental

Foreman: Tim LeFleche  
 T&B Rep.: JLL  
 Date Start: 10/18/13 End: 10/18/13  
 Location: See Exploration Location Plan  
 G.S. Elev. \_\_\_\_\_ Datum: \_\_\_\_\_

Type \_\_\_\_\_  
 I.D./O.D. 3 1/4  
 Hammer Wt. \_\_\_\_\_  
 Hammer Fall \_\_\_\_\_  
 Other \_\_\_\_\_

Casing \_\_\_\_\_  
 Sampler Macro Core

Groundwater Readings

Date	Time	Depth	Casing	Sta. Time
No Groundwater Encountered				

Depth (ft.)	PID PPM	Sample No. / Rec. (in)	Sample Depth (ft.)		Sample Description	General Stratigraphy	Notes	Well Construction
			Start	End				
5	0.0	1 / 30	0	4	Top 3": Asphalt Bottom 37": Grey, coarse GRAVEL, some Fill Material, trace Sand	ASPHALT	1	No Well Installed
						GRAVEL		
	0.0	2 / 30	4	8	Top 6": Grey, coarse GRAVEL, some Fill Material, trace Sand Middle 12": Black to brown, FILL MATERIAL, brick, some Sand Bottom 12": Red to brown, fine to medium SAND	FILL		
10	0.0	3 / 0	8	8.5	No Recovery	SAND	2	
					End of Exploration due to Refusal			
15								
20								
25								
30								

Notes:  
 1. Sample 5 to 6 feet.  
 2. Refusal at 8.5 feet



Project: Record Journal  
 Location: 11 Crown Street, Meriden Connecticut  
 Client: Record Journal Publishing Company

Drilling Co.: Martin Geo-Environmental

Foreman: Tim LeFleche  
 T&B Rep.: JLL  
 Date Start: 10/18/13 End: 10/18/13  
 Location: See Exploration Location Plan  
 G.S. Elev. \_\_\_\_\_ Datum: \_\_\_\_\_

Type \_\_\_\_\_  
 I.D./O.D. 3 1/4  
 Hammer Wt. \_\_\_\_\_  
 Hammer Fall \_\_\_\_\_  
 Other \_\_\_\_\_

Casing \_\_\_\_\_  
 Sampler Macro Core

Groundwater Readings

Date	Time	Depth	Casing	Sta. Time
No Groundwater Encountered				

Depth (ft.)	PID PPM	Sample No. / Rec. (in)	Sample Depth (ft.)		Sample Description	General Stratigraphy	Notes	Well Construction
			Start	End				
5	0.0	1 / 40	0	4	Top 4": Asphalt and Sub base Bottom 36": Red and black, FILL MATERIAL, some fine Sand, brick, asphalt or ash	ASPHALT	1	No Well Installed
						FILL		
5	0.0	2 / 30	4	7	Red, fine to medium SAND and SILT, some gravel, Weathered Bedrock in tip of core	SAND and SILT	2	
10					End of Exploration due to Refusal			
15								
20								
25								
30								

Notes:  
 1. Sample 0 to 2 feet.  
 2. Refusal at 7 feet



# Tighe & Bond



Monday, October 28, 2013

Attn: Ms. Jill Libby  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

Project ID: RECORD JOURNAL  
Sample ID#s: BF65725 - BF65738

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

A handwritten signature in black ink that reads "Phyllis Shiller". The signature is written in a cursive style.

Phyllis Shiller  
Laboratory Director

NELAC - #NY11301  
CT Lab Registration #PH-0618  
MA Lab Registration #MA-CT-007  
ME Lab Registration #CT-007  
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003  
NY Lab Registration #11301  
PA Lab Registration #68-03530  
RI Lab Registration #63  
VT Lab Registration #VT11301





## Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

October 28, 2013

FOR: Attn: Ms. Jill Libby  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

### Sample Information

Matrix: WATER  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: R-0280

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date

10/18/13

Time

0:00

10/18/13

15:45

## Laboratory Data

SDG ID: GBF65725  
Phoenix ID: BF65725

Project ID: RECORD JOURNAL

Client ID: TRIP BLANK

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
<b><u>Volatiles</u></b>						
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,1,1-Trichloroethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	10/18/13	KCA	SW8260
1,1,2-Trichloroethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,1-Dichloroethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,1-Dichloroethene	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,1-Dichloropropene	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,2,3-Trichlorobenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,2,3-Trichloropropane	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,2,4-Trichlorobenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,2,4-Trimethylbenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,2-Dibromoethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,2-Dichlorobenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,2-Dichloroethane	ND	0.60	ug/L	10/18/13	KCA	SW8260
1,2-Dichloropropane	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,3,5-Trimethylbenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,3-Dichlorobenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,3-Dichloropropane	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,4-Dichlorobenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
2,2-Dichloropropane	ND	1.0	ug/L	10/18/13	KCA	SW8260
2-Chlorotoluene	ND	1.0	ug/L	10/18/13	KCA	SW8260
2-Hexanone	ND	5.0	ug/L	10/18/13	KCA	SW8260
2-Isopropyltoluene	ND	1.0	ug/L	10/18/13	KCA	SW8260
4-Chlorotoluene	ND	1.0	ug/L	10/18/13	KCA	SW8260
4-Methyl-2-pentanone	ND	5.0	ug/L	10/18/13	KCA	SW8260
Acetone	ND	25	ug/L	10/18/13	KCA	SW8260

Client ID: TRIP BLANK

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acrylonitrile	ND	5.0	ug/L	10/18/13	KCA	SW8260
Benzene	ND	0.70	ug/L	10/18/13	KCA	SW8260
Bromobenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
Bromochloromethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
Bromodichloromethane	ND	0.50	ug/L	10/18/13	KCA	SW8260
Bromoform	ND	1.0	ug/L	10/18/13	KCA	SW8260
Bromomethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
Carbon Disulfide	ND	5.0	ug/L	10/18/13	KCA	SW8260
Carbon tetrachloride	ND	1.0	ug/L	10/18/13	KCA	SW8260
Chlorobenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
Chloroethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
Chloroform	ND	1.0	ug/L	10/18/13	KCA	SW8260
Chloromethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
cis-1,2-Dichloroethene	ND	1.0	ug/L	10/18/13	KCA	SW8260
cis-1,3-Dichloropropene	ND	0.40	ug/L	10/18/13	KCA	SW8260
Dibromochloromethane	ND	0.50	ug/L	10/18/13	KCA	SW8260
Dibromomethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
Dichlorodifluoromethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
Ethylbenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
Hexachlorobutadiene	ND	0.40	ug/L	10/18/13	KCA	SW8260
Isopropylbenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
m&p-Xylene	ND	1.0	ug/L	10/18/13	KCA	SW8260
Methyl ethyl ketone	ND	5.0	ug/L	10/18/13	KCA	SW8260
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	10/18/13	KCA	SW8260
Methylene chloride	ND	1.0	ug/L	10/18/13	KCA	SW8260
Naphthalene	ND	1.0	ug/L	10/18/13	KCA	SW8260
n-Butylbenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
n-Propylbenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
o-Xylene	ND	1.0	ug/L	10/18/13	KCA	SW8260
p-Isopropyltoluene	ND	1.0	ug/L	10/18/13	KCA	SW8260
sec-Butylbenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
Styrene	ND	1.0	ug/L	10/18/13	KCA	SW8260
tert-Butylbenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
Tetrachloroethene	ND	1.0	ug/L	10/18/13	KCA	SW8260
Tetrahydrofuran (THF)	ND	2.5	ug/L	10/18/13	KCA	SW8260
Toluene	ND	1.0	ug/L	10/18/13	KCA	SW8260
Total Xylenes	ND	1	ug/L	10/18/13	KCA	SW8260
trans-1,2-Dichloroethene	ND	1.0	ug/L	10/18/13	KCA	SW8260
trans-1,3-Dichloropropene	ND	0.40	ug/L	10/18/13	KCA	SW8260
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	10/18/13	KCA	SW8260
Trichloroethene	ND	1.0	ug/L	10/18/13	KCA	SW8260
Trichlorofluoromethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
Trichlorotrifluoroethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
Vinyl chloride	ND	1.0	ug/L	10/18/13	KCA	SW8260
<b><u>QA/QC Surrogates</u></b>						
% 1,2-dichlorobenzene-d4	102		%	10/18/13	KCA	70 - 130 %
% Bromofluorobenzene	99		%	10/18/13	KCA	70 - 130 %
% Dibromofluoromethane	104		%	10/18/13	KCA	70 - 130 %
% Toluene-d8	97		%	10/18/13	KCA	70 - 130 %

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
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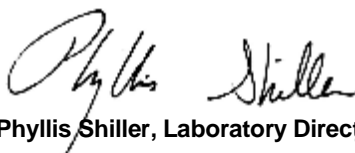
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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If there are any questions regarding this data, please call Phoenix Client Services at extension 200.  
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**Phyllis Shiller, Laboratory Director**

**October 28, 2013**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

October 28, 2013

FOR: Attn: Ms. Jill Libby  
 Tighe & Bond  
 213 Court St  
 Suite 900  
 Middletown, CT 06457

## Sample Information

Matrix: SOIL  
 Location Code: TIGHE  
 Rush Request: Standard  
 P.O.#: R-0280

## Custody Information

Collected by:  
 Received by: LB  
 Analyzed by: see "By" below

Date                      Time  
 10/18/13                      8:30  
 10/18/13                      15:45

## Laboratory Data

SDG ID: GBF65725  
 Phoenix ID: BF65726

Project ID: RECORD JOURNAL  
 Client ID: B-1 0-2 FT

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 0.40	0.40	mg/Kg	10/21/13	EK	SW6010
Arsenic	3.0	0.8	mg/Kg	10/21/13	EK	SW6010
Barium	77.1	0.40	mg/Kg	10/21/13	EK	SW6010
Beryllium	1.57	0.32	mg/Kg	10/21/13	EK	SW6010
Cadmium	0.58	0.40	mg/Kg	10/21/13	EK	SW6010
Chromium	20.4	0.40	mg/Kg	10/21/13	EK	SW6010
Copper	5.98	0.40	mg/kg	10/21/13	EK	SW6010
Mercury	< 0.09	0.09	mg/Kg	10/21/13	RS	SW-7471
Nickel	16.5	0.40	mg/Kg	10/21/13	EK	SW6010
Lead	20.6	0.40	mg/Kg	10/21/13	EK	SW6010
Antimony	< 4.0	4.0	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.6	1.6	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.6	3.6	mg/Kg	10/21/13	EK	SW6010
Vanadium	33.0	0.40	mg/Kg	10/21/13	EK	SW6010
Zinc	47.5	0.40	mg/Kg	10/21/13	EK	SW6010
Percent Solid	79		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/21/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

## TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	63	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

## QA/QC Surrogates

% n-Pentacosane	93		%	10/21/13	JRB	50 - 150 %
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## Polynuclear Aromatic HC

2-Methylnaphthalene	ND	290	ug/Kg	10/19/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Acenaphthylene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Anthracene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Benz(a)anthracene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Benzo(a)pyrene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Benzo(b)fluoranthene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Benzo(ghi)perylene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Benzo(k)fluoranthene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Chrysene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Fluoranthene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Fluorene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Naphthalene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Phenanthrene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Pyrene	ND	290	ug/Kg	10/19/13	DD	SW 8270
<b><u>QA/QC Surrogates</u></b>						
% 2-Fluorobiphenyl	82		%	10/19/13	DD	30 - 130 %
% Nitrobenzene-d5	80		%	10/19/13	DD	30 - 130 %
% Terphenyl-d14	91		%	10/19/13	DD	30 - 130 %

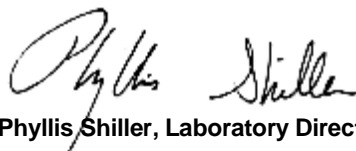
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

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**Phyllis Shiller, Laboratory Director**

**October 28, 2013**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

October 28, 2013

FOR: Attn: Ms. Jill Libby  
 Tighe & Bond  
 213 Court St  
 Suite 900  
 Middletown, CT 06457

## Sample Information

Matrix: SOIL  
 Location Code: TIGHE  
 Rush Request: Standard  
 P.O.#: R-0280

## Custody Information

Collected by:  
 Received by: LB  
 Analyzed by: see "By" below

Date                      Time  
 10/18/13                      9:00  
 10/18/13                      15:45

## Laboratory Data

SDG ID: GBF65725  
 Phoenix ID: BF65727

Project ID: RECORD JOURNAL  
 Client ID: B-2 4-6 FT

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 0.38	0.38	mg/Kg	10/21/13	EK	SW6010
Arsenic	2.5	0.8	mg/Kg	10/21/13	EK	SW6010
Barium	68.9	0.38	mg/Kg	10/21/13	EK	SW6010
Beryllium	0.77	0.30	mg/Kg	10/21/13	EK	SW6010
Cadmium	< 0.38	0.38	mg/Kg	10/21/13	EK	SW6010
Chromium	10.9	0.38	mg/Kg	10/21/13	EK	SW6010
Copper	8.24	0.38	mg/kg	10/21/13	EK	SW6010
Mercury	< 0.08	0.08	mg/Kg	10/21/13	RS	SW-7471
Nickel	8.84	0.38	mg/Kg	10/21/13	EK	SW6010
Lead	8.83	0.38	mg/Kg	10/21/13	EK	SW6010
Antimony	< 3.8	3.8	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.5	1.5	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.4	3.4	mg/Kg	10/21/13	EK	SW6010
Vanadium	24.0	0.38	mg/Kg	10/21/13	EK	SW6010
Zinc	25.4	0.38	mg/Kg	10/21/13	EK	SW6010
Percent Solid	88		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/21/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

## TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	56	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

## QA/QC Surrogates

% n-Pentacosane	81		%	10/21/13	JRB	50 - 150 %
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## Polynuclear Aromatic HC

2-Methylnaphthalene	ND	260	ug/Kg	10/19/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Acenaphthylene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Anthracene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benz(a)anthracene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benzo(a)pyrene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benzo(b)fluoranthene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benzo(ghi)perylene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benzo(k)fluoranthene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Chrysene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Fluoranthene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Fluorene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Naphthalene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Phenanthrene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Pyrene	ND	260	ug/Kg	10/19/13	DD	SW 8270
<b><u>QA/QC Surrogates</u></b>						
% 2-Fluorobiphenyl	88		%	10/19/13	DD	30 - 130 %
% Nitrobenzene-d5	86		%	10/19/13	DD	30 - 130 %
% Terphenyl-d14	81		%	10/19/13	DD	30 - 130 %

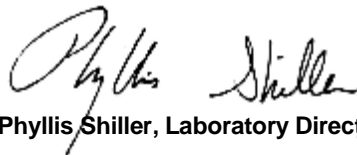
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

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**Phyllis Shiller, Laboratory Director**

**October 28, 2013**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

October 28, 2013

FOR: Attn: Ms. Jill Libby  
 Tighe & Bond  
 213 Court St  
 Suite 900  
 Middletown, CT 06457

## Sample Information

Matrix: SOIL  
 Location Code: TIGHE  
 Rush Request: Standard  
 P.O.#: R-0280

## Custody Information

Collected by:  
 Received by: LB  
 Analyzed by: see "By" below

Date                      Time  
 10/18/13                      10:00  
 10/18/13                      15:45

## Laboratory Data

SDG ID: GBF65725  
 Phoenix ID: BF65728

Project ID: RECORD JOURNAL  
 Client ID: B-3 4-6 FT

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 1.0	1.0	mg/Kg	10/21/13	EK	SW6010
Arsenic	5.4	0.9	mg/Kg	10/21/13	EK	SW6010
Barium	161	0.44	mg/Kg	10/21/13	EK	SW6010
Beryllium	0.80	0.35	mg/Kg	10/21/13	EK	SW6010
Cadmium	0.69	0.44	mg/Kg	10/21/13	EK	SW6010
Chromium	15.0	0.44	mg/Kg	10/21/13	EK	SW6010
Copper	90.5	0.44	mg/kg	10/21/13	EK	SW6010
Mercury	0.71	0.08	mg/Kg	10/21/13	RS	SW-7471
Nickel	12.4	0.44	mg/Kg	10/21/13	EK	SW6010
Lead	317	4.4	mg/Kg	10/22/13	LK	SW6010
Antimony	< 4.4	4.4	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.8	1.8	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.9	3.9	mg/Kg	10/21/13	EK	SW6010
Vanadium	27.1	0.44	mg/Kg	10/21/13	EK	SW6010
Zinc	216	4.4	mg/Kg	10/22/13	LK	SW6010
Percent Solid	76		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/21/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050
Field Extraction	Completed			10/18/13		SW5035

## TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	64	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

## QA/QC Surrogates

% n-Pentacosane	78		%	10/21/13	JRB	50 - 150 %
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
<b><u>Volatiles</u></b>						
1,1,1,2-Tetrachloroethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,1,1-Trichloroethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,1,2,2-Tetrachloroethane	ND	4.6	ug/Kg	10/22/13	HM	SW8260
1,1,2-Trichloroethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,1-Dichloroethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,1-Dichloroethene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,1-Dichloropropene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,2,3-Trichlorobenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,2,3-Trichloropropane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,2,4-Trichlorobenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,2,4-Trimethylbenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,2-Dibromo-3-chloropropane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,2-Dibromoethane	ND	7	ug/Kg	10/22/13	HM	SW8260
1,2-Dichlorobenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,2-Dichloroethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,2-Dichloropropane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,3,5-Trimethylbenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,3-Dichlorobenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,3-Dichloropropane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,4-Dichlorobenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
2,2-Dichloropropane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
2-Chlorotoluene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
2-Hexanone	ND	38	ug/Kg	10/22/13	HM	SW8260
2-Isopropyltoluene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
4-Chlorotoluene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
4-Methyl-2-pentanone	ND	38	ug/Kg	10/22/13	HM	SW8260
Acetone	77	46	ug/Kg	10/22/13	HM	SW8260
Acrylonitrile	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Benzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Bromobenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Bromochloromethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Bromodichloromethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Bromoform	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Bromomethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Carbon Disulfide	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Carbon tetrachloride	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Chlorobenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Chloroethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Chloroform	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Chloromethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
cis-1,2-Dichloroethene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
cis-1,3-Dichloropropene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Dibromochloromethane	ND	4.6	ug/Kg	10/22/13	HM	SW8260
Dibromomethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Dichlorodifluoromethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Ethylbenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Hexachlorobutadiene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Isopropylbenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
m&p-Xylene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Methyl Ethyl Ketone	ND	46	ug/Kg	10/22/13	HM	SW8260
Methyl t-butyl ether (MTBE)	ND	15	ug/Kg	10/22/13	HM	SW8260
Methylene chloride	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Naphthalene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
n-Butylbenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
n-Propylbenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
o-Xylene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
p-Isopropyltoluene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
sec-Butylbenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Styrene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
tert-Butylbenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Tetrachloroethene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Tetrahydrofuran (THF)	ND	15	ug/Kg	10/22/13	HM	SW8260
Toluene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Total Xylenes	ND	7.7	ug/Kg	10/22/13	HM	SW8260
trans-1,2-Dichloroethene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
trans-1,3-Dichloropropene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
trans-1,4-dichloro-2-butene	ND	15	ug/Kg	10/22/13	HM	SW8260
Trichloroethene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Trichlorofluoromethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Trichlorotrifluoroethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Vinyl chloride	ND	7.7	ug/Kg	10/22/13	HM	SW8260
<b><u>QA/QC Surrogates</u></b>						
% 1,2-dichlorobenzene-d4	104		%	10/22/13	HM	70 - 130 %
% Bromofluorobenzene	88		%	10/22/13	HM	70 - 130 %
% Dibromofluoromethane	106		%	10/22/13	HM	70 - 130 %
% Toluene-d8	97		%	10/22/13	HM	70 - 130 %
<b><u>Polynuclear Aromatic HC</u></b>						
2-Methylnaphthalene	ND	300	ug/Kg	10/19/13	DD	SW 8270
Acenaphthene	ND	300	ug/Kg	10/19/13	DD	SW 8270
Acenaphthylene	ND	300	ug/Kg	10/19/13	DD	SW 8270
Anthracene	ND	300	ug/Kg	10/19/13	DD	SW 8270
Benz(a)anthracene	1100	300	ug/Kg	10/19/13	DD	SW 8270
Benzo(a)pyrene	990	300	ug/Kg	10/19/13	DD	SW 8270
Benzo(b)fluoranthene	1300	300	ug/Kg	10/19/13	DD	SW 8270
Benzo(ghi)perylene	380	300	ug/Kg	10/19/13	DD	SW 8270
Benzo(k)fluoranthene	450	300	ug/Kg	10/19/13	DD	SW 8270
Chrysene	1100	300	ug/Kg	10/19/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	300	ug/Kg	10/19/13	DD	SW 8270
Fluoranthene	2100	300	ug/Kg	10/19/13	DD	SW 8270
Fluorene	ND	300	ug/Kg	10/19/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	380	300	ug/Kg	10/19/13	DD	SW 8270
Naphthalene	ND	300	ug/Kg	10/19/13	DD	SW 8270
Phenanthrene	1300	300	ug/Kg	10/19/13	DD	SW 8270
Pyrene	1800	300	ug/Kg	10/19/13	DD	SW 8270
<b><u>QA/QC Surrogates</u></b>						
% 2-Fluorobiphenyl	64		%	10/19/13	DD	30 - 130 %
% Nitrobenzene-d5	84		%	10/19/13	DD	30 - 130 %

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
% Terphenyl-d14	95		%	10/19/13	DD	30 - 130 %

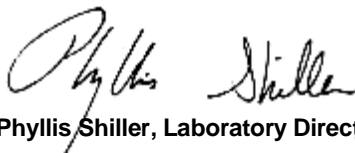
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

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**Phyllis Shiller, Laboratory Director**

**October 28, 2013**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

October 28, 2013

FOR: Attn: Ms. Jill Libby  
 Tighe & Bond  
 213 Court St  
 Suite 900  
 Middletown, CT 06457

## Sample Information

Matrix: SOIL  
 Location Code: TIGHE  
 Rush Request: Standard  
 P.O.#: R-0280

## Custody Information

Collected by:  
 Received by: LB  
 Analyzed by: see "By" below

Date            Time  
 10/18/13        10:10  
 10/18/13        15:45

## Laboratory Data

SDG ID: GBF65725  
 Phoenix ID: BF65729

Project ID: RECORD JOURNAL  
 Client ID: B-4 0-2 FT

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 2.0	2.0	mg/Kg	10/21/13	EK	SW6010
Arsenic	5.3	0.8	mg/Kg	10/21/13	EK	SW6010
Barium	157	0.38	mg/Kg	10/21/13	EK	SW6010
Beryllium	1.33	0.30	mg/Kg	10/21/13	EK	SW6010
Cadmium	0.70	0.38	mg/Kg	10/21/13	EK	SW6010
Chromium	16.9	0.38	mg/Kg	10/21/13	EK	SW6010
Copper	37.5	0.38	mg/kg	10/21/13	EK	SW6010
Mercury	0.85	0.07	mg/Kg	10/21/13	RS	SW-7471
Nickel	12.2	0.38	mg/Kg	10/21/13	EK	SW6010
Lead	1290	3.8	mg/Kg	10/22/13	LK	SW6010
Antimony	< 3.8	3.8	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.5	1.5	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.4	3.4	mg/Kg	10/21/13	EK	SW6010
Vanadium	22.4	0.38	mg/Kg	10/21/13	EK	SW6010
Zinc	115	0.38	mg/Kg	10/21/13	EK	SW6010
Percent Solid	89		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/21/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

## TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	55	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

## QA/QC Surrogates

% n-Pentacosane	88		%	10/21/13	JRB	50 - 150 %
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## Polynuclear Aromatic HC

2-Methylnaphthalene	ND	260	ug/Kg	10/19/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Acenaphthylene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Anthracene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benz(a)anthracene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benzo(a)pyrene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benzo(b)fluoranthene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benzo(ghi)perylene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benzo(k)fluoranthene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Chrysene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Fluoranthene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Fluorene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Naphthalene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Phenanthrene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Pyrene	ND	260	ug/Kg	10/19/13	DD	SW 8270
<b><u>QA/QC Surrogates</u></b>						
% 2-Fluorobiphenyl	78		%	10/19/13	DD	30 - 130 %
% Nitrobenzene-d5	77		%	10/19/13	DD	30 - 130 %
% Terphenyl-d14	87		%	10/19/13	DD	30 - 130 %

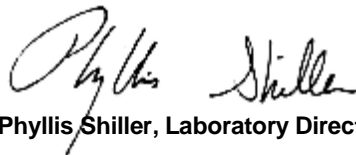
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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**Phyllis Shiller, Laboratory Director**

**October 28, 2013**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**  
 October 28, 2013

FOR: Attn: Ms. Jill Libby  
 Tighe & Bond  
 213 Court St  
 Suite 900  
 Middletown, CT 06457

Sample Information

Matrix: SOIL  
 Location Code: TIGHE  
 Rush Request: Standard  
 P.O.#: R-0280

Custody Information

Collected by:  
 Received by: LB  
 Analyzed by: see "By" below

Date                      Time  
 10/18/13                      10:30  
 10/18/13                      15:45

Laboratory Data

SDG ID: GBF65725  
 Phoenix ID: BF65730

Project ID: RECORD JOURNAL  
 Client ID: B-5 0-6 INCHES

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Percent Solid	84		%	10/18/13	W	E160.3
Extraction for PCB	Completed			10/18/13	BB/X	SW3540C

**PCB (Soxhlet)**

PCB-1016	ND	390	ug/Kg	10/21/13	AW	3540C/8082
PCB-1221	ND	390	ug/Kg	10/21/13	AW	3540C/8082
PCB-1232	ND	390	ug/Kg	10/21/13	AW	3540C/8082
PCB-1242	ND	390	ug/Kg	10/21/13	AW	3540C/8082
PCB-1248	ND	390	ug/Kg	10/21/13	AW	3540C/8082
PCB-1254	ND	390	ug/Kg	10/21/13	AW	3540C/8082
PCB-1260	ND	390	ug/Kg	10/21/13	AW	3540C/8082
PCB-1262	ND	390	ug/Kg	10/21/13	AW	3540C/8082
PCB-1268	ND	390	ug/Kg	10/21/13	AW	3540C/8082

**QA/QC Surrogates**

% DCBP	80		%	10/21/13	AW	30 - 150 %
% TCMX	113		%	10/21/13	AW	30 - 150 %

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
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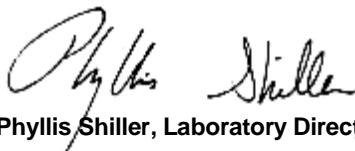
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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**Phyllis Shiller, Laboratory Director**

**October 28, 2013**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**  
 October 28, 2013

FOR: Attn: Ms. Jill Libby  
 Tighe & Bond  
 213 Court St  
 Suite 900  
 Middletown, CT 06457

Sample Information

Matrix: SOIL  
 Location Code: TIGHE  
 Rush Request: Standard  
 P.O.#: R-0280

Custody Information

Collected by:  
 Received by: LB  
 Analyzed by: see "By" below

Date                      Time  
 10/18/13                      10:50  
 10/18/13                      15:45

Laboratory Data

SDG ID: GBF65725  
 Phoenix ID: BF65731

Project ID: RECORD JOURNAL  
 Client ID: B-6 0-6 INCHES

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Percent Solid	92		%	10/18/13	W	E160.3
Extraction for PCB	Completed			10/18/13	BB/X	SW3540C

**PCB (Soxhlet)**

PCB-1016	ND	360	ug/Kg	10/21/13	AW	3540C/8082
PCB-1221	ND	360	ug/Kg	10/21/13	AW	3540C/8082
PCB-1232	ND	360	ug/Kg	10/21/13	AW	3540C/8082
PCB-1242	ND	360	ug/Kg	10/21/13	AW	3540C/8082
PCB-1248	ND	360	ug/Kg	10/21/13	AW	3540C/8082
PCB-1254	ND	360	ug/Kg	10/21/13	AW	3540C/8082
PCB-1260	ND	360	ug/Kg	10/21/13	AW	3540C/8082
PCB-1262	ND	360	ug/Kg	10/21/13	AW	3540C/8082
PCB-1268	ND	360	ug/Kg	10/21/13	AW	3540C/8082

**QA/QC Surrogates**

% DCBP	82		%	10/21/13	AW	30 - 150 %
% TCMX	110		%	10/21/13	AW	30 - 150 %



Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
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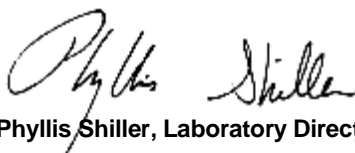
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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**Phyllis Shiller, Laboratory Director**

**October 28, 2013**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

October 28, 2013

FOR: Attn: Ms. Jill Libby  
 Tighe & Bond  
 213 Court St  
 Suite 900  
 Middletown, CT 06457

## Sample Information

Matrix: SOIL  
 Location Code: TIGHE  
 Rush Request: Standard  
 P.O.#: R-0280

## Custody Information

Collected by:  
 Received by: LB  
 Analyzed by: see "By" below

Date                      Time  
 10/18/13                      11:00  
 10/18/13                      15:45

## Laboratory Data

SDG ID: GBF65725  
 Phoenix ID: BF65732

Project ID: RECORD JOURNAL  
 Client ID: B-7 0-10 INCHES

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 0.40	0.40	mg/Kg	10/21/13	EK	SW6010
Arsenic	< 0.8	0.8	mg/Kg	10/21/13	EK	SW6010
Barium	63.5	0.40	mg/Kg	10/21/13	EK	SW6010
Beryllium	0.95	0.32	mg/Kg	10/21/13	EK	SW6010
Cadmium	< 0.40	0.40	mg/Kg	10/21/13	EK	SW6010
Chromium	11.7	0.40	mg/Kg	10/21/13	EK	SW6010
Copper	2.47	0.40	mg/kg	10/21/13	EK	SW6010
Mercury	< 0.08	0.08	mg/Kg	10/22/13	RS	SW-7471
Nickel	8.63	0.40	mg/Kg	10/21/13	EK	SW6010
Lead	10.4	0.40	mg/Kg	10/21/13	EK	SW6010
Antimony	< 4.0	4.0	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.6	1.6	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.6	3.6	mg/Kg	10/21/13	EK	SW6010
Vanadium	18.9	0.40	mg/Kg	10/21/13	EK	SW6010
Zinc	29.0	0.40	mg/Kg	10/21/13	EK	SW6010
Percent Solid	84		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/22/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

## TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	58	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

## QA/QC Surrogates

% n-Pentacosane	102		%	10/21/13	JRB	50 - 150 %
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## Polynuclear Aromatic HC

2-Methylnaphthalene	ND	280	ug/Kg	10/20/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Acenaphthylene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Anthracene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Benz(a)anthracene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Benzo(a)pyrene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Benzo(b)fluoranthene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Benzo(ghi)perylene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Benzo(k)fluoranthene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Chrysene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Fluoranthene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Fluorene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Naphthalene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Phenanthrene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Pyrene	ND	280	ug/Kg	10/20/13	DD	SW 8270
<b><u>QA/QC Surrogates</u></b>						
% 2-Fluorobiphenyl	83		%	10/20/13	DD	30 - 130 %
% Nitrobenzene-d5	109		%	10/20/13	DD	30 - 130 %
% Terphenyl-d14	92		%	10/20/13	DD	30 - 130 %

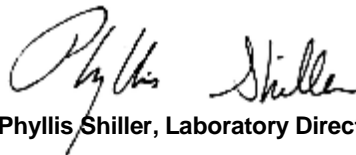
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

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**Phyllis Shiller, Laboratory Director**

**October 28, 2013**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

October 28, 2013

FOR: Attn: Ms. Jill Libby  
 Tighe & Bond  
 213 Court St  
 Suite 900  
 Middletown, CT 06457

## Sample Information

Matrix: SOIL  
 Location Code: TIGHE  
 Rush Request: Standard  
 P.O.#: R-0280

## Custody Information

Collected by:  
 Received by: LB  
 Analyzed by: see "By" below

Date                      Time  
 10/18/13                      12:00  
 10/18/13                      15:45

## Laboratory Data

SDG ID: GBF65725  
 Phoenix ID: BF65733

Project ID: RECORD JOURNAL  
 Client ID: B-8 4.5-5.5

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 0.37	0.37	mg/Kg	10/21/13	EK	SW6010
Arsenic	3.1	0.7	mg/Kg	10/21/13	EK	SW6010
Barium	94.9	0.37	mg/Kg	10/21/13	EK	SW6010
Beryllium	1.02	0.30	mg/Kg	10/21/13	EK	SW6010
Cadmium	0.56	0.37	mg/Kg	10/21/13	EK	SW6010
Chromium	15.5	0.37	mg/Kg	10/21/13	EK	SW6010
Copper	23.8	0.37	mg/kg	10/21/13	EK	SW6010
Mercury	0.20	0.07	mg/Kg	10/22/13	RS	SW-7471
Nickel	13.4	0.37	mg/Kg	10/21/13	EK	SW6010
Lead	130	0.37	mg/Kg	10/21/13	EK	SW6010
Antimony	< 3.7	3.7	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.5	1.5	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.3	3.3	mg/Kg	10/21/13	EK	SW6010
Vanadium	26.8	0.37	mg/Kg	10/21/13	EK	SW6010
Zinc	70.8	0.37	mg/Kg	10/21/13	EK	SW6010
Percent Solid	91		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/22/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

## TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	53	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

## QA/QC Surrogates

% n-Pentacosane	92		%	10/21/13	JRB	50 - 150 %
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## Polynuclear Aromatic HC

2-Methylnaphthalene	ND	250	ug/Kg	10/19/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Acenaphthylene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Anthracene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Benz(a)anthracene	1400	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(a)pyrene	1200	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(b)fluoranthene	1600	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(ghi)perylene	420	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(k)fluoranthene	530	250	ug/Kg	10/19/13	DD	SW 8270
Chrysene	1400	250	ug/Kg	10/19/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Fluoranthene	1900	250	ug/Kg	10/19/13	DD	SW 8270
Fluorene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	440	250	ug/Kg	10/19/13	DD	SW 8270
Naphthalene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Phenanthrene	790	250	ug/Kg	10/19/13	DD	SW 8270
Pyrene	1400	250	ug/Kg	10/19/13	DD	SW 8270
<b><u>QA/QC Surrogates</u></b>						
% 2-Fluorobiphenyl	77		%	10/19/13	DD	30 - 130 %
% Nitrobenzene-d5	82		%	10/19/13	DD	30 - 130 %
% Terphenyl-d14	70		%	10/19/13	DD	30 - 130 %

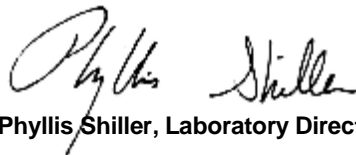
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

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**Phyllis Shiller, Laboratory Director**

**October 28, 2013**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

October 28, 2013

FOR: Attn: Ms. Jill Libby  
 Tighe & Bond  
 213 Court St  
 Suite 900  
 Middletown, CT 06457

## Sample Information

Matrix: SOIL  
 Location Code: TIGHE  
 Rush Request: Standard  
 P.O.#: R-0280

## Custody Information

Collected by:  
 Received by: LB  
 Analyzed by: see "By" below

Date                      Time  
 10/18/13                      13:00  
 10/18/13                      15:45

## Laboratory Data

SDG ID: GBF65725  
 Phoenix ID: BF65734

Project ID: RECORD JOURNAL  
 Client ID: B-9 6-7 FT

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 0.36	0.36	mg/Kg	10/21/13	EK	SW6010
Arsenic	< 0.7	0.7	mg/Kg	10/21/13	EK	SW6010
Barium	62.0	0.36	mg/Kg	10/21/13	EK	SW6010
Beryllium	0.54	0.29	mg/Kg	10/21/13	EK	SW6010
Cadmium	0.69	0.36	mg/Kg	10/21/13	EK	SW6010
Chromium	11.2	0.36	mg/Kg	10/21/13	EK	SW6010
Copper	8.00	0.36	mg/kg	10/21/13	EK	SW6010
Mercury	< 0.07	0.07	mg/Kg	10/22/13	RS	SW-7471
Nickel	5.98	0.36	mg/Kg	10/21/13	EK	SW6010
Lead	18.0	0.36	mg/Kg	10/21/13	EK	SW6010
Antimony	< 3.6	3.6	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.5	1.5	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.3	3.3	mg/Kg	10/21/13	EK	SW6010
Vanadium	24.1	0.36	mg/Kg	10/21/13	EK	SW6010
Zinc	55.4	0.36	mg/Kg	10/21/13	EK	SW6010
Percent Solid	94		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	SS/F	3545
Mercury Digestion	Completed			10/22/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

## TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	52	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

## QA/QC Surrogates

% n-Pentacosane	79		%	10/21/13	JRB	50 - 150 %
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## Polynuclear Aromatic HC

2-Methylnaphthalene	ND	240	ug/Kg	10/19/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Acenaphthylene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Anthracene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Benz(a)anthracene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Benzo(a)pyrene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Benzo(b)fluoranthene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Benzo(ghi)perylene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Benzo(k)fluoranthene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Chrysene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Fluoranthene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Fluorene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Naphthalene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Phenanthrene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Pyrene	ND	240	ug/Kg	10/19/13	DD	SW 8270
<b><u>QA/QC Surrogates</u></b>						
% 2-Fluorobiphenyl	90		%	10/19/13	DD	30 - 130 %
% Nitrobenzene-d5	89		%	10/19/13	DD	30 - 130 %
% Terphenyl-d14	103		%	10/19/13	DD	30 - 130 %

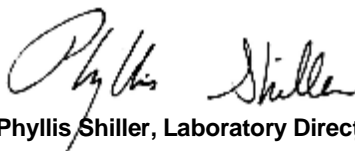
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

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**Phyllis Shiller, Laboratory Director**

**October 28, 2013**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

October 28, 2013

FOR: Attn: Ms. Jill Libby  
 Tighe & Bond  
 213 Court St  
 Suite 900  
 Middletown, CT 06457

## Sample Information

Matrix: SOIL  
 Location Code: TIGHE  
 Rush Request: Standard  
 P.O.#: R-0280

## Custody Information

Collected by:  
 Received by: LB  
 Analyzed by: see "By" below

Date                      Time  
 10/18/13                      13:30  
 10/18/13                      15:45

## Laboratory Data

SDG ID: GBF65725  
 Phoenix ID: BF65735

Project ID: RECORD JOURNAL  
 Client ID: B-10 0-2 FT

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 0.33	0.33	mg/Kg	10/21/13	EK	SW6010
Arsenic	2.3	0.7	mg/Kg	10/21/13	EK	SW6010
Barium	87.4	0.33	mg/Kg	10/21/13	EK	SW6010
Beryllium	0.84	0.27	mg/Kg	10/21/13	EK	SW6010
Cadmium	0.64	0.33	mg/Kg	10/21/13	EK	SW6010
Chromium	20.4	0.33	mg/Kg	10/21/13	EK	SW6010
Copper	27.4	0.33	mg/kg	10/21/13	EK	SW6010
Mercury	< 0.08	0.08	mg/Kg	10/22/13	RS	SW-7471
Nickel	16.8	0.33	mg/Kg	10/21/13	EK	SW6010
Lead	36.9	0.33	mg/Kg	10/21/13	EK	SW6010
Antimony	< 3.3	3.3	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.3	1.3	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.0	3.0	mg/Kg	10/21/13	EK	SW6010
Vanadium	42.7	0.33	mg/Kg	10/21/13	EK	SW6010
Zinc	54.5	0.33	mg/Kg	10/21/13	EK	SW6010
Percent Solid	89		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/22/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

## TPH by GC (Extractable Products)

Ext. Petroleum HC	580	280	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	**		mg/Kg	10/21/13	JRB	CT ETPH/8015

## QA/QC Surrogates

% n-Pentacosane	Diluted Out		%	10/21/13	JRB	50 - 150 %
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## Polynuclear Aromatic HC

2-Methylnaphthalene	ND	6500	ug/Kg	10/20/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	6500	ug/Kg	10/20/13	DD	SW 8270
Acenaphthylene	ND	6500	ug/Kg	10/20/13	DD	SW 8270
Anthracene	8200	6500	ug/Kg	10/20/13	DD	SW 8270
Benz(a)anthracene	39000	6500	ug/Kg	10/20/13	DD	SW 8270
Benzo(a)pyrene	32000	6500	ug/Kg	10/20/13	DD	SW 8270
Benzo(b)fluoranthene	51000	6500	ug/Kg	10/20/13	DD	SW 8270
Benzo(ghi)perylene	10000	6500	ug/Kg	10/20/13	DD	SW 8270
Benzo(k)fluoranthene	15000	6500	ug/Kg	10/20/13	DD	SW 8270
Chrysene	29000	6500	ug/Kg	10/20/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	6500	ug/Kg	10/20/13	DD	SW 8270
Fluoranthene	56000	6500	ug/Kg	10/20/13	DD	SW 8270
Fluorene	ND	6500	ug/Kg	10/20/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	9400	6500	ug/Kg	10/20/13	DD	SW 8270
Naphthalene	ND	6500	ug/Kg	10/20/13	DD	SW 8270
Phenanthrene	36000	6500	ug/Kg	10/20/13	DD	SW 8270
Pyrene	43000	6500	ug/Kg	10/20/13	DD	SW 8270
<b>QA/QC Surrogates</b>						
% 2-Fluorobiphenyl	*Diluted Out		%	10/20/13	DD	30 - 130 %
% Nitrobenzene-d5	*Diluted Out		%	10/20/13	DD	30 - 130 %
% Terphenyl-d14	*Diluted Out		%	10/20/13	DD	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

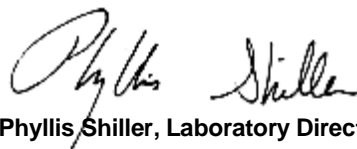
**Comments:**

\* Due to a matrix interference and/or the presence of a large amount of non-target material in the sample, an elevated RL was reported for the semivolatile analysis.

\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.  
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**Phyllis Shiller, Laboratory Director**

**October 28, 2013**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

October 28, 2013

FOR: Attn: Ms. Jill Libby  
 Tighe & Bond  
 213 Court St  
 Suite 900  
 Middletown, CT 06457

## Sample Information

Matrix: SOIL  
 Location Code: TIGHE  
 Rush Request: Standard  
 P.O.#: R-0280

## Custody Information

Collected by:  
 Received by: LB  
 Analyzed by: see "By" below

Date                      Time  
 10/18/13                      9:05  
 10/18/13                      15:45

## Laboratory Data

SDG ID: GBF65725  
 Phoenix ID: BF65736

Project ID: RECORD JOURNAL  
 Client ID: DUP RJ

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 0.37	0.37	mg/Kg	10/21/13	EK	SW6010
Arsenic	2.2	0.7	mg/Kg	10/21/13	EK	SW6010
Barium	70.7	0.37	mg/Kg	10/21/13	EK	SW6010
Beryllium	0.79	0.30	mg/Kg	10/21/13	EK	SW6010
Cadmium	0.41	0.37	mg/Kg	10/21/13	EK	SW6010
Chromium	14.4	0.37	mg/Kg	10/21/13	EK	SW6010
Copper	10.7	0.37	mg/kg	10/21/13	EK	SW6010
Mercury	< 0.08	0.08	mg/Kg	10/22/13	RS	SW-7471
Nickel	9.57	0.37	mg/Kg	10/21/13	EK	SW6010
Lead	9.52	0.37	mg/Kg	10/21/13	EK	SW6010
Antimony	< 3.7	3.7	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.5	1.5	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.3	3.3	mg/Kg	10/21/13	EK	SW6010
Vanadium	28.6	0.37	mg/Kg	10/21/13	EK	SW6010
Zinc	27.4	0.37	mg/Kg	10/21/13	EK	SW6010
Percent Solid	91		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/22/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

## TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	54	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

## QA/QC Surrogates

% n-Pentacosane	68		%	10/21/13	JRB	50 - 150 %
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## Polynuclear Aromatic HC

2-Methylnaphthalene	ND	250	ug/Kg	10/19/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Acenaphthylene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Anthracene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Benz(a)anthracene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(a)pyrene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(b)fluoranthene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(ghi)perylene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(k)fluoranthene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Chrysene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Fluoranthene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Fluorene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Naphthalene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Phenanthrene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Pyrene	ND	250	ug/Kg	10/19/13	DD	SW 8270
<b><u>QA/QC Surrogates</u></b>						
% 2-Fluorobiphenyl	88		%	10/19/13	DD	30 - 130 %
% Nitrobenzene-d5	83		%	10/19/13	DD	30 - 130 %
% Terphenyl-d14	78		%	10/19/13	DD	30 - 130 %

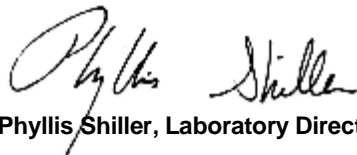
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

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**Phyllis Shiller, Laboratory Director**

**October 28, 2013**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

October 28, 2013

FOR: Attn: Ms. Jill Libby  
 Tighe & Bond  
 213 Court St  
 Suite 900  
 Middletown, CT 06457

## Sample Information

Matrix: SOIL  
 Location Code: TIGHE  
 Rush Request: Standard  
 P.O.#: R-0280

## Custody Information

Collected by:  
 Received by: LB  
 Analyzed by: see "By" below

Date                      Time  
 10/18/13                      14:00  
 10/18/13                      15:45

## Laboratory Data

SDG ID: GBF65725  
 Phoenix ID: BF65737

Project ID: RECORD JOURNAL  
 Client ID: SS-1 0-6 INCHES

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 0.38	0.38	mg/Kg	10/21/13	EK	SW6010
Arsenic	2.4	0.8	mg/Kg	10/21/13	EK	SW6010
Barium	59.5	0.38	mg/Kg	10/21/13	EK	SW6010
Beryllium	0.69	0.30	mg/Kg	10/21/13	EK	SW6010
Cadmium	0.54	0.38	mg/Kg	10/21/13	EK	SW6010
Chromium	15.4	0.38	mg/Kg	10/21/13	EK	SW6010
Copper	27.2	0.38	mg/kg	10/21/13	EK	SW6010
Mercury	0.10	0.07	mg/Kg	10/22/13	RS	SW-7471
Nickel	14.7	0.38	mg/Kg	10/21/13	EK	SW6010
Lead	55.5	0.38	mg/Kg	10/21/13	EK	SW6010
Antimony	< 3.8	3.8	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.5	1.5	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.4	3.4	mg/Kg	10/21/13	EK	SW6010
Vanadium	33.0	0.38	mg/Kg	10/21/13	EK	SW6010
Zinc	48.1	0.38	mg/Kg	10/21/13	EK	SW6010
Percent Solid	91		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/22/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

## TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	55	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

## QA/QC Surrogates

% n-Pentacosane	70		%	10/21/13	JRB	50 - 150 %
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## Polynuclear Aromatic HC

2-Methylnaphthalene	ND	250	ug/Kg	10/20/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Acenaphthylene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Anthracene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Benz(a)anthracene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Benzo(a)pyrene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Benzo(b)fluoranthene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Benzo(ghi)perylene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Benzo(k)fluoranthene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Chrysene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Fluoranthene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Fluorene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Naphthalene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Phenanthrene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Pyrene	ND	250	ug/Kg	10/20/13	DD	SW 8270
<b><u>QA/QC Surrogates</u></b>						
% 2-Fluorobiphenyl	78		%	10/20/13	DD	30 - 130 %
% Nitrobenzene-d5	113		%	10/20/13	DD	30 - 130 %
% Terphenyl-d14	88		%	10/20/13	DD	30 - 130 %

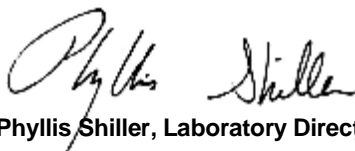
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

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**Phyllis Shiller, Laboratory Director**

**October 28, 2013**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

October 28, 2013

FOR: Attn: Ms. Jill Libby  
 Tighe & Bond  
 213 Court St  
 Suite 900  
 Middletown, CT 06457

## Sample Information

Matrix: SOIL  
 Location Code: TIGHE  
 Rush Request: Standard  
 P.O.#: R-0280

## Custody Information

Collected by:  
 Received by: LB  
 Analyzed by: see "By" below

Date                      Time  
 10/18/13                      14:30  
 10/18/13                      15:45

## Laboratory Data

SDG ID: GBF65725  
 Phoenix ID: BF65738

Project ID: RECORD JOURNAL  
 Client ID: SS-2 0-8 INCHES

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 2.0	2.0	mg/Kg	10/21/13	EK	SW6010
Arsenic	2.8	0.7	mg/Kg	10/21/13	EK	SW6010
Barium	126	0.37	mg/Kg	10/21/13	EK	SW6010
Beryllium	0.68	0.30	mg/Kg	10/21/13	EK	SW6010
Cadmium	0.75	0.37	mg/Kg	10/21/13	EK	SW6010
Chromium	15.8	0.37	mg/Kg	10/21/13	EK	SW6010
Copper	40.3	0.37	mg/kg	10/21/13	EK	SW6010
Mercury	0.28	0.09	mg/Kg	10/22/13	RS	SW-7471
Nickel	17.0	0.37	mg/Kg	10/21/13	EK	SW6010
Lead	266	3.7	mg/Kg	10/22/13	LK	SW6010
Antimony	< 3.7	3.7	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.5	1.5	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.3	3.3	mg/Kg	10/21/13	EK	SW6010
Vanadium	45.2	0.37	mg/Kg	10/21/13	EK	SW6010
Zinc	132	0.37	mg/Kg	10/21/13	EK	SW6010
Percent Solid	91		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/22/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

## TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	54	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

## QA/QC Surrogates

% n-Pentacosane	72		%	10/21/13	JRB	50 - 150 %
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## Polynuclear Aromatic HC

2-Methylnaphthalene	ND	250	ug/Kg	10/19/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Acenaphthylene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Anthracene	290	250	ug/Kg	10/19/13	DD	SW 8270
Benz(a)anthracene	910	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(a)pyrene	570	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(b)fluoranthene	790	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(ghi)perylene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(k)fluoranthene	330	250	ug/Kg	10/19/13	DD	SW 8270
Chrysene	770	250	ug/Kg	10/19/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Fluoranthene	1200	250	ug/Kg	10/19/13	DD	SW 8270
Fluorene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Naphthalene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Phenanthrene	1300	250	ug/Kg	10/19/13	DD	SW 8270
Pyrene	980	250	ug/Kg	10/19/13	DD	SW 8270
<b><u>QA/QC Surrogates</u></b>						
% 2-Fluorobiphenyl	86		%	10/19/13	DD	30 - 130 %
% Nitrobenzene-d5	85		%	10/19/13	DD	30 - 130 %
% Terphenyl-d14	74		%	10/19/13	DD	30 - 130 %

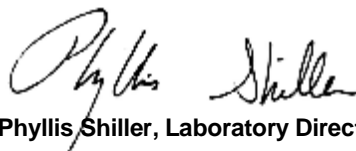
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

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**Phyllis Shiller, Laboratory Director**

**October 28, 2013**

**Reviewed and Released by: Greg Lawrence, Assistant Lab Director**



Environmental Laboratories, Inc.  
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 Tel. (860) 645-1102 Fax (860) 645-0823

# QA/QC Report

October 28, 2013

## QA/QC Data

SDG I.D.: GBF65725

Parameter	Blank	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 257344, QC Sample No: BF65049 (BF65726, BF65727, BF65728, BF65729, BF65732, BF65733, BF65734, BF65735, BF65736, BF65737, BF65738)												
<b>ICP Metals - Soil</b>												
Antimony	BRL	<3.4	<3.4	NC	76.1	76.4	0.4	94.0	94.1	0.1	75 - 125	30
Arsenic	BRL	4.3	3.51	20.2	101	99.6	1.4	94.9	96.2	1.4	75 - 125	30
Barium	BRL	109	119	8.80	112	106	5.5	115	101	13.0	75 - 125	30
Beryllium	BRL	0.31	0.32	NC	106	103	2.9	100	101	1.0	75 - 125	30
Cadmium	BRL	0.87	0.78	NC	103	101	2.0	99.2	100	0.8	75 - 125	30
Chromium	BRL	14.7	13.6	7.80	107	105	1.9	103	103	0.0	75 - 125	30
Copper	BRL	37.8	36.3	4.00	110	108	1.8	102	106	3.8	75 - 125	30
Lead	BRL	427	363	16.2	100	100	0.0	106	74.8	34.5	75 - 125	30
Nickel	BRL	10.1	9.57	5.40	106	103	2.9	99.8	101	1.2	75 - 125	30
Selenium	BRL	<1.4	<1.4	NC	87.0	88.3	1.5	83.9	84.6	0.8	75 - 125	30
Silver	BRL	<0.34	<0.34	NC	103	104	1.0	101	102	1.0	75 - 125	30
Thallium	BRL	<3.1	<3.1	NC	103	101	2.0	98.5	99.2	0.7	75 - 125	30
Vanadium	BRL	21.1	21.6	2.30	106	108	1.9	101	102	1.0	75 - 125	30
Zinc	BRL	189	181	4.30	99.2	97.3	1.9	91.6	88.3	3.7	75 - 125	30

QA/QC Batch 257555, QC Sample No: BF65664 (BF65726, BF65727, BF65728, BF65729)

Mercury - Soil	BRL	0.13	0.10	NC	108	107	0.9	95.3	88.7	7.2	70 - 130	30
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Comment:

Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 70-130%.

QA/QC Batch 257642, QC Sample No: BF65914 (BF65732, BF65733, BF65734, BF65735, BF65736, BF65737, BF65738)

Mercury - Soil	BRL	<0.07	<0.07	NC	97.6	94.5	3.2	106	121	13.2	70 - 130	30
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Comment:

Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 70-130%.

r = This parameter is outside laboratory rpd specified recovery limits.





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# QA/QC Report

October 28, 2013

## QA/QC Data

SDG I.D.: GBF65725

Parameter	Blank	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 257365, QC Sample No: BF65236 (BF65732, BF65733, BF65734, BF65735, BF65736, BF65737, BF65738)									
<u>TPH by GC (Extractable Products) - Soil</u>									
Ext. Petroleum HC	ND	74	78	5.3	85	80	6.1	60 - 120	30
% n-Pentacosane	69	95	94	1.1	100	91	9.4	50 - 150	30
QA/QC Batch 257685, QC Sample No: BF65647 (BF65725)									
<u>Volatiles - Water</u>									
1,1,1,2-Tetrachloroethane	ND	113	118	4.3				70 - 130	30
1,1,1-Trichloroethane	ND	98	97	1.0				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	98	108	9.7				70 - 130	30
1,1,2-Trichloroethane	ND	104	119	13.5				70 - 130	30
1,1-Dichloroethane	ND	92	92	0.0				70 - 130	30
1,1-Dichloroethene	ND	91	89	2.2				70 - 130	30
1,1-Dichloropropene	ND	106	102	3.8				70 - 130	30
1,2,3-Trichlorobenzene	ND	125	144	14.1				70 - 130	30
1,2,3-Trichloropropane	ND	95	104	9.0				70 - 130	30
1,2,4-Trichlorobenzene	ND	127	137	7.6				70 - 130	30
1,2,4-Trimethylbenzene	ND	113	107	5.5				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	109	122	11.3				70 - 130	30
1,2-Dibromoethane	ND	106	121	13.2				70 - 130	30
1,2-Dichlorobenzene	ND	108	112	3.6				70 - 130	30
1,2-Dichloroethane	ND	97	107	9.8				70 - 130	30
1,2-Dichloropropane	ND	97	103	6.0				70 - 130	30
1,3,5-Trimethylbenzene	ND	112	104	7.4				70 - 130	30
1,3-Dichlorobenzene	ND	113	111	1.8				70 - 130	30
1,3-Dichloropropane	ND	101	110	8.5				70 - 130	30
1,4-Dichlorobenzene	ND	110	109	0.9				70 - 130	30
2,2-Dichloropropane	ND	103	101	2.0				70 - 130	30
2-Chlorotoluene	ND	114	107	6.3				70 - 130	30
2-Hexanone	ND	93	120	25.4				70 - 130	30
2-Isopropyltoluene	ND	113	106	6.4				70 - 130	30
4-Chlorotoluene	ND	111	105	5.6				70 - 130	30
4-Methyl-2-pentanone	ND	90	115	24.4				70 - 130	30
Acetone	ND	78	93	17.5				70 - 130	30
Acrylonitrile	ND	89	105	16.5				70 - 130	30
Benzene	ND	100	101	1.0				70 - 130	30
Bromobenzene	ND	110	110	0.0				70 - 130	30
Bromochloromethane	ND	99	106	6.8				70 - 130	30
Bromodichloromethane	ND	104	112	7.4				70 - 130	30
Bromoform	ND	109	127	15.3				70 - 130	30
Bromomethane	ND	93	92	1.1				70 - 130	30
Carbon Disulfide	ND	88	83	5.8				70 - 130	30
Carbon tetrachloride	ND	113	109	3.6				70 - 130	30
Chlorobenzene	ND	106	106	0.0				70 - 130	30

QA/QC Data

SDG I.D.: GBF65725

Parameter	Blank	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Chloroethane	ND	90	91	1.1				70 - 130	30
Chloroform	ND	94	96	2.1				70 - 130	30
Chloromethane	ND	83	84	1.2				70 - 130	30
cis-1,2-Dichloroethene	ND	99	100	1.0				70 - 130	30
cis-1,3-Dichloropropene	ND	103	112	8.4				70 - 130	30
Dibromochloromethane	ND	115	127	9.9				70 - 130	30
Dibromomethane	ND	103	117	12.7				70 - 130	30
Dichlorodifluoromethane	ND	96	94	2.1				70 - 130	30
Ethylbenzene	ND	108	104	3.8				70 - 130	30
Hexachlorobutadiene	ND	127	117	8.2				70 - 130	30
Isopropylbenzene	ND	116	108	7.1				70 - 130	30
m&p-Xylene	ND	107	104	2.8				70 - 130	30
Methyl ethyl ketone	ND	74	91	20.6				70 - 130	30
Methyl t-butyl ether (MTBE)	ND	93	110	16.7				70 - 130	30
Methylene chloride	ND	83	88	5.8				70 - 130	30
Naphthalene	ND	126	146	14.7				70 - 130	30
n-Butylbenzene	ND	116	108	7.1				70 - 130	30
n-Propylbenzene	ND	118	106	10.7				70 - 130	30
o-Xylene	ND	103	103	0.0				70 - 130	30
p-Isopropyltoluene	ND	117	108	8.0				70 - 130	30
sec-Butylbenzene	ND	110	102	7.5				70 - 130	30
Styrene	ND	103	106	2.9				70 - 130	30
tert-Butylbenzene	ND	115	107	7.2				70 - 130	30
Tetrachloroethene	ND	116	110	5.3				70 - 130	30
Tetrahydrofuran (THF)	ND	82	101	20.8				70 - 130	30
Toluene	ND	103	102	1.0				70 - 130	30
trans-1,2-Dichloroethene	ND	92	90	2.2				70 - 130	30
trans-1,3-Dichloropropene	ND	101	112	10.3				70 - 130	30
trans-1,4-dichloro-2-butene	ND	105	117	10.8				70 - 130	30
Trichloroethene	ND	114	112	1.8				70 - 130	30
Trichlorofluoromethane	ND	97	96	1.0				70 - 130	30
Trichlorotrifluoroethane	ND	93	93	0.0				70 - 130	30
Vinyl chloride	ND	96	94	2.1				70 - 130	30
% 1,2-dichlorobenzene-d4	102	98	103	5.0				70 - 130	30
% Bromofluorobenzene	99	96	102	6.1				70 - 130	30
% Dibromofluoromethane	113	101	102	1.0				70 - 130	30
% Toluene-d8	97	97	98	1.0				70 - 130	30

Comment:

The MS/MSD are not reported for this batch.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 40-200%.

QA/QC Batch 257486, QC Sample No: BF65727 (BF65726, BF65727, BF65728, BF65729)

TPH by GC (Extractable Products) - Soil

Ext. Petroleum HC	ND	68		80	66	19.2	60 - 120	30
% n-Pentacosane	107	82		100	84	17.4	50 - 150	30

QA/QC Batch 257500, QC Sample No: BF65731 (BF65730, BF65731)

Polychlorinated Biphenyls - Soil

PCB-1016	ND	84	92	9.1	88	93	5.5	40 - 140	30
PCB-1221	ND							40 - 140	30
PCB-1232	ND							40 - 140	30
PCB-1242	ND							40 - 140	30
PCB-1248	ND							40 - 140	30

QA/QC Data

SDG I.D.: GBF65725

Parameter	Blank	LCS %	LCS D %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
PCB-1254	ND							40 - 140	30
PCB-1260	ND	92	90	2.2	91	92	1.1	40 - 140	30
PCB-1262	ND							40 - 140	30
PCB-1268	ND							40 - 140	30
% DCBP (Surrogate Rec)	89	114	106	7.3	100	101	1.0	30 - 150	30
% TCMX (Surrogate Rec)	96	104	100	3.9	102	102	0.0	30 - 150	30

QA/QC Batch 257494, QC Sample No: BF65738 (BF65726, BF65727, BF65728, BF65729, BF65732, BF65733, BF65734, BF65735, BF65736, BF65737, BF65738)

Polynuclear Aromatic HC - Soil

2-Methylnaphthalene	ND	70	77	9.5	72	70	2.8	30 - 130	30
Acenaphthene	ND	60	65	8.0	79	80	1.3	30 - 130	30
Acenaphthylene	ND	64	71	10.4	80	79	1.3	30 - 130	30
Anthracene	ND	70	76	8.2	82	81	1.2	30 - 130	30
Benz(a)anthracene	ND	89	93	4.4	65	66	1.5	30 - 130	30
Benzo(a)pyrene	ND	63	69	9.1	66	65	1.5	30 - 130	30
Benzo(b)fluoranthene	ND	73	81	10.4	81	79	2.5	30 - 130	30
Benzo(ghi)perylene	ND	75	70	6.9	50	50	0.0	30 - 130	30
Benzo(k)fluoranthene	ND	72	81	11.8	86	88	2.3	30 - 130	30
Chrysene	ND	66	72	8.7	64	69	7.5	30 - 130	30
Dibenz(a,h)anthracene	ND	84	81	3.6	56	57	1.8	30 - 130	30
Fluoranthene	ND	69	76	9.7	66	70	5.9	30 - 130	30
Fluorene	ND	86	92	6.7	83	83	0.0	30 - 130	30
Indeno(1,2,3-cd)pyrene	ND	81	79	2.5	56	57	1.8	30 - 130	30
Naphthalene	ND	76	81	6.4	72	72	0.0	30 - 130	30
Phenanthrene	ND	73	78	6.6	69	72	4.3	30 - 130	30
Pyrene	ND	70	77	9.5	66	71	7.3	30 - 130	30
% 2-Fluorobiphenyl	71	67	70	4.4	70	69	1.4	30 - 130	30
% Nitrobenzene-d5	74	66	69	4.4	67	66	1.5	30 - 130	30
% Terphenyl-d14	75	86	85	1.2	66	69	4.4	30 - 130	30

Comment:

Additional 8270 criteria: 20% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 15-110%, for soils 30-130%)

QA/QC Batch 257770, QC Sample No: BF66255 (BF65728 (50, 1X) )

Volatiles - Soil

1,1,1,2-Tetrachloroethane	ND	102	104	1.9	97	97	0.0	70 - 130	30
1,1,1-Trichloroethane	ND	99	97	2.0	97	96	1.0	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	93	89	4.4	108	111	2.7	70 - 130	30
1,1,2-Trichloroethane	ND	98	97	1.0	87	85	2.3	70 - 130	30
1,1-Dichloroethane	ND	95	91	4.3	100	122	19.8	70 - 130	30
1,1-Dichloroethene	ND	97	99	2.0	95	92	3.2	70 - 130	30
1,1-Dichloropropene	ND	93	94	1.1	89	88	1.1	70 - 130	30
1,2,3-Trichlorobenzene	ND	98	97	1.0	<40	<40	NC	70 - 130	30 m
1,2,3-Trichloropropane	ND	98	93	5.2	118	119	0.8	70 - 130	30
1,2,4-Trichlorobenzene	ND	92	92	0.0	<40	<40	NC	70 - 130	30 m
1,2,4-Trimethylbenzene	ND	98	96	2.1	96	96	0.0	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	111	103	7.5	92	97	5.3	70 - 130	30
1,2-Dibromoethane	ND	98	99	1.0	79	78	1.3	70 - 130	30
1,2-Dichlorobenzene	ND	96	96	0.0	74	75	1.3	70 - 130	30
1,2-Dichloroethane	ND	97	98	1.0	94	92	2.2	70 - 130	30
1,2-Dichloropropane	ND	90	91	1.1	89	86	3.4	70 - 130	30
1,3,5-Trimethylbenzene	ND	97	95	2.1	102	102	0.0	70 - 130	30
1,3-Dichlorobenzene	ND	97	95	2.1	78	79	1.3	70 - 130	30

## QA/QC Data

SDG I.D.: GBF65725

Parameter	Blank	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,3-Dichloropropane	ND	95	94	1.1	94	94	0.0	70 - 130	30	
1,4-Dichlorobenzene	ND	96	94	2.1	77	76	1.3	70 - 130	30	
2,2-Dichloropropane	ND	91	93	2.2	89	89	0.0	70 - 130	30	
2-Chlorotoluene	ND	97	96	1.0	97	99	2.0	70 - 130	30	
2-Hexanone	ND	100	97	3.0	<40	<40	NC	70 - 130	30	m
2-Isopropyltoluene	ND	99	97	2.0	95	96	1.0	70 - 130	30	
4-Chlorotoluene	ND	93	92	1.1	93	91	2.2	70 - 130	30	
4-Methyl-2-pentanone	ND	102	97	5.0	<40	<40	NC	70 - 130	30	m
Acetone	ND	98	93	5.2	58	52	10.9	70 - 130	30	m
Acrylonitrile	ND	99	84	16.4	<40	<40	NC	70 - 130	30	m
Benzene	ND	90	92	2.2	87	86	1.2	70 - 130	30	
Bromobenzene	ND	99	97	2.0	99	99	0.0	70 - 130	30	
Bromochloromethane	ND	91	91	0.0	93	92	1.1	70 - 130	30	
Bromodichloromethane	ND	96	98	2.1	83	85	2.4	70 - 130	30	
Bromoform	ND	109	109	0.0	68	72	5.7	70 - 130	30	m
Bromomethane	ND	101	105	3.9	47	44	6.6	70 - 130	30	m
Carbon Disulfide	ND	95	96	1.0	83	81	2.4	70 - 130	30	
Carbon tetrachloride	ND	107	109	1.9	99	100	1.0	70 - 130	30	
Chlorobenzene	ND	98	98	0.0	86	87	1.2	70 - 130	30	
Chloroethane	ND	102	101	1.0	99	93	6.3	70 - 130	30	
Chloroform	ND	93	93	0.0	91	90	1.1	70 - 130	30	
Chloromethane	ND	96	96	0.0	78	76	2.6	70 - 130	30	
cis-1,2-Dichloroethene	ND	91	91	0.0	85	83	2.4	70 - 130	30	
cis-1,3-Dichloropropene	ND	89	91	2.2	57	59	3.4	70 - 130	30	m
Dibromochloromethane	ND	103	103	0.0	86	90	4.5	70 - 130	30	
Dibromomethane	ND	96	97	1.0	101	100	1.0	70 - 130	30	
Dichlorodifluoromethane	ND	126	125	0.8	98	94	4.2	70 - 130	30	
Ethylbenzene	ND	94	94	0.0	92	92	0.0	70 - 130	30	
Hexachlorobutadiene	ND	99	95	4.1	48	47	2.1	70 - 130	30	m
Isopropylbenzene	ND	99	97	2.0	116	116	0.0	70 - 130	30	
m&p-Xylene	ND	96	97	1.0	90	90	0.0	70 - 130	30	
Methyl ethyl ketone	ND	96	87	9.8	<40	<40	NC	70 - 130	30	m
Methyl t-butyl ether (MTBE)	ND	93	94	1.1	103	100	3.0	70 - 130	30	
Methylene chloride	ND	91	90	1.1	93	90	3.3	70 - 130	30	
Naphthalene	ND	103	99	4.0	42	41	2.4	70 - 130	30	m
n-Butylbenzene	ND	92	91	1.1	72	71	1.4	70 - 130	30	
n-Propylbenzene	ND	98	95	3.1	105	105	0.0	70 - 130	30	
o-Xylene	ND	103	106	2.9	92	93	1.1	70 - 130	30	
p-Isopropyltoluene	ND	97	95	2.1	85	85	0.0	70 - 130	30	
sec-Butylbenzene	ND	96	94	2.1	94	96	2.1	70 - 130	30	
Styrene	ND	100	103	3.0	71	71	0.0	70 - 130	30	
tert-Butylbenzene	ND	101	99	2.0	105	107	1.9	70 - 130	30	
Tetrachloroethene	ND	98	99	1.0	100	101	1.0	70 - 130	30	
Tetrahydrofuran (THF)	ND	92	85	7.9	87	86	1.2	70 - 130	30	
Toluene	ND	93	95	2.1	83	83	0.0	70 - 130	30	
trans-1,2-Dichloroethene	ND	95	95	0.0	88	87	1.1	70 - 130	30	
trans-1,3-Dichloropropene	ND	92	92	0.0	66	67	1.5	70 - 130	30	m
trans-1,4-dichloro-2-butene	ND	97	93	4.2	50	52	3.9	70 - 130	30	m
Trichloroethene	ND	98	100	2.0	89	89	0.0	70 - 130	30	
Trichlorofluoromethane	ND	109	108	0.9	103	99	4.0	70 - 130	30	
Trichlorotrifluoroethane	ND	98	100	2.0	99	95	4.1	70 - 130	30	
Vinyl chloride	ND	103	104	1.0	88	85	3.5	70 - 130	30	
% 1,2-dichlorobenzene-d4	99	100	99	1.0	94	94	0.0	70 - 130	30	

QA/QC Data

SDG I.D.: GBF65725

Parameter	Blank	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% Bromofluorobenzene	95	99	100	1.0	86	88	2.3	70 - 130	30
% Dibromofluoromethane	100	98	100	2.0	99	101	2.0	70 - 130	30
% Toluene-d8	96	97	99	2.0	95	96	1.0	70 - 130	30

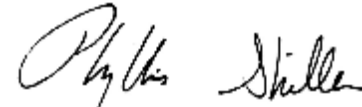
Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 40-200%.

l = This parameter is outside laboratory lcs/lcsd specified recovery limits.  
m = This parameter is outside laboratory ms/msd specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

- RPD - Relative Percent Difference
- LCS - Laboratory Control Sample
- LCSD - Laboratory Control Sample Duplicate
- MS - Matrix Spike
- MS Dup - Matrix Spike Duplicate
- NC - No Criteria
- Inf - Interference



Phyllis Shiller, Laboratory Director  
October 28, 2013

## Sample Criteria Exceedences Report

Requested Criteria: GAM, RC

GBF65725 - TIGHE

State: CT

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
BF65728	\$8100SMR	Benz(a)anthracene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	1100	300	1000	1000	ug/Kg
BF65728	\$8100SMR	Benz(a)anthracene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	1100	300	1000	1000	ug/Kg
BF65728	\$8100SMR	Chrysene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	1100	300	1000	1000	ug/Kg
BF65728	\$8100SMR	Benzo(b)fluoranthene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	1300	300	1000	1000	ug/Kg
BF65728	\$8100SMR	Benzo(b)fluoranthene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	1300	300	1000	1000	ug/Kg
BF65729	PB-SM	Lead	CT / INORGANIC SUBSTANCES / RES DEC (mg/kg)	1290	3.8	400	400	mg/Kg
BF65733	\$8100SMR	Benz(a)anthracene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	1400	250	1000	1000	ug/Kg
BF65733	\$8100SMR	Benz(a)anthracene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	1400	250	1000	1000	ug/Kg
BF65733	\$8100SMR	Chrysene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	1400	250	1000	1000	ug/Kg
BF65733	\$8100SMR	Benzo(b)fluoranthene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	1600	250	1000	1000	ug/Kg
BF65733	\$8100SMR	Benzo(b)fluoranthene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	1600	250	1000	1000	ug/Kg
BF65733	\$8100SMR	Benzo(a)pyrene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	1200	250	1000	1000	ug/Kg
BF65733	\$8100SMR	Benzo(a)pyrene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	1200	250	1000	1000	ug/Kg
BF65735	\$8100SMR	Naphthalene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	ND	6500	5600	5600	ug/Kg
BF65735	\$8100SMR	2-Methylnaphthalene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	ND	6500	980	980	ug/Kg
BF65735	\$8100SMR	Fluorene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	ND	6500	5600	5600	ug/Kg
BF65735	\$8100SMR	Phenanthrene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	36000	6500	4000	4000	ug/Kg
BF65735	\$8100SMR	Fluoranthene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	56000	6500	5600	5600	ug/Kg
BF65735	\$8100SMR	Pyrene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	43000	6500	4000	4000	ug/Kg
BF65735	\$8100SMR	Benz(a)anthracene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	39000	6500	1000	1000	ug/Kg
BF65735	\$8100SMR	Benz(a)anthracene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	39000	6500	1000	1000	ug/Kg
BF65735	\$8100SMR	Chrysene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	29000	6500	1000	1000	ug/Kg
BF65735	\$8100SMR	Benzo(b)fluoranthene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	51000	6500	1000	1000	ug/Kg
BF65735	\$8100SMR	Benzo(b)fluoranthene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	51000	6500	1000	1000	ug/Kg
BF65735	\$8100SMR	Benzo(k)fluoranthene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	15000	6500	1000	1000	ug/Kg
BF65735	\$8100SMR	Benzo(k)fluoranthene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	15000	6500	8400	8400	ug/Kg
BF65735	\$8100SMR	Benzo(a)pyrene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	32000	6500	1000	1000	ug/Kg
BF65735	\$8100SMR	Benzo(a)pyrene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	32000	6500	1000	1000	ug/Kg
BF65735	\$8100SMR	Indeno(1,2,3-cd)pyrene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	9400	6500	1000	1000	ug/Kg
BF65735	\$8100SMR	Indeno(1,2,3-cd)pyrene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	9400	6500	1000	1000	ug/Kg
BF65735	\$8100SMR	Dibenz(a,h)anthracene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	ND	6500	1000	1000	ug/Kg
BF65735	\$8100SMR	Dibenz(a,h)anthracene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	ND	6500	1000	1000	ug/Kg
BF65735	\$8100SMR	Benzo(ghi)perylene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	10000	6500	4200	4200	ug/Kg
BF65735	\$ETPH_SMR	Ext. Petroleum HC	CT / PESTICIDES, PCB's, TPH, a / GA/GAA PMC (mg/kg)	580	280	500	500	mg/Kg
BF65735	\$ETPH_SMR	Ext. Petroleum HC	CT / PESTICIDES, PCB's, TPH, a / RES DEC (mg/kg)	580	280	500	500	mg/Kg

Phoenix Laboratories does not assume responsibility for the data contained in this report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

# Reasonable Confidence Protocol Laboratory Analysis QA/QC Certification Form

**Laboratory Name:** Phoenix Environmental Labs, Inc. **Client:** TIGHE

**Project Location:** RECORD JOURNAL **Project Number:**

**Laboratory Sample ID(s):** BF65725, BF65726, BF65727, BF65728, BF65729, BF65730, BF65731, BF65732, BF65733, BF65734, BF65735, BF65736, BF65737, BF65738

**Sampling Date(s):** 10/18/2013

**RCP Methods Used:**

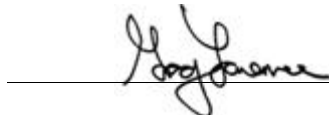
- 1311/1312     6010     7000     7196     7470/7471     8081     EPH     TO15  
 8082     8151     8260     8270     ETPH     9010/9012     VPH

1.	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1a.	Were the method specified preservation and holding time requirements met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1b.	EPH and VPH methods only: Was the VPH or EPH method conducted without significant modifications (see section 11.3 of respective RCP methods)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
2.	Were all samples received by the laboratory in a condition consistent with that described on the associated Chain-of-Custody document(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3.	Were samples received at an appropriate temperature (< 6 Degrees C)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
4.	Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? See Section: VOA Narration.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5a.	Were reporting limits specified or referenced on the chain-of-custody?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5b.	Were these reporting limits met?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
6.	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
7.	Are project-specific matrix spikes and laboratory duplicates included in the data set?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA

**Note:** For all questions to which the response was "No" (with the exception of question #5a, #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or 1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

**I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.**

Authorized  
Signature: \_\_\_\_\_



Date: Monday, October 28, 2013  
Printed Name: Greg Lawrence  
Position: Assistant Lab Director



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# RCP Certification Report

October 28, 2013

SDG ID.: GBF65725

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8270 Semi-volatile Organics:

Only the PAH constituents are reported as requested on the chain-of-custody. For sample ID BF65735 - Due to the concentration of target compounds not all of the requested criteria could be achieved.

## ETPH Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

**Instrument:** Au-fid84 10/21/13-1 (BF65727, BF65732)

Initial Calibration (FID84 - ETPH\_13) - The initial calibration curve was within method criteria and had a %RSD less than 30%.

As per section 7.2.3, a discrimination check standard was run and contained the following outliers: none

**Printed Name** Jeff Bucko  
**Position:** Chemist  
**Date:** 10/21/2013

**Instrument:** Au-fid84 10/21/13-2 (BF65726, BF65733, BF65734, BF65736, BF65737, BF65738)

Initial Calibration (FID84 - ETPH\_13) - The initial calibration curve was within method criteria and had a %RSD less than 30%.

As per section 7.2.3, a discrimination check standard was run and contained the following outliers: C30, C36

**Printed Name** Jeff Bucko  
**Position:** Chemist  
**Date:** 10/21/2013

**Instrument:** Au-xl2 10/21/13-2 (BF65728, BF65729, BF65735)

Initial Calibration (FID1 - ETPH\_1) - The initial calibration curve was within method criteria and had a %RSD less than 30%.

As per section 7.2.3, a discrimination check standard was run and contained the following outliers: C36

**Printed Name** Jeff Bucko  
**Position:** Chemist  
**Date:** 10/21/2013





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## QC (Site Specific)

----- Sample No: BF65727, QA/QC Batch: 257486 -----

All LCS recoveries were within 60 - 120 with the following exceptions: None.

All MS recoveries were within 50 - 150 with the following exceptions: None.

All MSD recoveries were within 50 - 150 with the following exceptions: None.

All MS/MSD RPDs were less than 30% with the following exceptions: None.

A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.

## QC (Batch Specific)

----- Sample No: BF65236, QA/QC Batch: 257365 -----

All LCS recoveries were within 60 - 120 with the following exceptions: None.

All LCSD recoveries were within 60 - 120 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

## Mercury Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

**Instrument:** Merlin 10/21/13-1 (BF65726, BF65727, BF65728, BF65729)

The method preparation blank contains all of the acids and reagents as the samples; the instrument blanks do not.

The initial calibration met all criteria including a standard run at or below the reporting level.

All calibration verification standards (ICV, CCV) met criteria.

All calibration blank verification standards (ICB, CCB) met criteria.

The matrix spike sample is used to identify spectral interference for each batch of samples, if within 85-115%, no interference is observed and no further action is taken.

**Printed Name** Rick Schweitzer

**Position:** Chemist

**Date:** 10/21/2013



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# RCP Certification Report

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SDG I.D.: GBF65725

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## QC (Batch Specific)

----- Sample No: BF65664, QA/QC Batch: 257555 -----

All LCS recoveries were within 70 - 130 with the following exceptions: None.

All LCSD recoveries were within 70 - 130 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

----- Sample No: BF65914, QA/QC Batch: 257642 -----

All LCS recoveries were within 70 - 130 with the following exceptions: None.

All LCSD recoveries were within 70 - 130 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

## ICP Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

**Instrument:** Arcos 10/21/13-1 (BF65726, BF65727, BF65728, BF65729, BF65732, BF65733, BF65734, BF65735, BF65736, BF65737, BF65738)

The initial calibration met criteria.

The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.

The continuing calibration blanks were less than the reporting level for the elements reported.

The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.

**Printed Name** Laura Kinnin

**Position:** Chemist

**Date:** 10/21/2013

**Instrument:** Arcos 10/22/13-1 (BF65728, BF65729, BF65738)

The initial calibration met criteria.

The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.

The continuing calibration blanks were less than the reporting level for the elements reported.

The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.

**Printed Name** Laura Kinnin

**Position:** Chemist

**Date:** 10/22/2013



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# RCP Certification Report

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SDG ID.: GBF65725

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## QC (Batch Specific)

----- Sample No: BF65049, QA/QC Batch: 257344 -----

All LCS recoveries were within 75 - 125 with the following exceptions: None.

All LCSD recoveries were within 75 - 125 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

## PAH Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

**Instrument:** Chem19 10/18/13-1 (BF65726, BF65727, BF65728, BF65729, BF65733, BF65734, BF65738)

Initial Calibration Verification (CHEM19/BN\_1007):

100% of target compounds met criteria.

The following compounds had %RSDs >20%: None.

The following compounds did not meet a minimum response factor of 0.01: None.

Continuing Calibration Verification (CHEM19/1018\_04-BN\_1007):

100% of target compounds met criteria. Internal standards were within the 50%-200% deviation from the initial calibration. The following compounds did not meet % deviation criteria: None.

The following compounds did not meet maximum % deviations: None.

The following compounds did not meet recommended response factors: None.

The following compounds did not meet minimum response factors: None.

**Printed Name** Damien Drobinski

**Position:** Chemist

**Date:** 10/18/2013

**Instrument:** Chem19 10/20/13-1 (BF65732, BF65735, BF65737)

Initial Calibration Verification (CHEM19/BN\_1007):

100% of target compounds met criteria.

The following compounds had %RSDs >20%: None.

The following compounds did not meet a minimum response factor of 0.01: None.

Continuing Calibration Verification (CHEM19/1020\_02-BN\_1007):

100% of target compounds met criteria. Internal standards were within the 50%-200% deviation from the initial calibration. The following compounds did not meet % deviation criteria: None.

The following compounds did not meet maximum % deviations: None.

The following compounds did not meet recommended response factors: None.

The following compounds did not meet minimum response factors: None.

**Printed Name** Damien Drobinski

**Position:** Chemist

**Date:** 10/20/2013



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# RCP Certification Report

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## QC (Site Specific)

----- Sample No: BF65738, QA/QC Batch: 257494 -----

All LCS recoveries were within 30 - 130 with the following exceptions: None.

All LCSD recoveries were within 30 - 130 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

All MS recoveries were within 30 - 130 with the following exceptions: None.

All MSD recoveries were within 30 - 130 with the following exceptions: None.

All MS/MSD RPDs were less than 30% with the following exceptions: None.

A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.

## PCB Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

**Instrument:** Au-ecd8 10/21/13-1 (BF65730, BF65731)

8082 Narration:

The initial calibration RSD for the compound list was less than 15% except for the following compounds: none

The continuing calibration standards were within acceptance criteria except for the following compounds: none

**Printed Name** Adam Werner

**Position:** Chemist

**Date:** 10/21/2013



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# RCP Certification Report

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SDG I.D.: GBF65725

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## QC (Site Specific)

----- Sample No: BF65731, QA/QC Batch: 257500 -----

All LCS recoveries were within 40 - 140 with the following exceptions: None.

All LCSD recoveries were within 40 - 140 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

All MS recoveries were within 40 - 140 with the following exceptions: None.

All MSD recoveries were within 40 - 140 with the following exceptions: None.

All MS/MSD RPDs were less than 30% with the following exceptions: None.

A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.

## SVOA Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

### **Instrument:** Chem09 10/18/13-1 (BF65736, BF65738)

The DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control. Initial Calibration Verification (CHEM09/SV\_1014):

97% of target compounds met criteria.

The following compounds had %RSDs >20%: 2,4-Dinitrophenol (28%), Carbazole (23%), Pentachlorophenol (29%)

The following compounds did not meet a minimum response factor of 0.01: 4-Nitrophenol (.009)

Continuing Calibration Verification (CHEM09/1018\_04-SV\_1014):

100% of target compounds met criteria. Internal standards were within the 50%-200% deviation from the initial calibration. The following compounds did not meet % deviation criteria: None.

The following compounds did not meet maximum % deviations: None.

The following compounds did not meet recommended response factors: 4-nitrophenol (.008)[0.01], Acenaphthene (.848)[0.9], Hexachlorobenzene (.083)[0.1]

The following compounds did not meet minimum response factors: 4-nitrophenol (.008)[0.01]

**Printed Name** Damien Drobinski

**Position:** Chemist

**Date:** 10/18/2013

### **Instrument:** Chem12 10/21/13-1 (BF65738)

The DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control. Initial Calibration Verification (CHEM12/sv\_1015):

94% of target compounds met criteria.

The following compounds had %RSDs >20%: 2,4-Dinitrophenol (25%), 4-Chloroaniline (22%), Aniline (60%), Atrazine (24%), Carbazole (36%)

The following compounds did not meet a minimum response factor of 0.01: None.

Continuing Calibration Verification (CHEM12/1021\_02-sv\_1015):



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98% of target compounds met criteria. Internal standards were within the 50%-200% deviation from the initial calibration. The following compounds did not meet % deviation criteria: 4-chloroaniline (-42%)[30%], Aniline (-31%)[30%]  
The following compounds did not meet maximum % deviations: 4-chloroaniline (-42%)[40%]  
The following compounds did not meet recommended response factors: 2-nitrophenol (.060)[0.1], Hexachlorobenzene (.084)[0.1]  
The following compounds did not meet minimum response factors: None.

**Printed Name** Damien Drobinski  
**Position:** Chemist  
**Date:** 10/21/2013

## QC (Site Specific)

----- Sample No: BF65738, QA/QC Batch: 257494 -----

All LCS recoveries were within 30 - 130 with the following exceptions: None.

All LCSD recoveries were within 30 - 130 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

All MS recoveries were within 30 - 130 with the following exceptions: None.

All MSD recoveries were within 30 - 130 with the following exceptions: None.

All MS/MSD RPDs were less than 30% with the following exceptions: None.

A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within criteria.

## VOA Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? No.

**QC Batch 257685 (Samples: BF65725): ----**

**The LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, Naphthalene)**

**Instrument:** Chem15 10/21/13-2 (BF65728)

Initial Calibration Verification (CHEM15/RCPS\_1014#1):

97% of target compounds met criteria.

The following compounds had %RSDs >20%: Acetone (23%), Chloroethane (23%)

The following compounds did not meet a minimum response factor of 0.01: None.

Continuing Calibration Verification (CHEM15/1021B36-RCPS\_1014#1):

100% of target compounds met criteria. Internal standards were within the 50%-200% deviation from the initial calibration. The following compounds did not meet % deviation criteria: None.

The following compounds did not meet maximum % deviations: None.

The following compounds did not meet recommended response factors: None.

The following compounds did not meet minimum response factors: None.



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## RCP Certification Report

October 28, 2013

SDG ID.: GBF65725

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**Printed Name** Harry Mullin  
**Position:** Chemist  
**Date:** 10/21/2013

**Instrument:** Chem17 10/18/13-1 (BF65725)

Initial Calibration Verification (CHEM17/RCPS\_1016):

92% of target compounds met criteria.

The following compounds had %RSDs >20%: Bromoform (27%), Hexachlorobutadiene (21%), Naphthalene (23%), Styrene (21%), trans-1,3-Dichloropropene (21%), trans-1,4-Dichloro-2-butene (30%)

The following compounds did not meet a minimum response factor of 0.01: None.

Continuing Calibration Verification (CHEM17/1018S02-RCPS\_1016):

100% of target compounds met criteria. Internal standards were within the 50%-200% deviation from the initial calibration. The following compounds did not meet % deviation criteria: None.

The following compounds did not meet maximum % deviations: None.

The following compounds did not meet recommended response factors: None.

The following compounds did not meet minimum response factors: Bromoform (.079)[SPCC: 0.1]

**Printed Name** Keith Aloisa  
**Position:** Chemist  
**Date:** 10/18/2013

**QC Comments:** QC Batch 257685 10/18/13 (BF65725)

The MS/MSD are not reported for this batch.

**QC (Batch Specific)**

----- Sample No: BF65647, QA/QC Batch: 257685 -----

All LCS recoveries were within 70 - 130 with the following exceptions: None.

All LCSD recoveries were within 70 - 130 with the following exceptions: 1,2,3-Trichlorobenzene(144%), 1,2,4-Trichlorobenzene(137%), Naphthalene(146%)

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

----- Sample No: BF66255, QA/QC Batch: 257770 -----

All LCS recoveries were within 70 - 130 with the following exceptions: None.

All LCSD recoveries were within 70 - 130 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

**Temperature Narration**



**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



# RCP Certification Report

October 28, 2013

SDG I.D.: GBF65725

---

The samples in this delivery group were received at 2°C.  
(Note acceptance criteria is above freezing up to 6°C)



Cooler: Yes  No   
 Coolant: IPK  ICE   
 Temp 2 °C Pg 1 of 2

**CHAIN OF CUSTODY RECORD**

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040  
 Email: info@phoenixlabs.com Fax (860) 645-0823  
 Client Services (860) 645-8726



Project: Record Journal  
 Report to: Jill Libby  
 Invoice to: TJB woffield

Project P.O.: R-0280  
 This section **MUST** be completed with **Bottle Quantities.**

Analysis Request: VOCs, PCBs, Metals via EPA Method 8270A

Client Sample - Information - Identification  
 Sampler's Signature: [Signature] Date: 10/11/13  
 Matrix Code: DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water  
 RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe  
 OIL=Oil B=Bulk L=Liquid

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Analysis Request
65725	Trip Blank	W	10/14/13	8:00	X
65726	B-1(0-2')	S	10/18/13	10:00	X
65727	B-2(H-6')	S	10/18	10:00	X
65728	B-3(H-6')	S	10/18	10:10	X
65729	B-4(0-2')	S	10/18	10:30	X
65730	B-5(0-6')	S	10/18	10:50	X
65731	B-6(0-6')	S	10/18	11:00	X
65732	B-7(5-10')	S	10/18	12:00	X
65733	B-8(4.5-5')	S	10/18	13:00	X
65734	B-9(6-7')	S	10/18	13:30	X
65735	B-10(0-2')	S	10/18	9:05	X
65736	DUP-BJ	S	10/18	9:05	X

Relinquished by: [Signature] Accepted by: [Signature]

Date: 10/18/13 Time: 15:15

RI  Direct Exposure (Residential)  GW  Other

CT  RCP Cert  GW Protection  SW Protection  GA Mobility  GB Mobility  Residential DEC  I/C DEC  Other

MA  MCP Certification  GW-1  GW-2  GW-3  S-1  S-2  S-3  MWRA eSMART  Other

Data Format:  Excel  PDF  GIS/Key  EQUIS  Other

Data Package:  Tier II Checklist  Full Data Package\*  Phoenix Std Report  Other

Turnaround:  1 Day\*  2 Days\*  3 Days\*  Standard  Other

\* SURCHARGE APPLIES

State where samples were collected: CT

\* SURCHARGE APPLIES

Comments, Special Requirements or Regulations:  
B-5 + B-6 for PCBs only  
[Signature]





**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

November 08, 2013

FOR: Attn: Ms. Jill Libby  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

### Sample Information

Matrix: WATER  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: R-0280

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date                      Time  
10/18/13                      0:00  
10/18/13                      15:45

## Laboratory Data

SDG ID: GBF65725  
Phoenix ID: BF65725

Project ID: RECORD JOURNAL  
Client ID: TRIP BLANK

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
<b><u>Volatiles</u></b>						
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,1,1-Trichloroethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	10/18/13	KCA	SW8260
1,1,2-Trichloroethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,1-Dichloroethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,1-Dichloroethene	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,1-Dichloropropene	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,2,3-Trichlorobenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,2,3-Trichloropropane	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,2,4-Trichlorobenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,2,4-Trimethylbenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,2-Dibromoethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,2-Dichlorobenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,2-Dichloroethane	ND	0.60	ug/L	10/18/13	KCA	SW8260
1,2-Dichloropropane	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,3,5-Trimethylbenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,3-Dichlorobenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,3-Dichloropropane	ND	1.0	ug/L	10/18/13	KCA	SW8260
1,4-Dichlorobenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
2,2-Dichloropropane	ND	1.0	ug/L	10/18/13	KCA	SW8260
2-Chlorotoluene	ND	1.0	ug/L	10/18/13	KCA	SW8260
2-Hexanone	ND	5.0	ug/L	10/18/13	KCA	SW8260
2-Isopropyltoluene	ND	1.0	ug/L	10/18/13	KCA	SW8260
4-Chlorotoluene	ND	1.0	ug/L	10/18/13	KCA	SW8260
4-Methyl-2-pentanone	ND	5.0	ug/L	10/18/13	KCA	SW8260
Acetone	ND	25	ug/L	10/18/13	KCA	SW8260

Client ID: TRIP BLANK

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acrylonitrile	ND	5.0	ug/L	10/18/13	KCA	SW8260
Benzene	ND	0.70	ug/L	10/18/13	KCA	SW8260
Bromobenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
Bromochloromethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
Bromodichloromethane	ND	0.50	ug/L	10/18/13	KCA	SW8260
Bromoform	ND	1.0	ug/L	10/18/13	KCA	SW8260
Bromomethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
Carbon Disulfide	ND	5.0	ug/L	10/18/13	KCA	SW8260
Carbon tetrachloride	ND	1.0	ug/L	10/18/13	KCA	SW8260
Chlorobenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
Chloroethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
Chloroform	ND	1.0	ug/L	10/18/13	KCA	SW8260
Chloromethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
cis-1,2-Dichloroethene	ND	1.0	ug/L	10/18/13	KCA	SW8260
cis-1,3-Dichloropropene	ND	0.40	ug/L	10/18/13	KCA	SW8260
Dibromochloromethane	ND	0.50	ug/L	10/18/13	KCA	SW8260
Dibromomethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
Dichlorodifluoromethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
Ethylbenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
Hexachlorobutadiene	ND	0.40	ug/L	10/18/13	KCA	SW8260
Isopropylbenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
m&p-Xylene	ND	1.0	ug/L	10/18/13	KCA	SW8260
Methyl ethyl ketone	ND	5.0	ug/L	10/18/13	KCA	SW8260
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	10/18/13	KCA	SW8260
Methylene chloride	ND	1.0	ug/L	10/18/13	KCA	SW8260
Naphthalene	ND	1.0	ug/L	10/18/13	KCA	SW8260
n-Butylbenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
n-Propylbenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
o-Xylene	ND	1.0	ug/L	10/18/13	KCA	SW8260
p-Isopropyltoluene	ND	1.0	ug/L	10/18/13	KCA	SW8260
sec-Butylbenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
Styrene	ND	1.0	ug/L	10/18/13	KCA	SW8260
tert-Butylbenzene	ND	1.0	ug/L	10/18/13	KCA	SW8260
Tetrachloroethene	ND	1.0	ug/L	10/18/13	KCA	SW8260
Tetrahydrofuran (THF)	ND	2.5	ug/L	10/18/13	KCA	SW8260
Toluene	ND	1.0	ug/L	10/18/13	KCA	SW8260
Total Xylenes	ND	1	ug/L	10/18/13	KCA	SW8260
trans-1,2-Dichloroethene	ND	1.0	ug/L	10/18/13	KCA	SW8260
trans-1,3-Dichloropropene	ND	0.40	ug/L	10/18/13	KCA	SW8260
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	10/18/13	KCA	SW8260
Trichloroethene	ND	1.0	ug/L	10/18/13	KCA	SW8260
Trichlorofluoromethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
Trichlorotrifluoroethane	ND	1.0	ug/L	10/18/13	KCA	SW8260
Vinyl chloride	ND	1.0	ug/L	10/18/13	KCA	SW8260
<b><u>QA/QC Surrogates</u></b>						
% 1,2-dichlorobenzene-d4	102		%	10/18/13	KCA	70 - 130 %
% Bromofluorobenzene	99		%	10/18/13	KCA	70 - 130 %
% Dibromofluoromethane	104		%	10/18/13	KCA	70 - 130 %
% Toluene-d8	97		%	10/18/13	KCA	70 - 130 %

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
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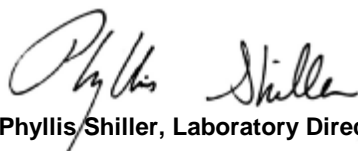
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

TRIP BLANK INCLUDED

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.  
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**Phyllis Shiller, Laboratory Director**

**November 08, 2013**



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**

November 08, 2013

FOR: Attn: Ms. Jill Libby  
 Tighe & Bond  
 213 Court St  
 Suite 900  
 Middletown, CT 06457

Sample Information

Matrix: SOIL  
 Location Code: TIGHE  
 Rush Request: Standard  
 P.O.#: R-0280

Custody Information

Collected by:  
 Received by: LB  
 Analyzed by: see "By" below

Date                      Time  
 10/18/13                      8:30  
 10/18/13                      15:45

Laboratory Data

SDG ID: GBF65725  
 Phoenix ID: BF65726

Project ID: RECORD JOURNAL  
 Client ID: B-1 0-2 FT

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 0.40	0.40	mg/Kg	10/21/13	EK	SW6010
Arsenic	3.0	0.8	mg/Kg	10/21/13	EK	SW6010
Barium	77.1	0.40	mg/Kg	10/21/13	EK	SW6010
Beryllium	1.57	0.32	mg/Kg	10/21/13	EK	SW6010
Cadmium	0.58	0.40	mg/Kg	10/21/13	EK	SW6010
Chromium	20.4	0.40	mg/Kg	10/21/13	EK	SW6010
Copper	5.98	0.40	mg/kg	10/21/13	EK	SW6010
Mercury	< 0.09	0.09	mg/Kg	10/21/13	RS	SW-7471
Nickel	16.5	0.40	mg/Kg	10/21/13	EK	SW6010
Lead	20.6	0.40	mg/Kg	10/21/13	EK	SW6010
Antimony	< 4.0	4.0	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.6	1.6	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.6	3.6	mg/Kg	10/21/13	EK	SW6010
Vanadium	33.0	0.40	mg/Kg	10/21/13	EK	SW6010
Zinc	47.5	0.40	mg/Kg	10/21/13	EK	SW6010
Percent Solid	79		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/21/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

**TPH by GC (Extractable Products)**

Ext. Petroleum HC	ND	63	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

**QA/QC Surrogates**

% n-Pentacosane	93		%	10/21/13	JRB	50 - 150 %
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**Polynuclear Aromatic HC**

2-Methylnaphthalene	ND	290	ug/Kg	10/19/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Acenaphthylene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Anthracene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Benz(a)anthracene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Benzo(a)pyrene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Benzo(b)fluoranthene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Benzo(ghi)perylene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Benzo(k)fluoranthene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Chrysene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Fluoranthene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Fluorene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Naphthalene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Phenanthrene	ND	290	ug/Kg	10/19/13	DD	SW 8270
Pyrene	ND	290	ug/Kg	10/19/13	DD	SW 8270
<b>QA/QC Surrogates</b>						
% 2-Fluorobiphenyl	82		%	10/19/13	DD	30 - 130 %
% Nitrobenzene-d5	80		%	10/19/13	DD	30 - 130 %
% Terphenyl-d14	91		%	10/19/13	DD	30 - 130 %

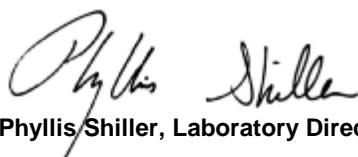
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

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**Phyllis Shiller, Laboratory Director**

**November 08, 2013**



### Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

November 08, 2013

FOR: Attn: Ms. Jill Libby  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

#### Sample Information

Matrix: SOIL  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: R-0280

#### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date            Time  
10/18/13        9:00  
10/18/13        15:45

### Laboratory Data

SDG ID: GBF65725  
Phoenix ID: BF65727

Project ID: RECORD JOURNAL  
Client ID: B-2 4-6 FT

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 0.38	0.38	mg/Kg	10/21/13	EK	SW6010
Arsenic	2.5	0.8	mg/Kg	10/21/13	EK	SW6010
Barium	68.9	0.38	mg/Kg	10/21/13	EK	SW6010
Beryllium	0.77	0.30	mg/Kg	10/21/13	EK	SW6010
Cadmium	< 0.38	0.38	mg/Kg	10/21/13	EK	SW6010
Chromium	10.9	0.38	mg/Kg	10/21/13	EK	SW6010
Copper	8.24	0.38	mg/kg	10/21/13	EK	SW6010
Mercury	< 0.08	0.08	mg/Kg	10/21/13	RS	SW-7471
Nickel	8.84	0.38	mg/Kg	10/21/13	EK	SW6010
Lead	8.83	0.38	mg/Kg	10/21/13	EK	SW6010
Antimony	< 3.8	3.8	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.5	1.5	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.4	3.4	mg/Kg	10/21/13	EK	SW6010
Vanadium	24.0	0.38	mg/Kg	10/21/13	EK	SW6010
Zinc	25.4	0.38	mg/Kg	10/21/13	EK	SW6010
Percent Solid	88		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/21/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

#### TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	56	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

#### QA/QC Surrogates

% n-Pentacosane	81		%	10/21/13	JRB	50 - 150 %
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#### Polynuclear Aromatic HC

2-Methylnaphthalene	ND	260	ug/Kg	10/19/13	DD	SW 8270
---------------------	----	-----	-------	----------	----	---------



Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Acenaphthylene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Anthracene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benz(a)anthracene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benzo(a)pyrene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benzo(b)fluoranthene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benzo(ghi)perylene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benzo(k)fluoranthene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Chrysene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Fluoranthene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Fluorene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Naphthalene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Phenanthrene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Pyrene	ND	260	ug/Kg	10/19/13	DD	SW 8270
<b>QA/QC Surrogates</b>						
% 2-Fluorobiphenyl	88		%	10/19/13	DD	30 - 130 %
% Nitrobenzene-d5	86		%	10/19/13	DD	30 - 130 %
% Terphenyl-d14	81		%	10/19/13	DD	30 - 130 %

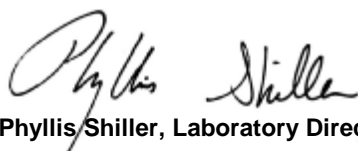
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

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**Phyllis Shiller, Laboratory Director**

**November 08, 2013**



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**  
 November 08, 2013

FOR: Attn: Ms. Jill Libby  
 Tighe & Bond  
 213 Court St  
 Suite 900  
 Middletown, CT 06457

Sample Information

Matrix: SOIL  
 Location Code: TIGHE  
 Rush Request: Standard  
 P.O.#: R-0280

Custody Information

Collected by:  
 Received by: LB  
 Analyzed by: see "By" below

Date                      Time  
 10/18/13                      10:00  
 10/18/13                      15:45

Laboratory Data

SDG ID: GBF65725  
 Phoenix ID: BF65728

Project ID: RECORD JOURNAL  
 Client ID: B-3 4-6 FT

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 1.0	1.0	mg/Kg	10/21/13	EK	SW6010
Arsenic	5.4	0.9	mg/Kg	10/21/13	EK	SW6010
Barium	161	0.44	mg/Kg	10/21/13	EK	SW6010
Beryllium	0.80	0.35	mg/Kg	10/21/13	EK	SW6010
Cadmium	0.69	0.44	mg/Kg	10/21/13	EK	SW6010
Chromium	15.0	0.44	mg/Kg	10/21/13	EK	SW6010
Copper	90.5	0.44	mg/kg	10/21/13	EK	SW6010
Mercury	0.71	0.08	mg/Kg	10/21/13	RS	SW-7471
Nickel	12.4	0.44	mg/Kg	10/21/13	EK	SW6010
Lead	317	4.4	mg/Kg	10/22/13	LK	SW6010
Antimony	< 4.4	4.4	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.8	1.8	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.9	3.9	mg/Kg	10/21/13	EK	SW6010
Vanadium	27.1	0.44	mg/Kg	10/21/13	EK	SW6010
Zinc	216	4.4	mg/Kg	10/22/13	LK	SW6010
Percent Solid	76		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/21/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050
Field Extraction	Completed			10/18/13		SW5035

**TPH by GC (Extractable Products)**

Ext. Petroleum HC	ND	64	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

**QA/QC Surrogates**

% n-Pentacosane	78		%	10/21/13	JRB	50 - 150 %
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
<b>Volatiles</b>						
1,1,1,2-Tetrachloroethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,1,1-Trichloroethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,1,2,2-Tetrachloroethane	ND	4.6	ug/Kg	10/22/13	HM	SW8260
1,1,2-Trichloroethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,1-Dichloroethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,1-Dichloroethene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,1-Dichloropropene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,2,3-Trichlorobenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,2,3-Trichloropropane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,2,4-Trichlorobenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,2,4-Trimethylbenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,2-Dibromo-3-chloropropane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,2-Dibromoethane	ND	7	ug/Kg	10/22/13	HM	SW8260
1,2-Dichlorobenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,2-Dichloroethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,2-Dichloropropane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,3,5-Trimethylbenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,3-Dichlorobenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,3-Dichloropropane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
1,4-Dichlorobenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
2,2-Dichloropropane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
2-Chlorotoluene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
2-Hexanone	ND	38	ug/Kg	10/22/13	HM	SW8260
2-Isopropyltoluene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
4-Chlorotoluene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
4-Methyl-2-pentanone	ND	38	ug/Kg	10/22/13	HM	SW8260
Acetone	77	46	ug/Kg	10/22/13	HM	SW8260
Acrylonitrile	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Benzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Bromobenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Bromochloromethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Bromodichloromethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Bromoform	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Bromomethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Carbon Disulfide	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Carbon tetrachloride	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Chlorobenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Chloroethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Chloroform	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Chloromethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
cis-1,2-Dichloroethene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
cis-1,3-Dichloropropene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Dibromochloromethane	ND	4.6	ug/Kg	10/22/13	HM	SW8260
Dibromomethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Dichlorodifluoromethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Ethylbenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Hexachlorobutadiene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Isopropylbenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
m&p-Xylene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Methyl Ethyl Ketone	ND	46	ug/Kg	10/22/13	HM	SW8260
Methyl t-butyl ether (MTBE)	ND	15	ug/Kg	10/22/13	HM	SW8260
Methylene chloride	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Naphthalene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
n-Butylbenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
n-Propylbenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
o-Xylene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
p-Isopropyltoluene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
sec-Butylbenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Styrene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
tert-Butylbenzene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Tetrachloroethene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Tetrahydrofuran (THF)	ND	15	ug/Kg	10/22/13	HM	SW8260
Toluene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Total Xylenes	ND	7.7	ug/Kg	10/22/13	HM	SW8260
trans-1,2-Dichloroethene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
trans-1,3-Dichloropropene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
trans-1,4-dichloro-2-butene	ND	15	ug/Kg	10/22/13	HM	SW8260
Trichloroethene	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Trichlorofluoromethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Trichlorotrifluoroethane	ND	7.7	ug/Kg	10/22/13	HM	SW8260
Vinyl chloride	ND	7.7	ug/Kg	10/22/13	HM	SW8260
<b><u>QA/QC Surrogates</u></b>						
% 1,2-dichlorobenzene-d4	104		%	10/22/13	HM	70 - 130 %
% Bromofluorobenzene	88		%	10/22/13	HM	70 - 130 %
% Dibromofluoromethane	106		%	10/22/13	HM	70 - 130 %
% Toluene-d8	97		%	10/22/13	HM	70 - 130 %
<b><u>Polynuclear Aromatic HC</u></b>						
2-Methylnaphthalene	ND	300	ug/Kg	10/19/13	DD	SW 8270
Acenaphthene	ND	300	ug/Kg	10/19/13	DD	SW 8270
Acenaphthylene	ND	300	ug/Kg	10/19/13	DD	SW 8270
Anthracene	ND	300	ug/Kg	10/19/13	DD	SW 8270
Benz(a)anthracene	1100	300	ug/Kg	10/19/13	DD	SW 8270
Benzo(a)pyrene	990	300	ug/Kg	10/19/13	DD	SW 8270
Benzo(b)fluoranthene	1300	300	ug/Kg	10/19/13	DD	SW 8270
Benzo(ghi)perylene	380	300	ug/Kg	10/19/13	DD	SW 8270
Benzo(k)fluoranthene	450	300	ug/Kg	10/19/13	DD	SW 8270
Chrysene	1100	300	ug/Kg	10/19/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	300	ug/Kg	10/19/13	DD	SW 8270
Fluoranthene	2100	300	ug/Kg	10/19/13	DD	SW 8270
Fluorene	ND	300	ug/Kg	10/19/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	380	300	ug/Kg	10/19/13	DD	SW 8270
Naphthalene	ND	300	ug/Kg	10/19/13	DD	SW 8270
Phenanthrene	1300	300	ug/Kg	10/19/13	DD	SW 8270
Pyrene	1800	300	ug/Kg	10/19/13	DD	SW 8270
<b><u>QA/QC Surrogates</u></b>						
% 2-Fluorobiphenyl	64		%	10/19/13	DD	30 - 130 %
% Nitrobenzene-d5	84		%	10/19/13	DD	30 - 130 %

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
% Terphenyl-d14	95		%	10/19/13	DD	30 - 130 %

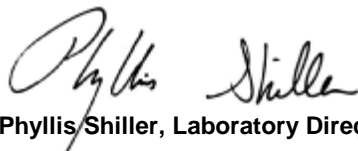
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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**Phyllis Shiller, Laboratory Director**

**November 08, 2013**



### Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

November 08, 2013

FOR: Attn: Ms. Jill Libby  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

#### Sample Information

Matrix: SOIL  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: R-0280

#### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date                      Time  
10/18/13                      10:10  
10/18/13                      15:45

### Laboratory Data

SDG ID: GBF65725  
Phoenix ID: BF65729

Project ID: RECORD JOURNAL  
Client ID: B-4 0-2 FT

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 2.0	2.0	mg/Kg	10/21/13	EK	SW6010
Arsenic	5.3	0.8	mg/Kg	10/21/13	EK	SW6010
Barium	157	0.38	mg/Kg	10/21/13	EK	SW6010
Beryllium	1.33	0.30	mg/Kg	10/21/13	EK	SW6010
Cadmium	0.70	0.38	mg/Kg	10/21/13	EK	SW6010
Chromium	16.9	0.38	mg/Kg	10/21/13	EK	SW6010
Copper	37.5	0.38	mg/kg	10/21/13	EK	SW6010
Mercury	0.85	0.07	mg/Kg	10/21/13	RS	SW-7471
Nickel	12.2	0.38	mg/Kg	10/21/13	EK	SW6010
Lead	1290	3.8	mg/Kg	10/22/13	LK	SW6010
Antimony	< 3.8	3.8	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.5	1.5	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.4	3.4	mg/Kg	10/21/13	EK	SW6010
Vanadium	22.4	0.38	mg/Kg	10/21/13	EK	SW6010
Zinc	115	0.38	mg/Kg	10/21/13	EK	SW6010
Percent Solid	89		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/21/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

#### TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	55	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

#### QA/QC Surrogates

% n-Pentacosane	88		%	10/21/13	JRB	50 - 150 %
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#### Polynuclear Aromatic HC

2-Methylnaphthalene	ND	260	ug/Kg	10/19/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Acenaphthylene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Anthracene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benz(a)anthracene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benzo(a)pyrene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benzo(b)fluoranthene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benzo(ghi)perylene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Benzo(k)fluoranthene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Chrysene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Fluoranthene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Fluorene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Naphthalene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Phenanthrene	ND	260	ug/Kg	10/19/13	DD	SW 8270
Pyrene	ND	260	ug/Kg	10/19/13	DD	SW 8270
<b>QA/QC Surrogates</b>						
% 2-Fluorobiphenyl	78		%	10/19/13	DD	30 - 130 %
% Nitrobenzene-d5	77		%	10/19/13	DD	30 - 130 %
% Terphenyl-d14	87		%	10/19/13	DD	30 - 130 %

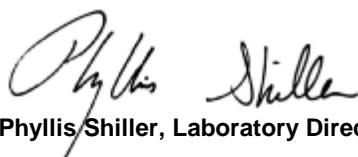
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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**Phyllis Shiller, Laboratory Director**

**November 08, 2013**



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

November 08, 2013

FOR: Attn: Ms. Jill Libby  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

### Sample Information

Matrix: SOIL  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: R-0280

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date                      Time  
10/18/13                      10:30  
10/18/13                      15:45

## Laboratory Data

SDG ID: GBF65725  
Phoenix ID: BF65730

Project ID: RECORD JOURNAL  
Client ID: B-5 0-6 INCHES

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Percent Solid	84		%	10/18/13	W	E160.3
Extraction for PCB	Completed			10/18/13	BB/X	SW3540C

### PCB (Soxhlet)

PCB-1016	ND	390	ug/Kg	10/21/13	AW	3540C/8082
PCB-1221	ND	390	ug/Kg	10/21/13	AW	3540C/8082
PCB-1232	ND	390	ug/Kg	10/21/13	AW	3540C/8082
PCB-1242	ND	390	ug/Kg	10/21/13	AW	3540C/8082
PCB-1248	ND	390	ug/Kg	10/21/13	AW	3540C/8082
PCB-1254	ND	390	ug/Kg	10/21/13	AW	3540C/8082
PCB-1260	ND	390	ug/Kg	10/21/13	AW	3540C/8082
PCB-1262	ND	390	ug/Kg	10/21/13	AW	3540C/8082
PCB-1268	ND	390	ug/Kg	10/21/13	AW	3540C/8082

### QA/QC Surrogates

% DCBP	80		%	10/21/13	AW	30 - 150 %
% TCMX	113		%	10/21/13	AW	30 - 150 %



Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
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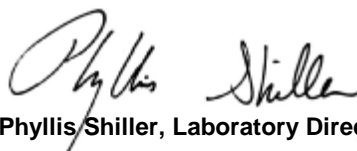
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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**Phyllis Shiller, Laboratory Director**

**November 08, 2013**



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

November 08, 2013

FOR: Attn: Ms. Jill Libby  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

### Sample Information

Matrix: SOIL  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: R-0280

### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date            Time  
10/18/13        10:50  
10/18/13        15:45

## Laboratory Data

SDG ID: GBF65725  
Phoenix ID: BF65731

Project ID: RECORD JOURNAL  
Client ID: B-6 0-6 INCHES

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Percent Solid	92		%	10/18/13	W	E160.3
Extraction for PCB	Completed			10/18/13	BB/X	SW3540C

### PCB (Soxhlet)

PCB-1016	ND	360	ug/Kg	10/21/13	AW	3540C/8082
PCB-1221	ND	360	ug/Kg	10/21/13	AW	3540C/8082
PCB-1232	ND	360	ug/Kg	10/21/13	AW	3540C/8082
PCB-1242	ND	360	ug/Kg	10/21/13	AW	3540C/8082
PCB-1248	ND	360	ug/Kg	10/21/13	AW	3540C/8082
PCB-1254	ND	360	ug/Kg	10/21/13	AW	3540C/8082
PCB-1260	ND	360	ug/Kg	10/21/13	AW	3540C/8082
PCB-1262	ND	360	ug/Kg	10/21/13	AW	3540C/8082
PCB-1268	ND	360	ug/Kg	10/21/13	AW	3540C/8082

### QA/QC Surrogates

% DCBP	82		%	10/21/13	AW	30 - 150 %
% TCMX	110		%	10/21/13	AW	30 - 150 %

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
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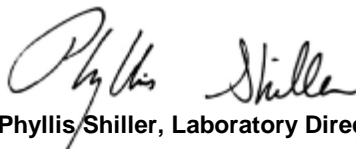
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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**Phyllis Shiller, Laboratory Director**

**November 08, 2013**



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**

November 08, 2013

FOR: Attn: Ms. Jill Libby  
 Tighe & Bond  
 213 Court St  
 Suite 900  
 Middletown, CT 06457

Sample Information

Matrix: SOIL  
 Location Code: TIGHE  
 Rush Request: Standard  
 P.O.#: R-0280

Custody Information

Collected by:  
 Received by: LB  
 Analyzed by: see "By" below

Date                      Time  
 10/18/13                      11:00  
 10/18/13                      15:45

Laboratory Data

SDG ID: GBF65725  
 Phoenix ID: BF65732

Project ID: RECORD JOURNAL  
 Client ID: B-7 0-10 INCHES

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 0.40	0.40	mg/Kg	10/21/13	EK	SW6010
Arsenic	< 0.8	0.8	mg/Kg	10/21/13	EK	SW6010
Barium	63.5	0.40	mg/Kg	10/21/13	EK	SW6010
Beryllium	0.95	0.32	mg/Kg	10/21/13	EK	SW6010
Cadmium	< 0.40	0.40	mg/Kg	10/21/13	EK	SW6010
Chromium	11.7	0.40	mg/Kg	10/21/13	EK	SW6010
Copper	2.47	0.40	mg/kg	10/21/13	EK	SW6010
Mercury	< 0.08	0.08	mg/Kg	10/22/13	RS	SW-7471
Nickel	8.63	0.40	mg/Kg	10/21/13	EK	SW6010
Lead	10.4	0.40	mg/Kg	10/21/13	EK	SW6010
Antimony	< 4.0	4.0	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.6	1.6	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.6	3.6	mg/Kg	10/21/13	EK	SW6010
Vanadium	18.9	0.40	mg/Kg	10/21/13	EK	SW6010
Zinc	29.0	0.40	mg/Kg	10/21/13	EK	SW6010
Percent Solid	84		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/22/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

**TPH by GC (Extractable Products)**

Ext. Petroleum HC	ND	58	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

**QA/QC Surrogates**

% n-Pentacosane	102		%	10/21/13	JRB	50 - 150 %
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**Polynuclear Aromatic HC**

2-Methylnaphthalene	ND	280	ug/Kg	10/20/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Acenaphthylene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Anthracene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Benz(a)anthracene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Benzo(a)pyrene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Benzo(b)fluoranthene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Benzo(ghi)perylene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Benzo(k)fluoranthene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Chrysene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Fluoranthene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Fluorene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Naphthalene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Phenanthrene	ND	280	ug/Kg	10/20/13	DD	SW 8270
Pyrene	ND	280	ug/Kg	10/20/13	DD	SW 8270
<b>QA/QC Surrogates</b>						
% 2-Fluorobiphenyl	83		%	10/20/13	DD	30 - 130 %
% Nitrobenzene-d5	109		%	10/20/13	DD	30 - 130 %
% Terphenyl-d14	92		%	10/20/13	DD	30 - 130 %

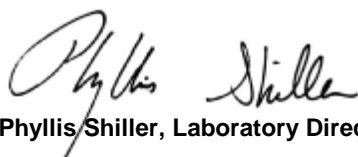
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

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**Phyllis Shiller, Laboratory Director**

**November 08, 2013**



### Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

November 08, 2013

FOR: Attn: Ms. Jill Libby  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

#### Sample Information

Matrix: SOIL  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: R-0280

#### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date            Time  
10/18/13        12:00  
10/18/13        15:45

### Laboratory Data

SDG ID: GBF65725  
Phoenix ID: BF65733

Project ID: RECORD JOURNAL  
Client ID: B-8 4.5-5.5

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 0.37	0.37	mg/Kg	10/21/13	EK	SW6010
Arsenic	3.1	0.7	mg/Kg	10/21/13	EK	SW6010
Barium	94.9	0.37	mg/Kg	10/21/13	EK	SW6010
Beryllium	1.02	0.30	mg/Kg	10/21/13	EK	SW6010
Cadmium	0.56	0.37	mg/Kg	10/21/13	EK	SW6010
Chromium	15.5	0.37	mg/Kg	10/21/13	EK	SW6010
Copper	23.8	0.37	mg/kg	10/21/13	EK	SW6010
Mercury	0.20	0.07	mg/Kg	10/22/13	RS	SW-7471
Nickel	13.4	0.37	mg/Kg	10/21/13	EK	SW6010
Lead	130	0.37	mg/Kg	10/21/13	EK	SW6010
Antimony	< 3.7	3.7	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.5	1.5	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.3	3.3	mg/Kg	10/21/13	EK	SW6010
Vanadium	26.8	0.37	mg/Kg	10/21/13	EK	SW6010
Zinc	70.8	0.37	mg/Kg	10/21/13	EK	SW6010
Percent Solid	91		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/22/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

#### TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	53	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

#### QA/QC Surrogates

% n-Pentacosane	92		%	10/21/13	JRB	50 - 150 %
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#### Polynuclear Aromatic HC

2-Methylnaphthalene	ND	250	ug/Kg	10/19/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Acenaphthylene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Anthracene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Benz(a)anthracene	1400	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(a)pyrene	1200	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(b)fluoranthene	1600	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(ghi)perylene	420	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(k)fluoranthene	530	250	ug/Kg	10/19/13	DD	SW 8270
Chrysene	1400	250	ug/Kg	10/19/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Fluoranthene	1900	250	ug/Kg	10/19/13	DD	SW 8270
Fluorene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	440	250	ug/Kg	10/19/13	DD	SW 8270
Naphthalene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Phenanthrene	790	250	ug/Kg	10/19/13	DD	SW 8270
Pyrene	1400	250	ug/Kg	10/19/13	DD	SW 8270
<b>QA/QC Surrogates</b>						
% 2-Fluorobiphenyl	77		%	10/19/13	DD	30 - 130 %
% Nitrobenzene-d5	82		%	10/19/13	DD	30 - 130 %
% Terphenyl-d14	70		%	10/19/13	DD	30 - 130 %

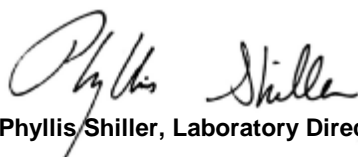
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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**Phyllis Shiller, Laboratory Director**

**November 08, 2013**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

November 08, 2013

FOR: Attn: Ms. Jill Libby  
 Tighe & Bond  
 213 Court St  
 Suite 900  
 Middletown, CT 06457

## Sample Information

Matrix: SOIL  
 Location Code: TIGHE  
 Rush Request: Standard  
 P.O.#: R-0280

## Custody Information

Collected by:  
 Received by: LB  
 Analyzed by: see "By" below

Date                      Time  
 10/18/13                      13:00  
 10/18/13                      15:45

## Laboratory Data

SDG ID: GBF65725  
 Phoenix ID: BF65734

Project ID: RECORD JOURNAL  
 Client ID: B-9 6-7 FT

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 0.36	0.36	mg/Kg	10/21/13	EK	SW6010
Arsenic	< 0.7	0.7	mg/Kg	10/21/13	EK	SW6010
Barium	62.0	0.36	mg/Kg	10/21/13	EK	SW6010
Beryllium	0.54	0.29	mg/Kg	10/21/13	EK	SW6010
Cadmium	0.69	0.36	mg/Kg	10/21/13	EK	SW6010
Chromium	11.2	0.36	mg/Kg	10/21/13	EK	SW6010
Copper	8.00	0.36	mg/kg	10/21/13	EK	SW6010
Mercury	< 0.07	0.07	mg/Kg	10/22/13	RS	SW-7471
Nickel	5.98	0.36	mg/Kg	10/21/13	EK	SW6010
Lead	18.0	0.36	mg/Kg	10/21/13	EK	SW6010
Antimony	< 3.6	3.6	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.5	1.5	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.3	3.3	mg/Kg	10/21/13	EK	SW6010
Vanadium	24.1	0.36	mg/Kg	10/21/13	EK	SW6010
Zinc	55.4	0.36	mg/Kg	10/21/13	EK	SW6010
Percent Solid	94		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	SS/F	3545
Mercury Digestion	Completed			10/22/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

## TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	52	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

## QA/QC Surrogates

% n-Pentacosane	79		%	10/21/13	JRB	50 - 150 %
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## Polynuclear Aromatic HC

2-Methylnaphthalene	ND	240	ug/Kg	10/19/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Acenaphthylene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Anthracene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Benz(a)anthracene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Benzo(a)pyrene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Benzo(b)fluoranthene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Benzo(ghi)perylene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Benzo(k)fluoranthene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Chrysene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Fluoranthene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Fluorene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Naphthalene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Phenanthrene	ND	240	ug/Kg	10/19/13	DD	SW 8270
Pyrene	ND	240	ug/Kg	10/19/13	DD	SW 8270
<b>QA/QC Surrogates</b>						
% 2-Fluorobiphenyl	90		%	10/19/13	DD	30 - 130 %
% Nitrobenzene-d5	89		%	10/19/13	DD	30 - 130 %
% Terphenyl-d14	103		%	10/19/13	DD	30 - 130 %

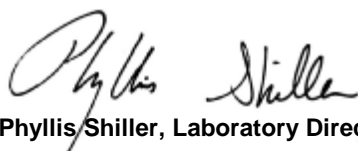
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

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**Phyllis Shiller, Laboratory Director**

**November 08, 2013**



### Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

November 08, 2013

FOR: Attn: Ms. Jill Libby  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

#### Sample Information

Matrix: SOIL  
Location Code: TIGHE  
Rush Request: 24 Hour  
P.O.#: R-0280

#### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date                      Time  
10/18/13                      13:30  
10/18/13                      15:45

### Laboratory Data

SDG ID: GBF65725  
Phoenix ID: BF65735

Project ID: RECORD JOURNAL  
Client ID: B-10 0-2 FT

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 0.33	0.33	mg/Kg	10/21/13	EK	SW6010
Arsenic	2.3	0.7	mg/Kg	10/21/13	EK	SW6010
Barium	87.4	0.33	mg/Kg	10/21/13	EK	SW6010
Beryllium	0.84	0.27	mg/Kg	10/21/13	EK	SW6010
Cadmium	0.64	0.33	mg/Kg	10/21/13	EK	SW6010
Chromium	20.4	0.33	mg/Kg	10/21/13	EK	SW6010
Copper	27.4	0.33	mg/kg	10/21/13	EK	SW6010
Mercury	< 0.08	0.08	mg/Kg	10/22/13	RS	SW-7471
Nickel	16.8	0.33	mg/Kg	10/21/13	EK	SW6010
Lead	36.9	0.33	mg/Kg	10/21/13	EK	SW6010
Antimony	< 3.3	3.3	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.3	1.3	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.0	3.0	mg/Kg	10/21/13	EK	SW6010
Vanadium	42.7	0.33	mg/Kg	10/21/13	EK	SW6010
Zinc	54.5	0.33	mg/Kg	10/21/13	EK	SW6010
Percent Solid	89		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			11/06/13	JJ/F	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/22/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

#### TPH by GC (Extractable Products)

Ext. Petroleum HC	580	280	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	**		mg/Kg	10/21/13	JRB	CT ETPH/8015

#### QA/QC Surrogates

% n-Pentacosane	Diluted Out		%	10/21/13	JRB	50 - 150 %
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#### Polynuclear Aromatic HC

2-Methylnaphthalene	ND	260	ug/Kg	11/06/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	260	ug/Kg	11/06/13	DD	SW 8270
Acenaphthylene	2000	260	ug/Kg	11/06/13	DD	SW 8270
Anthracene	2700	260	ug/Kg	11/06/13	DD	SW 8270
Benz(a)anthracene	16000	260	ug/Kg	11/06/13	DD	SW 8270
Benzo(a)pyrene	13000	260	ug/Kg	11/06/13	DD	SW 8270
Benzo(b)fluoranthene	17000	260	ug/Kg	11/06/13	DD	SW 8270
Benzo(ghi)perylene	4500	260	ug/Kg	11/06/13	DD	SW 8270
Benzo(k)fluoranthene	3500	260	ug/Kg	11/06/13	DD	SW 8270
Chrysene	14000	260	ug/Kg	11/06/13	DD	SW 8270
Dibenz(a,h)anthracene	630	260	ug/Kg	11/06/13	DD	SW 8270
Fluoranthene	28000	260	ug/Kg	11/06/13	DD	SW 8270
Fluorene	430	260	ug/Kg	11/06/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	4900	260	ug/Kg	11/06/13	DD	SW 8270
Naphthalene	1000	260	ug/Kg	11/06/13	DD	SW 8270
Phenanthrene	13000	260	ug/Kg	11/06/13	DD	SW 8270
Pyrene	22000	260	ug/Kg	11/06/13	DD	SW 8270
<b>QA/QC Surrogates</b>						
% 2-Fluorobiphenyl	81		%	11/06/13	DD	30 - 130 %
% Nitrobenzene-d5	88		%	11/06/13	DD	30 - 130 %
% Terphenyl-d14	78		%	11/06/13	DD	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

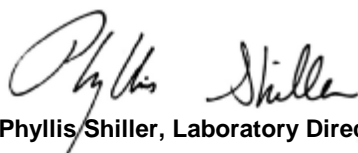
**Comments:**

\* Due to a matrix interference and/or the presence of a large amount of non-target material in the sample, an elevated RL was reported for the semivolatiles analysis. The sample contains 1/4 in size pieces of soft black material. This material is comprised of hydrocarbons including PAHs.

\*\*Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C9 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200. This report must not be reproduced except in full as defined by the attached chain of custody.



**Phyllis Shiller, Laboratory Director**  
**November 08, 2013**



### Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

November 08, 2013

FOR: Attn: Ms. Jill Libby  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

#### Sample Information

Matrix: SOIL  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: R-0280

#### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date                      Time  
10/18/13                      9:05  
10/18/13                      15:45

### Laboratory Data

SDG ID: GBF65725  
Phoenix ID: BF65736

Project ID: RECORD JOURNAL  
Client ID: DUP RJ

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 0.37	0.37	mg/Kg	10/21/13	EK	SW6010
Arsenic	2.2	0.7	mg/Kg	10/21/13	EK	SW6010
Barium	70.7	0.37	mg/Kg	10/21/13	EK	SW6010
Beryllium	0.79	0.30	mg/Kg	10/21/13	EK	SW6010
Cadmium	0.41	0.37	mg/Kg	10/21/13	EK	SW6010
Chromium	14.4	0.37	mg/Kg	10/21/13	EK	SW6010
Copper	10.7	0.37	mg/kg	10/21/13	EK	SW6010
Mercury	< 0.08	0.08	mg/Kg	10/22/13	RS	SW-7471
Nickel	9.57	0.37	mg/Kg	10/21/13	EK	SW6010
Lead	9.52	0.37	mg/Kg	10/21/13	EK	SW6010
Antimony	< 3.7	3.7	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.5	1.5	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.3	3.3	mg/Kg	10/21/13	EK	SW6010
Vanadium	28.6	0.37	mg/Kg	10/21/13	EK	SW6010
Zinc	27.4	0.37	mg/Kg	10/21/13	EK	SW6010
Percent Solid	91		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/22/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

#### TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	54	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

#### QA/QC Surrogates

% n-Pentacosane	68		%	10/21/13	JRB	50 - 150 %
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#### Polynuclear Aromatic HC

2-Methylnaphthalene	ND	250	ug/Kg	10/19/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Acenaphthylene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Anthracene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Benz(a)anthracene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(a)pyrene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(b)fluoranthene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(ghi)perylene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(k)fluoranthene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Chrysene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Fluoranthene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Fluorene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Naphthalene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Phenanthrene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Pyrene	ND	250	ug/Kg	10/19/13	DD	SW 8270
<b>QA/QC Surrogates</b>						
% 2-Fluorobiphenyl	88		%	10/19/13	DD	30 - 130 %
% Nitrobenzene-d5	83		%	10/19/13	DD	30 - 130 %
% Terphenyl-d14	78		%	10/19/13	DD	30 - 130 %

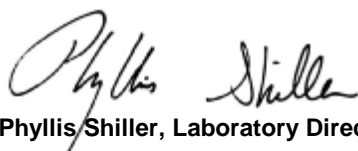
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

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**Phyllis Shiller, Laboratory Director**

**November 08, 2013**



### Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

November 08, 2013

FOR: Attn: Ms. Jill Libby  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

#### Sample Information

Matrix: SOIL  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: R-0280

#### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date            Time  
10/18/13        14:00  
10/18/13        15:45

### Laboratory Data

SDG ID: GBF65725  
Phoenix ID: BF65737

Project ID: RECORD JOURNAL  
Client ID: SS-1 0-6 INCHES

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 0.38	0.38	mg/Kg	10/21/13	EK	SW6010
Arsenic	2.4	0.8	mg/Kg	10/21/13	EK	SW6010
Barium	59.5	0.38	mg/Kg	10/21/13	EK	SW6010
Beryllium	0.69	0.30	mg/Kg	10/21/13	EK	SW6010
Cadmium	0.54	0.38	mg/Kg	10/21/13	EK	SW6010
Chromium	15.4	0.38	mg/Kg	10/21/13	EK	SW6010
Copper	27.2	0.38	mg/kg	10/21/13	EK	SW6010
Mercury	0.10	0.07	mg/Kg	10/22/13	RS	SW-7471
Nickel	14.7	0.38	mg/Kg	10/21/13	EK	SW6010
Lead	55.5	0.38	mg/Kg	10/21/13	EK	SW6010
Antimony	< 3.8	3.8	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.5	1.5	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.4	3.4	mg/Kg	10/21/13	EK	SW6010
Vanadium	33.0	0.38	mg/Kg	10/21/13	EK	SW6010
Zinc	48.1	0.38	mg/Kg	10/21/13	EK	SW6010
Percent Solid	91		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/22/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

#### TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	55	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

#### QA/QC Surrogates

% n-Pentacosane	70		%	10/21/13	JRB	50 - 150 %
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#### Polynuclear Aromatic HC

2-Methylnaphthalene	ND	250	ug/Kg	10/20/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Acenaphthylene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Anthracene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Benz(a)anthracene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Benzo(a)pyrene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Benzo(b)fluoranthene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Benzo(ghi)perylene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Benzo(k)fluoranthene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Chrysene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Fluoranthene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Fluorene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Naphthalene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Phenanthrene	ND	250	ug/Kg	10/20/13	DD	SW 8270
Pyrene	ND	250	ug/Kg	10/20/13	DD	SW 8270
<b>QA/QC Surrogates</b>						
% 2-Fluorobiphenyl	78		%	10/20/13	DD	30 - 130 %
% Nitrobenzene-d5	113		%	10/20/13	DD	30 - 130 %
% Terphenyl-d14	88		%	10/20/13	DD	30 - 130 %

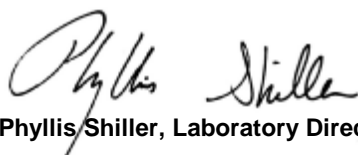
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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**Phyllis Shiller, Laboratory Director**

**November 08, 2013**



### Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Analysis Report

November 08, 2013

FOR: Attn: Ms. Jill Libby  
Tighe & Bond  
213 Court St  
Suite 900  
Middletown, CT 06457

#### Sample Information

Matrix: SOIL  
Location Code: TIGHE  
Rush Request: Standard  
P.O.#: R-0280

#### Custody Information

Collected by:  
Received by: LB  
Analyzed by: see "By" below

Date            Time  
10/18/13        14:30  
10/18/13        15:45

### Laboratory Data

SDG ID: GBF65725  
Phoenix ID: BF65738

Project ID: RECORD JOURNAL  
Client ID: SS-2 0-8 INCHES

Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Silver	< 2.0	2.0	mg/Kg	10/21/13	EK	SW6010
Arsenic	2.8	0.7	mg/Kg	10/21/13	EK	SW6010
Barium	126	0.37	mg/Kg	10/21/13	EK	SW6010
Beryllium	0.68	0.30	mg/Kg	10/21/13	EK	SW6010
Cadmium	0.75	0.37	mg/Kg	10/21/13	EK	SW6010
Chromium	15.8	0.37	mg/Kg	10/21/13	EK	SW6010
Copper	40.3	0.37	mg/kg	10/21/13	EK	SW6010
Mercury	0.28	0.09	mg/Kg	10/22/13	RS	SW-7471
Nickel	17.0	0.37	mg/Kg	10/21/13	EK	SW6010
Lead	266	3.7	mg/Kg	10/22/13	LK	SW6010
Antimony	< 3.7	3.7	mg/Kg	10/21/13	EK	SW6010
Selenium	< 1.5	1.5	mg/Kg	10/21/13	LK	SW6010
Thallium	< 3.3	3.3	mg/Kg	10/21/13	EK	SW6010
Vanadium	45.2	0.37	mg/Kg	10/21/13	EK	SW6010
Zinc	132	0.37	mg/Kg	10/21/13	EK	SW6010
Percent Solid	91		%	10/18/13	W	E160.3
Soil Extraction SVOA PAH	Completed			10/18/13	JJ/FV	SW3545
Extraction of CT ETPH	Completed			10/18/13	BS/F	3545
Mercury Digestion	Completed			10/22/13	I/I	SW7471
Total Metals Digest	Completed			10/18/13	Z/AG	SW846 - 3050

#### TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	54	mg/Kg	10/21/13	JRB	CT ETPH/8015
Identification	ND		mg/Kg	10/21/13	JRB	CT ETPH/8015

#### QA/QC Surrogates

% n-Pentacosane	72		%	10/21/13	JRB	50 - 150 %
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#### Polynuclear Aromatic HC

2-Methylnaphthalene	ND	250	ug/Kg	10/19/13	DD	SW 8270
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Parameter	Result	RL/ PQL	Units	Date/Time	By	Reference
Acenaphthene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Acenaphthylene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Anthracene	290	250	ug/Kg	10/19/13	DD	SW 8270
Benz(a)anthracene	910	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(a)pyrene	570	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(b)fluoranthene	790	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(ghi)perylene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Benzo(k)fluoranthene	330	250	ug/Kg	10/19/13	DD	SW 8270
Chrysene	770	250	ug/Kg	10/19/13	DD	SW 8270
Dibenz(a,h)anthracene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Fluoranthene	1200	250	ug/Kg	10/19/13	DD	SW 8270
Fluorene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Indeno(1,2,3-cd)pyrene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Naphthalene	ND	250	ug/Kg	10/19/13	DD	SW 8270
Phenanthrene	1300	250	ug/Kg	10/19/13	DD	SW 8270
Pyrene	980	250	ug/Kg	10/19/13	DD	SW 8270
<b>QA/QC Surrogates</b>						
% 2-Fluorobiphenyl	86		%	10/19/13	DD	30 - 130 %
% Nitrobenzene-d5	85		%	10/19/13	DD	30 - 130 %
% Terphenyl-d14	74		%	10/19/13	DD	30 - 130 %

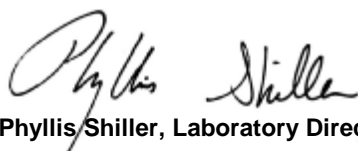
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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**Phyllis Shiller, Laboratory Director**

**November 08, 2013**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

# QA/QC Report

November 08, 2013

## QA/QC Data

SDG I.D.: GBF65725

Parameter	Blank	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 257344, QC Sample No: BF65049 (BF65726, BF65727, BF65728, BF65729, BF65732, BF65733, BF65734, BF65735, BF65736, BF65737, BF65738)												
<u>ICP Metals - Soil</u>												
Antimony	BRL	<3.4	<3.4	NC	76.1	76.4	0.4	94.0	94.1	0.1	75 - 125	30
Arsenic	BRL	4.3	3.51	20.2	101	99.6	1.4	94.9	96.2	1.4	75 - 125	30
Barium	BRL	109	119	8.80	112	106	5.5	115	101	13.0	75 - 125	30
Beryllium	BRL	0.31	0.32	NC	106	103	2.9	100	101	1.0	75 - 125	30
Cadmium	BRL	0.87	0.78	NC	103	101	2.0	99.2	100	0.8	75 - 125	30
Chromium	BRL	14.7	13.6	7.80	107	105	1.9	103	103	0.0	75 - 125	30
Copper	BRL	37.8	36.3	4.00	110	108	1.8	102	106	3.8	75 - 125	30
Lead	BRL	427	363	16.2	100	100	0.0	106	74.8	34.5	75 - 125	30
Nickel	BRL	10.1	9.57	5.40	106	103	2.9	99.8	101	1.2	75 - 125	30
Selenium	BRL	<1.4	<1.4	NC	87.0	88.3	1.5	83.9	84.6	0.8	75 - 125	30
Silver	BRL	<0.34	<0.34	NC	103	104	1.0	101	102	1.0	75 - 125	30
Thallium	BRL	<3.1	<3.1	NC	103	101	2.0	98.5	99.2	0.7	75 - 125	30
Vanadium	BRL	21.1	21.6	2.30	106	108	1.9	101	102	1.0	75 - 125	30
Zinc	BRL	189	181	4.30	99.2	97.3	1.9	91.6	88.3	3.7	75 - 125	30

QA/QC Batch 257555, QC Sample No: BF65664 (BF65726, BF65727, BF65728, BF65729)

Mercury - Soil	BRL	0.13	0.10	NC	108	107	0.9	95.3	88.7	7.2	70 - 130	30
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Comment:

Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 70-130%.

QA/QC Batch 257642, QC Sample No: BF65914 (BF65732, BF65733, BF65734, BF65735, BF65736, BF65737, BF65738)

Mercury - Soil	BRL	<0.07	<0.07	NC	97.6	94.5	3.2	106	121	13.2	70 - 130	30
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Comment:

Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 70-130%.

r = This parameter is outside laboratory rpd specified recovery limits.



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

# QA/QC Report

November 08, 2013

## QA/QC Data

SDG I.D.: GBF65725

Parameter	Blank	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 257365, QC Sample No: BF65236 (BF65732, BF65733, BF65734, BF65735, BF65736, BF65737, BF65738)									
<b>TPH by GC (Extractable Products) - Soil</b>									
Ext. Petroleum HC	ND	74	78	5.3	85	80	6.1	60 - 120	30
% n-Pentacosane	69	95	94	1.1	100	91	9.4	50 - 150	30
QA/QC Batch 257685, QC Sample No: BF65647 (BF65725)									
<b>Volatiles - Water</b>									
1,1,1,2-Tetrachloroethane	ND	113	118	4.3				70 - 130	30
1,1,1-Trichloroethane	ND	98	97	1.0				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	98	108	9.7				70 - 130	30
1,1,2-Trichloroethane	ND	104	119	13.5				70 - 130	30
1,1-Dichloroethane	ND	92	92	0.0				70 - 130	30
1,1-Dichloroethene	ND	91	89	2.2				70 - 130	30
1,1-Dichloropropene	ND	106	102	3.8				70 - 130	30
1,2,3-Trichlorobenzene	ND	125	144	14.1				70 - 130	30
1,2,3-Trichloropropane	ND	95	104	9.0				70 - 130	30
1,2,4-Trichlorobenzene	ND	127	137	7.6				70 - 130	30
1,2,4-Trimethylbenzene	ND	113	107	5.5				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	109	122	11.3				70 - 130	30
1,2-Dibromoethane	ND	106	121	13.2				70 - 130	30
1,2-Dichlorobenzene	ND	108	112	3.6				70 - 130	30
1,2-Dichloroethane	ND	97	107	9.8				70 - 130	30
1,2-Dichloropropane	ND	97	103	6.0				70 - 130	30
1,3,5-Trimethylbenzene	ND	112	104	7.4				70 - 130	30
1,3-Dichlorobenzene	ND	113	111	1.8				70 - 130	30
1,3-Dichloropropane	ND	101	110	8.5				70 - 130	30
1,4-Dichlorobenzene	ND	110	109	0.9				70 - 130	30
2,2-Dichloropropane	ND	103	101	2.0				70 - 130	30
2-Chlorotoluene	ND	114	107	6.3				70 - 130	30
2-Hexanone	ND	93	120	25.4				70 - 130	30
2-Isopropyltoluene	ND	113	106	6.4				70 - 130	30
4-Chlorotoluene	ND	111	105	5.6				70 - 130	30
4-Methyl-2-pentanone	ND	90	115	24.4				70 - 130	30
Acetone	ND	78	93	17.5				70 - 130	30
Acrylonitrile	ND	89	105	16.5				70 - 130	30
Benzene	ND	100	101	1.0				70 - 130	30
Bromobenzene	ND	110	110	0.0				70 - 130	30
Bromochloromethane	ND	99	106	6.8				70 - 130	30
Bromodichloromethane	ND	104	112	7.4				70 - 130	30
Bromoform	ND	109	127	15.3				70 - 130	30
Bromomethane	ND	93	92	1.1				70 - 130	30
Carbon Disulfide	ND	88	83	5.8				70 - 130	30
Carbon tetrachloride	ND	113	109	3.6				70 - 130	30
Chlorobenzene	ND	106	106	0.0				70 - 130	30

QA/QC Data

SDG I.D.: GBF65725

Parameter	Blank	LCS %	LCS D %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Chloroethane	ND	90	91	1.1				70 - 130	30
Chloroform	ND	94	96	2.1				70 - 130	30
Chloromethane	ND	83	84	1.2				70 - 130	30
cis-1,2-Dichloroethene	ND	99	100	1.0				70 - 130	30
cis-1,3-Dichloropropene	ND	103	112	8.4				70 - 130	30
Dibromochloromethane	ND	115	127	9.9				70 - 130	30
Dibromomethane	ND	103	117	12.7				70 - 130	30
Dichlorodifluoromethane	ND	96	94	2.1				70 - 130	30
Ethylbenzene	ND	108	104	3.8				70 - 130	30
Hexachlorobutadiene	ND	127	117	8.2				70 - 130	30
Isopropylbenzene	ND	116	108	7.1				70 - 130	30
m&p-Xylene	ND	107	104	2.8				70 - 130	30
Methyl ethyl ketone	ND	74	91	20.6				70 - 130	30
Methyl t-butyl ether (MTBE)	ND	93	110	16.7				70 - 130	30
Methylene chloride	ND	83	88	5.8				70 - 130	30
Naphthalene	ND	126	146	14.7				70 - 130	30
n-Butylbenzene	ND	116	108	7.1				70 - 130	30
n-Propylbenzene	ND	118	106	10.7				70 - 130	30
o-Xylene	ND	103	103	0.0				70 - 130	30
p-Isopropyltoluene	ND	117	108	8.0				70 - 130	30
sec-Butylbenzene	ND	110	102	7.5				70 - 130	30
Styrene	ND	103	106	2.9				70 - 130	30
tert-Butylbenzene	ND	115	107	7.2				70 - 130	30
Tetrachloroethene	ND	116	110	5.3				70 - 130	30
Tetrahydrofuran (THF)	ND	82	101	20.8				70 - 130	30
Toluene	ND	103	102	1.0				70 - 130	30
trans-1,2-Dichloroethene	ND	92	90	2.2				70 - 130	30
trans-1,3-Dichloropropene	ND	101	112	10.3				70 - 130	30
trans-1,4-dichloro-2-butene	ND	105	117	10.8				70 - 130	30
Trichloroethene	ND	114	112	1.8				70 - 130	30
Trichlorofluoromethane	ND	97	96	1.0				70 - 130	30
Trichlorotrifluoroethane	ND	93	93	0.0				70 - 130	30
Vinyl chloride	ND	96	94	2.1				70 - 130	30
% 1,2-dichlorobenzene-d4	102	98	103	5.0				70 - 130	30
% Bromofluorobenzene	99	96	102	6.1				70 - 130	30
% Dibromofluoromethane	113	101	102	1.0				70 - 130	30
% Toluene-d8	97	97	98	1.0				70 - 130	30

Comment:

The MS/MSD are not reported for this batch.

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 40-200%.

QA/QC Batch 257486, QC Sample No: BF65727 (BF65726, BF65727, BF65728, BF65729)

TPH by GC (Extractable Products) - Soil

Ext. Petroleum HC	ND	68		80	66	19.2	60 - 120	30
% n-Pentacosane	107	82		100	84	17.4	50 - 150	30

QA/QC Batch 257500, QC Sample No: BF65731 (BF65730, BF65731)

Polychlorinated Biphenyls - Soil

PCB-1016	ND	84	92	9.1	88	93	5.5	40 - 140	30
PCB-1221	ND							40 - 140	30
PCB-1232	ND							40 - 140	30
PCB-1242	ND							40 - 140	30
PCB-1248	ND							40 - 140	30

## QA/QC Data

SDG I.D.: GBF65725

Parameter	Blank	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
PCB-1254	ND							40 - 140	30
PCB-1260	ND	92	90	2.2	91	92	1.1	40 - 140	30
PCB-1262	ND							40 - 140	30
PCB-1268	ND							40 - 140	30
% DCBP (Surrogate Rec)	89	114	106	7.3	100	101	1.0	30 - 150	30
% TCMX (Surrogate Rec)	96	104	100	3.9	102	102	0.0	30 - 150	30

QA/QC Batch 257494, QC Sample No: BF65738 (BF65726, BF65727, BF65728, BF65729, BF65732, BF65733, BF65734, BF65735, BF65736, BF65737, BF65738)

### Polynuclear Aromatic HC - Soil

2-Methylnaphthalene	ND	70	77	9.5	72	70	2.8	30 - 130	30
Acenaphthene	ND	60	65	8.0	79	80	1.3	30 - 130	30
Acenaphthylene	ND	64	71	10.4	80	79	1.3	30 - 130	30
Anthracene	ND	70	76	8.2	82	81	1.2	30 - 130	30
Benz(a)anthracene	ND	89	93	4.4	65	66	1.5	30 - 130	30
Benzo(a)pyrene	ND	63	69	9.1	66	65	1.5	30 - 130	30
Benzo(b)fluoranthene	ND	73	81	10.4	81	79	2.5	30 - 130	30
Benzo(ghi)perylene	ND	75	70	6.9	50	50	0.0	30 - 130	30
Benzo(k)fluoranthene	ND	72	81	11.8	86	88	2.3	30 - 130	30
Chrysene	ND	66	72	8.7	64	69	7.5	30 - 130	30
Dibenz(a,h)anthracene	ND	84	81	3.6	56	57	1.8	30 - 130	30
Fluoranthene	ND	69	76	9.7	66	70	5.9	30 - 130	30
Fluorene	ND	86	92	6.7	83	83	0.0	30 - 130	30
Indeno(1,2,3-cd)pyrene	ND	81	79	2.5	56	57	1.8	30 - 130	30
Naphthalene	ND	76	81	6.4	72	72	0.0	30 - 130	30
Phenanthrene	ND	73	78	6.6	69	72	4.3	30 - 130	30
Pyrene	ND	70	77	9.5	66	71	7.3	30 - 130	30
% 2-Fluorobiphenyl	71	67	70	4.4	70	69	1.4	30 - 130	30
% Nitrobenzene-d5	74	66	69	4.4	67	66	1.5	30 - 130	30
% Terphenyl-d14	75	86	85	1.2	66	69	4.4	30 - 130	30

Comment:

Additional 8270 criteria: 20% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 15-110%, for soils 30-130%)

QA/QC Batch 257770, QC Sample No: BF66255 (BF65728 (50, 1X))

### Volatiles - Soil

1,1,1,2-Tetrachloroethane	ND	102	104	1.9	97	97	0.0	70 - 130	30
1,1,1-Trichloroethane	ND	99	97	2.0	97	96	1.0	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	93	89	4.4	108	111	2.7	70 - 130	30
1,1,2-Trichloroethane	ND	98	97	1.0	87	85	2.3	70 - 130	30
1,1-Dichloroethane	ND	95	91	4.3	100	122	19.8	70 - 130	30
1,1-Dichloroethene	ND	97	99	2.0	95	92	3.2	70 - 130	30
1,1-Dichloropropene	ND	93	94	1.1	89	88	1.1	70 - 130	30
1,2,3-Trichlorobenzene	ND	98	97	1.0	<40	<40	NC	70 - 130	30 m
1,2,3-Trichloropropane	ND	98	93	5.2	118	119	0.8	70 - 130	30
1,2,4-Trichlorobenzene	ND	92	92	0.0	<40	<40	NC	70 - 130	30 m
1,2,4-Trimethylbenzene	ND	98	96	2.1	96	96	0.0	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	111	103	7.5	92	97	5.3	70 - 130	30
1,2-Dibromoethane	ND	98	99	1.0	79	78	1.3	70 - 130	30
1,2-Dichlorobenzene	ND	96	96	0.0	74	75	1.3	70 - 130	30
1,2-Dichloroethane	ND	97	98	1.0	94	92	2.2	70 - 130	30
1,2-Dichloropropane	ND	90	91	1.1	89	86	3.4	70 - 130	30
1,3,5-Trimethylbenzene	ND	97	95	2.1	102	102	0.0	70 - 130	30
1,3-Dichlorobenzene	ND	97	95	2.1	78	79	1.3	70 - 130	30

QA/QC Data

SDG I.D.: GBF65725

Parameter	Blank	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,3-Dichloropropane	ND	95	94	1.1	94	94	0.0	70 - 130	30	
1,4-Dichlorobenzene	ND	96	94	2.1	77	76	1.3	70 - 130	30	
2,2-Dichloropropane	ND	91	93	2.2	89	89	0.0	70 - 130	30	
2-Chlorotoluene	ND	97	96	1.0	97	99	2.0	70 - 130	30	
2-Hexanone	ND	100	97	3.0	<40	<40	NC	70 - 130	30	m
2-Isopropyltoluene	ND	99	97	2.0	95	96	1.0	70 - 130	30	
4-Chlorotoluene	ND	93	92	1.1	93	91	2.2	70 - 130	30	
4-Methyl-2-pentanone	ND	102	97	5.0	<40	<40	NC	70 - 130	30	m
Acetone	ND	98	93	5.2	58	52	10.9	70 - 130	30	m
Acrylonitrile	ND	99	84	16.4	<40	<40	NC	70 - 130	30	m
Benzene	ND	90	92	2.2	87	86	1.2	70 - 130	30	
Bromobenzene	ND	99	97	2.0	99	99	0.0	70 - 130	30	
Bromochloromethane	ND	91	91	0.0	93	92	1.1	70 - 130	30	
Bromodichloromethane	ND	96	98	2.1	83	85	2.4	70 - 130	30	
Bromoform	ND	109	109	0.0	68	72	5.7	70 - 130	30	m
Bromomethane	ND	101	105	3.9	47	44	6.6	70 - 130	30	m
Carbon Disulfide	ND	95	96	1.0	83	81	2.4	70 - 130	30	
Carbon tetrachloride	ND	107	109	1.9	99	100	1.0	70 - 130	30	
Chlorobenzene	ND	98	98	0.0	86	87	1.2	70 - 130	30	
Chloroethane	ND	102	101	1.0	99	93	6.3	70 - 130	30	
Chloroform	ND	93	93	0.0	91	90	1.1	70 - 130	30	
Chloromethane	ND	96	96	0.0	78	76	2.6	70 - 130	30	
cis-1,2-Dichloroethene	ND	91	91	0.0	85	83	2.4	70 - 130	30	
cis-1,3-Dichloropropene	ND	89	91	2.2	57	59	3.4	70 - 130	30	m
Dibromochloromethane	ND	103	103	0.0	86	90	4.5	70 - 130	30	
Dibromomethane	ND	96	97	1.0	101	100	1.0	70 - 130	30	
Dichlorodifluoromethane	ND	126	125	0.8	98	94	4.2	70 - 130	30	
Ethylbenzene	ND	94	94	0.0	92	92	0.0	70 - 130	30	
Hexachlorobutadiene	ND	99	95	4.1	48	47	2.1	70 - 130	30	m
Isopropylbenzene	ND	99	97	2.0	116	116	0.0	70 - 130	30	
m&p-Xylene	ND	96	97	1.0	90	90	0.0	70 - 130	30	
Methyl ethyl ketone	ND	96	87	9.8	<40	<40	NC	70 - 130	30	m
Methyl t-butyl ether (MTBE)	ND	93	94	1.1	103	100	3.0	70 - 130	30	
Methylene chloride	ND	91	90	1.1	93	90	3.3	70 - 130	30	
Naphthalene	ND	103	99	4.0	42	41	2.4	70 - 130	30	m
n-Butylbenzene	ND	92	91	1.1	72	71	1.4	70 - 130	30	
n-Propylbenzene	ND	98	95	3.1	105	105	0.0	70 - 130	30	
o-Xylene	ND	103	106	2.9	92	93	1.1	70 - 130	30	
p-Isopropyltoluene	ND	97	95	2.1	85	85	0.0	70 - 130	30	
sec-Butylbenzene	ND	96	94	2.1	94	96	2.1	70 - 130	30	
Styrene	ND	100	103	3.0	71	71	0.0	70 - 130	30	
tert-Butylbenzene	ND	101	99	2.0	105	107	1.9	70 - 130	30	
Tetrachloroethene	ND	98	99	1.0	100	101	1.0	70 - 130	30	
Tetrahydrofuran (THF)	ND	92	85	7.9	87	86	1.2	70 - 130	30	
Toluene	ND	93	95	2.1	83	83	0.0	70 - 130	30	
trans-1,2-Dichloroethene	ND	95	95	0.0	88	87	1.1	70 - 130	30	
trans-1,3-Dichloropropene	ND	92	92	0.0	66	67	1.5	70 - 130	30	m
trans-1,4-dichloro-2-butene	ND	97	93	4.2	50	52	3.9	70 - 130	30	m
Trichloroethene	ND	98	100	2.0	89	89	0.0	70 - 130	30	
Trichlorofluoromethane	ND	109	108	0.9	103	99	4.0	70 - 130	30	
Trichlorotrifluoroethane	ND	98	100	2.0	99	95	4.1	70 - 130	30	
Vinyl chloride	ND	103	104	1.0	88	85	3.5	70 - 130	30	
% 1,2-dichlorobenzene-d4	99	100	99	1.0	94	94	0.0	70 - 130	30	

## QA/QC Data

SDG I.D.: GBF65725

Parameter	Blank	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% Bromofluorobenzene	95	99	100	1.0	86	88	2.3	70 - 130	30
% Dibromofluoromethane	100	98	100	2.0	99	101	2.0	70 - 130	30
% Toluene-d8	96	97	99	2.0	95	96	1.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 40-200%.

l = This parameter is outside laboratory lcs/lcsd specified recovery limits.

m = This parameter is outside laboratory ms/msd specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MS Dup - Matrix Spike Duplicate

NC - No Criteria

Intf - Interference



Phyllis Shiller, Laboratory Director

November 08, 2013

## Sample Criteria Exceedences Report

Requested Criteria: GAM, RC

GBF65725 - TIGHE

State: CT

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
BF65728	\$8100SMR	Benz(a)anthracene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	1100	300	1000	1000	ug/Kg
BF65728	\$8100SMR	Benz(a)anthracene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	1100	300	1000	1000	ug/Kg
BF65728	\$8100SMR	Chrysene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	1100	300	1000	1000	ug/Kg
BF65728	\$8100SMR	Benzo(b)fluoranthene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	1300	300	1000	1000	ug/Kg
BF65728	\$8100SMR	Benzo(b)fluoranthene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	1300	300	1000	1000	ug/Kg
BF65729	PB-SM	Lead	CT / INORGANIC SUBSTANCES / RES DEC (mg/kg)	1290	3.8	400	400	mg/Kg
BF65733	\$8100SMR	Benz(a)anthracene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	1400	250	1000	1000	ug/Kg
BF65733	\$8100SMR	Benz(a)anthracene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	1400	250	1000	1000	ug/Kg
BF65733	\$8100SMR	Chrysene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	1400	250	1000	1000	ug/Kg
BF65733	\$8100SMR	Benzo(b)fluoranthene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	1600	250	1000	1000	ug/Kg
BF65733	\$8100SMR	Benzo(b)fluoranthene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	1600	250	1000	1000	ug/Kg
BF65733	\$8100SMR	Benzo(a)pyrene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	1200	250	1000	1000	ug/Kg
BF65733	\$8100SMR	Benzo(a)pyrene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	1200	250	1000	1000	ug/Kg
BF65735	\$8100SMR	Phenanthrene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	13000	260	4000	4000	ug/Kg
BF65735	\$8100SMR	Fluoranthene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	28000	260	5600	5600	ug/Kg
BF65735	\$8100SMR	Pyrene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	22000	260	4000	4000	ug/Kg
BF65735	\$8100SMR	Benz(a)anthracene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	16000	260	1000	1000	ug/Kg
BF65735	\$8100SMR	Benz(a)anthracene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	16000	260	1000	1000	ug/Kg
BF65735	\$8100SMR	Chrysene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	14000	260	1000	1000	ug/Kg
BF65735	\$8100SMR	Benzo(b)fluoranthene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	17000	260	1000	1000	ug/Kg
BF65735	\$8100SMR	Benzo(b)fluoranthene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	17000	260	1000	1000	ug/Kg
BF65735	\$8100SMR	Benzo(k)fluoranthene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	3500	260	1000	1000	ug/Kg
BF65735	\$8100SMR	Benzo(a)pyrene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	13000	260	1000	1000	ug/Kg
BF65735	\$8100SMR	Benzo(a)pyrene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	13000	260	1000	1000	ug/Kg
BF65735	\$8100SMR	Indeno(1,2,3-cd)pyrene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	4900	260	1000	1000	ug/Kg
BF65735	\$8100SMR	Indeno(1,2,3-cd)pyrene	CT / SEMIVOLATILE ORGANIC COMP / RES DEC (mg/kg	4900	260	1000	1000	ug/Kg
BF65735	\$8100SMR	Benzo(ghi)perylene	CT / SEMIVOLATILE ORGANIC COMP / GA/GAA PMC (m	4500	260	4200	4200	ug/Kg
BF65735	\$ETPH_SMR	Ext. Petroleum HC	CT / PESTICIDES, PCB's, TPH, a / GA/GAA PMC (mg/kg)	580	280	500	500	mg/Kg
BF65735	\$ETPH_SMR	Ext. Petroleum HC	CT / PESTICIDES, PCB's, TPH, a / RES DEC (mg/kg)	580	280	500	500	mg/Kg

Phoenix Laboratories does not assume responsibility for the data contained in this report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



# Reasonable Confidence Protocol Laboratory Analysis QA/QC Certification Form

**Laboratory Name:** Phoenix Environmental Labs, Inc. **Client:** TIGHE

**Project Location:** RECORD JOURNAL **Project Number:**

**Laboratory Sample ID(s):** BF65725, BF65726, BF65727, BF65728, BF65729, BF65730, BF65731, BF65732, BF65733, BF65734, BF65735, BF65736, BF65737, BF65738

**Sampling Date(s):** 10/18/2013

**RCP Methods Used:**


1311/1312     6010     7000     7196     7470/7471     8081     EPH     TO15  
 8082     8151     8260     8270     ETPH     9010/9012     VPH

1.	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method specific Reasonable Confidence Protocol documents?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1a.	Were the method specified preservation and holding time requirements met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1b.	EPH and VPH methods only: Was the VPH or EPH method conducted without significant modifications (see section 11.3 of respective RCP methods)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
2.	Were all samples received by the laboratory in a condition consistent with that described on the associated Chain-of-Custody document(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3.	Were samples received at an appropriate temperature (< 6 Degrees C)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
4.	Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? See Section: VOA Narration.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5a.	Were reporting limits specified or referenced on the chain-of-custody?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5b.	Were these reporting limits met?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
6.	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
7.	Are project-specific matrix spikes and laboratory duplicates included in the data set?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA

**Note:** For all questions to which the response was "No" (with the exception of question #5a, #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or 1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

**I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete.**

Authorized  
Signature: \_\_\_\_\_



Date: Friday, November 08, 2013  
Printed Name: Greg Lawrence  
Position: Assistant Lab Director



**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
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# RCP Certification Report

November 08, 2013

SDG I.D.: GBF65725

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8270 Semi-volatile Organics:

Only the PAH constituents are reported as requested on the chain-of-custody. Fro sample ID BF65735 - Due to the concentration of target compounds not all of the requested criteria could be achieved.

## ETPH Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

**Instrument:** Au-fid84 10/21/13-1 (BF65727, BF65732)

Initial Calibration (FID84 - ETPH\_13) - The initial calibration curve was within method criteria and had a %RSD less than 30%.

As per section 7.2.3, a discrimination check standard was run and contained the following outliers: none

**Printed Name** Jeff Bucko  
**Position:** Chemist  
**Date:** 10/21/2013

**Instrument:** Au-fid84 10/21/13-2 (BF65726, BF65733, BF65734, BF65736, BF65737, BF65738)

Initial Calibration (FID84 - ETPH\_13) - The initial calibration curve was within method criteria and had a %RSD less than 30%.

As per section 7.2.3, a discrimination check standard was run and contained the following outliers: C30, C36

**Printed Name** Jeff Bucko  
**Position:** Chemist  
**Date:** 10/21/2013

**Instrument:** Au-xl2 10/21/13-2 (BF65728, BF65729, BF65735)

Initial Calibration (FID1 - ETPH\_1) - The initial calibration curve was within method criteria and had a %RSD less than 30%.

As per section 7.2.3, a discrimination check standard was run and contained the following outliers: C36

**Printed Name** Jeff Bucko  
**Position:** Chemist  
**Date:** 10/21/2013



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# RCP Certification Report

November 08, 2013

SDG I.D.: GBF65725

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## QC (Site Specific)

----- Sample No: BF65727, QA/QC Batch: 257486 -----

All LCS recoveries were within 60 - 120 with the following exceptions: None.

All MS recoveries were within 50 - 150 with the following exceptions: None.

All MSD recoveries were within 50 - 150 with the following exceptions: None.

All MS/MSD RPDs were less than 30% with the following exceptions: None.

A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within cr

## QC (Batch Specific)

----- Sample No: BF65236, QA/QC Batch: 257365 -----

All LCS recoveries were within 60 - 120 with the following exceptions: None.

All LCSD recoveries were within 60 - 120 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

## Mercury Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

**Instrument:** Merlin 10/21/13-1 (BF65726, BF65727, BF65728, BF65729)

The method preparation blank contains all of the acids and reagents as the samples; the instrument blanks do not.

The initial calibration met all criteria including a standard run at or below the reporting level.

All calibration verification standards (ICV, CCV) met criteria.

All calibration blank verification standards (ICB, CCB) met criteria.

The matrix spike sample is used to identify spectral interference for each batch of samples, if within 85-115%, no interference is observed and further action is taken.

**Printed Name** Rick Schweitzer

**Position:** Chemist

**Date:** 10/21/2013



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# RCP Certification Report

November 08, 2013

SDG I.D.: GBF65725

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## QC (Batch Specific)

----- Sample No: BF65664, QA/QC Batch: 257555 -----

All LCS recoveries were within 70 - 130 with the following exceptions: None.

All LCSD recoveries were within 70 - 130 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

----- Sample No: BF65914, QA/QC Batch: 257642 -----

All LCS recoveries were within 70 - 130 with the following exceptions: None.

All LCSD recoveries were within 70 - 130 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

## ICP Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

**Instrument:** Arcos 10/21/13-1 (BF65726, BF65727, BF65728, BF65729, BF65732, BF65733, BF65734, BF65735, BF65736, BF65737, BF65738)

The initial calibration met criteria.

The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.

The continuing calibration blanks were less than the reporting level for the elements reported.

The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.

**Printed Name** Laura Kinnin

**Position:** Chemist

**Date:** 10/21/2013

**Instrument:** Arcos 10/22/13-1 (BF65728, BF65729, BF65738)

The initial calibration met criteria.

The continuing calibration standards met criteria for all the elements reported. The linear range is defined daily by the calibration range.

The continuing calibration blanks were less than the reporting level for the elements reported.

The ICSA and ICSAB were analyzed at the beginning and end of the run and were within criteria.

**Printed Name** Laura Kinnin

**Position:** Chemist

**Date:** 10/22/2013



**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



# RCP Certification Report

November 08, 2013

SDG I.D.: GBF65725

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## QC (Batch Specific)

----- Sample No: BF65049, QA/QC Batch: 257344 -----

All LCS recoveries were within 75 - 125 with the following exceptions: None.

All LCSD recoveries were within 75 - 125 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

## PAH Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

### **Instrument:** Chem07 11/06/13-1 (BF65735)

The DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

If PAH/base neutral were requested, Phoenix utilized a method that contained a shortened list, so some of the compounds in the narrative may non-applicable. Initial Calibration Verification (CHEM07/BN\_1024):

100% of target compounds met criteria.

The following compounds had %RSDs >20%: None.

The following compounds did not meet a minimum response factor of 0.01: None.

Continuing Calibration Verification (CHEM07/1106\_04-BN\_1024):

100% of target compounds met criteria. Internal standards were within the 50%-200% deviation from the initial calibration. The following compounds did not meet % deviation criteria: None.

The following compounds did not meet maximum % deviations: None.

The following compounds did not meet recommended response factors: None.

The following compounds did not meet minimum response factors: None.

**Printed Name** Damien Drobinski

**Position:** Chemist

**Date:** 11/6/2013

### **Instrument:** Chem19 10/18/13-1 (BF65726, BF65727, BF65728, BF65729, BF65733, BF65734, BF65738)

Initial Calibration Verification (CHEM19/BN\_1007):

100% of target compounds met criteria.

The following compounds had %RSDs >20%: None.

The following compounds did not meet a minimum response factor of 0.01: None.

Continuing Calibration Verification (CHEM19/1018\_04-BN\_1007):

100% of target compounds met criteria. Internal standards were within the 50%-200% deviation from the initial calibration. The following compounds did not meet % deviation criteria: None.

The following compounds did not meet maximum % deviations: None.

The following compounds did not meet recommended response factors: None.

The following compounds did not meet minimum response factors: None.



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# RCP Certification Report

November 08, 2013

SDG I.D.: GBF65725

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**Printed Name** Damien Drobinski  
**Position:** Chemist  
**Date:** 10/18/2013

**Instrument:** Chem19 10/20/13-1 (BF65732, BF65735, BF65737)

Initial Calibration Verification (CHEM19/BN\_1007):  
100% of target compounds met criteria.  
The following compounds had %RSDs >20%: None.  
The following compounds did not meet a minimum response factor of 0.01: None.

Continuing Calibration Verification (CHEM19/1020\_02-BN\_1007):  
100% of target compounds met criteria. Internal standards were within the 50%-200% deviation from the initial calibration. The following compounds did not meet % deviation criteria: None.  
The following compounds did not meet maximum % deviations: None.  
The following compounds did not meet recommended response factors: None.  
The following compounds did not meet minimum response factors: None.

**Printed Name** Damien Drobinski  
**Position:** Chemist  
**Date:** 10/20/2013

## QC (Site Specific)

----- Sample No: BF65738, QA/QC Batch: 257494 -----

All LCS recoveries were within 30 - 130 with the following exceptions: None.

All LCSD recoveries were within 30 - 130 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

All MS recoveries were within 30 - 130 with the following exceptions: None.

All MSD recoveries were within 30 - 130 with the following exceptions: None.

All MS/MSD RPDs were less than 30% with the following exceptions: None.

A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within cr

## PCB Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

**Instrument:** Au-ecd8 10/21/13-1 (BF65730, BF65731)

8082 Narration:

The initial calibration RSD for the compound list was less than 15% except for the following compounds: none



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# RCP Certification Report

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The continuing calibration standards were within acceptance criteria except for the following compounds: none

**Printed Name** Adam Werner  
**Position:** Chemist  
**Date:** 10/21/2013

## QC (Site Specific)

----- Sample No: BF65731, QA/QC Batch: 257500 -----

All LCS recoveries were within 40 - 140 with the following exceptions: None.

All LCSD recoveries were within 40 - 140 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

All MS recoveries were within 40 - 140 with the following exceptions: None.

All MSD recoveries were within 40 - 140 with the following exceptions: None.

All MS/MSD RPDs were less than 30% with the following exceptions: None.

A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within cr

## SVOA Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? Yes.

**Instrument:** Chem06 11/07/13-1 (BF65735)

The DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control. Initi:

Calibration Verification (CHEM06/SV\_1101):

94% of target compounds met criteria.

The following compounds had %RSDs >20%: 4,6-Dinitro-2-methylphenol (21%), Benzoic Acid (22%), Carbazole (21%),

Hexachlorocyclopentadiene (21%), Pentachlorophenol (21%)

The following compounds did not meet a minimum response factor of 0.01: None.

Continuing Calibration Verification (CHEM06/1107\_04-SV\_1101):

98% of target compounds met criteria. Internal standards were within the 50%-200% deviation from the initial calibration. The following compounds did not meet % deviation criteria: Atrazine (80%)[30%], Benzaldehyde (31%)[30%]

The following compounds did not meet maximum % deviations: Atrazine (80%)[40%]

The following compounds did not meet recommended response factors: 2-nitrophenol (.063)[0.1], Atrazine (.002)[0.01], Hexachlorobenzene (.071)[0.1]

The following compounds did not meet minimum response factors: Atrazine (.002)[0.01]

**Printed Name** Damien Drobinski  
**Position:** Chemist  
**Date:** 11/7/2013



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# RCP Certification Report

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SDG I.D.: GBF65725

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**Instrument:** Chem09 10/18/13-1 (BF65736, BF65738)

The DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control. Initial Calibration Verification (CHEM09/SV\_1014):

97% of target compounds met criteria.

The following compounds had %RSDs >20%: 2,4-Dinitrophenol (28%), Carbazole (23%), Pentachlorophenol (29%)

The following compounds did not meet a minimum response factor of 0.01: 4-Nitrophenol (.009)

Continuing Calibration Verification (CHEM09/1018\_04-SV\_1014):

100% of target compounds met criteria. Internal standards were within the 50%-200% deviation from the initial calibration. The following compounds did not meet % deviation criteria: None.

The following compounds did not meet maximum % deviations: None.

The following compounds did not meet recommended response factors: 4-nitrophenol (.008)[0.01], Acenaphthene (.848)[0.9], Hexachlorobenzene (.083)[0.1]

The following compounds did not meet minimum response factors: 4-nitrophenol (.008)[0.01]

**Printed Name** Damien Drobinski

**Position:** Chemist

**Date:** 10/18/2013

**Instrument:** Chem09 11/07/13-1 (BF65735)

The DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control. Initial Calibration Verification (CHEM09/SV\_1028):

100% of target compounds met criteria.

The following compounds had %RSDs >20%: None.

The following compounds did not meet a minimum response factor of 0.01: None.

Continuing Calibration Verification (CHEM09/1107\_02-SV\_1028):

96% of target compounds met criteria. Internal standards were within the 50%-200% deviation from the initial calibration. The following compounds did not meet % deviation criteria: 2,4-dinitrophenol (36%)[30%], Aniline (37%)[30%], Atrazine (80%)[30%], Pentachlorophenol (49%)[30%]

The following compounds did not meet maximum % deviations: Atrazine (80%)[40%], Pentachlorophenol (49%)[40%]

The following compounds did not meet recommended response factors: 2-methylphenol (o-cresol) (.585)[0.7], Atrazine (.002)[0.01], Bis(2-chloroethoxy)methane (.223)[0.3], Bis(2-chloroethyl)ether (.557)[0.7], Chrysene (.695)[0.7], Hexachlorobenzene (.092)[0.1], Phenol (.713)[0.3]

The following compounds did not meet minimum response factors: Atrazine (.002)[0.01]

**Printed Name** Damien Drobinski

**Position:** Chemist

**Date:** 11/7/2013

**Instrument:** Chem12 10/21/13-1 (BF65738)

The DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control. Initial Calibration Verification (CHEM12/sv\_1015):

94% of target compounds met criteria.

The following compounds had %RSDs >20%: 2,4-Dinitrophenol (25%), 4-Chloroaniline (22%), Aniline (60%), Atrazine (24%), Carbazole (3)

The following compounds did not meet a minimum response factor of 0.01: None.





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# RCP Certification Report

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Continuing Calibration Verification (CHEM12/1021\_02-sv\_1015):  
98% of target compounds met criteria. Internal standards were within the 50%-200% deviation from the initial calibration. The following compounds did not meet % deviation criteria: 4-chloroaniline (-42%)[30%], Aniline (-31%)[30%]  
The following compounds did not meet maximum % deviations: 4-chloroaniline (-42%)[40%]  
The following compounds did not meet recommended response factors: 2-nitrophenol (.060)[0.1], Hexachlorobenzene (.084)[0.1]  
The following compounds did not meet minimum response factors: None.

**Printed Name** Damien Drobinski  
**Position:** Chemist  
**Date:** 10/21/2013

## QC (Site Specific)

----- Sample No: BF65738, QA/QC Batch: 257494 -----

All LCS recoveries were within 30 - 130 with the following exceptions: None.

All LCSD recoveries were within 30 - 130 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

All MS recoveries were within 30 - 130 with the following exceptions: None.

All MSD recoveries were within 30 - 130 with the following exceptions: None.

All MS/MSD RPDs were less than 30% with the following exceptions: None.

A matrix effect is suspected when a MS/MSD recovery is outside of criteria. No further action is required if LCS/LCSD compounds are within cr

## VOA Narration

Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents achieved? No.

**QC Batch 257685 (Samples: BF65725): -----**

**The LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, Naphthalene)**

**Instrument:** Chem15 10/21/13-2 (BF65728)

Initial Calibration Verification (CHEM15/RCPS\_1014#1):  
97% of target compounds met criteria.  
The following compounds had %RSDs >20%: Acetone (23%), Chloroethane (23%)  
The following compounds did not meet a minimum response factor of 0.01: None.

Continuing Calibration Verification (CHEM15/1021B36-RCPS\_1014#1):  
100% of target compounds met criteria. Internal standards were within the 50%-200% deviation from the initial calibration. The following compounds did not meet % deviation criteria: None.  
The following compounds did not meet maximum % deviations: None.  
The following compounds did not meet recommended response factors: None.  
The following compounds did not meet minimum response factors: None.



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# RCP Certification Report

November 08, 2013

SDG I.D.: GBF65725

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**Printed Name** Harry Mullin  
**Position:** Chemist  
**Date:** 10/21/2013

**Instrument:** Chem17 10/18/13-1 (BF65725)

Initial Calibration Verification (CHEM17/RCPS\_1016):

92% of target compounds met criteria.

The following compounds had %RSDs >20%: Bromoform (27%), Hexachlorobutadiene (21%), Naphthalene (23%), Styrene (21%), trans-1,3-Dichloropropene (21%), trans-1,4-Dichloro-2-butene (30%)

The following compounds did not meet a minimum response factor of 0.01: None.

Continuing Calibration Verification (CHEM17/1018S02-RCPS\_1016):

100% of target compounds met criteria. Internal standards were within the 50%-200% deviation from the initial calibration. The following compounds did not meet % deviation criteria: None.

The following compounds did not meet maximum % deviations: None.

The following compounds did not meet recommended response factors: None.

The following compounds did not meet minimum response factors: Bromoform (.079)[SPCC: 0.1]

**Printed Name** Keith Aloisa  
**Position:** Chemist  
**Date:** 10/18/2013

**QC Comments:** QC Batch 257685 10/18/13 (BF65725)

The MS/MSD are not reported for this batch.

**QC (Batch Specific)**

----- Sample No: BF65647, QA/QC Batch: 257685 -----

All LCS recoveries were within 70 - 130 with the following exceptions: None.

All LCSD recoveries were within 70 - 130 with the following exceptions: 1,2,3-Trichlorobenzene(144%), 1,2,4-Trichlorobenzene(137%), Naphthalene(146%)

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

----- Sample No: BF66255, QA/QC Batch: 257770 -----

All LCS recoveries were within 70 - 130 with the following exceptions: None.

All LCSD recoveries were within 70 - 130 with the following exceptions: None.

All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

**Temperature Narration**



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# RCP Certification Report

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SDG I.D.: GBF65725

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The samples in this delivery group were received at 2°C.  
(Note acceptance criteria is above freezing up to 6°C)

Cooler: Yes  No   
 Coolant: IPK  ICE  No   
 Temp 2 °C Pg 1 of 2

**CHAIN OF CUSTODY RECORD**

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040  
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 Client Services (860) 645-8726



Contact Options:  
 Fax:   
 Phone: 603-704-4756  
 Email: phoenix@phoenixlabs.com  
 Project P.O.: B-0280

Project: Record Journal  
 Report to: Jill Libby  
 Invoice to: TJB woffield

Customer: Tighe + Bond  
 Address: 219 Court St  
Manchester CT 06157

PHOENIX USE ONLY	Client Sample - Information - Identification				Analysis Request
SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	
65725	Trip Blank	W	10/14/13	8:00	
65726	B-1(0-2')	S	10/18/13	10:00	
65727	B-2(H-6')	S	10/18	10:00	
65728	B-3(H-6')	S	10/18	10:10	
65729	B-4(0-2')	S	10/18	10:30	
65730	B-5(0-6')	S	10/18	10:50	
65731	B-6(0-6')	S	10/18	11:00	
65732	B-7(5-10')	S	10/18	12:00	
65733	B-8(4.5-5')	S	10/18	13:00	
65734	B-9(6-7')	S	10/18	13:30	
65735	B-10(0-2')	S	10/18	9:05	
65736	DUP-BJ	S	10/18	9:05	

Analysis Request: VOCs, PCBs, Metals via EPA Method 8160A

Relinquished by: [Signature] Accepted by: [Signature]

Date: 10/18/13 Time: 15:15

RI:  Direct Exposure (Residential)  GW  Other

CT:  RCP Cert  GW Protection  SW Protection  GA Mobility  GB Mobility  Residential DEC  I/C DEC  Other

MA:  MCP Certification  GW-1  GW-2  GW-3  S-1  S-2  S-3  MWRA eSMART  Other

Data Format:  Excel  PDF  GIS/Key  EQUIS  Other

Data Package:  Tier II Checklist  Full Data Package\*  Phoenix Std Report  Other

Turnaround:  1 Day\*  2 Days\*  3 Days\*  Standard  Other

Comments, Special Requirements or Regulations: B-5 + B-6 for PCBs only

State where samples were collected: CT

\* SURCHARGE APPLIES

