

901 Beach Road, Fairfield, CT

Investigation Report

Town of Fairfield

September 2022

Tighe&Bond

September 20, 2022

Jade Barber
Department of Energy and Environmental Protection
Bureau of Water Protection and Land Reuse
Remediation Division
79 Elm Street
Hartford, CT 06106-5127

Re: **901 Beach Road
Investigation Report
Julian Fill Projects, Fairfield, CT**

Dear Ms. Barber:

On behalf of the Town of Fairfield, enclosed is the Investigation Report for the investigation of Julian Fill at 901 Beach Road in Fairfield, CT. This report is being submitted in accordance with the requirements of Consent Order 2020002DEEP, dated October 26, 2020 between the Town of Fairfield and the CT Department of Energy and Environmental Protection (CTDEEP).

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

Very truly yours,

TIGHE & BOND, INC.



James T. Olsen, PG, LEP#178
Project Director, LEP of Record

cc: Brenda Kupchick, First Selectwoman – Town of Fairfield
Thomas Bremer – Chief Administration Officer – Town of Fairfield
Michael Miller – Wiggin & Dana

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Section 1

Introduction

By way of background, in 2019, the Town of Fairfield Health Department began its evaluation of the potential use of “Julian Fill”¹ at locations within the Town’s municipal boundaries during 2013 – 2016. Town Health Department staff gathered relevant information from communications with staff from the Town Public Schools and Parks and Recreation, Public Works, Conservation and Engineering Departments. In addition, Town Health Department staff obtained and reviewed over 180 invoices / tickets purportedly showing the removal of “Julian Fill” from the Town’s former Reclamation Yard, then operated by Julian Development, LLC d/b/a Julian Enterprises, to identify locations within the Town’s municipal boundaries where Julian Fill potentially was placed during the relevant time. Town Health Department staff also gleaned information from certain Town resident inquiries about various projects occurring in Town rights of way and easements during this time. From these sources of information, Town Health Department staff developed and now maintains a list of locations where it is believed that Julian Fill could have been improperly placed. The pedestrian entrance to Jennings Beach at 901 Beach Road was identified as a location where Julian Fill was potentially placed.

The following is the Investigation Report summarizing investigation of “Julian Fill” at 901 Beach Road in Fairfield, Connecticut (Site). According to the Town of Fairfield, Julian Fill, identified as 1.25-inch crushed stone, was used to replenish the existing crushed stone walkway at the Site. Investigations were completed in January 2020 and August 2021. On October 26, 2020, the Connecticut Department of Energy and Environmental Protection (CTDEEP) and the Town executed Consent Order 2020002DEEP to address violations associated with the Julian Fill used throughout Fairfield. The investigations completed at the Site were in accordance with the requirements of the Consent Order. Based on the results of the investigation, the Julian Fill material reportedly used at the Site met the definition of “clean fill” and remediation of the Julian Fill was not required.

¹ This term refers to the materials that were processed by Julian Development, LLC d/b/a Julian Enterprises at the Town’s former Reclamation Yard, located at 1 Richard White Way, Fairfield, Connecticut, circa 2013-2016 and improperly placed at certain Town locations.

Section 2

Site Description

2.1 Site Location, Improvements, and History

The Site is located at 901 Beach Road, which is at the intersection of Fairfield Beach Road and Beach Road in Fairfield, Connecticut and consists of a pedestrian walkway that provides access to the southern end of Jennings Beach and decorative landscaping. A Site location map is provided as Figure 1 (Appendix A). A Site plan is provided as Figure 2.

Based upon the investigation described in Section 1 above, approximately 2.48 tons of Julian Fill consisting of 1.25-inch crushed stone were used to replenish the existing crushed stone walkway in August 2016.

2.2 Groundwater Quality Classification

According to the CTDEEP Water Quality Classifications Map of Fairfield, Connecticut (October 2018), groundwater at 901 Beach Road is classified as GB. Groundwater classified as GB is presumed not suitable for drinking without treatment.

2.3 Julian Fill Usage

Based on research conducted by the Town, information provided by Town personnel (including George Kaczegowicz, General Supervisor of Streets), field observations conducted by Tighe & Bond, and confirmatory sampling performed by Tighe & Bond, Julian Fill was used to replenish the crushed stone walkway at 901 Beach Road. Based on the Town's research, consisting of a review of Fairfield Public Works work tickets and Julian Enterprises invoices and discussions with Town Public Works and Conservation personnel, approximately 2.48 tons of Julian Fill consisting of 1.25-inch crushed stone were placed at the Site in August 2016. The location at the Site where the Julian Fill was placed is shown in Figure 2.

Section 3

Site Investigations

3.1 Sampling Protocols

Tighe & Bond conducted investigations at 901 Beach Road in January 2020 and August 2021. The investigations at the Site were completed in accordance with the requirements of the Consent Order. Samples were collected at 20-foot spacing overlaying the Julian Fill area, as shown on Figure 3. A total of 14 hand test pits were advanced as part of these investigations.

During the Site investigations, 16 soil samples (including 2 duplicates) were collected from among the hand test pits and analyzed for COCs known to be present in Julian Fill including extractable total petroleum hydrocarbons (ETPH), polycyclic aromatic hydrocarbons (PAHs), arsenic, lead, polychlorinated biphenyls (PCBs), and pesticides. Certain samples were additionally analyzed for PAHs and pesticides using the Synthetic Precipitation Leaching Procedure (SPLP) to evaluate leachability. During sampling, the subject material was also observed for the presence of asbestos containing materials (ACM), which is also known to be a constituent of Julian Fill. Tighe & Bond did not identify any potential ACM (PACM).

Of the 16 samples collected, 3 were collected within the reported Julian Fill use location, the crushed stone walkway. The remaining 14 samples were collected from the adjacent landscaped areas to evaluate the potential use of Julian Fill outside of the crushed stone walkway. It was later confirmed by the Town of Fairfield that the Julian Fill was only used within the crushed stone walkway; as such, these samples are considered background.

Soil samples were collected in accordance with CTDEEP guidance and Tighe & Bond standard operating procedures (SOPs) and submitted under proper chain-of-custody to the receiving laboratory. Hand test pit equipment was decontaminated between sampling locations. All samples were collected with dedicated nitrile gloves and placed into appropriate laboratory-supplied containers, chilled on ice, and were extracted and analyzed within the method specific holding time. Duplicate samples were collected on a frequency of one per 20 samples or 5 percent. A discussion of Quality Control/Quality Assurance for sampling and laboratory analyses is provided in Section 7.

After collection, sampling points were located in the field using a field tablet and R1 GPS locating unit. This data was subsequently uploaded into Tighe & Bond's GIS program for mapping and presentation.

3.2 Laboratory Analyses

Laboratory analyses were conducted in accordance with CTDEEP's Reasonable Confidence Protocols (RCPs) by Phoenix Environmental Laboratory (Phoenix) of Manchester, CT. Analytical methods that were followed are listed on Table 1 (Appendix B) for each COC. A Data Quality Assessment / Data Usability Evaluation (DQA/DUE) was completed for the data to ensure that Quality Control / Quality Assurance (QA/QC) was maintained and is presented in Section 7.

Laboratory data was received from the laboratory in electronic data deliverable (EDD) format for direct upload into Tighe & Bond's EnviroData data management program for data post processing, comparison to cleanup criteria, and export to the GIS mapping program.

Section 4

Regulatory Criteria

The Remediation Standard Regulations (RSRs) are set forth in Sections 22a-133k-1 through 22a-133k-3 of the RCSA, adopted January 1, 1996 and amended on June 27, 2013 and February 16, 2021. The RSRs contain criteria for the remediation of soil and groundwater. Further, in accordance with the Consent Order, Julian Fill that is determined to meet the definition of “solid waste” must be removed to satisfy Connecticut’s Solid Waste Management requirements, Chapter 446d of the General Statutes and RCSA §§ 22a-209-1, et seq. If the material is determined to be “clean fill,” however, Connecticut’s Solid Waste Management requirements do not apply to the location that is the subject of investigation – that is, because the material that was identified to be Julian Fill is not in fact “solid waste.”

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.

4.1 Direct Exposure Criteria

CTDEEP has established specific numeric exposure criteria for a broad range of contaminants in soil. The DEC applies to accessible soil to a depth of 15 feet. 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 feet below the ground surface, an environmental use restriction (EUR)² is in effect with respect to the subject release area in accordance with the RSRs. For PCBs, a maximum concentration of 10 milligrams per kilogram (mg/Kg) can remain in soils to be considered inaccessible, provided that an ELUR is in effect the subject area complies with the other applicable DEC provisions in the RSRs. Inaccessible soil generally means polluted soil, which is the following:

- More than 4 feet below the ground surface;
- More than 2 feet below a paved surface comprised of a minimum of three inches of bituminous pavement or concrete;
- Beneath a paved surface comprised of a minimum of three inches of bituminous concrete or concrete polluted only with concentrations of semi-volatile substances or petroleum hydrocarbons, normal constituents of bituminous concrete, in excess of applicable DEC and metals concentrations that are less than two times the applicable DEC;
- Beneath an existing building;

² “Environmental Use Restriction” is defined to include both a Notice of Activity and Use Limitation (NAUL) and an Environmental Land Use Restriction (ELUR). Conn. Gen. Stat. § 22a-133n.

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

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 locations to which the RSRs apply are required to be remediated to the residential criteria. If the industrial/commercial land use criteria are applicable and used, an EUR (NAUL or ELUR) is required to be in effect in accordance with the RSRs.

4.2 Pollutant Mobility Criteria

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

The applicable PMC for the Site is the PMC for a "GB" classified area. The PMC generally applies to all soil within the unsaturated zone, which represents the soil located from the ground surface to the seasonal high-water table in "GB" classified areas. The criteria do not apply to environmentally isolated soils that are polluted with substances other than VOCs provided an EUR 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 on-going contamination. An EUR 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 in soil, other than an inorganic substance or PCBs, 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 (default PMC). 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.

In addition, the RSRs provide an alternate method for compliance with the PMC. For polluted soils within a GB groundwater area, an SPLP or TCLP concentration of a substance in soil may be remediated to ten-times the groundwater protection criteria (GWPC).

Section 5

Investigation Results

A summary of the investigations of the Julian Fill at the 901 Beach Road in January 2020 and August 2021 is as follows:

Julian Fill Investigation

According to Town of Fairfield research, Julian Fill was only used within the area of the crushed stone walkway. Soil samples BR 1 to BR 3 were collected from this area and the results are summarized below:

- ETPH was not detected at concentrations above the laboratory reporting limits in all samples analyzed.
- Arsenic was detected at concentrations ranging from 0.97 mg/Kg to 2.09 mg/Kg, which are all below the RES DEC of 10 mg/Kg.
- Lead was detected at concentrations ranging from 9.24 mg/Kg to 17.3 mg/Kg, which are all below the RES DEC of 400 mg/Kg.
- PCBs were not detected at concentrations above the laboratory reporting limits in all samples analyzed.
- Pesticides were not detected at concentrations above the laboratory reporting limits in all samples analyzed.
- PAHs were not detected at concentrations above the laboratory reporting limits in all samples analyzed.
- PACMs were not identified.

Background Sampling

As the reported area of Julian Fill use was not well-defined at the time of the investigations, soil samples were collected from adjacent landscaped areas. Further research conducted by the Town confirmed that Julian Fill was not used at these landscaped areas. As such, the samples collected from the landscaped areas are representative of background conditions. Soil samples BR 4 to BR 8 and BR 101 to BR 106 were collected from the landscaped areas and the results are summarized below:

- ETPH was not detected at concentrations above the laboratory reporting limits in all samples analyzed.
- Arsenic was detected at concentrations ranging from 2.89 mg/Kg to 5.88 mg/Kg, which are all below the RES DEC of 10 mg/Kg.
- Lead was detected at concentrations ranging from 33.5 mg/Kg to 93.9 mg/Kg, which are all below the RES DEC of 400 mg/Kg.
- PCBs were not detected at concentrations above the laboratory reporting limits in all samples analyzed.
- Pesticides were detected in each sample analyzed with concentrations of total DDT and/or chlordane above the numerical GB PMC in soil samples BR 6 (0-1') and BR 7 (0-1'). Representative SPLP testing that was completed indicated that pesticides

do not leach at concentrations above the laboratory reporting limits and therefore complied with the optional GB PMC (i.e., ten-times GWPC).

- PAHs were detected in each sample analyzed with concentrations of several individual PAHs above the RES DEC and/or numerical GB PMC in soil samples BR 6 (0-1'), BR 7 (0-1'), BR 104 (0-1'), BR 105 (0-1'), and BR 106 (0-1'). Representative SPLP testing that was completed indicated that PAHs do not leach at concentrations above the laboratory reporting limits and therefore complied with the optional GB PMC (i.e., ten-times GWPC).
- PACMs were not identified.

A summary of investigation and background soil sampling analytical data is provided in Table 1, along with a comparison of soil data to the RSRs described in the previous section. Laboratory data reports are provided in Appendix D. The locations of the soil samples are provided on Figures 3.

Based on the Town's research and Tighe & Bond's investigation, the extent of Julian Fill is shown on Figures 2 and 3 and includes the crushed stone walkway at 901 Beach Road. The Julian Fill consists of crushed stone cover underlain with brown sand and some silt. An asphalt layer was identified at the locations of BR 1 and BR 2 at depths of 0.5 feet and 1 foot, respectively. Representative photographs are provided in Appendix C.

The results of the Julian Fill investigation samples complied with the RSRs, and as such met the definition of "clean fill". Remediation of the area where Julian Fill was reportedly used was not required.

Section 6

Conceptual Site Model

An initial conceptual site model (CSM) was submitted to CTDEEP by Tighe & Bond on April 16, 2020 describing COCs that are expected to be encountered during investigation and remediation of locations where Julian Fill was placed. The CSM provided below is intended to supplement the April 16, 2020 CSM, and a similar CSM will be presented for each Julian Fill location as additional data is gathered through investigation and remediation activities required in connection with Consent Order 2020002DEEP. The following CSM is specifically tailored for the Site-specific conditions at 901 Beach Road.

6.1 Description of the Site, Environments, and AOCs

A description of the Site, environments, and AOCs is provided in Section 2. There is one AOC, the area where Julian Fill was reportedly used to replenish the existing crushed stone walkway at 901 Beach Road.

Samples collected from background locations (i.e., landscaped areas) exhibited concentrations of arsenic, lead, PAHs, and pesticides. Concentrations of PAHs were determined to be above the RES DEC. These detections/concentrations are attributed to the historical placement of fill in the area (prior to Julian Fill use).

6.2 Nature and Extent of Contamination at the Site

As discussed in Section 2.3, based on the Town's research, approximately 2.48 tons of Julian Fill consisting of 1.25-inch crushed stone were used to replenish the existing crushed stone walkway at 901 Beach Road in August 2016. Investigations completed at the Site indicated that Julian Fill did not contain concentrations of COCs above applicable RSR criteria; as such, there is no risk posed with human exposure to Julian Fill at the Site and remediation was not required.

As previously discussed, certain background samples contained concentrations of PAHs above the RES DEC. These detections/concentrations are attributed to the historical placement of fill in the area (prior to Julian Fill use).

6.3 Potential Release Mechanisms and Migration Pathways at the Site

Tighe & Bond has investigated the locations where Julian Fill was reportedly used at 901 Beach Road. Soil samples collected from the Site did not contain concentrations of COCs above applicable RSR criteria. In addition, Tighe & Bond did not observe any migration pathways due to soil erosion or overland flow.

Background sampling identified concentrations of PAHs and pesticides above the numerical GB PMC. SPLP testing that was completed on representative samples indicated that these COCs do not leach at concentrations above the laboratory reporting limits and therefore comply with the optional GB PMC (i.e., ten-times GWPC).

Section 7 Quality Assurance / Quality Control

During the investigation activities conducted by Tighe & Bond, sufficient Quality Assurance/Quality Control (QA/QC) procedures were followed to conduct a Data Quality Assessment (DQA) and Data Usability Evaluation (DUE), as required by the CTDEEP Laboratory QA/QC DQA & DUE Guidance Document, dated May 2009, revised December 2010. The following provides a discussion of the DQA/DUE conducted for the data obtained by Tighe & Bond.

Based on the information provided in this section, it is Tighe & Bond's opinion that the site-specific Data Quality Objectives (DQOs) have been met.

A summary of results from QA/QC samples, including duplicate samples are included in the sections below.

7.1 Data Quality Objectives

DQOs for the environmental investigation activities were developed to ensure that a sufficient quantity and quality of analytical data were obtained in order to:

- Determine if a release has taken place;
- Determine if contamination is present in the environment at concentrations exceeding the applicable RSR criteria; and
- Support a defensible conclusion that the horizontal and vertical extent of contamination has been adequately delineated.

The soil samples obtained during Tighe & Bond's investigation activities were analyzed per the RCP methods to demonstrate sufficient quality of data.

7.2 DQA/DUE for Investigation Results

The investigation data was provided within two laboratory reports from Phoenix. Investigation samples were collected in January 2020 and August 2021. These samples were analyzed using the RCP methods. The RCP Case Narratives of the two laboratory reports indicates that minor QA/QC nonconformities were identified and are summarized below. Laboratory data reports are provided in Appendix D. The following briefly summarizes the findings of the DUE; see Table 2 for details:

- The QA/QC Certification Forms for each of the two laboratory reports indicate that each report met the requirements for "Reasonable Confidence"; however, only the PAH constituents and limited metals were reported as requested on the chain-of-custody which is not in accordance with Reasonable Confidence methods.
- Proper Chain of Custody protocols were utilized for all laboratory reports, including recordation of signatures, dates, and times documenting custody changes.
- All samples were received by the laboratory below 6°C.
- All reporting limits were met.

- All samples were analyzed within holding times for the various parameters.
- COCs associated with the site were not detected in any of the laboratory blanks.
- All laboratory control samples (LCS) were within the method specific limits for COCs associated with the Site except for the following:
 - For lab report GCE99876, the LCS/LCSD recovery or RPD values were outside method criteria for CT ETPH, PCBs, and PAHs. These constituents were not detected at concentrations above the laboratory reporting limits and/or other QC data was within acceptable limits; therefore, no significant bias is suspected.
- All surrogates were within acceptable limits for the various parameters, except:
 - For lab report GCE99876, the LCS/LCSD recovery or RPD values was outside method criteria for one PCB surrogate (DCBP) and one PAH surrogate (nitrobenzene-d5). The other surrogates and other QC data was within acceptable limits; therefore, no significant bias is suspected.
- Matrix spike and matrix spike duplicates were within method specific limits for COCs associated with the Site, except:
 - For lab report GCE99876, the MS/MSD RPD exceeds the method criteria for one pesticide (d-BHC). This analyte was not detected at concentrations above the laboratory reporting limits and other QC data was within acceptable limits; therefore, no significant bias is suspected.
- Other significant QA/QC non-conformities were not noted.

7.3 Duplicate Samples

Field duplicate samples are collected to provide information on data reproducibility. The duplicate samples were obtained by collecting two identical sets of soil samples from a single sample location. The respective duplicate samples were analyzed for the same parameters analyzed in the original sample. The comparison is a measurement of analytical precision, measured as Relative Percent Difference (RPD) as defined within the CTDEEP Laboratory Quality Assurance and Quality Control Guidance Document, dated May 2009, revised December 2010.

During the Julian Fill investigation activities two duplicate samples were collected: BR DUP H (parent sample BR 4) was submitted for analysis of Arsenic, Lead, CT ETPH, PCBs, and PAHs and BR 102D (parent sample BR 102) was submitted for analysis of PAHs. The RPD values were generally less than 25%, except for certain PAH compounds in the BR DUP H duplicate sample. In accordance with the Guidance Document, data reproducibility cannot be evaluated unless the results are at least 4 to 5 times the reporting limits, which the parent and duplicate results are under. As such, based on our data evaluation, the data appear useable for their intended purpose.

Section 8

LEP Opinion

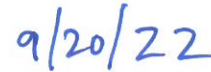
Tighe & Bond conducted investigations of the locations where Julian Fill was reportedly used and underlying soil at the Site in accordance with prevailing standards and guidelines. The COCs associated with the Julian Fill have been identified and the extent and degree of contamination from Julian Fill and associated impacts to underlying soil has been defined.

Based on the Town's research, approximately 2.48 tons of Julian Fill consisting of 1.25-inch crushed stone were used to replenish the existing crushed stone walkway at 901 Beach Road in August 2016. Investigations completed at the Site indicated that the Julian Fill did not contain concentrations of COCs above applicable RSR criteria and therefore met the definition of "clean fill". As such, no remediation was necessary for the areas where Julian Fill was used at the Site.

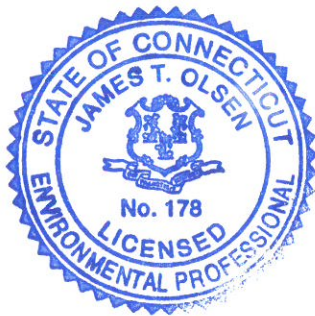
It is the opinion of this LEP that the investigation of the above-described areas of the Site where Julian Fill was previously placed has been completed in accordance with prevailing standards and guidelines and the requirements of Consent Order 2020002DEEP.



James T. Olsen, PG, LEP#178
Project Director, LEP of Record



Date



Section 9 Certification

I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law.



Honorable Brenda Kupchick
First Selectwoman – Town of Fairfield

9-19-22

Date

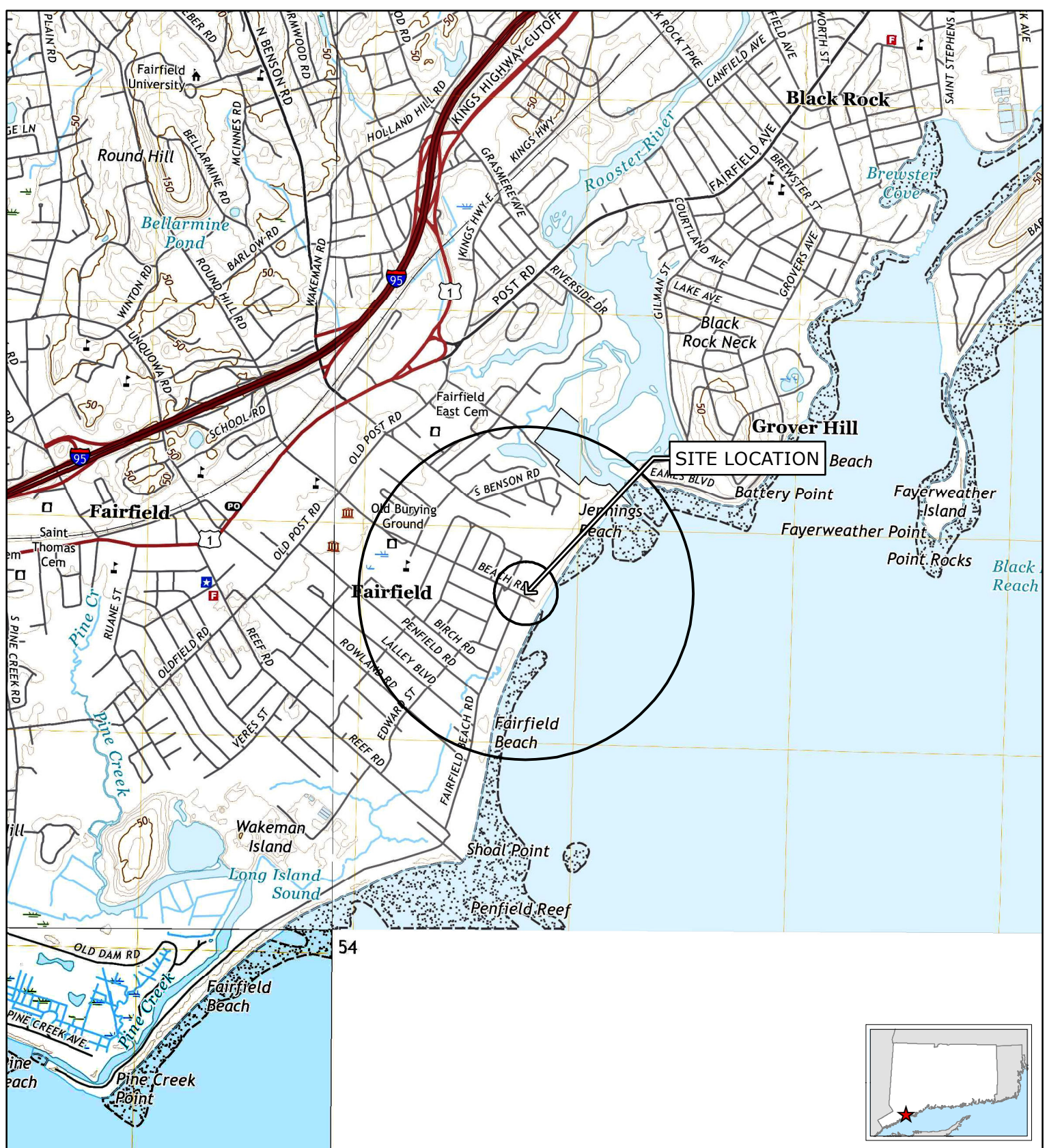


FIGURE 1
SITE LOCATION MAP

901 Beach Road
Fairfield, Connecticut

June 2022

Tighe & Bond

Based on USGS Topographic Map for
Bridgeport, CT Revised 2021. [Site Quad]
Westport, CT Revised 2021.
Bridgeport, CT Revised 1986.
Sherwood Point, CT Revised 2021.
Contour Interval Equals 10 ft.
Circles indicate 500-foot and half-mile radii



1:24,000
0 1,000 2,000
Feet





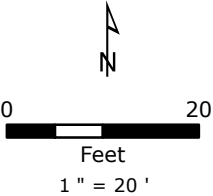
**FIGURE 2
SITE PLAN**

LEGEND

-  Reported Area of Julian Fill Usage
-  Approximate Parcel Boundary

According to the Town of Fairfield research, approximately 2.48 tons of Julian Fill, consisting of 1.25-inch crushed stone, was used at the Jennings Beach Road entrance in 2016.

LOCUS MAP



NOTES

1. Based on ESRI World Imagery Basemap.

**901 Beach Road
Fairfield, Connecticut**





June 2022

Tighe&Bond



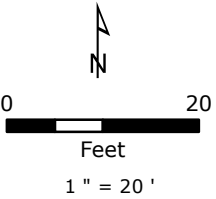
**FIGURE 3
JULIAN FILL
INVESTIGATION
SAMPLING LOCATIONS**

LEGEND

-  Investigation Sample Location
-  PAHs Exceed RES DEC
-  Reported Area of Julian Fill Usage
-  Approximate Parcel Boundary

According to the Town of Fairfield research, approximately 2.48 tons of Julian Fill, consisting of 1.25-inch crushed stone, was used at the Jennings Beach Road entrance in 2016.

LOCUS MAP



NOTES

1. Based on ESRI World Imagery Basemap.
2. Parcels downloaded from CTECO and are approximate.

**901 Beach Road
Fairfield, Connecticut**

July 2022

Tighe&Bond

TABLE 1
Summary of Julian Fill Investigation Analytical Data
901 Beach Road
Fairfield, Connecticut
Last Updated: 07/12/2022 (JLL)

						Background												
Sample ID	CTDEEP RSR		BR 1	BR 2	BR 3	BR 4	BR DUP H	BR 5	BR 6	BR 7	BR 8	BR101	BR102	BR102D	BR103	BR104	BR105	BR106
Sample Depth			0-0.5 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft	0-1 ft
Sample Date	RES	GB	1/7/20	1/7/20	1/7/20	1/7/20	1/7/20	1/7/20	1/7/20	1/7/20	1/7/20	8/24/21	8/24/21	8/24/21	8/24/21	8/24/21	8/24/21	8/24/21
Lab Sample ID	DEC	PMC	CE99876	CE99877	CE99878	CE99879	CE99884	CE99880	CE99881	CE99882	CE99883	CJ12772	CJ12773	CJ12774	CJ12775	CJ12776	CJ12777	CJ12778
CTETPH (mg/Kg)	500	2,500	<52	<56	<52	<59	<290	<59	<310	<290	<280	-	-	-	-	-	-	-
Total Metals 6010D (mg/Kg)																		
Arsenic	10	NA	1.44	0.97	2.09	3.18	3.58	2.89	5.41	5.88	3.93	-	-	-	-	-	-	-
Lead	400	NA	17.3	13.1	9.24	54	66.9	33.5	80.9	93.8	93.9	-	-	-	-	-	-	-
PCBs 8082A (mg/Kg)																		
Total PCBs	1	NA	<0.350	<0.370	<0.340	<0.390	<0.380	<0.390	<0.410	<0.380	<0.370	-	-	-	-	-	-	-
Pesticides 8081B (mg/Kg)																		
4,4-DDD	NE	NE	<0.001	<0.002	<0.001	0.005	0.003	<0.003	0.009	0.012	0.006	-	-	-	-	-	-	-
4,4-DDE	NE	NE	<0.001	<0.002	<0.001	0.004	0.004	0.002	0.005	0.005	0.006	-	-	-	-	-	-	-
4,4-DDT	NE	NE	<0.001	<0.002	<0.001	0.008	0.01	0.004	0.01	0.009	0.008	-	-	-	-	-	-	-
Total DDT	1.8	0.02	<0.001	<0.002	<0.001	0.017	0.017	0.006	0.024	0.026	0.02	-	-	-	-	-	-	-
Chlordane	0.49	0.066	<0.035	<0.036	<0.035	<0.039	<0.039	<0.040	0.053	0.091	<0.037	-	-	-	-	-	-	-
SPLP Pesticides 8081B (ug/L)	Varies	Varies	-	-	-	-	-	-	-	BRL	BRL	-	-	-	-	-	-	-
PAHs 8270D (mg/Kg)																		
Acenaphthylene	1,000	84	<0.250	<0.260	<0.240	<0.270	<0.270	<0.280	0.89	1.1	0.32	<0.26	<0.25	<0.26	<0.25	0.5	0.42	0.68
Anthracene	1,000	400	<0.250	<0.260	<0.240	<0.270	<0.270	<0.280	0.680	0.880	<0.260	<0.260	<0.250	<0.260	<0.250	0.320	0.310	0.420
Benzo(a)anthracene	1	1	<0.250	<0.260	<0.240	0.870	0.470	0.780	1.90	2.00	0.540	<0.260	0.450	0.430	<0.250	1.30	0.960	1.30
Benzo(a)pyrene	1	1	<0.250	<0.260	<0.240	0.830	0.590	0.890	1.90	2.10	0.710	0.430	0.640	0.530	<0.250	1.30	1.00	1.40
Benzo(b)fluoranthene	1	1	<0.250	<0.260	<0.240	0.730	0.540	0.790	1.70	1.60	0.610	0.300	0.610	0.530	<0.250	1.40	1.10	1.50
Benzo(g,h,i)perylene	8.4	1	<0.250	<0.260	<0.240	0.520	0.430	0.540	1.10	1.20	0.510	0.630	0.610	0.660	0.370	1.10	0.810	1.20
Benzo(k)fluoranthene	8.4	1	<0.250	<0.260	<0.240	0.690	0.470	0.660	1.70	1.40	0.570	0.280	0.510	0.480	<0.250	1.10	0.910	1.30
Chrysene	84	1	<0.250	<0.260	<0.240	0.920	0.520	0.770	1.90	2.30	0.630	<0.260	0.530	0.490	<0.250	1.40	1.10	1.40
Dibenz(a,h)anthracene	1	1	<0.250	<0.260	<0.240	<0.270	<0.270	<0.280	0.320	0.330	<0.260	<0.260	0.320	<0.260	<0.250	<0.280	<0.270	<0.270
Fluoranthene	1,000	56	<0.280	<0.260	<0.240	1.60	0.750	1.10	2.60	4.10	0.870	0.280	0.820	0.870	<0.250	2.90	2.10	2.70
Fluorene	1,000	56	<0.250	<0.260	<0.240	<0.270	<0.270	<0.280	<0.280	0.570	<0.260	<0.260	<0.250	<0.260	<0.250	<0.280	<0.270	<0.270
Indeno(1,2,3-cd)pyrene	1	1	<0.250	<0.260	<0.240	0.570	0.440	0.560	1.20	1.20	0.510	0.710	0.620	0.690	0.340	1.20	0.820	1.10
Phenanthrene	1,000	40	<0.250	<0.260	<0.240	0.970	0.270	0.320	0.810	3.50	0.370	<0.260	<0.250	0.310	<0.250	0.920	1.00	1.20
Pyrene	1,000	40	<0.350	<0.300	<0.240	1.30	0.760	1.00	2.70	5.10	0.920	0.270	0.810	0.830	0.250	2.80	1.90	2.40
SPLP PAHs 8270D (ug/L)	Varies	Varies	-	-	-	-	-	-	-	BRL	BRL	-	-	-	-	-	-	-

CTDEEP RSRs- Connecticut Department of Energy and Environmental Protection Remediation Standard Regulations (February 16, 2021)
and CTDEEP Additional Polluting Substances (September 20, 2018)

RES DEC-Residential Direct Exposure Criteria

GB PMC- Pollutant Mobility Criteria in a GA groundwater area

NE- Not established

NA- Not Applicable

CT ETPH- Connecticut Department of Public Health Extractable Total Petroleum

PAHs- Polycyclic Aromatic Hydrocarbons

PCBs- Polychlorinated Biphenyls

< xx indicates compound was not detected. Detection limit is provided.

Boxed values indicate exceedances of RES DEC

Bold Values indicate exceedances of REC DEC

Grey values indicate exceedances of GB PMC

PMC compliance was demonstrated utilizing SPLP analysis in accordance with the CTDEEP RSRs

TABLE 2
Summary of Data Usability Evaluation
901 Beach Road
Fairfield, Connecticut
Last Updated: 07/12/2022 (JLL)

Laboratory Report ID	Sample Date	Batch Group	Lab	Lab Sample ID	Sample ID	Media	Compound	QA/QC Description	Result Bias	Target Range	Result %	Detected in Sample	DUE Consideration
GCE99876	1/7/2020	513488	Phoenix	CE99876, CE99877, CE99878, CE99879, CE99880, CE99881, CE99882, CE99883, CE99884	BR 1 (0-0.5), BR 2 (0-1), BR 3 (0-1), BR 4 (0-1), BR 5 (0-1), BR 6 (0-1), BR 7 (0-1), BR 8 (0-1), BR DUP H	Soil	d-BHC	High MS/MSD RPD	Variability	30	34	No	d-BHC was not reported in the samples. No significant variability is suspected.
		513664		CE99881	BR 6 (0-1)	Soil	CT ETPH	High LCS/LCSD RPD	Variability	30	30.6	No	CT ETPH was not reported in the samples. No significant variability is suspected.
						Soil	Nitrobenzene-D5	Low LCS Recovery	Low	30-130	24	No (SUR)	The other surrogates and the target analytes are acceptable. No significant bias is suspected.
		515069(SIM)		CE99882, CE99883	BR 7 (0-1), BR 8 (0-1)	Soil	Acenaphthylene; Benzo(a)pyrene; Benzo(g,h,i)perylene; Indeno(1,2,3-cd)pyrene; Naphthalene; Nitrobenzene-D5	High LCS/LCSD RPD	Variability	20	53.8, 47.2, 33.3, 34.1, 31.6, 60.9	No	These analytes were not reported in the samples. No significant variability is suspected.
		513511		CE99876, CE99877, CE99878, CE99879, CE99880, CE99881, CE99882, CE99883, CE99884	BR 1 (0-0.5), BR 2 (0-1), BR 3 (0-1), BR 4 (0-1), BR 5 (0-1), BR 6 (0-1), BR 7 (0-1), BR 8 (0-1), BR DUP H	Soil	Aroclor-1016; Aroclor-1260	High LCS/LCSD RPD	Variability	30	30.5, 32.7	No	The site specific MS/MSD RPD is acceptable. No significant variability is suspected.
GCJ12772		No Problems				Soil							

LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MSD - Matrix Spike Duplicate
SUR - Surrogate

Appendix C - Photographic Log

Client: Town of Fairfield
901 Beach Road
Site: Fairfield, CT

Job Number: 15-0439

Photograph No.: 1	Date: 8/24/2021	Direction Taken: Facing East
Description: Site		
		

Photograph No.: 2	Date: 8/24/2021	Direction Taken: Facing Northwest
Description: Site		
		



Thursday, January 23, 2020

Attn: Brian Sirowich
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Project ID: 901 BEACH RD
SDG ID: GCE99876
Sample ID#s: CE99876 - CE99884

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. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

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.

Enclosed are revised Analysis Report pages. Please replace and discard the original pages. If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
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
UT Lab Registration #CT00007
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

Sample Id Cross Reference

January 23, 2020

SDG I.D.: GCE99876

Project ID: 901 BEACH RD

Client Id	Lab Id	Matrix
BR 1 (0-0.5`)	CE99876	SOIL
BR 2 (0-1`)	CE99877	SOIL
BR 3 (0-1`)	CE99878	SOIL
BR 4 (0-1`)	CE99879	SOIL
BR 5 (0-1`)	CE99880	SOIL
BR 6 (0-1`)	CE99881	SOIL
BR 7 (0-1`)	CE99882	SOIL
BR 8 (0-1`)	CE99883	SOIL
BR DUP H	CE99884	SOIL



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

Analysis Report

January 23, 2020

FOR: Attn: Brian Sirowich
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information

Matrix: SOIL
Location Code: TIGHE-DAS
Rush Request: Standard
P.O.#: 150439027

Custody Information

Collected by: BG
Received by: CP
Analyzed by: see "By" below

Date

01/07/20
01/09/20

Time

9:30
10:24

Laboratory Data

SDG ID: GCE99876
Phoenix ID: CE99876

Project ID: 901 BEACH RD
Client ID: BR 1 (0-0.5')

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	1.44	0.65	mg/Kg	1	01/11/20	CPP	SW6010D
Lead	17.3	0.32	mg/Kg	1	01/11/20	CPP	SW6010D
Percent Solid	93		%		01/09/20	VT	SW846-%Solid
Soil Extraction for Pesticide	Completed				01/09/20	MM/LE	SW3545A
Soil Extraction SVOA PAH	Completed				01/09/20	KK/LE	SW3545A
Extraction of CT ETPH	Completed				01/09/20	GG/LE	SW3545A
Extraction for PCB	Completed				01/09/20	HH/KL/VT	SW3540C
Total Metals Digest	Completed				01/09/20	JJ/AG/BF	SW3050B

TPH by GC (Extractable Products)

Ext. Petroleum H.C. (C9-C36)	ND	52	mg/Kg	1	01/10/20	JRB	CTETPH 8015D
Identification	ND		mg/Kg	1	01/10/20	JRB	CTETPH 8015D

QA/QC Surrogates

% n-Pentacosane	70		%	1	01/10/20	JRB	50 - 150 %
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PCB (Soxhlet SW3540C)

PCB-1016	ND	350	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1221	ND	350	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1232	ND	350	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1242	ND	350	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1248	ND	350	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1254	ND	350	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1260	ND	350	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1262	ND	350	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1268	ND	350	ug/Kg	10	01/10/20	SC	SW8082A

QA/QC Surrogates

% DCBP	110		%	10	01/10/20	SC	30 - 150 %
% DCBP (Confirmation)	106		%	10	01/10/20	SC	30 - 150 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% TCMX	115		%	10	01/10/20	SC	30 - 150 %
% TCMX (Confirmation)	116		%	10	01/10/20	SC	30 - 150 %

Pesticides

4,4' -DDD	ND	1.4	ug/Kg	2	01/11/20	CG	SW8081B
4,4' -DDE	ND	1.4	ug/Kg	2	01/11/20	CG	SW8081B
4,4' -DDT	ND	1.4	ug/Kg	2	01/11/20	CG	SW8081B
a-BHC	ND	1.4	ug/Kg	2	01/11/20	CG	SW8081B
Alachlor	ND	7.0	ug/Kg	2	01/11/20	CG	SW8081B
Aldrin	ND	1.4	ug/Kg	2	01/11/20	CG	SW8081B
b-BHC	ND	1.4	ug/Kg	2	01/11/20	CG	SW8081B
Chlordane	ND	35	ug/Kg	2	01/11/20	CG	SW8081B
d-BHC	ND	1.4	ug/Kg	2	01/11/20	CG	SW8081B
Dieldrin	ND	3.5	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan I	ND	7.0	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan II	ND	7.0	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan sulfate	ND	7.0	ug/Kg	2	01/11/20	CG	SW8081B
Endrin	ND	7.0	ug/Kg	2	01/11/20	CG	SW8081B
Endrin aldehyde	ND	7.0	ug/Kg	2	01/11/20	CG	SW8081B
Endrin ketone	ND	7.0	ug/Kg	2	01/11/20	CG	SW8081B
g-BHC	ND	1.4	ug/Kg	2	01/11/20	CG	SW8081B
Heptachlor	ND	7.0	ug/Kg	2	01/11/20	CG	SW8081B
Heptachlor epoxide	ND	7.0	ug/Kg	2	01/11/20	CG	SW8081B
Methoxychlor	ND	35	ug/Kg	2	01/11/20	CG	SW8081B
Toxaphene	ND	140	ug/Kg	2	01/11/20	CG	SW8081B

QA/QC Surrogates

% DCBP	64		%	2	01/11/20	CG	30 - 150 %
% DCBP (Confirmation)	62		%	2	01/11/20	CG	30 - 150 %
% TCMX	55		%	2	01/11/20	CG	30 - 150 %
% TCMX (Confirmation)	55		%	2	01/11/20	CG	30 - 150 %

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	250	ug/Kg	1	01/09/20	AW	SW8270D
Acenaphthene	ND	250	ug/Kg	1	01/09/20	AW	SW8270D
Acenaphthylene	ND	250	ug/Kg	1	01/09/20	AW	SW8270D
Anthracene	ND	250	ug/Kg	1	01/09/20	AW	SW8270D
Benz(a)anthracene	ND	250	ug/Kg	1	01/09/20	AW	SW8270D
Benzo(a)pyrene	ND	250	ug/Kg	1	01/09/20	AW	SW8270D
Benzo(b)fluoranthene	ND	250	ug/Kg	1	01/09/20	AW	SW8270D
Benzo(ghi)perylene	ND	250	ug/Kg	1	01/09/20	AW	SW8270D
Benzo(k)fluoranthene	ND	250	ug/Kg	1	01/09/20	AW	SW8270D
Chrysene	ND	250	ug/Kg	1	01/09/20	AW	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	01/09/20	AW	SW8270D
Fluoranthene	ND	280	ug/Kg	1	01/09/20	AW	SW8270D
Fluorene	ND	250	ug/Kg	1	01/09/20	AW	SW8270D
Indeno(1,2,3-cd)pyrene	ND	250	ug/Kg	1	01/09/20	AW	SW8270D
Naphthalene	ND	250	ug/Kg	1	01/09/20	AW	SW8270D
Phenanthrene	ND	250	ug/Kg	1	01/09/20	AW	SW8270D
Pyrene	ND	350	ug/Kg	1	01/09/20	AW	SW8270D

QA/QC Surrogates

Project ID: 901 BEACH RD
Client ID: BR 1 (0-0.5`)

Phoenix I.D.: CE99876

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% 2-Fluorobiphenyl	66		%	1	01/09/20	AW	30 - 130 %
% Nitrobenzene-d5	64		%	1	01/09/20	AW	30 - 130 %
% Terphenyl-d14	67		%	1	01/09/20	AW	30 - 130 %

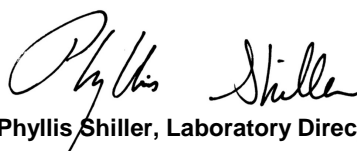
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 23, 2020

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

January 23, 2020

FOR: Attn: Brian Sirowich
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information

Matrix: SOIL
Location Code: TIGHE-DAS
Rush Request: Standard
P.O.#: 150439027

Custody Information

Collected by: BG
Received by: CP
Analyzed by: see "By" below

Date

01/07/20
01/09/20

Time

9:35
10:24

Laboratory Data

SDG ID: GCE99876
Phoenix ID: CE99877

Project ID: 901 BEACH RD
Client ID: BR 2 (0-1')

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	0.97	0.69	mg/Kg	1	01/11/20	CPP	SW6010D
Lead	13.1	0.35	mg/Kg	1	01/11/20	CPP	SW6010D
Percent Solid	89		%		01/09/20	VT	SW846-%Solid
Soil Extraction for Pesticide	Completed				01/09/20	MM/LE	SW3545A
Soil Extraction SVOA PAH	Completed				01/09/20	KK/LE	SW3545A
Extraction of CT ETPH	Completed				01/09/20	GG/LE	SW3545A
Extraction for PCB	Completed				01/09/20	HH/KL/VT	SW3540C
Total Metals Digest	Completed				01/09/20	JJ/AG/BF	SW3050B

TPH by GC (Extractable Products)

Ext. Petroleum H.C. (C9-C36)	ND	56	mg/Kg	1	01/10/20	JRB	CTETPH 8015D
Identification	ND		mg/Kg	1	01/10/20	JRB	CTETPH 8015D

QA/QC Surrogates

% n-Pentacosane	59		%	1	01/10/20	JRB	50 - 150 %
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PCB (Soxhlet SW3540C)

PCB-1016	ND	370	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1221	ND	370	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1232	ND	370	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1242	ND	370	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1248	ND	370	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1254	ND	370	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1260	ND	370	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1262	ND	370	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1268	ND	370	ug/Kg	10	01/10/20	SC	SW8082A

QA/QC Surrogates

% DCBP	92		%	10	01/10/20	SC	30 - 150 %
% DCBP (Confirmation)	93		%	10	01/10/20	SC	30 - 150 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% TCMX	101		%	10	01/10/20	SC	30 - 150 %
% TCMX (Confirmation)	102		%	10	01/10/20	SC	30 - 150 %

Pesticides

4,4' -DDD	ND	1.5	ug/Kg	2	01/11/20	CG	SW8081B
4,4' -DDE	ND	1.5	ug/Kg	2	01/11/20	CG	SW8081B
4,4' -DDT	ND	1.5	ug/Kg	2	01/11/20	CG	SW8081B
a-BHC	ND	1.5	ug/Kg	2	01/11/20	CG	SW8081B
Alachlor	ND	7.3	ug/Kg	2	01/11/20	CG	SW8081B
Aldrin	ND	1.5	ug/Kg	2	01/11/20	CG	SW8081B
b-BHC	ND	1.5	ug/Kg	2	01/11/20	CG	SW8081B
Chlordane	ND	36	ug/Kg	2	01/11/20	CG	SW8081B
d-BHC	ND	1.5	ug/Kg	2	01/11/20	CG	SW8081B
Dieldrin	ND	3.6	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan I	ND	7.3	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan II	ND	7.3	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan sulfate	ND	7.3	ug/Kg	2	01/11/20	CG	SW8081B
Endrin	ND	7.3	ug/Kg	2	01/11/20	CG	SW8081B
Endrin aldehyde	ND	7.3	ug/Kg	2	01/11/20	CG	SW8081B
Endrin ketone	ND	7.3	ug/Kg	2	01/11/20	CG	SW8081B
g-BHC	ND	1.5	ug/Kg	2	01/11/20	CG	SW8081B
Heptachlor	ND	7.3	ug/Kg	2	01/11/20	CG	SW8081B
Heptachlor epoxide	ND	7.3	ug/Kg	2	01/11/20	CG	SW8081B
Methoxychlor	ND	36	ug/Kg	2	01/11/20	CG	SW8081B
Toxaphene	ND	150	ug/Kg	2	01/11/20	CG	SW8081B

QA/QC Surrogates

% DCBP	61		%	2	01/11/20	CG	30 - 150 %
% DCBP (Confirmation)	55		%	2	01/11/20	CG	30 - 150 %
% TCMX	59		%	2	01/11/20	CG	30 - 150 %
% TCMX (Confirmation)	56		%	2	01/11/20	CG	30 - 150 %

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Acenaphthene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Anthracene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Benz(a)anthracene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(a)pyrene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(b)fluoranthene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(ghi)perylene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(k)fluoranthene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Chrysene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Fluoranthene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Fluorene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Naphthalene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Phenanthrene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Pyrene	ND	300	ug/Kg	1	01/10/20	AW	SW8270D

QA/QC Surrogates

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% 2-Fluorobiphenyl	64		%	1	01/10/20	AW	30 - 130 %
% Nitrobenzene-d5	64		%	1	01/10/20	AW	30 - 130 %
% Terphenyl-d14	66		%	1	01/10/20	AW	30 - 130 %

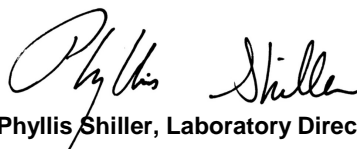
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

January 23, 2020

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

January 23, 2020

FOR: Attn: Brian Sirowich
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information

Matrix: SOIL
Location Code: TIGHE-DAS
Rush Request: Standard
P.O.#: 150439027

Custody Information

Collected by: BG
Received by: CP
Analyzed by: see "By" below

Date

01/07/20
01/09/20

Time

9:40
10:24

Laboratory Data

SDG ID: GCE99876
Phoenix ID: CE99878

Project ID: 901 BEACH RD
Client ID: BR 3 (0-1')

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	2.09	0.70	mg/Kg	1	01/11/20	CPP	SW6010D
Lead	9.24	0.35	mg/Kg	1	01/11/20	CPP	SW6010D
Percent Solid	95		%		01/09/20	VT	SW846-%Solid
Soil Extraction for Pesticide	Completed				01/09/20	MM/LE	SW3545A
Soil Extraction SVOA PAH	Completed				01/09/20	KK/LE	SW3545A
Extraction of CT ETPH	Completed				01/09/20	GG/LE	SW3545A
Extraction for PCB	Completed				01/09/20	HH/KL/VT	SW3540C
Total Metals Digest	Completed				01/09/20	JJ/AG/BF	SW3050B

TPH by GC (Extractable Products)

Ext. Petroleum H.C. (C9-C36)	ND	52	mg/Kg	1	01/10/20	JRB	CTETPH 8015D
Identification	ND		mg/Kg	1	01/10/20	JRB	CTETPH 8015D

QA/QC Surrogates

% n-Pentacosane	61		%	1	01/10/20	JRB	50 - 150 %
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PCB (Soxhlet SW3540C)

PCB-1016	ND	340	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1221	ND	340	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1232	ND	340	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1242	ND	340	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1248	ND	340	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1254	ND	340	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1260	ND	340	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1262	ND	340	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1268	ND	340	ug/Kg	10	01/10/20	SC	SW8082A

QA/QC Surrogates

% DCBP	87		%	10	01/10/20	SC	30 - 150 %
% DCBP (Confirmation)	83		%	10	01/10/20	SC	30 - 150 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% TCMX	92		%	10	01/10/20	SC	30 - 150 %
% TCMX (Confirmation)	94		%	10	01/10/20	SC	30 - 150 %

Pesticides

4,4' -DDD	ND	1.4	ug/Kg	2	01/11/20	CG	SW8081B
4,4' -DDE	ND	1.4	ug/Kg	2	01/11/20	CG	SW8081B
4,4' -DDT	ND	1.4	ug/Kg	2	01/11/20	CG	SW8081B
a-BHC	ND	1.4	ug/Kg	2	01/11/20	CG	SW8081B
Alachlor	ND	6.9	ug/Kg	2	01/11/20	CG	SW8081B
Aldrin	ND	1.4	ug/Kg	2	01/11/20	CG	SW8081B
b-BHC	ND	1.4	ug/Kg	2	01/11/20	CG	SW8081B
Chlordane	ND	35	ug/Kg	2	01/11/20	CG	SW8081B
d-BHC	ND	1.4	ug/Kg	2	01/11/20	CG	SW8081B
Dieldrin	ND	3.5	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan I	ND	6.9	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan II	ND	6.9	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan sulfate	ND	6.9	ug/Kg	2	01/11/20	CG	SW8081B
Endrin	ND	6.9	ug/Kg	2	01/11/20	CG	SW8081B
Endrin aldehyde	ND	6.9	ug/Kg	2	01/11/20	CG	SW8081B
Endrin ketone	ND	6.9	ug/Kg	2	01/11/20	CG	SW8081B
g-BHC	ND	1.4	ug/Kg	2	01/11/20	CG	SW8081B
Heptachlor	ND	6.9	ug/Kg	2	01/11/20	CG	SW8081B
Heptachlor epoxide	ND	6.9	ug/Kg	2	01/11/20	CG	SW8081B
Methoxychlor	ND	35	ug/Kg	2	01/11/20	CG	SW8081B
Toxaphene	ND	140	ug/Kg	2	01/11/20	CG	SW8081B

QA/QC Surrogates

% DCBP	72		%	2	01/11/20	CG	30 - 150 %
% DCBP (Confirmation)	66		%	2	01/11/20	CG	30 - 150 %
% TCMX	59		%	2	01/11/20	CG	30 - 150 %
% TCMX (Confirmation)	60		%	2	01/11/20	CG	30 - 150 %

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	240	ug/Kg	1	01/09/20	AW	SW8270D
Acenaphthene	ND	240	ug/Kg	1	01/09/20	AW	SW8270D
Acenaphthylene	ND	240	ug/Kg	1	01/09/20	AW	SW8270D
Anthracene	ND	240	ug/Kg	1	01/09/20	AW	SW8270D
Benz(a)anthracene	ND	240	ug/Kg	1	01/09/20	AW	SW8270D
Benzo(a)pyrene	ND	240	ug/Kg	1	01/09/20	AW	SW8270D
Benzo(b)fluoranthene	ND	240	ug/Kg	1	01/09/20	AW	SW8270D
Benzo(ghi)perylene	ND	240	ug/Kg	1	01/09/20	AW	SW8270D
Benzo(k)fluoranthene	ND	240	ug/Kg	1	01/09/20	AW	SW8270D
Chrysene	ND	240	ug/Kg	1	01/09/20	AW	SW8270D
Dibenz(a,h)anthracene	ND	240	ug/Kg	1	01/09/20	AW	SW8270D
Fluoranthene	ND	240	ug/Kg	1	01/09/20	AW	SW8270D
Fluorene	ND	240	ug/Kg	1	01/09/20	AW	SW8270D
Indeno(1,2,3-cd)pyrene	ND	240	ug/Kg	1	01/09/20	AW	SW8270D
Naphthalene	ND	240	ug/Kg	1	01/09/20	AW	SW8270D
Phenanthrene	ND	240	ug/Kg	1	01/09/20	AW	SW8270D
Pyrene	ND	240	ug/Kg	1	01/09/20	AW	SW8270D

QA/QC Surrogates

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% 2-Fluorobiphenyl	50		%	1	01/09/20	AW	30 - 130 %
% Nitrobenzene-d5	48		%	1	01/09/20	AW	30 - 130 %
% Terphenyl-d14	55		%	1	01/09/20	AW	30 - 130 %

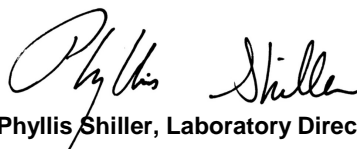
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

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Phyllis Shiller, Laboratory Director

January 23, 2020

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

January 23, 2020

FOR: Attn: Brian Sirowich
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information

Matrix: SOIL
Location Code: TIGHE-DAS
Rush Request: Standard
P.O.#: 150439027

Custody Information

Collected by: BG
Received by: CP
Analyzed by: see "By" below

Date

01/07/20 9:45
01/09/20 10:24

Time

Laboratory Data

SDG ID: GCE99876
Phoenix ID: CE99879

Project ID: 901 BEACH RD
Client ID: BR 4 (0-1')

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	3.18	0.78	mg/Kg	1	01/11/20	CPP	SW6010D
Lead	54.0	0.39	mg/Kg	1	01/11/20	CPP	SW6010D
Percent Solid	84		%		01/09/20	VT	SW846-%Solid
Soil Extraction for Pesticide	Completed				01/09/20	MM/LE	SW3545A
Soil Extraction SVOA PAH	Completed				01/09/20	KK/LE	SW3545A
Extraction of CT ETPH	Completed				01/09/20	GG/LE	SW3545A
Extraction for PCB	Completed				01/09/20	HH/KL/VT	SW3540C
Total Metals Digest	Completed				01/09/20	JJ/AG/BF	SW3050B

TPH by GC (Extractable Products)

Ext. Petroleum H.C. (C9-C36)	ND	59	mg/Kg	1	01/10/20	JRB	CTETPH 8015D
Identification	ND		mg/Kg	1	01/10/20	JRB	CTETPH 8015D

QA/QC Surrogates

% n-Pentacosane	56		%	1	01/10/20	JRB	50 - 150 %
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PCB (Soxhlet SW3540C)

PCB-1016	ND	390	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1221	ND	390	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1232	ND	390	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1242	ND	390	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1248	ND	390	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1254	ND	390	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1260	ND	390	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1262	ND	390	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1268	ND	390	ug/Kg	10	01/10/20	SC	SW8082A

QA/QC Surrogates

% DCBP	94		%	10	01/10/20	SC	30 - 150 %
% DCBP (Confirmation)	83		%	10	01/10/20	SC	30 - 150 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% TCMX	101		%	10	01/10/20	SC	30 - 150 %
% TCMX (Confirmation)	102		%	10	01/10/20	SC	30 - 150 %

Pesticides

4,4' -DDD	4.9	1.6	ug/Kg	2	01/11/20	CG	SW8081B
4,4' -DDE	3.5	1.6	ug/Kg	2	01/11/20	CG	SW8081B
4,4' -DDT	8.2	7.8	ug/Kg	2	01/11/20	CG	SW8081B
a-BHC	ND	1.6	ug/Kg	2	01/11/20	CG	SW8081B
Alachlor	ND	7.8	ug/Kg	2	01/11/20	CG	SW8081B
Aldrin	ND	1.6	ug/Kg	2	01/11/20	CG	SW8081B
b-BHC	ND	1.6	ug/Kg	2	01/11/20	CG	SW8081B
Chlordane	ND	39	ug/Kg	2	01/11/20	CG	SW8081B
d-BHC	ND	1.6	ug/Kg	2	01/11/20	CG	SW8081B
Dieldrin	ND	3.9	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan I	ND	7.8	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan II	ND	7.8	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan sulfate	ND	7.8	ug/Kg	2	01/11/20	CG	SW8081B
Endrin	ND	7.8	ug/Kg	2	01/11/20	CG	SW8081B
Endrin aldehyde	ND	7.8	ug/Kg	2	01/11/20	CG	SW8081B
Endrin ketone	ND	7.8	ug/Kg	2	01/11/20	CG	SW8081B
g-BHC	ND	1.6	ug/Kg	2	01/11/20	CG	SW8081B
Heptachlor	ND	7.8	ug/Kg	2	01/11/20	CG	SW8081B
Heptachlor epoxide	ND	7.8	ug/Kg	2	01/11/20	CG	SW8081B
Methoxychlor	ND	39	ug/Kg	2	01/11/20	CG	SW8081B
Toxaphene	ND	160	ug/Kg	2	01/11/20	CG	SW8081B

QA/QC Surrogates

% DCBP	48		%	2	01/11/20	CG	30 - 150 %
% DCBP (Confirmation)	80		%	2	01/11/20	CG	30 - 150 %
% TCMX	74		%	2	01/11/20	CG	30 - 150 %
% TCMX (Confirmation)	73		%	2	01/11/20	CG	30 - 150 %

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	270	ug/Kg	1	01/09/20	AW	SW8270D
Acenaphthene	ND	270	ug/Kg	1	01/09/20	AW	SW8270D
Acenaphthylene	ND	270	ug/Kg	1	01/09/20	AW	SW8270D
Anthracene	ND	270	ug/Kg	1	01/09/20	AW	SW8270D
Benz(a)anthracene	870	270	ug/Kg	1	01/09/20	AW	SW8270D
Benzo(a)pyrene	830	270	ug/Kg	1	01/09/20	AW	SW8270D
Benzo(b)fluoranthene	730	270	ug/Kg	1	01/09/20	AW	SW8270D
Benzo(ghi)perylene	520	270	ug/Kg	1	01/09/20	AW	SW8270D
Benzo(k)fluoranthene	690	270	ug/Kg	1	01/09/20	AW	SW8270D
Chrysene	920	270	ug/Kg	1	01/09/20	AW	SW8270D
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	01/09/20	AW	SW8270D
Fluoranthene	1600	270	ug/Kg	1	01/09/20	AW	SW8270D
Fluorene	ND	270	ug/Kg	1	01/09/20	AW	SW8270D
Indeno(1,2,3-cd)pyrene	570	270	ug/Kg	1	01/09/20	AW	SW8270D
Naphthalene	ND	270	ug/Kg	1	01/09/20	AW	SW8270D
Phenanthrene	970	270	ug/Kg	1	01/09/20	AW	SW8270D
Pyrene	1300	270	ug/Kg	1	01/09/20	AW	SW8270D

QA/QC Surrogates

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% 2-Fluorobiphenyl	55		%	1	01/09/20	AW	30 - 130 %
% Nitrobenzene-d5	43		%	1	01/09/20	AW	30 - 130 %
% Terphenyl-d14	53		%	1	01/09/20	AW	30 - 130 %

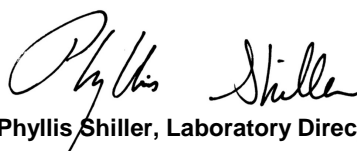
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

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Phyllis Shiller, Laboratory Director

January 23, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



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Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

January 23, 2020

FOR: Attn: Brian Sirowich
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information

Matrix: SOIL
Location Code: TIGHE-DAS
Rush Request: Standard
P.O.#: 150439027

Custody Information

Collected by: BG
Received by: CP
Analyzed by: see "By" below

Date

01/07/20
01/09/20

Time

9:50
10:24

Laboratory Data

SDG ID: GCE99876
Phoenix ID: CE99880

Project ID: 901 BEACH RD
Client ID: BR 5 (0-1')

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	2.89	0.75	mg/Kg	1	01/11/20	CPP	SW6010D
Lead	33.5	0.38	mg/Kg	1	01/11/20	CPP	SW6010D
Percent Solid	83		%		01/09/20	VT	SW846-%Solid
Soil Extraction for Pesticide	Completed				01/09/20	MM/LE	SW3545A
Soil Extraction SVOA PAH	Completed				01/09/20	KK/LE	SW3545A
Extraction of CT ETPH	Completed				01/09/20	GG/LE	SW3545A
Extraction for PCB	Completed				01/09/20	HH/KL/VT	SW3540C
Total Metals Digest	Completed				01/09/20	JJ/AG/BF	SW3050B

TPH by GC (Extractable Products)

Ext. Petroleum H.C. (C9-C36)	ND	59	mg/Kg	1	01/10/20	JRB	CTETPH 8015D
Identification	ND		mg/Kg	1	01/10/20	JRB	CTETPH 8015D

QA/QC Surrogates

% n-Pentacosane	56		%	1	01/10/20	JRB	50 - 150 %
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PCB (Soxhlet SW3540C)

PCB-1016	ND	390	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1221	ND	390	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1232	ND	390	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1242	ND	390	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1248	ND	390	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1254	ND	390	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1260	ND	390	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1262	ND	390	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1268	ND	390	ug/Kg	10	01/10/20	SC	SW8082A

QA/QC Surrogates

% DCBP	92		%	10	01/10/20	SC	30 - 150 %
% DCBP (Confirmation)	92		%	10	01/10/20	SC	30 - 150 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% TCMX	91		%	10	01/10/20	SC	30 - 150 %
% TCMX (Confirmation)	95		%	10	01/10/20	SC	30 - 150 %

Pesticides

4,4' -DDD	ND	3.0	ug/Kg	2	01/11/20	CG	SW8081B
4,4' -DDE	2.0	1.6	ug/Kg	2	01/11/20	CG	SW8081B
4,4' -DDT	3.6	1.6	ug/Kg	2	01/11/20	CG	SW8081B
a-BHC	ND	1.6	ug/Kg	2	01/11/20	CG	SW8081B
Alachlor	ND	7.9	ug/Kg	2	01/11/20	CG	SW8081B
Aldrin	ND	1.6	ug/Kg	2	01/11/20	CG	SW8081B
b-BHC	ND	1.6	ug/Kg	2	01/11/20	CG	SW8081B
Chlordane	ND	40	ug/Kg	2	01/11/20	CG	SW8081B
d-BHC	ND	1.6	ug/Kg	2	01/11/20	CG	SW8081B
Dieldrin	ND	4.0	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan I	ND	7.9	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan II	ND	7.9	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan sulfate	ND	7.9	ug/Kg	2	01/11/20	CG	SW8081B
Endrin	ND	7.9	ug/Kg	2	01/11/20	CG	SW8081B
Endrin aldehyde	ND	7.9	ug/Kg	2	01/11/20	CG	SW8081B
Endrin ketone	ND	7.9	ug/Kg	2	01/11/20	CG	SW8081B
g-BHC	ND	1.6	ug/Kg	2	01/11/20	CG	SW8081B
Heptachlor	ND	7.9	ug/Kg	2	01/11/20	CG	SW8081B
Heptachlor epoxide	ND	7.9	ug/Kg	2	01/11/20	CG	SW8081B
Methoxychlor	ND	40	ug/Kg	2	01/11/20	CG	SW8081B
Toxaphene	ND	160	ug/Kg	2	01/11/20	CG	SW8081B

QA/QC Surrogates

% DCBP	49		%	2	01/11/20	CG	30 - 150 %
% DCBP (Confirmation)	84		%	2	01/11/20	CG	30 - 150 %
% TCMX	68		%	2	01/11/20	CG	30 - 150 %
% TCMX (Confirmation)	73		%	2	01/11/20	CG	30 - 150 %

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	280	ug/Kg	1	01/10/20	AW	SW8270D
Acenaphthene	ND	280	ug/Kg	1	01/10/20	AW	SW8270D
Acenaphthylene	ND	280	ug/Kg	1	01/10/20	AW	SW8270D
Anthracene	ND	280	ug/Kg	1	01/10/20	AW	SW8270D
Benz(a)anthracene	780	280	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(a)pyrene	890	280	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(b)fluoranthene	790	280	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(ghi)perylene	540	280	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(k)fluoranthene	660	280	ug/Kg	1	01/10/20	AW	SW8270D
Chrysene	770	280	ug/Kg	1	01/10/20	AW	SW8270D
Dibenz(a,h)anthracene	ND	280	ug/Kg	1	01/10/20	AW	SW8270D
Fluoranthene	1100	280	ug/Kg	1	01/10/20	AW	SW8270D
Fluorene	ND	280	ug/Kg	1	01/10/20	AW	SW8270D
Indeno(1,2,3-cd)pyrene	560	280	ug/Kg	1	01/10/20	AW	SW8270D
Naphthalene	ND	280	ug/Kg	1	01/10/20	AW	SW8270D
Phenanthrene	320	280	ug/Kg	1	01/10/20	AW	SW8270D
Pyrene	1000	280	ug/Kg	1	01/10/20	AW	SW8270D

QA/QC Surrogates

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% 2-Fluorobiphenyl	55		%	1	01/10/20	AW	30 - 130 %
% Nitrobenzene-d5	60		%	1	01/10/20	AW	30 - 130 %
% Terphenyl-d14	49		%	1	01/10/20	AW	30 - 130 %

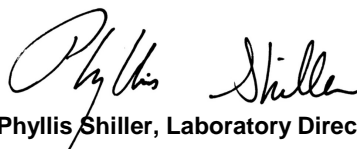
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

January 23, 2020

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

January 23, 2020

FOR: Attn: Brian Sirowich
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information

Matrix: SOIL
Location Code: TIGHE-DAS
Rush Request: Standard
P.O.#: 150439027

Custody Information

Collected by: BG
Received by: CP
Analyzed by: see "By" below

Date

01/07/20
01/09/20

Time

9:49
10:24

Laboratory Data

SDG ID: GCE99876
Phoenix ID: CE99881

Project ID: 901 BEACH RD
Client ID: BR 6 (0-1')

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	5.41	0.81	mg/Kg	1	01/11/20	CPP	SW6010D
Lead	80.9	0.41	mg/Kg	1	01/11/20	CPP	SW6010D
Percent Solid	81		%		01/09/20	VT	SW846-%Solid
Soil Extraction for Pesticide	Completed				01/09/20	MM/LE	SW3545A
Soil Extraction SVOA PAH	Completed				01/09/20	KK/LE	SW3545A
Extraction of CT ETPH	Completed				01/10/20	GG/LE	SW3545A
Extraction for PCB	Completed				01/09/20	HH/KL/VT	SW3540C
Total Metals Digest	Completed				01/09/20	JJ/AG/BF	SW3050B

TPH by GC (Extractable Products)

Ext. Petroleum H.C. (C9-C36)	ND	310	mg/Kg	5	01/13/20	JRB	CTETPH 8015D
Identification	ND		mg/Kg	5	01/13/20	JRB	CTETPH 8015D

QA/QC Surrogates

% n-Pentacosane	56		%	5	01/13/20	JRB	50 - 150 %
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PCB (Soxhlet SW3540C)

PCB-1016	ND	410	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1221	ND	410	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1232	ND	410	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1242	ND	410	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1248	ND	410	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1254	ND	410	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1260	ND	410	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1262	ND	410	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1268	ND	410	ug/Kg	10	01/10/20	SC	SW8082A

QA/QC Surrogates

% DCBP	92		%	10	01/10/20	SC	30 - 150 %
% DCBP (Confirmation)	85		%	10	01/10/20	SC	30 - 150 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% TCMX	99		%	10	01/10/20	SC	30 - 150 %
% TCMX (Confirmation)	98		%	10	01/10/20	SC	30 - 150 %

Pesticides

4,4' -DDD	8.5	8.1	ug/Kg	2	01/11/20	CG	SW8081B
4,4' -DDE	5.2	1.6	ug/Kg	2	01/11/20	CG	SW8081B
4,4' -DDT	9.9	8.1	ug/Kg	2	01/11/20	CG	SW8081B
a-BHC	ND	1.6	ug/Kg	2	01/11/20	CG	SW8081B
Alachlor	ND	8.1	ug/Kg	2	01/11/20	CG	SW8081B
Aldrin	ND	1.6	ug/Kg	2	01/11/20	CG	SW8081B
b-BHC	ND	1.6	ug/Kg	2	01/11/20	CG	SW8081B
Chlordane	53	40	ug/Kg	2	01/11/20	CG	SW8081B
d-BHC	ND	1.6	ug/Kg	2	01/11/20	CG	SW8081B
Dieldrin	ND	4.0	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan I	ND	8.1	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan II	ND	8.1	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan sulfate	ND	8.1	ug/Kg	2	01/11/20	CG	SW8081B
Endrin	ND	8.1	ug/Kg	2	01/11/20	CG	SW8081B
Endrin aldehyde	ND	8.1	ug/Kg	2	01/11/20	CG	SW8081B
Endrin ketone	ND	8.1	ug/Kg	2	01/11/20	CG	SW8081B
g-BHC	ND	1.6	ug/Kg	2	01/11/20	CG	SW8081B
Heptachlor	ND	8.1	ug/Kg	2	01/11/20	CG	SW8081B
Heptachlor epoxide	ND	8.1	ug/Kg	2	01/11/20	CG	SW8081B
Methoxychlor	ND	40	ug/Kg	2	01/11/20	CG	SW8081B
Toxaphene	ND	160	ug/Kg	2	01/11/20	CG	SW8081B

QA/QC Surrogates

% DCBP	50		%	2	01/11/20	CG	30 - 150 %
% DCBP (Confirmation)	76		%	2	01/11/20	CG	30 - 150 %
% TCMX	67		%	2	01/11/20	CG	30 - 150 %
% TCMX (Confirmation)	69		%	2	01/11/20	CG	30 - 150 %

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	280	ug/Kg	1	01/10/20	AW	SW8270D
Acenaphthene	ND	280	ug/Kg	1	01/10/20	AW	SW8270D
Acenaphthylene	890	280	ug/Kg	1	01/10/20	AW	SW8270D
Anthracene	680	280	ug/Kg	1	01/10/20	AW	SW8270D
Benz(a)anthracene	1900	280	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(a)pyrene	1900	280	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(b)fluoranthene	1700	280	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(ghi)perylene	1100	280	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(k)fluoranthene	1700	280	ug/Kg	1	01/10/20	AW	SW8270D
Chrysene	1900	280	ug/Kg	1	01/10/20	AW	SW8270D
Dibenz(a,h)anthracene	320	280	ug/Kg	1	01/10/20	AW	SW8270D
Fluoranthene	2600	280	ug/Kg	1	01/10/20	AW	SW8270D
Fluorene	ND	280	ug/Kg	1	01/10/20	AW	SW8270D
Indeno(1,2,3-cd)pyrene	1200	280	ug/Kg	1	01/10/20	AW	SW8270D
Naphthalene	ND	280	ug/Kg	1	01/10/20	AW	SW8270D
Phenanthrene	810	280	ug/Kg	1	01/10/20	AW	SW8270D
Pyrene	2700	280	ug/Kg	1	01/10/20	AW	SW8270D

QA/QC Surrogates

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% 2-Fluorobiphenyl	53		%	1	01/10/20	AW	30 - 130 %
% Nitrobenzene-d5	49		%	1	01/10/20	AW	30 - 130 %
% Terphenyl-d14	59		%	1	01/10/20	AW	30 - 130 %

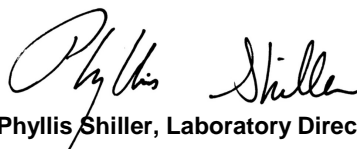
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

January 23, 2020

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

January 23, 2020

FOR: Attn: Brian Sirowich
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information

Matrix: SOIL
Location Code: TIGHE-DAS
Rush Request: 72 Hour
P.O.#: 150439027

Custody Information

Collected by: BG
Received by: CP
Analyzed by: see "By" below

Date

01/07/20
01/09/20

Time

9:53
10:24

Laboratory Data

SDG ID: GCE99876
Phoenix ID: CE99882

Project ID: 901 BEACH RD
Client ID: BR 7 (0-1')

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	5.88	0.72	mg/Kg	1	01/11/20	CPP	SW6010D
Lead	93.8	0.36	mg/Kg	1	01/11/20	CPP	SW6010D
Percent Solid	86		%		01/09/20	VT	SW846-%Solid
Soil Extraction for Pesticide	Completed				01/09/20	MM/LE	SW3545A
Soil Extraction SVOA PAH	Completed				01/09/20	KK/LE	SW3545A
Extraction of CT ETPH	Completed				01/09/20	GG/LE	SW3545A
Extraction for PCB	Completed				01/09/20	HH/KL/VT	SW3540C
SPLP Extraction for Organics	Completed				01/17/20	Q	SW1312
SPLP Semivolatiles (SIM) Ext.	Completed				01/20/20	P/AK	SW3510C/SW3520C
SPLP Pesticides Ext. (LDL)	Completed				01/20/20	AT/AT	SW3510C
Total Metals Digest	Completed				01/09/20	JJ/AG/BF	SW3050B

TPH by GC (Extractable Products)

Ext. Petroleum H.C. (C9-C36)	ND	290	mg/Kg	5	01/10/20	JRB	CTETPH 8015D
Identification	ND		mg/Kg	5	01/10/20	JRB	CTETPH 8015D

QA/QC Surrogates

% n-Pentacosane	69		%	5	01/10/20	JRB	50 - 150 %
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PCB (Soxhlet SW3540C)

PCB-1016	ND	380	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1221	ND	380	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1232	ND	380	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1242	ND	380	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1248	ND	380	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1254	ND	380	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1260	ND	380	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1262	ND	380	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1268	ND	380	ug/Kg	10	01/10/20	SC	SW8082A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>QA/QC Surrogates</u>							
% DCBP	90		%	10	01/10/20	SC	30 - 150 %
% DCBP (Confirmation)	81		%	10	01/10/20	SC	30 - 150 %
% TCMX	94		%	10	01/10/20	SC	30 - 150 %
% TCMX (Confirmation)	93		%	10	01/10/20	SC	30 - 150 %
<u>Pesticides</u>							
4,4' -DDD	12	7.5	ug/Kg	2	01/11/20	CG	SW8081B
4,4' -DDE	5.2	1.5	ug/Kg	2	01/11/20	CG	SW8081B
4,4' -DDT	9.3	7.5	ug/Kg	2	01/11/20	CG	SW8081B
a-BHC	ND	1.5	ug/Kg	2	01/11/20	CG	SW8081B
Alachlor	ND	7.5	ug/Kg	2	01/11/20	CG	SW8081B
Aldrin	ND	1.5	ug/Kg	2	01/11/20	CG	SW8081B
b-BHC	ND	1.5	ug/Kg	2	01/11/20	CG	SW8081B
Chlordane	91	38	ug/Kg	2	01/11/20	CG	SW8081B
d-BHC	ND	1.5	ug/Kg	2	01/11/20	CG	SW8081B
Dieldrin	ND	3.8	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan I	ND	7.5	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan II	ND	7.5	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan sulfate	ND	7.5	ug/Kg	2	01/11/20	CG	SW8081B
Endrin	ND	7.5	ug/Kg	2	01/11/20	CG	SW8081B
Endrin aldehyde	ND	7.5	ug/Kg	2	01/11/20	CG	SW8081B
Endrin ketone	ND	7.5	ug/Kg	2	01/11/20	CG	SW8081B
g-BHC	ND	1.5	ug/Kg	2	01/11/20	CG	SW8081B
Heptachlor	ND	7.5	ug/Kg	2	01/11/20	CG	SW8081B
Heptachlor epoxide	ND	7.5	ug/Kg	2	01/11/20	CG	SW8081B
Methoxychlor	ND	38	ug/Kg	2	01/11/20	CG	SW8081B
Toxaphene	ND	150	ug/Kg	2	01/11/20	CG	SW8081B
<u>QA/QC Surrogates</u>							
% DCBP	45		%	2	01/11/20	CG	30 - 150 %
% DCBP (Confirmation)	66		%	2	01/11/20	CG	30 - 150 %
% TCMX	62		%	2	01/11/20	CG	30 - 150 %
% TCMX (Confirmation)	62		%	2	01/11/20	CG	30 - 150 %
<u>SPLP Pesticides (GA Criteria)</u>							
4,4' -DDD	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
4,4' -DDE	ND	0.009	ug/L	1	01/22/20	CG	SW8081B
4,4' -DDT	ND	0.006	ug/L	1	01/22/20	CG	SW8081B
a-BHC	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Alachlor	ND	0.010	ug/L	1	01/22/20	CG	SW8081B
Aldrin	ND	0.003	ug/L	1	01/22/20	CG	SW8081B
b-BHC	ND	0.050	ug/L	1	01/22/20	CG	SW8081B
Chlordane	ND	0.050	ug/L	1	01/22/20	CG	SW8081B
d-BHC	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Dieldrin	ND	0.002	ug/L	1	01/22/20	CG	SW8081B
Endosulfan I	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Endosulfan II	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Endosulfan sulfate	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Endrin	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Endrin aldehyde	ND	0.005	ug/L	1	01/22/20	CG	SW8081B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Endrin Ketone	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
g-BHC	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Heptachlor	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Heptachlor epoxide	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Methoxychlor	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Toxaphene	ND	0.20	ug/L	1	01/22/20	CG	SW8081B
<u>QA/QC Surrogates</u>							
%DCBP (Surrogate Rec)	53		%	1	01/22/20	CG	30 - 150 %
%DCBP (Surrogate Rec) (Confirmation)	50		%	1	01/22/20	CG	30 - 150 %
%TCMX (Surrogate Rec)	77		%	1	01/22/20	CG	30 - 150 %
%TCMX (Surrogate Rec) (Confirmation)	84		%	1	01/22/20	CG	30 - 150 %

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	270	ug/Kg	1	01/10/20	AW	SW8270D
Acenaphthene	ND	270	ug/Kg	1	01/10/20	AW	SW8270D
Acenaphthylene	1100	270	ug/Kg	1	01/10/20	AW	SW8270D
Anthracene	880	270	ug/Kg	1	01/10/20	AW	SW8270D
Benz(a)anthracene	2000	270	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(a)pyrene	2100	270	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(b)fluoranthene	1600	270	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(ghi)perylene	1200	270	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(k)fluoranthene	1400	270	ug/Kg	1	01/10/20	AW	SW8270D
Chrysene	2300	270	ug/Kg	1	01/10/20	AW	SW8270D
Dibenz(a,h)anthracene	330	270	ug/Kg	1	01/10/20	AW	SW8270D
Fluoranthene	4100	270	ug/Kg	1	01/10/20	AW	SW8270D
Fluorene	570	270	ug/Kg	1	01/10/20	AW	SW8270D
Indeno(1,2,3-cd)pyrene	1200	270	ug/Kg	1	01/10/20	AW	SW8270D
Naphthalene	ND	270	ug/Kg	1	01/10/20	AW	SW8270D
Phenanthrene	3500	270	ug/Kg	1	01/10/20	AW	SW8270D
Pyrene	5100	270	ug/Kg	1	01/10/20	AW	SW8270D

QA/QC Surrogates

% 2-Fluorobiphenyl	51		%	1	01/10/20	AW	30 - 130 %
% Nitrobenzene-d5	56		%	1	01/10/20	AW	30 - 130 %
% Terphenyl-d14	62		%	1	01/10/20	AW	30 - 130 %

SPLP Semivolatiles by SIM

2-Methylnaphthalene	ND	0.52	ug/L	1	01/21/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.52	ug/L	1	01/21/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.31	ug/L	1	01/21/20	WB	SW8270D (SIM)
Anthracene	ND	0.52	ug/L	1	01/21/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.05	ug/L	1	01/21/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.21	ug/L	1	01/21/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.07	ug/L	1	01/21/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.49	ug/L	1	01/21/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.31	ug/L	1	01/21/20	WB	SW8270D (SIM)
Chrysene	ND	0.52	ug/L	1	01/21/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.10	ug/L	1	01/21/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.52	ug/L	1	01/21/20	WB	SW8270D (SIM)
Fluorene	ND	0.52	ug/L	1	01/21/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	01/21/20	WB	SW8270D (SIM)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Naphthalene	ND	0.52	ug/L	1	01/21/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.06	ug/L	1	01/21/20	WB	SW8270D (SIM)
Pyrene	ND	0.52	ug/L	1	01/21/20	WB	SW8270D (SIM)
<u>QA/QC Surrogates</u>							
% 2-Fluorobiphenyl	49		%	1	01/21/20	WB	30 - 130 %
% Nitrobenzene-d5	39		%	1	01/21/20	WB	30 - 130 %
% Terphenyl-d14	37		%	1	01/21/20	WB	30 - 130 %

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

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

January 23, 2020

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

January 23, 2020

FOR: Attn: Brian Sirowich
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information

Matrix: SOIL
Location Code: TIGHE-DAS
Rush Request: 72 Hour
P.O.#: 150439027

Custody Information

Collected by: BG
Received by: CP
Analyzed by: see "By" below

Date

01/07/20 10:00
01/09/20 10:24

Time

Laboratory Data

SDG ID: GCE99876
Phoenix ID: CE99883

Project ID: 901 BEACH RD
Client ID: BR 8 (0-1')

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	3.93	0.75	mg/Kg	1	01/11/20	CPP	SW6010D
Lead	93.9	0.37	mg/Kg	1	01/11/20	CPP	SW6010D
Percent Solid	89		%		01/09/20	VT	SW846-%Solid
Soil Extraction for Pesticide	Completed				01/09/20	MM/LE	SW3545A
Soil Extraction SVOA PAH	Completed				01/09/20	KK/LE	SW3545A
Extraction of CT ETPH	Completed				01/09/20	GG/LE	SW3545A
Extraction for PCB	Completed				01/09/20	HH/KL/VT	SW3540C
SPLP Extraction for Organics	Completed				01/17/20	Q	SW1312
SPLP Semivolatiles (SIM) Ext.	Completed				01/20/20	P/AK	SW3510C/SW3520C
SPLP Pesticides Ext. (LDL)	Completed				01/20/20	AT/AT	SW3510C
Total Metals Digest	Completed				01/09/20	JJ/AG/BF	SW3050B

TPH by GC (Extractable Products)

Ext. Petroleum H.C. (C9-C36)	ND	280	mg/Kg	5	01/10/20	JRB	CTETPH 8015D
Identification	ND		mg/Kg	5	01/10/20	JRB	CTETPH 8015D

QA/QC Surrogates

% n-Pentacosane	66		%	5	01/10/20	JRB	50 - 150 %
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PCB (Soxhlet SW3540C)

PCB-1016	ND	370	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1221	ND	370	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1232	ND	370	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1242	ND	370	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1248	ND	370	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1254	ND	370	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1260	ND	370	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1262	ND	370	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1268	ND	370	ug/Kg	10	01/10/20	SC	SW8082A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
<u>QA/QC Surrogates</u>							
% DCBP	99		%	10	01/10/20	SC	30 - 150 %
% DCBP (Confirmation)	92		%	10	01/10/20	SC	30 - 150 %
% TCMX	105		%	10	01/10/20	SC	30 - 150 %
% TCMX (Confirmation)	107		%	10	01/10/20	SC	30 - 150 %
<u>Pesticides</u>							
4,4' -DDD	6.3	1.5	ug/Kg	2	01/11/20	CG	SW8081B
4,4' -DDE	6.0	1.5	ug/Kg	2	01/11/20	CG	SW8081B
4,4' -DDT	8.1	7.4	ug/Kg	2	01/11/20	CG	SW8081B
a-BHC	ND	1.5	ug/Kg	2	01/11/20	CG	SW8081B
Alachlor	ND	7.4	ug/Kg	2	01/11/20	CG	SW8081B
Aldrin	ND	1.5	ug/Kg	2	01/11/20	CG	SW8081B
b-BHC	ND	1.5	ug/Kg	2	01/11/20	CG	SW8081B
Chlordane	ND	37	ug/Kg	2	01/11/20	CG	SW8081B
d-BHC	ND	1.5	ug/Kg	2	01/11/20	CG	SW8081B
Dieldrin	ND	3.7	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan I	ND	7.4	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan II	ND	7.4	ug/Kg	2	01/11/20	CG	SW8081B
Endosulfan sulfate	ND	7.4	ug/Kg	2	01/11/20	CG	SW8081B
Endrin	ND	7.4	ug/Kg	2	01/11/20	CG	SW8081B
Endrin aldehyde	ND	7.4	ug/Kg	2	01/11/20	CG	SW8081B
Endrin ketone	ND	7.4	ug/Kg	2	01/11/20	CG	SW8081B
g-BHC	ND	1.5	ug/Kg	2	01/11/20	CG	SW8081B
Heptachlor	ND	7.4	ug/Kg	2	01/11/20	CG	SW8081B
Heptachlor epoxide	ND	7.4	ug/Kg	2	01/11/20	CG	SW8081B
Methoxychlor	ND	37	ug/Kg	2	01/11/20	CG	SW8081B
Toxaphene	ND	150	ug/Kg	2	01/11/20	CG	SW8081B
<u>QA/QC Surrogates</u>							
% DCBP	40		%	2	01/11/20	CG	30 - 150 %
% DCBP (Confirmation)	73		%	2	01/11/20	CG	30 - 150 %
% TCMX	55		%	2	01/11/20	CG	30 - 150 %
% TCMX (Confirmation)	85		%	2	01/11/20	CG	30 - 150 %
<u>SPLP Pesticides (GA Criteria)</u>							
4,4' -DDD	ND	0.006	ug/L	1	01/22/20	CG	SW8081B
4,4' -DDE	ND	0.012	ug/L	1	01/22/20	CG	SW8081B
4,4' -DDT	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
a-BHC	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Alachlor	ND	0.010	ug/L	1	01/22/20	CG	SW8081B
Aldrin	ND	0.003	ug/L	1	01/22/20	CG	SW8081B
b-BHC	ND	0.039	ug/L	1	01/22/20	CG	SW8081B
Chlordane	ND	0.050	ug/L	1	01/22/20	CG	SW8081B
d-BHC	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Dieldrin	ND	0.002	ug/L	1	01/22/20	CG	SW8081B
Endosulfan I	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Endosulfan II	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Endosulfan sulfate	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Endrin	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Endrin aldehyde	ND	0.021	ug/L	1	01/22/20	CG	SW8081B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Endrin Ketone	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
g-BHC	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Heptachlor	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Heptachlor epoxide	ND	0.005	ug/L	1	01/22/20	CG	SW8081B
Methoxychlor	ND	0.034	ug/L	1	01/22/20	CG	SW8081B
Toxaphene	ND	0.20	ug/L	1	01/22/20	CG	SW8081B
<u>QA/QC Surrogates</u>							
%DCBP (Surrogate Rec)	56		%	1	01/22/20	CG	30 - 150 %
%DCBP (Surrogate Rec) (Confirmation)	59		%	1	01/22/20	CG	30 - 150 %
%TCMX (Surrogate Rec)	73		%	1	01/22/20	CG	30 - 150 %
%TCMX (Surrogate Rec) (Confirmation)	108		%	1	01/22/20	CG	30 - 150 %

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Acenaphthene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Acenaphthylene	320	260	ug/Kg	1	01/10/20	AW	SW8270D
Anthracene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Benz(a)anthracene	540	260	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(a)pyrene	710	260	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(b)fluoranthene	610	260	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(ghi)perylene	510	260	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(k)fluoranthene	570	260	ug/Kg	1	01/10/20	AW	SW8270D
Chrysene	630	260	ug/Kg	1	01/10/20	AW	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Fluoranthene	870	260	ug/Kg	1	01/10/20	AW	SW8270D
Fluorene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Indeno(1,2,3-cd)pyrene	510	260	ug/Kg	1	01/10/20	AW	SW8270D
Naphthalene	ND	260	ug/Kg	1	01/10/20	AW	SW8270D
Phenanthrene	370	260	ug/Kg	1	01/10/20	AW	SW8270D
Pyrene	920	260	ug/Kg	1	01/10/20	AW	SW8270D

QA/QC Surrogates

% 2-Fluorobiphenyl	41		%	1	01/10/20	AW	30 - 130 %
% Nitrobenzene-d5	35		%	1	01/10/20	AW	30 - 130 %
% Terphenyl-d14	48		%	1	01/10/20	AW	30 - 130 %

SPLP Semivolatiles by SIM

2-Methylnaphthalene	ND	0.59	ug/L	1	01/21/20	WB	SW8270D (SIM)
Acenaphthene	ND	0.59	ug/L	1	01/21/20	WB	SW8270D (SIM)
Acenaphthylene	ND	0.35	ug/L	1	01/21/20	WB	SW8270D (SIM)
Anthracene	ND	0.59	ug/L	1	01/21/20	WB	SW8270D (SIM)
Benz(a)anthracene	ND	0.06	ug/L	1	01/21/20	WB	SW8270D (SIM)
Benzo(a)pyrene	ND	0.24	ug/L	1	01/21/20	WB	SW8270D (SIM)
Benzo(b)fluoranthene	ND	0.08	ug/L	1	01/21/20	WB	SW8270D (SIM)
Benzo(ghi)perylene	ND	0.57	ug/L	1	01/21/20	WB	SW8270D (SIM)
Benzo(k)fluoranthene	ND	0.35	ug/L	1	01/21/20	WB	SW8270D (SIM)
Chrysene	ND	0.59	ug/L	1	01/21/20	WB	SW8270D (SIM)
Dibenz(a,h)anthracene	ND	0.12	ug/L	1	01/21/20	WB	SW8270D (SIM)
Fluoranthene	ND	0.59	ug/L	1	01/21/20	WB	SW8270D (SIM)
Fluorene	ND	0.59	ug/L	1	01/21/20	WB	SW8270D (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.12	ug/L	1	01/21/20	WB	SW8270D (SIM)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Naphthalene	ND	0.59	ug/L	1	01/21/20	WB	SW8270D (SIM)
Phenanthrene	ND	0.07	ug/L	1	01/21/20	WB	SW8270D (SIM)
Pyrene	ND	0.59	ug/L	1	01/21/20	WB	SW8270D (SIM)
<u>QA/QC Surrogates</u>							
% 2-Fluorobiphenyl	49		%	1	01/21/20	WB	30 - 130 %
% Nitrobenzene-d5	41		%	1	01/21/20	WB	30 - 130 %
% Terphenyl-d14	36		%	1	01/21/20	WB	30 - 130 %

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

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

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Phyllis Shiller, Laboratory Director

January 23, 2020

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

January 23, 2020

FOR: Attn: Brian Sirowich
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information

Matrix: SOIL
Location Code: TIGHE-DAS
Rush Request: Standard
P.O.#: 150439027

Custody Information

Collected by: BG
Received by: CP
Analyzed by: see "By" below

Date

01/07/20
01/09/20

Time

10:01
10:24

Laboratory Data

SDG ID: GCE99876
Phoenix ID: CE99884

Project ID: 901 BEACH RD
Client ID: BR DUP H

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Arsenic	3.58	0.78	mg/Kg	1	01/11/20	CPP	SW6010D
Lead	66.9	0.39	mg/Kg	1	01/11/20	CPP	SW6010D
Percent Solid	86		%		01/09/20	VT	SW846-%Solid
Soil Extraction for Pesticide	Completed				01/09/20	MM/E	SW3545A
Soil Extraction SVOA PAH	Completed				01/09/20	KK/LE	SW3545A
Extraction of CT ETPH	Completed				01/09/20	GG/LE	SW3545A
Extraction for PCB	Completed				01/09/20	HH/KL/VT	SW3540C
Total Metals Digest	Completed				01/09/20	JJ/AG/BF	SW3050B

TPH by GC (Extractable Products)

Ext. Petroleum H.C. (C9-C36)	ND	290	mg/Kg	5	01/10/20	JRB	CTETPH 8015D
Identification	ND		mg/Kg	5	01/10/20	JRB	CTETPH 8015D

QA/QC Surrogates

% n-Pentacosane	61		%	5	01/10/20	JRB	50 - 150 %
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PCB (Soxhlet SW3540C)

PCB-1016	ND	380	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1221	ND	380	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1232	ND	380	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1242	ND	380	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1248	ND	380	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1254	ND	380	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1260	ND	380	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1262	ND	380	ug/Kg	10	01/10/20	SC	SW8082A
PCB-1268	ND	380	ug/Kg	10	01/10/20	SC	SW8082A

QA/QC Surrogates

% DCBP	71		%	10	01/10/20	SC	30 - 150 %
% DCBP (Confirmation)	74		%	10	01/10/20	SC	30 - 150 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% TCMX	61		%	10	01/10/20	SC	30 - 150 %
% TCMX (Confirmation)	65		%	10	01/10/20	SC	30 - 150 %

Pesticides

4,4' -DDD	3.1	1.5	ug/Kg	2	01/10/20	CG	SW8081B
4,4' -DDE	4.2	1.5	ug/Kg	2	01/10/20	CG	SW8081B
4,4' -DDT	9.7	7.7	ug/Kg	2	01/10/20	CG	SW8081B
a-BHC	ND	1.5	ug/Kg	2	01/10/20	CG	SW8081B
Alachlor	ND	7.7	ug/Kg	2	01/10/20	CG	SW8081B
Aldrin	ND	1.5	ug/Kg	2	01/10/20	CG	SW8081B
b-BHC	ND	1.5	ug/Kg	2	01/10/20	CG	SW8081B
Chlordane	ND	39	ug/Kg	2	01/10/20	CG	SW8081B
d-BHC	ND	1.5	ug/Kg	2	01/10/20	CG	SW8081B
Dieldrin	ND	3.9	ug/Kg	2	01/10/20	CG	SW8081B
Endosulfan I	ND	7.7	ug/Kg	2	01/10/20	CG	SW8081B
Endosulfan II	ND	7.7	ug/Kg	2	01/10/20	CG	SW8081B
Endosulfan sulfate	ND	7.7	ug/Kg	2	01/10/20	CG	SW8081B
Endrin	ND	7.7	ug/Kg	2	01/10/20	CG	SW8081B
Endrin aldehyde	ND	7.7	ug/Kg	2	01/10/20	CG	SW8081B
Endrin ketone	ND	7.7	ug/Kg	2	01/10/20	CG	SW8081B
g-BHC	ND	1.5	ug/Kg	2	01/10/20	CG	SW8081B
Heptachlor	ND	7.7	ug/Kg	2	01/10/20	CG	SW8081B
Heptachlor epoxide	ND	7.7	ug/Kg	2	01/10/20	CG	SW8081B
Methoxychlor	ND	39	ug/Kg	2	01/10/20	CG	SW8081B
Toxaphene	ND	150	ug/Kg	2	01/10/20	CG	SW8081B

QA/QC Surrogates

% DCBP	52		%	2	01/10/20	CG	30 - 150 %
% DCBP (Confirmation)	66		%	2	01/10/20	CG	30 - 150 %
% TCMX	65		%	2	01/10/20	CG	30 - 150 %
% TCMX (Confirmation)	110		%	2	01/10/20	CG	30 - 150 %

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	270	ug/Kg	1	01/10/20	AW	SW8270D
Acenaphthene	ND	270	ug/Kg	1	01/10/20	AW	SW8270D
Acenaphthylene	ND	270	ug/Kg	1	01/10/20	AW	SW8270D
Anthracene	ND	270	ug/Kg	1	01/10/20	AW	SW8270D
Benz(a)anthracene	470	270	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(a)pyrene	590	270	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(b)fluoranthene	540	270	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(ghi)perylene	430	270	ug/Kg	1	01/10/20	AW	SW8270D
Benzo(k)fluoranthene	470	270	ug/Kg	1	01/10/20	AW	SW8270D
Chrysene	520	270	ug/Kg	1	01/10/20	AW	SW8270D
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	01/10/20	AW	SW8270D
Fluoranthene	750	270	ug/Kg	1	01/10/20	AW	SW8270D
Fluorene	ND	270	ug/Kg	1	01/10/20	AW	SW8270D
Indeno(1,2,3-cd)pyrene	440	270	ug/Kg	1	01/10/20	AW	SW8270D
Naphthalene	ND	270	ug/Kg	1	01/10/20	AW	SW8270D
Phenanthrene	270	270	ug/Kg	1	01/10/20	AW	SW8270D
Pyrene	760	270	ug/Kg	1	01/10/20	AW	SW8270D

QA/QC Surrogates

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% 2-Fluorobiphenyl	52		%	1	01/10/20	AW	30 - 130 %
% Nitrobenzene-d5	52		%	1	01/10/20	AW	30 - 130 %
% Terphenyl-d14	49		%	1	01/10/20	AW	30 - 130 %

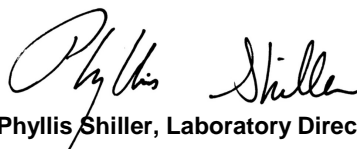
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

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Phyllis Shiller, Laboratory Director

January 23, 2020

Reviewed and Released by: Greg Lawrence, Assistant Lab Director



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Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

January 23, 2020

QA/QC Data

SDG I.D.: GCE99876

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 513550 (mg/kg), QC Sample No: CE99874 (CE99876)													
<u>ICP Metals - Soil</u>													
Arsenic	BRL	0.67	2.96	2.80	NC	106	104	1.9	99.1			75 - 125	30
Lead	BRL	0.33	10.3	12.1	16.1	105	103	1.9	101			75 - 125	30
QA/QC Batch 513508 (mg/kg), QC Sample No: CE99877 (CE99877, CE99878, CE99879, CE99880, CE99881, CE99882, CE99883, CE99884)													
<u>ICP Metals - Soil</u>													
Arsenic	BRL	0.67	0.97	<0.68	NC	88.7	89.8	1.2	87.0			75 - 125	30
Lead	BRL	0.33	13.1	12.7	3.10	89.0	88.4	0.7	94.9			75 - 125	30



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QA/QC Report

January 23, 2020

QA/QC Data

SDG I.D.: GCE99876

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
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QA/QC Batch 513484 (mg/Kg), QC Sample No: CE99881 (CE99876, CE99877, CE99878, CE99879, CE99880, CE99882, CE99883, CE99884)

TPH by GC (Extractable Products) - Soil

Ext. Petroleum H.C. (C9-C36)	ND	50	73	61	17.9	76	72	5.4	60 - 120	30
% n-Pentacosane	62	%	72	62	14.9	84	83	1.2	50 - 150	30

Comment:

Additional surrogate criteria: LCS acceptance range is 60-120% MS acceptance range 50-150%. The ETPH/DRO LCS has been normalized based on the alkane calibration.

QA/QC Batch 513664 (mg/Kg), QC Sample No: CF00260 (CE99881)

TPH by GC (Extractable Products) - Soil

Ext. Petroleum H.C. (C9-C36)	ND	50	61	83	30.6	90	84	6.9	60 - 120	30	r
% n-Pentacosane	62	%	55	67	19.7	70	69	1.4	50 - 150	30	

Comment:

Additional surrogate criteria: LCS acceptance range is 60-120% MS acceptance range 50-150%. The ETPH/DRO LCS has been normalized based on the alkane calibration.

QA/QC Batch 513511 (ug/Kg), QC Sample No: CE99883 10X (CE99876, CE99877, CE99878, CE99879, CE99880, CE99881, CE99882, CE99883, CE99884)

Polychlorinated Biphenyls - Soil

PCB-1016	ND	170	121	89	30.5	98	102	4.0	40 - 140	30	
PCB-1221	ND	170							40 - 140	30	
PCB-1232	ND	170							40 - 140	30	
PCB-1242	ND	170							40 - 140	30	
PCB-1248	ND	170							40 - 140	30	
PCB-1254	ND	170							40 - 140	30	
PCB-1260	ND	170	121	87	32.7	96	99	3.1	40 - 140	30	r
PCB-1262	ND	170							40 - 140	30	
PCB-1268	ND	170							40 - 140	30	
% DCBP (Surrogate Rec)	96	%	97	75	25.6	83	96	14.5	30 - 150	30	
% DCBP (Surrogate Rec) (Confirm	80	%	97	70	32.3	93	91	2.2	30 - 150	30	r
% TCMX (Surrogate Rec)	110	%	113	86	27.1	98	108	9.7	30 - 150	30	
% TCMX (Surrogate Rec) (Confirm	109	%	118	90	26.9	100	112	11.3	30 - 150	30	

QA/QC Batch 513488 (ug/Kg), QC Sample No: CE99876 2X (CE99876, CE99877, CE99878, CE99879, CE99880, CE99881, CE99882, CE99883, CE99884)

Pesticides - Soil

4,4' -DDD	ND	1.7	93	95	2.1	78	87	10.9	40 - 140	30	
4,4' -DDE	ND	1.7	80	78	2.5	78	77	1.3	40 - 140	30	
4,4' -DDT	ND	1.7	84	83	1.2	74	79	6.5	40 - 140	30	
a-BHC	ND	1.0	78	76	2.6	66	68	3.0	40 - 140	30	
Alachlor	ND	3.3	NA	NA	NC	NA	NA	NC	40 - 140	30	
Aldrin	ND	1.0	73	71	2.8	64	68	6.1	40 - 140	30	
b-BHC	ND	1.0	110	106	3.7	100	112	11.3	40 - 140	30	
Chlordane	ND	33	80	77	3.8	70	73	4.2	40 - 140	30	

QA/QC Data

SDG I.D.: GCE99876

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
d-BHC	ND	3.3	96	94	2.1	78	110	34.0	40 - 140	30
Dieldrin	ND	1.0	79	76	3.9	67	70	4.4	40 - 140	30
Endosulfan I	ND	3.3	86	84	2.4	76	80	5.1	40 - 140	30
Endosulfan II	ND	3.3	100	97	3.0	78	82	5.0	40 - 140	30
Endosulfan sulfate	ND	3.3	117	114	2.6	95	101	6.1	40 - 140	30
Endrin	ND	3.3	80	75	6.5	74	76	2.7	40 - 140	30
Endrin aldehyde	ND	3.3	103	102	1.0	82	84	2.4	40 - 140	30
Endrin ketone	ND	3.3	103	100	3.0	80	85	6.1	40 - 140	30
g-BHC	ND	1.0	53	54	1.9	67	62	7.8	40 - 140	30
Heptachlor	ND	3.3	80	78	2.5	75	77	2.6	40 - 140	30
Heptachlor epoxide	ND	3.3	77	75	2.6	69	71	2.9	40 - 140	30
Methoxychlor	ND	3.3	89	90	1.1	76	76	0.0	40 - 140	30
Toxaphene	ND	130	NA	NA	NC	NA	NA	NC	40 - 140	30
% DCBP	77	%	78	73	6.6	63	65	3.1	30 - 150	30
% DCBP (Confirmation)	92	%	96	91	5.3	75	78	3.9	30 - 150	30
% TCMX	75	%	76	77	1.3	65	65	0.0	30 - 150	30
% TCMX (Confirmation)	75	%	75	77	2.6	62	64	3.2	30 - 150	30

QA/QC Batch 515054 (ug/L), QC Sample No: CE99882 (CE99882, CE99883)

Pesticides

4,4' -DDD	ND	0.003	102	101	1.0				40 - 140	20
4,4' -DDE	ND	0.003	90	84	6.9				40 - 140	20
4,4' -DDT	ND	0.003	94	94	0.0				40 - 140	20
a-BHC	ND	0.002	88	84	4.7				40 - 140	20
Alachlor	ND	0.005	NA	NA	NC				40 - 140	20
Aldrin	ND	0.002	84	78	7.4				40 - 140	20
b-BHC	ND	0.002	123	131	6.3				40 - 140	20
Chlordane	ND	0.050	87	84	3.5				40 - 140	20
d-BHC	ND	0.005	61	55	10.3				40 - 140	20
Dieldrin	ND	0.002	99	95	4.1				40 - 140	20
Endosulfan I	ND	0.005	106	103	2.9				40 - 140	20
Endosulfan II	ND	0.005	112	114	1.8				40 - 140	20
Endosulfan sulfate	ND	0.005	118	121	2.5				40 - 140	20
Endrin	ND	0.005	99	94	5.2				40 - 140	20
Endrin aldehyde	ND	0.005	119	116	2.6				40 - 140	20
Endrin ketone	ND	0.005	108	121	11.4				40 - 140	20
g-BHC	ND	0.002	94	92	2.2				40 - 140	20
Heptachlor	ND	0.005	92	84	9.1				40 - 140	20
Heptachlor epoxide	ND	0.005	95	90	5.4				40 - 140	20
Methoxychlor	ND	0.005	105	101	3.9				40 - 140	20
Toxaphene	ND	0.20	NA	NA	NC				40 - 140	20
% DCBP	90	%	83	96	14.5				30 - 150	20
% DCBP (Confirmation)	82	%	82	90	9.3				30 - 150	20
% TCMX	78	%	85	76	11.2				30 - 150	20
% TCMX (Confirmation)	81	%	87	83	4.7				30 - 150	20

Comment:

A LCS and LCSD duplicate were performed instead of a MS and MSD. Alpha and gamma chlordane were spiked and analyzed instead of technical chlordane. Gamma chlordane recovery is reported as chlordane in the LCS and LCSD

QA/QC Batch 513481 (ug/kg), QC Sample No: CE99900 (CE99876, CE99877)

Polynuclear Aromatic HC - Soil

2-Methylnaphthalene	ND	230	52	50	3.9	46	50	8.3	30 - 130	30
Acenaphthene	ND	230	57	54	5.4	51	55	7.5	30 - 130	30
Acenaphthylene	ND	230	55	52	5.6	48	53	9.9	30 - 130	30

QA/QC Data

SDG I.D.: GCE99876

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Anthracene	ND	230	58	57	1.7	54	61	12.2	30 - 130	30
Benz(a)anthracene	ND	230	60	60	0.0	52	59	12.6	30 - 130	30
Benzo(a)pyrene	ND	230	63	60	4.9	52	55	5.6	30 - 130	30
Benzo(b)fluoranthene	ND	230	61	58	5.0	51	53	3.8	30 - 130	30
Benzo(ghi)perylene	ND	230	46	42	9.1	30	40	28.6	30 - 130	30
Benzo(k)fluoranthene	ND	230	58	61	5.0	52	58	10.9	30 - 130	30
Chrysene	ND	230	56	57	1.8	51	54	5.7	30 - 130	30
Dibenz(a,h)anthracene	ND	230	52	50	3.9	37	50	29.9	30 - 130	30
Fluoranthene	ND	230	60	57	5.1	56	57	1.8	30 - 130	30
Fluorene	ND	230	61	59	3.3	54	61	12.2	30 - 130	30
Indeno(1,2,3-cd)pyrene	ND	230	52	50	3.9	36	45	22.2	30 - 130	30
Naphthalene	ND	230	57	51	11.1	48	52	8.0	30 - 130	30
Phenanthrene	ND	230	58	58	0.0	50	53	5.8	30 - 130	30
Pyrene	ND	230	63	60	4.9	56	60	6.9	30 - 130	30
% 2-Fluorobiphenyl	54	%	53	48	9.9	44	49	10.8	30 - 130	30
% Nitrobenzene-d5	61	%	58	56	3.5	56	52	7.4	30 - 130	30
% Terphenyl-d14	52	%	53	50	5.8	43	47	8.9	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 513486 (ug/kg), QC Sample No: CF00347 (CE99878, CE99879, CE99880, CE99881, CE99882, CE99883, CE99884)

Polynuclear Aromatic HC - Soil

2-Methylnaphthalene	ND	230	60	56	6.9	55	54	1.8	30 - 130	30
Acenaphthene	ND	230	64	61	4.8	60	62	3.3	30 - 130	30
Acenaphthylene	ND	230	60	57	5.1	55	55	0.0	30 - 130	30
Anthracene	ND	230	60	58	3.4	59	62	5.0	30 - 130	30
Benz(a)anthracene	ND	230	61	58	5.0	55	59	7.0	30 - 130	30
Benzo(a)pyrene	ND	230	65	62	4.7	60	66	9.5	30 - 130	30
Benzo(b)fluoranthene	ND	230	62	58	6.7	55	60	8.7	30 - 130	30
Benzo(ghi)perylene	ND	230	58	56	3.5	40	47	16.1	30 - 130	30
Benzo(k)fluoranthene	ND	230	61	59	3.3	59	64	8.1	30 - 130	30
Chrysene	ND	230	59	56	5.2	52	57	9.2	30 - 130	30
Dibenz(a,h)anthracene	ND	230	64	60	6.5	51	57	11.1	30 - 130	30
Fluoranthene	ND	230	57	54	5.4	49	54	9.7	30 - 130	30
Fluorene	ND	230	66	64	3.1	59	61	3.3	30 - 130	30
Indeno(1,2,3-cd)pyrene	ND	230	62	60	3.3	47	53	12.0	30 - 130	30
Naphthalene	ND	230	61	54	12.2	55	54	1.8	30 - 130	30
Phenanthrene	ND	230	58	58	0.0	54	58	7.1	30 - 130	30
Pyrene	ND	230	57	56	1.8	51	57	11.1	30 - 130	30
% 2-Fluorobiphenyl	51	%	58	53	9.0	51	52	1.9	30 - 130	30
% Nitrobenzene-d5	56	%	63	59	6.6	58	61	5.0	30 - 130	30
% Terphenyl-d14	50	%	49	47	4.2	47	50	6.2	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 515069 (ug/L), QC Sample No: CF16318 (CE99882, CE99883)

Semivolatiles by SIM, PAH - SPLP

2-Methylnaphthalene	ND	0.50	43	49	13.0				30 - 130	20
Acenaphthene	ND	0.50	63	65	3.1				30 - 130	20
Acenaphthylene	ND	0.10	34	59	53.8				30 - 130	20
Anthracene	ND	0.10	80	73	9.2				30 - 130	20
Benz(a)anthracene	ND	0.02	86	79	8.5				30 - 130	20

QA/QC Data

SDG I.D.: GCE99876

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzo(a)pyrene	ND	0.02	55	89	47.2				30 - 130	20	r
Benzo(b)fluoranthene	ND	0.02	111	95	15.5				30 - 130	20	
Benzo(ghi)perylene	ND	0.02	60	84	33.3				30 - 130	20	r
Benzo(k)fluoranthene	ND	0.02	113	106	6.4				30 - 130	20	
Chrysene	ND	0.02	95	82	14.7				30 - 130	20	
Dibenz(a,h)anthracene	ND	0.02	106	98	7.8				30 - 130	20	
Fluoranthene	ND	0.50	82	72	13.0				30 - 130	20	
Fluorene	ND	0.10	72	66	8.7				30 - 130	20	
Indeno(1,2,3-cd)pyrene	ND	0.02	68	96	34.1				30 - 130	20	r
Naphthalene	ND	0.50	32	44	31.6				30 - 130	20	r
Phenanthrene	ND	0.06	77	68	12.4				30 - 130	20	
Pyrene	ND	0.07	73	75	2.7				30 - 130	20	
% 2-Fluorobiphenyl	53	%	45	52	14.4				30 - 130	20	
% Nitrobenzene-d5	47	%	24	45	60.9				30 - 130	20	I,r
% Terphenyl-d14	56	%	62	54	13.8				30 - 130	20	

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%)

I = This parameter is outside laboratory LCS/LCSD specified recovery limits.

r = This parameter is outside laboratory RPD 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
January 23, 2020

Thursday, January 23, 2020

Criteria: CT: GAM, GBM, I/C, RC

State: CT

Sample Criteria Exceedances Report

GCE99876 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CE99879	\$PEST_SMR	4,4' -DDE	CT / RSR GA,GAA (mg/kg) / APS Organics	3.5	1.6	3	3	ug/Kg
CE99879	\$PEST_SMR	4,4' -DDT	CT / RSR GA,GAA (mg/kg) / APS Organics	8.2	7.8	3	3	ug/Kg
CE99879	\$PEST_SMR	4,4' -DDD	CT / RSR GA,GAA (mg/kg) / APS Organics	4.9	1.6	3	3	ug/Kg
CE99880	\$PEST_SMR	4,4' -DDT	CT / RSR GA,GAA (mg/kg) / APS Organics	3.6	1.6	3	3	ug/Kg
CE99881	\$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	1900	280	1000	1000	ug/Kg
CE99881	\$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	1200	280	1000	1000	ug/Kg
CE99881	\$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1900	280	1000	1000	ug/Kg
CE99881	\$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1900	280	1000	1000	ug/Kg
CE99881	\$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1700	280	1000	1000	ug/Kg
CE99881	\$8100SMR	Chrysene	CT / RSR GA,GAA (mg/kg) / APS Organics	1900	280	1000	1000	ug/Kg
CE99881	\$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GA,GAA (mg/kg) / APS Organics	1200	280	1000	1000	ug/Kg
CE99881	\$8100SMR	Benzo(ghi)perylene	CT / RSR GA,GAA (mg/kg) / APS Organics	1100	280	1000	1000	ug/Kg
CE99881	\$8100SMR	Benzo(k)fluoranthene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	1700	280	1000	1000	ug/Kg
CE99881	\$8100SMR	Benzo(b)fluoranthene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	1700	280	1000	1000	ug/Kg
CE99881	\$8100SMR	Benz(a)anthracene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	1900	280	1000	1000	ug/Kg
CE99881	\$8100SMR	Benzo(a)pyrene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	1900	280	1000	1000	ug/Kg
CE99881	\$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	1900	280	1000	1000	ug/Kg
CE99881	\$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	1200	280	1000	1000	ug/Kg
CE99881	\$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	1100	280	1000	1000	ug/Kg
CE99881	\$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	1700	280	1000	1000	ug/Kg
CE99881	\$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	1900	280	1000	1000	ug/Kg
CE99881	\$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	1900	280	1000	1000	ug/Kg
CE99881	\$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	1700	280	1000	1000	ug/Kg
CE99881	\$PEST_SMR	4,4' -DDD	CT / RSR GA,GAA (mg/kg) / APS Organics	8.5	8.1	3	3	ug/Kg
CE99881	\$PEST_SMR	4,4' -DDE	CT / RSR GA,GAA (mg/kg) / APS Organics	5.2	1.6	3	3	ug/Kg
CE99881	\$PEST_SMR	4,4' -DDT	CT / RSR GA,GAA (mg/kg) / APS Organics	9.9	8.1	3	3	ug/Kg
CE99882	\$8100SMR	Benzo(a)pyrene	CT / RSR DEC I/C (mg/kg) / Semivolatiles	2100	270	1000	1000	ug/Kg
CE99882	\$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	1200	270	1000	1000	ug/Kg
CE99882	\$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	2000	270	1000	1000	ug/Kg
CE99882	\$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	2100	270	1000	1000	ug/Kg
CE99882	\$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1600	270	1000	1000	ug/Kg
CE99882	\$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GA,GAA (mg/kg) / APS Organics	1200	270	1000	1000	ug/Kg
CE99882	\$8100SMR	Chrysene	CT / RSR GA,GAA (mg/kg) / APS Organics	2300	270	1000	1000	ug/Kg
CE99882	\$8100SMR	Benzo(ghi)perylene	CT / RSR GA,GAA (mg/kg) / APS Organics	1200	270	1000	1000	ug/Kg
CE99882	\$8100SMR	Pyrene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	5100	270	4000	4000	ug/Kg
CE99882	\$8100SMR	Benzo(k)fluoranthene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	1400	270	1000	1000	ug/Kg
CE99882	\$8100SMR	Benzo(b)fluoranthene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	1600	270	1000	1000	ug/Kg
CE99882	\$8100SMR	Benzo(a)pyrene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	2100	270	1000	1000	ug/Kg
CE99882	\$8100SMR	Benz(a)anthracene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	2000	270	1000	1000	ug/Kg
CE99882	\$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	1200	270	1000	1000	ug/Kg

Thursday, January 23, 2020

Criteria: CT: GAM, GBM, I/C, RC

State: CT

Sample Criteria Exceedances Report

GCE99876 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CE99882	\$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	2300	270	1000	1000	ug/Kg
CE99882	\$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	1200	270	1000	1000	ug/Kg
CE99882	\$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	2100	270	1000	1000	ug/Kg
CE99882	\$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	1400	270	1000	1000	ug/Kg
CE99882	\$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	2000	270	1000	1000	ug/Kg
CE99882	\$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	1600	270	1000	1000	ug/Kg
CE99882	\$PEST_SMR	4,4' -DDD	CT / RSR GA,GAA (mg/kg) / APS Organics	12	7.5	3	3	ug/Kg
CE99882	\$PEST_SMR	Chlordane	CT / RSR GA,GAA (mg/kg) / APS Organics	91	38	66	66	ug/Kg
CE99882	\$PEST_SMR	4,4' -DDE	CT / RSR GA,GAA (mg/kg) / APS Organics	5.2	1.5	3	3	ug/Kg
CE99882	\$PEST_SMR	4,4' -DDT	CT / RSR GA,GAA (mg/kg) / APS Organics	9.3	7.5	3	3	ug/Kg
CE99882	\$PEST_SMR	Chlordane	CT / RSR GA,GAA (mg/kg) / Pesticides/TPH	91	38	66	66	ug/Kg
CE99882	\$PEST_SMR	Chlordane	CT / RSR GB (mg/kg) / APS Organics	91	38	66	66	ug/Kg
CE99882	\$PEST_SMR	Chlordane	CT / RSR GB (mg/kg) / Pesticides/TPH	91	38	66	66	ug/Kg
CE99883	\$PEST_SMR	4,4' -DDD	CT / RSR GA,GAA (mg/kg) / APS Organics	6.3	1.5	3	3	ug/Kg
CE99883	\$PEST_SMR	4,4' -DDE	CT / RSR GA,GAA (mg/kg) / APS Organics	6.0	1.5	3	3	ug/Kg
CE99883	\$PEST_SMR	4,4' -DDT	CT / RSR GA,GAA (mg/kg) / APS Organics	8.1	7.4	3	3	ug/Kg
CE99884	\$PEST_SMR	4,4' -DDT	CT / RSR GA,GAA (mg/kg) / APS Organics	9.7	7.7	3	3	ug/Kg
CE99884	\$PEST_SMR	4,4' -DDD	CT / RSR GA,GAA (mg/kg) / APS Organics	3.1	1.5	3	3	ug/Kg
CE99884	\$PEST_SMR	4,4' -DDE	CT / RSR GA,GAA (mg/kg) / APS Organics	4.2	1.5	3	3	ug/Kg

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance 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 & Bond

Project Location: 901 BEACH RD

Project Number:

Laboratory Sample ID(s): CE99876-CE99884

Sampling Date(s): 1/7/2020

List RCP Methods Used (e.g., 8260, 8270, et cetera) 1311/1312, 6010, 8081, 8082, 8270, ETPH

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	<u>VPH and EPH methods only:</u> 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 Sections: ETPH Narration, PCB Narration, PEST Narration, SVOASIM Narration.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5	a) Were reporting limits specified or referenced on the chain-of-custody? b) Were these reporting limits met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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
7	Are project-specific matrix spikes and laboratory duplicates included in the data set?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Notes: For all questions to which the response was "No" (with the exception of question #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". This form may not be altered and all questions must be answered.

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:

Position: Assistant Lab Director

Printed Name: Greg Lawrence

Date: Thursday, January 23, 2020

Name of Laboratory Phoenix Environmental Labs, Inc.

This certification form is to be used for RCP methods only.



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



RCP Certification Report

January 23, 2020

SDG I.D.: GCE99876

SDG Comments

Metals Analysis:

The client requested a shorter list of elements than the 6010 RCP list. Only Arsenic and Lead are reported as requested on the chain of custody.

8270 Semi-volatile Organics:

Only the PAH constituents are reported as requested on the chain-of-custody. For the SPLP leachates, in order to achieve the requested reporting levels for the target compounds, the sample was extracted and analyzed via 8270 selective ion monitoring (SIM).

ETPH Narration

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

QC Batch 513664 (Samples: CE99881): -----

The LCS/LCSD RPD exceeds the method criteria. All of the other RPD's are acceptable. These analytes were not reported in the sample(s). No significant variability is suspected. (Ext. Petroleum H.C. (C9-C36))

Instrument:

AU-FID11 01/10/20-1

Jeff Bucko, Chemist 01/10/20

CE99879 (1X)

The initial calibration (ETPHD16I) RSD for the compound list was less than 30% except for the following compounds: None.

As per section 7.2.3, a discrimination check standard was run (110A003_1) and contained the following outliers: None.

The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-FID84 01/10/20-1

Jeff Bucko, Chemist 01/10/20

CE99882 (5X), CE99883 (5X), CE99884 (5X)

The initial calibration (ETPHN01I) RSD for the compound list was less than 30% except for the following compounds: None.

As per section 7.2.3, a discrimination check standard was run (110A003_1) and contained the following outliers: None.

The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-FID84 01/13/20-1

Jeff Bucko, Chemist 01/13/20

CE99881 (5X)

The initial calibration (ETPHN01I) RSD for the compound list was less than 30% except for the following compounds: None.

As per section 7.2.3, a discrimination check standard was run (113A003) and contained the following outliers: None.

The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-XL2 01/08/20-1

Jeff Bucko, Chemist 01/08/20

CE99876 (1X), CE99877 (1X), CE99878 (1X), CE99880 (1X)

The initial calibration (ETPHO29I) RSD for the compound list was less than 30% except for the following compounds: None.

As per section 7.2.3, a discrimination check standard was run (108A003_1) and contained the following outliers: None.

The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

QC (Batch Specific):

Batch 513664 (CF00260)

CE99881

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: Ext. Petroleum H.C. (C9-C36)(30.6%)



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RCP Certification Report

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SDG I.D.: GCE99876

ETPH Narration

Additional surrogate criteria: LCS acceptance range is 60-120% MS acceptance range 50-150%. The ETPH/DRO LCS has been normalized based on the alkane calibration.

QC (Site Specific):

Batch 513484 (CE99881)

CE99876, CE99877, CE99878, CE99879, CE99880, CE99882, CE99883, CE99884

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.

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.

Additional surrogate criteria: LCS acceptance range is 60-120% MS acceptance range 50-150%. The ETPH/DRO LCS has been normalized based on the alkane calibration.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS 01/11/20 09:00

Cindy Pearce, Chemist 01/11/20

CE99876, CE99877, CE99878, CE99879, CE99880, CE99881, CE99882, CE99883, CE99884

Additional criteria for CCV and ICSAB:

Sodium and Potassium are poor performing elements, the laboratory's in-house limits are 85-115% (CCV) and 70-130% (ICSAB). The linear range is defined daily by the calibration range.

The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.

The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.

The following ICP Interference Check (ICSAB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 513550 (CE99874)

CE99876

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.

QC (Site Specific):

Batch 513508 (CE99877)

CE99877, CE99878, CE99879, CE99880, CE99881, CE99882, CE99883, CE99884

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.

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

PCB Narration



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RCP Certification Report

January 23, 2020

SDG I.D.: GCE99876

PCB Narration

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

QC Batch 513511 (Samples: CE99876, CE99877, CE99878, CE99879, CE99880, CE99881, CE99882, CE99883, CE99884): -----

The LCS/LCSD RPD exceeds the method criteria for one analyte and one surrogate. The site specific MS/MSD RPD is acceptable. No significant variability is suspected. (PCB-1260, % DCBP (Surrogate Rec) (Confirmation))

Instrument:

AU-ECD5 01/10/20-1

Saadia Chudary, Chemist 01/10/20

CE99876 (10X), CE99877 (10X), CE99878 (10X), CE99879 (10X), CE99880 (10X), CE99881 (10X), CE99882 (10X), CE99883 (10X), CE99884 (10X)

The initial calibration (PC108AI) RSD for the compound list was less than 20% except for the following compounds: None.

The initial calibration (PC108BI) RSD for the compound list was less than 20% except for the following compounds: None.

The continuing calibration %D for the compound list was less than 15% except for the following compounds: None.

QC (Site Specific):

Batch 513511 (CE99883)

CE99876, CE99877, CE99878, CE99879, CE99880, CE99881, CE99882, CE99883, CE99884

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: % DCBP (Surrogate Rec) (Confirmation)(32.3%), PCB-1260(32.7%)

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.

PEST Narration

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

QC Batch 513488 (Samples: CE99876, CE99877, CE99878, CE99879, CE99880, CE99881, CE99882, CE99883, CE99884): -----

The MS/MSD RPD exceeds the method criteria for one analyte. This analyte was not reported in the samples. No significant variability is suspected. (d-BHC)

Instrument:

AU-ECD35 01/10/20-1

Chelsey Guerette, Chemist 01/10/20

CE99876 (2X), CE99877 (2X), CE99878 (2X)

The initial calibration (PS0106AI) RSD for the compound list was less than 20% except for the following compounds: None.

The initial calibration (PS0106BI) RSD for the compound list was less than 20% except for the following compounds: None.

The Endrin and DDT breakdown does not exceed 15% except for the following compounds: None.

The Endrin and DDT breakdown does not exceed the maximum of 20% except for the following compounds: None.

The continuing calibration %D for the compound list was less than 20% except for the following compounds: None.

AU-ECD35 01/22/20-1

Chelsey Guerette, Chemist 01/22/20

CE99882 (1X), CE99883 (1X)

The initial calibration (PS0120AI) RSD for the compound list was less than 20% except for the following compounds: None.

The initial calibration (PS0120BI) RSD for the compound list was less than 20% except for the following compounds: None.

The Endrin and DDT breakdown does not exceed 15% except for the following compounds: None.



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SDG I.D.: GCE99876

PEST Narration

The Endrin and DDT breakdown does not exceed the maximum of 20% except for the following compounds: None.

The continuing calibration %D for the compound list was less than 20% except for the following compounds:

Samples: CE99882, CE99883

Preceding CC 122A004 - b-BHC 41%H (20%), Endosulfan sulfate 25%H (20%), Endrin aldehyde 25%H (20%)

Succeeding CC 122A031 - b-BHC 42%H (20%), Endosulfan sulfate 30%H (20%), Endrin aldehyde 27%H (20%), Endrin Ketone 21%H (20%)

AU-ECD7 01/10/20-1

Chelsey Guerette, Chemist 01/10/20

CE99879 (2X), CE99880 (2X), CE99881 (2X), CE99882 (2X), CE99883 (2X), CE99884 (2X)

The initial calibration (PS0109AI) RSD for the compound list was less than 20% except for the following compounds: None.

The initial calibration (PS0109BI) RSD for the compound list was less than 20% except for the following compounds: None.

The Endrin and DDT breakdown does not exceed 15% except for the following compounds: None.

The Endrin and DDT breakdown does not exceed the maximum of 20% except for the following compounds: None.

The continuing calibration %D for the compound list was less than 20% except for the following compounds:

Samples: CE99884

Preceding CC 110A025 - None.

Succeeding CC 110A038 - b-BHC 28%H (20%)

Samples: CE99879, CE99880, CE99881, CE99882, CE99883

Preceding CC 110A038 - b-BHC 28%H (20%)

Succeeding CC 110A065 - % DCBP -37%L (20%), b-BHC 21%H (20%)

QC (Batch Specific):

Batch 515054 (CE99882)

CE99882, CE99883

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 20% with the following exceptions: None.

A LCS and LCS duplicate were performed instead of a MS and MSD. Alpha and gamma chlordane were spiked and analyzed instead of technical chlordane. Gamma chlordane recovery is reported as chlordane in the LCS and LCSD

QC (Site Specific):

Batch 513488 (CE99876)

CE99876, CE99877, CE99878, CE99879, CE99880, CE99881, CE99882, CE99883, CE99884

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 30 - 150 with the following exceptions: None.

All MSD recoveries were within 30 - 150 with the following exceptions: None.

All MS/MSD RPDs were less than 30% with the following exceptions: d-BHC(34.0%)

SVOA Narration

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

Instrument:

CHEM05 01/09/20-1

Matt Richard, Chemist 01/09/20

CE99878 (1X), CE99879 (1X), CE99880 (1X), CE99881 (1X), CE99882 (1X), CE99883 (1X), CE99884 (1X)



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RCP Certification Report

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SDG I.D.: GCE99876

SVOA Narration

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM05/5_BN_1115):

100% of target compounds met criteria.

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

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

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

Continuing Calibration Verification (CHEM05/0109_08-5_BN_1115):

Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.

100% of target compounds met criteria.

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.

CHEM19 01/09/20-2

Matt Richard, Chemist 01/09/20

CE99876 (1X), CE99877 (1X)

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM19/19_BN_1112):

100% of target compounds met criteria.

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

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

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

Continuing Calibration Verification (CHEM19/0109_18-19_BN_1112):

Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.

100% of target compounds met criteria.

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.

QC (Batch Specific):

Batch 513481 (CE99900)

CE99876, CE99877

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.

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%)

Batch 513486 (CF00347)

CE99878, CE99879, CE99880, CE99881, CE99882, CE99883, CE99884



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RCP Certification Report

January 23, 2020

SDG I.D.: GCE99876

SVOA Narration

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.
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%)

SVOASIM Narration

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

QC Batch 515069 (Samples: CE99882, CE99883): ----

The LCS recovery for one surrogate is below the lower range. The other surrogates and the target analytes are acceptable. No significant bias is suspected. (% Nitrobenzene-d5)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes and one surrogate. These analytes were not reported in the sample(s). No significant no variability is suspected. (Acenaphthylene, Benzo(a)pyrene, Benzo(ghi)perylene, Indeno(1,2,3-cd)pyrene, Naphthalene, % Nitrobenzene-d5)

Instrument:

CHEM25 01/21/20-1

Wes Bryon, Chemist 01/21/20

CE99882 (1X), CE99883 (1X)

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM25/25_BNSIM18_1118):

100% of target compounds met criteria.

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

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

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

Continuing Calibration Verification (CHEM25/0121_03-25_BNSIM18_1118):

Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.

100% of target compounds met criteria.

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.

QC (Batch Specific):

Batch 515069 (CF16318)

CE99882, CE99883

All LCS recoveries were within 30 - 130 with the following exceptions: % Nitrobenzene-d5(24%)

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

All LCS/LCSD RPDs were less than 20% with the following exceptions: % Nitrobenzene-d5(60.9%), Acenaphthylene(53.8%), Benzo(a)pyrene(47.2%), Benzo(ghi)perylene(33.3%), Indeno(1,2,3-cd)pyrene(34.1%), Naphthalene(31.6%)

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%)



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RCP Certification Report

January 23, 2020

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Temperature Narration

The samples were received at 1.6C with cooling initiated.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)



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

Customer: Tighe & Bond
Address: 213 Court St
Suite 1100
Middletown CT 06457

Project: 901 Beach Rd
Report to: Brian Sirowich, Jim Libby, Jim Olsen
Invoice to: Tighe & Bond
QUOTE # DAS Pricing

Project P.O.: 150439027

This section **MUST** be completed with Bottle Quantities.

PHOENIX USE ONLY	SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Analysis Request
	99876	BR 1 (0-0.5')	S	1-7-20	9:30	PCBs SOX
	99877	BR 2 (0-1')			9:35	PCBs SOX
	99878	BR 3 (0-1')			9:40	PCBs SOX
	99879	BR 4 (0-1')			9:45	PCBs SOX
	99880	BR 5 (0-1')			9:50	PCBs SOX
	99881	BR 6 (0-1')			9:49	PCBs SOX
	99882	BR 7 (0-1')			9:53	PCBs SOX
	99883	BR 8 (0-1')			10:00	PCBs SOX
	99884	BR DUP H			10:01	PCBs SOX

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 X= (Other)

Sampler's Signature: Brian Sirowich Date: 1-7-20

Relinquished by:	Accepted by:	Date:	Time:	RI	CT	MA	Data Format
<u>Th LR</u>	<u>T + B Friday</u>	<u>1-7-20</u>	<u>10:00</u>	<input type="checkbox"/> (Residential) Direct Exposure <input type="checkbox"/> (Comm/Industrial) Direct Exposure <input type="checkbox"/> GA Leachability <input type="checkbox"/> GB Leachability <input type="checkbox"/> GA-GW Objectives <input type="checkbox"/> GB-GW Objectives	<input checked="" type="checkbox"/> RCP Cert <input type="checkbox"/> GW Protection <input type="checkbox"/> SW Protection <input checked="" type="checkbox"/> GA Mobility <input checked="" type="checkbox"/> GB Mobility <input checked="" type="checkbox"/> Residential DEC <input checked="" type="checkbox"/> I/C DEC <input type="checkbox"/> Other	<input type="checkbox"/> MCP Certification <input type="checkbox"/> GW-1 <input type="checkbox"/> GW-2 <input type="checkbox"/> GW-3 <input type="checkbox"/> S-1 GW-1 <input type="checkbox"/> S-2 GW-1 <input type="checkbox"/> S-3 GW-1 <input type="checkbox"/> SW Protection	<input checked="" type="checkbox"/> Excel <input checked="" type="checkbox"/> PDF <input type="checkbox"/> GIS/Key <input type="checkbox"/> EQUIS <input checked="" type="checkbox"/> Other EnviroData

Comments, Special Requirements or Regulations:
Also report to Ian Adameit, Brian Gaultzetti.

Turnaround Time:
☐ 1 Day*
☐ 2 Days*
☐ 3 Days*
☒ Standard (5 days)
☐ Other

* SURCHARGE APPLIES

State where samples were collected: CT

* SURCHARGE APPLIES

Sarah Bell

From: Jill L. Libby <JLLibby@tigheBond.com>
Sent: Friday, January 17, 2020 6:34 AM
To: Sarah Bell
Cc: Brian Sirowich
Subject: RE: Phoenix Labs - GCE99876, 901 BEACH RD - Report Ready

Good Morning Sarah,
Could I please submit BR-6 & BR7 (CE99882 & CE99883) for SPLP Pesticides and SPLP PAHs? With 3 day TAT so we don't miss hold.

Thank you,
Jill

Jill Libby | Project Environmental Scientist II

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www.tighebond.com | Follow us on: [Twitter](#) [Facebook](#) [LinkedIn](#)



From: Client Services <clientservices@phoenixlabs.com>
Sent: Thursday, January 16, 2020 12:31 PM
To: Jill L. Libby <JLLibby@tigheBond.com>
Subject: Phoenix Labs - GCE99876, 901 BEACH RD - Report Ready

[Caution - External Sender]

Delivery group GCE99876 (901 BEACH RD) for the following samples:

CE99876 - BR 1 (0-0.5')
CE99877 - BR 2 (0-1')
CE99878 - BR 3 (0-1')
CE99879 - BR 4 (0-1')
CE99880 - BR 5 (0-1')
CE99881 - BR 6 (0-1')
CE99882 - BR 7 (0-1')
CE99883 - BR 8 (0-1')
CE99884 - BR DUP H

is available for review. Please click the following link to view report data.

www.PhoenixLabs.com

Note: The default password is your email address. You may change it after logging in.

Please take a moment to give us some feedback on your experience with Phoenix Environmental Laboratories, Inc. Your input is valuable to us!

www.phoenixlabs.com/CustomerSurvey

Phoenix Environmental Laboratories, Inc.

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Fax. (860) 645-0823
www.phoenixlabs.com

Please do not reply to this email.

cc'd: JTolsen@tighebond.com; jllibby@tighebond.com; bsirowich@tighebond.com; BGaulzetti@TigheBond.com; ladomeit@TigheBond.com



Wednesday, August 25, 2021

Attn: Brian Sirowich
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Project ID: 901 BEACH ROAD
SDG ID: GCJ12772
Sample ID#s: CJ12772 - CJ12778

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. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

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 are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Phyllis Shiller".

Phyllis Shiller

Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
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
UT Lab Registration #CT00007
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

Sample Id Cross Reference

August 25, 2021

SDG I.D.: GCJ12772

Project ID: 901 BEACH ROAD

Client Id	Lab Id	Matrix
BR101 (0-1)	CJ12772	DRINKING WATER
BR102 (0-1)	CJ12773	DRINKING WATER
BR102D (0-1)	CJ12774	DRINKING WATER
BR103 (0-1)	CJ12775	DRINKING WATER
BR104 (0-1)	CJ12776	DRINKING WATER
BR105 (0-1)	CJ12777	DRINKING WATER
BR106 (0-1)	CJ12778	DRINKING WATER



Environmental Laboratories, Inc.
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Analysis Report

August 25, 2021

FOR: Attn: Brian Sirowich
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information

Matrix: DRINKING WATER
Location Code: TIGHE-DAS
Rush Request: Standard
P.O.#: 150439 BEACH RD

Custody Information

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

Date

08/24/21

Time

13:30

08/24/21

16:50

Laboratory Data

SDG ID: GCJ12772
Phoenix ID: CJ12772

Project ID: 901 BEACH ROAD
Client ID: BR101 (0-1)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	90		%		08/24/21	JS	SW846-%Solid
Soil Extraction for SVOA PAH	Completed				08/24/21	I/Y/K	SW3546

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	260	ug/Kg	1	08/25/21	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	08/25/21	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	08/25/21	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	08/25/21	WB	SW8270D
Benz(a)anthracene	ND	260	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(a)pyrene	430	260	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(b)fluoranthene	300	260	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(ghi)perylene	630	260	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(k)fluoranthene	280	260	ug/Kg	1	08/25/21	WB	SW8270D
Chrysene	ND	260	ug/Kg	1	08/25/21	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	08/25/21	WB	SW8270D
Fluoranthene	280	260	ug/Kg	1	08/25/21	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	08/25/21	WB	SW8270D
Indeno(1,2,3-cd)pyrene	710	260	ug/Kg	1	08/25/21	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	08/25/21	WB	SW8270D
Phenanthrene	ND	260	ug/Kg	1	08/25/21	WB	SW8270D
Pyrene	270	260	ug/Kg	1	08/25/21	WB	SW8270D

QA/QC Surrogates

% 2-Fluorobiphenyl	73		%	1	08/25/21	WB	30 - 130 %
% Nitrobenzene-d5	65		%	1	08/25/21	WB	30 - 130 %
% Terphenyl-d14	91		%	1	08/25/21	WB	30 - 130 %

Project ID: 901 BEACH ROAD
Client ID: BR101 (0-1)

Phoenix I.D.: CJ12772


Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

August 25, 2021

Reviewed and Released by: Ethan Lee, Project Manager



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

Analysis Report

August 25, 2021

FOR: Attn: Brian Sirowich
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information

Matrix: DRINKING WATER
Location Code: TIGHE-DAS
Rush Request: Standard
P.O.#: 150439 BEACH RD

Custody Information

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

Date

08/24/21

Time

13:32

08/24/21

16:50

Laboratory Data

SDG ID: GCJ12772
Phoenix ID: CJ12773

Project ID: 901 BEACH ROAD
Client ID: BR102 (0-1)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	93		%		08/24/21	JS	SW846-%Solid
Soil Extraction for SVOA PAH	Completed				08/24/21	I/Y/K	SW3546

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Acenaphthene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Acenaphthylene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Anthracene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Benz(a)anthracene	450	250	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(a)pyrene	640	250	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(b)fluoranthene	610	250	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(ghi)perylene	610	250	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(k)fluoranthene	510	250	ug/Kg	1	08/25/21	WB	SW8270D
Chrysene	530	250	ug/Kg	1	08/25/21	WB	SW8270D
Dibenz(a,h)anthracene	320	250	ug/Kg	1	08/25/21	WB	SW8270D
Fluoranthene	820	250	ug/Kg	1	08/25/21	WB	SW8270D
Fluorene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Indeno(1,2,3-cd)pyrene	620	250	ug/Kg	1	08/25/21	WB	SW8270D
Naphthalene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Phenanthrene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Pyrene	810	250	ug/Kg	1	08/25/21	WB	SW8270D

QA/QC Surrogates

% 2-Fluorobiphenyl	80	%	1	08/25/21	WB	30 - 130 %
% Nitrobenzene-d5	79	%	1	08/25/21	WB	30 - 130 %
% Terphenyl-d14	89	%	1	08/25/21	WB	30 - 130 %

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

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Phyllis Shiller, Laboratory Director

August 25, 2021

Reviewed and Released by: Ethan Lee, Project Manager



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Analysis Report

August 25, 2021

FOR: Attn: Brian Sirowich
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information

Matrix: DRINKING WATER
Location Code: TIGHE-DAS
Rush Request: Standard
P.O.#: 150439 BEACH RD

Custody Information

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

Date

08/24/21

Time

13:33

08/24/21

16:50

Laboratory Data

SDG ID: GCJ12772
Phoenix ID: CJ12774

Project ID: 901 BEACH ROAD
Client ID: BR102D (0-1)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	89		%		08/24/21	JS	SW846-%Solid
Soil Extraction for SVOA PAH	Completed				08/24/21	I/Y/K	SW3546

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	260	ug/Kg	1	08/25/21	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	08/25/21	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	08/25/21	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	08/25/21	WB	SW8270D
Benz(a)anthracene	430	260	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(a)pyrene	530	260	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(b)fluoranthene	530	260	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(ghi)perylene	660	260	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(k)fluoranthene	480	260	ug/Kg	1	08/25/21	WB	SW8270D
Chrysene	490	260	ug/Kg	1	08/25/21	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	08/25/21	WB	SW8270D
Fluoranthene	870	260	ug/Kg	1	08/25/21	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	08/25/21	WB	SW8270D
Indeno(1,2,3-cd)pyrene	690	260	ug/Kg	1	08/25/21	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	08/25/21	WB	SW8270D
Phenanthrene	310	260	ug/Kg	1	08/25/21	WB	SW8270D
Pyrene	830	260	ug/Kg	1	08/25/21	WB	SW8270D

QA/QC Surrogates

% 2-Fluorobiphenyl	66	%	1	08/25/21	WB	30 - 130 %
% Nitrobenzene-d5	59	%	1	08/25/21	WB	30 - 130 %
% Terphenyl-d14	83	%	1	08/25/21	WB	30 - 130 %

Project ID: 901 BEACH ROAD
Client ID: BR102D (0-1)

Phoenix I.D.: CJ12774


Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

August 25, 2021

Reviewed and Released by: Ethan Lee, Project Manager



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

Analysis Report

August 25, 2021

FOR: Attn: Brian Sirowich
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information

Matrix: DRINKING WATER
Location Code: TIGHE-DAS
Rush Request: Standard
P.O.#: 150439 BEACH RD

Custody Information

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

Date

08/24/21 13:35
08/24/21 16:50

Time

Laboratory Data

SDG ID: GCJ12772
Phoenix ID: CJ12775

Project ID: 901 BEACH ROAD
Client ID: BR103 (0-1)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	93		%		08/24/21	JS	SW846-%Solid
Soil Extraction for SVOA PAH	Completed				08/24/21	I/Y/K	SW3546

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Acenaphthene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Acenaphthylene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Anthracene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Benz(a)anthracene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(a)pyrene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(b)fluoranthene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(ghi)perylene	370	250	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(k)fluoranthene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Chrysene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Fluoranthene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Fluorene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Indeno(1,2,3-cd)pyrene	340	250	ug/Kg	1	08/25/21	WB	SW8270D
Naphthalene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Phenanthrene	ND	250	ug/Kg	1	08/25/21	WB	SW8270D
Pyrene	250	250	ug/Kg	1	08/25/21	WB	SW8270D

QA/QC Surrogates

% 2-Fluorobiphenyl	88		%	1	08/25/21	WB	30 - 130 %
% Nitrobenzene-d5	80		%	1	08/25/21	WB	30 - 130 %
% Terphenyl-d14	102		%	1	08/25/21	WB	30 - 130 %

Project ID: 901 BEACH ROAD
Client ID: BR103 (0-1)

Phoenix I.D.: CJ12775


Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

August 25, 2021

Reviewed and Released by: Ethan Lee, Project Manager



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

Analysis Report

August 25, 2021

FOR: Attn: Brian Sirowich
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information

Matrix: DRINKING WATER
Location Code: TIGHE-DAS
Rush Request: Standard
P.O.#: 150439 BEACH RD

Custody Information

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

Date

08/24/21

Time

13:38

08/24/21

16:50

Laboratory Data

SDG ID: GCJ12772

Phoenix ID: CJ12776

Project ID: 901 BEACH ROAD

Client ID: BR104 (0-1)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	82		%		08/24/21	JS	SW846-%Solid
Soil Extraction for SVOA PAH	Completed				08/24/21	I/Y/K	SW3546

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	280	ug/Kg	1	08/25/21	WB	SW8270D
Acenaphthene	ND	280	ug/Kg	1	08/25/21	WB	SW8270D
Acenaphthylene	500	280	ug/Kg	1	08/25/21	WB	SW8270D
Anthracene	320	280	ug/Kg	1	08/25/21	WB	SW8270D
Benz(a)anthracene	1300	280	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(a)pyrene	1300	280	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(b)fluoranthene	1400	280	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(ghi)perylene	1100	280	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(k)fluoranthene	1100	280	ug/Kg	1	08/25/21	WB	SW8270D
Chrysene	1400	280	ug/Kg	1	08/25/21	WB	SW8270D
Dibenz(a,h)anthracene	ND	280	ug/Kg	1	08/25/21	WB	SW8270D
Fluoranthene	2900	280	ug/Kg	1	08/25/21	WB	SW8270D
Fluorene	ND	280	ug/Kg	1	08/25/21	WB	SW8270D
Indeno(1,2,3-cd)pyrene	1200	280	ug/Kg	1	08/25/21	WB	SW8270D
Naphthalene	ND	280	ug/Kg	1	08/25/21	WB	SW8270D
Phenanthrene	920	280	ug/Kg	1	08/25/21	WB	SW8270D
Pyrene	2800	280	ug/Kg	1	08/25/21	WB	SW8270D

QA/QC Surrogates

% 2-Fluorobiphenyl	72		%	1	08/25/21	WB	30 - 130 %
% Nitrobenzene-d5	75		%	1	08/25/21	WB	30 - 130 %
% Terphenyl-d14	91		%	1	08/25/21	WB	30 - 130 %

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

QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

August 25, 2021

Reviewed and Released by: Ethan Lee, Project Manager



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Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

August 25, 2021

FOR: Attn: Brian Sirowich
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information

Matrix: DRINKING WATER
Location Code: TIGHE-DAS
Rush Request: Standard
P.O.#: 150439 BEACH RD

Custody Information

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

Date

08/24/21

Time

13:40

08/24/21

16:50

Laboratory Data

SDG ID: GCJ12772
Phoenix ID: CJ12777

Project ID: 901 BEACH ROAD
Client ID: BR105 (0-1)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	87		%		08/24/21	JS	SW846-%Solid
Soil Extraction for SVOA PAH	Completed				08/24/21	I/Y/K	SW3546

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	270	ug/Kg	1	08/25/21	WB	SW8270D
Acenaphthene	ND	270	ug/Kg	1	08/25/21	WB	SW8270D
Acenaphthylene	420	270	ug/Kg	1	08/25/21	WB	SW8270D
Anthracene	310	270	ug/Kg	1	08/25/21	WB	SW8270D
Benz(a)anthracene	960	270	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(a)pyrene	1000	270	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(b)fluoranthene	1100	270	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(ghi)perylene	810	270	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(k)fluoranthene	910	270	ug/Kg	1	08/25/21	WB	SW8270D
Chrysene	1100	270	ug/Kg	1	08/25/21	WB	SW8270D
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	08/25/21	WB	SW8270D
Fluoranthene	2100	270	ug/Kg	1	08/25/21	WB	SW8270D
Fluorene	ND	270	ug/Kg	1	08/25/21	WB	SW8270D
Indeno(1,2,3-cd)pyrene	820	270	ug/Kg	1	08/25/21	WB	SW8270D
Naphthalene	ND	270	ug/Kg	1	08/25/21	WB	SW8270D
Phenanthrene	1000	270	ug/Kg	1	08/25/21	WB	SW8270D
Pyrene	1900	270	ug/Kg	1	08/25/21	WB	SW8270D

QA/QC Surrogates

% 2-Fluorobiphenyl	60		%	1	08/25/21	WB	30 - 130 %
% Nitrobenzene-d5	51		%	1	08/25/21	WB	30 - 130 %
% Terphenyl-d14	68		%	1	08/25/21	WB	30 - 130 %

Project ID: 901 BEACH ROAD
Client ID: BR105 (0-1)

Phoenix I.D.: CJ12777


Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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Phyllis Shiller, Laboratory Director

August 25, 2021

Reviewed and Released by: Ethan Lee, Project Manager



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Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

August 25, 2021

FOR: Attn: Brian Sirowich
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information

Matrix: DRINKING WATER
Location Code: TIGHE-DAS
Rush Request: Standard
P.O.#: 150439 BEACH RD

Custody Information

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

Date

08/24/21 13:42
08/24/21 16:50

Time

Laboratory Data

SDG ID: GCJ12772
Phoenix ID: CJ12778

Project ID: 901 BEACH ROAD
Client ID: BR106 (0-1)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	85		%		08/24/21	JS	SW846-%Solid
Soil Extraction for SVOA PAH	Completed				08/24/21	I/Y/K	SW3546

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	270	ug/Kg	1	08/25/21	WB	SW8270D
Acenaphthene	ND	270	ug/Kg	1	08/25/21	WB	SW8270D
Acenaphthylene	680	270	ug/Kg	1	08/25/21	WB	SW8270D
Anthracene	420	270	ug/Kg	1	08/25/21	WB	SW8270D
Benz(a)anthracene	1300	270	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(a)pyrene	1400	270	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(b)fluoranthene	1500	270	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(ghi)perylene	1200	270	ug/Kg	1	08/25/21	WB	SW8270D
Benzo(k)fluoranthene	1300	270	ug/Kg	1	08/25/21	WB	SW8270D
Chrysene	1400	270	ug/Kg	1	08/25/21	WB	SW8270D
Dibenz(a,h)anthracene	ND	270	ug/Kg	1	08/25/21	WB	SW8270D
Fluoranthene	2700	270	ug/Kg	1	08/25/21	WB	SW8270D
Fluorene	ND	270	ug/Kg	1	08/25/21	WB	SW8270D
Indeno(1,2,3-cd)pyrene	1100	270	ug/Kg	1	08/25/21	WB	SW8270D
Naphthalene	ND	270	ug/Kg	1	08/25/21	WB	SW8270D
Phenanthrene	1200	270	ug/Kg	1	08/25/21	WB	SW8270D
Pyrene	2400	270	ug/Kg	1	08/25/21	WB	SW8270D

QA/QC Surrogates

% 2-Fluorobiphenyl	80	%	1	08/25/21	WB	30 - 130 %
% Nitrobenzene-d5	87	%	1	08/25/21	WB	30 - 130 %
% Terphenyl-d14	81	%	1	08/25/21	WB	30 - 130 %

Project ID: 901 BEACH ROAD
Client ID: BR106 (0-1)

Phoenix I.D.: CJ12778


Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
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RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director

August 25, 2021

Reviewed and Released by: Ethan Lee, Project Manager



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

August 25, 2021

QA/QC Data

SDG I.D.: GCJ12772

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 589132 (ug/kg), QC Sample No: CJ12631 (CJ12777, CJ12778)										
Polynuclear Aromatic HC										
2-Methylnaphthalene	ND	230	74	78	5.3	74	71	4.1	40 - 140	30
Acenaphthene	ND	230	79	81	2.5	80	75	6.5	30 - 130	30
Acenaphthylene	ND	230	78	81	3.8	78	74	5.3	40 - 140	30
Anthracene	ND	230	79	83	4.9	81	74	9.0	40 - 140	30
Benz(a)anthracene	ND	230	81	84	3.6	85	76	11.2	40 - 140	30
Benzo(a)pyrene	ND	230	78	80	2.5	80	73	9.2	40 - 140	30
Benzo(b)fluoranthene	ND	230	85	85	0.0	88	76	14.6	40 - 140	30
Benzo(ghi)perylene	ND	230	80	81	1.2	80	72	10.5	40 - 140	30
Benzo(k)fluoranthene	ND	230	77	81	5.1	80	74	7.8	40 - 140	30
Chrysene	ND	230	79	82	3.7	81	75	7.7	40 - 140	30
Dibenz(a,h)anthracene	ND	230	83	82	1.2	84	74	12.7	40 - 140	30
Fluoranthene	ND	230	76	80	5.1	80	70	13.3	40 - 140	30
Fluorene	ND	230	80	84	4.9	82	76	7.6	40 - 140	30
Indeno(1,2,3-cd)pyrene	ND	230	86	87	1.2	85	77	9.9	40 - 140	30
Naphthalene	ND	230	71	74	4.1	71	70	1.4	40 - 140	30
Phenanthrene	ND	230	80	83	3.7	83	74	11.5	40 - 140	30
Pyrene	ND	230	76	80	5.1	81	71	13.2	30 - 130	30
% 2-Fluorobiphenyl	86	%	85	88	3.5	86	83	3.6	30 - 130	30
% Nitrobenzene-d5	82	%	81	85	4.8	82	78	5.0	30 - 130	30
% Terphenyl-d14	90	%	86	89	3.4	91	78	15.4	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 589143 (ug/kg), QC Sample No: CJ12773 (CJ12772, CJ12773, CJ12774, CJ12775, CJ12776)

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	230	72	76	5.4	64	69	7.5	40 - 140	30
Acenaphthene	ND	230	78	83	6.2	71	72	1.4	30 - 130	30
Acenaphthylene	ND	230	72	76	5.4	63	64	1.6	40 - 140	30
Anthracene	ND	230	79	82	3.7	78	75	3.9	40 - 140	30
Benz(a)anthracene	ND	230	77	81	5.1	83	66	22.8	40 - 140	30
Benzo(a)pyrene	ND	230	76	82	7.6	77	63	20.0	40 - 140	30
Benzo(b)fluoranthene	ND	230	92	99	7.3	96	74	25.9	40 - 140	30
Benzo(ghi)perylene	ND	230	87	93	6.7	48	52	8.0	40 - 140	30
Benzo(k)fluoranthene	ND	230	90	95	5.4	81	71	13.2	40 - 140	30
Chrysene	ND	230	82	84	2.4	86	70	20.5	40 - 140	30
Dibenz(a,h)anthracene	ND	230	88	96	8.7	52	57	9.2	40 - 140	30
Fluoranthene	ND	230	82	83	1.2	93	74	22.8	40 - 140	30
Fluorene	ND	230	83	86	3.6	74	76	2.7	40 - 140	30
Indeno(1,2,3-cd)pyrene	ND	230	89	97	8.6	52	53	1.9	40 - 140	30
Naphthalene	ND	230	69	75	8.3	62	68	9.2	40 - 140	30
Phenanthrene	ND	230	79	83	4.9	88	69	24.2	40 - 140	30

QA/QC Data

SDG I.D.: GCJ12772

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Pyrene	ND	230	84	85	1.2	97	78	21.7	30 - 130	30
% 2-Fluorobiphenyl	83	%	81	88	8.3	71	74	4.1	30 - 130	30
% Nitrobenzene-d5	82	%	74	78	5.3	62	72	14.9	30 - 130	30
% Terphenyl-d14	93	%	88	91	3.4	79	79	0.0	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%)

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

August 25, 2021

Wednesday, August 25, 2021

Criteria: CT: DW, GAM, GBM, RC

State: CT

Sample Criteria Exceedances Report

G CJ12772 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ12776	\$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	1200	280	1000	1000	ug/Kg
CJ12776	\$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1300	280	1000	1000	ug/Kg
CJ12776	\$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1300	280	1000	1000	ug/Kg
CJ12776	\$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1400	280	1000	1000	ug/Kg
CJ12776	\$8100SMR	Benzo(ghi)perylene	CT / RSR GA,GAA (mg/kg) / APS Organics	1100	280	1000	1000	ug/Kg
CJ12776	\$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GA,GAA (mg/kg) / APS Organics	1200	280	1000	1000	ug/Kg
CJ12776	\$8100SMR	Chrysene	CT / RSR GA,GAA (mg/kg) / APS Organics	1400	280	1000	1000	ug/Kg
CJ12776	\$8100SMR	Benzo(k)fluoranthene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	1100	280	1000	1000	ug/Kg
CJ12776	\$8100SMR	Benzo(b)fluoranthene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	1400	280	1000	1000	ug/Kg
CJ12776	\$8100SMR	Benzo(a)pyrene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	1300	280	1000	1000	ug/Kg
CJ12776	\$8100SMR	Benz(a)anthracene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	1300	280	1000	1000	ug/Kg
CJ12776	\$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	1400	280	1000	1000	ug/Kg
CJ12776	\$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	1200	280	1000	1000	ug/Kg
CJ12776	\$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	1100	280	1000	1000	ug/Kg
CJ12776	\$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	1400	280	1000	1000	ug/Kg
CJ12776	\$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	1300	280	1000	1000	ug/Kg
CJ12776	\$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	1100	280	1000	1000	ug/Kg
CJ12776	\$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	1300	280	1000	1000	ug/Kg
CJ12777	\$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1100	270	1000	1000	ug/Kg
CJ12777	\$8100SMR	Chrysene	CT / RSR GA,GAA (mg/kg) / APS Organics	1100	270	1000	1000	ug/Kg
CJ12777	\$8100SMR	Benzo(b)fluoranthene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	1100	270	1000	1000	ug/Kg
CJ12777	\$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	1100	270	1000	1000	ug/Kg
CJ12777	\$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	1100	270	1000	1000	ug/Kg
CJ12778	\$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR DEC RES (mg/kg) / APS Organics	1100	270	1000	1000	ug/Kg
CJ12778	\$8100SMR	Benzo(b)fluoranthene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1500	270	1000	1000	ug/Kg
CJ12778	\$8100SMR	Benz(a)anthracene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1300	270	1000	1000	ug/Kg
CJ12778	\$8100SMR	Benzo(a)pyrene	CT / RSR DEC RES (mg/kg) / Semivolatiles	1400	270	1000	1000	ug/Kg
CJ12778	\$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GA,GAA (mg/kg) / APS Organics	1100	270	1000	1000	ug/Kg
CJ12778	\$8100SMR	Chrysene	CT / RSR GA,GAA (mg/kg) / APS Organics	1400	270	1000	1000	ug/Kg
CJ12778	\$8100SMR	Benzo(ghi)perylene	CT / RSR GA,GAA (mg/kg) / APS Organics	1200	270	1000	1000	ug/Kg
CJ12778	\$8100SMR	Benzo(k)fluoranthene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	1300	270	1000	1000	ug/Kg
CJ12778	\$8100SMR	Benzo(b)fluoranthene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	1500	270	1000	1000	ug/Kg
CJ12778	\$8100SMR	Benzo(a)pyrene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	1400	270	1000	1000	ug/Kg
CJ12778	\$8100SMR	Benz(a)anthracene	CT / RSR GA,GAA (mg/kg) / Semivolatiles	1300	270	1000	1000	ug/Kg
CJ12778	\$8100SMR	Benzo(ghi)perylene	CT / RSR GB (mg/kg) / APS Organics	1200	270	1000	1000	ug/Kg
CJ12778	\$8100SMR	Chrysene	CT / RSR GB (mg/kg) / APS Organics	1400	270	1000	1000	ug/Kg
CJ12778	\$8100SMR	Indeno(1,2,3-cd)pyrene	CT / RSR GB (mg/kg) / APS Organics	1100	270	1000	1000	ug/Kg
CJ12778	\$8100SMR	Benzo(a)pyrene	CT / RSR GB (mg/kg) / Semivolatiles	1400	270	1000	1000	ug/Kg
CJ12778	\$8100SMR	Benzo(k)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	1300	270	1000	1000	ug/Kg
CJ12778	\$8100SMR	Benz(a)anthracene	CT / RSR GB (mg/kg) / Semivolatiles	1300	270	1000	1000	ug/Kg

Wednesday, August 25, 2021

Criteria: CT: DW, GAM, GBM, RC

State: CT

Sample Criteria Exceedances Report

GCJ12772 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CJ12778	\$8100SMR	Benzo(b)fluoranthene	CT / RSR GB (mg/kg) / Semivolatiles	1500	270	1000	1000	ug/Kg

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance 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:

Project Location: 901 BEACH ROAD

Project Number:

Laboratory Sample ID(s): CJ12772-CJ12778

Sampling Date(s): 8/24/2021

List RCP Methods Used (e.g., 8260, 8270, et cetera) 8270

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	<u>VPH and EPH methods only:</u> 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 CTDEP Reasonable Confidence Protocol documents achieved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5	a) Were reporting limits specified or referenced on the chain-of-custody? b) Were these reporting limits met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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
7	Are project-specific matrix spikes and laboratory duplicates included in the data set?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Notes: For all questions to which the response was "No" (with the exception of question #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". This form may not be altered and all questions must be answered.

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: Ethan Lee Position: Project Manager

Printed Name: Ethan Lee Date: Wednesday, August 25, 2021

Name of Laboratory Phoenix Environmental Labs, Inc.

This certification form is to be used for RCP methods only.



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

August 25, 2021

SDG I.D.: GCJ12772

SDG Comments

8270 Semi-volatile Organics:

The client requested a short list for 8270 RCP Semivolatile. Only the PAH constituents are reported as requested on the chain-of-custody.

SVOA Narration

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

Instrument:

CHEM07 08/24/21-2

Matt Richard, Chemist 08/24/21

CJ12777 (1X), CJ12778 (1X)

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.

For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM07/7_BN_0728):

100% of target compounds met criteria.

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

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

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

Continuing Calibration Verification (CHEM07/0824_29-7_BN_0728):

Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.

100% of target compounds met criteria.

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.

CHEM22 08/24/21-1

Matt Richard, Chemist 08/24/21

CJ12772 (1X), CJ12773 (1X), CJ12774 (1X), CJ12775 (1X), CJ12776 (1X)

Initial Calibration Evaluation (CHEM22/22_BN_0728):

100% of target compounds met criteria.

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

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

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

Continuing Calibration Verification (CHEM22/0824_05-22_BN_0728):

Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.

100% of target compounds met criteria.

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.

QC (Batch Specific):

Batch 589132 (CJ12631)

CJ12777, CJ12778



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

August 25, 2021

SDG I.D.: GCJ12772

SVOA Narration

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.
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%)

QC (Site Specific):

Batch 589143 (CJ12773)

CJ12772, CJ12773, CJ12774, CJ12775, CJ12776

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.
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%)

Temperature Narration

The samples were received at 1.7C with cooling initiated.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

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

Cooler: Yes ☒ No ☐
 Coolant: IPK ☒ ICE ☐ Pg 1 of 1
 Temp 1.7 °C

Data Delivery/Contact Options:

Fax: ☐
 Phone: ☐
 Email: ☒ On File

Project: 901 Beach Road Project P.O.: 150432 Beach Rd

Report to: BRENS JILL L
 Invoice to: Tyche & Dad
 QUOTE # DAS Rats

Customer: Tyche & Dad, Inc.
 Address: 1060 Bpt Ave
Shelton, CT

Sampler's Signature: [Signature] Date: 8/24

Matrix Code: 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 X = (Other)

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Analysis Request
12772	BR101 (0-1)	S	8/24	1330	X
12773	BR102 (0-1)			1332	X
12774	BR103 (0-1)			1333	X
12775	BR104 (0-1)			1335	X
12776	BR105 (0-1)			1338	X
12777	BR106 (0-1)			1340	X
12778	BR107 (0-1)			1342	X

Relinquished by: [Signature] Accepted by: [Signature] Date: 8/24/12 Time: 3:20

Comments, Special Requirements or Regulations: [Signature]

Turnaround Time:
☐ 1 Day*
☐ 2 Days*
☒ 3 Days*
☐ Standard
☐ Other

*MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.

State where samples were collected: CT

* SURCHARGE APPLIES

