220 Coral Drive, 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: **220 Coral Drive**
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 220 Coral Drive 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 area of a repaired drainage culvert at 220 Coral Drive was identified as a location where Julian Fill was potentially placed.

The following is the Investigation Report summarizing investigation of "Julian Fill" at 220 Coral Drive in Fairfield, Connecticut (Site). According to the Town of Fairfield, Julian Fill was reportedly used during the repair of a collapsed drainage culvert in approximately 2014/2015. The Site was investigated in October 2019. 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 completed in accordance with the requirements of the Consent Order. Based on the results of the investigation, the Julian Fill material reportedly used at 220 Coral Drive 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 off the southeast corner of the residential dwelling at 220 Coral Drive in Fairfield, Connecticut. A Site location map is provided as Figure 1 (Appendix A). The real property comprising the Site is approximately 0.46 acres and contains a single-family dwelling that is privately owned. A Site plan is provided as Figure 2.

Based upon the investigation described in Section 1 above, an unknown volume of Julian Fill was used during the repair of a collapsed drainage culvert in approximately 2014/2015.

2.2 Groundwater Quality Classification

According to the CTDEEP Water Quality Classifications Map of Fairfield, Connecticut (October 2018), groundwater at 220 Coral Drive 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, an unknown volume of Julian Fill was used as backfill during the repair of a collapsed drainage culvert at 220 Coral Drive in approximately 2014/2015. 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 investigated 220 Coral Drive in October 2019. The investigation completed was consistent and complies with the requirements of the Consent Order. The reported area of Julian Fill use measured less than 400 square-feet; as such, one hand test pit was advanced, as shown on Figure 3.

During the investigation, 3 soil samples were collected from the hand test pit at depths of 0-0.5', 1-1.5', and 2.5-3' below ground surface (bgs) and analyzed for constituents of concern (COCs) known to be present in Julian Fill including extractable total petroleum hydrocarbons (ETPH), polycyclic aromatic hydrocarbons (PAHs), arsenic, lead, polychlorinated biphenyls (PCBs), pesticides, and asbestos in soil. 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 potential ACMs (PACMs). All samples were collected from within the reported Julian Fill location.

Investigation 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 not collected as less than 20 samples were collected from the Site. 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. Asbestos soil samples were submitted to Eastern Analytical Services, Inc. (EAS) of Elmsford, NY for analysis. 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 results from the investigation of the Julian Fill at 220 Coral Drive in October 2019 is as follows:

- ETPH was detected in samples CD 101 (0-0.5') and CD 101 (1-1.5') at concentrations of 450 mg/Kg and 490 mg/Kg, respectively, which are below the RES DEC of 500 mg/Kg and the GB PMC of 2,500 mg/Kg.
- Arsenic was detected at concentrations ranging from 2.68 mg/Kg to 3.52 mg/Kg, which are below the RES DEC of 10 mg/Kg.
- Lead was detected at concentrations ranging from 11.8 mg/Kg to 15.7 mg/Kg, which are 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.
- Several individual PAHs were detected in samples CD 101 (0-0.5') and CD 101 (2.5-3') at concentrations below their respective RES DEC and GB PMC.
- Asbestos in soil was not detected in all samples analyzed and PACMs were not identified within the reported Julian Fill use area.

A summary of investigation soil sampling analytical data is provided in Table 1 (Appendix B), 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 a limited area off the southeast corner of the 220 Coral Drive dwelling where a drainage culvert repair was reportedly completed in approximately 2014/2015. The Julian Fill generally consists of dark brown sand with some gravel. Asphalt millings were also noted. 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 220 Coral Drive.

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 as backfill during the repair of a collapsed drainage culvert in approximately 2014/2015.

6.2 Nature and Extent of Contamination at the Site

As discussed in Section 2.3, based on the Town's research, an unknown volume of Julian Fill was used as backfill during the repair of a collapsed drainage culvert in approximately 2014/2015. 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.

6.3 Potential Release Mechanisms and Migration Pathways at the Site

Tighe & Bond has investigated the locations where Julian Fill was reportedly used at the 220 Coral Drive. Soil samples collected from these areas 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.

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;
- Support a defensible conclusion that the horizontal and vertical extent of contamination has been adequately delineated; and,
- Support a defensible conclusion that a release area has been remediated such that the post-remediation concentrations of COCs comply with the RSRs.

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 one laboratory report from Phoenix. Investigation samples were collected in October 2019. These samples were analyzed using the RCP methods. The RCP Case Narrative of the laboratory report 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 Form for the laboratory report indicate that the 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:
    - LCS/LCSD RPD value was outside method criteria for a PCB surrogate. Based on other QC data, no significant bias is suspected.
- All surrogates were within acceptable limits for the various parameters except for the LCS/LCSD RPD listed above.
- Matrix spike and matrix spike duplicates were within method specific limits for COCs associated with the Site.
- Other significant QA/QC non-conformities were not noted.

Potential asbestos containing soil samples were provided within one laboratory report from October 2019, samples were analyzed by Eastern Analytical Services, Inc., CT NVLAP Lab Code 101646-0. The analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method.

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. In accordance with the Guidance Document, duplicate samples were collected at a frequency of one duplicate sample per 20 samples collected.

During the Julian Fill investigation activities, a total of three soil samples were collected. In accordance with the Guidance Document, no duplicate samples were collected.

Section 8
LEP Opinion

Tighe & Bond conducted an investigation where the 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, an unknown volume of Julian Fill was used as backfill during the repair of a drainage culvert at the Site in approximately 2014/2015. 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.

J.T. Olsen

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

9/20/22

Date

Section 9
Certification

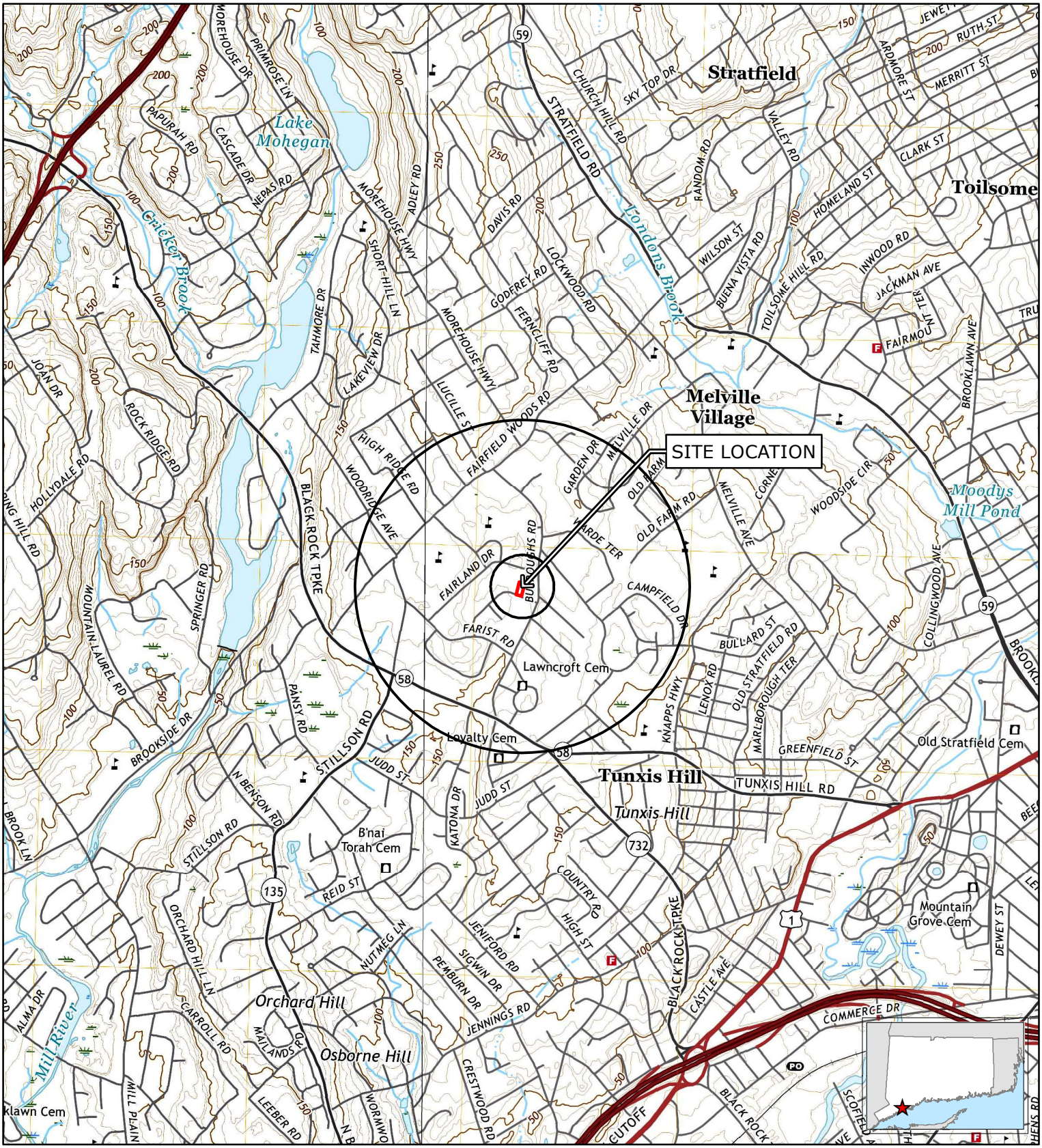
I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate 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

J:\F\F0439 Fairfield Target Client Business Development\20 Fill Investigation, Management & Remedial Planning\Sites\Coral Drive\Investigation\Investigation Report\Coral Drive IR.docx

APPENDIX A



Legend

Approximate Site Parcel

Based on USGS Topographic Map for Bridgeport, CT Revised 2021. [Site Quad] Westport, 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

N

FIGURE 1
SITE LOCATION MAP

220 Coral Drive
Fairfield, Connecticut

June 2022

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F-0439

FIGURE 2
SITE PLAN

LEGEND

- Reported Area of Julian Fill Usage
- Approximate Site Parcel
- Approximate Parcel Boundary

According to Town of Farifield research, an unkonwn volume of Julian Fill was used to repair a collapsed culvert in approximate 2014/2015.

LOCUS MAP

N

0 30

Feet

1 " = 30 '

NOTES

1. Based on 2019 Statewide Orthophotography, Courtesy of CTECO.

220 Coral Drive
Fairfield, Connecticut

July 2022

Tighe&Bond

CORAL DR

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F-0439

FIGURE 3
JULIAN FILL INVESTIGATION SAMPLING LOCATION

LEGEND

- Investigation Sample Location
- Yard Drain
- Reported Area of Julian Fill Usage
- Approximate Site Parcel
- Approximate Parcel Boundary

According to Town of Farifield research, an unkonwn volume of Julian Fill was used to repair a collapsed culvert in approximate 2014/2015.

LOCUS MAP

0 20
Feet
1 " = 20 '

NOTES

1. Based on 2016 Statewide Orthophotography, Courtesty of CTECO.

220 Coral Drive
Fairfield, Connecticut

June 2022

Tighe&Bond

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APPENDIX B

TABLE 1
Summary of Julian Fill Investigation Analytical Data
220 Coral Drive
Fairfield, Connecticut
Last Updated: 06/14/2022 (JLL)

Sample Name	CTDEEP RSR Criteria		US EPA	CD 101	CD 101	CD 101
Sample Date				10/28/19	10/28/19	10/28/19
Sample Depth	RES	GB		0 - 0.5 ft	1 - 1.5 ft	2.5 - 3 ft
Lab Sample ID	DEC	PMC		CE50261	CE50263	CE50266
Asbestos PLM 198.1[2]						
% Amosite	NA	NA	NA	0.0%	0.0%	0.0%
% Chrysotile	NA	NA	NA	0.0%	0.0%	0.0%
% Other	NA	NA	NA	0.0%	0.0%	0.0%
% Total Asbestos	NA	NA	1%	0.0%	0.0%	0.0%
Metals (mg/Kg)						
Arsenic	10	NA	NA	3.52	2.68	3.06
Lead	400	NA	NA	15.7	11.8	12.9
CT ETPH (mg/Kg)	500	2,500	NA	450	490	<270
PCBs (mg/Kg)						
Total PCBs	1	NA	NA	<0.36	<0.37	<0.37
Pesticides (mg/Kg)	Varies	Varies	NA	BRL	BRL	BRL
Semi-VOCs (mg/Kg)						
Benzo(a)anthracene	1	1	NA	0.57	<1	0.48
Benzo(a)pyrene	1	1	NA	0.61	<1	0.54
Benzo(b)fluoranthene	1	1	NA	0.59	<1	0.53
Benzo(g,h,i)perylene	*8.4*	*1*	NA	0.43	<1	0.42
Benzo(k)fluoranthene	8.4	1	NA	0.48	<1	0.43
Chrysene	*84*	*1*	NA	0.63	<1	0.54
Fluoranthene	1,000	56	NA	1.2	<1.3	0.86
Indeno(1,2,3-cd)pyrene	*1*	*1*	NA	0.46	<1	0.43
Phenanthrene	1,000	40	NA	0.41	<1.3	0.32
Pyrene	1,000	40	NA	0.98	<1.3	0.83

CTDEEP RSRs - Connecticut Department of Energy and Environmental Protection Remediation Standard Regulations (June 27, 2013) and *CTDEEP Additional Polluting Substances (September 20, 2018)*
CT ETPH- Connecticut Department of Public Health Extractable Total Petroleum Hydrocarbons
RES DEC-Residential Direct Exposure Criteria
GB PMC - Pollutant Mobility Criteria in a GB groundwater area
NE - Not established/NA - Not Applicable
< xx indicates compound was not reported above laboratory limit.
ND - None Detected
BRL - Below Reporting Limit
PAHs- Polycyclic Aromatic Hydrocarbons
PCBs- Polychlorinated Biphenyls
[2] - Asbestos analysis of Bulk Materials via 40 CFR Part 763, Sub. E, App. E/NYS-DOH 198.1 (PLM) by Eastern Analytical Services, Inc.

TABLE 2
Summary of Data Usability Evaluation
220 Coral Drive
Fairfield, Connecticut
Last Updated: 06/14/2022 (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
GCE50261	10/28/2019	504062	Phoenix	CE50261, CE50263, CE50266	CD 101 (0-0.5), CD 101 (1-1.5), CD 101 (2.5-3)	Soil	Tetrachloro-m-xylene (SUR)	High LCS/LCSD RPD	Variability	30	40	No (SUR)	The RPD for the other surrogate and the target analytes is acceptable. No significant bias is suspected.

LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
SUR - Surrogate

APPENDIX C

Appendix C - Photographic Log

Client: Town of Fairfield **Job Number:** 15-0439

Site: 220 Coral Drive
Fairfield, CT

Photograph No.: 1	**Date:** 10/28/2019	**Direction Taken:** Facing North
Description: CD 101 Sampling Location		

APPENDIX D

PHOENIX
Environmental Laboratories, Inc.

Thursday, November 07, 2019

Attn: Ms. Jill Libby
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Project ID: **FAIRFIELD 21 SITES CORAL DRIVE**
SDG ID: **GCE50261**
Sample ID#s: CE50261, CE50263, CE50266

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,

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

November 07, 2019

SDG I.D.: GCE50261

Project ID: FAIRFIELD 21 SITES CORAL DRIVE

Client Id	Lab Id	Matrix
CD 101 (0-0.5`)	CE50261	SOIL
CD 101 (1-1.5`)	CE50263	SOIL
CD 101 (2.5-3`)	CE50266	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

November 07, 2019

FOR: Attn: Ms. Jill Libby
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/28/19	13:30
Location Code:	TIGHE-DAS	Received by:	B	10/29/19	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	150439027				

Laboratory Data

SDG ID: GCE50261
Phoenix ID: CE50261

Project ID: FAIRFIELD 21 SITES CORAL DRIVE
Client ID: CD 101 (0-0.5`)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Arsenic	3.52	0.68	mg/Kg	1	10/31/19	EK	SW6010D	
Lead	15.7	0.34	mg/Kg	1	10/31/19	EK	SW6010D	
Percent Solid	91		%		10/29/19	VT	SW846-%Solid	
Soil Extraction for Pesticide	Completed				10/30/19	FM/L	SW3545A	
Soil Extraction SVOA PAH	Completed				10/29/19	KK/VV	SW3545A	
Extraction of CT ETPH	Completed				10/29/19	FG/AK	SW3545A	
Extraction for PCB	Completed				10/30/19	XX/VT	SW3540C	
Total Metals Digest	Completed				10/29/19	B/AG/Q	SW3050B	
Asbestos	ND	0	%		11/06/19	*	NYSDOH 198.1 PLM	C
TPH by GC (Extractable Products)								
Ext. Petroleum H.C. (C9-C36)	450	270	mg/Kg	5	11/01/19	JRB	CTETPH 8015D	
Identification	**		mg/Kg	5	11/01/19	JRB	CTETPH 8015D	
QA/QC Surrogates								
% n-Pentacosane	82		%	5	11/01/19	JRB	50 - 150 %	
PCB (Soxhlet SW3540C)								
PCB-1016	ND	360	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1221	ND	360	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1232	ND	360	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1242	ND	360	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1248	ND	360	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1254	ND	360	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1260	ND	360	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1262	ND	360	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1268	ND	360	ug/Kg	10	10/31/19	SC	SW8082A	
QA/QC Surrogates								
% DCBP	73		%	10	10/31/19	SC	30 - 150 %	

Ver 1

Project ID: FAIRFIELD 21 SITES CORAL DRIVE
Client ID: CD 101 (0-0.5`)

Phoenix I.D.: CE50261

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% DCBP (Confirmation)	78		%	10	10/31/19	SC	30 - 150 %
% TCMX	73		%	10	10/31/19	SC	30 - 150 %
% TCMX (Confirmation)	75		%	10	10/31/19	SC	30 - 150 %
Pesticides							
4,4' -DDD	ND	1.4	ug/Kg	2	11/01/19	AW	SW8081B
4,4' -DDE	ND	1.4	ug/Kg	2	11/01/19	AW	SW8081B
4,4' -DDT	ND	1.4	ug/Kg	2	11/01/19	AW	SW8081B
a-BHC	ND	1.4	ug/Kg	2	11/01/19	AW	SW8081B
Alachlor	ND	7.2	ug/Kg	2	11/01/19	AW	SW8081B
Aldrin	ND	1.4	ug/Kg	2	11/01/19	AW	SW8081B
b-BHC	ND	1.4	ug/Kg	2	11/01/19	AW	SW8081B
Chlordane	ND	36	ug/Kg	2	11/01/19	AW	SW8081B
d-BHC	ND	1.4	ug/Kg	2	11/01/19	AW	SW8081B
Dieldrin	ND	3.6	ug/Kg	2	11/01/19	AW	SW8081B
Endosulfan I	ND	7.2	ug/Kg	2	11/01/19	AW	SW8081B
Endosulfan II	ND	7.2	ug/Kg	2	11/01/19	AW	SW8081B
Endosulfan sulfate	ND	7.2	ug/Kg	2	11/01/19	AW	SW8081B
Endrin	ND	7.2	ug/Kg	2	11/01/19	AW	SW8081B
Endrin aldehyde	ND	7.2	ug/Kg	2	11/01/19	AW	SW8081B
Endrin ketone	ND	7.2	ug/Kg	2	11/01/19	AW	SW8081B
g-BHC	ND	1.4	ug/Kg	2	11/01/19	AW	SW8081B
Heptachlor	ND	7.2	ug/Kg	2	11/01/19	AW	SW8081B
Heptachlor epoxide	ND	7.2	ug/Kg	2	11/01/19	AW	SW8081B
Methoxychlor	ND	36	ug/Kg	2	11/01/19	AW	SW8081B
Toxaphene	ND	140	ug/Kg	2	11/01/19	AW	SW8081B
QA/QC Surrogates							
% DCBP	67		%	2	11/01/19	AW	30 - 150 %
% DCBP (Confirmation)	59		%	2	11/01/19	AW	30 - 150 %
% TCMX	64		%	2	11/01/19	AW	30 - 150 %
% TCMX (Confirmation)	67		%	2	11/01/19	AW	30 - 150 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	ND	250	ug/Kg	1	10/30/19	WB	SW8270D
Acenaphthene	ND	250	ug/Kg	1	10/30/19	WB	SW8270D
Acenaphthylene	ND	250	ug/Kg	1	10/30/19	WB	SW8270D
Anthracene	ND	250	ug/Kg	1	10/30/19	WB	SW8270D
Benz(a)anthracene	570	250	ug/Kg	1	10/30/19	WB	SW8270D
Benzo(a)pyrene	610	250	ug/Kg	1	10/30/19	WB	SW8270D
Benzo(b)fluoranthene	590	250	ug/Kg	1	10/30/19	WB	SW8270D
Benzo(ghi)perylene	430	250	ug/Kg	1	10/30/19	WB	SW8270D
Benzo(k)fluoranthene	480	250	ug/Kg	1	10/30/19	WB	SW8270D
Chrysene	630	250	ug/Kg	1	10/30/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	10/30/19	WB	SW8270D
Fluoranthene	1200	250	ug/Kg	1	10/30/19	WB	SW8270D
Fluorene	ND	250	ug/Kg	1	10/30/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	460	250	ug/Kg	1	10/30/19	WB	SW8270D
Naphthalene	ND	250	ug/Kg	1	10/30/19	WB	SW8270D
Phenanthrene	410	250	ug/Kg	1	10/30/19	WB	SW8270D
Pyrene	980	250	ug/Kg	1	10/30/19	WB	SW8270D

Project ID: FAIRFIELD 21 SITES CORAL DRIVE
Client ID: CD 101 (0-0.5`)

Phoenix I.D.: CE50261

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
QA/QC Surrogates							
% 2-Fluorobiphenyl	51		%	1	10/30/19	WB	30 - 130 %
% Nitrobenzene-d5	58		%	1	10/30/19	WB	30 - 130 %
% Terphenyl-d14	48		%	1	10/30/19	WB	30 - 130 %

C = This parameter is subcontracted.

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

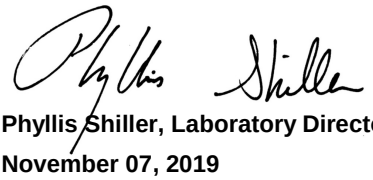
Comments:

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C26 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

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

Asbestos (NYSDOH 198.1 PLM) was analyzed by CT certified lab #PH-0622.

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
November 07, 2019
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

November 07, 2019

FOR: Attn: Ms. Jill Libby
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/28/19	13:40
Location Code:	TIGHE-DAS	Received by:	B	10/29/19	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	150439027				

Laboratory Data

SDG ID: GCE50261
Phoenix ID: CE50263

Project ID: FAIRFIELD 21 SITES CORAL DRIVE
Client ID: CD 101 (1-1.5`)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Arsenic	2.68	0.66	mg/Kg	1	10/31/19	EK	SW6010D	
Lead	11.8	0.33	mg/Kg	1	10/31/19	EK	SW6010D	
Percent Solid	90		%		10/29/19	VT	SW846-%Solid	
Soil Extraction for Pesticide	Completed				10/30/19	FM/L	SW3545A	
Soil Extraction SVOA PAH	Completed				10/29/19	KK/VV	SW3545A	
Extraction of CT ETPH	Completed				10/29/19	FG/AK	SW3545A	
Extraction for PCB	Completed				10/30/19	XX/VT	SW3540C	
Total Metals Digest	Completed				10/29/19	B/AG/Q	SW3050B	
Asbestos	ND	0	%		11/06/19	*	NYSDOH 198.1 PLM	C
TPH by GC (Extractable Products)								
Ext. Petroleum H.C. (C9-C36)	490	270	mg/Kg	5	11/01/19	JRB	CTETPH 8015D	
Identification	**		mg/Kg	5	11/01/19	JRB	CTETPH 8015D	
QA/QC Surrogates								
% n-Pentacosane	85		%	5	11/01/19	JRB	50 - 150 %	
PCB (Soxhlet SW3540C)								
PCB-1016	ND	370	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1221	ND	370	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1232	ND	370	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1242	ND	370	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1248	ND	370	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1254	ND	370	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1260	ND	370	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1262	ND	370	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1268	ND	370	ug/Kg	10	10/31/19	SC	SW8082A	
QA/QC Surrogates								
% DCBP	80		%	10	10/31/19	SC	30 - 150 %	

Ver 1

Project ID: FAIRFIELD 21 SITES CORAL DRIVE
Client ID: CD 101 (1-1.5`)

Phoenix I.D.: CE50263

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% DCBP (Confirmation)	81		%	10	10/31/19	SC	30 - 150 %
% TCMX	75		%	10	10/31/19	SC	30 - 150 %
% TCMX (Confirmation)	73		%	10	10/31/19	SC	30 - 150 %
Pesticides							
4,4' -DDD	ND	1.4	ug/Kg	2	11/01/19	AW	SW8081B
4,4' -DDE	ND	1.4	ug/Kg	2	11/01/19	AW	SW8081B
4,4' -DDT	ND	1.4	ug/Kg	2	11/01/19	AW	SW8081B
a-BHC	ND	2.0	ug/Kg	2	11/01/19	AW	SW8081B
Alachlor	ND	7.2	ug/Kg	2	11/01/19	AW	SW8081B
Aldrin	ND	1.4	ug/Kg	2	11/01/19	AW	SW8081B
b-BHC	ND	1.4	ug/Kg	2	11/01/19	AW	SW8081B
Chlordane	ND	36	ug/Kg	2	11/01/19	AW	SW8081B
d-BHC	ND	1.4	ug/Kg	2	11/01/19	AW	SW8081B
Dieldrin	ND	3.6	ug/Kg	2	11/01/19	AW	SW8081B
Endosulfan I	ND	7.2	ug/Kg	2	11/01/19	AW	SW8081B
Endosulfan II	ND	7.2	ug/Kg	2	11/01/19	AW	SW8081B
Endosulfan sulfate	ND	7.2	ug/Kg	2	11/01/19	AW	SW8081B
Endrin	ND	7.2	ug/Kg	2	11/01/19	AW	SW8081B
Endrin aldehyde	ND	7.2	ug/Kg	2	11/01/19	AW	SW8081B
Endrin ketone	ND	7.2	ug/Kg	2	11/01/19	AW	SW8081B
g-BHC	ND	1.4	ug/Kg	2	11/01/19	AW	SW8081B
Heptachlor	ND	7.2	ug/Kg	2	11/01/19	AW	SW8081B
Heptachlor epoxide	ND	7.2	ug/Kg	2	11/01/19	AW	SW8081B
Methoxychlor	ND	36	ug/Kg	2	11/01/19	AW	SW8081B
Toxaphene	ND	140	ug/Kg	2	11/01/19	AW	SW8081B
QA/QC Surrogates							
% DCBP	49		%	2	11/01/19	AW	30 - 150 %
% DCBP (Confirmation)	42		%	2	11/01/19	AW	30 - 150 %
% TCMX	47		%	2	11/01/19	AW	30 - 150 %
% TCMX (Confirmation)	50		%	2	11/01/19	AW	30 - 150 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	ND	560	ug/Kg	5	10/31/19	WB	SW8270D
Acenaphthene	ND	1300	ug/Kg	5	10/31/19	WB	SW8270D
Acenaphthylene	ND	1300	ug/Kg	5	10/31/19	WB	SW8270D
Anthracene	ND	1300	ug/Kg	5	10/31/19	WB	SW8270D
Benz(a)anthracene	ND	1000	ug/Kg	5	10/31/19	WB	SW8270D
Benzo(a)pyrene	ND	1000	ug/Kg	5	10/31/19	WB	SW8270D
Benzo(b)fluoranthene	ND	1000	ug/Kg	5	10/31/19	WB	SW8270D
Benzo(ghi)perylene	ND	1000	ug/Kg	5	10/31/19	WB	SW8270D
Benzo(k)fluoranthene	ND	1000	ug/Kg	5	10/31/19	WB	SW8270D
Chrysene	ND	1000	ug/Kg	5	10/31/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	1000	ug/Kg	5	10/31/19	WB	SW8270D
Fluoranthene	ND	1300	ug/Kg	5	10/31/19	WB	SW8270D
Fluorene	ND	1300	ug/Kg	5	10/31/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	1000	ug/Kg	5	10/31/19	WB	SW8270D
Naphthalene	ND	1300	ug/Kg	5	10/31/19	WB	SW8270D
Phenanthrene	ND	1300	ug/Kg	5	10/31/19	WB	SW8270D
Pyrene	ND	1300	ug/Kg	5	10/31/19	WB	SW8270D

Project ID: FAIRFIELD 21 SITES CORAL DRIVE
Client ID: CD 101 (1-1.5`)

Phoenix I.D.: CE50263

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
QA/QC Surrogates							
% 2-Fluorobiphenyl (5x)	63		%	5	10/31/19	WB	30 - 130 %
% Nitrobenzene-d5 (5x)	61		%	5	10/31/19	WB	30 - 130 %
% Terphenyl-d14 (5x)	61		%	5	10/31/19	WB	30 - 130 %

C = This parameter is subcontracted.

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

Comments:

Semi-Volatile Comment:
Due to a matrix interference and/or the presence of a large amount of non-target material in the sample, a dilution was required resulting in an elevated RL for the semivolatile analysis.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C26 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

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

Asbestos (NYSDOH 198.1 PLM) was analyzed by CT certified lab #PH-0622.

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.
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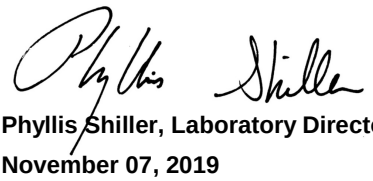


Phyllis Shiller, Laboratory Director
November 07, 2019
Reviewed and Released by: Greg Lawrence, Assistant Lab Director

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

Analysis Report

November 07, 2019

FOR: Attn: Ms. Jill Libby
Tighe & Bond
213 Court St, Suite 1100
Middletown, CT 06457

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/28/19	13:55
Location Code:	TIGHE-DAS	Received by:	B	10/29/19	16:45
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	150439027				

Laboratory Data

SDG ID: GCE50261
Phoenix ID: CE50266

Project ID: FAIRFIELD 21 SITES CORAL DRIVE
Client ID: CD 101 (2.5-3`)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Arsenic	3.06	0.69	mg/Kg	1	10/31/19	EK	SW6010D	
Lead	12.9	0.34	mg/Kg	1	10/31/19	EK	SW6010D	
Percent Solid	89		%		10/29/19	VT	SW846-%Solid	
Soil Extraction for Pesticide	Completed				10/30/19	FM/L	SW3545A	
Soil Extraction SVOA PAH	Completed				10/29/19	KK/VV	SW3545A	
Extraction of CT ETPH	Completed				10/29/19	FG/E	SW3545A	
Extraction for PCB	Completed				10/30/19	XX/VT	SW3540C	
Total Metals Digest	Completed				10/29/19	B/AG/Q	SW3050B	
Asbestos	ND	0	%		11/06/19	*	NYSDOH 198.1 PLM	C
TPH by GC (Extractable Products)								
Ext. Petroleum H.C. (C9-C36)	ND	270	mg/Kg	5	11/01/19	JRB	CTETPH 8015D	
Identification	ND		mg/Kg	5	11/01/19	JRB	CTETPH 8015D	
QA/QC Surrogates								
% n-Pentacosane	65		%	5	11/01/19	JRB	50 - 150 %	
PCB (Soxhlet SW3540C)								
PCB-1016	ND	370	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1221	ND	370	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1232	ND	370	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1242	ND	370	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1248	ND	370	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1254	ND	370	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1260	ND	370	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1262	ND	370	ug/Kg	10	10/31/19	SC	SW8082A	
PCB-1268	ND	370	ug/Kg	10	10/31/19	SC	SW8082A	
QA/QC Surrogates								
% DCBP	60		%	10	10/31/19	SC	30 - 150 %	

Ver 1

Project ID: FAIRFIELD 21 SITES CORAL DRIVE
Client ID: CD 101 (2.5-3`)

Phoenix I.D.: CE50266

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% DCBP (Confirmation)	63		%	10	10/31/19	SC	30 - 150 %
% TCMX	54		%	10	10/31/19	SC	30 - 150 %
% TCMX (Confirmation)	53		%	10	10/31/19	SC	30 - 150 %
Pesticides							
4,4' -DDD	ND	1.5	ug/Kg	2	11/01/19	AW	SW8081B
4,4' -DDE	ND	1.5	ug/Kg	2	11/01/19	AW	SW8081B
4,4' -DDT	ND	3.0	ug/Kg	2	11/01/19	AW	SW8081B
a-BHC	ND	2.0	ug/Kg	2	11/01/19	AW	SW8081B
Alachlor	ND	7.3	ug/Kg	2	11/01/19	AW	SW8081B
Aldrin	ND	1.5	ug/Kg	2	11/01/19	AW	SW8081B
b-BHC	ND	1.5	ug/Kg	2	11/01/19	AW	SW8081B
Chlordane	ND	36	ug/Kg	2	11/01/19	AW	SW8081B
d-BHC	ND	1.5	ug/Kg	2	11/01/19	AW	SW8081B
Dieldrin	ND	3.6	ug/Kg	2	11/01/19	AW	SW8081B
Endosulfan I	ND	7.3	ug/Kg	2	11/01/19	AW	SW8081B
Endosulfan II	ND	7.3	ug/Kg	2	11/01/19	AW	SW8081B
Endosulfan sulfate	ND	7.3	ug/Kg	2	11/01/19	AW	SW8081B
Endrin	ND	7.3	ug/Kg	2	11/01/19	AW	SW8081B
Endrin aldehyde	ND	7.3	ug/Kg	2	11/01/19	AW	SW8081B
Endrin ketone	ND	7.3	ug/Kg	2	11/01/19	AW	SW8081B
g-BHC	ND	1.5	ug/Kg	2	11/01/19	AW	SW8081B
Heptachlor	ND	7.3	ug/Kg	2	11/01/19	AW	SW8081B
Heptachlor epoxide	ND	7.3	ug/Kg	2	11/01/19	AW	SW8081B
Methoxychlor	ND	36	ug/Kg	2	11/01/19	AW	SW8081B
Toxaphene	ND	150	ug/Kg	2	11/01/19	AW	SW8081B
QA/QC Surrogates							
% DCBP	65		%	2	11/01/19	AW	30 - 150 %
% DCBP (Confirmation)	48		%	2	11/01/19	AW	30 - 150 %
% TCMX	62		%	2	11/01/19	AW	30 - 150 %
% TCMX (Confirmation)	48		%	2	11/01/19	AW	30 - 150 %
Polynuclear Aromatic HC							
2-Methylnaphthalene	ND	260	ug/Kg	1	10/31/19	WB	SW8270D
Acenaphthene	ND	260	ug/Kg	1	10/31/19	WB	SW8270D
Acenaphthylene	ND	260	ug/Kg	1	10/31/19	WB	SW8270D
Anthracene	ND	260	ug/Kg	1	10/31/19	WB	SW8270D
Benz(a)anthracene	480	260	ug/Kg	1	10/31/19	WB	SW8270D
Benzo(a)pyrene	540	260	ug/Kg	1	10/31/19	WB	SW8270D
Benzo(b)fluoranthene	530	260	ug/Kg	1	10/31/19	WB	SW8270D
Benzo(ghi)perylene	420	260	ug/Kg	1	10/31/19	WB	SW8270D
Benzo(k)fluoranthene	430	260	ug/Kg	1	10/31/19	WB	SW8270D
Chrysene	540	260	ug/Kg	1	10/31/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	10/31/19	WB	SW8270D
Fluoranthene	860	260	ug/Kg	1	10/31/19	WB	SW8270D
Fluorene	ND	260	ug/Kg	1	10/31/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	430	260	ug/Kg	1	10/31/19	WB	SW8270D
Naphthalene	ND	260	ug/Kg	1	10/31/19	WB	SW8270D
Phenanthrene	320	260	ug/Kg	1	10/31/19	WB	SW8270D
Pyrene	830	260	ug/Kg	1	10/31/19	WB	SW8270D

Project ID: FAIRFIELD 21 SITES CORAL DRIVE
Client ID: CD 101 (2.5-3`)

Phoenix I.D.: CE50266

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
QA/QC Surrogates							
% 2-Fluorobiphenyl	41		%	1	10/31/19	WB	30 - 130 %
% Nitrobenzene-d5	48		%	1	10/31/19	WB	30 - 130 %
% Terphenyl-d14	39		%	1	10/31/19	WB	30 - 130 %

C = This parameter is subcontracted.

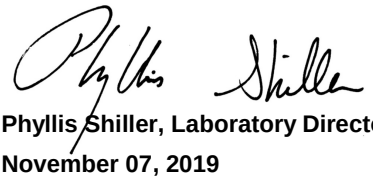
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

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

Asbestos (NYSDOH 198.1 PLM) was analyzed by CT certified lab #PH-0622.

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
November 07, 2019
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

QA/QC Report

November 07, 2019

QA/QC Data

SDG I.D.: GCE50261

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 503911 (mg/kg), QC Sample No: CE50255 (CE50261, CE50263, CE50266)													
ICP Metals - Soil													
Arsenic	BRL	0.67	2.80	2.50	NC	104	106	1.9	77.1			75 - 125	30
Lead	BRL	0.33	12.3	10.3	17.7	100	108	7.7	78.8			75 - 125	30

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QA/QC Report

November 07, 2019

QA/QC Data

SDG I.D.: GCE50261

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 503887 (mg/Kg), QC Sample No: CE50266 (CE50261, CE50263, CE50266)											
TPH by GC (Extractable Products) - Soil											
Ext. Petroleum H.C. (C9-C36)	ND	50	76	72	5.4				60 - 120	30	
% n-Pentacosane	66	%	64	51	22.6				50 - 150	30	
Comment:											
*The MS/MSD could not be analyzed because of matrix interference. The LCS was within QA/QC criteria.											
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 504062 (ug/Kg), QC Sample No: CE47776 10X (CE50261, CE50263, CE50266)											
Polychlorinated Biphenyls - Soil											
PCB-1016	ND	170	101	79	24.4	79	62	24.1	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	101	88	13.8	78	65	18.2	40 - 140	30	
PCB-1262	ND	170							40 - 140	30	
PCB-1268	ND	170							40 - 140	30	
% DCBP (Surrogate Rec)	126	%	124	112	10.2	98	73	29.2	30 - 150	30	
% DCBP (Surrogate Rec) (Confirm	129	%	126	106	17.2	104	73	35.0	30 - 150	30	r
% TCMX (Surrogate Rec)	96	%	93	62	40.0	87	68	24.5	30 - 150	30	r
% TCMX (Surrogate Rec) (Confirm	96	%	94	64	38.0	85	69	20.8	30 - 150	30	r
QA/QC Batch 504042 (ug/Kg), QC Sample No: CE50249 2X (CE50261, CE50263, CE50266)											
Pesticides - Soil											
4,4' -DDD	ND	1.7	93	93	0.0	56	74	27.7	40 - 140	30	
4,4' -DDE	ND	1.7	82	85	3.6	53	67	23.3	40 - 140	30	
4,4' -DDT	ND	1.7	85	87	2.3	53	68	24.8	40 - 140	30	
a-BHC	ND	1.0	79	82	3.7	49	63	25.0	40 - 140	30	
Alachlor	ND	3.3	NA	NA	NC	NA	NA	NC	40 - 140	30	
Aldrin	ND	1.0	80	81	1.2	49	64	26.5	40 - 140	30	
b-BHC	ND	1.0	105	105	0.0	62	83	29.0	40 - 140	30	
Chlordane	ND	33	80	82	2.5	51	64	22.6	40 - 140	30	
d-BHC	ND	3.3	79	81	2.5	48	61	23.9	40 - 140	30	
Dieldrin	ND	1.0	84	85	1.2	53	68	24.8	40 - 140	30	
Endosulfan I	ND	3.3	85	90	5.7	54	68	23.0	40 - 140	30	
Endosulfan II	ND	3.3	94	95	1.1	60	76	23.5	40 - 140	30	
Endosulfan sulfate	ND	3.3	90	93	3.3	57	72	23.3	40 - 140	30	
Endrin	ND	3.3	78	79	1.3	51	65	24.1	40 - 140	30	
Endrin aldehyde	ND	3.3	94	90	4.3	53	85	46.4	40 - 140	30	r
Endrin ketone	ND	3.3	88	90	2.2	58	70	18.8	40 - 140	30	
g-BHC	ND	1.0	74	75	1.3	46	59	24.8	40 - 140	30	

QA/QC Data

SDG I.D.: GCE50261

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Heptachlor	ND	3.3	76	80	5.1	52	61	15.9	40 - 140	30
Heptachlor epoxide	ND	3.3	79	82	3.7	50	60	18.2	40 - 140	30
Methoxychlor	ND	3.3	87	87	0.0	55	70	24.0	40 - 140	30
Toxaphene	ND	130	NA	NA	NC	NA	NA	NC	40 - 140	30
% DCBP	66	%	70	72	2.8	49	56	13.3	30 - 150	30
% DCBP (Confirmation)	76	%	79	78	1.3	55	65	16.7	30 - 150	30
% TCMX	65	%	73	69	5.6	47	58	21.0	30 - 150	30
% TCMX (Confirmation)	71	%	78	76	2.6	51	61	17.9	30 - 150	30

QA/QC Batch 503888 (ug/kg), QC Sample No: CE50249 (CE50261, CE50263, CE50266)

Polynuclear Aromatic HC - Soil

2-Methylnaphthalene	ND	230	58	57	1.7	49	46	6.3	30 - 130	30
Acenaphthene	ND	230	60	59	1.7	52	51	1.9	30 - 130	30
Acenaphthylene	ND	230	56	57	1.8	50	50	0.0	30 - 130	30
Anthracene	ND	230	64	65	1.6	58	57	1.7	30 - 130	30
Benz(a)anthracene	ND	230	62	68	9.2	57	59	3.4	30 - 130	30
Benzo(a)pyrene	ND	230	64	68	6.1	58	60	3.4	30 - 130	30
Benzo(b)fluoranthene	ND	230	67	71	5.8	59	61	3.3	30 - 130	30
Benzo(ghi)perylene	ND	230	61	62	1.6	55	58	5.3	30 - 130	30
Benzo(k)fluoranthene	ND	230	64	70	9.0	56	58	3.5	30 - 130	30
Chrysene	ND	230	63	67	6.2	57	59	3.4	30 - 130	30
Dibenz(a,h)anthracene	ND	230	69	69	0.0	58	62	6.7	30 - 130	30
Fluoranthene	ND	230	59	62	5.0	56	57	1.8	30 - 130	30
Fluorene	ND	230	60	61	1.7	56	55	1.8	30 - 130	30
Indeno(1,2,3-cd)pyrene	ND	230	67	72	7.2	60	63	4.9	30 - 130	30
Naphthalene	ND	230	56	55	1.8	45	42	6.9	30 - 130	30
Phenanthrene	ND	230	62	63	1.6	56	56	0.0	30 - 130	30
Pyrene	ND	230	59	63	6.6	56	57	1.8	30 - 130	30
% 2-Fluorobiphenyl	49	%	54	55	1.8	46	45	2.2	30 - 130	30
% Nitrobenzene-d5	53	%	62	63	1.6	52	51	1.9	30 - 130	30
% Terphenyl-d14	50	%	55	59	7.0	50	54	7.7	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%)

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
November 07, 2019

Thursday, November 07, 2019

Criteria: CT: GAM, RC

State: CT

Sample Criteria Exceedances Report

GCE50261 - TIGHE-DAS

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

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: FAIRFIELD 21 SITES CORAL DRIVE ***Project Number:***

Laboratory Sample ID(s): CE50261, CE50263, CE50266 ***Sampling Date(s):*** 10/28/2019

List RCP Methods Used (e.g., 8260, 8270, et cetera) 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?**	☑ Yes ☐ No
1A	**Were the method specified preservation and holding time requirements met?**	☑ Yes ☐ No
1B	***VPH and EPH methods only:*** **Was the VPH or EPH method conducted without significant modifications (see section 11.3 of respective RCP methods)**	☐ Yes ☐ No ☑ NA
2	**Were all samples received by the laboratory in a condition consistent with that described on the associated Chain-of-Custody document(s)?**	☑ Yes ☐ No
3	**Were samples received at an appropriate temperature (< 6 Degrees C)?**	☑ Yes ☐ No ☐ NA
4	**Were all QA/QC performance criteria specified in the Reasonable Confidence Protocol documents acheived? See Sections: PCB Narration, PEST Narration.**	☐ Yes ☑ No
5	**a) Were reporting limits specified or referenced on the chain-of-custody?** **b) Were these reporting limits met?**	☑ Yes ☐ No ☑ Yes ☐ 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?**	☐ Yes ☑ No
7	**Are project-specific matrix spikes and laboratory duplicates included in the data set?**	☐ Yes ☑ 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, November 07, 2019

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

NY # 11301

RCP Certification Report

November 07, 2019

SDG I.D.: GCE50261

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

ETPH Narration

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

Instrument:

AU-FID1 10/30/19-1 Jeff Bucko, Chemist 10/30/19

CE50261, CE50263, CE50266

The initial calibration (ETPHO03I) 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 (O30A003_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 503887 (CE50266)

CE50261, CE50263, CE50266

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.
*The MS/MSD could not be analyzed because of matrix interference. The LCS was within QA/QC criteria.
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 10/30/19 08:43 Emily Kolominskaya, Chemist 10/30/19

CE50261, CE50263, CE50266

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 503911 (CE50255)

CE50261, CE50263, CE50266

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

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

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Certification Report

November 07, 2019

SDG I.D.: GCE50261

ICP Metals Narration

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.

PCB Narration

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

QC Batch 504062 (Samples: CE50261, CE50263, CE50266): -----

The LCS/LCSD RPD exceeds the method criteria for one surrogate. The RPD for the other surrogate and the target analytes is acceptable. No significant bias is suspected. (% TCMX (Surrogate Rec), % TCMX (Surrogate Rec) (Confirmation))

Instrument:

AU-ECD3 10/31/19-1 Saadia Chudary, Chemist 10/31/19

CE50261

The initial calibration (PC1030AI) RSD for the compound list was less than 20% except for the following compounds: None.
The initial calibration (PC1030BI) 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.

AU-ECD6 10/31/19-1 Saadia Chudary, Chemist 10/31/19

CE50263, CE50266

The initial calibration (PC1024AI) RSD for the compound list was less than 20% except for the following compounds: None.
The initial calibration (PC1024BI) 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 (Batch Specific):

Batch 504062 (CE47776)

CE50261, CE50263, CE50266

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: % TCMX (Surrogate Rec)(40.0%), % TCMX (Surrogate Rec) (Confirmation)(38.0%)

PEST Narration

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

Instrument:

AU-ECD4 11/01/19-1 Adam Werner, Chemist 11/01/19

CE50261, CE50263, CE50266

The initial calibration (PSO31AI) RSD for the compound list was less than 20% except for the following compounds: None.
The initial calibration (PSO31BI) 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.

QC (Batch Specific):

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

RCP Certification Report

November 07, 2019

SDG I.D.: GCE50261

PEST Narration

Batch 504042_(CE50249)

CE50261, CE50263, CE50266

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.

SVOA Narration

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

Instrument:

CHEM07 10/30/19-2 Wes Bryon, Chemist 10/30/19

CE50261, CE50263, CE50266

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_0927A):
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 (CHEM07/1030_19-7_BN_0927A):
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 503888_(CE50249)

CE50261, CE50263, CE50266

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%)

Temperature Narration

The samples were received at 4.2C with cooling initiated.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Cooler: Yes [X] No [ ]
Coolant: IPK [X] ICE [ ] No [ ]

PHOENIX
Environmental Laboratories, Inc.

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

Temp 4.2°C Pg 1 of 1

Data Delivery/Contact Options:
[ ] Fax:
[ ] Phone:
[X] Email: On File

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

Project: Fairfield 21 Sites Coral Drive Project P.O: 150439027
Report to: Jill Libby, Jim Olsen, Brian Sirowich
Invoice to: Tighe & Bond
QUOTE #

This section MUST be completed with Bottle Quantities.

Sampler's Signature: [signature] Date: 10/28

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** = 5 (Other)

Analysis Request

PHOENIX USE ONLY SAMPLE #	Client Sample - Information - Identification: Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Arsenic	Asbestos	ETPHs	Lead	PCBs	SOX	PAHs	8270 SIM Pesticides	GL Amber 8 oz. w/H3PO4	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container (8) oz	GL Soil container (4) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml [ ] 1500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
502601	CD 101 (0-0.5')	S	10-28	1:30	X	X	X	X	X	X	X				1	1							
502602	CD 101 (0.5-1')			1:35																			
502603	CD 101 (1-1.5')			1:40	X	X	X	X	X	X	X				1	1							
502604	CD 101 (1.5-2')			1:45																			
502605	CD 101 (2-2.5')			1:50																			
502606	CD 101 (2.5-3')			1:55	X	X	X	X	X	X	X				1	1							

Relinquished by:	Accepted by:	Date:	Time:
[signature]	Fed Ex	10-28	3:50
Fed Ex	[signature]	10/29/19	2:30pm
[signature]	[signature]	10-29-19	10:45

Comments, Special Requirements or Regulations:
DAS Pricing

Turnaround Time:
[ ] 1 Day*
[ ] 2 Days*
[ ] 3 Days*
[X] Standard
[ ] Other
* SURCHARGE APPLIES

RI
[ ] (Residential) Direct Exposure
[ ] (Comm/Industrial) Direct Exposure
[ ] GA Leachability
[ ] GB Leachability
[ ] GA-GW Objectives
[ ] GB-GW Objectives

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

MA
[ ] MCP Certification
[ ] GW-1 [ ] MWRA eSMART
[ ] GW-2
[ ] GW-3
[ ] S-1 GW-1 [ ] S-1 GW-2 [ ] S-1 GW-3
[ ] S-2 GW-1 [ ] S-2 GW-2 [ ] S-2 GW-3
[ ] S-3 GW-1 [ ] S-3 GW-2 [ ] S-3 GW-3
[ ] SW Protection

State where samples were collected: CT

Data Format
[X] Excel
[X] PDF
[ ] GIS/Key
[ ] EQuIS
[X] Other EnviroData

Data Package
[ ] Tier II Checklist
[ ] Full Data Package*
[X] Phoenix Std Report
[ ] Other

* SURCHARGE APPLIES

Eastern Analytical Services, Inc.

Bulk Sample Results

Client: Phoenix Environmental Laboratories, Inc.
P.O. Box 370
Manchester, CT 06040

Date Collected : 10/29/2019
Collected By : Not Given
Date Received : 10/31/2019
Date Analyzed : 11/06/2019
Analyzed By : Ghayath Elias
Signature :
Analytical Method : 40 CFR Part 763, Sub. E, App. E/NYS-DOH 198.1 (PLM)
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Sample ID Number		CE50249	CE50250	CE50251	CE50252
Layer Number					
Lab ID Number		2655032	2655033	2655034	2655035
Sample Location		Not Given	Not Given	Not Given	Not Given
Sample Description		Not Given	Not Given	Not Given	Not Given
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	No	No	No	No
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Brown	Brown	Brown	Brown
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	1.0	1.0	1.0	1.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	30.0	35.0	30.0	40.0
	% Carbonates	20.0	20.0	20.0	20.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	49.0	44.0	49.0	39.0

Eastern Analytical Services, Inc.

Bulk Sample Results

Client: Phoenix Environmental Laboratories, Inc.
P.O. Box 370
Manchester, CT 06040

Date Collected : 10/29/2019
Collected By : Not Given
Date Received : 10/31/2019
Date Analyzed : 11/06/2019
Analyzed By : Ghayath Elias
Signature :
Analytical Method : 40 CFR Part 763, Sub. E, App. E/NYS-DOH 198.1 (PLM)
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Sample ID Number		CE50253	CE50254	CE50255	CE50256
Layer Number					
Lab ID Number		2655036	2655037	2655038	2655039
Sample Location		Not Given	Not Given	Not Given	Not Given
Sample Description		Not Given	Not Given	Not Given	Not Given
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	No	No	No	No
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Brown	Brown	Brown	Brown
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	< 1.0	1.0	1.0	1.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	30.0	30.0	40.0	30.0
	% Carbonates	20.0	20.0	30.0	20.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	50.0	49.0	29.0	49.0

Eastern Analytical Services, Inc.

Bulk Sample Results

Client: Phoenix Environmental Laboratories, Inc.
P.O. Box 370
Manchester, CT 06040

Date Collected : 10/29/2019
Collected By : Not Given
Date Received : 10/31/2019
Date Analyzed : 11/06/2019
Analyzed By : Ghayath Elias
Signature :
Analytical Method : 40 CFR Part 763, Sub. E, App. E/NYS-DOH 198.1 (PLM)
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Sample ID Number		CE50257	CE50258	CE50259	CE50260
Layer Number					
Lab ID Number		2655040	2655041	2655042	2655043
Sample Location		Not Given	Not Given	Not Given	Not Given
Sample Description		Not Given	Not Given	Not Given	Not Given
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	No	No	No	No
	Homogenous	No	No	No	No
	Fibrous	Yes	Yes	Yes	Yes
	Color	Brown	Brown	Brown	Brown
Sample Treatment		Homogenized	Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0	0.0
	% Other	0.0	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0	0.0
	% Cellulose	1.0	1.0	1.0	< 1.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	30.0	30.0	30.0	40.0
	% Carbonates	30.0	20.0	20.0	20.0
	% Other	0.0	0.0	0.0	0.0
	% Unidentified	39.0	49.0	49.0	40.0

Eastern Analytical Services, Inc.

Bulk Sample Results

Client: Phoenix Environmental Laboratories, Inc.
P.O. Box 370
Manchester, CT 06040

Date Collected : 10/29/2019
Collected By : Not Given
Date Received : 10/31/2019
Date Analyzed : 11/06/2019
Analyzed By : Ghayath Elias
Signature :
Analytical Method : 40 CFR Part 763, Sub. E, App. E/NYS-DOH 198.1 (PLM)
NVLAP Lab Code : 101646-0
NYS Lab No. 10851

Sample ID Number		CE50261	CE50263	CE50266
Layer Number				
Lab ID Number		2655044	2655045	2655046
Sample Location		Not Given	Not Given	Not Given
Sample Description		Not Given	Not Given	Not Given
Method of Quantification		Visual Estimation	Visual Estimation	Visual Estimation
Appearance	Layered	No	No	No
	Homogenous	No	No	No
	Fibrous	Yes	Yes	Yes
	Color	Brown	Brown	Brown
Sample Treatment		Homogenized	Homogenized	Homogenized
Asbestos Content	% Amosite	0.0	0.0	0.0
	% Chrysotile	0.0	0.0	0.0
	% Other	0.0	0.0	0.0
	% Total Asbestos	0.0	0.0	0.0
Other Fibrous Materials Present	% Fibrous Glass	0.0	0.0	0.0
	% Cellulose	1.0	1.0	1.0
	% Other	0.0	0.0	0.0
	% Unidentified	0.0	0.0	0.0
Non-Fibrous Materials Present	% Silicates	35.0	30.0	30.0
	% Carbonates	20.0	20.0	30.0
	% Other	0.0	0.0	0.0
	% Unidentified	44.0	49.0	39.0

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