02/24/2020



Gary Trombly, Jr.

Department of Energy and Environmental Protection
Storage Tank and PCB Enforcement Unit
79 Elm Street
Hartford, Connecticut 06106

Re: Partial Consent Order #COWSPCB 15-001

English Station Remediation

Scope of Study Situation #3, Supplemental to CT DEEP Approved Scope of Study July 2017

Dear Messrs. Trombly:

The United Illuminating Company is pleased to submit a Scope of Study for Situation #3. The Scope of Study for Situation #3 is a supplemental document to the approved Scope of Study, dated July 2017. The essence of this Scope of Study focuses on a tunnel identified during the demolition of Station B along the southeastern portion of the building and ultimately connecting with the Cooling Water Tunnel, identified as Area of Concern 14.

In accordance with Section B., 13 of the PCO, the undersigned have personally examined and are familiar with the information submitted in this document and all attachments thereto, and do certify, based on reasonable investigation, including their inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of their knowledge and belief. They 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.

Should you have any questions or comments regarding this document or any attachments hereto, please don't hesitate to contact Shawn Crosbie at (203) 926-4595.

THE UNITED ILLUMINATING COMPANY

David LaBelle

Vice President Environmental, Health & Safety

Avangrid

Shawn & Crosbie Project Manager

The United Illuminating Company

## **SCOPE OF STUDY**

## Supplemental to Approved Scope of Study, July 2017

## Situation No. 3 – Station B South Tunnel Investigation

## ENGLISH STATION FACILITY 510A GRAND AVENUE NEW HAVEN, CONNECTICUT

### Prepared for:

## **The United Illuminating Company**

180 Marsh Hill Road Orange, Connecticut



Prepared by

Windsor, Connecticut

February 2020

## **SCOPE OF STUDY**

## Supplemental to Approved Scope of Study, July 2017

### SITUATION NO. 3 – STATION B SOUTH TUNNEL INVESTIGATION

## ENGLISH STATION FACILITY 510A GRAND AVENUE NEW HAVEN, CONNECTICUT

Prepared for

### The United Illuminating Company

180 Marsh Road Orange, Connecticut

TRC Project No. 263951

February 2020



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#### **Acronym/Abbreviation List**

AEI Advanced Environmental Interface, Inc.

AOC Area of Concern

ASTM American Society for Testing and Materials

CFC Chlorofluorocarbon

CHMM Certified Hazardous Materials Manager

cm Centimeter

cm/sec Centimeters per second

COC Contaminant of concern CSM Conceptual site model

CT DEEP Connecticut Department of Energy and Environmental Protection

CT DPH Connecticut Department of Health DEC Residential Direct Exposure Criteria

DQA Data Quality Assessment
DQO Data Quality Objectives
DUE Data Usability Evaluation

ECAF Environmental Condition Assessment Form

ELLAP Environmental Lead Laboratory Accreditation Program

EPA Environmental Protection Agency ESA Environmental Site Assessment

ETPH Extractable total petroleum hydrocarbons

ftbgs Feet below ground surface GEI GEI Consultants, Inc. gr Gravimetric reduction

GWPC Groundwater protection criteria

HPLC High performance liquid chromatography

HRP HRP Associates, Inc.
I/C Industrial/Commercial
LCS Laboratory control sample

ID Identifier

IDW Investigation-derived waste

LEP Licensed Environmental Professional

LF Lineal feet

MDL Minimum detection limit

mg/cm<sup>2</sup> Milligrams per square centimeter

mg/kg Milligrams per kilogram

MS Matrix spike

MSD Matrix spike duplicate
NAPL Non-aqueous phase liquids
NTU Nephelometric turbidity unit

NVLAP National Voluntary Laboratory Accreditation Program

PAH Polycyclic aromatic hydrocarbons

PCB Polychlorinated biphenyl
PCO Partial Consent Order
PID Photoionization detector
PMC Pollutant Mobility Criteria
PPE Personal protective equipment

ppm Parts per million

QA/QC Quality Assurance/Quality Control

%R Percent recovery
RAP Remedial Action Plan

RCP Reasonable Confidence Protocols

RCRA Resource Conservation and Recovery Act RCSA Regulations of Connecticut State Agencies RES Residential RL Reporting limit

RPD Relative percent difference

RSR Remediation Standard Regulations SOP Standard Operating Procedure

SOS Scope of Study

SPLP Synthetic precipitation leachate procedure

SVOC Semi-volatile organic compound SWPC Surface Water Protection Criteria

TCLP Toxicity Characteristic Leaching Procedure

TPH Total petroleum hydrocarbon
TRC TRC Environmental Corporation
UI The United Illuminating Company
USDOT U.S. Department of Transportation

VC Volatilization Criteria VOC Volatile organic compound

W&S Weston & Sampson

#### 1.1 Overview

TRC Environmental Corporation (TRC) has been retained by The United Illuminating Company (UI) to provide Licensed Environmental Professional (LEP) services as they relate to adherence to and completion of all tasks outlined in Partial Consent Order (PCO) COWSPCB 15-001, including the preparation of this Situation #3 Supplemental to Scope of Study approved July 2017 (Situation #3 SOS). TRC previously prepared a Scope of Study document that covered the site wide investigation of soil, sediment, surface water and concrete that is entitled "Scope of Study (SOS), English Station" revised July 2017, which was reviewed and approved by the Connecticut Department of Energy and Environmental Protection (CT DEEP). Subsequent to approval of the July 2017 SOS, Weston and Sampson (W&S) performed the investigation required under that SOS. Two reports covering those investigations entitled "North Side Investigation Summary Report" dated January 2018 and "South Side Investigation Summary Report" dated February 2018 were submitted to the CT DEEP. Within the July 2017 SOS and the two investigation reports the cooling water discharge tunnel ("the Tunnel") associated with Station B on Parcel A is defined as Area of Concern (AOC)-14. At the time of preparing the July 2017 SOS and the two investigation reports the available site drawings represented the Tunnel as being located outside the footprint of Station B to the south and running south and southeast across the former coal storage area within Parcel A. Figure No. 1 attached to this Situation #3 SOS shows the location of the Tunnel in proximity to Station B that was known at that time and sampled by W&S in 2017. Since W&S sampling did not involve entering the Tunnel and the sampling was from the surface through 6-inch diameter cored holes through the roof, the limits of the Tunnel remained as originally depicted. It is only following the complete demolition of Station B through the fall of 2019, that an additional portion of the tunnel was found beneath the south-southeast side of the basement inside Station B. A portion of the Tunnel roof as shown on Figure No. 1, collapsed and building demolition debris fell into the Tunnel. The opening approximately 20 feet long exposed enough of this section of the Tunnel to determine that it runs east-west inside the building footprint along the south wall and that it connects to another tunnel also running east-west just outside the building footprint.

Following the collapse of the Tunnel roof within the footprint of Station B as shown on Figure No. 1, the CT DEEP was notified by UI on January 14, 2020. A description of the materials inside of the tunnel and photographs were sent to the CT DEEP via email. The CT DEEP responded via email with a request that the black liquid, the bottom solids (*identified as the "rocky area"*) and the black stained Tunnel side wall be sampled. The Tunnel side wall was requested to be a wipe sample for PCB. The water and solid samples were collected by TRC on January 15, 2020 and submitted to Con-Test Laboratories of East Longmeadow, Massachusetts for the following analysis:

- Volatile Organic Compounds (VOCs) EPA Method 8260
- Semi-Volatile Organic Compounds (SVOCs) EPA Method 8270
- RCRA 8 Metals EPA Method 6020 & 7470
- Polychlorinated Biphenyls (PCBs) EPA Method 8082 with Soxhlet Extraction
- Extractable Total Petroleum Hydrocarbons (ETPH) CT DEEP Method
- % Solids SM 2540G (Sediment Only)

The results of the above testing were furnished to the CT DEEP via e-mail on January 22, 2020. The test results for the sediment exhibit a total PCB concentration of 1.4 mg/kg. A subsequent call with Lori Saliby and Gary Trombly of the CT DEEP on January 22, 2020, prompted a decision by CT DEEP to require further delineation and testing of the Tunnel and its contents within. During that call it was determined to name this new finding as Situation #3 for ease of tracking. This Situation #3 SOS is therefore prepared in response to the CT DEEP request.

On February 4, 2020 UI notified CT DEEP of its intentions to remove the roof of the tunnel to understand its dimensions and provide the Department with a comprehensive sampling plan. Based on current activities to close out the Station B demo work ACV, UI's onsite demo and remediation contractor did not start removing the roof of the Tunnel until February 12, 2020. ACV completed the removal of the roof Tunnel on February 13, 2020.

As the Respondent, UI has committed to conducting the investigation and remediation of the Site in accordance with the provisions of the PCO. Since the Parcel A PCB Remedial Action Plan (RAP) has been approved by the EPA and in concept with the CT DEEP, it is anticipated that any additional remedial actions based on analytical results exceeding the

remedial criterion for Parcel A of 1 mg/kg required for the Tunnel will be implemented as an amendment (modification) to the existing RAP approval. All media exceeding the High Occupancy Standards under 40 CFR 761 for PCBs in this section of Parcel A are the required to be addressed. The general requirements of the PCO that will be followed for Situation #3 include:

- Development of a supplemental SOS;
- Implement the Situation #3 SOS once approved by the CT DEEP;
- Develop and submit for review and approval by the CT DEEP a Supplemental Investigation Report that fully describes the investigatory activities conducted, evaluates the results of analyses conducted for all sample media as identified in the PCO,;
- Amend existing plans and specifications for the approved remedial actions,
- Implement the CTDEEP-approved remedial actions;
- Prepare a report describing, in detail, the remedial actions performed at the Site and the proposed monitoring program designed to determine the effectiveness of the remediation; and
- Implement and document the results of the post-remediation monitoring activities.

#### 1.2 Objectives

The primary objective of this Situation #3 SOS document is to provide a framework for investigation/characterization of the Tunnel as depicted on Figure No.1, allowing for the fulfillment of the obligations of the PCO. Specifically, the SOS objectives as they relate to environmental media (concrete tunnel floor, water and sediment located within the Tunnel, as shown on Figure No. 1) include:

- Identifying the existing and potential extent and degree of contamination (defining the three-dimensional extent and distribution of substances associated with each release) while complying with all prevailing standards and guidelines (including, but not limited to Connecticut's Site Characterization Guidance Document (CT DEEP, 2010a).
- Identify non-hazardous and hazardous wastes at the Site.

These objectives will be accomplished by presenting within this document the following:

- A thorough summary of previous investigation and remediation efforts undertaken at the Site; and
- A proposed sampling and analytical program for all environmental media as defined above.

### 1.3 Relevant Past Report Summaries

This section summarizes information from past site investigation reports that have relevant information concerning the Tunnel (AOC-14).

#### 1.3.1 2005 Interim PCB Report for Station B Parcel Sale, AEI (AEI, 2005)

In 2005 AEI issued an interim report summarizing work completed on what is now identified as the "Parcel A" portion of the Site. The purpose for issuing the interim report was to provide a summary of all PCB-related work completed for the northern portion of the Site, in advance of the subdivision and sale of that portion of the Site.

PCBs were detected in sediment in a catch basin identified by AEI as "CB-2," located in the central portion of the former coal yard. Additionally, PCBs were also detected in soil in a small area to the southeast of CB-2. Concentrations of PCBs in both areas were below 10 mg/kg. The report notes that catch basins CB-1 and CB-2 tie into a cooling water discharge tunnel that runs from Station B to an unidentified termination point on the southern portion of the Site. According to the report, the tunnel is approximately 3 feet tall and 4 feet wide and is buried approximately 1 foot below grade. AEI reported that the tunnel is sealed off at both ends and no outfall to the Mill River.

# 1.3.2 2015 Draft Section 4 Subsurface Investigation for the Former English Station, HRP (HRP, 2015)

In 2015, HRP completed a subsurface investigation on behalf of UI to characterize the distribution of soil and groundwater contamination in the vicinity of select AOCs identified for the Site. The subsurface investigation was completed in accordance with a Generalized Scope of Work Plan submitted to the CTDEEP in February 2014. The investigation activities were completed to provide a preliminary evaluation of the distribution of contamination in select AOCs and were not meant to fully characterize the Site.

HRP collected a single sediment sample (identified as DT-111914-1) from the former cooling water discharge tunnel near the eastern terminus of the tunnel. Laboratory analytical

results on sediment sample DT-111914-1 indicated that it contained PCBs at a concentration of 1.78 mg/kg.

#### 1.3.3 2018 *W&S North Side Summary Report* (W&S, 2018)

#### AOC-14 Cooling Water Tunnel

The W&S North Side Summary Report defines AOC-14 as the former cooling water discharge tunnel which is located within the North Side of the Site on Parcel A. The W&S report refers to historical plans which indicate that this former cooling water discharge tunnel ran from the south side of Station B on Parcel A, through the former coal yard, and to an unidentified discharge point at a location along the eastern side of the Site. The cooling water tunnel was reported to be sealed off at both ends and no longer discharging to the Mill River. Two catch basins, identified as CB-1 and CB-2, located within the former coal yard, were reported to discharge into the Tunnel.

The Conceptual Site Model in SOS approved in July 2017 indicates PCBs, ETPH and PAHs are potential contaminants of concern for AOC-14. Potential release mechanisms to the tunnel are identified as impacts from storm water run-off from catch basins connected to the tunnel, and/or potential infiltration through the concrete of the discharge tunnel or to cracks, seams or joints in the tunnel.

Weston & Sampson performed sampling of concrete and sediment within the cooling tunnel as part of the investigation. Prior to sampling the tunnel the following activities were performed:

- The tunnel was confirmed to extend along the southwestern face of Station B
  approximately 70 feet. Investigation performed during the sampling found that all
  inlets/outlets to the tunnel had been filled and there was no apparent flow of water
  into or out of the tunnel.
- The tunnel extends to the south and then turns to the southeast and extends beneath those areas designated as AOC-12W and AOC 12E. The construction of the tunnel was similar along this extent and was approximately 3 feet tall and 4 feet wide.

- Catch basins designated as CB-1 and CB-2 were confirmed to be constructed directly over the tunnel.
- Beyond the former coal bins, the tunnel extends to the north beneath the paved driveway, toward the east gate entrance east of Station B. At the northernmost extent of this section of tunnel, concrete was not found at the base and therefore only sediment samples were collected at this location. All inlets/outlets to the tunnel at the northernmost extent had been previously sealed and there was no flow of water into or out of the tunnel to the Mill River.
- The tunnel also extends to the south to near the foundation for an electrical transmission tower. The tunnel widened widens to approximately 4 feet tall and 4 feet wide at the southern extent. The foundation and other materials filled the inlet/outlet at this end of the structure and no flow of water into or out of the tunnel was observed.
- The tunnel was found to be flooded at the time of the investigation. However, the only inflow of water into the tunnel observed was storm water which would enter at the two catch basins.

W&S collected samples of porous media (concrete and wood (1 sample)) and sediment. Refer to the figures included in Appendix B for the tunnel layout and sample locations from the W&S North Side Summary Report A total of 71 locations (AOC 14 - 1 through 71) were planned to be taken sampled at 10-foot intervals throughout the length of the tunnel. At the following locations, samples could not be collected from the following locations for the following reasons:

- Locations 9 through 11: Portions of the tunnel were collapsed, and concrete and sediment samples could not be collected.
- Locations 49 and 50: Sediment was not found and therefore not sampled. At location 49 wood was found and sampled but no concrete present to sample.
- Locations 12, 14, 16, 17, 19 through 25, and 42: Tunnel had clay- like floor and concrete samples were not collected.
- Locations 27, 28, 31, and 35: Concrete sample locations could not be accessed due to obstructions found in the bottom of the tunnel.

In total, 51 concrete samples, 1 wood sample and 66 sediment samples were collected from the bottom of the cooling tunnel and submitted for PCB analysis. Ten (10) selected sediment samples were also submitted for ETPH and PAH analysis. Analysis identified the following:

#### Porous Media Samples:

 PCBs were detected at only four sample locations at concentrations below applicable remedial criteria.

#### **Sediment Samples:**

- PCBs were detected above laboratory detection limits in 61 of the samples. Total PCBs were detected above 1 mg/kg in 32 of the samples. There were no samples with detections of PCBs that exceeded 10 mg/kg.
- ETPH was detected above laboratory reporting limits in each sample submitted for analysis. Of the detections, only four locations (AOC14-SE-1 through 4) exhibited ETPH concentrations in exceedance of IC/DEC and GB PMC remedial criteria of 2,500 mg/kg.
- PAHs were detected in each sample submitted for analysis. Of the detections, nine sample locations (AOC-14-SE-1 through 8 and 63) exhibited PAH concentrations in exceedance of 1 mg/kg GB PMC remedial criteria.

W&S concluded that the results of the investigation for AOC-14 Former Cooling Water Discharge Tunnel appear to support the previous CSM for this area regarding impacts to sediments. The lack of impacts identified to concrete indicate that migration of PCBs into the concrete has been limited.

W&S concluded that based on the results of the investigation, data appears to be sufficient for assessment purposes. W&S recommended that no additional sampling be performed because all accessible areas of the tunnel have been sampled at 10-foot intervals.

Refer to Appendix B of this Situation #3 SOS for copies of the AOC-14 figures and tables for sediment and porous media sampling laboratory results from the W&S North Side Investigation Report.

#### 1.4 <u>Tunnel Sampling and Testing Program</u>

The collection of sediment and tunnel floor concrete samples will mirror the Tunnel investigations previous performed by W&S and in accordance with all of the sampling and data protocols contained in the previously approved SOS, July 2017. Refer to Figure No. 1 for the location of proposed sediment and tunnel concrete floor sampling, which is based on 10 foot spacing of sample locations along the center of the Tunnel not previously investigated. The sample layout is based on the actual limits of the Tunnel to maintain the 10-foot sample spacing. It is expected that once the Tunnel atmosphere is checked and cleared that the space will be managed as an unpermitted confined space.

All solids within the Tunnel and the concrete floor samples from within the Tunnel will be analyzed for PCBs using EPA Method 8082 with Soxhlet Extraction and submitted to Con-Test Laboratories on a standard turn-around time. There are currently estimated a total of 27 sample locations as shown on Figure No. 1. GPS will be used to provide coordinate locations for all samples collected. For the inside tunnel section and the outside tunnel section one composite solids sample and one composite water sample will be collected for each section of tunnel to provide sufficient data for waste characterization analysis. Each composite sample will be taken by collecting a discrete sample for each location along the entire length of the tunnel and homogenizing into a composite sample. The composite sediment samples will have the following analysis performed:

- Volatile Organic Compounds (VOCs) EPA Method 8260
- Semi-Volatile Organic Compounds (SVOCs) EPA Method 8270
- RCRA 8 Metals EPA Method 6020 & 7470
- Polychlorinated Biphenyls (PCBs) EPA Method 8082 with Soxhlet Extraction
- Extractable Total Petroleum Hydrocarbons (ETPH) CT DEEP Method
- Reactive Cyanide EPA Method 9014
- Reactive Sulfide EPA Method 9030
- pH EPA Method 9045
- % Solids SM 245D
- Free Liquid EPA Method 9095
- TCLP 8 RCRA Metals EPA Method 6010 & 7470

The composite water samples will have the following analysis performed:

• Volatile Organic Compounds (VOCs) – EPA Method 8260

- Semi-Volatile Organic Compounds (SVOCs) EPA Method 8270
- RCRA 8 Metals EPA Method 6020 & 7470
- Polychlorinated Biphenyls (PCBs) EPA Method 8082 with Soxhlet Extraction
- Extractable Total Petroleum Hydrocarbons (ETPH) CT DEEP Method
- Reactive Cyanide EPA Method 9014
- Reactive Sulfide EPA Method 9030
- pH EPA Method 4500(liquid)
- Flashpoint EPA Method 1010

All composite samples will be submitted to Con-Test Laboratories of East Longmeadow, Massachusetts.

The detailed methodology for sample handling, preservation, labeling, testing, reporting, QA/QC, data validation and waste management listed below that will be followed are covered in the previously approved SOS, July 2017 document referenced in Section 1.0.

#### Investigation-Derived Waste (IDW) Management

- Decontamination Solutions
- Expendable Equipment

#### Quality Assurance/Quality Control (QA/QC) Procedures

- Measurement Quality Objectives
  - o Precision
  - o Accuracy
  - o Representativeness
  - Completeness
  - Comparability
  - o Sensitivity
  - o Field Quality Control Samples
  - o Equipment Blanks
  - o Field Duplicates
  - o MS/MSDs
  - o Temperature Blanks
  - o Trip Blanks
- Sample Sequence
- Sample Documentation Requirements
  - o Field Notes

- Sample Labeling
- Sample Handling and Shipping
- Sample Custody
  - o Field Custody Procedures
  - Laboratory Custody Procedures
- Field Equipment Decontamination Procedures
- Data Validation and Reporting
  - o Data Reporting
  - o Field Data Evaluation
  - o Analytical Data Validation

The following three sections provide a description of the sampling that will be performed.

### 1.5 <u>Tunnel Sediment Investigation</u>

#### 1.5.1 DQOs for Sediment & Solids Samples

Data collected during the sediment and solids investigations are intended to evaluate the current contaminant concentrations in sediment and solids for the purpose of ultimately creating a waste management or disposal plan. Sediment and solid samples will be collected from those areas in which sediments are observed. Sediment and solid sample analytical results will be used for waste characterization for waste disposal purposes.

#### 1.5.2 Sediment & Solid Sampling Methodology

Sediment and solid samples will be collected by means of a spade, shovel, trowel or scoop. The sediment and solid sampling device will be chosen based on the depth of water at each specific sampling location. Once the appropriate sampling device is chosen, a sediment or solid sample will be collected from a location that is representative of a sediment or solid depositional area. Sediments and solids will be characterized based on color, grain size, odors and stains. For sediment samples collected for VOC analysis, the sample will be placed directly into the appropriately preserved VOA vials. An aliquot will also be placed in an unpreserved glass container for moisture content analysis. For samples not being analyzed for VOCs, the sample will be transferred from the sampling device into a decontaminated stainless-steel bowl for homogenization. In the bowl, excess water will be decanted using measures that maintain fine sediments and solids within the sample. Once the sample is homogenized, it will be placed

in the appropriate laboratory-provided glassware and placed on ice in a cooler for delivery to the laboratory under proper chain-of-custody protocols.

#### 1.6 Tunnel Water Investigation

#### 1.6.1 DQOs for Water Samples

Data collected during the Tunnel water investigation are intended to evaluate the current contaminant concentrations in water for the purpose of developing a water management plan. Waters are considered to be any ponded, pooled or sitting water that has collected in on-site structures that are able to retain water. Water analytical results will be used for waste characterization for water treatment and disposal purposes.

#### 1.6.2 Water Sampling Methodology

Water samples from within the Tunnel will be collected utilizing a dip sampler or directly into the laboratory-provided container. If not collected directly into the laboratory-provided container, the collected sample will be poured into the appropriate laboratory provided container from the sampling device and placed on ice in a cooler for delivery to the laboratory under proper chain-of-custody protocols.

#### 1.7 Concrete Sampling

#### 1.7.1 Data Quality Objectives for Concrete Sampling

Concrete investigation of concrete tunnel floor surfaces will be conducted as a part of the Situation #3 investigation activities. The purpose of the concrete sampling will be to identify PCB-contaminated areas of concrete. Under the regulations at 40 CFR 761, the concrete at the Site that has been contaminated with PCBs would be considered a PCB remediation waste, as defined at 40 CFR 761.3.

#### 1.7.2 Concrete Sampling Methodology

All concrete samples will be collected in accordance with the procedures described in the EPA Region 1 *Standard Operating Procedure for Sampling Porous Surfaces for Polychlorinated Biphenyls (PCBs)* (EPA, 2011). Each concrete sample will be collected from the surface of the floor to a depth of 1/2–inch into the floor utilizing a chisel bit to collect pieces of concrete from

this interval. A series of 2 vertical intervals will be collected at each sample location. The concrete chips will then be placed into properly labeled, laboratory-supplied sample jars and placed in a cooler with ice. The laboratory will pulverize and process the chips prior to analysis. The chisel bit will be decontaminated following collection of the concrete chips at each location.

#### 1.8 Summary

The investigation work performed under this Situation #3 Supplemental SOS will complete the process of investigation necessary to delineate the entirety of the AOC-14 tunnel as it is known based upon having exposed the entirety of the tunnel previously unknown. The data collected will supplement the existing investigation data on AOC-14 and allow the development of a modification to the Parcel A PCB Remedial Action Plan (RAP) to address any PCB containing sediment, solids, concrete and water consistent with remedial criteria specified in the Parcel A PCB RAP.

## **FIGURES**

## APPENDIX A – PHOTO LOG



Photo 1: South Side of Station B Looking West from the East End

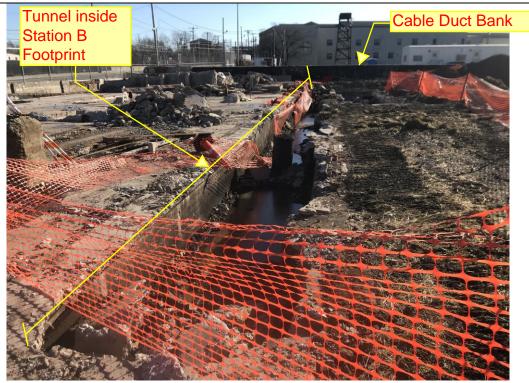


Photo 2: South Side of Station B looking West from West End of the Inside Tunnel

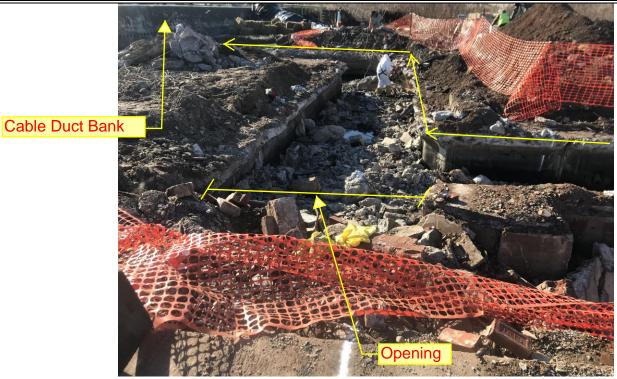


Photo 3: East End Tunnel Section Running South from Station B



Photo 4: East End Tunnel South of Station B – Looking North toward Station B



Photo 5: East End Tunnel South of Station B looking East under Cable Duct

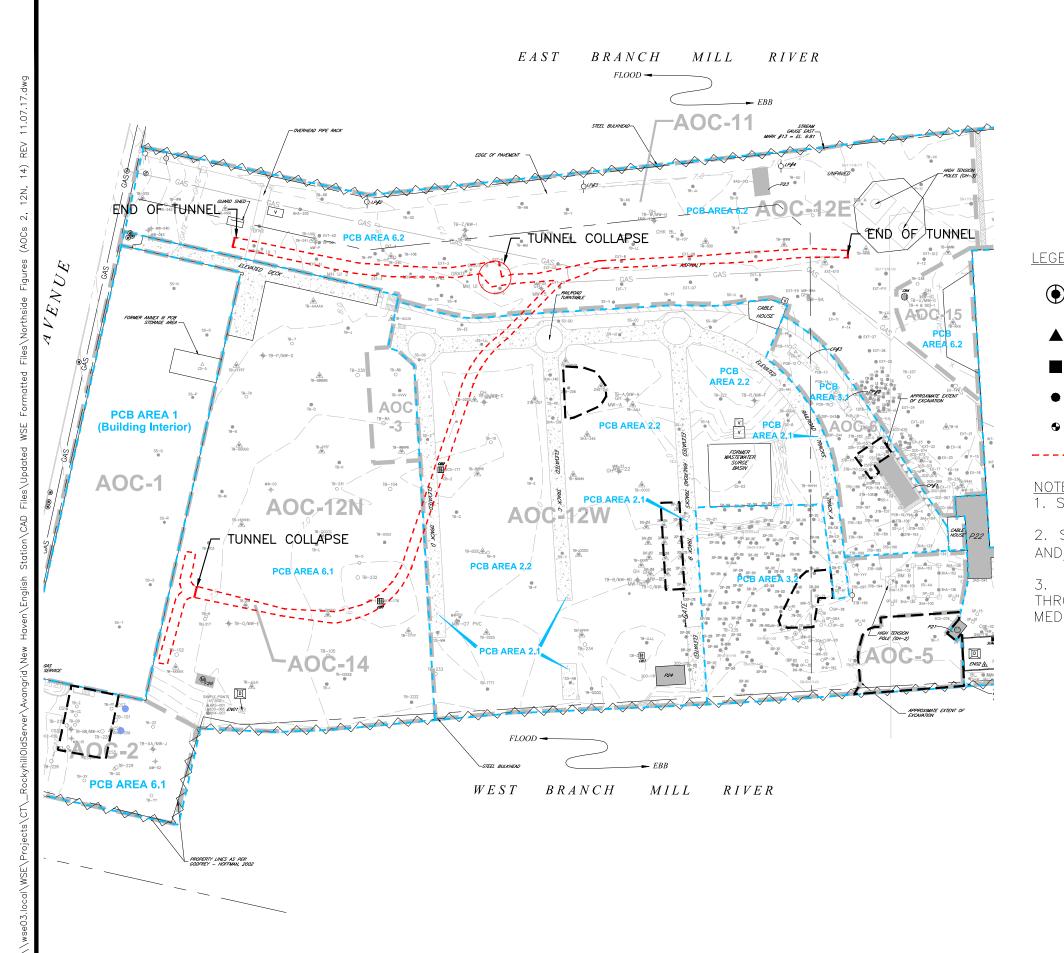


Photo 6: West End Tunnel South of Station B during 2017 sampling – Looking North toward Station B



Photo 7: West End Tunnel South of Station B during 2017 sampling – West end at Intersection looking West

APPENDIX R -	W&S A	OC-14 FIGURES	& TABLES
	V		AX.   /



**LEGEND:** 

- W&S SEDIMENT/POROUS MEDIA SAMPLE LOCATION. LEFT SIDE REPRESENTS POROUS MEDIA SAMPLE, RIGHT SIDE REPRESENTS SEDIMENT SAMPLE
- CONCRETE/ASPHALT SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- ---- APPROXIMATE LIMIT OF COOLING TUNNEL

- 1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
- 2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
- 3. SEDIMENT AND CONCRETE SAMPLES WERE COLLECTED THROUGHOUT AOC-14 DEPENDING ON ACCESSIBILITY OF THE MEDIA.

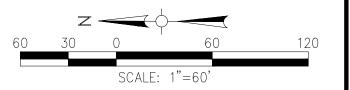


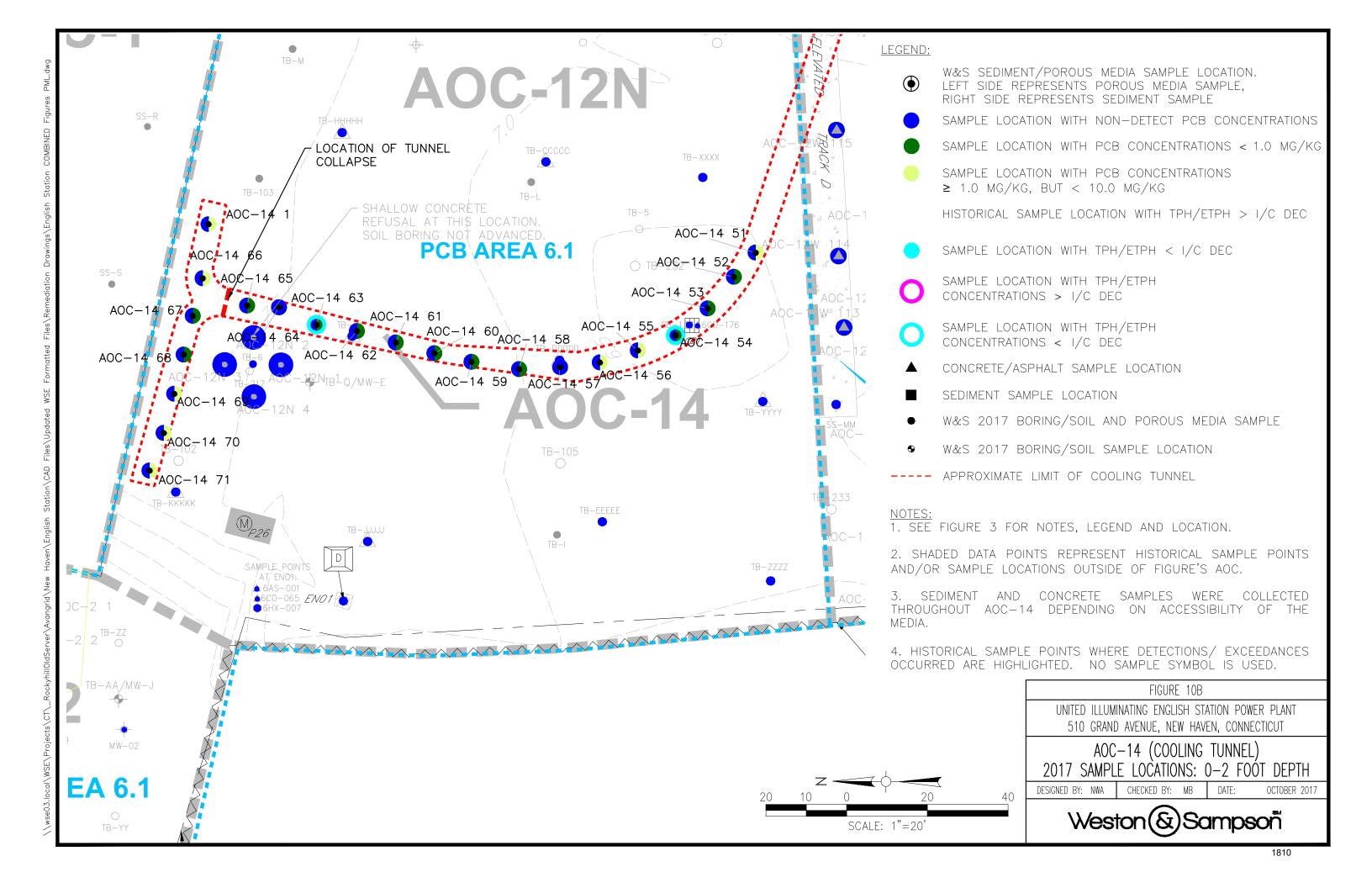
FIGURE 10A UNITED ILLUMINATING ENGLISH STATION POWER PLANT 510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

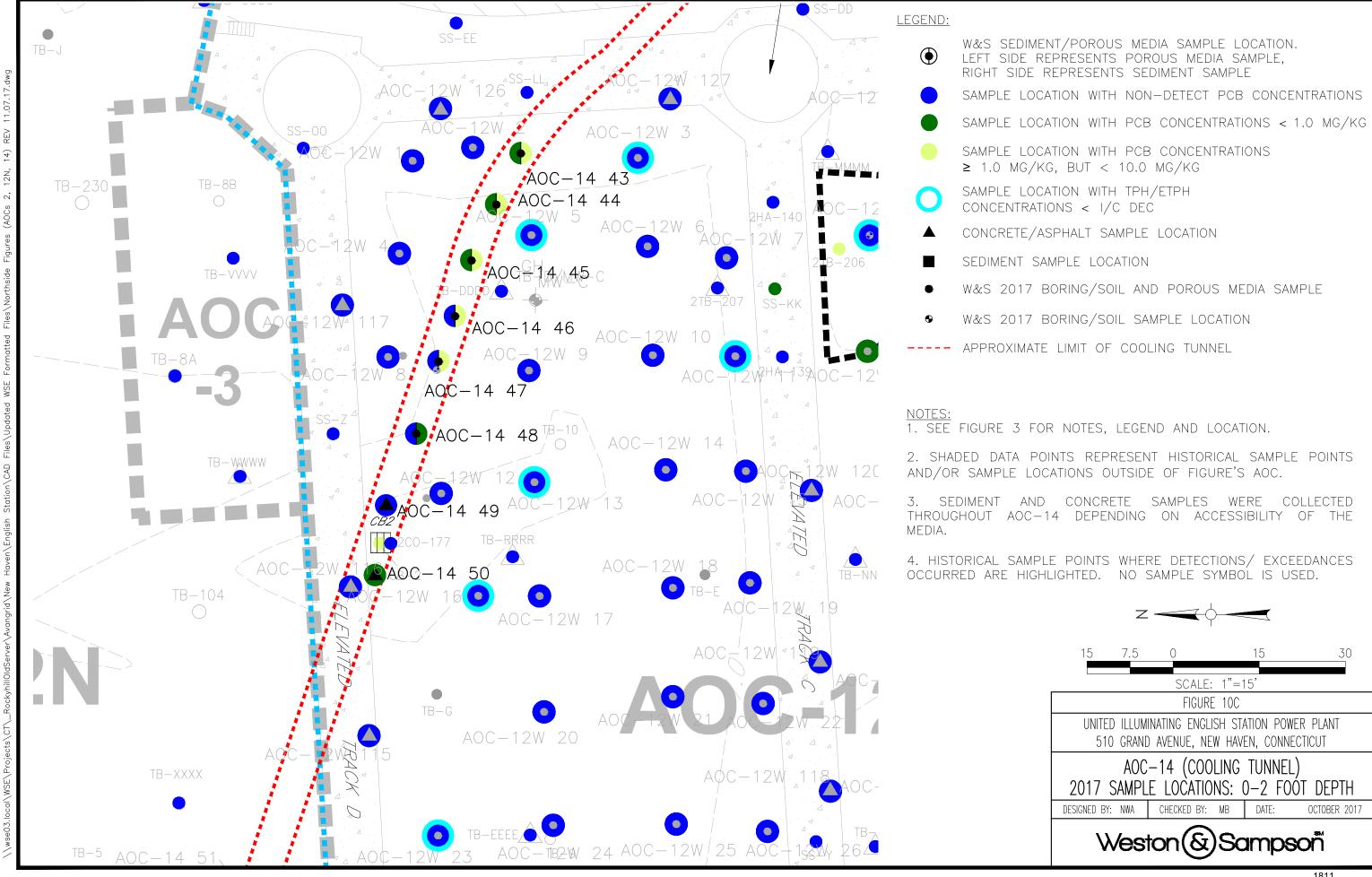
> AOC-14 (COOLING TUNNEL) 2017 SAMPLE LOCATIONS

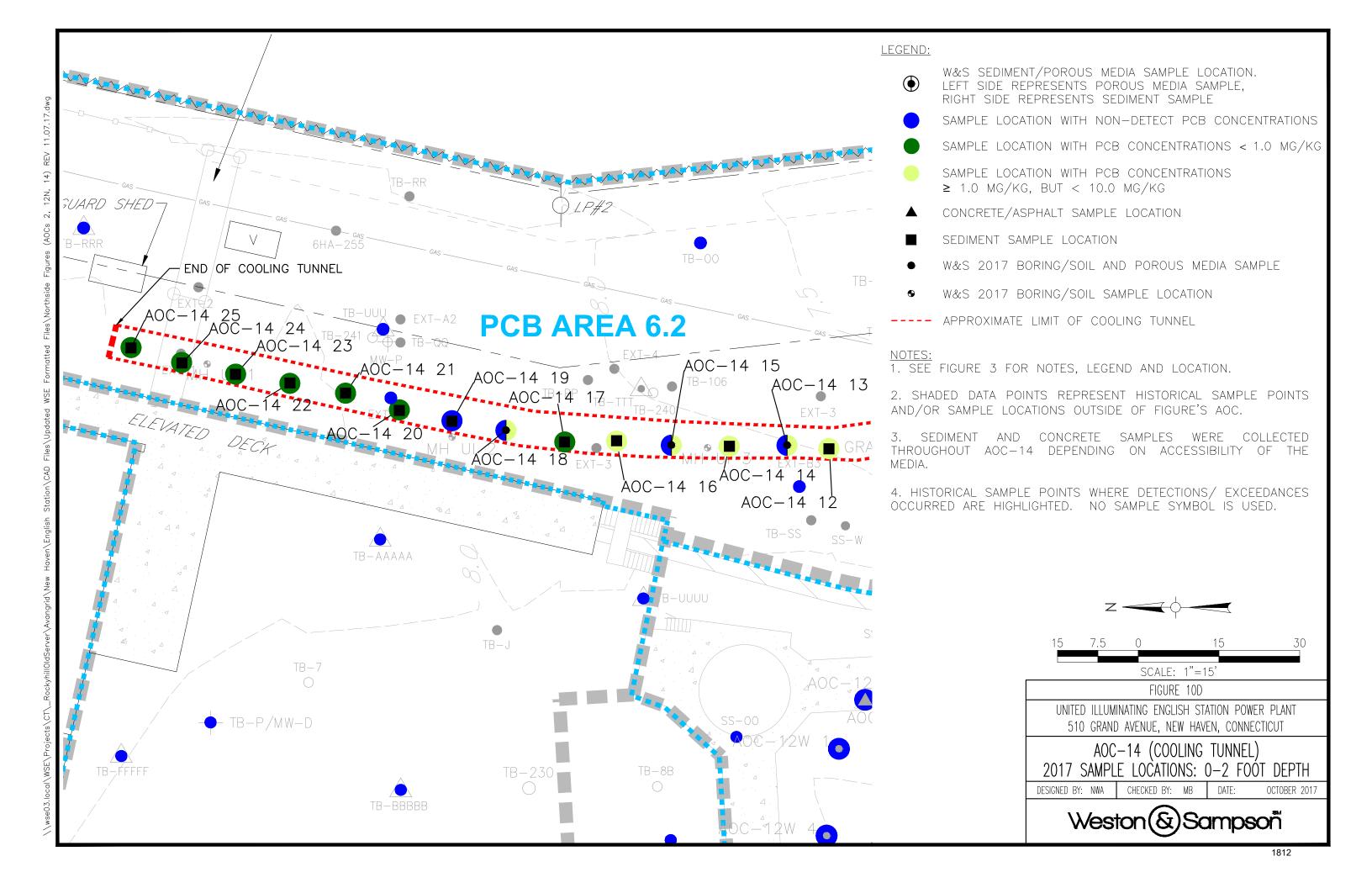
DESIGNED BY: NWA CHECKED BY: MB DATE:

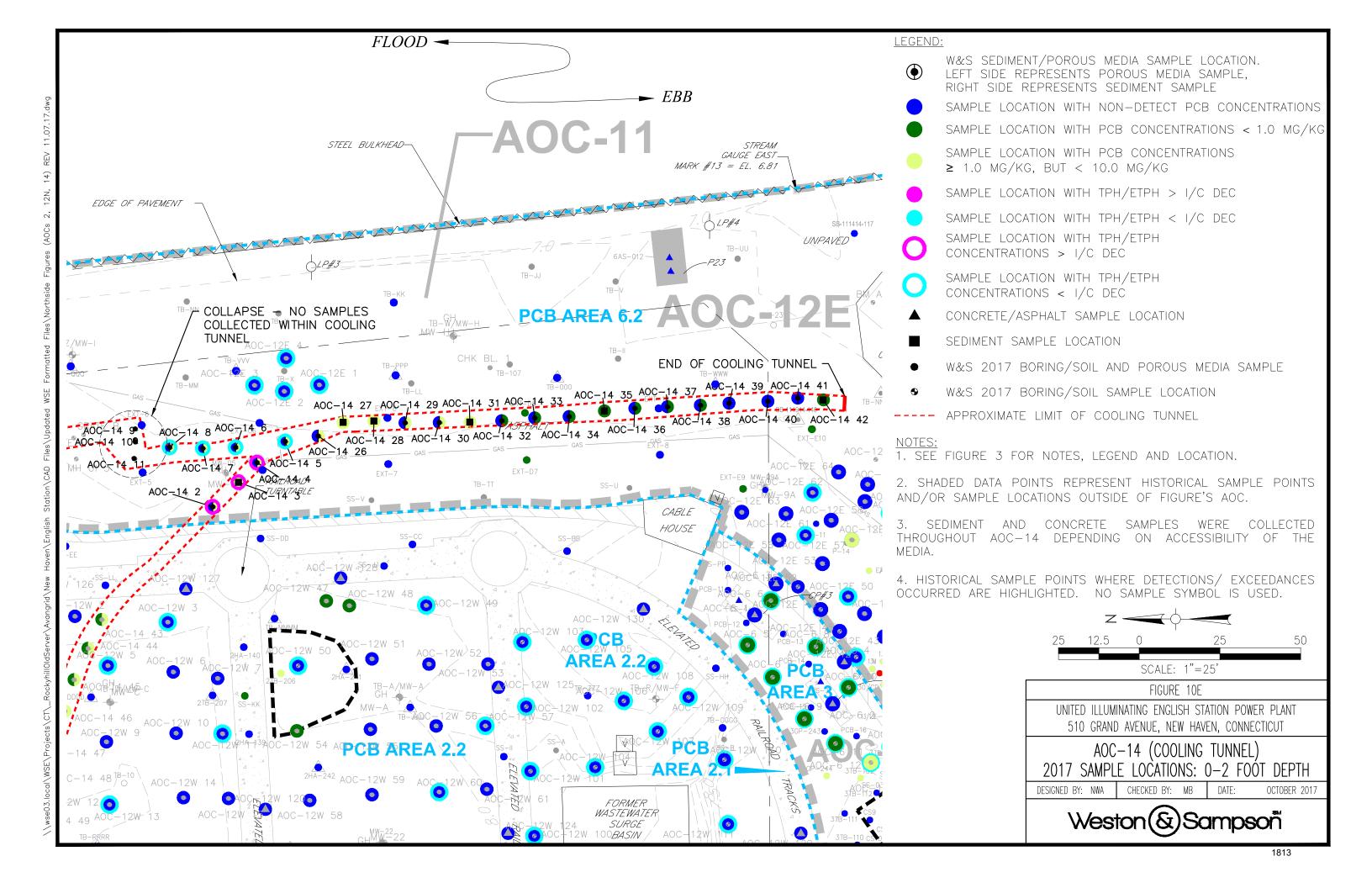
OCTOBER 2017











Rearrier   Reservant   Reservant   Reservant   Rearrier   Rearri	SAMPLE LOCATION			WC 400 44 0ED 4	WC 40044 CO 4	WC 40044 CE 0	WC 40044 00 0	WC 40044 CE 0	WC 40044 00 0	WC 40044 CE 4	WC 40044 00 4	WC ACCAA CE E	WC 40044 00 F	WC 40044 CE 6	WC 40044 00 C
Processing   10   10   10   10   10   10   10   1	SAMPLE LUCATION SAMPLE DEPTH (# has)	PEMEDIATIO	MATANDARD	WS-AOC-14-SED-1	WS-AOC14-CO-1	WS-AOC14-SE-2	WS-AOC14-CO-2	WS-AOC14-SE-3	WS-AOC14-CO-3	WS-AOC14-SE-4	WS-AOC14-CO-4	WS-AOC14-SE-5	WS-AOC14-CO-5	WS-AOC14-SE-6	WS-AOC14-CO-6 (0-0.5")
PARAMETER (CHINA)    1	DATE SAMPLED			7/13/2017	9/6/17	8/8/17	8/9/17	8/8/17	8/8/17	8/8/17	8/9/17	8/9/17	8/9/17	8/9/17	8/9/17
PARAMETER (Juniar)  PARAMETER (Juniar)  10				17G0507		17H0394	17H0533	17H0394	17H0394	17H0394	17H0533	17H0533	17H0533	17H0533	17H0533
Page-16th and Pa		I/C DEC							1						
## Comment of the com	PARAMETER (Units) <sup>2</sup>														
## Comment of the com	Polychlorinated Biphenyls by EPA method 8082 (mg/kg)														
PCS-1526 10	PCB-1248	10		0.6	< 0.094	0.96	<0.10	1.9	< 0.096	0.93	< 0.094	0.51	< 0.093	0.62	<0.10
PC-2-1200 10 0.33 0.014 0.04 0.10 0.09 0.70 0.004 0.24 0.000 0.33 0.01 0.07 0.004 0.24 0.000 0.33 0.00 0.33 0.007	PCB-1254	10		0.74	< 0.094	0.97	<0.10	1.7	< 0.096	1.0	< 0.094	0.57	< 0.093	0.83	<0.10
Sept. Part production delignment by EPA method \$257 (applied)	PCB-1260	10		0.39	<0.094	0.64	<0.10	0.80	< 0.096	0.70	<0.094	0.24	< 0.093	0.33	<0.10
Sept. Part production delignment by EPA method \$257 (applied)		10		1.73	<0.094	2.57	<0.10	4.4	<0.096	2.63		1.32	<0.093	1.78	<0.10
Figure   F	SPLP Polychlorinated Biphenyls by EPA method 8082 (µg/l)														
Agreement   2,500			5	<0.20	NA	NA	NA		NA	NA		NA	NA		NA
Agreement   2,500	Semivolatile Organic Compounds by EPA method 8270 (mg/kg)														
According	Acenaphthene*	2,500	84	<0.43	NA	<0.73	NA	<0.65	NA	<0.68	NA.	<0.85	NA	<0.84	NA
Anthropome			84	<0.43		<0.73	NA	<0.65	NA	<0.68	NA	<0.85	NA	<0.84	
Process   1	Anthracene*	2,500	400	0.63	NA	<0.73	NA	<0.65	NA	<0.68	NA	<0.85	NA	<0.84	NA
Proceedings	Benzo(a)anthracene	7.8	1	2.4	NA	1.4	NA	2.1	NA	1.4	NA	1.6	NA	<0.84	NA NA
Parasital/Informations	Benzo(a)pyrene	1	1	2.0	NA	2.0	NA	2.7	NA NA	1.8	NA	1.5	NA		NA
Bernating   1	Benzo(b)fluoranthene	7.8	1	2.9	NA	2.6	NA	3.8	NA	2.4	NA	2.5	NA	1.2	NA
Factoritime	Benzo(g,h,i)perylene*	78	1	1.5	NA	1.2	NA	1.7	NA	1.2	NA	0.86	NA		NA
Factoritime		78	1	1.2	NA	0.82	NA	1.3	NA	0.81	NA	<0.85	NA	<0.84	NA
Flooring		780	1		NA		NA	2.2	NA		NA	1.5	NA	< 0.84	NA NA
Fluorene   2,500   56   -0.43   NA   -0.73   NA   -0.055   NA   -0.068   NA   -0.055   NA   -0.056   NA   -0.055   NA   -0.056	Dibenz(a,h)anthracene*	1	1	<0.43	NA	<0.73	NA	<0.65	NA	<0.68	NA	<0.85		<0.84	NA
Fluorene   2,500   56   -0.43   NA   -0.73   NA   -0.055   NA   -0.068   NA   -0.055   NA   -0.056   NA   -0.055   NA   -0.056	Fluoranthene	2,500	56	5.2	NA	2.8	NA	3.6	NA	2.1	NA	3.8	NA	1.5	NA
2.Methylogeninalener   1,000   5.6   0.77   NA   .0.72   NA   .0.65   NA   .0.68   NA   .0.65		2,500	56	<0.43	NA	< 0.73	NA	<0.65	NA	< 0.68	NA	< 0.85	NA	<0.84	NA
2.Methylogeninalener   1,000   5.6   0.77   NA   .0.72   NA   .0.65   NA   .0.68   NA   .0.65	Indeno(1,2,3-cd)pyrene*	7.8	1	1.4	NA	<0.73	NA	1.7	NA	1.2	NA	0.94	NA	<0.84	NA
Naphthalene	2-Methylnaphthalene*	1,000	5.6	0.77	NA NA	<0.73	NA	< 0.65	NA	< 0.68	NA	<0.85		< 0.84	NA
SPLP Semivolatile Organic Compounds by EPA method 8270 (pgf)		2,500	56	0.82	NA	<0.73	NA	<0.65	NA	<0.68	NA		NA	<0.84	NA
SPLP Semivolatile Organic Compounds by EPA method 8270 (pgf)	Phenanthrene	2,500	40	3.5	NA	1.4	NA	1.8	NA	1.0	NA	3.4	NA	<0.84	NA
Aconspirityrene* NE 4.200 - 40.28 NA	Pyrene	2,500					NA		NA	3.5	NA	3.3		1.8	NA
Acenaphthene*   NE   4.200   <0.28   NA   NA   NA   NA   NA   NA   NA   N	SPLP Semivolatile Organic Compounds by EPA method 8270 (μg/l)														
Anthracener* NE 20,000 < -0.19 NA	Acenaphthene*	NE	4 200	<0.28		NA	NA	NA			NA	NA	NA	NA	NA
Anthracener*  NE 20.00	Acenaphthylene	NE	4,200	<0.28	NA	NA	NA		NA						
Benza(a)primere	Anthracene*	NE	20,000	<0.19	NA										
Benzos playmen	Benzo(a)anthracene	NE	0.6	<0.047	NA										
Benzo(ph) upranthene	Benzo(a)pyrene	NE	2	<0.093	NA										
Chryster   NE   A.8   <0.19   NA   NA   NA   NA   NA   NA   NA   N	Benzo(b)fluoranthene	NE		< 0.047	NA	NA NA	NA	NA	I NA	NA	NA	NA NA	NΔ	NA	NA NA
Chysene'   NE   A.8   <0.19   NA   NA   NA   NA   NA   NA   NA   N	Benzo(g,h,i)perylene*	NE	4.8	<0.47	NA	NA	NΔ	NA							
Chysene'   NE   A.8   <0.19   NA   NA   NA   NA   NA   NA   NA   N	Benzo(k)fluoranthene	NE		<0.19	NA										
Fuoranthere	Chrysene*	NE	4.8	<0.19	NA		NA	NA	NA	NA	NA		NA	NA	NA
Fluorente   NE   2,800   <0,47   NA   NA   NA   NA   NA   NA   NA   N	Dibenz(a,h)anthracene*	NE	1		NA		NA								
Fluorene   NE   2,800   <0,93	Fluoranthene	NE		<0.47	NA	NA	NA	NA	NA	I NA		NA NA	NA	NA	NA
2-Methylnosphthalene*  NE 290 -0.93 NA		NE	2,800	< 0.93	NA			NA	NA	NA		NΔ		NA	NA
2-Methylnsephthalener         NE         290         <0.93	Indeno(1,2,3-cd)pyrene*	NE	1	<0.19	NA	NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA
Naphthalene         NE         2,800         <0,933	2-Methylnaphthalene*	NE	280	~0.93	NA	NA	NA		NΔ	NA	NA	NΔ	NΔ	NA	NΔ
Phenanthrene   NE   2,000   0.094   NA   NA   NA   NA   NA   NA   NA   N	Naphthalene	NE	2,800	< 0.93	NA		NA	NA							
Pyrene NE 2,000 <0.93 NA	Phenanthrene	NE	2,000	0.094	NA		NA								
ETPH by CT method (mg/kg) 2,500 2,500 5700 NA 3000 NA 3200 NA 5700 NA 410 NA 1900 NA SPLP ETPH by CT method (mg/l) NE 2,50 0,17 NA		NE								NA					NA
SPLP ETPH by CT method (mg/l)         NE         2.50         0.17         NA		2,500	2,500	5700	NA		NA		NA		NA	410	NA	1900	NA
Test Critic (V) 204 NA 224 NA 250 NA 254 NA NA NA NA NA NA NA		NE	2.50	0.17	NA										
10tat 50tits (%)	Total Solids (%)			39.1	NA	23.4	NA	26.0	NA	25.1	NA	NA	NA	NA	NA

- NO.16.

  1. Analytical results compared to Connecticut Remediation Standard Regulations (January 1996; revised June 27, 2013).

  2. Only compounds that were detected are provided in this table. For a complete list of analytes, refer to laboratory report.
- 3. The site is located within a GB groundwater area. For comparison to SPLP results for Organics except for PCBs, the GB PMC listed is 10x the GWPC.

  \*These criteria are available through the submission and approval by CT DEEP of a Request for Approval of Criteria for Additional Polluting Substances and Certain Alternative Criteria Form.

  A/B labels indicate smaller subintervals for normal samples.

mg/kg = milligrams per kilogram μg/l = micrograms per liter

< = compound not detected above laboratory reporting limit, shown.

BOLD = compound detected at that concentration.

NA = Not Analyzed

GB PMC = GB Pollutant Mobility Criteria

I/C DEC = Industrial/Commercial Direct Exposure Criteria

NE = Not Established by DEEP

-- = Not Applicable

SAMPLE LOCATION			WS-AOC14-SE-7	WS-AOC14-CO-7	WS-AOC14-SE-8	WS-AOC14-CO-8	WS-AOC14-SE-12	WS-AOC14-SE-13	WS-AOC14-CO-13	WS-AOC14-SE-14	WS-AOC14-SE-15	WS-AOC14-CO-15	WS-AOC14-SE-16	WS-AOC14-SE-17
SAMPLE DEPTH (ft bgs)	REMEDIATION	N STANDARD		(0-0.5")		(0-0.5")			(0-0.5")			(0-0.5")		
DATE SAMPLED	REGULA	ATIONS1	8/9/17 17H0533	8/9/17	8/9/17 17H0533	8/9/17	8/10/17	8/10/17	8/10/17	8/10/17 17H0617	8/10/17 17H0617	8/10/17	8/10/17	8/10/17
WORK ORDER NO.	ļ,		17H0533	17H0533	17H0533	17H0533	17H0617	17H0617	17H0617	17H0617	17H0617	17H0617	17H0617	17H0617
QA/QC IDENTIFIER	I/C DEC	GB PMC <sup>3</sup>												
PARAMETER (Units) <sup>2</sup>														
Polychlorinated Biphenyls by EPA method 8082 (mg/kg)														ļl
PCB-1248	10		0.30	<0.094	0.46 0.55	<0.099	0.94 1.2	0.86 1.2	<0.10	0.9	0.67	<0.10 <0.10	0.68	0.34
PCB-1254	10		0.42	<0.094		<0.099		4	<0.10		0.78		0.85	<0.33
PCB-1260 Total PCBs	10 10		0.29	<0.094 <0.094	0.33 1.34	<0.099 <0.099	0.58 2.72	0.47 2.53	<0.10 <0.10	0.38 2.48	0.39 1.84	<0.10 <0.10	0.35 1.88	<0.33 0.34
SPLP Polychlorinated Biphenyls by EPA method 8082 (µg/l)	10		1.01	<0.094	1.34	<0.099	2.12	2.53	<0.10	2.46	1.04	<0.10	1.00	0.34
Total PCBs		5	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA
Semivolatile Organic Compounds by EPA method 8270 (mg/kg)		3	INA	INA		INA	INA	INA	INA	INA	INA	INA	INA	INA
Acenaphthene*	2 500	84	<b>∠</b> 0.85	NA	<0.84	NΔ	NA	NΔ	NΔ	NΔ	NΔ	NΔ	NΔ	NΔ
Acenaphthylene	2,500 2,500	84 84	<0.85 <0.85	NA NA	<0.84 <0.84	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Anthracene*	2.500	400	<0.85	NA NA	<0.84		NA NA		NA NA	NA NA	NA NA		NA NA	NA NA
Benzo(a)anthracene	7.8	1	<0.85	NA NA	0.97	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)pyrene	1 1	1	0.94	NA NA	1.2	NA NA	NA NA	NA	NA	NA NA	NA NA	NA NA	NA NA	NA
Benzo(b)fluoranthene	7.8	1	1.5	NA	1.9	NA	NA NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene*	78	1	< 0.85	NA	<0.84	NA	NA	NA NA	NA	NΔ	NA	NA NA	NA NA	NA NA
Benzo(k)fluoranthene	78	1	<0.85 <0.85	NA	<0.84	NA	NA	NA NA NA	NA NA	NA NA	NA	NA	NA	NA
Chrysene*	78 780	1	<0.85	NA	1.1	NA NA	NA	NA NA	NA	NA	NA	NA NA	NA NA	NA NA
Dibenz(a.h)anthracene*	1	1	<0.85	NA	<0.84	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	2,500	56	1.4	NA	2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	2,500	56	< 0.85	NA	< 0.84	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
Indeno(1,2,3-cd)pyrene*	2,500 7.8	1	<0.85	NA	<0.84 <0.84	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene*		5.6	< 0.85	NA	<0.84	NA	NA	NA	NA	NA	NA	NA	NΔ	NA
Naphthalene	2,500	56	<0.85	NA	<0.84	NA	NA	NA	NA	NA	NA	NA	NA NA	NA
Phenanthrene	2,500	40	<0.85	NA	1.7	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	2,500	40	1.7	NA	2.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Semivolatile Organic Compounds by EPA method 8270 (μg/l)														
Acenaphthene*	NE NE	4 200	NA	NA	NA NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA
Acenaphthylene	NE	4,200	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene*	NE	20,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NE	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NE	2	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA NA	NA	NA
Benzo(b)fluoranthene	NE	0.8 4.8	NA NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA
Benzo(g,h,i)perylene*	NE NE		NA NA NA	NA	NA NA	NA NA	NA	NA NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA
Benzo(k)fluoranthene		5	NA NA	NA NA			NA	NA NA						NA
Chrysene*	NE NE	4.8	NA NA	NA	NA	NA	NA	NA NA	NA NA	NA	NA	NA NA	NA	NA
Dibenz(a,h)anthracene*	NE NE	1		NA NA	NA NA	NA NA	NA NA			NA NA	NA NA	NA NA	NA NA	NA NA
Fluoranthene	NE	2,800	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluorene	NE NE	2,800	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Indeno(1,2,3-cd)pyrene*		280	NA NA	NA NA		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA	NA NA
2-Methylnaphthalene*	NE	280		NA NA	NA NA				NA NA		NA NA	NA NA	NA NA	
Naphthalene	NE NE	2,800	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA		NA NA	NA NA	NA NA
Phenanthrene	NE		NA NA	·	NA NA	NA NA			NA NA	NA NA	NA NA	NA NA		
Pyrene ETPH by CT method (mg/kg)	NE 2.500	2,000	NA 980	NA NA	NA 500	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
SPLP ETPH by CT method (mg/l)	2,500 NE	2,500	980 NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Total Solids (%)	INE	2.00	NA NA	NA NA	NA NA	NA NA	42.0	48.2	NA NA	38.1	32.4	NA NA	30.2	30.5
I Utai Oulus (70)	-	-	INA	INA	INA	INA	42.0	40.2	INA	30.1	32.4	INA	30.2	30.0

- NO.16.

  1. Analytical results compared to Connecticut Remediation Standard Regulations (January 1996; revised June 27, 2013).

  2. Only compounds that were detected are provided in this table. For a complete list of analytes, refer to laboratory report.
- 3. The site is located within a GB groundwater area. For comparison to SPLP results for Organics except for PCBs, the GB PMC listed is 10x the GWPC.

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  A/B labels indicate smaller subintervals for normal samples.

mg/kg = milligrams per kilogram

μg/l = micrograms per liter

< = compound not detected above laboratory reporting limit, shown.

BOLD = compound detected at that concentration.
NA = Not Analyzed

GB PMC = GB Pollutant Mobility Criteria

I/C DEC = Industrial/Commercial Direct Exposure Criteria

NE = Not Established by DEEP

-- = Not Applicable

SAMPLE LOCATION	051150115101		WS-AOC14-SE-18	WS-AOC14-CO-18	WS-AOC14-SE-19	WS-AOC14-SE-20	WS-AOC14-SE-21	WS-AOC14-SE-22	WS-AOC14-SE-DUP-	1 WS-AOC14-SE-23	WS-AOC14-SE-24	WS-AOC14-SE-25	WS-AOC14-SE-26	WS-AOC14-CO-26
SAMPLE DEPTH (ft bgs) DATE SAMPLED	REMEDIATION REGULA		8/10/17	(0-0.5")	9/11/17	8/11/17	8/11/17	8/11/17	8/11/17	9/11/17	9/11/17	8/11/17	8/11/17	(0-0.5") 8/11/17
WORK ORDER NO.	REGULA	ATIONS	8/10/17 17H0617	8/10/17 17H0617	8/11/17 17H0711	8/11/17 17H0711	8/11/17 17H0711	17H0711	8/11/17 17H0711	8/11/17 17H0711	8/11/17 17H0711	8/11/17 17H0711	17H0711	17H0711
QA/QC IDENTIFIER	I/C DEC	GB PMC <sup>3</sup>	1/1001/	1/11001/	1/11/11	1/17/11	LI/fig/(II	PARENT	DUPLICATE	1/10/11	1/170/11	1/10//11	1/17/11	1/110/11
PARAMETER (Units) <sup>2</sup>	I/C DEC	ODTIVIC						TAKEN	DOILIOATE					
Polychlorinated Biphenyls by EPA method 8082 (mg/kg)														
PCB-1248	10		0.54	<0.10	<0.20	<0.23	0.29	<0.25	<0.25	<0.26	<0.19	<0.22	0.85	<0.10
	10 10		0.54 0.47	<0.10	<0.20	<0.23	0.33	0.37	0.61	0.38	0.23	<0.22	0.85 1.0	<0.10
PCB-1260	10		<0.35	<0.10	<0.20	0.31	<0.24	-0.37 -0.35	0.61 0.32	<0.26	0.20	0.34	0.51	<0.10
Total PCBs	10 10 10		1.01	<0.10	<0.20	0.31	0.62	<0.25 0.37	0.93	0.38	0.43	0.34	2.36	<0.10
SPLP Polychlorinated Biphenyls by EPA method 8082 (µg/l)	10		1.01	Q0.10	<b>40.20</b>		0.02	0.07	0.33	0.50	0.43	0.54	2.30	Q0.10
Total PCBs		5	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA	NA	NA
Semivolatile Organic Compounds by EPA method 8270 (mg/kg)				ING										
Acenaphthene*	2,500	84	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	2,500	84	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Anthracene*		400		NA NA	NA NA		NΔ							NΔ
Benzo(a)anthracene	2,500 7.8	1	NA NA	NA NA	NA NA NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)pyrene		1	NA	NA NA	NA NA	NA	NA NA	NA	NΔ	NA NA	NA NA	NA NA	NA	NA NA
Benzo(b)fluoranthene	7.8	1	NA NA	NA	NΔ	NA	NA NA	NA NA	NA NA	NA	NA	NA	NA NA	NA NA
Benzo(g,h,i)perylene*	78	1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA
Benzo(k)fluoranthene		1		NA						NA NA				NA NA
Chrysene*	78 780	1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Dibenz(a,h)anthracene*	1	1	NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA
Fluoranthene	2,500	56	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	2.500	56	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA	NA	NA	NA NA	NA NA
Indeno(1,2,3-cd)pyrene*	7.8	1	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA	NA NA	NA	NA NA	I NA	NA NA
2-Methylnaphthalene*	2,500 7.8 1,000	5.6	NA NA	NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA NA	NA
Naphthalene	2.500	56	NA NA	NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA
Phenanthrene	2,500	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	2.500	40	NA.	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA
SPLP Semivolatile Organic Compounds by EPA method 8270 (μg/l)														
Acenaphthene*	NE	4,200	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	NE NE NE	4,200	NA	NA	NA NA	NA	NA	NA	NA NA	NA	NA	NA	NA NA	NA
Anthracene*	NE		NA	NA	NA NA	NA	NA	NA NA	NA NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NE	0.6	NA NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA NA
Benzo(a)pyrene	NE	2	NA	NA	NA NA	NA	NΔ	NA	NA	NA	NA	NA		NA
Benzo(b)fluoranthene	NE NE	0.8	NA NA	NA	NA	NA NA	NA NA	NA NA	NA	NA NA	NA	NA NA	NA NA	NA
Benzo(g,h,i)perylene*	NE NE	4.8	NA NA	NA	NA NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NE	5	NA	NA	NA	NA NA	NA	NA	NA NA	NA	NA	NA NA	NA	NA
Chrysene*	NE	4.8	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene*	NE	1	NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NE NE	2,800	NA	NA	NA NA	NA	NA	NA NA	NA	NA	NA	NA NA	NA	NA
Fluorene	NE	2,800	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene*	NE NE	1	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene*	NE	280	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NE	2,800 2,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NE NE	2,000	NA NA	NA	NA NA	NA NA	NA	NA NA	NA NA	NA	NA	NA NA	NA NA	NA
Pyrene	NE	2,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETPH by CT method (mg/kg)	2,500	2,500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP ETPH by CT method (mg/l)	NE	2.50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Solids (%)			28.3	NA	50.7	42.8	42.3	40.7	39.7	38.0	51.6	44.7	27.9	NA

- NO.16.

  1. Analytical results compared to Connecticut Remediation Standard Regulations (January 1996; revised June 27, 2013).

  2. Only compounds that were detected are provided in this table. For a complete list of analytes, refer to laboratory report.
- 3. The site is located within a GB groundwater area. For comparison to SPLP results for Organics except for PCBs, the GB PMC listed is 10x the GWPC.

  \*These criteria are available through the submission and approval by CT DEEP of a Request for Approval of Criteria for Additional Polluting Substances and Certain Alternative Criteria Form.

  A/B labels indicate smaller subintervals for normal samples.

mg/kg = milligrams per kilogram

μg/l = micrograms per liter

< = compound not detected above laboratory reporting limit, shown.

BOLD = compound detected at that concentration.
NA = Not Analyzed

GB PMC = GB Pollutant Mobility Criteria

I/C DEC = Industrial/Commercial Direct Exposure Criteria

NE = Not Established by DEEP

-- = Not Applicable

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SAMPLE LOCATION			WS-AOC14-SE-27	WS-AOC14-SE-28	WS-AOC-14-SE-29	WS-AOC14-CO-29	WS-AOC-14-SE-30	WS-AOC14-CO-30	WS-AOC-14-SE-31	WS-AOC-14-SE-32	WS-AOC14-CO-32	WS-AOC-14-SE-33	WS-AOC14-CO-33	WS-AOC14-SE-34	WS-AOC14-CO-34
SAMPLE DEPTH (ft bgs)		N STANDARD				(0-0.5")		(0-0.5")	1	[			(0-0.5")		(0-0.5")
DATE SAMPLED	REGUL	ATIONS <sup>1</sup>	8/11/17 17H0711	8/11/17	8/14/17	8/21/17	8/14/17	8/21/17	8/14/17	8/14/17	8/21/17	8/14/17	8/21/17	8/21/17	8/21/17
WORK ORDER NO.			17H0711	17H0711	17H0854	17H1163	17H0854	17H1163	17H0854	17H0854	17H1163	17H0854	17H1163	17H1163	17H1163
QA/QC IDENTIFIER	I/C DEC	GB PMC <sup>3</sup>													
PARAMETER (Units) <sup>2</sup>															
Polychlorinated Biphenyls by EPA method 8082 (mg/kg)									ļ						
PCB-1248 PCB-1254	10		1.3	0.94	1.9	<0.10	0.50	<0.10	0.52	<0.38	<0.10	<0.38	<0.10	0.25 0.26	<0.10
PCB-1254	10	-	1.3	1.1	2.1	<0.10	0.65	<0.10	0.57	<0.38	<0.10	<0.38	<0.10		<0.10
PCB-1260 Total PCBs	10 10		0.53 3.13	0.58 2.62	0.87 4.87	<0.10 <0.10	0.47 1.62	<0.10 <0.10	0.50 1.59	0.53 0.53	<0.10	0.58 0.58	<0.10 <0.10	0.20 0.71	<0.10 <0.10
	10		3.13	2.62	4.87	<0.10	1.62	<0.10	1.59	0.53	<0.10	0.58	<0.10	0.71	<0.10
SPLP Polychlorinated Biphenyls by EPA method 8082 (μg/l)						l			1						
Total PCBs		5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Semivolatile Organic Compounds by EPA method 8270 (mg/kg)		ļ													
Acenaphthene*	2,500 2,500	84 84	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA
Acenaphthylene									NA	NA			NA	NA	NA
Anthracene*	2,500	400	NA	NA NA	NA NA	NA	NA	NA	NA	NA	NA	NA NA	NA NA	NA	NA
Benzo(a)anthracene	7.8	ļ <u>1</u>	NA NA	NA	NA	NA NA	NA NA	NA	NA	NA	NA NA	NA	NA	NA NA NA	NA NA NA
Benzo(a)pyrene	1	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Benzo(b)fluoranthene	7.8	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene*	78	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NΔ	NA	NA
Benzo(k)fluoranthene	78 780	1	NA	NA NA	NA NA	NA NA	NA	NA	NA	NA	NA	NA NA	NA NA	NA NA	NA
Chrysene*	780	1	NA NA	NA	NA	NA	NA NA	NA NA	NA	NA	NA NA	NA	NA	NA	NA NA
Dibenz(a,h)anthracene*	1	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	2,500	56	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	2,500	56	NA	NA	NA NA	NA NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA NA
Indeno(1,2,3-cd)pyrene*	2,500 7.8	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA NA	NA NA	NA
2-Methylnaphthalene*	1.000	5.6	NA	NA	NA NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA NA	NA
Naphthalene	2,500	56	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	2,500	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	2,500	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Semivolatile Organic Compounds by EPA method 8270 (μg/l)		<u> </u>													
Acenaphthene*	NE	4 200	NΔ	NA NA	NΔ	NΔ	NΔ	NA	NA	NA	NA NA	NA	NA	NΔ	NΔ
Acenaphthylene	NE NE	4,200	NA NA	NA	NA NA	NA NA	NA NA	NA	NA	NA	NA	NA	NA NA NA	NA NA	NA NA
Anthracene*	NE	20,000	NA	NA	NA	NA	NA NA	NA	NA	NA	NA	NA NA NA	NA	NA NA	NA
Benzo(a)anthracene	NE	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NE	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA
Benzo(b)fluoranthene	NE	0.8	NA	NΔ	NΔ	NA NA	NΔ	NA	NA	NA	NA	NA			NA NA
Benzo(g,h,i)perylene*	NE	0.8 4.8	NA	NA NA	NA NA	NA NA	NA NA	NA	NA	NA	NA NA	NA NA	NA NA	NA NA	NA
Benzo(k)fluoranthene	NE	5	NA NA	NA	NA	NA NA	NA NA	NA NA	NA	NA	NA	NA	NA		NA NA
Chrysene*	NE	4.8	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA		NA
Dibenz(a,h)anthracene*	NE	1	NA	NA	NA	NA NA	NA NA	NA	NA	NA	NA	NA NA	NA NA	NA NA	NA NA
Fluoranthene	NE	2,800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA
Fluorene	NE	2,800	NA	NΔ	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NIA
Indeno(1,2,3-cd)pyrene*	NE NE	1	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA NA	NA NA	NA
2-Methylnaphthalene*	NE	280	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NΔ	NΔ
Naphthalene	NE	2,800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA NA	NA NA
Phenanthrene	NF	2.000	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA	NA NA	NA	NA	NA	NA NA	NA NA
Pyrene	NE	2.000	NA NA	NA	NA NA	NA	NA.	NA NA	NA	NA.	NA.	NA	NA NA	NA NA	NA.
ETPH by CT method (mg/kg)	2.500	2,500	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA.	NA NA	NA NA	NA NA	NA NA	NA NA
SPLP ETPH by CT method (mg/l)	NE	2.50	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA.	NA NA	NA NA	NA NA	NA NA	NA NA
Total Solids (%)		2.30	34.8	31.4	30.0	NA NA	31.0	NA NA	29.4	26.2	NA NA	26.5	NA NA	NA NA	NA NA
Total Outus (70)			34.0	31.4	30.0	13/0	31.0	11/0	23.7	20.2	14/4	20.0	INA	INA	110

- 1. Analytical results compared to Connecticut Remediation Standard Regulations (January 1996; revised June 27,
- 1. Adaption toolis compared to commenced remainded registering (garanty years, tenses during 21, 2013).

  2. Only compounds that were detected are provided in this table. For a complete list of analytes, refer to laboratory report.

- The site is located within a GB groundwater area. For comparison to SPLP results for Organics except for PCBs, the GB PMC Isted is 10x the GWPC.

  \*These criteria are available through the submission and approval by CT DEEP of a Request for Approval of Criteria for Additional Polluting Substances and Certain Alternative Criteria Form.

  A/B labels indicate smaller subintervals for normal samples.

mg/kg = milligrams per kilogram

μg/l = micrograms per liter
<= compound not detected above laboratory reporting limit, shown.

BOLD = compound detected at that concentration.
NA = Not Analyzed

GB PMC = GB Pollutant Mobility Criteria

I/C DEC = Industrial/Commercial Direct Exposure Criteria NE = Not Established by DEEP

-- = Not Applicable

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SAMPLE LOCATION	1		WS-AOC14-SE-35	WS-AOC14-SE-36	WS-AOC14-CO-36	WS-AOC14-SE-37	WS-AOC14-CO-37	WS-AOC14-SE-38	WS-AOC14-CO-38	WS-AOC14-SE-39	WS-AOC14-CO-39	WS-AOC14-SE-40	WS-AOC14-CO-40
SAMPLE DEPTH (ft bgs)	REMEDIATION STANDARD				(0-0.5")		(0-0.5")		(0-0.5")		(0-0.5")		(0-0.5")
DATE SAMPLED	REGUL		8/21/17	8/21/17	8/21/17	8/21/17	8/21/17	8/22/17	8/22/17	8/22/17	8/22/17	8/22/17	8/22/17
WORK ORDER NO.	]	, <u>-</u>	17H1163	17H1163	17H1163	17H1163	17H1163	17H1209	17H1209	17H1209	17H1209	17H1209	17H1209
QA/QC IDENTIFIER	I/C DEC	GB PMC <sup>3</sup>											
PARAMETER (Units) <sup>2</sup>													
Polychlorinated Biphenyls by EPA method 8082 (mg/kg) PCB-1248 PCB-1254		l					ļ						
PCB-1248	10		0.16	0.12	<0.10	0.18 0.21	<0.10	0.10	<0.50	<0.50	<0.50	<0.50 <0.50	<0.50
PCB-1254	10		0.20	0.15	<0.10		<0.10	0.13	<0.50	<0.50	<0.50		<0.50
PCB-1260 Total PCBs	10 10		0.22 0.58	0.15 0.42	<0.10 <0.10	0.28 0.67	<0.10 <0.10	0.17	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50
	10	-	0.58	0.42	<0.10	0.67	<0.10	0.40	< 0.50	<0.50	< 0.50	< 0.50	< 0.50
SPLP Polychlorinated Biphenyls by EPA method 8082 (μg/l)								1					ļ
Total PCBs	-	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Semivolatile Organic Compounds by EPA method 8270 (mg/kg)		l											
Acenaphthene*	2,500 2,500	84 84	NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA
Acenaphthylene			NA	NA			NA	NA			NA		
Anthracene*	2,500	400	NA	NA	NA NA	NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA
Benzo(a)anthracene	7.8	L11	NA NA NA NA NA	NA	NA NA	NA		NA		NA	NA	NA	NA NA
Benzo(a)pyrene	1	1		NA									
Benzo(b)fluoranthene	7.8	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene*	78	1	NA NA	NA NA	NA	NA	NA NA	NA	NA	NA	NA	NA NA	NA
Benzo(k)fluoranthene	78	1	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA	NA
Chrysene*	78 780	1	NA	NA	NA		NA	NA			NA	NA NA NA	NA NA
Dibenz(a,h)anthracene*	1	1	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA
Fluoranthene	2,500	56	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	2,500	56	NA	NA NA	NA								
Indeno(1,2,3-cd)pyrene*	2,500 2,500 7.8 1,000		NA NA	NA	NA NA	NA	NA	NA	NA	NA	NA NA	NA NA	NA
2-Methylnaphthalene*	1,000	5.6	NA NA	NΔ	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
Naphthalene	2,500	56	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	2,500 2,500	40	NA	NA NA	NA								
Pyrene	2,500	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Semivolatile Organic Compounds by EPA method 8270 (μg/l)		l								L			
Acenaphthene*	NE NE	4,200	NA NA NA	NA	NA NA	NA	NA	NA	NA	NA	NA NA NA	NA NA	NA
Acenaphthylene	NE	4,200	NA	NA NA	NA	NA NA	NA NA	NA	NA NA	NA NA NA	NA	NA	NA NA
Anthracene*	NE	20,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	NE	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
Benzo(a)pyrene	NE	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NE	0.8 4.8	NA	NΙΔ	NA	NA	NA	NA		NA	NA	NA	NA
Benzo(g,h,i)perylene*	NE NE NE NE NE	4.8	NA NA NA	NA NA	NA NA NA	NA NA NA	NA NA NA	NA	NA NA	NA NA NA	NA NA NA	NA NA	NA
Benzo(k)fluoranthene	NE	5	NA				NA	NA	NA		NA		NA
Chrysene*	NE	4.8	NA	NA NA	NA	NA NA	NA NA	NA	NA	NA	NA	NA	NA NA
Dibenz(a,h)anthracene*	NE NE	1	NA NA		NA NA			NA	NA	NA	NA NA	NA NA	
Fluoranthene	NE	2,800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NE NE NE	2,800	NA	NA NA	NA NA	NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA
Indeno(1,2,3-cd)pyrene*	NE	1	NA NA NA			NA		NA					NA
2-Methylnaphthalene*	NE	280	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NE	2 800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NE NE	2,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NE	2,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETPH by CT method (mg/kg)	2,500	2,500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP ETPH by CT method (mg/l)	NE	2.50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Solids (%)	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

- NOTES.

  1. Analytical results compared to Connecticut Remediation Standard Regulations (January 1996; revised June 27, 2013).

  2. Only compounds that were detected are provided in this table. For a complete list of analytes, refer to laboratory report.
- 3. The site is located within a GB groundwater area. For comparison to SPLP results for Organics except for PCBs, the GB PMC listed is 10x the GWPC.

  \* These criteria are available through the submission and approval by CT DEEP of a Request for Approval of Criteria for Additional Polluting Substances and Certain Alternative Criteria Form.

  A/B labels indicate smaller subintervals for normal samples.

mg/kg = milligrams per kilogram

μg/l = micrograms per liter

< = compound not detected above laboratory reporting limit, shown.

BOLD = compound detected at that concentration.
NA = Not Analyzed

GB PMC = GB Pollutant Mobility Criteria

I/C DEC = Industrial/Commercial Direct Exposure Criteria

NE = Not Established by DEEP

-- = Not Applicable

SAMPLE LOCATION			WS-AOC14-SE-41	WS-AOC14-CO-41	WS-AOC14-SE-42	WS-AOC-14-SE-43	WS-AOC14-CO-43	WS-AOC-14-SE-44	WS-AOC14-CO-44	WS-AOC-14-SE-45	WS-AOC14-CO-45	WS-AOC-14-SE-46	WS-AOC14-CO-46	WS-AOC-14-SE-47	WS-AOC14-CO-47
SAMPLE DEPTH (ft bgs)		N STANDARD		(0-0.5")			(0-0.5")		(0-0.5")		(0-0.5")		(0-0.5")	1	(0-0.5")
DATE SAMPLED	REGULA	ATIONS <sup>1</sup>	8/22/17	8/22/17	8/22/17	8/24/17	8/30/17	8/24/17	8/30/17	8/24/17	8/30/17	8/24/17	8/30/17	8/24/17	8/30/17
WORK ORDER NO.			17H1209	17H1209	17H1209	17H1359	17H1621	17H1359	17H1621	17H1359	17H1621	17H1359	17H1621	17H1359	17H1621
QA/QC IDENTIFIER	I/C DEC	GB PMC <sup>3</sup>													
PARAMETER (Units) <sup>2</sup>															
Polychlorinated Biphenyls by EPA method 8082 (mg/kg)		ļ							ļ						
PCB-1248 PCB-1254	10		<0.50	<0.10	0.10	0.36	0.11	0.55	0.16	4.6	0.11	0.81	<0.096	0.97 1.0	<0.098
PCB-1254	10		<0.50	<0.10	0.17	0.37	0.14	0.72	0.18	4.0	0.12	0.90	<0.096		<0.098
PCB-1260 Total PCBs	10 10		<0.50 <0.50	<0.10	0.32 0.59	0.31 1.04	0.23 0.48	0.40 1.67	0.20 0.54	1.3 9.9	<0.099	0.45 2.16	<0.096 <0.096	0.55 2.52	<0.098 <0.098
	10		< 0.50	<0.10	0.59	1.04	0.48	1.67	0.54	9.9	0.23	2.16	< 0.096	2.52	<0.098
SPLP Polychlorinated Biphenyls by EPA method 8082 (μg/l)														l	
Total PCBs		5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Semivolatile Organic Compounds by EPA method 8270 (mg/kg)		ļ													
Acenaphthene*	2,500 2,500	84 84	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA
Acenaphthylene								NA	NA	NA			NA	NA	NA
Anthracene*	2,500	400	NA	NA NA	NA NA	NA	NA	NA	NA	NA	NA	NA NA	NA NA	NA NA NA	NA NA NA
Benzo(a)anthracene	7.8	1	NA	NA	NA	NA NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	1	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Benzo(b)fluoranthene	7.8	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene*	78	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NΔ	NA NA	NA
Benzo(k)fluoranthene	78 780	1	NA	NA NA	NA NA	NA NA	NA	NA	NA	NA	NA	NA NA	NA NA	NA NA	NA
Chrysene*	780	1	NA NA	NA	NA	NA	NA NA	NA NA	NA	NA	NA NA	NA	NA	NA	NA NA
Dibenz(a,h)anthracene*	1	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA
Fluoranthene	2,500	56	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	2,500 7.8	56	NA	NA	NA NA	NA NA	NA NA	NA	NA	NA	NA	NA NA	NA NA	NA NA	NA NA
Indeno(1,2,3-cd)pyrene*	7.8	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene*	1.000	5.6	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA	I NA	NA
Naphthalene	2,500	56	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	2,500	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	2,500	40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Semivolatile Organic Compounds by EPA method 8270 (μg/l)															
Acenaphthene*	NE	4,200	NA	NA NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA	NA
Acenaphthylene	NE NE	4,200	NA NA	NA	NA NA	NA NA	NA NA	NA	NA	NA	NA	NA	NA	NA NA	NA NA
Anthracene*	NE	20,000	NA NA	NA	NA	NA	NA NA	NA	NA	NA	NA	NA NA NA	NA NA NA	NA NA	NΔ
Benzo(a)anthracene	NE	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA
Benzo(a)pyrene	NE	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NF	0.8	NA NA	NA	NΔ	NΔ	NΔ	NA	NA	NA	NA	NA	NΔ		NA
Benzo(g,h,i)perylene*	NE	0.8 4.8	NA	NA	NA NA	NA NA	NA NA	NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA
Benzo(k)fluoranthene	NE	5	NA NA	NA NA	NA	NA	NA NA	NA NA	NA NA	NA	NA	NA	NA	NA	NA NA
Chrysene*	NE	4.8	NA NA	NA	NA	NA		NA	NA NA	NA	NA	NA	NA NA		
Dibenz(a,h)anthracene*	NE NE	1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluoranthene	NE	2,800	NA NA	NA	NA	NΔ	NΔ	NA	NA	NA	NA	NA	NA	NΔ	NA
	NF	2,800	NA NA	NΔ	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NΔ	NA NA		NA
Fluorene Indeno(1.2.3-cd)nyrene*	NE NE	1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA	NA NA	NA NA	NA NA
Indeno(1,2,3-cd)pyrene*	NF	280	NA NA	NA NA	NA NA	NA NA	NA NA	NΔ	NΔ						
2-Methylnaphthalene*	NE NE	2.800			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA	NA NA	NA NA
Naphthalene Phonosthrone	NE NE	2,000	NA NA	NA NA				NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		
Phenanthrene Physics	NE NE		NA NA	NA NA	NA NA	NA NA	NA NA						NA NA	NA NA	NA NA
Pyrene ETDH by CT method (method)	2.500	2,000	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
ETPH by CT method (mg/kg)	2,500 NE	2,500	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
SPLP ETPH by CT method (mg/l)	INE.	2.50	NA NA	NA NA	NA NA	NA 27.7	NA NA	43.9	NA NA	NA 31.5	NA NA	NA 41.6	NA NA	NA 38.7	NA NA
Total Solids (%)			NA NA	INA	INA	21.1	INA	43.9	INA	31.3	Avi	41.0	NA.	36.7	AVI

- 1. Analytical results compared to Connecticut Remediation Standard Regulations (January 1996; revised June 27,
- 1. Adaption toolis compared to commenced remainded registering (garanty years, tenses during 21, 2013).

  2. Only compounds that were detected are provided in this table. For a complete list of analytes, refer to laboratory report.
- The site is located within a GB groundwater area. For comparison to SPLP results for Organics except for PCBs, the GB PMC Isted is 10x the GWPC.

  \*These criteria are available through the submission and approval by CT DEEP of a Request for Approval of Criteria for Additional Polluting Substances and Certain Alternative Criteria Form.

  A/B labels indicate smaller subintervals for normal samples.

R = location depth was resampled. mg/kg = milligrams per kilogram

μg/l = micrograms per liter
<= compound not detected above laboratory reporting limit, shown.

BOLD = compound detected at that concentration.
NA = Not Analyzed

GB PMC = GB Pollutant Mobility Criteria

I/C DEC = Industrial/Commercial Direct Exposure Criteria

NE = Not Established by DEEP

-- = Not Applicable

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SAMPLE LOCATION			WS-AOC-14-SE-48	WS-AOC14-CO-48	WS-AOC14-WO-49	WS-AOC14-CO-50	WS-AOC14-SE-51	WS-AOC14-CO-51	WS-AOC14-SE-52	WS-AOC14-CO-52	WS-AOC14-SE-53	WS-AOC14-CO-53	3 VS-AOC14-CO-DUP-1
SAMPLE DEPTH (ft bgs)		N STANDARD		(0-0.5")		(0-0.5")	[	(0-0.5")		(0-0.5")		(0-0.5")	(0-0.5")
DATE SAMPLED	REGUL	ATIONS <sup>1</sup>	8/24/17 17H1359	8/30/17	8/30/17	8/30/17	8/30/17 17H1621	8/30/17	8/30/17	8/30/17	8/30/17	8/30/17	8/30/17
WORK ORDER NO.		00.01103	17H1359	17H1621	17H1621	17H1621	17H1621	17H1621	17H1621	17H1621	17H1621	17H1621	17H1621
QA/QC IDENTIFIER	I/C DEC	GB PMC <sup>3</sup>										PARENT	DUPLICATE
PARAMETER (Units) <sup>2</sup>													
Polychlorinated Biphenyls by EPA method 8082 (mg/kg) PCB-1248 PCB-1254				0.007	0.000		0.50	0.000	0.31	0.00	0.007	0.000	0.000
POB-1240	10		<0.21 <0.21	<0.097 <0.097	<0.093 <0.093	0.10 0.11	0.59 0.53	<0.098 <0.098	0.34	<0.99 <0.99	0.097 0.12	<0.099 <0.099	<0.096 <0.096
POB 4000	10			<0.097							0.12		
PCB-1260 Total PCBs	10 10		0.30 0.30	<0.097 <0.097	<0.093 <0.093	<0.096 <b>0.21</b>	0.21 1.33	<0.098 <0.098	0.12 0.77	<0.99 <0.99	<0.093 0.22	<0.099 <0.099	<0.096 <0.096
SPLP Polychlorinated Biphenyls by EPA method 8082 (μg/l)	10	-	0.30	<0.097	<0.093	0.21	1.33	<0.096	0.77	<0.99	0.22	<0.099	<0.090
Total PCBs		5	NA NA	NA NA	NA NA	NA	NA	NA NA	NA	NA NA	NA	NA NA	NA NA
Semivolatile Organic Compounds by EPA method 8270 (mg/kg)	-	3	INA	INA	INA	INA	INA	INA	INA	INA	INA	INA	INA
	2 500	84	NA	NΔ	NΔ	NΔ	NA	NA	NΔ	NΔ	NΔ	NΔ	NΔ
Acenaphthene*	2,500 2,500	84 84	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Acenaphthylene Anthracene*	2,500	400	NA NA NA	NA NA		NA NA	NA NA	NA NA		NA NA	NA		NA NA
Benzo(a)anthracene	7.8	1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Renzo(a)nyrene	1	·····	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(b)fluoranthene	7.8			NA NA		NA NA	NA NA	NA NA		NA NA	NA NA		NA NA
Benzo(g,h,i)perylene*	7.8 78	·····	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(k)fluoranthene	79	<del> </del>	NA NA	NA				NA NA					NA NA
Chrisana*	78 780	·····	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA NA	NA NA
Chrysene* Dibenz(a.h)anthracene*	1	1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NΔ	NA NA
Fluoranthene	2,500	56	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	2,500 2,500 7.8 1,000	56	NΔ	NA NA	NΔ	NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA
Fluorene Indeno(1,2,3-cd)pyrene*	7.8	1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
2-Methylnaphthalene*	1,000	5.6	NΔ	NΔ	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NΔ	NA.	NA NA
Naphthalene	2.500	56	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Phenanthrene	2 500	40	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Pyrene	2,500 2,500	40	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
SPLP Semivolatile Organic Compounds by EPA method 8270 (µg/l)		-10				70.		101			10.1		
Acenaphthene*	NF	4,200	NΔ	NA	NΔ	NA	NA	NA	NΔ	NΔ	NΔ	NΔ	NA
Acenaphthylene	NE NE	4,200	NA NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA NA	NA NA NA	NA NA	NA NA
Anthracene*	NE	20.000	NA NA	NA	NA NA	NA	NA NA	NA	NA	NA	NA NA	NA	NA NA
Benzo(a)anthracene	NF	0.6	NA NA	NA NA	NA NA	NA	NA.	NA NA	NA	NA	NA.	NA.	NA NA
Benzo(a)pyrene	NF	2	NA NA	NA	NA NA	NA	NA NA	NA NA	NA	NA	NA	NA NA	NA NA
Benzo(b)fluoranthene	NE NE NE NE NE	0.8	NA		NA NA	NA	NA NA	NA			NA NA	NA	NA
Benzo(g,h,i)perylene*	NF	0.8 4.8	NA NA NA	NA NA	NA NA NA	NA NA NA	NA NA NA	NA	NA NA	NA NA NA	NA NA NA	NA	NA
Benzo(k)fluoranthene	NE	5	NA	NA	NA NA	NA	NA NA	NA	NA	NA NA	NA NA	NA NA	NA
Chrysene*	NF	4.8	NA				NA NA	NA	NA	NA	NA NA		
Dibenz(a,h)anthracene*	NE NE	1	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA	NA	NA NA	NA NA	NA NA
Fluoranthene	NE	2,800	NA	NΔ	NA NA	NA	NA	NA	NA	NA	NA	NA	NA NA
Fluorene	NE	2,800	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene*	NE NE NE	1	NA NA NA	NA NA	NA NA	NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA
2-Methylnaphthalene*	NE	280	NA	NA	NA NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NE	2,800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NE NE	2,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NE	2,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETPH by CT method (mg/kg)	2,500	2,500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP ETPH by CT method (mg/l)	NE	2.50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Solids (%)		-	37.5	NA	NA	NA	43.3	NA	76.3	NA	84.0	NA	NA

- NOTES.

  1. Analytical results compared to Connecticut Remediation Standard Regulations (January 1996; revised June 27, 2013).

  2. Only compounds that were detected are provided in this table. For a complete list of analytes, refer to laboratory report.
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R = location depth was resampled.

mg/kg = milligrams per kilogram

μg/l = micrograms per liter

< = compound not detected above laboratory reporting limit, shown.

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NA = Not Analyzed

GB PMC = GB Pollutant Mobility Criteria

I/C DEC = Industrial/Commercial Direct Exposure Criteria

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-- = Not Applicable

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CAMPLE LOCATION			WC 40044 CE 54	WC 40044 00 F4	WC ACCAA CE FF	WC 40044 00 FF	WC AOCAA CE EC	T WC 40044 00 F0	WC 40044 CE 57	WC 40044 00 F7	WC 40044 CE F0	WC 40044 CO F0	WC 40044 CE 50	WC 40044 CO FO
SAMPLE LOCATION	DEMEDIATIO	N STANDARD	WS-AUC14-SE-54	WS-AOC14-CO-54 (0-0.5")	WS-AUC14-SE-55	WS-AOC14-CO-55	WS-AOC14-SE-56	WS-AOC14-CO-56 (0-0.5")	WS-AUC14-SE-57	WS-AOC14-CO-57 (0-0.5")	WS-AUC14-SE-58	WS-AOC14-CO-58	WS-AOC14-SE-59	WS-AOC14-CO-59
SAMPLE DEPTH (ft bqs) DATE SAMPLED	REGULA		8/30/17	8/30/17	8/30/17	(0-0.5") 8/30/17	8/30/17	8/30/17	9/1/17	9/1/17	9/1/17	(0-0.5") 9/1/17	9/1/17	(0-0.5") 9/1/17
WORK ORDER NO.			17H1621	17H1621	17H1621	17H1621	17H1621	8/30/17 17H1621	1710058	9/1/17 1710058	9/1/17 17l0058	1710058	9/1/17 17I0058	1710058
QA/QC IDENTIFIER	I/C DEC	GB PMC <sup>3</sup>						1						[
PARAMETER (Units) <sup>2</sup>														
Polychlorinated Biphenyls by EPA method 8082 (mg/kg)														
PCB-1248	10		0.21	<0.99	2.1	<0.96	0.33	<0.96	<0.12	<0.079	<0.086	<0.096	<0.14	<0.99
PCB-1254	10		0.35	<0.99	1.7	<0.96	0.55	<0.96	<0.12	<0.079	0.13	<0.096	0.16	<0.99
PCB-1260	10		<0.12	<0.99						<0.079				
Total PCBs	10		0.56	<0.99	0.64 4.44	<0.96 <0.96	0.30 1.18	<0.96 <0.96	<0.12 <0.12	<0.079	<0.086 <b>0.13</b>	<0.096 <0.096	<0.14 0.16	<0.99 <0.99
SPLP Polychlorinated Biphenyls by EPA method 8082 (µg/l)														
Total PCBs		5	NA	NA	NA	NA.	NA	NA	NA	NA	NA	NA NA	NA	NA
Semivolatile Organic Compounds by EPA method 8270 (mg/kg)		-												
Acenaphthene*	2,500	84	<1.1	NA	NA	NA NA	NA	NA NA	NA	NA	NA	NA	NA	NA NA
Acenaphthylene	2,500	84	<1.1 <1.1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA	NA NA
Anthracene*	2.500	400	<1.1			NA	NA			NA			NA	NA NA
Benzo(a)anthracene	7.8	1	<1.1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)pyrene	1	·····	<1.1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	
Benzo(b)fluoranthene	. L	ł	<1.1			NA NA	NA NA			NA NA			NA NA	
Benzo(g,h,i)perylene*	7.8 78	} <del>-</del>	<1.1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	70	ļ				NA NA		NA NA NA	NA NA	NA NA	NA.		NA NA	NA NA
Benzo(k)fluoranthene	78 780	} <del>;</del>	<1.1 <1.1	NA NA	NA NA	NA NA	NA NA	N/A	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Chrysene* Dibenz(a.h)anthracene*	1		<1.1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluoranthene	2,500	<u></u>	1.7	NA NA	NA NA			NA NA	NA NA	NA NA			NA NA	NA NA
		56 56	-11	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluorene	2,500 7.8	1	<1.1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Indeno(1,2,3-cd)pyrene* 2-Methylnaphthalene*	1.000	5.6	<1.1 <1.1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Naphthalene	2.500	56	<1.1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Phenanthrene	2,500		<del> </del>		<del> </del>			NA NA	NA NA	NA NA		<u> </u>	NA NA	NA NA
	2,500	40 40	<1.1 1.6	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Pyrene SBLB Seminalatila Organia Compounds by EBA method \$270 (ug/l)	2,500	40	1.0	NA NA	INA	NA NA	INA	NA NA	NA NA	NA	INA	NA NA	INA	INA
SPLP Semivolatile Organic Compounds by EPA method 8270 (μg/l)	NE	4,200						NIA						
Acenaphthene*	NE NE	4,200	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA
Acenaphthylene Anthracene*	NE NE	20.000	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA.	NA NA	NA	NA	NA NA
						INA				NA.		NA	INA.	<b> </b>
Benzo(a)anthracene	NE	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	NE	ļ <u>.</u>	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(b)fluoranthene	NE	0.8 4.8	NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA	NA
Benzo(g,h,i)perylene*	NE NE		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(k)fluoranthene		5					NA NA	NA NA	NA	NA			NA	NA
Chrysene*	NE NE	4.8	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Dibenz(a,h)anthracene*	NE	11		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluoranthene	NE	2,800	NA	NA	NA		NA NA		NA			NA	NA	NA
Fluorene	NE NE	2,800	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA.	NA NA
Indeno(1,2,3-cd)pyrene*		11	NA NA		NA NA	NA NA	NA NA	NA NA		NA NA	NA NA	NA NA	NA NA	
2-Methylnaphthalene*	NE	280		NA			NA		NA	NA		NA 		NA
Naphthalene	NE	2,800	NA	NA	NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NE	2,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NE	2,000	NA 1000	NA	NA	NA	NA	NA NA	NA NA	NA NA	NA	NA	NA NA	NA NA
ETPH by CT method (mg/kg)	2,500	2,500	1900	NA NA	NA	NA NA	NA	NA	NA NA	NA NA	NA	NA	NA	NA
SPLP ETPH by CT method (mg/l)	NE	2.50	NA	NA NA	NA	NA NA	NA .	NA	NA .	NA NA	NA	NA	NA .	NA
Total Solids (%)	**		62.5	NA	30.8	NA	47.8	NA	68.0	NA	92.5	NA	57.3	NA

- NO.16.

  1. Analytical results compared to Connecticut Remediation Standard Regulations (January 1996; revised June 27, 2013).

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  A/B labels indicate smaller subintervals for normal samples.

R = location depth was resampled.

mg/kg = milligrams per kilogram

μg/l = micrograms per liter < = compound not detected above laboratory reporting limit, shown.

BOLD = compound detected at that concentration.
NA = Not Analyzed

GB PMC = GB Pollutant Mobility Criteria

I/C DEC = Industrial/Commercial Direct Exposure Criteria

NE = Not Established by DEEP

-- = Not Applicable

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SAMPLE LOCATION			WS-AOC14-SE-60	WS-AOC14-CO-60	WS-AOC14-SE-61	WS-AOC14-CO-61	WS-AOC14-SE-62	WS-AOC14-CO-62	WS-AOC14-SE-63	WS-AOC14-CO-63	WS-AOC14-SE-64	WS-AOC14-CO-64	WS-AOC14-SE-65	WS-AOC14-CO-65
SAMPLE DEPTH (ft bgs)	REMEDIATION	N STANDARD		(0-0.5")		(0-0.5")						(0-0.5")		(0-0.5")
DATE SAMPLED	REGULA	ATIONS <sup>1</sup>	9/1/17 1710058	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17	9/1/17 1710058	9/1/17	9/6/17	9/6/17	9/6/17	9/6/17
WORK ORDER NO.	]],,	r	1710058	1710058	1710058	1710058	1710058	1710058	1710058	1710058	1710172	1710172	1710172	1710172
QA/QC IDENTIFIER	I/C DEC	GB PMC <sup>3</sup>												
PARAMETER (Units) <sup>2</sup>														
Polychlorinated Biphenyls by EPA method 8082 (mg/kg)										<b></b>	ļ		ļ	
PCB-1248	10		<0.14	<0.096	0.12	<0.091	0.20	<0.099	0.23	<0.093	<0.092	<0.098	<0.093	<0.099
PCB-1254	10		0.17	<0.096	0.15	<0.091	0.27	<0.099	0.28	<0.093	<0.092	<0.098	0.13	<0.099
PCB-1260 Total PCBs	10 10		<0.14 <b>0.17</b>	<0.096 <0.096	0.14 0.41	<0.091 <0.091	0.27 0.74	<0.099 <0.099	0.21 0.72	<0.093 <0.093	<0.092 <0.092	<0.098 <0.098	<0.093 0.13	<0.099
	10		0.17	<0.096	0.41	<0.091	0.74	<0.099	0.72	<0.093	<0.092	<0.098	0.13	<0.099
SPLP Polychlorinated Biphenyls by EPA method 8082 (μg/l)									·····					
Total PCBs		5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Semivolatile Organic Compounds by EPA method 8270 (mg/kg)														
Acenaphthene*	2,500 2,500	84 84	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.42 0.29	NA NA	NA NA	NA NA	NA NA	NA NA
Acenaphthylene														
Anthracene*	2,500 7.8	400	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	1.8 5.1	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)anthracene	1.5	·····	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	5.1 4.6	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)pyrene Benzo(b)fluoranthene	70	ł	NA NA	NA NA	NA NA		NA NA		6.7	NA NA	NA NA		NA NA	NA NA
	7.8	·		NA NA	NA NA	NA NA	NA NA	NA NA	0.7		NA NA	NA NA	NA NA	NA NA
Benzo(g,h,i)perylene*	78	ļ	NA NA NA		NA NA		NA NA	NA NA NA	3.2	NA NA				
Benzo(k)fluoranthene	78 780	ļ	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	2.3 5.6	NA NA	NA NA	NA NA	NA NA	NA NA
Chrysene*	760	·	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	0.86	NA NA	NA NA	NA NA	NA NA	NA NA
Dibenz(a,h)anthracene* Fluoranthene	2.500	ļ		NA NA							<u> </u>			NA NA
		56	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	14 0.80	NA NA	NA NA	NA NA	NA NA	NA NA
Fluorene	2,500 7.8	56	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	3.5	NA NA	NA NA	NA NA	NA NA	NA NA
Indeno(1,2,3-cd)pyrene* 2-Methylnaphthalene*	1.000	5.6	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	1.0	NA NA	NA NA	NA NA	NA NA	NA NA
L	2.500	56	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	1.8	NA NA	NA NA	NA NA	NA NA	NA NA
Naphthalene Phenanthrene	2,500	,	NA NA	NA NA			<u> </u>	NA NA	8.0	NA NA		<u> </u>		NA NA
	2,500	40 40	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	12	NA NA	NA NA	NA NA	NA NA	NA NA
Pyrene SDI B Samiyalatila Organia Compounds by EBA method 9270 (cg/l)	2,500	40	NA	NA NA	NA NA	NA NA	NA NA	NA NA	12	NA NA	NA NA	NA NA	NA	INA
SPLP Semivolatile Organic Compounds by EPA method 8270 (μg/l)		4,200	NIA.	NI A	NIA.	NIA .		N10	NA	NIA .	NA	NIA.	NA	NA
Acenaphthene*	NE NE	4,200	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Acenaphthylene Anthracene*	NE NE	20,000	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA
Benzo(a)anthracene	NE	0.6	NA NA	NA NA	NA.	NA NA	N/A	NA NA	NA NA	N/A	NA NA	NA NA	NA	NA.
Benzo(a)pyrene	NE NE	2		NA NA	NA NA		NA NA		NA NA	NA NA	NA NA		NA NA	NA NA
Benzo(b)fluoranthene	NE NE		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(g,h,i)perylene*	NE NE	0.8 4.8	NA NA NA	NA NA			NA	NA NA NA			NA NA	NΔ		NA NA
Benzo(k)fluoranthene	NE NE	5	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Chrysene*		4.8	NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA	NA NA	NA NA	NA NA	NA NA
Dibenz(a,h)anthracene*	NE NE	1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluoranthene	NE	2,800	NA NA	NA NA	NΔ	NA NA	NA	NA	NA NA	NA NA	NA	NA NA	NA	NA
Fluorene	NF	2,800	NA NA	NA NA		NA NA	NA.		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Indeno(1,2,3-cd)pyrene*	NE NE	1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA
2-Methylnaphthalene*	NE	280	NΔ	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA
Naphthalene	NE	2 800	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Phenanthrene	NE	2.000	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA	NA NA	NA NA	NA	NA NA	NA NA
Pyrene	NE	2,000	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
ETPH by CT method (mg/kg)	2.500	2,500	NA NA	NA NA	NA NA	NA.	NA.	NA NA	1300	NA NA	NA NA	NA NA	NA NA	NA NA
SPLP ETPH by CT method (mg/l)	NE NE	2.50	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Total Solids (%)	-		56.1	NA NA	90.8	NA.	95.8	NA.	62.9	NA.	86.9	NA NA	85.6	NA NA

- NO.16.

  1. Analytical results compared to Connecticut Remediation Standard Regulations (January 1996; revised June 27, 2013).

  2. Only compounds that were detected are provided in this table. For a complete list of analytes, refer to laboratory report.
- 3. The site is located within a GB groundwater area. For comparison to SPLP results for Organics except for PCBs, the GB PMC listed is 10x the GWPC.

  \*These criteria are available through the submission and approval by CT DEEP of a Request for Approval of Criteria for Additional Polluting Substances and Certain Alternative Criteria Form.

  A/B labels indicate smaller subintervals for normal samples.

R = location depth was resampled. mg/kg = milligrams per kilogram

μg/l = micrograms per liter

< = compound not detected above laboratory reporting limit, shown.

BOLD = compound detected at that concentration.
NA = Not Analyzed

GB PMC = GB Pollutant Mobility Criteria

I/C DEC = Industrial/Commercial Direct Exposure Criteria NE = Not Established by DEEP

-- = Not Applicable

SAMPLE LOCATION			WS-AOC14-SE-66	WS-AOC14-CO-66	WS-AOC14-SE-67	WS-AOC14-CO-67	WS-AOC14-SE-68	WS-AOC14-CO-68	WS-AOC14-SE-69	WS-AOC14-CO-69	WS-AOC14-SE-70	WS-AOC14-CO-70	WS-AOC14-SE-71	WS-AOC14-CO-71
SAMPLE DEPTH (ft bgs)	REMEDIATION	STANDARD		(0-0.5")		(0-0.5")		(0-0.5")		(0-0.5")		(0-0.5")		(0-0.5")
DATE SAMPLED	REGULA		9/6/17 17I0172	9/6/17	9/6/17 17I0172	9/6/17	9/6/17	9/6/17	9/6/17 17l0172	9/6/17 17l0172	9/6/17	9/6/17	9/6/17	9/6/17
WORK ORDER NO.	]],		1710172	1710172	1710172	1710172	1710172	1710172	1710172	1710172	1710172	1710172	1710172	1710172
QA/QC IDENTIFIER	I/C DEC	GB PMC <sup>3</sup>												
PARAMETER (Units) <sup>2</sup>														
Polychlorinated Biphenyls by EPA method 8082 (mg/kg)								<b></b>		<b></b>	ļ		<b></b>	
PCB-1248 PCB-1254	10	<del></del>	0.44	<0.096	0.32 0.39	<0.085	0.19	<0.087	0.56	<0.97	0.32	<0.091	0.62	<0.93
PCB-1254	10		0.51	<0.096		<0.085	0.35	<0.087	0.69	<0.97	0.46	<0.091	0.62	<0.93
PCB-1260 Total PCBs	10 10	<del></del>	0.25 1.2	<0.096 <0.096	0.24 0.95	<0.085 <0.085	0.26 0.8	<0.087 <0.087	0.69 0.35 1.6	<0.97 <0.97	0.25 1.03	<0.091 <0.091	0.28 1.52	<0.93
	10		1.2	<0.096	0.95	<0.085	0.8	<0.087	1.6	<0.97	1.03	<0.091	1.52	<0.93
SPLP Polychlorinated Biphenyls by EPA method 8082 (μg/l)									·····					
Total PCBs		5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Semivolatile Organic Compounds by EPA method 8270 (mg/kg)								<b></b>						
Acenaphthene*	2,500 2,500	84 84	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Acenaphthylene				NA NA			NA NA							
Anthracene*	2,500 7.8	400	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)anthracene			NA NA	NA NA	INA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(a)pyrene Benzo(b)fluoranthene			NA NA	NA NA	NA NA		NA NA			NA NA	NA NA		NA NA	NA NA
	7.8			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA	NA NA	NA NA	NA NA
Benzo(g,h,i)perylene*	78		NA NA		NA NA		NA NA	NA NA NA	NA NA	NA NA				
Benzo(k)fluoranthene	78 780		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Chrysene* Dibenz(a h)anthracene*	760		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Dibenz(a,n)anthracene* Fluoranthene	2.500			NA NA							<u> </u>			NA NA
		56	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluorene	2,500 7.8	56	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Indeno(1,2,3-cd)pyrene* 2-Methylnaphthalene*	1.000	5.6	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Naphthalene	2.500	56	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Phenanthrene	2,500	~~~~~	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA		NA NA	NA NA
Pyrene	2,500	40 40	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	2,300	40	INA	INA	INA	INA	INA	INA	INA	INA	INA	INA	INA	INA
SPLP Semivolatile Organic Compounds by EPA method 8270 (μg/l)	NE	4,200	NIA	NIA	NIA	NIA	NIA	NIA	NA	NIA	NA NA	NA NA	NA NA	NA
Acenaphthulese	NE NE	4,200	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA	NA NA
Acenaphthylene Anthracene*	NE NE	20,000	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA	NA NA	NA NA	NA	NA
Benzo(a)anthracene	NE	0.6	NA NA	NA	NA.	NA NA	NΔ	NA NA	NΔ	N/A	NA NA	NA NA	NΔ	NA.
Benzo(a)pyrene	NE NE	2		NA NA	NA		NA NA		NA NA	NA	NA NA		NA	NA
Benzo(b)fluoranthene	NE NE		NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA NA
Benzo(g,h,i)perylene*	NE NF	0.8 4.8	NA NA NA	NA NA			NA NA	NA NA NA	NA NA		NA NA	NA NA		NA
Benzo(k)fluoranthene	NE NE	5	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Chrysene*		4.8	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Dibenz(a,h)anthracene*	NE NE	1	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Fluoranthene	NE	2,800	NA NA	NA NA	NΔ	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA NA	NA	NA
Fluorene	NE	2,800	NA	NA NA		NA	NA	NΔ	NA NA	NA NA	NA.	NA	NA NA	NA NA
Indeno(1,2,3-cd)pyrene*	NE NE	1	NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA	NA NA	NA	NA NA	NA NA
2-Methylnaphthalene*	NE	280	NΔ	NA	NA	NA	NA	NΔ	NA	NA NA	NA	NA NA	NA	NA
Naphthalene	NE	2,800	NA NA	NA	NA	NA	NA	NA NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NE	2,000	NA NA	NA	NA	NA	NA	NA	NA	NA NA	NA	NA	NA	NA
Pyrene	NE	2,000	NA	NA	NA NA	NA	NA	NA NA	NA	NA	NA.	NA.	NA.	NA NA
ETPH by CT method (mg/kg)	2,500	2,500	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
SPLP ETPH by CT method (mg/l)	NE	2.50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Solids (%)	-	-	55.0	NA NA	62.6	NA NA	83.5	NA	71.8	NA.	57.4	NA.	47.2	NA NA

- NO.16.

  1. Analytical results compared to Connecticut Remediation Standard Regulations (January 1996; revised June 27, 2013).

  2. Only compounds that were detected are provided in this table. For a complete list of analytes, refer to laboratory report.
- 3. The site is located within a GB groundwater area. For comparison to SPLP results for Organics except for PCBs, the GB PMC listed is 10x the GWPC.

  \*These criteria are available through the submission and approval by CT DEEP of a Request for Approval of Criteria for Additional Polluting Substances and Certain Alternative Criteria Form.

  A/B labels indicate smaller subintervals for normal samples.

R = location depth was resampled.

mg/kg = milligrams per kilogram

μg/l = micrograms per liter

< = compound not detected above laboratory reporting limit, shown.

BOLD = compound detected at that concentration.
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GB PMC = GB Pollutant Mobility Criteria

I/C DEC = Industrial/Commercial Direct Exposure Criteria

NE = Not Established by DEEP

-- = Not Applicable

**Situation #4 Oily Sump Pit** 

#### **MEMORANDUM**

**To:** Mr. Gary Trombly, Jr, CT DEEP

Ms. Lori Saliby, CT DEEP

From: Mr. Shawn Crosbie, UI

Ms. Marya Mahoney, LEP, TRC Mr. Carl Stopper, PE, TRC

Subject: English Station – Station B Situation #4 Resolution

Oily Sump Pit Structure TRC Project No.: 263951

Date: April 7, 2020

#### Introduction

This memo has been prepared at the request of the Connecticut Department of Energy and Environmental Protection (CTDEEP) to summarize the results of the sampling, removal and disposal of the contents of the small concrete sump pit ("sump") located as shown on the attached figure that was found to contain oil and a mixture of soil and debris within the former Station B building on Parcel A located at 510A Grand Avenue. This memo also serves as an amendment to the "English Station Partial Soil Remedial Action Plan - 510 & 510A Grand Avenue (dated September 2018, revised September 2019), also known as the (non-PCB) Soil Remedial Action Plan" as it describes how the concrete sump structure will be removed and disposed of during the performance of other remedial actions covered under that plan. The sump was first discovered on January 14, 2020 during the final cleaning of Station B demolition debris from the basement slab. The surface of the sump opening measuring approximately 2 feet by 3 feet was found during debris cleaning. Initially the dimensions of the concrete sump were unknown, as reported to the CTDEEP via e-mail in the morning of January 15, 2020 as a small depression containing oil and debris. As debris in the area around the sump was removed with hand shovels in first few inches from a corner within the sump, oil staining of the underlying material was observed and free phase oil pooled in the bottom of the excavation (Refer to the attached Photo Log – Photo #2). As communicated in the January 15th email a PCB sample was taken on January 14, 2020 of the oil to determine if the concentration of Halogenated Solvents (SW 845 8260C-D) and PCBs (EPA 600 4-81-45 via Soxhlet). The sample was submitted to Con-Test Environmental Laboratories of East Longmeadow, Massachusetts. On January 15, 2020 UI received the results of the sample indicating the PCB concentration was <0.79 mg/mg and all Halogenated Solvents were below laboratory reportable limits. The CTDEEP was provided a copy of Con-Test report 20A0594 via e-mail in the early afternoon of January 15, 2020. A copy of the lab report is attached. Through follow-up conversation with the CTDEEP it was decided to designate the sump activities as Situation #4.

#### Sump Contents Removal and Sampling

On Wednesday, January 15, 2020 UI's contractor, ACV began removing the debris and oil from the sump area, placing the material into one 55-gallon steel drum, which was then transferred to the waste storage area on the West side inside English Station. Free phase oil was absorbed onto absorbent pads and placed into the drum with the solid material. ACV was only able to remove material with shovels and steel bar to a depth of approximately one foot due to the compactness of the material and the small dimensions (2 ft. x 3 ft.) of the sump. ACV placed an absorbent sock in the sump and covered the top with poly-sheeting and plywood.

On January 22, 2020, ACV finished removal of the sump contents (liquid and solids/debris) using a combination of hand tools and a turbo-vac truck. Liquids, which were a combination of rainwater and oil, were first pumped into a 55-gallon steel drum. The concrete sump bottom was reached at a depth of approximately 3 feet below the basement floor slab. Following solids removal ACV used a solution of Simple Green and water to scrub the walls and floor of the sump. The small volume of this solution was removed using the turbo-vac truck and combined with the solids. Two 55-gallon steel drums of solid material were generated upon emptying the turbo-vac. All three drums were transferred to the waste storage area inside the Western portion of English Station.

On January 22, 2020 TRC collected a solid sample from the previously drummed material. The sample (TRC-AOC-1-SOLID-02) was sent to Con-Test Laboratory for analysis. A copy of lab report 20A0963 is attached. The material was analyzed by the following methods and detection limits were below regulatory criteria for waste characterization:

- Volatile Organic Compounds (VOCs) EPA Method 8260
- Semi-Volatile Organic Compounds (SVOCs) EPA Method 8270
- RCRA 8 Metals EPA Method 6020 & 7470
- Polychlorinated Bi-Phenyls (PCBs) EPA Method 8082 with Soxhlet Extraction
- Extractable Total Petroleum Hydrocarbons (ETPH) CTDEEP Method
- Reactive Cyanide EPA Method 9014
- Reactive Sulfide EPA Method 9030
- pH EPA Method 9045
- % Solids SM 245D
- Free Liquid EPA Method 9095
- TCLP 8 RCRA Metals EPA Method 6010 & 7470

PCBs were not detected (<0.085 mg/Kg) and is therefore not USEPA or CTDEEP regulated for PCBs. The SVOC results were non-detect, with reporting limits below the CT Remediation Standards Regulations (RSRs) for Industrial Commercial Direct Exposure (I/CDEC) and GB Pollutant Mobility Criteria (GBPMC). All of the TCLP RCRA 8 metals results were non-detect, with reporting limits below the RSR GBPMC for these constituents. All of

the other RCRA hazardous waste tests such as reactivity, ignitability, flashpoint and pH were below the RCRA hazardous waste thresholds. The remaining detections are summarized below:

Summary of Constituents in Sample TRC-AOC-1-SOLID-02 Above Reporting Limits

SUBSTANCE	CONCENTRATION	I/CDEC	<u>GBPMC</u>
CT ETPH	96,000 mg/Kg	2,500 mg/Kg	2,500 mg/Kg
p-Isopropyltoluene	0.006 mg/Kg	1,000 mg/Kg	41.8 mg/Kg
1,2,4-Trimethylbenzene	0.015 mg/Kg	1,000 mg/Kg	70 mg/Kg
Total Arsenic	4.5 mg/Kg	10 mg/Kg	-
Total Barium	190 mg/Kg	140,000 mg/Kg	-
Total Chromium	23 mg/Kg	NE/(100 mg/Kg for Cr <sup>+6</sup> )	-
Total Lead	71 mg/Kg	1,000 mg/Kg	-
Total Mercury	0.14 mg/Kg	610 mg/Kg	-

NE - Criteria Not Established

Based on the above summary and attached analytical data, these wastes will be managed as a state regulated waste, CR05 Waste Chemical Solid.

On January 23, 2020 and January 24, 2020 TRC inspected the sump to observe if any oil seeped into the sump. No oil or other liquids were observed (Refer to the attached Photo Log – Photo #8).

On January 28, 2020, UI provided CTDEEP a copy of Con-Test Lab Report 20A0963 and the photos of the sump via e-mail. On February 10, 2020 UI received an email from CTDEEP on Situation #4 requesting an outline of sampling efforts based on earlier phone discussions related to treating the concrete sump like an underground tank grave, taking sidewall and bottom samples and analyzing for ETPH.

On February 11, 2020 TRC collected the requested five concrete samples (TRC-AOC-1-CO-01(0-0.5") through CO-05). Prior to sampling the concrete, the rainwater that collected in the sump was removed and placed into an empty 55-gallon steel drum. The drum was moved to the waste storage area inside Western portion of English Station. The concrete samples were submitted to Con-Test for analysis and the results are contained in the attached Con-Test Report 20B0447 dated February 13, 2020. The five ETPH results are as follows:

- TRC-AOC-1-CO-01(0-0.5") 17,000 mg/Kg (East Wall)
- TRC-AOC-1-CO-02(0-0.5") 40,000 mg/Kg (North Wall)
- TRC-AOC-1-CO-03(0-0.5") 1,800 mg/Kg (West Wall)
- TRC-AOC-1-CO-04(0-0.5") 6,400 mg/Kg (South Wall)
- TRC-AOC-1-CO-05(0-0.5") 25,000 mg/Kg (Floor)

Follow-up discussion with CTDEEP at the February 19, 2020 meeting regarding Situation #4, it was determined that this memo would document the findings from the work performed to date and describe how the sump will be managed during the remediation for Parcel A. It was agreed by both UI and CT DEEP that the sump

structure will be completely removed during the Parcel A soil remediation efforts and disposed of offsite with the other Connecticut Regulated solid waste (CR05).

#### **Removal and Disposal**

The management and disposal of the solid and liquid drummed wastes will be performed by licensed transporter and disposal facilities permitted to accept, treat and/or dispose of the wastes. Based upon the testing performed the liquids in the two 55-gallon drums is classified as State Regulated Waste Code CR04, which is a Waste Chemical Liquid. CR04 covers any wastes that are liquid, free flowing and/or contain free draining liquids and are toxic, hazardous to handle and/or may cause contamination of ground and/or surface water if improperly managed. These wastes may include but are not limited to latex and solvent paint wastes, grinding wastes, waste sludges, antifreeze wastes and glycol solutions. The two 55-gallon drums containing solids from the sump is classified as State Regulated Waste Code CR05, which is a Waste Chemical Solid. CR05 covers any chemical solid or semi-solid from a commercial, industrial, agricultural or community activity. These wastes may include, but are not limited to, grinding dusts, tumbling sludges, scrap plastic and rubber flash, and other ground or chipped waste solid. The two drums of liquid and two drums of solid are currently staged inside the English Station building in the area designated for storage of drums containing wastes. The offsite disposal facilities for these materials is currently being evaluated, once selected UI will provide this information to the CTDEEP.

With regard to managing the ETPH impacts within the concrete sump structure, the plan proposed to CT DEEP during the February 2020 Monthly Meeting is to completely remove the entire sump structure during the soil remediation phase for Parcel A. The "English Station Partial Soil Remedial Action Plan - 510 & 510A Grand Avenue (dated September 2018, revised September 2019)" stipulates that the concrete basement slab for Station B will be broken or penetrated to allow surface water to drain freely through the slab. At the point that this work is performed the sump structure area will be completely removed and disposed of offsite as State Regulated Waste Code CR05. The soil surrounding the sump will be visibly checked for possible oil staining. If visible impacts are found, then the visibly impacted soil material will also be removed and disposed of with the sump structure. Sidewall and bottom Verification samples for ETPH analysis will be collected following sump and any necessary soil removal activities to ensure the CT ETPH levels are less than the GB Pollutant Mobility Criteria. Following the basement slab penetration and sump removal a non-woven geotextile will be placed on the surface before a minimum of 4 feet of tested suitable fill will be placed to render the underlying soil inaccessible in accordance with the CT DEEP Remediation Standards Regulations.

#### **Photographs**

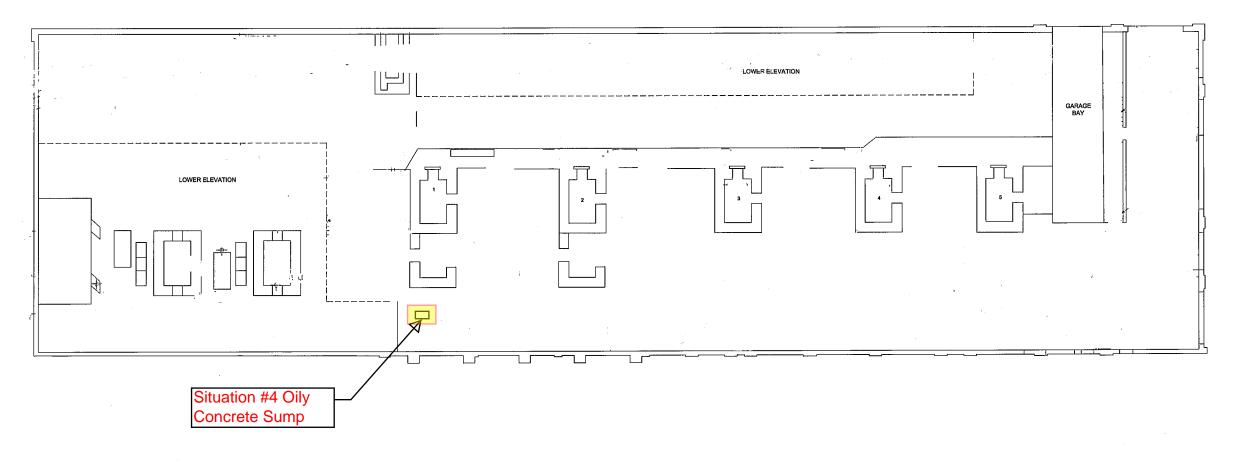
Attached to this memorandum are a series of photographs that document the location of the sump and the steps described above.

Attachments:
Figure 1 – Site Plan
Photographs

- Laboratory Reports
   20A0594 Contest Final 01-15-2020
- 20A0963 Contest Final 01-27-2020
- 20B0447 Contest Final 02-13-2020

## FIGURE 1

#### GRAND AVENUE

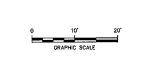


## LEGEND

Area of proposed sump and soil excavation



SOURCE:
MAP TITLED "PLAN PREPARED FOR UNITED
ILLUMINATING COMPANY, ENGLISH STATION,
NEW HAVEN, CONNECTICUT, BASEMENT LEVELSTATION B', SCALE: NTS, DATED: JAN. 2000, BY
GEI CONSULTANTS, INC.



PROJECT:	UNITED I	LLUMINATI	NG
	<b>ENGLISH STAT</b>	ION POWE	R PLANT
	510 <sup>4</sup> Gra	and Avenu	e
	New Have	n, Connect	icut
Situation	on #4 - O	ily Co	ncrete Sump
Loca	tion Plan	- Sta	tion B
DRAWN BY:	K. Hollenbeck	PROJ. NO.:	263951-000013-000008

Figure 1



## **PHOTOGRAPHS**



Photo 1: Sump Location Looking East along South Wall of Station B – 01-14-2020



Photo 2: Initial Hand Excavation and Discovery of Free Phase Oil. Oil Sample (TRC-AOC-1-OIL-01) Collected – 01-14-2020



Photo 3: Hand Removal and Drumming of Sump Contents to 1 Foot Deep – 01-15-2020



Photo 4: Sump Contents following Hand Removal – 01-15-2020



Photo 5: Absorbent Sock Placed inside Sump – 01-16-2020



Photo 6: Loosening Sump Contents during Turbo-vac Removal – 01-22-2020



Photo 7: Sump Condition Immediately Following Contents Removal 01-22-2020



Photo 8: Cleaned Sump Inspection – 01-24-2020



Photo 9: Sump Covered with Poly-Sheeting and Plywood 02-03-2020



Photo 10: Concrete Sump Sidewall Sampling 02-11-2020

## **LABORATORY REPORTS**



January 15, 2020

Carl Stopper TRC Environmental Corporation - CT 21 Griffin Road North Windsor, CT 06095

Project Location: 510A Grand Ave, New Haven, CT

Client Job Number:

Project Number: 263951.000028.000001 Laboratory Work Order Number: 20A0594

Keny K. Mille

Enclosed are results of analyses for samples received by the laboratory on January 14, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kerry K. McGee Project Manager

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TRC Environmental Corporation - CT 21 Griffin Road North

PURCHASE ORDER NUMBER:

REPORT DATE: 1/15/2020

Windsor, CT 06095 ATTN: Carl Stopper

TORCHI ISE ORBER NOMBER

PROJECT NUMBER: 263951.000028.000001

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0594

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 510A Grand Ave, New Haven, CT

FIELD SAMPLE # LAB ID: MATRIX SAMPLE DESCRIPTION TEST SUB LAB

TRC-AOC-1-OIL-01 20A0594-01 Oil EPA 600 4-81-045

SW-846 8260C-D



#### CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

REVISED REPORT - 1/15/2020 - Project location edited as per COC/client's request.

SW-846 8260C-D

#### Qualifications:

DL-01

Elevated reporting limits for all volatile compounds due to foaming sample matrix.

Analyte & Samples(s) Qualified:

20A0594-01[TRC-AOC-1-OIL-01]

L-01

Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

Analyte & Samples(s) Qualified:

Bromomethane

B250052-BS1, S044602-CCV1

Chloromethane

B250052-BS1, S044602-CCV1

L-03

Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be

biased on the low side Analyte & Samples(s) Qualified:

1,2,3-Trichlorobenzene

20A0594-01[TRC-AOC-1-OIL-01], B250052-BLK1, B250052-BS1, S044602-CCV1

V-05

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

Analyte & Samples(s) Qualified:

1,2,3-Trichlorobenzene

20A0594-01[TRC-AOC-1-OIL-01], B250052-BLK1, B250052-BS1, S044602-CCV1

1,2,4-Trichlorobenzene

20A0594-01[TRC-AOC-1-OIL-01], B250052-BLK1, B250052-BS1, S044602-CCV1

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound. Analyte & Samples(s) Qualified:

Bromochloromethane

B250052-BS1, S044602-CCV1

Bromomethane

B250052-BS1, S044602-CCV1

Chloromethane

B250052-BS1, S044602-CCV1

Methylene Chloride

B250052-BS1, S044602-CCV1



The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Kerry K. McGee
Project Manager



Project Location: 510A Grand Ave, New Haven, CT Work Order: 20A0594 Sample Description:

Date Received: 1/14/2020

Sampled: 1/14/2020 14:00 Field Sample #: TRC-AOC-1-OIL-01

Sample ID: 20A0594-01 Sample Matrix: Oil

Sample Flags: DL-01			Volatile Organic Co	mpounds by C	GC/MS				_
Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Bromobenzene	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Bromochloromethane	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Bromodichloromethane	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Bromoform	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Bromomethane	ND	9.1	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Carbon Tetrachloride	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Chlorobenzene	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Chlorodibromomethane	ND	0.91	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Chloroethane	ND	18	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Chloroform	ND	3.6	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Chloromethane	ND	9.1	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
2-Chlorotoluene	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
4-Chlorotoluene	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,2-Dibromoethane (EDB)	ND	0.91	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Dibromomethane	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,2-Dichlorobenzene	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,3-Dichlorobenzene	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,4-Dichlorobenzene	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
trans-1,4-Dichloro-2-butene	ND	3.6	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Dichlorodifluoromethane (Freon 12)	ND	18	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,1-Dichloroethane	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,2-Dichloroethane	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,1-Dichloroethylene	ND	3.6	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
cis-1,2-Dichloroethylene	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
trans-1,2-Dichloroethylene	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,2-Dichloropropane	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,3-Dichloropropane	ND	0.91	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
2,2-Dichloropropane	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,1-Dichloropropene	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
cis-1,3-Dichloropropene	ND	0.91	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
trans-1,3-Dichloropropene	ND	0.91	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Hexachlorobutadiene	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Methylene Chloride	ND	18	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,1,1,2-Tetrachloroethane	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,1,2,2-Tetrachloroethane	ND	0.91	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Tetrachloroethylene	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,2,3-Trichlorobenzene	ND	1.8	mg/Kg	2	V-05, L-03	SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,2,4-Trichlorobenzene	ND	1.8	mg/Kg	2	V-05	SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,3,5-Trichlorobenzene	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,1,1-Trichloroethane	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,1,2-Trichloroethane	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Trichloroethylene	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Trichlorofluoromethane (Freon 11)	ND	9.1	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
								Dogo 6	100

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1/15/20 9:14



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 510A Grand Ave, New Haven, CT Sample Description: Work Order: 20A0594

Date Received: 1/14/2020

**Field Sample #: TRC-AOC-1-OIL-01** Sampled: 1/14/2020 14:00

Sample ID: 20A0594-01
Sample Matrix: Oil

4-Bromofluorobenzene

ample Flags: DL-01	Volatile Organic Compounds by GC/MS

97.0

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,2,3-Trichloropropane	ND	1.8	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	9.1	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Vinyl Chloride	ND	9.1	mg/Kg	2		SW-846 8260C-D	1/15/20	1/15/20 9:14	EEH
Surrogates		% Recovery	Recovery Limits	s	Flag/Qual				
1,2-Dichloroethane-d4		103	70-130					1/15/20 9:14	
Toluene-d8		97.7	70-130					1/15/20 9:14	

70-130

Date

Date/Time

1/15/20 8:56

1/15/20 8:56



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 510A Grand Ave, New Haven, CT Sample Description: Work Order: 20A0594

Date Received: 1/14/2020

Field Sample #: TRC-AOC-1-OIL-01 Sampled: 1/14/2020 14:00

Sample ID: 20A0594-01
Sample Matrix: Oil

Tetrachloro-m-xylene [1]

Tetrachloro-m-xylene [2]

#### Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Prepared	Analyzed	Analyst
Aroclor-1016 [1]	ND	0.79	mg/Kg	1		EPA 600 4-81-045	1/14/20	1/15/20 8:56	AYH
Aroclor-1221 [1]	ND	0.79	mg/Kg	1		EPA 600 4-81-045	1/14/20	1/15/20 8:56	AYH
Aroclor-1232 [1]	ND	0.79	mg/Kg	1		EPA 600 4-81-045	1/14/20	1/15/20 8:56	AYH
Aroclor-1242 [1]	ND	0.79	mg/Kg	1		EPA 600 4-81-045	1/14/20	1/15/20 8:56	AYH
Aroclor-1248 [1]	ND	0.79	mg/Kg	1		EPA 600 4-81-045	1/14/20	1/15/20 8:56	AYH
Aroclor-1254 [1]	ND	0.79	mg/Kg	1		EPA 600 4-81-045	1/14/20	1/15/20 8:56	AYH
Aroclor-1260 [1]	ND	0.79	mg/Kg	1		EPA 600 4-81-045	1/14/20	1/15/20 8:56	AYH
Aroclor-1262 [1]	ND	0.79	mg/Kg	1		EPA 600 4-81-045	1/14/20	1/15/20 8:56	AYH
Aroclor-1268 [1]	ND	0.79	mg/Kg	1		EPA 600 4-81-045	1/14/20	1/15/20 8:56	AYH
	0.0		mg/Kg	1		EPA 600 4-81-045	1/14/20	1/15/20 8:56	AYH
Surrogates		% Recovery	Recovery Limits	3	Flag/Qual				
Decachlorobiphenyl [1]	-	83.2	30-150			-		1/15/20 8:56	
Decachlorobiphenyl [2]		85.5	30-150					1/15/20 8:56	

30-150

30-150

86.3

88.6



### **Sample Extraction Data**

### Prep Method: SW-846 3580A-EPA 600 4-81-045

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
20A0594-01 [TRC-AOC-1-OIL-01]	B249888	0.252	10.0	01/14/20

#### Prep Method: SW-846 5035/5030B-SW-846 8260C-D

Lab Number [Field ID]	Batch	Sample Amount(g)	Methanol Volume(mL)	Methanol Aliquot(mL)	Final Volume(mL)	Date
20A0594-01 [TRC-AOC-1-OIL-01]	B250052	0.550	5.00	0.5	50	01/15/20

RPD

%REC



### 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

Spike

Source

### Volatile Organic Compounds by GC/MS - Quality Control

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B250052 - SW-846 5035/5030B										
Blank (B250052-BLK1)				Prepared & A	Analyzed: 01	15/20				
Bromobenzene	ND	0.10	mg/Kg							
Bromochloromethane	ND	0.10	mg/Kg							
Bromodichloromethane	ND	0.10	mg/Kg							
Bromoform	ND	0.10	mg/Kg							
Bromomethane	ND	0.50	mg/Kg							
Carbon Tetrachloride	ND	0.10	mg/Kg							
Chlorobenzene	ND	0.10	mg/Kg							
Chlorodibromomethane	ND	0.050	mg/Kg							
Chloroethane	ND	1.0	mg/Kg							
Chloroform	ND	0.20	mg/Kg							
Chloromethane	ND	0.50	mg/Kg							
2-Chlorotoluene	ND	0.10	mg/Kg							
4-Chlorotoluene	ND	0.10	mg/Kg							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.10	mg/Kg							
1,2-Dibromoethane (EDB)	ND	0.050	mg/Kg							
Dibromomethane	ND	0.10	mg/Kg							
1,2-Dichlorobenzene	ND	0.10	mg/Kg							
1,3-Dichlorobenzene	ND	0.10	mg/Kg							
1,4-Dichlorobenzene	ND	0.10	mg/Kg							
trans-1,4-Dichloro-2-butene	ND	0.20	mg/Kg							
Dichlorodifluoromethane (Freon 12)	ND	1.0	mg/Kg							
1,1-Dichloroethane	ND	0.10	mg/Kg							
1,2-Dichloroethane	ND	0.10	mg/Kg							
1,1-Dichloroethylene	ND	0.20	mg/Kg							
cis-1,2-Dichloroethylene	ND	0.10	mg/Kg							
trans-1,2-Dichloroethylene	ND	0.10	mg/Kg							
1,2-Dichloropropane	ND	0.10	mg/Kg							
1,3-Dichloropropane	ND	0.050	mg/Kg							
2,2-Dichloropropane	ND	0.10	mg/Kg							
1,1-Dichloropropene	ND	0.10	mg/Kg							
cis-1,3-Dichloropropene	ND	0.050	mg/Kg							
trans-1,3-Dichloropropene	ND	0.050	mg/Kg							
Hexachlorobutadiene	ND	0.10	mg/Kg							
Methylene Chloride	ND	1.0	mg/Kg							
1,1,1,2-Tetrachloroethane	ND	0.10	mg/Kg							
1,1,2,2-Tetrachloroethane	ND	0.050	mg/Kg							
Tetrachloroethylene	ND	0.10	mg/Kg							
1,2,3-Trichlorobenzene	ND	0.10	mg/Kg							L-03, V-05
1,2,4-Trichlorobenzene	ND	0.10	mg/Kg							V-05
1,3,5-Trichlorobenzene	ND	0.10	mg/Kg							
1,1,1-Trichloroethane	ND	0.10	mg/Kg							
1,1,2-Trichloroethane	ND	0.10	mg/Kg							
Trichloroethylene	ND	0.10	mg/Kg							
Trichlorofluoromethane (Freon 11)	ND	0.50	mg/Kg							
1,2,3-Trichloropropane	ND	0.10	mg/Kg							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon	ND	0.50	mg/Kg							
113) Vinyl Chloride	ND	0.50	mg/Kg							
Surrogate: 1,2-Dichloroethane-d4	0.0260		mg/Kg	0.0250		104	70-130			
Surrogate: Toluene-d8	0.0247		mg/Kg	0.0250		98.9	70-130			
Duiloguic. Idiuciic-ud	0.027/		1115/125	0.0230		70.7	10-130			



### 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

### Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B250052 - SW-846 5035/5030B											_
LCS (B250052-BS1)				Prepared & A	Analyzed: 01	/15/20					
Bromobenzene	0.0113	0.0023	mg/Kg	0.0113		99.3	70-130				_
Bromochloromethane	0.0134	0.0023	mg/Kg	0.0113		118	70-130			V-20	
Bromodichloromethane	0.0118	0.0023	mg/Kg	0.0113		104	70-130				
Bromoform	0.0107	0.0023	mg/Kg	0.0113		94.8	70-130				
Bromomethane	0.0151	0.011	mg/Kg	0.0113		134 *	40-130			L-01, V-20	†
Carbon Tetrachloride	0.0125	0.0023	mg/Kg	0.0113		110	70-130				
Chlorobenzene	0.0120	0.0023	mg/Kg	0.0113		106	70-130				
Chlorodibromomethane	0.0115	0.0011	mg/Kg	0.0113		102	70-130				
Chloroethane	0.0121	0.023	mg/Kg	0.0113		107	70-130				
Chloroform	0.0125	0.0045	mg/Kg	0.0113		111	70-130				
Chloromethane	0.0157	0.011	mg/Kg	0.0113		138 *	70-130			L-01, V-20	
2-Chlorotoluene	0.0117	0.0023	mg/Kg	0.0113		104	70-130			,	
4-Chlorotoluene	0.0116	0.0023	mg/Kg	0.0113		103	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	0.0102	0.0023	mg/Kg	0.0113		89.8	70-130				
1,2-Dibromoethane (EDB)	0.0115	0.0011	mg/Kg	0.0113		102	70-130				
Dibromomethane	0.0116	0.0023	mg/Kg	0.0113		102	70-130				
1,2-Dichlorobenzene	0.0117	0.0023	mg/Kg	0.0113		103	70-130				
1,3-Dichlorobenzene	0.0123	0.0023	mg/Kg	0.0113		109	70-130				
1,4-Dichlorobenzene	0.0123	0.0023	mg/Kg	0.0113		103	70-130				
trans-1,4-Dichloro-2-butene	0.0108	0.0045	mg/Kg	0.0113		95.2	70-130				
Dichlorodifluoromethane (Freon 12)	0.0108	0.023	mg/Kg	0.0113		93.4	40-160				†
1,1-Dichloroethane	0.0108	0.0023	mg/Kg	0.0113		110	70-130				1
1,2-Dichloroethane	0.0124	0.0023	mg/Kg	0.0113		105	70-130				
1,1-Dichloroethylene		0.0045	mg/Kg	0.0113		109	70-130				
cis-1,2-Dichloroethylene	0.0124	0.0043	mg/Kg	0.0113		112	70-130				
trans-1,2-Dichloroethylene	0.0127	0.0023	mg/Kg	0.0113		112	70-130				
1,2-Dichloropropane	0.0128	0.0023	mg/Kg	0.0113		112	70-130				
1,3-Dichloropropane	0.0125	0.0023		0.0113		107	70-130				
2,2-Dichloropropane	0.0121	0.0011	mg/Kg mg/Kg								
1,1-Dichloropropene	0.0122	0.0023		0.0113		108	70-130				
cis-1,3-Dichloropropene	0.0132	0.0023	mg/Kg	0.0113		116	70-130				
	0.0121		mg/Kg	0.0113		106	70-130				
trans-1,3-Dichloropropene Hexachlorobutadiene	0.0111	0.0011 0.0023	mg/Kg	0.0113		97.6	70-130				
	0.0109		mg/Kg	0.0113		95.8	70-160			11.20	
Methylene Chloride	0.0137	0.023	mg/Kg	0.0113		121	40-160			V-20	†
1,1,2.7 Tetrachloroethane	0.0119	0.0023	mg/Kg	0.0113		105	70-130				
1,1,2,2-Tetrachloroethane	0.0124	0.0011	mg/Kg	0.0113		110	70-130				
Tetrachloroethylene	0.0125	0.0023	mg/Kg	0.0113		110	70-130				
1,2,3-Trichlorobenzene	0.00719	0.0023	mg/Kg	0.0113		63.4 *	70-130			V-05, L-03	
1,2,4-Trichlorobenzene	0.00850	0.0023	mg/Kg	0.0113		75.0	70-130			V-05	
1,3,5-Trichlorobenzene	0.00960	0.0023	mg/Kg	0.0113		84.7	70-130				
1,1,1-Trichloroethane	0.0127	0.0023	mg/Kg	0.0113		112	70-130				
1,1,2-Trichloroethane	0.0123	0.0023	mg/Kg	0.0113		109	70-130				
Trichloroethylene	0.0123	0.0023	mg/Kg	0.0113		108	70-130				
Trichlorofluoromethane (Freon 11)	0.0129	0.011	mg/Kg	0.0113		114	70-130				
1,2,3-Trichloropropane	0.0117	0.0023	mg/Kg	0.0113		104	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon	0.0127	0.011	mg/Kg	0.0113		112	70-130				
113) Vinyl Chloride	0.0130	0.011	mg/Kg	0.0113		115	40-130				†
		V.VII									_'
Surrogate: 1,2-Dichloroethane-d4	0.0296		mg/Kg	0.0283		104	70-130				
Surrogate: Toluene-d8	0.0277		mg/Kg	0.0283		97.7	70-130				
Surrogate: 4-Bromofluorobenzene	0.0270		mg/Kg	0.0283		95.3	70-130				



#### QUALITY CONTROL

Spike

Source

%REC

RPD

### Polychlorinated Biphenyls By GC/ECD - Quality Control

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B249888 - SW-846 3580A										
Blank (B249888-BLK1)	Prepared & Analyzed: 01/14/20									
Aroclor-1016	ND	0.73	mg/Kg							
Aroclor-1016 [2C]	ND	0.73	mg/Kg							
Aroclor-1221	ND	0.73	mg/Kg							
Aroclor-1221 [2C]	ND	0.73	mg/Kg							
Aroclor-1232	ND	0.73	mg/Kg							
aroclor-1232 [2C]	ND	0.73	mg/Kg							
croclor-1242	ND	0.73	mg/Kg							
roclor-1242 [2C]	ND	0.73	mg/Kg							
aroclor-1248	ND	0.73	mg/Kg							
roclor-1248 [2C]	ND	0.73	mg/Kg							
croclor-1254	ND	0.73	mg/Kg							
roclor-1254 [2C]	ND	0.73	mg/Kg							
roclor-1260	ND	0.73	mg/Kg							
roclor-1260 [2C]	ND	0.73	mg/Kg							
roclor-1262	ND	0.73	mg/Kg							
roclor-1262 [2C]	ND	0.73	mg/Kg							
roclor-1268	ND	0.73	mg/Kg							
roclor-1268 [2C]	ND	0.73	mg/Kg							
otal PCB Aroclors	0.0		mg/Kg							
urrogate: Decachlorobiphenyl	6.50		mg/Kg	7.28		89.3	30-150			
urrogate: Decachlorobiphenyl [2C]	6.73		mg/Kg	7.28		92.5	30-150			
urrogate: Tetrachloro-m-xylene	5.96		mg/Kg	7.28		81.8	30-150			
urrogate: Tetrachloro-m-xylene [2C]	6.38		mg/Kg	7.28		87.7	30-150			
.CS (B249888-BS1)				Prepared &	Analyzed: 01/	/14/20				
aroclor-1016	ND	0.72	mg/Kg				85-115			
Aroclor-1016 [2C]	ND	0.72	mg/Kg				85-115			
aroclor-1221	ND	0.72	mg/Kg				85-115			
aroclor-1221 [2C]	ND	0.72	mg/Kg				85-115			
croclor-1232	ND	0.72	mg/Kg				85-115			
aroclor-1232 [2C]	ND	0.72	mg/Kg				85-115			
aroclor-1242	ND	0.72	mg/Kg				85-115			
aroclor-1242 [2C]	ND	0.72	mg/Kg				85-115			
croclor-1248	ND	0.72	mg/Kg				85-115			
aroclor-1248 [2C]	ND	0.72	mg/Kg				85-115			
aroclor-1254	ND	0.72	mg/Kg				85-115			
aroclor-1254 [2C]	ND	0.72	mg/Kg				85-115			
aroclor-1260	4.2	0.72	mg/Kg	3.70		113	85-115			
aroclor-1260 [2C]	4.2	0.72	mg/Kg	3.70		113	85-115			
Aroclor-1262	ND	0.72	mg/Kg				85-115			
aroclor-1262 [2C]	ND	0.72	mg/Kg				85-115			
aroclor-1268	ND	0.72	mg/Kg				85-115			
Aroclor-1268 [2C]	ND	0.72	mg/Kg				85-115			
urrogate: Decachlorobiphenyl	6.47		mg/Kg	7.22		89.7	30-150			
surrogate: Decachlorobiphenyl [2C]	6.70		mg/Kg	7.22		92.9	30-150			
urrogate: Tetrachloro-m-xylene	5.92		mg/Kg	7.22		82.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	6.32		mg/Kg	7.22		87.6	30-150			



#### QUALITY CONTROL

### Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B249888 - SW-846 3580A										
LCS Dup (B249888-BSD1)				Prepared &	Analyzed: 01	/14/20				
Aroclor-1016	ND	0.70	mg/Kg				85-115	NC	30	
Aroclor-1016 [2C]	ND	0.70	mg/Kg				85-115	NC	30	
Aroclor-1221	ND	0.70	mg/Kg				85-115	NC	30	
Aroclor-1221 [2C]	ND	0.70	mg/Kg				85-115	NC	30	
Aroclor-1232	ND	0.70	mg/Kg				85-115	NC	30	
Aroclor-1232 [2C]	ND	0.70	mg/Kg				85-115	NC	30	
Aroclor-1242	ND	0.70	mg/Kg				85-115	NC	30	
Aroclor-1242 [2C]	ND	0.70	mg/Kg				85-115	NC	30	
Aroclor-1248	ND	0.70	mg/Kg				85-115	NC	30	
Aroclor-1248 [2C]	ND	0.70	mg/Kg				85-115	NC	30	
Aroclor-1254	ND	0.70	mg/Kg				85-115	NC	30	
Aroclor-1254 [2C]	ND	0.70	mg/Kg				85-115	NC	30	
Aroclor-1260	3.9	0.70	mg/Kg	3.43		114	85-115	6.37	30	
Aroclor-1260 [2C]	3.9	0.70	mg/Kg	3.43		113	85-115	7.86	30	
Aroclor-1262	ND	0.70	mg/Kg				85-115	NC	30	
Aroclor-1262 [2C]	ND	0.70	mg/Kg				85-115	NC	30	
Aroclor-1268	ND	0.70	mg/Kg				85-115	NC	30	
Aroclor-1268 [2C]	ND	0.70	mg/Kg				85-115	NC	30	
Surrogate: Decachlorobiphenyl	6.36		mg/Kg	6.97		91.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	6.56		mg/Kg	6.97		94.1	30-150			
Surrogate: Tetrachloro-m-xylene	5.80		mg/Kg	6.97		83.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	6.17		mg/Kg	6.97		88.5	30-150			



## **IDENTIFICATION SUMMARY** FOR SINGLE COMPONENT ANALYTES

EPA 600 4-81-045

0.000

0.000

2

Lab Sample ID: B2498		B249888-BS1			ate(s) Analy	zed: 01/14/2020	01/1	4/2020
In	strument ID (1):			In	strument ID	(2):		
G	C Column (1):	ID:	(m	nm) G	C Column (2	2):	ID:	(mm
	ANALYTE	COL	COL RT R		WINDOW CONCENTR		%RPD	
				FROM	ТО			
	Aroclor-1260	1	0.000	0.000	0.000	4.2		

0.000

0.000

0.000

0.000

4.2

4.2

0.0



Aroclor-1260

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS Dup	)

EPA 600 4-81-045

0.000

0.000

1

2

La	ab Sample ID:	B249888-BSD	B249888-BSD1			zed:	01/14/2020				
Instrument ID (1):					Instrument ID (2):						
G	C Column (1):	ID:	(m	nm) G	C Column (2	2):		ID:	(mm)		
	ANALYTE	COL	RT	RT WI	NDOW TO	CONC	ENTRATION	%RPD			

0.000

0.000

0.000

0.000

3.9

3.9

0.0



#### FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
DL-01	Elevated reporting limits for all volatile compounds due to foaming sample matrix.
L-01	Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
L-03	Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side.  Data validation is not affected since sample result was "not detected" for this compound.



## CERTIFICATIONS

## Certified Analyses included in this Report

Certifications
MA,NY,ME
NY

 $The \ CON\text{-}TEST \ Environmental \ Laboratory \ operates \ under the \ following \ certifications \ and \ accreditations:$ 

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

	Page of	# of Containers	<sup>2</sup> Preservation Code	<sup>3</sup> Container Code	Alson Sheet History Assembly		O Lab to Filter	1	O Field Filtered	Lab to Filter		1 Matrix Codes: GW = Ground Water	WW = Waste Water DW = Drinking Water	A Air	SL = Sludge	Sult = Solid 0 = Other (please	2 Preservation Codes:	T = ICed	M = Wethanol N = Nitric Acid	S = Suffuric Acid B = Sodium Bisulfate	X = Sodium Hydroxide T = Sodium	т	Gerine)	A = Amber Glass G = Glass P = Plastic	ST = Sterile V = Vial	S = Summa Canister	O = Other (please	define)		Soxhlet	Non Soxhlet
7_0324201/	39 Spruce Street East Longmeadow, MA 01028				ANALYSIS REQUESTED	- I Novi Je		P24	80			2 H		THE RESERVE OF THE PARTY OF THE								Please use the following codes to indicate possible sample concentration	within the Conc Code column above: H - High; M - Medium; L - Low; C - Clean; U - Unknown			ANALYTICAL LABORATORY	www.contestisbs.com		NELLE BROWN AND ACCORDING	Uther  WRTA Chromatogram	☐ AIHA-LAP,LLC
WWW. COINCESTADS, COM DOC # 381 Rev 1_0324201/	CHAIN OF CUSTODY RECORD  RESERVES AND RESERVED RESERVED BY THE	10-Day [	M W	Aspercial Negligibed A V V		4-Day	Sylve scalings with the scaling state of the scalin		kg Required:	CStoper B. transmis	<i>5</i> €	Grab Matrix Conc Code Code	X *									Please use the following code		Special Requirements  MA MCP Remired	Certifica	CT RCP Required  RCP Certification Form Required		DAVELD #	LANSID #	cipality 🔲 MWRA	21 J School Brownfield MBTA
(3.6.6)	CHAIN OF		Due Date:	so, CT	*	Parel A 2-Day	town, C.C. Format: PDF	Other:	ke D.	Email To:	Fax To #:	Beginning Ending Composite Date/Time Date/Time	1 14/40 1400										152-843-2817		72 C.	CT ASK.		7.12	Designet Catifer	Government C	Federal City
	Phone: 413-525-2332 Fax: 413-525-6405	Email: info@contestlabs.com	۱ <sub>۲</sub> ۲	~ Ra N Windson	9	11.54 5 Jat. on	1 0000 28 00000 1	5-10-10			Blons. He'n	Client Sample ID / Description	TRC-AUC-1-011-0					THE RESERVE TO THE PARTY OF THE					Matt Blumstern (TRC) 203-543-	Date/Time:	ost)	9		Date/Time:	- Date/Time		Date/Time:
	1	KKM SOAOSYY	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Address: 2   Griffin Rd	Phone: 860-248-	Project Location C 10 C	143	Project Manager: حداً الم	Con-Test Quote Name/Number: $eta$ - 201 $eta$ 0911	Invoice Recipient: (しゅ)	Sampled By: Matt	Con-Test Work Order#					THE PARTY OF THE P				The second secon	Attention: Kerry	Questions, costact	Pelinguished by: (signature)	Received by: (signature) 22_ 6	Relinquished by: (signature)		eceived by: (signature)	Selinouished by: (signature)	e 18	o eceived by: (signature)

I Have Not Confirmed Sample Container
Numbers With Lab Staff Before Relinquishing
Over Samples\_\_\_\_\_



Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Received By	<u>C</u> /	P.		Date	1-14-7	2070	Time	1700	
How were the sar	nples	In Cooler	7 VL	No Cooler		On Ice	-	No Ice	T
received?	•	Direct from Samp	<del>/`</del>	. 110 000,01	1	Ambient		Melted Ice	
		Direct nom camp	By Gun #	2				Mottod Too	
Were samples w			•			Actual Tem			•
Temperature? 2		<u> </u>	By Blank #			Actual Tem			
Was Cust	•		NA	•	-	es Tampered		NA	<u>.</u>
Was COC		•	T	•	s Chain Ag	gree With Sa	mples?	ī	•
		eaking/loose caps	on any sam	-	F	-			
Is COC in ink/ Leg	•				nples rece	ived within h		T	•
Did COC include		Client		Analysis	1		er Name	<u> </u>	
pertinent Informa		Project	T	ID's	<u> </u>	_ Collection	Dates/Times		
Are Sample label		_							
Are there Lab to F		•	F			as notified?			•
Are there Rushes'			T		Who wa	as notified?	Ashlic		
Are there Short Ho			F		Who wa	as notified?		<del></del>	
Is there enough Vo	olume	?	T						
Is there Headspac	e whe	ere applicable?	NA		MS/MSD?	?	-		
Proper Media/Con	tainer	s Used?	T		ls splitting	samples red	quired?	<u> </u>	
Were trip blanks re	eceive	ed?	F		On COC?	? <u> </u>	_		
Do all samples ha	ve the	proper pH?	M	Acid			Base		
Viais i	1	Containers:	#			#			#
Unp-		1 Liter Amb.		1 Liter I	Plastic		16 oz	Amb.	
HCL-		500 mL Amb.		500 mL	Plastic		8oz Am	b/Clear	
Meoh- \		250 mL Amb.		250 mL	Plastic		4oz <b>(</b> m	b)Clear	
Bisulfate-		Flashpoint		Col./Ba	octeria		2oz Am	b/Clear	-
DI-		Other Glass		Other F	Plastic		Enc	ore	
Thiosulfate-		SOC Kit		Plastic	Bag		Frozen:		
Sulfuric-		Perchlorate		Ziplo	ock				
				Unused N	fedia				
Vials 1		Containers:	#			#			#
Unp-		1 Liter Amb.		1 Liter f	Plastic		16 oz	Amb.	
HCL-		500 mL Amb.		500 mL	Plastic		8oz Am	b/Clear	
Meoh-		250 mL Amb.	·····	250 mL	Plastic		4oz Am		
		Col./Bacteria		Flash			2oz Am	b/Clear	
Bisulfate-				Other (		-	Enc	ore	
Bisulfate- DI-		Other Plastic							
Bisulfate- DI- Thiosulfate-		SOC Kit		Plastic			Frozen:		
Bisulfate- DI- Thiosulfate- Sulfuric- Comments:				Plastic Ziplo			Frozen:		

Client: TRC Environmental Corporation - CT



Laboratory Name:

# REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Con-Test Analytical Laboratory

Project	Location: 510 Gronk Ave, New Haven, CT	594	
Labora	atory Sample ID(s):	Sample Date(s):	
20A05	94-01	01/14/2020	
List RC SW-846 82	CP Methods Used: 260C-D		
1	For each analytical method referenced in this laboratory report package performance criteria followed, including the requirement to explain any acceptable guidelines, as specified in the CTDEP method-specific Reas Protocol documents?	y criteria falling outside of	Yes No
1A	Were the method specified preservation and holding time requirements	met?	✓ Yes
1B	VPH and EPH Methods only: Was the VPH and EPH method conductor modifications (see Section 11.3 of respective RCP methods)?	ed without significant	☐ Yes ☐ No ☑ N/A
2	Were all samples received by the laboratory in a condition consistent wassociated chain-of-custody document(s)?	vith that described on the	✓ Yes
3	Were samples received at an appropriate temperature (< 6 degrees C.)?		Yes No
4	Were all QA/QC performance criteria specified in the CTDEP Reasona documents achieved?	ible Confidence Protocol	Yes Vo
5A	Were reporting limits specified or referenced on the chain-of-custody?		✓ Yes
5B	Were these reporting limits met?		Yes No
6	For each analytical method referenced in this laboratory report package all constituents identified in the method-specific analyte lists presented Confidence Protocol documents?		✓ Yes No
7	Are project-specific matrix spikes and laboratory duplicates included in	n this data set?	☐Yes ☑ No
must b	For all questions to which the response was "No" (with the exception of be provided in an attached narrative. If the answer to question #1, #1A, or bet the requirements for "Reasonable Confidence."  orm may not be altered and all questions must be answered.	-	Lisa A. Worthington
and cont	e undersigned, attest under the pains and penalties of p belief and based upon my personal inquiry of those res ained in this analytical report, such information is accu horized Signature:	sponsible for providing the informati	on
Prin	ted Name: Lisa A. Worthington	Date: <u>01/15/20</u>	
Nan	ne of Laboratory: <u>Con-Test Analytical Laboratory</u>		

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

39 Spruce Street East Longmeadow, MA 01028  Page	# of Containers	<sup>2</sup> Preservation Code	<sup>3</sup> Container Code		0		O Field Filtered			1 <u>Matrix Codes:</u> GW = Ground Water	WW = Waste Water	A HAIT	SL Sludge	0 = Other (please	O General Control of the Control of	<sup>2</sup> Preservation Codes:	H = HCL	I = Iced H = HCL M = Methanol N = Nitric Acid	H = Iced H = HCL M = Methanol N = Nitric Acid S = Sulfuric Acid S = Sulfuric Acid B = Sodium Bisulfate		and Ave.,	and Ave., centration	and Ave.,	and Ave., centration	and Ave., centration  Con-Kesk Alveracat Laboratowy	and Ave., centration centration with the life dependence of the life	and Ave., centration centration with the contract of the contr
CHAIN OF CUSTODY RECORD  CHAIN OF CUSTODY RECORD  East I  East I	10-Day	Due Date:	tasandograma wantinon	1-Day SS 3-Day	Las Dalivay Street Stre	rur 🔀 EAUEL	e Data Pkg Required:	r comp	26 2 20	<del>olell</del>	X * X 7 0 004!									Droing 15,100	Project location is 510A Grand Ave., Pu New Haven, CT per Matt B2517 -KKM 1/15/2020	2517	2517	2517  Project location is 510A PuNew Haven, CT per Mai -KKM 1/15/2020  Special Requirements MCP Certification Form Required	Project location is 510A PuNew Haven, CT per Mai -KKM 1/15/2020  WCP Certification Form Required  MCP Certification Form Required  T AS & CT RCP Required  T AS & RCP Certification Form Required	Project location is 510A PROJECT location is 510A PROJECT location is 510A -KKM 1/15/2020    MA MCP Required   MCP Certification Form Required   MCP Certification Form Required   MCP Certification Form Required   MA State DW Requ	2 \$ 17  Project location is 510A puNew Haven, CT per Mai -KKM 1/15/2020  KKM 1/15/2020  MA MCP Required MCP Certification Form Required MCP Certification Form Required MS State DW Required MA State DW Required  MA State DW Required  MAN State DW Required  MAN State DW Required  MAN State DW Required
CON-KESt* Phone: 413-525-2332	tlabs.com	١		Fralish Station Pacel A	New How, C	lagge	Con-Test Quote Name/Number: 8-20180911 English Station		att Bloasten	Con-Test Cilent Sample ID / Description Beginning Work Order# Date/Time	1 TRC-1011-011-01 1/14/20										tion: Kerry	Ty Megae	2+ 1	: Kerry Cortact (signature)			Megae Matt Blunites (RC) 203-9 Matt Blunites Socretion (7+co Date/Time: Socretion L-14-2020 Date/Time: PCB R Date/Time: Option

I Have Not Confirmed Sample Container
Numbers With Lab Staff Before Relinquishing
Over Samples\_\_\_\_\_



Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client	TRC								
Receiv	ed By	J.		Date	1-14-7	070	Time	<u> 1700                                   </u>	······································
How were the	•	In Cooler	_ 7 'CL	No Cooler	1	On Ice		No Ice	T
recei	ved?	Direct from Samp	oling			Ambient		Melted Ice	
Were sam	oles within		By Gun#	2		Actual Tem	p - 22.0		
Temperatu		F	By Blank #			Actual Tem	ıp -		
Was	Custody S	eal Intact?	NA	We	re Sample	s Tampered	with?	<u> </u>	
Was	COC Relin	quished?	T	Does	s Chain Ag	ree With Sa	mples?	T	
Are the	ere broken/l	eaking/loose caps	on any sam		F	•			
Is COC in in	•						olding time?	T	
Did COC i		Client	T	Analysis	1	•	er Name	<u> </u>	
pertinent in		Project	T	ID's	1	Collection	Dates/Times		
•		d out and legible?							
Are there La		?	F			s notified?		·····	
Are there Ru			T			s notified?	<u>Ashlii</u>		
Are there Sh		_	F		Who wa	s notified?		<del></del>	
Is there enou	-								
	•	ere applicable?	NA		MS/MSD?		• <u>.</u>	,	
Proper Medi						samples rec	quired?	F	
Were trip bla			<u> </u>		On COC?	<u> </u>	_		
Do all sampl	es have the	proper pH?	W	Acid _		•	Base		
Vials	#	Containers:							44
			#			#			34
Unp-	35	1 Liter Amb.	*	1 Liter I		7	16 oz		
Unp- HCL-		1 Liter Amb. 500 mL Amb.	#	500 mL	Plastic	#	8oz Am	b/Clear	
Unp- HCL- Meoh-		1 Liter Amb. 500 mL Amb. 250 mL Amb.	#	500 mL 250 mL	Plastic Plastic	7	8oz Am 4oz <b>(</b> m	b/Clear Б/Clear	
Unp- HCL- Meoh- Bisulfate-		1 Liter Amb. 500 mL Amb. 250 mL Amb. Flashpoint		500 mL 250 mL Col./Ba	Plastic Plastic acteria	7	8oz Am 4oz <b>(</b> m 2oz Am	b/Clear b/Clear b/Clear	
Unp- HCL- Meoh- Bisulfate- DI-		1 Liter Amb. 500 mL Amb. 250 mL Amb. Flashpoint Other Glass		500 mL 250 mL Col./Ba Other F	Plastic Plastic acteria Plastic	7	8oz Am 4oz Am 2oz Am Enc	b/Clear b/Clear b/Clear	
Unp- HCL- Meoh- Bisulfate- DI- Thiosulfate-		1 Liter Amb. 500 mL Amb. 250 mL Amb. Flashpoint Other Glass SOC Kit		500 mL 250 mL Col./Ba Other F Plastic	Plastic Plastic acteria Plastic Bag	7	8oz Am 4oz <b>(</b> m 2oz Am	b/Clear b/Clear b/Clear	
Unp- HCL- Meoh- Bisulfate- DI- Thiosulfate-		1 Liter Amb. 500 mL Amb. 250 mL Amb. Flashpoint Other Glass		500 mL 250 mL Col./Ba Other F Plastic Ziple	Plastic Plastic acteria Plastic Bag ock		8oz Am 4oz Am 2oz Am Enc	b/Clear b/Clear b/Clear	
Unp- HCL- Meoh- Bisulfate- DI- Thiosulfate- Sulfuric-		1 Liter Amb. 500 mL Amb. 250 mL Amb. Flashpoint Other Glass SOC Kit Perchlorate		500 mL 250 mL Col./Ba Other F Plastic	Plastic Plastic acteria Plastic Bag ock		8oz Am 4oz Am 2oz Am Enc	b/Clear b/Clear b/Clear	
Unp- HCL- Meoh- Bisulfate- DI- Thiosulfate- Sulfuric-	#	1 Liter Amb. 500 mL Amb. 250 mL Amb. Flashpoint Other Glass SOC Kit Perchlorate  Containers:	#	500 mL 250 mL Col./Ba Other F Plastic Ziplo	Plastic Plastic acteria Plastic Bag ock	#	8oz Am 4oz Am 2oz Am Enc Frozen:	b/Clear b/Clear b/Clear core	*
Unp- HCL- Meoh- Bisulfate- DI- Thiosulfate- Sulfuric-  Vials Unp-	#	1 Liter Amb. 500 mL Amb. 250 mL Amb. Flashpoint Other Glass SOC Kit Perchlorate  Containers: 1 Liter Amb.		500 mL 250 mL Col./Ba Other F Plastic Ziple Unused N	Plastic Plastic acteria Plastic Bag ock Media		8oz Am 4oz Am 2oz Am Enc Frozen:	b/Clear b/Clear b/Clear core	
Unp- HCL- Meoh- Bisulfate- DI- Thiosulfate- Sulfuric-  Vials Unp- HCL-	*	1 Liter Amb. 500 mL Amb. 250 mL Amb. Flashpoint Other Glass SOC Kit Perchlorate  Containers:		500 mL 250 mL Col./Ba Other F Plastic Ziplo	Plastic Plastic acteria Plastic Bag ock Media Plastic Plastic		8oz Am 4oz Am 2oz Am Enc Frozen:	b/Clear b/Clear b/Clear core	*
Unp- HCL- Meoh- Bisulfate- DI- Thiosulfate- Sulfuric-  Vials Unp- HCL- Meoh-	#	1 Liter Amb. 500 mL Amb. 250 mL Amb. Flashpoint Other Glass SOC Kit Perchlorate  Containers: 1 Liter Amb. 500 mL Amb.		500 mL 250 mL Col./Ba Other F Plastic Ziple Unused N 1 Liter F 500 mL	Plastic Plastic acteria Plastic Bag ock Media Plastic Plastic Plastic Plastic		8oz Am 4oz Am 2oz Am Enc Frozen:	b/Clear b/Clear b/Clear core Amb. b/Clear b/Clear	*
Unp- HCL- Meoh- Bisulfate- DI- Thiosulfate- Sulfuric-  Vials Unp- HCL- Meoh- Bisulfate- DI-	#	1 Liter Amb. 500 mL Amb. 250 mL Amb. Flashpoint Other Glass SOC Kit Perchlorate  Containers: 1 Liter Amb. 500 mL Amb. 250 mL Amb.		500 mL 250 mL Col./Ba Other F Plastic Ziple Unused N  1 Liter F 500 mL 250 mL	Plastic Plastic acteria Plastic Bag bock Media Plastic Plastic Plastic Plastic point		8oz Am 4oz Am 2oz Am Enc Frozen:  16 oz 8oz Am 4oz Am	b/Clear b/Clear b/Clear core  Amb. b/Clear b/Clear b/Clear b/Clear	
Unp- HCL- Meoh- Bisulfate- DI- Thiosulfate- Sulfuric-  Vials Unp- HCL- Meoh- Bisulfate- DI- Thiosulfate-	#	1 Liter Amb. 500 mL Amb. 250 mL Amb. Flashpoint Other Glass SOC Kit Perchlorate  Containers: 1 Liter Amb. 500 mL Amb. 250 mL Amb. Col./Bacteria Other Plastic SOC Kit		500 mL 250 mL Col./Ba Other F Plastic Ziple Unused N  1 Liter F 500 mL 250 mL Flash	Plastic Plastic Cacteria Plastic C Bag C Bag C Bag C Bag C Bag C Bastic Plastic Plastic Plastic Plastic Plastic Plastic Plastic Plastic Plastic		8oz Am 4oz Am 2oz Am Enc Frozen:  16 oz 8oz Am 4oz Am 2oz Am	b/Clear b/Clear b/Clear core  Amb. b/Clear b/Clear b/Clear b/Clear	
Unp- HCL- Meoh- Bisulfate- DI- Thiosulfate- Sulfuric-  Vials Unp- HCL- Meoh- Bisulfate- DI- Thiosulfate- Sulfuric-		1 Liter Amb. 500 mL Amb. 250 mL Amb. Flashpoint Other Glass SOC Kit Perchlorate  Containers: 1 Liter Amb. 500 mL Amb. 250 mL Amb. Col./Bacteria Other Plastic		500 mL 250 mL Col./Ba Other F Plastic Ziplo Unused N  1 Liter F 500 mL 250 mL Flash Other O	Plastic Plastic acteria Plastic Bag ock Media Plastic		8oz Am 4oz Am 2oz Am Enc Frozen:  16 oz 8oz Am 4oz Am 2oz Am 2oz Am Enc	b/Clear b/Clear b/Clear core  Amb. b/Clear b/Clear b/Clear b/Clear	
Unp- HCL- Meoh- Bisulfate- DI- Thiosulfate- Sulfuric-  Vials Unp- HCL- Meoh- Bisulfate- DI- Thiosulfate- Sulfuric-		1 Liter Amb. 500 mL Amb. 250 mL Amb. Flashpoint Other Glass SOC Kit Perchlorate  Containers: 1 Liter Amb. 500 mL Amb. 250 mL Amb. Col./Bacteria Other Plastic SOC Kit		500 mL 250 mL Col./Ba Other F Plastic Ziplo Unused M  1 Liter F 500 mL 250 mL Flash Other ( Plastic	Plastic Plastic acteria Plastic Bag ock Media Plastic		8oz Am 4oz Am 2oz Am Enc Frozen:  16 oz 8oz Am 4oz Am 2oz Am 2oz Am Enc	b/Clear b/Clear b/Clear core  Amb. b/Clear b/Clear b/Clear b/Clear	*
Unp- HCL- Meoh- Bisulfate- DI- Thiosulfate-		1 Liter Amb. 500 mL Amb. 250 mL Amb. Flashpoint Other Glass SOC Kit Perchlorate  Containers: 1 Liter Amb. 500 mL Amb. 250 mL Amb. Col./Bacteria Other Plastic SOC Kit		500 mL 250 mL Col./Ba Other F Plastic Ziplo Unused M  1 Liter F 500 mL 250 mL Flash Other ( Plastic	Plastic Plastic acteria Plastic Bag ock Media Plastic		8oz Am 4oz Am 2oz Am Enc Frozen:  16 oz 8oz Am 4oz Am 2oz Am 2oz Am Enc	b/Clear b/Clear b/Clear core  Amb. b/Clear b/Clear b/Clear b/Clear	
Unp- HCL- Meoh- Bisulfate- DI- Thiosulfate- Sulfuric-  Vials Unp- HCL- Meoh- Bisulfate- DI- Thiosulfate- Sulfuric-		1 Liter Amb. 500 mL Amb. 250 mL Amb. Flashpoint Other Glass SOC Kit Perchlorate  Containers: 1 Liter Amb. 500 mL Amb. 250 mL Amb. Col./Bacteria Other Plastic SOC Kit		500 mL 250 mL Col./Ba Other F Plastic Ziplo Unused M  1 Liter F 500 mL 250 mL Flash Other ( Plastic	Plastic Plastic acteria Plastic Bag ock Media Plastic		8oz Am 4oz Am 2oz Am Enc Frozen:  16 oz 8oz Am 4oz Am 2oz Am 2oz Am Enc	b/Clear b/Clear b/Clear core  Amb. b/Clear b/Clear b/Clear b/Clear	#



January 27, 2020

Carl Stopper TRC Environmental Corporation - CT 21 Griffin Road North Windsor, CT 06095

Project Location: 510A Grand Ave., New Haven, CT

Client Job Number:

Project Number: 263951.000028.000001 Laboratory Work Order Number: 20A0963

Keny K. Mille

Enclosed are results of analyses for samples received by the laboratory on January 22, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kerry K. McGee Project Manager

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TRC Environmental Corporation - CT 21 Griffin Road North Windsor, CT 06095

ATTN: Carl Stopper

REPORT DATE: 1/27/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 263951.000028.000001

#### ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0963

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 510A Grand Ave., New Haven, CT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TRC-AOC-1-SOLID-02	20A0963-01	Soil		CTDEP ETPH	
				SM 2540G	
				SW-846 1030	
				SW-846 1311	
				SW-846 6010D	
				SW-846 7470A	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8260C-D	
				SW-846 8270D-E	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	



#### CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report. For method 6010, only a select list of metals was requested and reported.



#### CTDEP ETPH

#### Qualifications:

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

#### 2-Fluorobiphenyl

20A0963-01[TRC-AOC-1-SOLID-02]

SW-846 8260C-D

#### **Qualifications:**

V-16

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported

## result. Analyte & Samples(s) Qualified:

#### 1.3-Dichlorobenzene

20A0963-01RE1[TRC-AOC-1-SOLID-02]

V-17

Internal standard area <50% of associated calibration standard internal standard area. Reanalysis yielded similar internal standard non-conformance

#### Analyte & Samples(s) Qualified:

#### 1,2,3-Trichlorobenzene

20A0963-01[TRC-AOC-1-SOLID-02], 20A0963-01RE1[TRC-AOC-1-SOLID-02]

#### 1,2,4-Trichlorobenzene

20A0963-01[TRC-AOC-1-SOLID-02], 20A0963-01RE1[TRC-AOC-1-SOLID-02]

#### 1.2.4-Trimethylbenzene

20A0963-01[TRC-AOC-1-SOLID-02], 20A0963-01RE1[TRC-AOC-1-SOLID-02]

#### 1,2-Dibromo-3-chloropropane (DB)

20A0963-01[TRC-AOC-1-SOLID-02], 20A0963-01RE1[TRC-AOC-1-SOLID-02]

#### 1,2-Dichlorobenzene

20A0963-01[TRC-AOC-1-SOLID-02], 20A0963-01RE1[TRC-AOC-1-SOLID-02]

#### 1,3-Dichlorobenzene

20A0963-01[TRC-AOC-1-SOLID-02]

#### 1,4-Dichlorobenzene

20A0963-01[TRC-AOC-1-SOLID-02], 20A0963-01RE1[TRC-AOC-1-SOLID-02]

#### 1,4-Dichlorobenzene-d4

20A0963-01[TRC-AOC-1-SOLID-02], 20A0963-01RE1[TRC-AOC-1-SOLID-02]

#### Hexachlorobutadiene

20A0963-01[TRC-AOC-1-SOLID-02], 20A0963-01RE1[TRC-AOC-1-SOLID-02]

#### Naphthalene

20A0963-01[TRC-AOC-1-SOLID-02], 20A0963-01RE1[TRC-AOC-1-SOLID-02]

#### n-Butylbenzene

20A0963-01[TRC-AOC-1-SOLID-02], 20A0963-01RE1[TRC-AOC-1-SOLID-02]

#### p-Isopropyltoluene (p-Cymene)

20A0963-01[TRC-AOC-1-SOLID-02], 20A0963-01RE1[TRC-AOC-1-SOLID-02]

#### sec-Butylbenzene

20A0963-01[TRC-AOC-1-SOLID-02], 20A0963-01RE1[TRC-AOC-1-SOLID-02]

#### tert-Butylbenzene

20A0963-01[TRC-AOC-1-SOLID-02], 20A0963-01RE1[TRC-AOC-1-SOLID-02]

#### V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is

## estimated. Analyte & Samples(s) Qualified:

20A0963-01[TRC-AOC-1-SOLID-02], 20A0963-01RE1[TRC-AOC-1-SOLID-02], B250629-BLK1, B250629-BS1, S044893-CCV1

SW-846 8270D-E

#### Qualifications:



R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this

compound.

Analyte & Samples(s) Qualified:

4-Chloroaniline

20A0963-01[TRC-AOC-1-SOLID-02], B250530-BLK1, B250530-BS1, B250530-BSD1

**RL-12** 

Elevated reporting limit due to matrix interference.

Analyte & Samples(s) Qualified:

20A0963-01[TRC-AOC-1-SOLID-02]

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences. Analyte & Samples(s) Qualified:

2,4,6-Tribromophenol

20A0963-01[TRC-AOC-1-SOLID-02]

2-Fluorobiphenyl

20A0963-01[TRC-AOC-1-SOLID-02]

2-Fluorophenol

20A0963-01[TRC-AOC-1-SOLID-02]

Nitrobenzene-d5

20A0963-01[TRC-AOC-1-SOLID-02]

Phenol-d6

20A0963-01[TRC-AOC-1-SOLID-02]

p-Terphenyl-d14

20A0963-01[TRC-AOC-1-SOLID-02]

V-05

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol

S044895-CCV1

Hexachlorocyclopentadiene

20A0963-01[TRC-AOC-1-SOLID-02], B250530-BLK1, B250530-BS1, B250530-BSD1, S044891-CCV1, S044895-CCV1

Pentachlorophenol

S044895-CCV1

V-06

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

Analyte & Samples(s) Qualified:

Di-n-octylphthalate

S044895-CCV1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Technical Representative

Jua Watshington



Project Location: 510A Grand Ave., New Haven, CT Sample Description: Work Order: 20A0963

Date Received: 1/22/2020

Field Sample #: TRC-AOC-1-SOLID-02 Sampled: 1/22/2020 12:30

Sample ID: 20A0963-01
Sample Matrix: Soil

#### Volatile Organic Compounds by GC/MS

			Volatile Organic Con	npounds by G	C/MS				
							Date	Date/Time	
Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Prepared	Analyzed	Analyst
Acetone	0.67	0.26	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Acetone	0.24	0.18	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Acrylonitrile	ND	0.015	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Acrylonitrile	ND	0.011	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Benzene	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Benzene	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Bromobenzene	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Bromobenzene	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Bromodichloromethane	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Bromodichloromethane	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Bromoform	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Bromoform	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Bromomethane	ND	0.026	mg/Kg dry	1	V-34	SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Bromomethane	ND	0.018	mg/Kg dry	1	V-34	SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
2-Butanone (MEK)	ND	0.10	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
2-Butanone (MEK)	ND	0.071	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
n-Butylbenzene	ND	0.0051	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
n-Butylbenzene	ND	0.0035	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
sec-Butylbenzene	ND	0.0051	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
sec-Butylbenzene	ND	0.0035	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
tert-Butylbenzene	ND	0.0051	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
tert-Butylbenzene	ND	0.0035	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Carbon Disulfide	ND	0.015	mg/Kg dry	1	, ,,	SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Carbon Disulfide	ND	0.013	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Carbon Tetrachloride	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Carbon Tetrachloride	ND	0.0031	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 0:31	MFF
Chlorobenzene	ND	0.0053	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Chlorobenzene	ND	0.0031	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 0:31	MFF
Chlorodibromomethane	ND	0.0033	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Chlorodibromomethane	ND ND								MFF
Chloroethane		0.0018	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	
Chloroethane	ND	0.051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Chloroform	ND	0.035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Chloroform	ND	0.010	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
	ND	0.0071	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Chloromethane	ND	0.026	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Chloromethane	ND	0.018	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
2-Chlorotoluene	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
2-Chlorotoluene	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
4-Chlorotoluene	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
4-Chlorotoluene	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0051	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0035	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,2-Dibromoethane (EDB)	ND	0.0026	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,2-Dibromoethane (EDB)	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41 1868 Page 8	MFF

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Project Location: 510A Grand Ave., New Haven, CT Sample Description: Work Order: 20A0963

Date Received: 1/22/2020

Field Sample #: TRC-AOC-1-SOLID-02 Sampled: 1/22/2020 12:30

Sample ID: 20A0963-01
Sample Matrix: Soil

#### Volatile Organic Compounds by GC/MS

			Volatile Organic Con	npounds by G	SC/MS				
							Date	Date/Time	
Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Prepared	Analyzed	Analyst
Dibromomethane	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Dibromomethane	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,2-Dichlorobenzene	ND	0.0051	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,2-Dichlorobenzene	ND	0.0035	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,3-Dichlorobenzene	ND	0.0051	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,3-Dichlorobenzene	ND	0.0035	mg/Kg dry	1	V-16	SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,4-Dichlorobenzene	ND	0.0051	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,4-Dichlorobenzene	ND	0.0035	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
trans-1,4-Dichloro-2-butene	ND	0.010	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
trans-1,4-Dichloro-2-butene	ND	0.0071	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,1-Dichloroethane	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,1-Dichloroethane	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,2-Dichloroethane	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,2-Dichloroethane	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,1-Dichloroethylene	ND	0.010	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,1-Dichloroethylene	ND	0.0071	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
cis-1,2-Dichloroethylene	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
cis-1,2-Dichloroethylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
trans-1,2-Dichloroethylene	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
trans-1,2-Dichloroethylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,2-Dichloropropane	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,2-Dichloropropane	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,3-Dichloropropane	ND	0.0026	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,3-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
2,2-Dichloropropane	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
2,2-Dichloropropane	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,1-Dichloropropene	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,1-Dichloropropene	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
cis-1,3-Dichloropropene	ND	0.0026	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
cis-1,3-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
trans-1,3-Dichloropropene	ND	0.0026	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
trans-1,3-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Ethylbenzene	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Ethylbenzene	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Hexachlorobutadiene	ND	0.0051	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Hexachlorobutadiene	ND	0.0035	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
2-Hexanone (MBK)	ND	0.051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
2-Hexanone (MBK)	ND	0.035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Isopropylbenzene (Cumene)	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Isopropylbenzene (Cumene)	ND	0.0031	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
p-Isopropyltoluene (p-Cymene)	0.0060	0.0053	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0031	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 0:31	MFF
r - Propyristant (p Cymene)	MD	0.0055	mg/Rg dry		. 1/	5 ii 6 i 6 6266C-D	1,23,20	Page 9 (	

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Project Location: 510A Grand Ave., New Haven, CT Sample Description: Work Order: 20A0963

Date Received: 1/22/2020

Field Sample #: TRC-AOC-1-SOLID-02 Sampled: 1/22/2020 12:30

Sample ID: 20A0963-01
Sample Matrix: Soil

#### Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Methyl tert-Butyl Ether (MTBE)	ND	0.010	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0071	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Methylene Chloride	ND	0.051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Methylene Chloride	ND	0.035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Naphthalene	ND	0.010	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Naphthalene	ND	0.0071	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
n-Propylbenzene	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
n-Propylbenzene	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Styrene	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Styrene	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,1,1,2-Tetrachloroethane	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,1,1,2-Tetrachloroethane	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,1,2,2-Tetrachloroethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,1,2,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Tetrachloroethylene	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Tetrachloroethylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Tetrahydrofuran	ND	0.026	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Tetrahydrofuran	ND	0.018	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Toluene	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Toluene	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,2,3-Trichlorobenzene	ND	0.0051	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,2,3-Trichlorobenzene	ND	0.0035	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,2,4-Trichlorobenzene	ND	0.0051	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,2,4-Trichlorobenzene	ND	0.0035	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,1,1-Trichloroethane	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,1,1-Trichloroethane	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,1,2-Trichloroethane	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,1,2-Trichloroethane	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Trichloroethylene	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Trichloroethylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Trichlorofluoromethane (Freon 11)	ND	0.026	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Trichlorofluoromethane (Freon 11)	ND	0.018	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,2,3-Trichloropropane	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,2,3-Trichloropropane	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.026	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.018	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,2,4-Trimethylbenzene	0.015	0.0051	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,2,4-Trimethylbenzene	0.0040	0.0035	mg/Kg dry	1	V-17	SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
1,3,5-Trimethylbenzene	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
1,3,5-Trimethylbenzene	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Vinyl Chloride	ND	0.026	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF

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Project Location: 510A Grand Ave., New Haven, CT Sample Description: Work Order: 20A0963

Date Received: 1/22/2020

Field Sample #: TRC-AOC-1-SOLID-02 Sampled: 1/22/2020 12:30

Sample ID: 20A0963-01
Sample Matrix: Soil

#### Volatile Organic Compounds by GC/MS

							Date	Date/Time	
Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Prepared	Analyzed	Analyst
Vinyl Chloride	ND	0.018	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
m+p Xylene	ND	0.010	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
m+p Xylene	ND	0.0071	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
o-Xylene	ND	0.0051	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
o-Xylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Xylenes (total)	ND	0.015	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 6:51	MFF
Xylenes (total)	ND	0.011	mg/Kg dry	1		SW-846 8260C-D	1/23/20	1/23/20 9:41	MFF
Surrogates		% Recovery	Recovery Limits	s	Flag/Qual				
1,2-Dichloroethane-d4		81.8	70-130					1/23/20 6:51	
1,2-Dichloroethane-d4		82.2	70-130					1/23/20 9:41	
Toluene-d8		90.2	70-130					1/23/20 6:51	
Toluene-d8		93.1	70-130					1/23/20 9:41	
4-Bromofluorobenzene		75.1	70-130					1/23/20 6:51	
4-Bromofluorobenzene		84.0	70-130					1/23/20 9:41	



Project Location: 510A Grand Ave., New Haven, CT Sample Description: Work Order: 20A0963

Date Received: 1/22/2020

Field Sample #: TRC-AOC-1-SOLID-02 Sampled: 1/22/2020 12:30

Sample ID: 20A0963-01
Sample Matrix: Soil

Sample Flags: RL-12 Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analys
Acenaphthene	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Acenaphthylene	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Aniline	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Anthracene	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Benzo(a)anthracene	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Benzo(a)pyrene	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Benzo(b)fluoranthene	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Benzo(g,h,i)perylene	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Benzo(k)fluoranthene	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Bis(2-chloroethoxy)methane	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Bis(2-chloroethyl)ether	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Bis(2-chloroisopropyl)ether	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Bis(2-Ethylhexyl)phthalate	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
1-Bromophenylphenylether	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Butylbenzylphthalate	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Carbazole	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
1-Chloroaniline	ND	24	mg/Kg dry	10	R-05	SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
1-Chloro-3-methylphenol	ND	24	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
2-Chloronaphthalene	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
2-Chlorophenol	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
1-Chlorophenylphenylether	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Chrysene	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Dibenz(a,h)anthracene	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Dibenzofuran	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Di-n-butylphthalate	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
3,3-Dichlorobenzidine	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
2,4-Dichlorophenol	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Diethylphthalate	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
2,4-Dimethylphenol	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Dimethylphthalate	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
1,6-Dinitro-2-methylphenol	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
2,4-Dinitrophenol	ND	24	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
2,4-Dinitrotoluene	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
2,6-Dinitrotoluene	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Di-n-octylphthalate	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Fluoranthene	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Fluorene	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Hexachlorobenzene	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Hexachlorobutadiene	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Hexachlorocyclopentadiene	ND	12	mg/Kg dry	10	V-05	SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Hexachloroethane	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
ndeno(1,2,3-cd)pyrene	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Isophorone	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
2-Methylnaphthalene	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL

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Project Location: 510A Grand Ave., New Haven, CT Work Order: 20A0963 Sample Description:

Date Received: 1/22/2020

Field Sample #: TRC-AOC-1-SOLID-02 Sampled: 1/22/2020 12:30

Sample ID: 20A0963-01 Sample Matrix: Soil Sample Flags: RL-12

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	12	mg/Kg dry	10	ring/Quui	SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
3/4-Methylphenol	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Naphthalene	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
2-Nitroaniline	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
3-Nitroaniline	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
4-Nitroaniline	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Nitrobenzene	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
2-Nitrophenol	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
4-Nitrophenol	ND	24	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
N-Nitrosodiphenylamine/Diphenylamine	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
N-Nitrosodi-n-propylamine	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Pentachloronitrobenzene	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Pentachlorophenol	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Phenanthrene	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Phenol	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Pyrene	ND	6.2	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Pyridine	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
1,2,4,5-Tetrachlorobenzene	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
1,2,4-Trichlorobenzene	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
2,4,5-Trichlorophenol	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
2,4,6-Trichlorophenol	ND	12	mg/Kg dry	10		SW-846 8270D-E	1/22/20	1/23/20 13:30	BGL
Surrogates		% Recovery	Recovery Limits	s	Flag/Qual				
2-Fluorophenol		*	30-130	_	S-01			1/23/20 13:30	
Phenol-d6		*	30-130		S-01			1/23/20 13:30	

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	*	30-130	S-01	1/23/20 13:30
Phenol-d6	*	30-130	S-01	1/23/20 13:30
Nitrobenzene-d5	*	30-130	S-01	1/23/20 13:30
2-Fluorobiphenyl	*	30-130	S-01	1/23/20 13:30
2,4,6-Tribromophenol	*	30-130	S-01	1/23/20 13:30
p-Terphenyl-d14	*	30-130	S-01	1/23/20 13:30



Project Location: 510A Grand Ave., New Haven, CT Sample Description: Work Order: 20A0963

Date Received: 1/22/2020

Field Sample #: TRC-AOC-1-SOLID-02 Sampled: 1/22/2020 12:30

Sample ID: 20A0963-01
Sample Matrix: Soil

Tetrachloro-m-xylene [2]

#### Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.085	mg/Kg	1		SW-846 8082A	1/22/20	1/24/20 13:45	AYH
Aroclor-1221 [1]	ND	0.085	mg/Kg	1		SW-846 8082A	1/22/20	1/24/20 13:45	AYH
Aroclor-1232 [1]	ND	0.085	mg/Kg	1		SW-846 8082A	1/22/20	1/24/20 13:45	AYH
Aroclor-1242 [1]	ND	0.085	mg/Kg	1		SW-846 8082A	1/22/20	1/24/20 13:45	AYH
Aroclor-1248 [1]	ND	0.085	mg/Kg	1		SW-846 8082A	1/22/20	1/24/20 13:45	AYH
Aroclor-1254 [1]	ND	0.085	mg/Kg	1		SW-846 8082A	1/22/20	1/24/20 13:45	AYH
Aroclor-1260 [1]	ND	0.085	mg/Kg	1		SW-846 8082A	1/22/20	1/24/20 13:45	AYH
Aroclor-1262 [1]	ND	0.085	mg/Kg	1		SW-846 8082A	1/22/20	1/24/20 13:45	AYH
Aroclor-1268 [1]	ND	0.085	mg/Kg	1		SW-846 8082A	1/22/20	1/24/20 13:45	AYH
Total PCB Aroclors [1]	0.0		mg/Kg	1		SW-846 8082A	1/22/20	1/24/20 13:45	AYH
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		81.7	30-150					1/24/20 13:45	
Decachlorobiphenyl [2]		75.4	30-150					1/24/20 13:45	
Tetrachloro-m-xylene [1]		80.2	30-150					1/24/20 13:45	

30-150

74.8

1/24/20 13:45



Project Location: 510A Grand Ave., New Haven, CT Work Order: 20A0963 Sample Description:

Date Received: 1/22/2020

Sampled: 1/22/2020 12:30 Field Sample #: TRC-AOC-1-SOLID-02

Sample ID: 20A0963-01 Sample Matrix: Soil

#### Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
СТ ЕТРН	96000	14000	mg/Kg dry	400	riag/Quai	CTDEP ETPH	1/23/20	1/23/20 15:00	KLB
Surrogates		% Recovery	Recovery Limits	1	Flag/Qual				
2-Fluorobinhenyl		*	50-150		S-01			1/23/20 15:00	



Analyte

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 510 A Grand Ave., New Haven, CT Sample Description: Work Order: 20A0963

mg/Kg dry

1

Date Received: 1/22/2020

Field Sample #: TRC-AOC-1-SOLID-02 Sampled: 1/22/2020 12:30

ND

0.39

Sample ID: 20A0963-01
Sample Matrix: Soil

Arsenic Barium Cadmium Chromium Lead Mercury Selenium

Silver

			Metals Analy	ses (Total)					
							Date	Date/Time	
:	Results	RL	Units	Dilution	Flag/Qual	Method	Prepared	Analyzed	Analyst
	4.5	2.0	mg/Kg dry	1		SW-846 6010D	1/23/20	1/24/20 12:40	TBC
	190	2.0	mg/Kg dry	1		SW-846 6010D	1/23/20	1/24/20 12:40	TBC
	ND	0.20	mg/Kg dry	1		SW-846 6010D	1/23/20	1/24/20 12:40	TBC
	23	0.39	mg/Kg dry	1		SW-846 6010D	1/23/20	1/24/20 12:40	TBC
	71	0.59	mg/Kg dry	1		SW-846 6010D	1/23/20	1/24/20 12:40	TBC
	0.14	0.029	mg/Kg dry	1		SW-846 7471B	1/23/20	1/24/20 10:36	CJV
	ND	3.9	mg/Kg dry	1		SW-846 6010D	1/23/20	1/24/20 12:40	TBC

SW-846 6010D

1/23/20

1/24/20 12:40

TBC



Project Location: 510A Grand Ave., New Haven, CT Sample Description: Work Order: 20A0963

Date Received: 1/22/2020

Field Sample #: TRC-AOC-1-SOLID-02 Sampled: 1/22/2020 12:30

Sample ID: 20A0963-01
Sample Matrix: Soil

#### Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

								Date	Date/Time	
	Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Prepared	Analyzed	Analyst
% Solids		82.9		% Wt	1		SM 2540G	1/22/20	1/23/20 9:18	CBM
Free Liquid		Absent		present/absent	1		SW-846 9095B	1/23/20	1/23/20 9:00	LL
Ignitability		Present		present/absent	1		SW-846 1030	1/23/20	1/23/20 17:00	DJM
рН @18.2°C		10		pH Units	1		SW-846 9045C	1/22/20	1/22/20 20:00	AIA
Reactive Cyanide		ND	4.0	mg/Kg	1		SW-846 9014	1/23/20	1/23/20 13:40	EC
Reactive Sulfide		ND	20	mg/Kg	1		SW-846 9030A	1/23/20	1/23/20 13:05	EC



Project Location: 510A Grand Ave., New Haven, CT Sample Description: Work Order: 20A0963

Date Received: 1/22/2020

Field Sample #: TRC-AOC-1-SOLID-02 Sampled: 1/22/2020 12:30

Sample ID: 20A0963-01
Sample Matrix: Soil

#### TCLP - Metals Analyses

							Date	Date/Time	
Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Prepared	Analyzed	Analyst
Arsenic	ND	0.050	mg/L	1		SW-846 6010D	1/24/20	1/24/20 14:38	МЈН
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	1/24/20	1/24/20 12:21	CJV
Barium	ND	0.50	mg/L	1		SW-846 6010D	1/24/20	1/24/20 14:38	MJH
Cadmium	ND	0.010	mg/L	1		SW-846 6010D	1/24/20	1/24/20 14:38	MJH
Chromium	ND	0.050	mg/L	1		SW-846 6010D	1/24/20	1/24/20 14:38	MJH
Lead	ND	0.10	mg/L	1		SW-846 6010D	1/24/20	1/24/20 14:38	MJH
Selenium	ND	0.050	mg/L	1		SW-846 6010D	1/24/20	1/24/20 14:38	MJH
Silver	ND	0.050	mg/L	1		SW-846 6010D	1/24/20	1/24/20 14:38	МЈН



## **Sample Extraction Data**

Prep Method:	SW-846 354	6-CTDEP ETPH
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20A0963-01 [TRC-AOC-1-SOLID-02]

20A0963-01RE1 [TRC-AOC-1-SOLID-02]

Prep Method: SW-846 3546-CTDEP ETPH					
Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date	
20A0963-01 [TRC-AOC-1-SOLID-02]	B250619	30.0	3.00	01/23/20	
Prep Method: % Solids-SM 2540G					
Lab Number [Field ID]	Batch			Date	
20A0963-01 [TRC-AOC-1-SOLID-02]	B250624			01/22/20	
SW-846 1030					
Lab Number [Field ID]	Batch	Initial [g]		Date	
20A0963-01 [TRC-AOC-1-SOLID-02]	B250715	50.0		01/23/20	
Prep Method: SW-846 3050B-SW-846 6010D					
Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date	
20A0963-01 [TRC-AOC-1-SOLID-02]	B250680	1.54	50.0	01/23/20	
Prep Method: SW-846 3010A-SW-846 6010D	Leachates wer	e extracted on 1/23/2020 p	per SW-846 1311 in Batch B2:	50683	
Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date	
20A0963-01 [TRC-AOC-1-SOLID-02]	B250763	50.0	50.0	01/24/20	
Prep Method: SW-846 7470A Prep-SW-846 7470A	Leachates wer	e extracted on 1/23/2020 p	per SW-846 1311 in Batch B2:	50683	
Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date	
20A0963-01 [TRC-AOC-1-SOLID-02]	B250764	6.00	6.00	01/24/20	
Prep Method: SW-846 7471-SW-846 7471B					
Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date	
20A0963-01 [TRC-AOC-1-SOLID-02]	B250651	0.616	50.0	01/23/20	
Prep Method: SW-846 3540C-SW-846 8082A					
Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date	
20A0963-01 [TRC-AOC-1-SOLID-02]	B250593	2.35	10.0	01/22/20	
Prep Method: SW-846 5035-SW-846 8260C-D					
Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date	

B250629

B250629

2.35

3.40

10.0

10.0

01/23/20

01/23/20



## **Sample Extraction Data**

## Prep Method: SW-846 3546-SW-846 8270D-E

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
20A0963-01 [TRC-AOC-1-SOLID-02]	B250530	30.0	3.00	01/22/20

#### SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
20A0963-01 [TRC-AOC-1-SOLID-02]	B250645	25.2	250	01/23/20

#### SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
20A0963-01 [TRC-AOC-1-SOLID-02]	B250646	25.2	250	01/23/20

## SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
20A0963-01 [TRC-AOC-1-SOLID-02]	B250616	20.0	01/22/20

#### SW-846 9095B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
20A0963-01 [TRC-AOC-1-SOLID-02]	B250640	100	100	01/23/20

Notes



Analyte

## 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

Spike

Level

Source

Result

%REC

%REC

Limits

RPD

Limit

RPD

## Volatile Organic Compounds by GC/MS - Quality Control

Units

Reporting

Limit

Result

Analyte	Kesuit	Limit	Units	Level	Result	%REC	Limits	KPD	Limit	Notes
Batch B250629 - SW-846 5035										
Blank (B250629-BLK1)				Prepared & A	Analyzed: 01	/23/20				
Acetone	ND	0.10	mg/Kg wet							
Acrylonitrile	ND	0.0060	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							V-34
-Butanone (MEK)	ND	0.040	mg/Kg wet							
-Butylbenzene	ND	0.0020	mg/Kg wet							
ec-Butylbenzene	ND	0.0020	mg/Kg wet							
ert-Butylbenzene	ND	0.0020	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
-Chlorotoluene	ND	0.0020	mg/Kg wet							
-Chlorotoluene	ND	0.0020	mg/Kg wet							
,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
rans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							
,1-Dichloroethane	ND	0.0020	mg/Kg wet							
,2-Dichloroethane	ND	0.0020	mg/Kg wet							
,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
is-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
rans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
,2-Dichloropropane	ND	0.0020	mg/Kg wet							
,3-Dichloropropane	ND	0.0010	mg/Kg wet							
,2-Dichloropropane	ND	0.0020	mg/Kg wet							
,1-Dichloropropene	ND	0.0020	mg/Kg wet							
is-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
rans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
-Hexanone (MBK)	ND	0.020	mg/Kg wet							
sopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
i-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methylene Chloride	ND	0.020	mg/Kg wet							
-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							
-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
,1,1,2-Tetrachloroethane	ND ND	0.0020	mg/Kg wet							



#### QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
eatch B250629 - SW-846 5035										
Blank (B250629-BLK1)				Prepared & A	Analyzed: 01	/23/20				
etrachloroethylene	ND	0.0020	mg/Kg wet							
etrahydrofuran	ND	0.010	mg/Kg wet							
oluene	ND	0.0020	mg/Kg wet							
2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1-Trichloroethane	ND	0.0020	mg/Kg wet							
1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
richloroethylene	ND	0.0020	mg/Kg wet							
richlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,2-Trichloro-1,2,2-trifluoroethane (Freon	ND	0.010	mg/Kg wet							
3) 2.4. Trimathylbanzana	3.775	0.0020	ma/V a wat							
2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
3,5-Trimethylbenzene inyl Chloride	ND	0.0020	mg/Kg wet							
·	ND		mg/Kg wet							
+p Xylene -Xylene	ND	0.0040 0.0020	mg/Kg wet							
•	ND		mg/Kg wet							
ylenes (total)	ND	0.0060	mg/Kg wet							
urrogate: 1,2-Dichloroethane-d4	0.0393		mg/Kg wet	0.0500		78.5	70-130			
urrogate: Toluene-d8	0.0483		mg/Kg wet	0.0500		96.5	70-130			
urrogate: 4-Bromofluorobenzene	0.0511		mg/Kg wet	0.0500		102	70-130			
CS (B250629-BS1)			]	Prepared & A	Analyzed: 01	/23/20				
cetone	0.178	0.10	mg/Kg wet	0.200		89.2	40-160			
crylonitrile	0.0188	0.0060	mg/Kg wet	0.0200		93.9	70-130			
enzene	0.0187	0.0020	mg/Kg wet	0.0200		93.7	70-130			
romobenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130			
romodichloromethane	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130			
romoform	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130			
romomethane	0.0189	0.010	mg/Kg wet	0.0200		94.7	40-160			V-34
-Butanone (MEK)	0.190	0.040	mg/Kg wet	0.200		95.1	40-160			
Butylbenzene	0.0159	0.0020	mg/Kg wet	0.0200		79.4	70-130			
c-Butylbenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.7	70-130			
rt-Butylbenzene	0.0183	0.0020	mg/Kg wet	0.0200		91.5	70-130			
arbon Disulfide	0.181	0.0060	mg/Kg wet	0.200		90.4	70-130			
arbon Tetrachloride	0.0198	0.0020	mg/Kg wet	0.0200		99.2	70-130			
hlorobenzene	0.0219	0.0020	mg/Kg wet	0.0200		109	70-130			
hlorodibromomethane	0.0220	0.0010	mg/Kg wet	0.0200		110	40-160			
hloroethane	0.0180	0.020	mg/Kg wet	0.0200		89.9	70-130			
hloroform	0.0179	0.0040	mg/Kg wet	0.0200		89.6	70-130			
hloromethane	0.0174	0.010	mg/Kg wet	0.0200		87.1	40-160			
Chlorotoluene	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130			
Chlorotoluene	0.0187	0.0020	mg/Kg wet	0.0200		93.4	70-130			
2-Dibromo-3-chloropropane (DBCP)	0.0183	0.0020	mg/Kg wet	0.0200		91.5	70-130			
2-Dibromoethane (EDB)	0.0227	0.0010	mg/Kg wet	0.0200		113	70-130			
bromomethane	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			
2-Dichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.3	70-130			
3-Dichlorobenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130			
4-Dichlorobenzene	0.0182	0.0020	mg/Kg wet	0.0200		90.9	70-130			
nns-1,4-Dichloro-2-butene	0.0187	0.0040	mg/Kg wet	0.0200		93.3	70-130			
ichlorodifluoromethane (Freon 12)	0.0210	0.020	mg/Kg wet	0.0200		105	40-160			
1-Dichloroethane	0.0187	0.0020	mg/Kg wet	0.0200		93.6	70-130			



#### QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250629 - SW-846 5035										
LCS (B250629-BS1)				Prepared & A	Analyzed: 01/	23/20				
1,1-Dichloroethylene	0.0166	0.0040	mg/Kg wet	0.0200		83.1	70-130			
cis-1,2-Dichloroethylene	0.0178	0.0020	mg/Kg wet	0.0200		89.2	70-130			
trans-1,2-Dichloroethylene	0.0186	0.0020	mg/Kg wet	0.0200		92.9	70-130			
1,2-Dichloropropane	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
1,3-Dichloropropane	0.0216	0.0010	mg/Kg wet	0.0200		108	70-130			
2,2-Dichloropropane	0.0174	0.0020	mg/Kg wet	0.0200		87.0	70-130			
1,1-Dichloropropene	0.0176	0.0020	mg/Kg wet	0.0200		87.9	70-130			
cis-1,3-Dichloropropene	0.0207	0.0010	mg/Kg wet	0.0200		104	70-130			
trans-1,3-Dichloropropene	0.0204	0.0010	mg/Kg wet	0.0200		102	70-130			
Ethylbenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.7	70-130			
Hexachlorobutadiene	0.0199	0.0020	mg/Kg wet	0.0200		99.6	40-160			
2-Hexanone (MBK)	0.186	0.020	mg/Kg wet	0.200		92.9	70-130			
Isopropylbenzene (Cumene)	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
p-Isopropyltoluene (p-Cymene)	0.0179	0.0020	mg/Kg wet	0.0200		89.7	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0196	0.0040	mg/Kg wet	0.0200		97.8	70-130			
Methylene Chloride	0.0191	0.020	mg/Kg wet	0.0200		95.6	70-130			
4-Methyl-2-pentanone (MIBK)	0.187	0.020	mg/Kg wet	0.200		93.7	40-160			
Naphthalene	0.0168	0.0040	mg/Kg wet	0.0200		84.1	70-130			
n-Propylbenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130			
Styrene	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130			
1,1,1,2-Tetrachloroethane	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
1,1,2,2-Tetrachloroethane	0.0203	0.0010	mg/Kg wet	0.0200		102	70-130			
Tetrachloroethylene	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130			
Tetrahydrofuran	0.0192	0.010	mg/Kg wet	0.0200		96.2	70-130			
Toluene	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130			
1,2,3-Trichlorobenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.6	70-130			
1,2,4-Trichlorobenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130			
1,1,1-Trichloroethane	0.0178	0.0020	mg/Kg wet	0.0200		89.0	70-130			
1,1,2-Trichloroethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
Trichloroethylene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
Trichlorofluoromethane (Freon 11)	0.0185	0.010	mg/Kg wet	0.0200		92.5	40-160			
1,2,3-Trichloropropane	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0191	0.010	mg/Kg wet	0.0200		95.3	70-130			
1,2,4-Trimethylbenzene	0.0167	0.0020	mg/Kg wet	0.0200		83.3	70-130			
1,3,5-Trimethylbenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130			
Vinyl Chloride	0.0170	0.010	mg/Kg wet	0.0200		85.1	70-130			
m+p Xylene	0.0380	0.0040	mg/Kg wet	0.0400		94.9	70-130			
o-Xylene	0.0190	0.0020	mg/Kg wet	0.0200		95.2	70-130			
Xylenes (total)	0.0570	0.0060	mg/Kg wet	0.0600		95.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0387		mg/Kg wet	0.0500		77.4	70-130			
Surrogate: Toluene-d8	0.0487		mg/Kg wet	0.0500		97.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.0524		mg/Kg wet	0.0500		105	70-130			

Notes



Analyte

## 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

Spike

Level

Source

Result

%REC

%REC

Limits

RPD

Limit

RPD

## Semivolatile Organic Compounds by GC/MS - Quality Control

Units

Reporting

Limit

Result

Analyte	Kesuit	Limit	Units	Levei	Kesuit	%REC	Limits	KPD	Limit	Notes
atch B250530 - SW-846 3546										
lank (B250530-BLK1)				Prepared: 01	/22/20 Analy	yzed: 01/23/2	20			
cenaphthene	ND	0.17	mg/Kg wet							
cenaphthylene	ND	0.17	mg/Kg wet							
niline	ND	0.34	mg/Kg wet							
nthracene	ND	0.17	mg/Kg wet							
enzo(a)anthracene	ND	0.17	mg/Kg wet							
enzo(a)pyrene	ND	0.17	mg/Kg wet							
enzo(b)fluoranthene	ND	0.17	mg/Kg wet							
enzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
enzo(k)fluoranthene	ND	0.17	mg/Kg wet							
is(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
is(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
s(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
is(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
Bromophenylphenylether	ND	0.34	mg/Kg wet							
utylbenzylphthalate	ND	0.34	mg/Kg wet							
arbazole	ND	0.17	mg/Kg wet							
Chloroaniline	ND	0.66	mg/Kg wet							R-05
Chloro-3-methylphenol	ND	0.66	mg/Kg wet							
Chloronaphthalene	ND	0.34	mg/Kg wet							
Chlorophenol	ND	0.34	mg/Kg wet							
Chlorophenylphenylether	ND	0.34	mg/Kg wet							
nrysene	ND	0.17	mg/Kg wet							
ibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
ibenzofuran	ND	0.34	mg/Kg wet							
-n-butylphthalate	ND	0.34	mg/Kg wet							
3-Dichlorobenzidine	ND	0.17	mg/Kg wet							
4-Dichlorophenol	ND	0.34	mg/Kg wet							
ethylphthalate	ND	0.34	mg/Kg wet							
4-Dimethylphenol	ND	0.34	mg/Kg wet							
imethylphthalate	ND	0.34	mg/Kg wet							
6-Dinitro-2-methylphenol	ND	0.34	mg/Kg wet							
4-Dinitrophenol	ND	0.66	mg/Kg wet							
4-Dinitrotoluene	ND	0.34	mg/Kg wet							
6-Dinitrotoluene	ND	0.34	mg/Kg wet							
i-n-octylphthalate	ND	0.34	mg/Kg wet							
uoranthene	ND	0.17	mg/Kg wet							
uorene	ND	0.17	mg/Kg wet							
exachlorobenzene	ND	0.34	mg/Kg wet							
exachlorobutadiene	ND	0.34	mg/Kg wet							
exachlorocyclopentadiene	ND	0.34	mg/Kg wet							V-05
exachloroethane	ND	0.34	mg/Kg wet							
ideno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
ophorone	ND	0.34	mg/Kg wet							
Methylnaphthalene	ND	0.17	mg/Kg wet							
Methylphenol	ND	0.34	mg/Kg wet							
4-Methylphenol	ND	0.34	mg/Kg wet							
aphthalene	ND	0.17	mg/Kg wet							
Nitroaniline	ND	0.34	mg/Kg wet							
Nitroaniline	ND	0.34	mg/Kg wet							
Nitroaniline	ND	0.34	mg/Kg wet							
itrobenzene	ND	0.34	mg/Kg wet							
Nitrophenol	ND	0.34	mg/Kg wet							



#### QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250530 - SW-846 3546										
Blank (B250530-BLK1)				Prepared: 01	/22/20 Anal	yzed: 01/23/2	20			
4-Nitrophenol	ND	0.66	mg/Kg wet							
N-Nitrosodiphenylamine/Diphenylamine	ND	0.34	mg/Kg wet							
I-Nitrosodi-n-propylamine	ND	0.34	mg/Kg wet							
entachloronitrobenzene	ND	0.34	mg/Kg wet							
entachlorophenol	ND	0.34	mg/Kg wet							
henanthrene	ND	0.17	mg/Kg wet							
henol	ND	0.34	mg/Kg wet							
yrene	ND	0.17	mg/Kg wet							
yridine	ND	0.34	mg/Kg wet							
,2,4,5-Tetrachlorobenzene	ND	0.34	mg/Kg wet							
,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet							
4,5-Trichlorophenol	ND	0.34	mg/Kg wet							
,4,6-Trichlorophenol	ND	0.34	mg/Kg wet							
· · · · · · · · · · · · · · · · · · ·				6.67		70 5	20 120			
urrogate: 2-Fluorophenol	5.23		mg/Kg wet	6.67		78.5	30-130			
urrogate: Phenol-d6	5.57		mg/Kg wet	6.67		83.5	30-130			
urrogate: Nitrobenzene-d5	2.62		mg/Kg wet	3.33		78.5	30-130			
urrogate: 2-Fluorobiphenyl	3.32		mg/Kg wet	3.33		99.6	30-130			
urrogate: 2,4,6-Tribromophenol	5.63		mg/Kg wet	6.67		84.5	30-130			
urrogate: p-Terphenyl-d14	2.81		mg/Kg wet	3.33		84.4	30-130			
CS (B250530-BS1)				Prepared: 01	/22/20 Anal	yzed: 01/23/2	20			
cenaphthene	1.33	0.17	mg/Kg wet	1.67		80.0	40-140			
cenaphthylene	1.39	0.17	mg/Kg wet	1.67		83.2	40-140			
niline	1.21	0.34	mg/Kg wet	1.67		72.8	40-140			
nthracene	1.39	0.17	mg/Kg wet	1.67		83.2	40-140			
enzo(a)anthracene	1.35	0.17	mg/Kg wet	1.67		80.9	40-140			
enzo(a)pyrene	1.39	0.17	mg/Kg wet	1.67		83.5	40-140			
enzo(b)fluoranthene	1.37	0.17	mg/Kg wet	1.67		82.2	40-140			
enzo(g,h,i)perylene	1.35	0.17	mg/Kg wet	1.67		80.9	40-140			
Benzo(k)fluoranthene	1.38	0.17	mg/Kg wet	1.67		82.6	40-140			
tis(2-chloroethoxy)methane	1.28	0.34	mg/Kg wet	1.67		76.9	40-140			
sis(2-chloroethyl)ether	1.28	0.34	mg/Kg wet	1.67		77.0	40-140			
Bis(2-chloroisopropyl)ether	1.67	0.34	mg/Kg wet	1.67		100	40-140			
sis(2-Ethylhexyl)phthalate	1.17	0.34	mg/Kg wet	1.67		70.1	40-140			
-Bromophenylphenylether	1.35	0.34	mg/Kg wet	1.67		81.1	40-140			
tutylbenzylphthalate	1.20	0.34	mg/Kg wet	1.67		72.2	40-140			
Carbazole	1.35	0.17	mg/Kg wet	1.67		80.8	40-140			
-Chloroaniline	1.33	0.66	mg/Kg wet	1.67		71.4	40-140			R-05
-Chloro-3-methylphenol	1.52	0.66	mg/Kg wet	1.67		91.5	30-130			11-03
-Chloronaphthalene		0.34	mg/Kg wet	1.67		80.0	40-140			
-Chlorophenol	1.33	0.34	mg/Kg wet	1.67		79.2	30-130			
-Chlorophenylphenylether	1.32	0.34	mg/Kg wet				40-140			
hrysene	1.42	0.34	mg/Kg wet	1.67		85.3				
•	1.31			1.67		78.7	40-140			
ibenz(a,h)anthracene ibenzofuran	1.37	0.17	mg/Kg wet	1.67		82.2	40-140			
	1.45	0.34	mg/Kg wet	1.67		87.1	40-140			
i-n-butylphthalate	1.36	0.34	mg/Kg wet	1.67		81.4	40-140			
3-Dichlorobenzidine	1.41	0.17	mg/Kg wet	1.67		84.3	40-140			
4-Dichlorophenol	1.45	0.34	mg/Kg wet	1.67		87.2	30-130			
Diethylphthalate	1.39	0.34	mg/Kg wet	1.67		83.7	40-140			
,4-Dimethylphenol	1.31	0.34	mg/Kg wet	1.67		78.5	30-130			
imethylphthalate	1.37	0.34	mg/Kg wet	1.67		82.1	40-140			
4,6-Dinitro-2-methylphenol	1.20	0.34	mg/Kg wet	1.67		72.2	30-130		1	005

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#### QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250530 - SW-846 3546										
.CS (B250530-BS1)			1	Prepared: 01	/22/20 Anal	yzed: 01/23/2	20			
,4-Dinitrophenol	0.897	0.66	mg/Kg wet	1.67		53.8	30-130			
,4-Dinitrotoluene	1.32	0.34	mg/Kg wet	1.67		79.4	40-140			
,6-Dinitrotoluene	1.43	0.34	mg/Kg wet	1.67		86.1	40-140			
Di-n-octylphthalate	1.16	0.34	mg/Kg wet	1.67		69.9	40-140			
luoranthene	1.48	0.17	mg/Kg wet	1.67		89.1	40-140			
luorene	1.38	0.17	mg/Kg wet	1.67		82.8	40-140			
Iexachlorobenzene	1.45	0.34	mg/Kg wet	1.67		87.1	40-140			
Iexachlorobutadiene	1.45	0.34	mg/Kg wet	1.67		86.9	40-140			
Iexachlorocyclopentadiene	0.584	0.34	mg/Kg wet	1.67		35.0	30-140			V-05
Iexachloroethane	1.13	0.34	mg/Kg wet	1.67		68.0	40-140			
ndeno(1,2,3-cd)pyrene	1.50	0.17	mg/Kg wet	1.67		90.1	40-140			
sophorone	1.45	0.34	mg/Kg wet	1.67		86.7	40-140			
-Methylnaphthalene	1.53	0.17	mg/Kg wet	1.67		91.6	40-140			
-Methylphenol	1.26	0.34	mg/Kg wet	1.67		75.6	30-130			
/4-Methylphenol	1.37	0.34	mg/Kg wet	1.67		82.1	30-130			
Japhthalene	1.32	0.17	mg/Kg wet	1.67		79.3	40-140			
-Nitroaniline	1.60	0.34	mg/Kg wet	1.67		95.8	40-140			
-Nitroaniline	1.24	0.34	mg/Kg wet	1.67		74.5	40-140			
-Nitroaniline	1.37	0.34	mg/Kg wet	1.67		82.4	40-140			
litrobenzene	1.37	0.34	mg/Kg wet	1.67		85.2	40-140			
-Nitrophenol	1.42	0.34	mg/Kg wet	1.67		82.0	30-130			
-Nitrophenol	1.67	0.66	mg/Kg wet	1.67		100	10-130			
I-Nitrosodiphenylamine/Diphenylamine	1.67	0.34	mg/Kg wet	1.67		84.1	40-140			
I-Nitrosodi-n-propylamine	1.40	0.34	mg/Kg wet	1.67		84.3	40-140			
entachloronitrobenzene		0.34	mg/Kg wet	1.67		84.3 86.6	40-140			
entachlorophenol	1.44	0.34	mg/Kg wet	1.67		67.2	30-130			
henanthrene	1.12	0.17	mg/Kg wet	1.67		83.7	40-140			
henol	1.40	0.17	mg/Kg wet	1.67		83.7 79.9	20-130			
lyrene	1.33	0.34	mg/Kg wet	1.67		79.9 79.2	40-140			
vyridine	1.32	0.17	mg/Kg wet							
,2,4,5-Tetrachlorobenzene	0.738	0.34	mg/Kg wet	1.67		44.3	10-140			
,2,4-Trichlorobenzene	1.42	0.34	mg/Kg wet	1.67		84.9	40-140			
,4,5-Trichlorophenol	1.39			1.67		83.5	40-140			
•	1.53	0.34	mg/Kg wet	1.67		91.7	30-130			
,4,6-Trichlorophenol	1.48	0.34	mg/Kg wet	1.67		88.9	30-130			
urrogate: 2-Fluorophenol	5.71		mg/Kg wet	6.67		85.6	30-130			
urrogate: Phenol-d6	6.03		mg/Kg wet	6.67		90.4	30-130			
urrogate: Nitrobenzene-d5	2.85		mg/Kg wet	3.33		85.5	30-130			
urrogate: 2-Fluorobiphenyl	3.68		mg/Kg wet	3.33		110	30-130			
urrogate: 2,4,6-Tribromophenol	6.29		mg/Kg wet	6.67		94.4	30-130			
urrogate: p-Terphenyl-d14	2.92		mg/Kg wet	3.33		87.5	30-130			
.CS Dup (B250530-BSD1)			1	Prepared: 01	/22/20 Anal	yzed: 01/23/2	20			
cenaphthene	1.26	0.17	mg/Kg wet	1.67		75.4	40-140	5.90	30	
cenaphthylene	1.30	0.17	mg/Kg wet	1.67		78.0	40-140	6.48	30	
niline	0.882	0.34	mg/Kg wet	1.67		52.9	40-140	31.6	50	
nthracene	1.35	0.17	mg/Kg wet	1.67		80.8	40-140	2.88	30	
senzo(a)anthracene	1.31	0.17	mg/Kg wet	1.67		78.9	40-140	2.50	30	
enzo(a)pyrene	1.30	0.17	mg/Kg wet	1.67		78.0	40-140	6.74	30	
denzo(b)fluoranthene	1.30	0.17	mg/Kg wet	1.67		78.8	40-140	4.22	30	
Benzo(g,h,i)perylene	1.31	0.17	mg/Kg wet	1.67		77.5	40-140	4.22	30	
Benzo(k)fluoranthene	1.29	0.17	mg/Kg wet	1.67		78.7	40-140	4.79	30	
	1.31	0.1/	***** ** ** ** ** ** ** ** ** ** ** **	1.07		10.7	TO-140	7.17	20	

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#### QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B250530 - SW-846 3546											
LCS Dup (B250530-BSD1)				Prepared: 01	/22/20 Anal	yzed: 01/23/2	20				
Bis(2-chloroethyl)ether	1.25	0.34	mg/Kg wet	1.67		75.1	40-140	2.47	30		
Bis(2-chloroisopropyl)ether	1.62	0.34	mg/Kg wet	1.67		97.1	40-140	3.06	30		
Bis(2-Ethylhexyl)phthalate	1.13	0.34	mg/Kg wet	1.67		68.1	40-140	2.92	30		
4-Bromophenylphenylether	1.30	0.34	mg/Kg wet	1.67		77.7	40-140	4.31	30		
Butylbenzylphthalate	1.15	0.34	mg/Kg wet	1.67		68.9	40-140	4.65	30		
Carbazole	1.28	0.17	mg/Kg wet	1.67		76.7	40-140	5.18	30		
4-Chloroaniline	0.877	0.66	mg/Kg wet	1.67		52.6	40-140	30.3	30	R-05	†
4-Chloro-3-methylphenol	1.42	0.66	mg/Kg wet	1.67		85.5	30-130	6.80	30		
2-Chloronaphthalene	1.25	0.34	mg/Kg wet	1.67		75.1	40-140	6.27	30		
2-Chlorophenol	1.28	0.34	mg/Kg wet	1.67		76.9	30-130	2.90	30		
4-Chlorophenylphenylether	1.33	0.34	mg/Kg wet	1.67		79.6	40-140	6.93	30		
Chrysene	1.26	0.17	mg/Kg wet	1.67		75.6	40-140	4.12	30		
Dibenz(a,h)anthracene	1.34	0.17	mg/Kg wet	1.67		80.4	40-140	2.19	30		
Dibenzofuran	1.36	0.34	mg/Kg wet	1.67		81.8	40-140	6.20	30		
Di-n-butylphthalate	1.28	0.34	mg/Kg wet	1.67		76.7	40-140	5.92	30		
3,3-Dichlorobenzidine	1.07	0.17	mg/Kg wet	1.67		64.4	40-140	26.8	30		† ‡
2,4-Dichlorophenol	1.38	0.34	mg/Kg wet	1.67		82.8	30-130	5.18	30		
Diethylphthalate	1.32	0.34	mg/Kg wet	1.67		79.0	40-140	5.78	30		
2,4-Dimethylphenol	1.26	0.34	mg/Kg wet	1.67		75.8	30-130	3.60	30		
Dimethylphthalate	1.29	0.34	mg/Kg wet	1.67		77.6	40-140	5.61	50		
,6-Dinitro-2-methylphenol	1.14	0.34	mg/Kg wet	1.67		68.3	30-130	5.55	50		
,4-Dinitrophenol	0.825	0.66	mg/Kg wet	1.67		49.5	30-130	8.40	50		
,4-Dinitrotoluene	1.28	0.34	mg/Kg wet	1.67		76.8	40-140	3.33	30		
,6-Dinitrotoluene	1.36	0.34	mg/Kg wet	1.67		81.4	40-140	5.54	30		
Di-n-octylphthalate	1.09	0.34	mg/Kg wet	1.67		65.2	40-140	6.87	30		
luoranthene	1.40	0.17	mg/Kg wet	1.67		84.2	40-140	5.63	30		
Fluorene	1.32	0.17	mg/Kg wet	1.67		79.0	40-140	4.70	30		
Hexachlorobenzene	1.40	0.34	mg/Kg wet	1.67		83.9	40-140	3.79	30		
Hexachlorobutadiene	1.37	0.34	mg/Kg wet	1.67		82.1	40-140	5.70	30		
Hexachlorocyclopentadiene	0.565	0.34	mg/Kg wet	1.67		33.9	30-140	3.31	50	V-05	
Hexachloroethane	1.11	0.34	mg/Kg wet	1.67		66.4	40-140	2.47	50		
Indeno(1,2,3-cd)pyrene	1.49	0.17	mg/Kg wet	1.67		89.6	40-140	0.557	50		
sophorone	1.37	0.34	mg/Kg wet	1.67		82.3	40-140	5.28	30		
-Methylnaphthalene	1.46	0.17	mg/Kg wet	1.67		87.9	40-140	4.12	30		
-Methylphenol	1.22	0.34	mg/Kg wet	1.67		73.2	30-130	3.23	30		
3/4-Methylphenol	1.29	0.34	mg/Kg wet	1.67		77.6	30-130	5.64	30		
Naphthalene	1.27	0.17	mg/Kg wet	1.67		76.3	40-140	3.96	30		
2-Nitroaniline	1.50	0.34	mg/Kg wet	1.67		90.1	40-140	6.05	30		
3-Nitroaniline	1.10	0.34	mg/Kg wet	1.67		65.8	40-140	12.4	30		†
-Nitroaniline	1.26	0.34	mg/Kg wet	1.67		75.6	40-140	8.51	30		
Nitrobenzene	1.38	0.34	mg/Kg wet	1.67		82.6	40-140	3.03	30		
2-Nitrophenol	1.34	0.34	mg/Kg wet	1.67		80.5	30-130	1.87	30		
4-Nitrophenol	1.57	0.66	mg/Kg wet	1.67		94.5	10-130	6.00	50		1
N-Nitrosodiphenylamine/Diphenylamine	1.34	0.34	mg/Kg wet	1.67		80.2	40-140	4.84	30		
N-Nitrosodi-n-propylamine	1.33	0.34	mg/Kg wet	1.67		79.9	40-140	5.41	30		
Pentachloronitrobenzene	1.36	0.34	mg/Kg wet	1.67		81.7	40-140	5.80	30		
Pentachlorophenol	1.00	0.34	mg/Kg wet	1.67		60.2	30-130	10.9	50		
Phenanthrene	1.34	0.17	mg/Kg wet	1.67		80.7	40-140	3.70	30		
Phenol	1.29	0.34	mg/Kg wet	1.67		77.5	20-130	3.02	30		
Pyrene	1.30	0.17	mg/Kg wet	1.67		77.9	40-140	1.68	30		
Pyridine	0.671	0.34	mg/Kg wet	1.67		40.3	10-140	9.51	50		†
1,2,4,5-Tetrachlorobenzene	1.37	0.34	mg/Kg wet	1.67		82.1	40-140	3.40	30		

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#### QUALITY CONTROL

## Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250530 - SW-846 3546										
LCS Dup (B250530-BSD1)	Prepared: 01/22/20 Analyzed: 01/23/20									
1,2,4-Trichlorobenzene	1.34	0.34	mg/Kg wet	1.67		80.4	40-140	3.69	30	
2,4,5-Trichlorophenol	1.43	0.34	mg/Kg wet	1.67		85.9	30-130	6.58	30	
2,4,6-Trichlorophenol	1.39	0.34	mg/Kg wet	1.67		83.2	30-130	6.64	50	
Surrogate: 2-Fluorophenol	5.52		mg/Kg wet	6.67		82.8	30-130			
Surrogate: Phenol-d6	5.82		mg/Kg wet	6.67		87.4	30-130			
Surrogate: Nitrobenzene-d5	2.77		mg/Kg wet	3.33		83.2	30-130			
Surrogate: 2-Fluorobiphenyl	3.46		mg/Kg wet	3.33		104	30-130			
Surrogate: 2,4,6-Tribromophenol	5.95		mg/Kg wet	6.67		89.3	30-130			
Surrogate: p-Terphenyl-d14	2.85		mg/Kg wet	3.33		85.5	30-130			



## 39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

#### QUALITY CONTROL

## Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250593 - SW-846 3540C										
Blank (B250593-BLK1)	Prepared: 01/22/20 Analyzed: 01/24/20									
Aroclor-1016	ND	0.10	mg/Kg							
Aroclor-1016 [2C]	ND	0.10	mg/Kg							
Aroclor-1221	ND	0.10	mg/Kg							
Aroclor-1221 [2C]	ND	0.10	mg/Kg							
Aroclor-1232	ND	0.10	mg/Kg							
Aroclor-1232 [2C]	ND	0.10	mg/Kg							
Aroclor-1242	ND	0.10	mg/Kg							
Aroclor-1242 [2C]	ND	0.10	mg/Kg							
Aroclor-1248	ND	0.10	mg/Kg							
Aroclor-1248 [2C]	ND	0.10	mg/Kg							
Aroclor-1254	ND	0.10	mg/Kg							
Aroclor-1254 [2C]	ND	0.10	mg/Kg							
Aroclor-1260	ND	0.10	mg/Kg							
Aroclor-1260 [2C]	ND	0.10	mg/Kg							
Aroclor-1262	ND	0.10	mg/Kg							
Aroclor-1262 [2C]	ND	0.10	mg/Kg							
Aroclor-1268	ND	0.10	mg/Kg							
Aroclor-1268 [2C]	ND	0.10	mg/Kg							
Total PCB Aroclors	0.0		mg/Kg							
Surrogate: Decachlorobiphenyl	1.10		mg/Kg	1.00		110	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.06		mg/Kg	1.00		106	30-150			
Surrogate: Tetrachloro-m-xylene	0.998		mg/Kg	1.00		99.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.971		mg/Kg	1.00		97.1	30-150			
LCS (B250593-BS1)				Prepared: 01	/22/20 Analy	yzed: 01/24/2	20			
Aroclor-1016	0.85	0.10	mg/Kg	1.00		84.6	40-140			
Aroclor-1016 [2C]	0.86	0.10	mg/Kg	1.00		85.7	40-140			
Aroclor-1260	0.84	0.10	mg/Kg	1.00		83.8	40-140			
Aroclor-1260 [2C]	0.81	0.10	mg/Kg	1.00		81.4	40-140			
Surrogate: Decachlorobiphenyl	0.937		mg/Kg	1.00		93.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.907		mg/Kg	1.00		90.7	30-150			
Surrogate: Tetrachloro-m-xylene	0.863		mg/Kg	1.00		86.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.843		mg/Kg	1.00		84.3	30-150			
LCS Dup (B250593-BSD1)	Prepared: 01/22/20 Analyzed: 01/24/20									
Aroclor-1016	0.84	0.10	mg/Kg	1.00		83.6	40-140	1.19	30	
Aroclor-1016 [2C]	0.84	0.10	mg/Kg	1.00		83.9	40-140	2.19	30	
Aroclor-1260	0.83	0.10	mg/Kg	1.00		83.0	40-140	0.968	30	
Aroclor-1260 [2C]	0.81	0.10	mg/Kg	1.00		81.2	40-140	0.294	30	
Surrogate: Decachlorobiphenyl	0.943		mg/Kg	1.00		94.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.919		mg/Kg	1.00		91.9	30-150			
Surrogate: Tetrachloro-m-xylene	0.863		mg/Kg	1.00		86.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.861		mg/Kg	1.00		86.1	30-150			



#### QUALITY CONTROL

#### Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250619 - SW-846 3546										
Blank (B250619-BLK1)	Prepared & Analyzed: 01/23/20									
СТ ЕТРН	ND	10	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	2.05		mg/Kg wet	3.33		61.6	50-150			
LCS (B250619-BS1)	Prepared & Analyzed: 01/23/20									
СТ ЕТРН	23.6	10	mg/Kg wet	33.3		70.8	60-120			
Surrogate: 2-Fluorobiphenyl	2.46		mg/Kg wet	3.33		73.8	50-150			
LCS Dup (B250619-BSD1)	Prepared & Analyzed: 01/23/20									
СТ ЕТРН	24.3	10	mg/Kg wet	33.3		72.9	60-120	2.92	30	
Surrogate: 2-Fluorobiphenyl	2.41		mg/Kg wet	3.33		72.4	50-150			



# QUALITY CONTROL

# Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250651 - SW-846 7471										
Blank (B250651-BLK1)				Prepared: 01	1/23/20 Anal	yzed: 01/24/	20			
Mercury	ND	0.025	mg/Kg wet							
LCS (B250651-BS1)				Prepared: 01	1/23/20 Anal	yzed: 01/24/	20			
Mercury	8.11	0.39	mg/Kg wet	7.61		107	72.7-127.3			
LCS Dup (B250651-BSD1)				Prepared: 01	1/23/20 Anal	yzed: 01/24/	20			
Mercury	7.98	0.38	mg/Kg wet	7.61		105	72.7-127.3	1.59	20	
Batch B250680 - SW-846 3050B										
Blank (B250680-BLK1)				Prepared: 01	1/23/20 Anal	yzed: 01/24/	20			
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
LCS (B250680-BS1)				Prepared: 01	1/23/20 Anal	yzed: 01/24/	20			
Arsenic	128	5.1	mg/Kg wet	143		89.3	83.2-117.5			
Barium	388	5.1	mg/Kg wet	415		93.5	82.7-117.6			
Cadmium	51.1	0.51	mg/Kg wet	56.2		90.9	82.9-117.3			
Chromium	85.9	1.0	mg/Kg wet	101		85.1	82.4-116.8			
Lead	111	1.5	mg/Kg wet	125		88.8	82.4-116.8			
Selenium	66.4	10	mg/Kg wet	77.9		85.2	79.3-120.7			
Silver	31.3	1.0	mg/Kg wet	34.3		91.4	81-119.2			
LCS Dup (B250680-BSD1)				Prepared: 01	1/23/20 Anal	yzed: 01/24/	20			
Arsenic	122	5.0	mg/Kg wet	143		85.1	83.2-117.5	4.74	30	
Barium	377	5.0	mg/Kg wet	415		91.0	82.7-117.6	2.71	20	
Cadmium	54.6	0.50	mg/Kg wet	56.2		97.2	82.9-117.3	6.60	20	
Chromium	85.1	0.99	mg/Kg wet	101		84.3	82.4-116.8	0.980	30	
Lead	105	1.5	mg/Kg wet	125		84.0	82.4-116.8	5.57	30	
Selenium	62.8	9.9	mg/Kg wet	77.9		80.6	79.3-120.7	5.60	30	
Silver	30.3	0.99	mg/Kg wet	34.3		88.3	81-119.2	3.41	30	
Reference (B250680-SRM1) MRL Check				Prepared: 01	1/23/20 Anal	yzed: 01/24/	20			
Lead	0.432	0.47	mg/Kg wet	0.471		91.7	80-120			



# QUALITY CONTROL

# Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250616 - SW-846 9045C	result		2.110			,				
LCS (B250616-BS1)				Prepared &	Analyzed: 01	/22/20				
рН	6.00		pH Units	6.00		100	90-110			
Duplicate (B250616-DUP1)	Sour	rce: 20A0963-	-01	Prepared &	Analyzed: 01	/22/20				
pH	10		pH Units		10	)		1.12	6.96	
Batch B250645 - SW-846 9014										
Blank (B250645-BLK1)				Prepared &	Analyzed: 01	/23/20				
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B250645-BS1)				Prepared &	Analyzed: 01	/23/20				
Reactive Cyanide	9.4	0.40	mg/Kg	10.0		94.4	82.8-113			
Batch B250646 - SW-846 9030A										
Blank (B250646-BLK1)				Prepared &	Analyzed: 01	/23/20				
Reactive Sulfide	ND	2.0	mg/Kg							
LCS (B250646-BS1)				Prepared &	Analyzed: 01	/23/20				
Reactive Sulfide	14	2.0	mg/Kg	14.8		97.3	57.6-114			



# QUALITY CONTROL

# TCLP - Metals Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250763 - SW-846 3010A										
Blank (B250763-BLK1)				Prepared & A	Analyzed: 01	/24/20				
Arsenic	ND	0.050	mg/L							
Barium	ND	0.50	mg/L							
Cadmium	ND	0.010	mg/L							
Chromium	ND	0.050	mg/L							
Lead	ND	0.10	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.050	mg/L							
LCS (B250763-BS1)				Prepared & A	Analyzed: 01	/24/20				
Arsenic	0.506	0.050	mg/L	0.500		101	80-120			
Barium	0.503	0.50	mg/L	0.500		101	80-120			
Cadmium	0.515	0.010	mg/L	0.500		103	80-120			
Chromium	0.491	0.050	mg/L	0.500		98.2	80-120			
Lead	0.493	0.10	mg/L	0.500		98.6	80-120			
Selenium	0.561	0.050	mg/L	0.500		112	80-120			
Silver	0.578	0.050	mg/L	0.500		116	80-120			
LCS Dup (B250763-BSD1)				Prepared & A	Analyzed: 01	/24/20				
Arsenic	0.484	0.050	mg/L	0.500		96.9	80-120	4.31	20	
Barium	0.496	0.50	mg/L	0.500		99.3	80-120	1.29	20	
Cadmium	0.507	0.010	mg/L	0.500		101	80-120	1.44	20	
Chromium	0.483	0.050	mg/L	0.500		96.6	80-120	1.67	20	
Lead	0.474	0.10	mg/L	0.500		94.8	80-120	3.98	20	
Selenium	0.516	0.050	mg/L	0.500		103	80-120	8.40	20	
Silver	0.571	0.050	mg/L	0.500		114	80-120	1.18	20	
Batch B250764 - SW-846 7470A Prep										
Blank (B250764-BLK1)				Prepared & A	Analyzed: 01	/24/20				
Mercury	ND	0.00010	mg/L							
LCS (B250764-BS1)				Prepared & A	Analyzed: 01	/24/20				
Mercury	0.00386	0.00010	mg/L	0.00400		96.6	80-120			
LCS Dup (B250764-BSD1)				Prepared & A	Analyzed: 01	/24/20				
Mercury	0.00387	0.00010	mg/L	0.00400		96.8	80-120	0.170	20	
Matrix Spike (B250764-MS1)	Sou	rce: 20A0963-	01	Prepared & A	Analyzed: 01	/24/20				
Mercury	0.00367	0.00010	mg/L	0.00400	0.0000404	4 90.7	75-125			



# IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Lab Sample ID:	B250593-BS1		Date(s) Analyzed:	01/24/2020	01/24/202	20
Instrument ID (1):			Instrument ID (2):			
GC Column (1):	ID:	(mm)	GC Column (2):		ID:	(mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
7.10.12172	OOL	111	FROM	TO	OONOLIVITUUTION	70111 D
Aroclor-1016	1	0.000	0.000	0.000	0.85	
	2	0.000	0.000	0.000	0.86	1.2
Aroclor-1260	1	0.000	0.000	0.000	0.84	
	2	0.000	0.000	0.000	0.81	3.6



# **IDENTIFICATION SUMMARY** FOR SINGLE COMPONENT ANALYTES

LCS Dup
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SW-846 8082A

Lab Sample ID:	B250593-BSD1	_	Date(s) Analyzed:	01/24/2020	01/24	/2020
Instrument ID (1):			Instrument ID (2):			
GC Column (1):	ID:	(mm)	GC Column (2):		ID:	(mm)

ANALYTE	COL	RT	RT WI	NDOW	CONCENTRATION	%RPD
7.00.2112	002		FROM	TO	00110211111111111111	70111 2
Aroclor-1016	1	0.000	0.000	0.000	0.84	
	2	0.000	0.000	0.000	0.84	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.83	
	2	0.000	0.000	0.000	0.81	2.4



# FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
RL-12	Elevated reporting limit due to matrix interference.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-17	Internal standard area <50% of associated calibration standard internal standard area. Reanalysis yielded similar internal standard non-conformance.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.



# CERTIFICATIONS

### Certified Analyses included in this Report

Acetone

Certified Analyses included in this Report  Analyte	Certifications
CTDEP ETPH in Soil	
СТ ЕТРН	CT
SW-846 1030 in Soil	
	MVAILLOT NO ME VA
Ignitability	NY,NH,CT,NC,ME,VA
SW-846 6010D in Soil	
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AIHA,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
SW-846 6010D in Water	
Arsenic	NY,CT,NC,ME,NH,VA
Barium	NY,CT,ME,NC,NH,VA
Cadmium	NY,CT,ME,NC,NH,VA
Chromium	NY,CT,ME,NC,NH,VA
Lead	NY,CT,ME,NC,NH,VA
Selenium	CT,ME,NC,NH,NY,VA
Silver	CT,ME,NC,NH,NY,VA
SW-846 7470A in Water	
Mercury	CT,ME,NC,NH,NY,VA
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8082A in Product/Solid	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA
SW-846 8260C-D in Soil	

CT,NH,NY,ME



# CERTIFICATIONS

Analyte	Certifications	
SW-846 8260C-D in Soil		
Acrylonitrile	CT,NH,NY,ME	
Benzene	CT,NH,NY,ME	
Bromobenzene	NH,NY,ME	
Bromodichloromethane	CT,NH,NY,ME	
Bromoform	CT,NH,NY,ME	
Bromomethane	CT,NH,NY,ME	
2-Butanone (MEK)	CT,NH,NY,ME	
n-Butylbenzene	CT,NH,NY,ME	
sec-Butylbenzene	CT,NH,NY,ME	
tert-Butylbenzene	CT,NH,NY,ME	
Carbon Disulfide	CT,NH,NY,ME	
Carbon Tetrachloride	CT,NH,NY,ME	
Chlorobenzene	CT,NH,NY,ME	
Chlorodibromomethane	CT,NH,NY,ME	
Chloroethane	CT,NH,NY,ME	
Chloroform	CT,NH,NY,ME	
Chloromethane	CT,NH,NY,ME	
2-Chlorotoluene	CT,NH,NY,ME	
4-Chlorotoluene	CT,NH,NY,ME	
1,2-Dibromo-3-chloropropane (DBCP)	NY	
Dibromomethane	NH,NY,ME	
1,2-Dichlorobenzene	CT,NH,NY,ME	
1,3-Dichlorobenzene	CT,NH,NY,ME	
1,4-Dichlorobenzene	CT,NH,NY,ME	
trans-1,4-Dichloro-2-butene	NY	
Dichlorodifluoromethane (Freon 12)	NY,ME	
1,1-Dichloroethane	CT,NH,NY,ME	
1,2-Dichloroethane	CT,NH,NY,ME	
1,1-Dichloroethylene	CT,NH,NY,ME	
cis-1,2-Dichloroethylene	CT,NH,NY,ME	
trans-1,2-Dichloroethylene	CT,NH,NY,ME	
1,2-Dichloropropane	CT,NH,NY,ME	
1,3-Dichloropropane	NH,NY,ME	
2,2-Dichloropropane	NH,NY,ME	
1,1-Dichloropropene	NH,NY,ME	
cis-1,3-Dichloropropene	CT,NH,NY,ME	
trans-1,3-Dichloropropene	CT,NH,NY,ME	
Ethylbenzene	CT,NH,NY,ME	
Hexachlorobutadiene	NH,NY,ME	
2-Hexanone (MBK)	CT,NH,NY,ME	
Isopropylbenzene (Cumene)	CT,NH,NY,ME	
p-Isopropyltoluene (p-Cymene)	NH,NY	
Methyl tert-Butyl Ether (MTBE)	NH,NY	
Methylene Chloride	CT,NH,NY,ME	
4-Methyl-2-pentanone (MIBK)	CT,NH,NY	
Naphthalene	NH,NY,ME	
n-Propylbenzene	NH,NY	1808



# CERTIFICATIONS

Analyte	Certifications
SW-846 8260C-D in Soil	
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME
Tetrachloroethylene	CT,NH,NY,ME
Toluene	CT,NH,NY,ME
1,2,4-Trichlorobenzene	NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME
1,1,2-Trichloroethane	CT,NH,NY,ME
Trichloroethylene	CT,NH,NY,ME
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME
1,2,3-Trichloropropane	NH,NY,ME
1,2,4-Trimethylbenzene	CT,NH,NY,ME
1,3,5-Trimethylbenzene	CT,NH,NY,ME
Vinyl Chloride	CT,NH,NY,ME
m+p Xylene	CT,NH,NY,ME
o-Xylene	CT,NH,NY,ME
Xylenes (total)	NH,NY
SW-846 8270D-E in Soil	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Aniline	NY,NH
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
Benzo(g,h,i)perylene	CT,NY,NH
Benzo(k)fluoranthene	CT,NY,NH
Bis(2-chloroethoxy)methane	CT,NY,NH
Bis(2-chloroethyl)ether	CT,NY,NH
Bis(2-chloroisopropyl)ether	CT,NY,NH
Bis(2-Ethylhexyl)phthalate	CT,NY,NH
4-Bromophenylphenylether	CT,NY,NH
Butylbenzylphthalate	CT,NY,NH
4-Chloroaniline	CT,NY,NH
4-Chloro-3-methylphenol	CT,NY,NH
2-Chloronaphthalene	CT,NY,NH
2-Chlorophenol	CT,NY,NH
4-Chlorophenylphenylether	CT,NY,NH
Chrysene	CT,NY,NH
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	NY,NH
1,3-Dichlorobenzene	NY,NH
1,4-Dichlorobenzene	NY,NH
3,3-Dichlorobenzidine	CT,NY,NH



# CERTIFICATIONS

Analyte	Certifications
SW-846 8270D-E in Soil	
2,4-Dichlorophenol	CT,NY,NH
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
4,6-Dinitro-2-methylphenol	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
Fluoranthene	CT,NY,NH
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachlorocyclopentadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
2-Nitroaniline	CT,NY,NH
3-Nitroaniline	CT,NY,NH
4-Nitroaniline	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
N-Nitrosodi-n-propylamine	CT,NY,NH
Pentachloronitrobenzene	NY
Pentachlorophenol	CT,NY,NH
Phenanthrene	CT,NY,NH
Phenol	CT,NY,NH
Pyrene Pyridine	CT,NY,NH
1,2,4,5-Tetrachlorobenzene	NY
1,2,4-Trichlorobenzene	CT,NY,NH
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH
SW-846 8270D-E in Water	C1, C1, C1
	OTANIA MA
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Aniline	CT,NY CT,NY,NH
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH



# CERTIFICATIONS

Analyte	Certifications	
SW-846 8270D-E in Water		
Benzo(g,h,i)perylene	CT,NY,NH	
Benzo(k)fluoranthene	CT,NY,NH	
Bis(2-chloroethoxy)methane	CT,NY,NH	
Bis(2-chloroethyl)ether	CT,NY,NH	
Bis(2-chloroisopropyl)ether	CT,NY,NH	
Bis(2-Ethylhexyl)phthalate	CT,NY,NH	
4-Bromophenylphenylether	CT,NY,NH	
Butylbenzylphthalate	CT,NY,NH	
4-Chloroaniline	CT,NY,NH	
4-Chloro-3-methylphenol	CT,NY,NH	
2-Chloronaphthalene	CT,NY,NH	
2-Chlorophenol	CT,NY,NH	
4-Chlorophenylphenylether	CT,NY,NH	
Chrysene	CT,NY,NH	
Dibenz(a,h)anthracene	CT,NY,NH	
Dibenzofuran	CT,NY,NH	
Di-n-butylphthalate	CT,NY,NH	
1,2-Dichlorobenzene	NY	
1,3-Dichlorobenzene	NY	
1,4-Dichlorobenzene	NY	
3,3-Dichlorobenzidine	CT,NY,NH	
2,4-Dichlorophenol	CT,NY,NH	
Diethylphthalate	CT,NY,NH	
2,4-Dimethylphenol	CT,NY,NH	
Dimethylphthalate	CT,NY,NH	
4,6-Dinitro-2-methylphenol	CT,NY,NH	
2,4-Dinitrophenol	CT,NY,NH	
2,4-Dinitrotoluene	CT,NY,NH	
2,6-Dinitrotoluene	CT,NY,NH	
Di-n-octylphthalate	CT,NY,NH	
Fluoranthene	CT,NY,NH	
Fluorene	NY,NH	
Hexachlorobenzene	CT,NY,NH	
Hexachlorobutadiene	CT,NY,NH	
Hexachlorocyclopentadiene	CT,NY,NH	
Hexachloroethane	CT,NY,NH	
Indeno(1,2,3-cd)pyrene	CT,NY,NH	
Isophorone 2 Mathylpophthalona	CT,NY,NH	
2-Methylnaphthalene 2-Methylphenol	CT,NY,NH CT,NY,NH	
3/4-Methylphenol	CT,NY,NH	
	CT,NY,NH	
Naphthalene 2-Nitroaniline	CT,NY,NH CT,NY,NH	
3-Nitroaniline	CT,NY,NH CT,NY,NH	
4-Nitroaniline	CT,NY,NH CT,NY,NH	
4-Nitroaniline Nitrobenzene	CT,NY,NH CT,NY,NH	
2-Nitrophenol	CT,NY,NH CT,NY,NH	
2 Introphenor	C1,111,1111	1001



# CERTIFICATIONS

# Certified Analyses included in this Report

Analyte	Certifications	
SW-846 8270D-E in Water		
4-Nitrophenol	CT,NY,NH	
N-Nitrosodi-n-propylamine	CT,NY,NH	
Pentachlorophenol	CT,NY,NH	
Phenanthrene	CT,NY,NH	
Phenol	CT,NY,NH	
Pyrene	CT,NY,NH	
Pyridine	CT,NY,NH	
1,2,4,5-Tetrachlorobenzene	NY	
1,2,4-Trichlorobenzene	CT,NY,NH	
2,4,5-Trichlorophenol	CT,NY,NH	
2,4,6-Trichlorophenol	CT,NY,NH	
SW-846 9095B in Soil		

Free Liquid NY

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Publile Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

	Page of	# of Containers	<sup>2</sup> Preservation Code	<sup>3</sup> Container Code	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	O Field Filtered	O Lab to Filter		The delication of the second o	O Field Filtered			1 Matrix Codes:	GW = Ground Water WW = Waste Water	DW = Drinking Water A = Air	S = Soil	SQL = SONG	0 = Other (please	neares)	<sup>2</sup> Preservation Codes:	H = HCL	M = Methanol	S = Sulfuric Acid	X = Sodium Hydroxide	T = Sodium	O = Other (please define)	<sup>3</sup> Container Codes:	A = Amber Glass G = Glass	P = Plastic	ST = Sterile V = Vial	S = Summa Canister	0 = Other (please	define)		PCB ONLY Soxhiet	ž
03242017	39 Spruce Street East Longmeadow, MA 01028				ANAL YSIS REQUESTED					1444	13 (A)	+ 10 1+2 1+3 10 1+0	1100 Les	×	X											Please use the following codes to indicate possible sample concentration	within the Coll. Cude Collain above: H - High; M - Medium; L - Low; C - Clean; U - Unknown			*4774-900	ANALYTICAL LABORATORY	www.contextlabs.com		NELAC and AltA-LAP, LLC Accredited	Other Chromatogram	☐ AIHA-LAP,LLC
http://www.contestlabs.com Doc # 381 Rev 1_03242017	CHAIN OF CUSTODY RECORD	10-Day		novel standings	_	7 <u>7,1</u>	DUSTUS	Excel X		kequired:	: golutions, Com	56	Grab Metrix Conc	>				- American								Please use the following codes to	H - High; M - Medium; L	Special Requirements	MA MCP Required	P Certifica	PCD Configuration Forms By	RCF Certification Form Required	MA State DW Regured	# disma	Municipality	21 J School Brownfield MBTA
		n 7-Day	Due Date:		1-Day	A 2-Day	K.J.	Format: PDF		CLP Like Do	Email To:		Beginning Ending Composite	016104591	<u> </u>												43 25 17	Betweet from Missil Wespethern					1 1	Olenar	Project Entity  Government	Federal City
	Phone: 413-525-2332 2C/# 0 46 5	Email: info@contestlabs.com	TR.C.	Rd N Windsor, CT	. ~	Parcel	taver, c	,000008,00000 i		-3018011 English Station	Ą	81025-62	Client Sample ID / Description	TRC-401-50110-02		White the same of									THE PROPERTY OF THE PROPERTY O	call Matt Blunstern	203 543		1/24/20	Date/Time:	Date/Time		Date/Time:		Date/Time:	Date/Time:
	ANALYTICAL LABORATORY	メエス		Address: 2   Griffin	Phone: 860 - 298 - 969	English Station	Project Location: 510 A Gran	163951	Project Manager: Carl 5H	ie/Num	Invoice Recipient: Carl 5+0	Sampled By: Matt 8102	Con-Test Work Order#	-												Comments: Suestions Call		Retinquished by, (signature)	Mayor Oberton	Received by: (signature)	Kelinguished by Tsignature)	(2)	eceived by: (signature)	1900 Dag	e delinquished by: (signature)	eceived by: (signature)

I Have Not Confirmed Sample Container
Numbers With Lab Staff Before Relinquishing
Over Samples\_\_\_\_\_



Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any Falso	3
Statement will be brought to the attention of the Client - State True or False	

Client	TRC							
Receiv	ed By	246		Date	1122120	Time	1416	
How were th	•	In Cooler	<u>T</u>	No Cooler	On Ice		No Ice	
receiv	ed?	Direct from Sam	pling		Ambient		Melted Ice	
1.07	6. 91.5.		By Gun #	$\overline{2}$	Actual Te	mp- <u>5,8</u>	<del>_</del>	
Were samp		T	By Blank #		Actual Te		<del></del>	
Temperatu			- ' -				nla	
	Custody Se		<u>Nla</u>	•	re Samples Tampere		1714	
	COC Relin	•		•	s Chain Agree With S	ampies :	<del></del>	
		eaking/loose caps	s on any sam		nples received within	haldina tima?	, "	
Is COC in in	•	Client		Analysis	Mark and the second sec	oler Name		
pertinent Inf		Project		. Alialysis . ID's	<del></del>	n Dates/Time	<u> </u>	
•		d out and legible?		. 103	Ooneono	ii Dates/ Time	,3	
Are there La		-		-	Who was notified?			
Are there Ru		•		•	Who was notified?	Alex As	1-1-1 1-11	
Are there Sh				•	Who was notified?	Arex, As	shly, Ashley	
Is there enou				-	willo was notified?	B20_	Ashley	
	-			•	MS/MSD? F		*	
	•	ere applicable?	<u>pla</u>	•	Is splitting samples re	—		
Proper Media				•	On COC? F	equileu :	L	
Were trip bla				Aoid	**************************************	 Base	Na	
Do all sampl	es have the			Acid	<u>Na</u>	base	11/0	
Vials	#	Containers:	#		#	1		#
Unp-		1 Liter Amb.	<b></b>	1 Liter			oz Amb.	
HCL-	· ·	500 mL Amb.		500 mL			mb/Clear	4
Meoh-		250 mL Amb.		250 mL		<del> </del>	mb/Clear	
Bisulfate- DI-		Flashpoint Other Glass		Col./Ba			mb/Clear ncore	
Thiosulfate-	<u>a</u>	SOC Kit	<del>                                     </del>	Plastic		Frozen:	ncore	
Sulfuric-		Perchlorate		Zipl		1102611.		
Culture-		reremorate						
				Unused I	Media #	1		# 1
Vials	*	Containers: 1 Liter Amb.	#	1 Liter		16.6	oz Amb.	99
Unp- HCL-	·····	500 mL Amb.	<del></del>	500 mL		····	mb/Clear	
Meoh-		250 mL Amb.		250 mL			mb/Clear	
Bisulfate-		Col./Bacteria		Flash			mb/Clear	<del></del>
Disuitate-	<del></del>	Other Plastic		Other			ncore	
Thiosulfate-		SOC Kit	<del> </del>	Plastic	<del></del>	Frozen:		
Sulfuric-		Perchlorate		Zipl		7		
Comments:		1		, <u></u> , p.				

### C:\MSDCHEM\2\DATA\B012320\B0123006.D

# **CT ETPH Discrimination Check**

Data File Name B0123006.D
Data File Path C:\MSDCHEM\2\DATA\B012320\
Operator RMW
Date Acquired 1/23/1920 8:37
Acq. Method File EPH04.M
Sample Name ETPH 1500

Instrument Name GCFID2

Name	Ret Time	Target Response	Average Response	*%D+/-20
n-Nonane	1.26	7641398	8596343	11
n-Decane	2.02	7819367	8596343	9
n-Dodecane	3.03	8023410	8596343	7
n-Tetradecane	3.75	8284184	8596343	4
n-Hexadecane	4.37	8455477	8596343	2
n-Octadecane	4.91	8643572	8596343	-1
n-Eicosane	5.46	8804179	8596343	-2
n-Docosane	6.14	8926032	8596343	-4
n-Tetracosane	6.93	9052202	8596343	-5
n-Hexacosane	7.75	9116753	8596343	-6
n-Octacosane	8.49	9159033	8596343	-7
n-Triacontane	9.18	9184649	8596343	-7
n-Dotriacontane	9.82	8867783	8596343	-3
n-Tetratriacontane	10.41	8687712	8596343	-1
n-Hexatriacontane	10.97	8279396	8596343	4

# **Samples**

\*One compound allowed %D</=50

20A0445-04RE1 20A0900-01@10X 20A0963-01@400X

C:\MSDCHEM\CUSTRPT\PET\_NS\_F.CRT



# REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Labora	atory Name:	Con-Test Analytical Laboratory	Client: TRC Enviro	nmental Corporation - CT					
Projec	t Location:	510A Grand Ave., New Haven, CT	Project Number:	20A0963					
Labora	atory Sample I	ID(s):	Sample Date(s):						
20A09	963-01		01/22/2020						
	CP Methods U	Sw-846 6010D, Sw-846 7470A, Sw-846 7471B, Sw-846 80	082A, SW-846 8260C-D, SW-846 8270D-E						
1	performance cri	ical method referenced in this laboratory report packag iteria followed, including the requirement to explain a lelines, as specified in the CTDEP method-specific Re nents?	ny criteria falling outside of	✓ Yes No					
1A	Were the metho	od specified preservation and holding time requirement	ts met?	✓ Yes No					
1B		Methods only: Was the VPH and EPH method conductive Section 11.3 of respective RCP methods)?	cted without significant	☐ Yes ☐ No ☑ N/A					
2		es received by the laboratory in a condition consistent n-of-custody document(s)?	with that described on the	✓ Yes No					
3	Were samples re	eceived at an appropriate temperature (< 6 degrees C.)	?	Yes No					
4	Were all QA/Q0 documents achi	C performance criteria specified in the CTDEP Reason leved?	nable Confidence Protocol	Yes No					
5A	Were reporting	limits specified or referenced on the chain-of-custody	?	✓ Yes No					
5B	Were these repo	orting limits met?		Yes ✓ No					
6	all constituents	ical method referenced in this laboratory report packag identified in the method-specific analyte lists presente stocol documents?		Yes No					
7	Are project-spe	cific matrix spikes and laboratory duplicates included	in this data set?	Yes ✓ No					
must b	be provided in an a eet the requiremen	to which the response was "No" (with the exception of attached narrative. If the answer to question #1, #1A, of the for "Reasonable Confidence." (Itered and all questions must be answered.	•	Lisa A. Worthingto					
and	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.								
Aut	horized Signa	nture: husa Worthungton	Position: <u>Technical Represen</u>	<u>itative</u>					
Prir	nted Name: <u>I</u>	Lisa A. Worthington	Date: <u>01/24/20</u>						
Nan	ne of Laborat	tory: Con-Test Analytical Laboratory							

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



February 13, 2020

Carl Stopper TRC Environmental Corporation - CT 21 Griffin Road North Windsor, CT 06095

Project Location: 510A Grand Ave., New Haven, CT

Client Job Number:

Project Number: 263951.000028.000001 Laboratory Work Order Number: 20B0447

Keny K. Mille

Enclosed are results of analyses for samples received by the laboratory on February 11, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kerry K. McGee Project Manager

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TRC Environmental Corporation - CT 21 Griffin Road North Windsor, CT 06095

ATTN: Carl Stopper

REPORT DATE: 2/13/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 263951.000028.000001

### ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20B0447

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 510A Grand Ave., New Haven, CT

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TRC-AOC-1-CO-01 (0-0.5")	20B0447-01	Concrete		CTDEP ETPH	
TRC-AOC-1-CO-02 (0-0.5")	20B0447-02	Concrete		CTDEP ETPH	
TRC-AOC-1-CO-03 (0-0.5")	20B0447-03	Concrete		CTDEP ETPH	
TRC-AOC-1-CO-04 (0-0.5")	20B0447-04	Concrete		CTDEP ETPH	
TRC-AOC-1-CO-05 (0-0.5")	20B0447-05	Concrete		CTDEP ETPH	
EB021120-CO	20B0447-06	Equipment Blank Water		CTDEP ETPH	



### CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

### CTDEP ETPH

### Qualifications:

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences. Analyte & Samples(s) Qualified:

### 2-Fluorobiphenyl

 $20B0447-01[TRC-AOC-1-CO-01\ (0-0.5")], 20B0447-02[TRC-AOC-1-CO-02\ (0-0.5")], 20B0447-04[TRC-AOC-1-CO-04\ (0-0.5")], 20B0447-05[TRC-AOC-1-CO-05\ (0-0.5")], 20B047-05[TRC-AOC-1-CO-05\ (0-0.5")], 20B047-05[TRC-AOC-1-CO-05\ (0-0.5")], 20B047-05[TRC-AOC-$ (0-0.5")

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Technical Representative

Lua Watslengton



Project Location: 510A Grand Ave., New Haven, CT Sample Description: Work Order: 20B0447

Date Received: 2/11/2020

Field Sample #: TRC-AOC-1-CO-01 (0-0.5") Sampled: 2/11/2020 11:05

Sample ID: 20B0447-01 Sample Matrix: Concrete

### Petroleum Hydrocarbons Analyses

	A a last -	D14-	DI	TI24	D:14:	FI/01	Mathad	Date	Date/Time	A l4
СТ ЕТРН	Analyte	Results 17000	<b>RL</b> 4800	Units mg/Kg	Dilution 100	Flag/Qual	Method CTDEP ETPH	2/11/20	Analyzed 2/12/20 14:03	Analyst RDD
	Surrogates		% Recovery	Recovery Limits	3	Flag/Qual				
2-Fluorobinheny	1		*	50-150		S-01			2/12/20 14:03	



Project Location: 510A Grand Ave., New Haven, CT Sample Description: Work Order: 20B0447

Date Received: 2/11/2020

Field Sample #: TRC-AOC-1-CO-02 (0-0.5") Sampled: 2/11/2020 11:10

Sample ID: 20B0447-02 Sample Matrix: Concrete

Dotroloum	Hydrocarbons	Analyses
Petroleum	Hydrocardons	Anaivses

					TI (0 )		Date	Date/Time	
Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Prepared	Analyzed	Analyst
СТ ЕТРН	40000	5000	mg/Kg	100		CTDEP ETPH	2/11/20	2/12/20 14:24	RDD
Surrogates		% Recovery	Recovery Limits	3	Flag/Qual				
2-Fluorobinhenyl		*	50-150		S-01			2/12/20 14:24	



Project Location: 510A Grand Ave., New Haven, CT Sample Description: Work Order: 20B0447

Date Received: 2/11/2020

Field Sample #: TRC-AOC-1-CO-03 (0-0.5") Sampled: 2/11/2020 11:15

Sample ID: 20B0447-03
Sample Matrix: Concrete

### Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
СТ ЕТРН	1800	500	mg/Kg	10		CTDEP ETPH	2/11/20	2/12/20 13:23	RDD
Surrogates		% Recovery	Recovery Limits	s	Flag/Qual				
2-Fluorohinhenyl		62.6	50-150					2/12/20 13:23	

12



Project Location: 510A Grand Ave., New Haven, CT Work Order: 20B0447 Sample Description:

Date Received: 2/11/2020

Sampled: 2/11/2020 11:20 Field Sample #: TRC-AOC-1-CO-04 (0-0.5")

Sample ID: 20B0447-04 Sample Matrix: Concrete

### Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
СТ ЕТРН	6400	990	mg/Kg	20		CTDEP ETPH	2/11/20	2/12/20 14:03	RDD
Surrogates		% Recovery	Recovery Limits	3	Flag/Qual				
2-Fluorobiphenyl		*	50-150		S-01			2/12/20 14:03	



Project Location: 510A Grand Ave., New Haven, CT Work Order: 20B0447 Sample Description:

Date Received: 2/11/2020

Sampled: 2/11/2020 11:25 Field Sample #: TRC-AOC-1-CO-05 (0-0.5")

Sample ID: 20B0447-05 Sample Matrix: Concrete

### Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
СТ ЕТРН	25000	4800	mg/Kg	100		CTDEP ETPH	2/11/20	2/12/20 13:43	RDD
Surrogates		% Recovery	Recovery Limits	6	Flag/Qual				
2-Fluorobiphenyl		*	50-150		S-01			2/12/20 13:43	



Project Location: 510A Grand Ave., New Haven, CT Work Order: 20B0447 Sample Description:

Date Received: 2/11/2020

Sampled: 2/11/2020 11:45 Field Sample #: EB021120-CO

Sample ID: 20B0447-06

Sample Matrix: Equipment Blank Water

### Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
СТ ЕТРН	ND	0.15	mg/L	1		CTDEP ETPH	2/11/20	2/12/20 13:03	RDD
Surrogates		% Recovery	Recovery Limits	s	Flag/Qual				
2-Fluorobiphenyl		82.7	50-150					2/12/20 13:03	

2-Fluorobiphenyl



# **Sample Extraction Data**

# Prep Method: SW-846 3546-CTDEP ETPH

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
20B0447-01 [TRC-AOC-1-CO-01 (0-0.5")]	B252018	6.22	1.00	02/11/20
20B0447-02 [TRC-AOC-1-CO-02 (0-0.5")]	B252018	6.00	1.00	02/11/20
20B0447-03 [TRC-AOC-1-CO-03 (0-0.5")]	B252018	6.00	1.00	02/11/20
20B0447-04 [TRC-AOC-1-CO-04 (0-0.5")]	B252018	6.05	1.00	02/11/20
20B0447-05 [TRC-AOC-1-CO-05 (0-0.5")]	B252018	6.30	1.00	02/11/20

### Prep Method: SW-846 3510C-CTDEP ETPH

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20B0447-06 [EB021120-CO]	B252001	1000	1.00	02/11/20



# QUALITY CONTROL

# Petroleum Hydrocarbons Analyses - Quality Control

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B252001 - SW-846 3510C										
Blank (B252001-BLK1)				Prepared: 02	2/11/20 Anal	yzed: 02/12/2	20			
СТ ЕТРН	ND	0.15	mg/L							
Surrogate: 2-Fluorobiphenyl	0.0904		mg/L	0.100		90.4	50-150			
LCS (B252001-BS1)				Prepared: 02	2/11/20 Anal	yzed: 02/12/2	20			
CT ETPH	0.693	0.15	mg/L	1.00		69.3	60-120			
Surrogate: 2-Fluorobiphenyl	0.0856		mg/L	0.100		85.6	50-150			
LCS Dup (B252001-BSD1)				Prepared: 02	2/11/20 Anal	yzed: 02/12/2	20			
СТ ЕТРН	0.695	0.15	mg/L	1.00		69.5	60-120	0.305	30	
Surrogate: 2-Fluorobiphenyl	0.0818		mg/L	0.100		81.8	50-150			
Batch B252018 - SW-846 3546										
Blank (B252018-BLK1)				Prepared: 02	2/11/20 Anal	yzed: 02/12/2	20			
СТ ЕТРН	ND	50	mg/Kg							
Surrogate: 2-Fluorobiphenyl	13.8		mg/Kg	16.7		82.5	50-150			
LCS (B252018-BS1)				Prepared: 02	2/11/20 Anal	yzed: 02/12/2	20			
СТ ЕТРН	124	50	mg/Kg	167		74.6	60-120			
Surrogate: 2-Fluorobiphenyl	13.2		mg/Kg	16.7		79.1	50-150			
LCS Dup (B252018-BSD1)				Prepared: 02	2/11/20 Anal	yzed: 02/12/2	20			
СТ ЕТРН	124	50	mg/Kg	167		74.2	60-120	0.551	30	
Surrogate: 2-Fluorobiphenyl	13.6		mg/Kg	16.7		81.7	50-150			



# FLAG/QUALIFIER SUMMARY

†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

QC result is outside of established limits.



# CERTIFICATIONS

# Certified Analyses included in this Report

Analyte Certifications

CTDEP ETPH in Soil

CT ETPH CT

CTDEP ETPH in Water

CT ETPH CT

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2021
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

	Page of	# of Containers	<sup>2</sup> Preservation Code	<sup>3</sup> Container Code		O Field Filtered	O Lab to Filter		COLUMN CO			1 Matrix Codes: GW = Ground Water	WW = Waste Water DW = Drinking Water	A = Air S = Soil	SL = Sludge	0 = Other (please	CONCRETE	2 Preservation Codes:	H = HCL	N = Nitric Acid	B = Sodium Bisulfate	T = Sodium	O = Other (please define)		<sup>3</sup> Container Codes: A = Amber Glass	G = Glass P = Plastic	ST = Sterile		<del></del>	define)		PCB ONLY	Saxhlet
Doc # 381 Rev 1_03242017 39 Grence Greet	East Longmeadow, MA 01028				ANALYSIS REQUESTED																		Please use the following codes to indicate possible sample concentration	within the Conc Code column above:	H - High; M - Medium; L - Low; C - Clean; U - Unknown	pa		Ded Ded			NELAC and AHA-LAP, LLC Accredited	Other	A Chromatogram
http://www.contestlabs.com Doc# 36	USICUT RECURE	10-Day [		7	3-Day	4-Day	2 40	EAUEL	Pour irod	Stoppe (1) + teampres. H	<i>"</i>	e Grab Matrix Cont	0 0	У 2 0	о Х	2 ×	0	× 7 ×					Please use the followin	withi	H - High; M - M	Special Requirements  MA MCP Required	Certifica	X CT RCP Required	RCP Certification Form Required	MA State DW Required	# GISMd		Municipality MWRA
http://www	DO JO NIHO	m 7-Day □	Due Date:	17 C T		Cel A 2-Day 🗙	A 100 100001	2	Sector's	Email To:	#	Beginning Ending Composite	2/11/20 1105	12/1/20 1110	2/11/20 111 5	211 02/11/2	12/1//20 1125	3/11/20/1145								Metastas Mah Regimenan			CT KSRs		(2)	Project Entity	
	Phone: 413-525-2332 Fax: 413-525-6405	Email: info@contestlabs.com	I RC	RAN Windson	7	English Station Porcel	Ave	10000 :02000	5-101 Fr. 161	Stopper	620	Client Sample ID / Description	TRE ADE 1- CO-01 (0-0.5")	TRC-40C-1-C0-02 (0-0.5")	1.5.0-0) E0-0)-1-104-1)J	16-401-1-10-04 (0-0,5)	TR(-AOC-1-60-05 60-05") 2/11/20	EB 02 1120 - Co		in the state of th					· · · · · · · · · · · · · · · · · · ·	Date/Time 1410		1 4 1 30 Q.C.	1 2 1 2 1 1 2 1 1 2 1 1 2 1 2 1 2 1 2 1		1000 2/11/2020	Date/Time:	_
	ANALYTICAL LABORATORY	Lem 2080447	Tarrest clinic	21 Gr	Phone: 860-298-464		5 10A G	N	CS-1	nvoice Recipient: Com Sto	ampled By: Matt Blumstein	Con-Test Work Order#	<u>ド</u>	业 2	7 S T		7 T	See E					Comments:			Will Differ Charles	ecerved by: (signature)	Imolary ley	Included by Sugarate Jen	Sceived by (signature)		Hinquished by: (signature)	

I Have Not Confirmed Sample Container
Numbers With Lab Staff Before Relinquishing
Over Samples\_\_\_\_\_



Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client TRC	. (7)		D-1-		***			<del></del>
Received By	<u>u</u>		Date	2-11-70	70	Time	1600	
How were the samples	In Cooler	Т	No Cooler		On Ice	<u> </u>	No Ice	
received?	Direct from Samp	ling	•		Ambient		Melted Ice	
More complex within	·	By Gun #	2		Actual Tem	p - 5, 5		
Were samples within Temperature? 2-6°C	_	By Blank #		•	Actual Tem			
Was Custody S		NA NA		,	s Tampered		NA.	
Was COC Relin		<u> </u>	•	•	ee With Sa		7	•
Are there broken/l	•	on any sam	•	r F	00 11.1.1.00			
Is COC in ink/ Legible?	-	on any cam	•	noles receiv	ved within h	olding time?	ĩ	
Did COC include all	Client	T	Analysis	1		er Name	ĺ	•
pertinent Information?	Project		ID's	<del>-</del>	•	Dates/Times		
Are Sample labels filled	<del>=</del>	Ť	•					
Are there Lab to Filters'	_	F	•	Who was	s notified?			
Are there Rushes?		T	•			Mile		
Are there Short Holds?		F	•	Who was	s notified?			
Is there enough Volume	?	ı	•					
Is there Headspace who		NA	•	MS/MSD?	F			
Proper Media/Container		7	•	Is splitting	samples red	- quired?	F	
Were trip blanks receive		F	•	On COC?	-	•		
Do all samples have the		NA	Acid			Base		
Vials #	Containers:	#			#			#
Unp-	1 Liter Amb.		1 Liter	Plastic		16 o	z Amb.	
HCL-	500 mL Amb.		500 mL	. Plastic			mb/Clear	
Meoh-	250 mL Amb.		<del></del>	. Plastic			nB/Clear	5
Bisulfate-	Flashpoint	*,*		acteria		·	mb/Clear	
DI-	Other Glass			Plastic			core	
Thiosulfate-	SOC Kit			c Bag	,	Frozen:		I
Sulfuric-	Perchlorate		Zipl	ock				
			Unused l	Media				
Vials #	Containers:	#		<b>-</b>	#	4.0		7
Unp-	1 Liter Amb.			Plastic			z Amb.	
HCL-	500 mL Amb.			. Plastic			mb/Clear mb/Clear	
Meoh-	250 mL Amb. Col./Bacteria			Plastic		<del> </del>	nb/Clear	
Bisulfate- DI-	Other Plastic			npoint Glass		<del></del>	ncore	
Thiosulfate-	SOC Kit			c Bag		Frozen:	icore	L
Sulfuric-	Perchlorate			lock		1 102011.		
Comments:	1 oromorate		ے ا	look		<b>!</b>		

### C:\MSDCHEM\4\DATA\D021120.SEC\D0211047.D

# **CT ETPH DISCRIMINATION CHECK**

Data File Name D0211047.D

Data File Path C:\MSDCHEM\4\DATA\D021120.SEC\
Operator RMW

Date Acquired 2/12/1920 10:03

Acq. Method File EPH11D.M
Sample Name ETPH 1500

Instrument Name GCFID4

	Name	Ret Time	Target Response	Average Response	*%D+/-20
C-9		1.61	9808924	11260126	13
C-10		2.26	10197996	11260126	9
C-12		3.19	10814645	11260126	4
C-14		3.91	11233027	11260126	0
C-16		4.52	11457031	11260126	-2
C-18		5.06	11629622	11260126	-3
C-20		5.66	11664964	11260126	-4
C-22		6.40	11674057	11260126	-4
C-24		7.23	11708381	11260126	-4
C-26		8.04	11635058	11260126	-3
C-28		8.78	11676673	11260126	-4
C-30		9.46	11624113	11260126	-3
C-32		10.09	11372631	11260126	-1
C-34		10.69	11333345	11260126	-1
C-36		11.26	11071429	11260126	2

# <u>Samples</u>

20B0447-06 20B0447-03@10X 20B0447-05@100X 20B0447-01@100X \*One compound allowed %D</=50%

C:\MSDCHEM\CUSTRPT\PET\_NS\_01B.CRT

Page 17 of 19

# C:\MSDCHEM\4\DATA\D021120\D0211046.D

# **CT ETPH DISCRIMINATION CHECK**

Data File Name D0211046.D

Data File Path C:\MSDCHEM\4\DATA\D021120\

Operator RMW

Date Acquired 2/12/1920 9:46
Acq. Method File EPH11D.M
Sample Name ETPH 1500
Instrument Name GCFID4

	Name	Ret Time	Target Response	Average Response	*%D+/-20
C-9		1.52	7582835	8577058	12
C-10		2.21	7801368	8577058	9
C-12		3.17	8181615	8577058	5
C-14		3.89	8485142	8577058	1
C-16		4.51	8695534	8577058	-1
C-18		5.06	8942095	8577058	-4
C-20		5.67	8972665	8577058	-5
C-22		6.41	9010507	8577058	-5
C-24		7.25	9026647	8577058	-5
C-26		8.06	8940457	8577058	-4
C-28		8.81	8910281	8577058	-4
C-30		9.49	8783737	8577058	-2
C-32		10.13	8553735	8577058	0
C-34		10.73	8485816	8577058	1
C-36		11.31	8283433	8577058	3
C-34		10.73	8485816	8577058	1

<u>Samples</u> 20B0447-04@20X 20B0447-02@100X \*One compound allowed %D</=50%



# REASONABLE CONFIDENCE PROTOCOL LABORATORY ANALYSIS QA/QC CERTIFICATION FORM

Client: TRC Environmental Corporation - CT Con-Test Analytical Laboratory Laboratory Name: **Project Number:** 20B0447 Project Location: 510A Grand Ave., New Haven, CT Laboratory Sample ID(s): Sample Date(s): 20B0447-01 thru 20B0447-06 02/11/2020 List RCP Methods Used: CTDEP ETPH ✓ Yes ☐ No 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 CTDEP method-specific Reasonable Confidence Protocol documents? ✓ Yes No 1A Were the method specified preservation and holding time requirements met? Yes ☐ No VPH and EPH Methods only: Was the VPH and EPH method conducted without significant 1R ✓ N/A modifications (see Section 11.3 of respective RCP methods)? ✓ Yes No Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)? ✓ Yes No Were samples received at an appropriate temperature (< 6 degrees C.)? 3 □ N/A Yes ✓ No Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved? Yes ✓ No 5A Were reporting limits specified or referenced on the chain-of-custody? No Yes Were these reporting limits met? ✓ Yes No 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 this data set? Notes: For all questions to which the response was "No" (with the exception of question #7), additional information Lisa A. Worthington 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. husa Worthungton **Authorized Signature:** Position: Technical Representative Printed Name: Lisa A. Worthington Date: 02/13/20 Name of Laboratory: Con-Test Analytical Laboratory

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

**APPENDIX N** 

**Photographs** 



Photo 1: 5/15/19, Station B basement asbestos abatement containment.

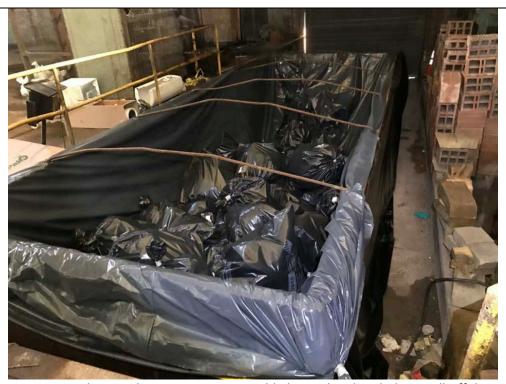


Photo 2: 5/15/2019, Station B asbestos abatement waste. Double bagged and sealed in a roll-off dumpster.



Photo 3: 5/17/2019, Station B basement asbestos containment and negative air machine with HEPA filter.



Photo 4: 5/31/2019, Station B interior asbestos abatement containment.



Photo 5: 6/7/2019, Asbestos abatement contractor removing exterior windows from the western side of Station B.



Photo 6: 6/11/2019, Asbestos abatement contractor removing exterior windows from the western side of Station B.



Photo 7: 6/14/2019, Asbestos abatement contractor preparing a work area on the northern side of Station B.



Photo 8: 6/14/2019, United Illuminating disconnecting electrical service to Station B.



Photo 9: 6/14/2019, Asbestos abatement contractor removing exterior windows from the northern side of Station B.



Photo 10: 6/20/2020, Exterior windows removed from the western and part of the northern side of Station B.



Photo 11: 6/21/2019, Asbestos abatement contractor removing exterior windows from the eastern side of Station B.



Photo 12: 6/28/2019, Northeast corner of Station B after all exterior windows have been removed.



Photo 13: 7/3/2019, United Illuminating disconnecting 480-volt electrical service to English Station.



Photo 14: 7/12/2019, Conduit trench for the realignment of 480-volt service.

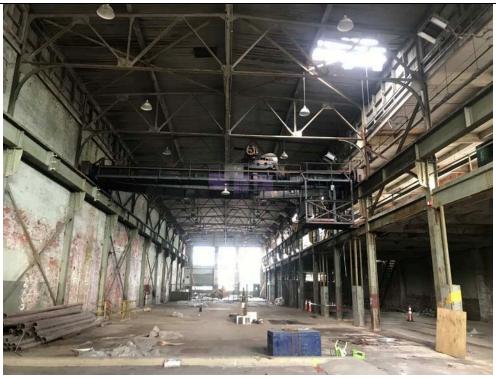


Photo 15: 7/17/2019, Pre-demolition inspection inside Station B.



Photo 16: 7/17/2019, Demolition of the abandoned boat adjacent to Station B.