

IMMEDIATE RESPONSE ACTION PLAN

RELEASE TRACKING NUMBER 3-35941

**RECREATIONAL AREA
90 OAK STREET
NATICK, MASSACHUSETTS 01760**

Prepared For:

**TOWN OF NATICK
13 EAST CENTRAL STREET
NATICK, MASSACHUSETTS 01760**

Prepared By:

**CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
31 BELLOWS ROAD
RAYNHAM, MASSACHUSETTS 02767**

CEC Project 195-909

JANUARY 2020



Civil & Environmental Consultants, Inc.

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1.0 INTRODUCTION

Civil & Environmental Consultants, Inc. (CEC) has prepared this Immediate Response Action (IRA) Plan on behalf of the Town of Natick, Massachusetts, pursuant to the provisions of 310 CMR 40.0000, the Massachusetts Contingency Plan (MCP). This IRA Plan is being submitted to the Massachusetts Department of Environmental Protection (MassDEP) in connection with a release of polychlorinated biphenyls (PCBs) identified at the Property located at 90 Oak Street in Natick, Massachusetts (the Town Property), and on two adjacent properties. MassDEP has assigned Release Tracking Number (RTN) 3-35941 to the release (the Disposal Site). On December 4, 2019, MassDEP issued Notices of Responsibility (NORs) for RTN 3-35941 to the following entities: the Town of Natick; Speedway, LLC; and Elaine Investments, LLC. A copy of the NOR issued to the Town of Natick (Natick) is included in Appendix A. A Site Locust Map is included as Figure 1. This IRA Plan addresses only the portion of the Disposal Site on Natick property and those response actions occurring on property owned by Natick.

A completed and signed Bureau of Waste Site Cleanup (BWSC) Immediate Response Action (IRA) Transmittal Form (BWSC-105) and a Release Notification and Retraction Form (BWSC-103) has been electronically submitted to the MassDEP via the eDEP online filing system.

1.1 BACKGROUND

Based on prior reports, Natick believes that on September 2, 2014, Speedway, LLC (Speedway), the owner of the Speedway Gas Station (Store #2507), located at 233 Worcester Street (Route 9) in Natick, Massachusetts, obtained knowledge of the detection of polychlorinated biphenyls (PCBs) in soil at the rear of the gas station property (Speedway Property). The PCBs were present at concentrations exceeding the Massachusetts Contingency Plan (MCP) Reportable Concentration for soil classified as S-1 (RCS-1). The release of PCBs is assumed to have originated from fill material that was placed at the property where the gas station is located in the late 1950s or 1960s. MassDEP assigned RTN 3-32656 to this release. A Release Notification Form (RNF) was submitted by Speedway to MassDEP on December 31, 2014. A *Phase I Initial Site Investigation Report* was submitted to MassDEP on December 28, 2015, by EnviroTrac Ltd. (EnviroTrac), on behalf of Speedway. A *Phase II Scope of Work* was submitted to MassDEP by

EnviroTrac on November 18, 2018, which indicated that the Disposal Site boundary for RTN 3-32656 extended beyond the Speedway Property and onto the adjacent Town-owned property. Prior to October 30, 2019, Natick was not informed of the Speedway release, or that contamination was found on Natick property.

An Interim Phase II Comprehensive Site Assessment Report was prepared by EnviroTrac and was submitted to MassDEP on June 25, 2019.

On October 28, 2019, on behalf of Speedway., Craig Blake, LSP for EnviroTrac, notified MassDEP of the presence of PCBs in soil at concentrations that could pose an Imminent Hazard (IH) on the Speedway Property and an adjacent property owned by Elaine Investments, LLC (EI Property). On the same day, MassDEP notified Natick through oral communications that concentrations of PCBs detected on the Speedway and EI Properties located adjacent to the Town's Property were present at levels that could pose an IH. MassDEP further indicated that it was likely that similar concentrations could be present on the Town Property. Accordingly, on October 30, 2019, MassDEP requested that the Town engage a Licensed Site Profession (LSP) to perform an assessment of the surficial soils in the area of the Town's Property boundary to evaluate the potential for an IH to exist on the Property, which is utilized as a recreational area, baseball field, and playground.

On October 30, 2019, Natick engaged CEC to provide LSP services related to the necessary assessment to evaluate whether the PCB impacted soil extended onto the Town Property and to assist with compliance with MassDEP requirements. As more fully described in following sections, CEC collected surficial soil samples on October 31, 2019, and submitted them to ESS Laboratories for analysis on a rush turn-around basis. On November 5, 2019, upon receiving the analytical results from the laboratory which indicated that PCBs were detected in surficial soils at concentrations that could pose an Imminent Hazard, Natick notified MassDEP of a two hour reportable condition, pursuant 310 CMR 40.0311, within two hours of receiving those results. MassDEP orally provided notice to the Town that it was a Potentially Responsible Party (PRP) for the release and that an IRA was required.

Pursuant 310 CMR 40.0412(1), IRAs are required to be conducted to address the 2-hour reportable condition.

2.0 ENTITY ASSUMING RESPONSIBILITY FOR CONDUCTING THE IMMEDIATE RESPONSE ACTIONS

Pursuant to 310 CMR 40.0424(1)(a), the name, address, telephone number, and relationship to the Site of the persons assuming responsibility for conducting the IRA on the Town Property are presented here:

Potentially Responsible Party: Town of Natick
Melissa Malone, Town Administrator
Natick, Massachusetts 01760
(508) 647-6400

Licensed Site Professional: Jonathan Kitchen, PG, LSP
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767
(774) 501-2176

3.0 DESCRIPTION OF RELEASE, SITE CONDITIONS, SURROUNDING RECEPTORS, AND REASON FOR THE IRA

Pursuant to 310 CMR 40.0424(1)(b), descriptions of the release, Site conditions, and the surrounding receptors are discussed below.

3.1 DESCRIPTION OF RELEASE

In September 2014, Speedway obtained knowledge of a release of PCBs in soil on their property located at 233 Worcester Street.

According to the EnviroTrac *Interim Phase II Comprehensive Site Assessment Report*, PCBs were detected on the Speedway Property at concentrations as high as 33.5 milligrams per kilogram (mg/kg) and on the EI Property, which is located adjacent to the Speedway Property and adjacent to the Town Property, at concentrations as high as 1,400 mg/kg. In both cases, these are concentrations that could pose an Imminent Hazard (IH).

As noted above, these two properties abut the Town Property, and the samples with concentrations that could pose an IH are very close to the Town Property line. Accordingly, on October 30, 2019, MassDEP requested that the Town perform an assessment of the surficial soils in the area of the Town Property boundary to evaluate the conditions on the Town Property, which is utilized as a recreational area, baseball field, and playground.

As described more fully in Section 4 of this IRA Plan, on October 31, November 7, and November 19, 2019, CEC collected surficial soil samples from several areas of the Property, including the slope located at the boundary between the Town Property and the two abutting properties. Several samples were submitted to a laboratory for analysis of PCBs, which were detected in surficial soils located at the slope at the Property boundary at concentrations that could pose an IH (see area A on Figure 2). The majority of the analytical results indicate that PCBs were either not detected or were detected in some of the areas, but at concentrations less than the most stringent MassDEP Method 1 soil standard of 1 mg/kg. The exception being area A and two samples in area Q, which are in the vicinity of the slope at the abutting property lines.

The source of the release is believed to be associated with fill material that was placed on the properties adjacent to Worcester Street (Route 9) in the 1960s.

3.2 SITE CONDITIONS

A portion of the Property where the release is located is Town-owned property and is comprised of a recreational area including a playground, baseball field, walking paths, and open grassed areas. The YMCA utilizes the building on the Property as an after school child care facility. The majority of the Property, including the playground areas and baseball field, have been newly renovated. There is a newly constructed retaining wall along a portion of the southern Property boundary with another adjacent property, the Natick Auto Clinic property, located at 207 Worcester Street, behind which is a rip rap covered slope.

3.3 SURROUNDING RECEPTORS

3.3.1 Human Receptors

The Property on which the Disposal Site is located is in a mixed-use commercial and residential area of Natick, Massachusetts, and is used as a public recreational area and for after school child care. Potential human receptors related to the Disposal Site include children, adults, site workers, construction workers, park visitors, and potential trespassers.

3.3.2 Environmental Receptors

According to the MassDEP Phase I Site Assessment Map, a copy of which is included as Appendix B, the Disposal Site is located within a Zone II public water supply protection area, and is within a protected open space. There are freshwater wetlands within the Disposal Site; and, Pickerel Pond, Jennings Pond, Mud Pond, and various streams are located within a ½ mile radius of the Disposal Site.

3.4 IMMINENT HAZARD EVALUATION

Pursuant to 310 CMR 40.0426, an Imminent Hazard Evaluation has been performed as part of this IRA. The efforts to evaluate the potential IH are described within this IRA Plan, specifically in Section 4. Based on the information obtained to date, without the restrictive fencing placed around the soils containing concentrations of PCBs greater than 10 mg/kg, Disposal Site conditions could

pose an IH. Accordingly, a fence has been erected around the soils that could pose an IH and additional assessment and response actions are being conducted to address those soils.

3.5 SUBSTANTIAL RELEASE MIGRATION

Per 310 CMR 40.0006, there are six conditions which represent a Condition of Substantial Release Migration (SRM), which are listed below with a description of how each condition relates to the Release.

1. Releases that have resulted in the discharge of separate-phase oil and/or separate-phase hazardous material to surface waters, buildings, or underground utilities or conduits;
2. Releases to the ground surface or to the vadose zone that, if not promptly removed or contained, are likely to significantly impact the underlying groundwater, or significantly exacerbate an existing condition of groundwater pollution;
3. Releases to the groundwater that have migrated or are expected to migrate more than 200 feet per year;
4. Releases to the groundwater that have been or are within one year likely to be detected in a public or private water supply well;
5. Releases to the groundwater that have been or are within one year likely to be detected in a surface water body, wetland, or public water supply reservoir;
6. Release to the groundwater or to the vadose zone that have resulted or have the potential to result in the discharge of vapors into a School, Daycare or Child Care Center or occupied Residential Dwelling;

Based on CECs understanding of Disposal Site conditions, the relatively low solubility and volatility of PCBs in water and/or the environment and the distance from the impacted soils to the occupied structure at the Disposal Site, none of the conditions of SRM listed above are present at the Disposal Site.

CEC will continue to evaluate the potential for a condition of SRM to exist at the Disposal Site.

3.6 CRITICAL EXPOSURE PATHWAYS

As defined in 310 CMR 40.0006, Critical Exposure Pathways (CEPs) are those routes by which oil and/or hazardous material (OHM) released at a disposal site are transported, or are likely to be transported, to human receptors via: (a) vapor-phase emissions of measurable concentration of oil and/or hazardous materials into the living or working space of a pre-school, daycare, school or occupied residential dwelling; or (b) the ingestion, dermal absorption or inhalation of measurable concentrations of oil and/or hazardous materials from drinking water supply wells located at and servicing a pre-school, daycare, school, or occupied residential dwelling. The area of the release is located approximately 500 feet from the building that is used as an after school child care center. It is unlikely that PCBs will be detected in the indoor air of the building and there is no drinking water supply well servicing the building. Accordingly, a CEP does not exist. CEC will continue to evaluate whether CEPs are present.

3.7 REASON FOR AN IMMEDIATE RESPONSE ACTION

The release of OHM at the Site initially required notification under the 2-hour Release Notification provision of the MCP, 310 CMR 40.0311(7). Pursuant to 310 CMR 40.0411(1)(a), an IRA is required at the Disposal Site to abate, prevent, and/or eliminate an Imminent Hazard to health, safety, public welfare, and/or the environment.

4.0 IMMEDIATE RESPONSE ACTIONS UNDERTAKEN TO DATE AND IRA PLAN

Pursuant to 310 CMR 40.0424(1)(c), the IRA objectives, actions taken, specific plans, and implementation schedule are discussed below.

On October 30, 2019, MassDEP informed the Town of Natick of the potential for PCBs to be located in surficial soil on the Town Property, which is located adjacent to properties where PCBs were detected at concentrations that could pose an Imminent Hazard. At the time, the Town engaged CEC as its LSP to perform an evaluation of the surficial soils.

The purpose of the IRA is to assess the extent of PCBs in the surficial soils at the Town Property and to prevent exposure to concentrations of PCBs in soils that could pose an IH.

The following sections summarize the actions taken since October 30, 2019.

4.1 CEC SITE INVESTIGATION

On October 31, 2019, CEC collected shallow soil samples from seven different areas on the Property, identified as Areas A through G, including the slope between the Property and the Speedway and EI Properties, and various areas surrounding the baseball field. Sample location areas are depicted on Figure 2. At each area, CEC collected samples from two intervals (0 to 0.5 feet and 0.5 feet to 1 foot) at several locations. A composite sample from each area (CS-A, CS-B, CS-C, CS-D, CS-E, CS-F and CS-G), containing soil from both intervals at each location, was submitted to ESS Laboratories for analysis for PCBs. Individual discrete samples from each location were placed on hold at the laboratory for potential analysis for PCBs.

PCBs were detected in the sample CS-A, which was collected from the area of the slope between the Town Property and the adjacent Speedway and EI Properties, at a concentration of 51.6 mg/kg, which is indicative of a 2-hour reporting requirement, as it could pose an Imminent Hazard. Accordingly, the Town notified MassDEP of this condition and an Immediate Response Action (IRA) was initiated. At the time of notification, MassDEP approved the placement of a fence around the area where the concentrations were greater than 10 mg/kg. MassDEP also indicated that a new RTN would not be issued, and that the Town Property would be included in the Disposal Site RTN 3-35941.

PCBs were either not detected, or detected at concentrations below the Method 1 soil standard of 1 mg/kg, in the remaining samples CS-B through CS-G.

Because PCBs were detected (although at concentrations below 1 mg/kg) in the composite samples for areas B, G, and F; and, because these were deemed to be areas of higher potential for exposure to surficial soils, the discrete samples from these areas were taken off of hold for analysis. The samples from each interval from areas B & F were composited by the lab into a sample representing the top 1 foot for each location (for example, sample B-1 was a composite of the 0-0.5 and 0.5-1 foot interval from the B-1 location, and so on). Samples in area F were only collected from the 0-0.5' interval, as this is the newly constructed baseball field, and the material below 0.5' is sand/gravel drainage layer material that was brought onto the Property to construct the baseball field. PCBs were detected in the samples from areas B, G, and F, but at concentrations that did not exceed the MCP Method 1 S-1 Soil Standard of 1 mg/kg.

On November 7, 2019, CEC returned to the Town Property to collect soil samples from several additional areas (identified as areas H through P), including the playground areas, open grass/landscaped areas, and additional locations along the southern Property boundary. Soil samples were collected from two intervals, 0 to 0.5' and 0.5 to 1' below grade, at multiple locations in each area. For each area, a composite sample of the 0 to 1' interval (CS-H, CS-I, CS-J, CS-K, CS-L, CS-M, CS-N, CS-O, and CS-P) was submitted for analysis for PCBs. PCBs were detected in all but one sample at concentrations ranging from 0.08 to 0.4 mg/kg; all below the MCP Method 1 S-1 Soil Standard of 1 mg/kg. The N area is located along the southern Property line near the retaining wall. PCBs were detected in the CS-N sample at a concentration of 0.4 mg/kg. Based on this detection, the individual N samples were composited and submitted for analysis for PCBs (for example, N-1 is a composite of the 0 to 0.5' and 0.5 to 1' interval from the N-1 location, and so on). The highest detection was in sample N-3 at 0.7 mg/kg. This sample is located in close proximity to the A sample area.

On November 19, 2019, CEC collected shallow (0 to 1') soil samples (Q-1 through Q-9) from the area at the bottom of the slope, down toward the wetlands along the southwest corner of the property line (adjacent to the Speedway Property). The samples were submitted to ESS for analysis for PCBs. PCBs were detected in 2 of the 9 samples (Q-4 and Q-9) at concentrations above 1 mg/kg. PCBs were detected at a concentration of 33.2 mg/kg in sample Q-4, which is indicative of a potential IH.

All sample locations are shown in Figure 2. A summary of the laboratory analytical results is provided in Table 1. Copies of the laboratory analytical reports are provided in Appendix C.

4.2 FENCING AND SIGNAGE

The Town erected a six foot chain link fence and signage around the majority of the area where the concentrations of PCBs in soils could pose an IH. Signs were posted on the fencing to warn people to stay out of the area. The Town is awaiting a fencing contractor to install the remainder of the fence during the week of January 6, 2020.

4.3 REMEDIATION WASTE MANAGEMENT

No remediation waste was generated and/or is anticipated to be generated from the planned response actions.

4.4 PROPOSED ENVIRONMENTAL MONITORING PLAN

Other than the ongoing assessment and monitoring the conditions of the fence to ensure human access/exposure to the soil that could pose an IH is prevented, no additional monitoring is required and/or planned.

4.5 PERMITS

Pursuant to 310 CMR 40.0424(1)(h), federal, state, and local permitting required for this IRA are discussed below. The Conservation Commission was consulted to determine whether any filings were required due to the installation of the fence within the buffer zone.

CEC is not aware of any permits specific to response actions that are required to implement this IRA.

4.6 SCHEDULE

IRA activities and response actions are continuing, including additional assessment and evaluation of actions to be taken to permanently restrict exposure to the impacted soils. An IRA Status Report will be submitted to MassDEP on or before March 3, 2020.

5.0 SEAL AND SIGNATURE OF THE LICENSED SITE PROFESSIONAL

Pursuant to 310 CMR 40.0424(1)(i), the seal and signature of the LSP who prepared this IRA Plan is included on the IRA Transmittal Form BWSC- which is being submitted via eDEP concurrently with this report.

6.0 PUBLIC INVOLVEMENT

The Chief Municipal Officer and the Board of Health have been notified that an IRA is underway to address an IH and have been provided notification of the submittal of this this IRA Plan.

7.0 LIMITATIONS

The opinions and conclusions expressed herein have been developed as a result of site assessment, field observations and research by CEC personnel. CEC makes no claims or representations (implicit or explicit) as to the completeness or accuracy of information or data developed and provided by others.

Opinions developed may include certain forward-looking statements or positions that may involve a number of calculated risks and/or uncertainties. For the purpose of the Opinions rendered herein, any statement that is not deemed to be historical fact or documented data, including without limitation any statement using the term believes, intends or similar expression, is a forward-looking statement. Among the important factors that could cause the Opinions to differ from those stated are, but not limited to, the passage of time, changes in technology, regulatory revisions, manifestations of latent conditions or future events. These factors et al., may render, solely by virtue of becoming evident, the Opinions contained herein inaccurate or otherwise inapplicable within and based on the context and content of the original information. Neither CEC nor an LSP in its employ shall be liable or responsible for the effect of any changes in circumstance which may affect the usability of the Opinions rendered. CEC reserves the right to change its opinions, conclusions, and/or recommendations should new data become available which would indicate that the information provided to and relied upon at the time of the report preparation by CEC was incomplete, inaccurate, incorrect or otherwise deficient. Events occurring on or near the Disposal Site after the noted site inspections are beyond the scope and context of this report.

CEC is not responsible for permit fees, compliance fees and/or non-compliance penalties assessed by the MassDEP unless expressly stated. Fees and penalties are invoiced by and payable directly to the MassDEP.

For services provided by a LSP, including Opinions rendered as provided by the MCP, documents filed with DEP may be audited after the date of filing. In the event that the Site is selected for an audit, the client remains responsible for complying with the MassDEP requirements associated with the Site audit.

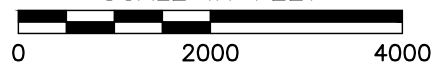
FIGURES



REFERENCE

- USGS MAPS ARE BASED ON GIS DATA PROVIDED BY THE BUREAU OF GEOGRAPHIC INFORMATION (MASS GIS), COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF TECHNOLOGY AND SECURITY SERVICES.

SCALE IN FEET



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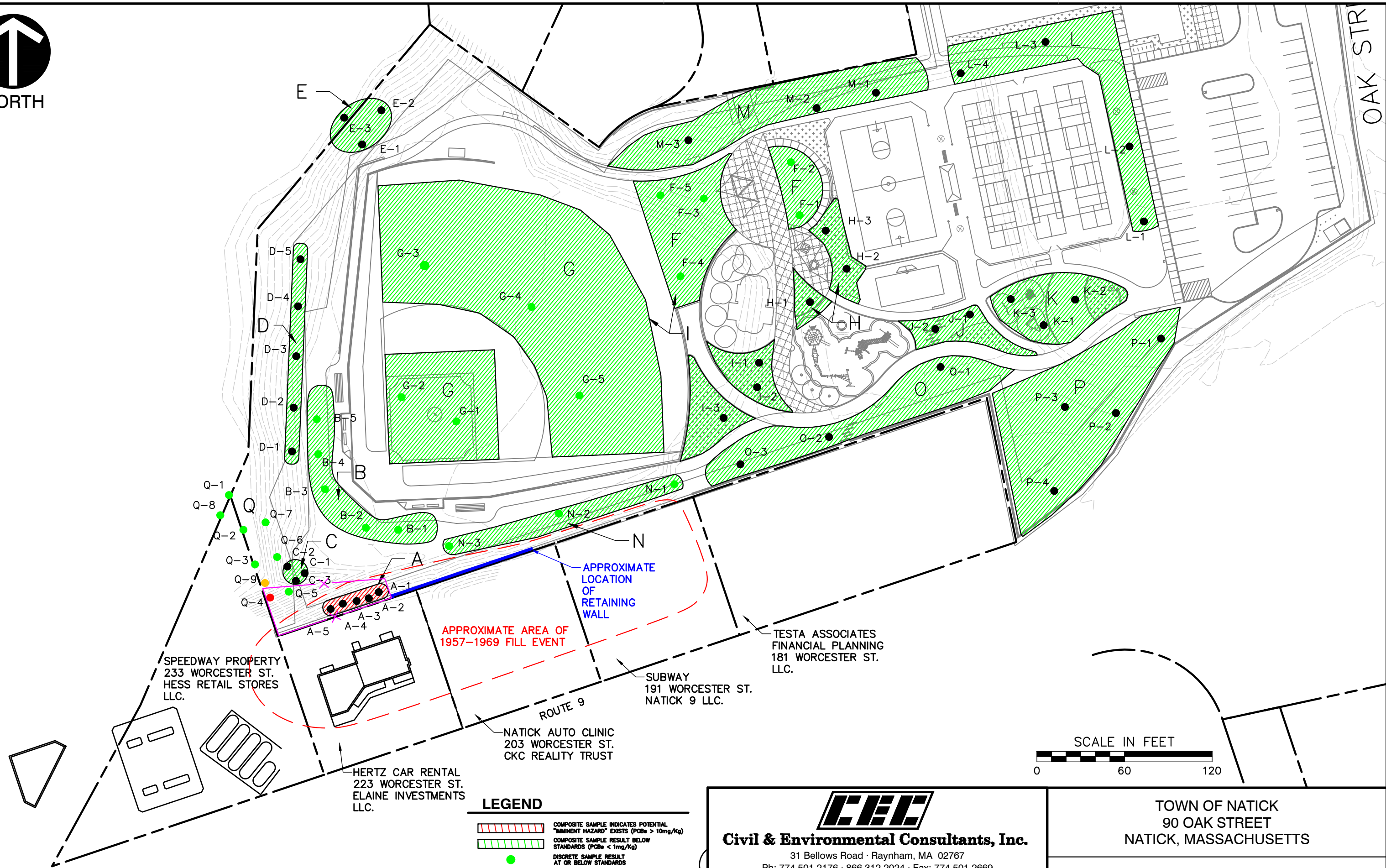
TOWN OF NATICK
90 OAK STREET
NATICK, MASSACHUSETTS

SITE LOCUS

DRAWN BY:	MPV	CHECKED BY:	APPROVED BY:	FIGURE NO.:
DATE:	DECEMBER 2019	DWG SCALE:	1"=2000'	PROJECT NO:
			195-909	1



P:\2019\195-909-CADD\DWG\195-909-11x17_Setup.dwg[FIGURE 2] LS: (12/31/2019 - mvarao) - LP: 12/31/2019 10:03 AM



LEGEND

- COMPOSITE SAMPLE INDICATES POTENTIAL "IMMINENT HAZARD" EXISTS (PCBs > 10mg/Kg)
- COMPOSITE SAMPLE RESULT BELOW STANDARDS (PCBs < 1mg/Kg)
- DISCRETE SAMPLE RESULT AT OR BELOW STANDARDS
- DISCRETE SAMPLE ON HOLD (NOT YET ANALYZED)
- DISCRETE SAMPLE RESULT INDICATES POTENTIAL "IMMINENT HAZARD" (PCBs > 10mg/Kg)
- DISCRETE SAMPLE RESULT FOR PCBs < 10mg/Kg BUT > 1mg/Kg

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DRAWN BY:	MPV	CHECKED BY:	MOC
DATE:	DECEMBER 2019	DWG SCALE:	1"=60'

TOWN OF NATICK 90 OAK STREET NATICK, MASSACHUSETTS	
SITE PLAN	
APPROVED BY:	MOC
PROJECT NO:	195-909
FIGURE NO.:	2



P:\2019\195-909-CADD\Drawings\195-909-11x17_Setup.dwg[FIGURE 3] LS:(12/31/2019 - mvarao) - LP: 12/31/2019 10:01 AM

SPEEDWAY PROPERTY
233 WORCESTER ST.
HESS RETAIL STORES
LLC.

LEGEND



COMPOSITE SAMPLE INDICATES POTENTIAL
"IMMINENT HAZARD" EXISTS (PCBs > 10mg/Kg)



COMPOSITE SAMPLE RESULT BELOW
STANDARDS (PCBs < 1mg/Kg)



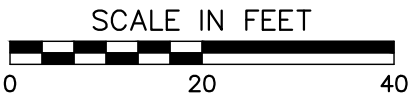
DISCRETE SAMPLE RESULT
AT OR BELOW STANDARDS
DISCRETE SAMPLE ON HOLD
(NOT YET ANALYZED)



DISCRETE SAMPLE RESULT INDICATES POTENTIAL
"IMMINENT HAZARD" (PCBs > 10mg/Kg)



DISCRETE SAMPLE RESULT FOR PCBs <
10mg/Kg BUT > 1mg/Kg





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DATE:	DECEMBER 2019	DWG SCALE:	1"=20'	PROJECT NO:	195-909	3

TOWN OF NATICK
90 OAK STREET
NATICK, MASSACHUSETTS

FENCE LOCATION PLAN

TABLES

Table 1
Soil Analytical Data
90 Oak Street
Natick, Massachusetts
CEC Project No. 195-909

Area Composite Sample Results

Sample ID	CS-A 0-1ft	CS-B 0-1ft	CS-C 0-1ft	CS-D 0-1ft	CS-E 0-1ft	CS-F 0-1ft	CS-G 0-1ft	CS-H 0-1ft	CS-I 0-1ft	CS-J 0-1ft	CS-K 0-1ft	CS-L 0-1ft	CS-M 0-1ft	CS-N 0-1ft	CS-O 0-1ft	CS-P 0-1ft	MCP Standards	
Sample Date	10/31/2019	10/31/2019	10/31/2019	10/31/2019	10/31/2019	10/31/2019	10/31/2019	11/07/2019	11/07/2019	11/07/2019	11/07/2019	11/07/2019	11/07/2019	11/07/2019	11/07/2019	11/07/2019		
Sample Type	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp		
Laboratory Sample ID:	19J1156-01	19J1156-02	19J1156-03	19J1156-04	19J1156-05	19J1156-06	19J1156-07	19K0288-01	19K0288-02	19K0288-03	19K0288-04	19K0288-05	19K0288-06	19K0288-07	19K0288-08	19K0288-09	RCS-1	S-1/GW-1
PCBs (mg/kg)																		
Total	51.6	0.5	0.1	< 0.06	< 0.07	0.2	0.7	0.1	0.1	<0.06	0.08	0.3	0.08	0.4	0.08	0.1	1	1

Discrete Sample Location Results

Sample ID	F-1 0-0.5ft	F-2 0-0.5ft	F-3 0-0.5ft	F-4 0-0.5ft	F-5 0-0.5ft	B-1 0-0.5ft	B-2 0-0.5ft	B-3 0-0.5ft	B-4 0-0.5ft	B-5 0-0.5ft	G-1 0-0.5ft	G-2 0-0.5ft	G-3 0-0.5ft	G-4 0-0.5ft	G-5 0-0.5ft	N-1 0-0.5 ft	N-2 0-0.5 ft	N-3 0-0.5 ft	Q-1 0-1 ft	Q-2 0-1 ft	Q-3 0-1 ft	Q-4 0-1 ft	Q-5 0-1 ft	Q-6 0-1 ft	Q-7 0-1 ft	Q-8 0-1 ft	Q-9 0-1 ft	MCP Standards		
Sample Date	10/31/2019	10/31/2019	10/31/2019	10/31/2019	10/31/2019	10/31/2019	10/31/2019	10/31/2019	10/31/2019	10/31/2019	10/31/2019	10/31/2019	10/31/2019	10/31/2019	10/31/2019	11/7/2019	11/7/2019	11/7/2019	11/19/2019	11/19/2019	11/19/2019	11/19/2019	11/19/2019	11/19/2019	11/19/2019	11/19/2019	11/19/2019			11/19/2019
Sample Type	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Comp	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab		
Laboratory Sample ID:	19K0222-01	19K0222-02	19K0222-03	19K0222-04	19K0222-05	19K0221-01	19K0221-02	19K0221-03	19K0221-04	19K0221-05	19K0221-06	19K0221-07	19K0221-08	19K0221-09	19K0221-10	19K0688-01	19K0688-02	19K0688-03	19K0629-01	19K0629-02	19K0629-03	19K0629-04	19K0629-05	19K0629-06	19K0629-07	19K0629-08	19K0629-09	RCS-1	S-1/GW-1	
PCBs (mg/kg)																														
Total	0.19	0.3	0.08	0.19	0.19	1.0	0.2	0.3	<0.06	0.3	0.18	0.4	0.4	0.3	0.3	0.4	0.5	0.7	< 0.09	< 0.06	0.09	33.2	0.2	0.2	< 0.06	< 0.4	5.2	1	1	

Notes:
PCBs = Polychlorinated Biphenyls
mg/kg - milligrams per kilogram
RCS-1 - Massachusetts Contingency Plan Reportable Concentrations for Category S-1 Soils.
S-1/GW-2/3 = MCP Applicable Soil Standards
Bolded = Greater than S-1/GW-1 Standards

APPENDIX A
BWSC TRANSMITTAL FORM & NOR



Massachusetts Department of Environmental Protection

eDEP Transaction Copy

Here is the file you requested for your records.

To retain a copy of this file you must save and/or print.

Username: **MCOTECEC**

Transaction ID: **1163262**

Document: **BWSC103 Release Notification & Retraction Form**

Size of File: **147.99K**

Status of Transaction: **In Process**

Date and Time Created: **12/31/2019:11:15:47 AM**

Note: This file only includes forms that were part of your transaction as of the date and time indicated above. If you need a more current copy of your transaction, return to eDEP and select to "Download a Copy" from the Current Submittals page.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

RELEASE NOTIFICATION & NOTIFICATION
RETRACTION FORM

Pursuant to 310 CMR 40.0335 and 310 CMR 40.0371 (Subpart C)

BWSC 103

Release Tracking Number

3 - 35941

A. RELEASE OR THREAT OF RELEASE LOCATION:

1. Release Name/Location Aid: REAR OF GASOLINE STATION

2. Street Address: 207, 233 AND 251 WORCESTER STREET

3. City/Town: NATICK 4. ZIP Code: 017600000

5. Coordinates: a. Latitude: N b. Longitude: W

B. THIS FORM IS BEING USED TO: (check one)

- ☒ 1. Submit a **Release Notification**
- ☐ 2. Submit a **Revised Release Notification**
- ☐ 3. Submit a **Retraction of a Previously Reported Notification** of a release or threat of release including supporting documentation required pursuant to 310 CMR 40.0335 (Section C is not required)

(All sections of this transmittal form must be filled out unless otherwise noted above)

C. INFORMATION DESCRIBING THE RELEASE OR THREAT OF RELEASE (TOR):

1. Date and time of Oral Notification, if applicable: 11/5/2019 Time: ☐ AM ☒ PM
mm/dd/yyyy hh:mm

2. Date and time you obtained knowledge of the Release or TOR: 11/5/2019 Time: ☐ AM ☐ PM
mm/dd/yyyy hh:mm

3. Date and time release or TOR occurred, if known: Time: ☐ AM ☐ PM
mm/dd/yyyy hh:mm

Check all Notification Thresholds that apply to the Release or Threat of Release:
(for more information see 310 CMR 40.0310 - 40.0315)

- | 4. 2 HOUR REPORTING CONDITIONS | 5. 72 HOUR REPORTING CONDITIONS | 6. 120 DAY REPORTING CONDITIONS |
|---|---|---|
| <input type="checkbox"/> a. Sudden Release | <input type="checkbox"/> a. Subsurface Non-Aqueous Phase Liquid (NAPL) Equal to or Greater than 1/2 Inch (.04 feet) | <input type="checkbox"/> a. Release of Hazardous Material(s) to Soil or Groundwater Exceeding Reportable Concentration(s) |
| <input type="checkbox"/> b. Threat of Sudden Release | <input type="checkbox"/> b. Underground Storage Tank (UST) Release | <input type="checkbox"/> b. Release of Oil to Soil Exceeding Reportable Concentration(s) and Affecting More than 2 Cubic Yards |
| <input type="checkbox"/> c. Oil Sheen on Surface Water | <input type="checkbox"/> c. Threat of UST Release | <input type="checkbox"/> c. Release of Oil to Groundwater Exceeding Reportable Concentration(s) |
| <input type="checkbox"/> d. Poses Imminent Hazard | <input type="checkbox"/> d. Release to Groundwater near Water Supply | <input type="checkbox"/> d. Subsurface Non-Aqueous Phase Liquid (NAPL) Equal to or Greater than 1/8 Inch (.01 feet) and Less than 1/2 Inch (.04 feet) |
| <input checked="" type="checkbox"/> e. Could Pose Imminent Hazard | <input type="checkbox"/> e. Substantial Release Migration | |
| <input type="checkbox"/> f. Release Detected in Private Well | | |
| <input type="checkbox"/> g. Release to Storm Drain | | |
| <input type="checkbox"/> h. Sanitary Sewer Release (Imminent Hazard Only) | | |



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

**RELEASE NOTIFICATION & NOTIFICATION
RETRACTION FORM**

Pursuant to 310 CMR 40.0335 and 310 CMR 40.0371 (Subpart C)

BWSC 103

Release Tracking Number

3 - 35941

C. INFORMATION DESCRIBING THE RELEASE OR THREAT OF RELEASE (TOR): (cont.)

7. List below the Oils (O) or Hazardous Materials (HM) that exceed their Reportable Concentration (RC) or Reportable Quantity (RQ) by the greatest amount.

☐ Check here if an amount or concentration is unknown or less than detectable.

O or HM Released	CAS Number, if known	O or HM	Amount or Concentration	Units	RCs Exceeded, if Applicable (RCS-1, RCS-2, RCGW-1, RCGW-2)
PCBS		HM	51.6	MG/KG	RCS-1

☐ Check here if a list of additional Oil and Hazardous Materials subject to reporting, or any other documentation relating to this notification is attached.

D. PERSON REQUIRED TO NOTIFY:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person notifying

2. Name of Organization: NATICK TOWN OF

3. Contact First Name: WILLIAM D 4. Last Name: CHENARD

5. Street: 13 EAST CENTRAL ST 6. Title: _____

7. City/Town: NATICK 8. State: MA 9. ZIP Code: 017600000

10. Telephone: 508-647-6404 11. Ext.: _____ 12. Email: _____

☐ 13. Check here if attaching names and addresses of owners of properties affected by the Release or Threat of Release, other than an owner who is submitting this Release Notification (required).

E. RELATIONSHIP OF PERSON TO RELEASE OR THREAT OF RELEASE: ☐ Check here to change relationship

☒ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☒ e. Other RP or PRP Specify: NON-SPECIFIED PRP

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Otherwise Required to Notify Specify Relationship: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

**RELEASE NOTIFICATION & NOTIFICATION
RETRACTION FORM**

Pursuant to 310 CMR 40.0335 and 310 CMR 40.0371 (Subpart C)

BWSC 103

Release Tracking Number

3 - 35941

F. CERTIFICATION OF PERSON REQUIRED TO NOTIFY:

1. I, _____, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By : _____ 3. Title: _____
Signature
4. For: NATICK TOWN OF _____ 5. Date : _____
(Name of person or entity recorded in Section D) mm/dd/yyyy

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street: _____
8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____
11. Telephone: _____ 12. Ext.: _____ 13. Email: _____

**YOU ARE SUBJECT TO ANNUAL COMPLIANCE ASSURANCE FEES FOR EACH BILLABLE YEAR FOR TIER
CLASSIFIED DISPOSAL SITES. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM
OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU
MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.**

Date Stamp (DEP USE ONLY:)





Massachusetts Department of Environmental Protection

eDEP Transaction Copy

Here is the file you requested for your records.

To retain a copy of this file you must save and/or print.

Username: MCOTECEC

Transaction ID: 1163268

Document: BWSC105 Immediate Response Action Transmittal Form

Size of File: 168.23K

Status of Transaction: In Process

Date and Time Created: 1/3/2020:5:22:59 PM

Note: This file only includes forms that were part of your transaction as of the date and time indicated above. If you need a more current copy of your transaction, return to eDEP and select to "Download a Copy" from the Current Submittals page.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC 105

Immediate Response Action (IRA) Transmittal Form
Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number

3 - 35941

A. SITE LOCATION:

1. Release Name/Location Aid: REAR OF GASOLINE STATION

2. Street Address: 207, 233 AND 251 WORCESTER STREET

3. City/Town: NATICK

4. Zip Code: 017600000

☐ 5. Check here if this location is Adequately Regulated, pursuant to 310 CMR 40.0110-0114.

☐ a. CERCLA

☐ b. HSWA Corrective Action

☐ c. Solid Waste Management

☐ d. RCRA State Program (21C Facilities)

B. THIS FORM IS BEING USED TO: (check all that apply)

1. List Submittal Date of Initial IRA Written Plan (if previously submitted): _____

☒ 2. Submit an **Initial IRA Plan**.

☐ 3. Submit a **Modified IRA Plan** of a previously submitted written IRA Plan.

☒ 4. Submit an **Imminent Hazard Evaluation**. (check one)

☐ a. An Imminent Hazard exists in connection with this Release or Threat of Release.

☐ b. An Imminent Hazard does not exist in connection with this Release or Threat of Release.

☐ c. It is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release, and further assessment activities will be undertaken.

☒ d. It is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release. However, response actions will address those conditions that could pose an Imminent Hazard.

☐ 5. Submit a request to **Terminate an Active Remedial System or Response Action(s) Taken to Address an Imminent Hazard**.

☐ 6. Submit an **IRA Status Report**

☐ 7. Submit a **Remedial Monitoring Report**. (This report can only be submitted through eDEP.)

a. Type of Report: (check one) ☐ i. Initial Report ☐ ii. Interim Report ☐ iii. Final Report

b. Frequency of Submittal: (check all that apply)

☐ i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.

☐ ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.

☐ iii. A Remedial Monitoring Report(s) submitted every six months, concurrent with an IRA Status Report.

☐ iv. A Remedial Monitoring Report(s) submitted annually, concurrent with an IRA Status Report.

c. Number of Remedial Systems and/or Monitoring Programs: _____

A separate BWSC105A, IRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

Immediate Response Action (IRA) Transmittal Form
Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

BWSC 105

Release Tracking Number

3 - 35941

☐ 8. Submit an IRA Completion Statement.

☐ a. Check here if future response actions addressing this Release or Threat of Release notification condition will be conducted as part of the Response Actions planned or ongoing at a Site that has already been Tier Classified under a different Release Tracking Number (RTN)

b. Provide Release Tracking Number of Tier Classified Site (Primary RTN): _____

These additional response actions must occur according to the deadlines applicable to the Primary RTN. Use the Primary RTN when making all future submittals for the site unless specifically relating to this Immediate Response Action.

☐ 9. Submit a Revised IRA Completion Statement.

☐ 10. Submit a Plan for the Application of Remedial Additives near a sensitive receptor, pursuant to 310 CMR 40.0046(3).

(All sections of this transmittal form must be filled out unless otherwise noted above)

C. RELEASE OR THREAT OF RELEASE CONDITIONS THAT WARRANT IRA:

1. Media Impacted and Receptors Affected: (check all that apply)

- | | | |
|---|---|---|
| <input type="checkbox"/> a. Paved Surface | <input type="checkbox"/> b. Basement | <input type="checkbox"/> c. School |
| <input type="checkbox"/> d. Public Water Supply | <input type="checkbox"/> e. Surface Water | <input type="checkbox"/> f. Zone 2 |
| <input type="checkbox"/> g. Private Well | <input type="checkbox"/> h. Residence | <input checked="" type="checkbox"/> i. Soil |
| <input type="checkbox"/> j. Groundwater | <input type="checkbox"/> k. Sediments | <input checked="" type="checkbox"/> l. Wetland |
| <input type="checkbox"/> m. Storm Drain | <input type="checkbox"/> n. Indoor Air | <input type="checkbox"/> o. Air |
| <input type="checkbox"/> p. Soil Gas | <input type="checkbox"/> q. Sub-Slab Soil Gas | <input type="checkbox"/> r. Critical Exposure Pathway |
| <input type="checkbox"/> s. NAPL | <input type="checkbox"/> t. Unknown | |
| <input type="checkbox"/> r. Others | Specify: _____ | |

2. Sources of the Release or TOR: (check all that apply)

- | | | |
|--|---|-----------------------------------|
| <input type="checkbox"/> a. Transformer | <input type="checkbox"/> b. Fuel Tank | <input type="checkbox"/> c. Pipe |
| <input type="checkbox"/> d. OHM Delivery | <input type="checkbox"/> e. AST | <input type="checkbox"/> f. Drums |
| <input type="checkbox"/> g. Tanker Truck | <input type="checkbox"/> h. Hose | <input type="checkbox"/> i. Line |
| <input type="checkbox"/> j. UST | Describe: _____ | |
| <input type="checkbox"/> k. Vehicle | <input type="checkbox"/> l. Boat/Vessel | |
| <input checked="" type="checkbox"/> m. Unknown | <input checked="" type="checkbox"/> n. Other: | POTENTIAL FILL |

3. Type of Release or TOR: (check all that apply)

- | | | | |
|--|---|---|--------------------------------------|
| <input type="checkbox"/> a. Dumping | <input type="checkbox"/> b. Fire | <input type="checkbox"/> c. AST Removal | <input type="checkbox"/> d. Overfill |
| <input type="checkbox"/> e. Rupture | <input type="checkbox"/> f. Vehicle Accident | <input type="checkbox"/> g. Leak | <input type="checkbox"/> h. Spill |
| <input type="checkbox"/> i. Test failure | <input type="checkbox"/> j. TOR Only | | |
| <input type="checkbox"/> k. UST Removal | Describe: _____ | | |
| <input checked="" type="checkbox"/> l. Unknown | <input checked="" type="checkbox"/> m. Other: | POTENTIAL FILL | |

4. Identify Oils and Hazardous Materials Released: (check all that apply)

- | | |
|--|--|
| <input type="checkbox"/> a. Oils | <input type="checkbox"/> b. Chlorinated Solvents |
| <input type="checkbox"/> c. Heavy Metals | <input checked="" type="checkbox"/> d. Others |
| Specify: PCBS | |

D. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply, for volumes list cumulative amounts)

- | | |
|---|---|
| <input checked="" type="checkbox"/> 1. Assessment and/or Monitoring Only | <input type="checkbox"/> 2. Temporary Covers or Caps |
| <input type="checkbox"/> 3. Deployment of Absorbent or Containment Materials | <input type="checkbox"/> 4. Temporary Water Supplies |
| <input type="checkbox"/> 5. Structure Venting System/HVAC Modification System | <input type="checkbox"/> 6. Temporary Evacuation or Relocation of Residents |
| <input type="checkbox"/> 7. Product or NAPL Recovery | <input checked="" type="checkbox"/> 8. Fencing and Sign Posting |
| <input type="checkbox"/> 9. Groundwater Treatment Systems | <input type="checkbox"/> 10. Soil Vapor Extraction |
| <input type="checkbox"/> 11. Remedial Additives | <input type="checkbox"/> 12. Air Sparging |
| <input type="checkbox"/> 13. Active Exposure Pathway Mitigation System | <input type="checkbox"/> 14. Passive Exposure Pathway Mitigation System |



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

Immediate Response Action (IRA) Transmittal Form

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

BWSC 105

Release Tracking Number

3

- 35941

D. DESCRIPTION OF RESPONSE ACTIONS: (cont.)

☐ 15. Excavation of Contaminated Soils.

☐ a. Re-use, Recycling or Treatment

☐ i. On Site

Estimated volume in cubic yards _____

☐ ii. Off Site

Estimated volume in cubic yards _____

ii.a. Receiving Facility: _____

Town: _____

State: _____

ii.b. Receiving Facility: _____

Town: _____

State: _____

iii. Describe: _____

☐ b. Store

☐ i. On Site

Estimated volume in cubic yards _____

☐ ii. Off Site

Estimated volume in cubic yards _____

ii.a. Receiving Facility: _____

Town: _____

State: _____

ii.b. Receiving Facility: _____

Town: _____

State: _____

☐ c. Landfill

☐ i. Cover

Estimated volume in cubic yards _____

Receiving Facility: _____

Town: _____

State: _____

☐ ii. Disposal

Estimated volume in cubic yards _____

Receiving Facility: _____

Town: _____

State: _____

☐ 16. Removal of Drums, Tanks, or Containers:

a. Describe Quantity and Amount: _____

b. Receiving Facility: _____

Town: _____

State: _____

c. Receiving Facility: _____

Town: _____

State: _____

☐ 17. Removal of Other Contaminated Media:

a. Specify Type and Volume: _____

☐ 18. Other Response Actions:

Describe: _____

☐ 19. Use of Innovative Technologies:

Describe: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC 105

Immediate Response Action (IRA) Transmittal Form
Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number

3 - 35941

E. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> if Section B of this form indicates that an **Immediate Response Action Plan** is being submitted, the response action(s) that is(are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is(are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that an **Imminent Hazard Evaluation** is being submitted, this Imminent Hazard Evaluation was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and the assessment activity(ies) undertaken to support this Imminent Hazard Evaluation comply(ies) with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000;

> if Section B of this form indicates that an **Immediate Response Action Status Report** and/or a **Remedial Monitoring Report** is(are) being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that an **Immediate Response Action Completion Statement** or a request to **Terminate an Active Remedial System or Response Action(s) Taken to Address an Imminent Hazard** is being submitted, the response action(s) that is(are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is(are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 7812

2. First Name: JONATHAN D

3. Last Name: KITCHEN

4. Telephone: 508-747-7900

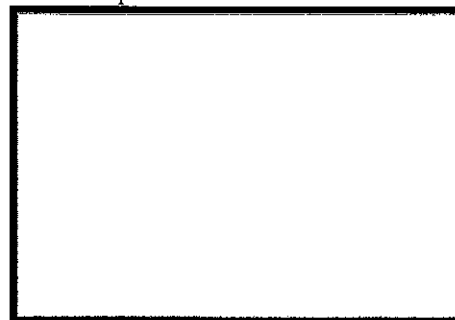
5. Ext: _____

6. Email: _____

7. Signature: _____

8. Date: _____ (mm/dd/yyyy)

9. LSP Stamp:





Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

Immediate Response Action (IRA) Transmittal Form
Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

BWSC 105

Release Tracking Number

3 - 35941

F. PERSON UNDERTAKING IRA:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions
2. Name of Organization: NATICK TOWN OF
3. Contact First Name: WILLIAM D 4. Last Name: CHENARD
5. Street: 13 EAST CENTRAL ST 6. Title: _____
7. City/Town: NATICK 8. State: MA 9. Zip Code: 017600000
10. Telephone: 508-647-6404 11. Ext: _____ 12. Email: _____

G. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING IRA:

- ☐ Check here to change relationship
- ☒ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter
☒ e. Other RP or PRP Specify Relationship: NON-SPECIFIED PRP
- ☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)
- ☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))
- ☐ 4. Any Other Person Undertaking Response Actions: Specify Relationship: _____

H. REQUIRED ATTACHMENT AND SUBMITTALS:

- ☐ 1. Check here if any Remediation Waste, generated as a result of this IRA, will be stored, treated, managed, recycled or reused at the site following submission of the IRA Completion Statement. If this box is checked, you must submit one of the following plans, along with the appropriate transmittal form.
☐ a. A Release Abatement Measure (RAM) Plan (BWSC106) ☐ b. Phase IV Remedy Implementation Plan (BWSC108)
- ☐ 2. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by MassDEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.
- ☒ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health were notified of the implementation of an Immediate Response Action taken to control, prevent, abate or eliminate an Imminent Hazard.
- ☐ 4. Check here to certify that the Chief Municipal Officer and the Local Board of Health were notified of the submittal of a Completion Statement for an Immediate Response Action taken to control, prevent, abate or eliminate an Imminent Hazard.
- ☐ 5. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to BWSC.eDEP@state.ma.us.
- ☒ 6. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC 105

Immediate Response Action (IRA) Transmittal Form

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking Number

3 - 35941

I. CERTIFICATION OF PERSON UNDERTAKING IRA:

1. I, _____, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form; (ii) that, based on my inquiry of the/those individual(s) immediately responsible for obtaining the information, the material information contained herein is, to the best of my knowledge, information and belief, true, accurate and complete; (iii) that, to the best of my knowledge, information and belief, I/the person(s) or entity(ies) on whose behalf this submittal is made satisfy(ies) the criteria in 310 CMR 40.0183(2); (iv) that I/the person(s) or entity(ies) on whose behalf this submittal is made have provided notice in accordance with 310 CMR 40.0183(5); and (v) that I am fully authorized to make this attestation on behalf of the person(s) or entity(ies) legally responsible for this submittal. I/the person(s) or entity(ies) on whose behalf this submittal is made is/are aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By: _____ 3. Title: _____

4. For: NATICK TOWN OF _____ 5. Date: _____ (mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section F.

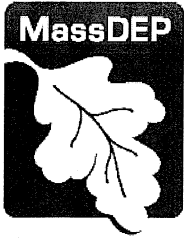
7. Street: _____

8. City/Town: _____ 9. State: _____ 10. Zip Code: _____

11. Telephone: _____ 12. Ext: _____ 13. Email: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Northeast Regional Office • 205B Lowell Street, Wilmington MA 01887 • 978-694-3200

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Kathleen A. Theoharides
Secretary

Martin Suuberg
Commissioner

URGENT LEGAL MATTER: PROMPT ACTION NECESSARY

December 4, 2019

The Town of Natick
13 East Central Street
Natick, MA 01760

Attn: Mr. William D. Chenard

**RE: Natick
Worcester and Oak Streets
PCBs Measured in Surficial Soil
RTN: 3-0035941**

NOTICE OF RESPONSIBILITY M.G.L. c. 21E and 310 CMR 40.0000

Dear Mr. Chenard:

On October 28, 2019, at 3:59 p.m., the Massachusetts Department of Environmental Protection (MassDEP) received Notification from Licensed Site Professional (LSP) Craig Blake of Envirotrac about a release/threat of release of Oil/Hazardous Material at the subject location, which requires one or more Response Actions. Apparently, elevated levels of polychlorinated biphenyls (PCBs) were measured in soils on the property located at 207 Worcester Street. Further assessment has also found elevated PCBs at 223 Worcester Street and 90 Oak Street in Natick. Based on this information, MassDEP has reason to believe that the subject properties or portion(s) thereof are a disposal site as defined in the Massachusetts Oil and Hazardous Material Release Prevention and Response Act, M.G.L. c. 21E and the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000. M.G.L. c.21E and the MCP govern the assessment and cleanup of Disposal Sites.

The purpose of this notice is to inform you of your legal responsibilities under state law for assessing and/or remediating the subject release. For purposes of this notice, the terms and phrases used herein shall have the meaning ascribed to them by the MCP unless the text clearly indicates otherwise.

STATUTORY LIABILITIES

MassDEP also has reason to believe that you (as used in this letter "you" refers to the Town of Natick) are a Potentially Responsible Party (PRP) with liability under M.G.L. c. 21E, Section 5, for Response Action Costs. Section 5 makes the following parties liable to the Commonwealth of Massachusetts: current owners or operators of a site from or at which there is or has been a release/threat of release of oil or hazardous material; any person who owned or operated a site at the time hazardous material was stored or disposed of; any person who arranged for the transport, disposal, storage or treatment of hazardous material to or at a site; any person who transported hazardous material to a transport, disposal, storage or treatment site from which there is or has been a release/threat of release of such material; and any person who otherwise caused or is legally responsible for a release/threat of release of oil or hazardous material at a site.

This liability is "strict" meaning that it is not based on fault but solely on your status as owner, operator, generator, transporter or disposer. It is also "joint and several", meaning that you may be liable for all response action costs incurred at the site, regardless of the existence of any other liable parties.

The MCP requires responsible parties to take necessary Response Actions at properties where there is or has been a release or threat of release of oil and/or hazardous material. If you do not take the necessary Response Actions, or fail to perform them in an appropriate and timely manner, MassDEP is authorized by M.G.L. c. 21E to have the work performed by its contractors. By taking such actions, you can avoid liability for Response Action Costs incurred by MassDEP and its contractors in performing these actions, and any sanctions, which may be imposed, for failure to perform Response Actions under the MCP.

You may be liable for up to three (3) times all Response Action Costs incurred by MassDEP. Response Action Costs include, without limitation, the cost of direct hours spent by MassDEP employees arranging for response actions or overseeing work performed by persons other than MassDEP or its contractors, expenses incurred by MassDEP in support of those direct hours, and payments to MassDEP's contractors. (For more detail on cost liability, see 310 CMR 40.1200.)

MassDEP may also assess interest on costs incurred at the rate of twelve percent (12%), compounded annually. To secure payment of this debt, the Commonwealth may place liens on all of your property in the Commonwealth. To recover the debt, the Commonwealth may foreclose on these liens or the Attorney General may bring legal action against you.

In addition to your liability for up to three (3) times all response action costs incurred by MassDEP, you may also be liable to the Commonwealth for damages to natural resources caused by the release. Civil and criminal liability may also be imposed under M.G.L. c. 21E, § 11, and civil administrative penalties may be imposed under M.G.L. c. 21A, § 16 for each violation of M.G.L. c. 21E, the MCP, or any order, permit or approval issued hereunder.

NECESSARY RESPONSE ACTIONS

The subject site shall not be deemed to have all the necessary and required Response Actions taken unless and until all Substantial Hazards presented by the site have been eliminated and a level of No Significant Risk exists or has been achieved in compliance with M.G.L. c. 21E and the MCP. In addition, the MCP requires persons undertaking Response Actions at Disposal Sites perform Immediate Response Actions (IRAs) in response to "sudden releases", Imminent Hazards and Substantial Release Migration. Such persons must continue to evaluate the need for IRAs and notify MassDEP immediately if such a need exists.

MassDEP has determined that an IRA is necessary to address the release of the PCBs in surficial soil at these locations. At this time MassDEP has granted approvals for remedial IRAs to include erecting restrictive fencing, posting warning signage, and covering exposed soils. Your IRA assessment work should focus on determining the nature, extent, and source of PCB contaminated soil to be remediated.

You are authorized to conduct only the specific response actions for which you received approval from MassDEP at the time oral Notifications were made to MassDEP of the release of Oil and/or Hazardous Materials. All additional Immediate Response Actions require MassDEP approval in accordance with 310 CMR 40.0420.

MassDEP reminds you that IRAs must include site assessment activities necessary to evaluate potential Imminent Hazard (IH), Substantial Release Migration (SRM), and Critical Exposure Pathway (CEP) conditions. Additional Immediate Response Actions will be required in the event that one or more of these conditions are observed.

The MCP requires that you employ or engage a Licensed Site Professional (LSP) to manage, supervise or actually perform the necessary response actions at the subject site. In addition, the MCP requires persons undertaking response actions at a disposal site submit to MassDEP a Permanent Solution Statement prepared by an LSP in accordance with 310 CMR 40.1000 upon determining that a level of No Significant Risk already exists or has been achieved at a disposal site or portion thereof. [You may obtain a list of the names and addresses of these licensed professionals from the Board of Registration of Hazardous Waste Site Cleanup Professionals at: <http://www.mass.gov/eea/agencies/lsp/> or (617) 556-1091.]

There are several other submittals required by the MCP which are related to release notification and/or Response Actions that may be conducted at the subject site in addition to a Permanent Solution Statement that, unless otherwise specified by MassDEP, must be provided to MassDEP within specific regulatory timeframes. The submittals are as follows:

- (1) If information is obtained after making an oral or written notification to indicate that the release or threat of release didn't occur, failed to meet the reporting criteria at 310 CMR 40.0311 through 40.0315, or is exempt from notification pursuant to 310 CMR 40.0317, a Notification Retraction may be submitted within 60 days of initial notification pursuant to 310 CMR 40.0335;

- (2) If a Notification Retraction has not been submitted, a Release Notification Form (RNF) must be submitted to MassDEP pursuant to section 310 CMR 40.0333 within 60 calendar days of the initial date of oral notification to MassDEP of a release pursuant to 310 CMR 40.0300 or from the date MassDEP issues a Notice of Responsibility (NOR), whichever occurs earlier. The RNF can either be submitted electronically or using the PDF Form at: <http://www.mass.gov/eea/docs/dep/cleanup/approvals/bwsc-103.pdf>;
- (3) Unless a Permanent Solution Statement or Downgradient Property Status Submittal is provided to MassDEP earlier, an Immediate Response Action (IRA) Plan prepared in accordance with 310 CMR 40.0420, or an IRA Completion Statement (310 CMR 40.0427) must be submitted to MassDEP within 60 calendar days of the initial date of oral notification to MassDEP of a release pursuant to 310 CMR 40.0300 or from the date MassDEP issues an NOR, whichever occurs earlier; and
- (4) Unless a Permanent Solution Statement or Downgradient Property Status Submittal is provided to MassDEP earlier, a completed Tier Classification Submittal pursuant to 310 CMR 40.0510 must be submitted within one year of the initial date of notification of a release pursuant to 310 CMR 40.0300 or from the date MassDEP issues an NOR, whichever occurs earlier or as otherwise specified by the Department in an Interim Deadline or order issued pursuant to 310 CMR 40.0501 (2).
- (5) Pursuant to MassDEP's "Timely Action Schedule and Fee Provisions", 310 CMR 4.00, the appropriate fee must be included with a Permanent Solution Statement that is submitted to MassDEP more than 120 calendar days after the initial date of oral notification to MassDEP of a release pursuant to 310 CMR 40.0300, or more than 120 calendar days after the date MassDEP issues an NOR, whichever occurs earlier, and before Tier Classification. A fee is not required for a Permanent Solution Statement submitted to MassDEP within 120 days of the date of oral notification to MassDEP, or within 120 days of the date MassDEP issues an NOR, whichever date occurs earlier, or after Tier Classification.

It is important to note that you must dispose of any Remediation Waste generated at the subject location in accordance with 310 CMR 40.0030 including, without limitation, contaminated soil and/or debris. Any Bill of Lading accompanying such waste must bear the seal and signature of an LSP or, if the response action is performed under the direct supervision of MassDEP, the signature of an authorized representative of MassDEP.

MassDEP encourages parties with liability under M.G.L. c. 21E to take prompt action in response to releases and threats of release of oil and/or hazardous material. By taking prompt action, you may significantly lower your assessment and cleanup costs and avoid the imposition of, or reduce the amount of, certain annual compliance fees for response actions payable under 310 CMR 4.00.

If you have any questions relative to this notice, you should contact Kenneth Sanderson at the letterhead address or (978) 694-3363.

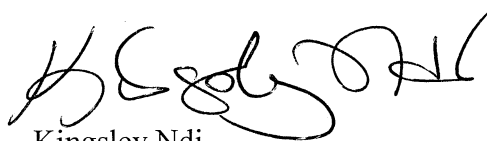
Natick, 50 Fort Avenue, RTN 3-0035941
Notice of Responsibility: the Town of Natick
Page 5

All future communications regarding this release must reference the Release Tracking Number (RTN) 3-0035941 contained in the subject block of this letter.

Sincerely,



Kenneth Sanderson
Environmental Engineer
Emergency Response Section



Kingsley Ndi
Emergency Response and Notification Chief
Bureau of Waste Site Cleanup

cc: Data Entry/File
NOR/ISSUED
Health Director James White, Natick Health Department
Speedway, LLC, 500 Speedway Drive, Enon, OH 45323, Attn: Mr. Mark Stella
Elaine Investments, LLC, c/o Tao Zhang, 6 Circle Drive, Dover, MA 02030, Attn: Mr.
Tao Zhang



Civil & Environmental Consultants, Inc.

January 03, 2020

Town of Natick
Melissa Malone, Town Administrator
13 East Central Street
Natick, Massachusetts 01760

Subject: Signatory Authority for MassDEP Submittals
90 Oak Street, Natick, Massachusetts
CEC Project 195-909

Dear Ms. Malone:

Civil & Environmental Consultants, Inc. (CEC) is currently providing the Town of Natick Licensed Site Professional (LSP) services for a regulated release at the property located at 90 Oak Street in Natick, Massachusetts (the Property). The release is being regulated by the Massachusetts Department of Environmental Protection (MassDEP) under Release Tracking Number (RTN) 3-35941. The Property is owned by the Town of Natick, of which you are the Town Administrator. The services being provided by CEC include preparing reports and associated forms to be submitted to the MassDEP and coordination of the necessary response actions required.

For regulatory submittals, our LSP, Jonathan Kitchen, would sign his name as your agent. Under section 310 CMR 40.009(2) of the Massachusetts Contingency Plan (MCP), a LSP can only sign these forms if the forms are accompanied by a written declaration from his client authorizing him to act as their agent. If you wish to have CEC's LSP act as your agent for the necessary submittals; specifically, an Immediate Response Action Plan and Release Notification Form, please sign at the bottom of this letter indicating your authorization to sign and submit these on your behalf. A draft of the documents were sent to you for your review and authorization prior to CEC signing it.

Please do not hesitate to call with any questions or comments.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

Molly Cote, LSP
Project Manager III

Jonathan D. Kitchen, PG, LSP
Principal

Melissa Malone, Town Administrator

APPENDIX B
MASSDEP PHASE I SITE ASSESSMENT MAP

MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:

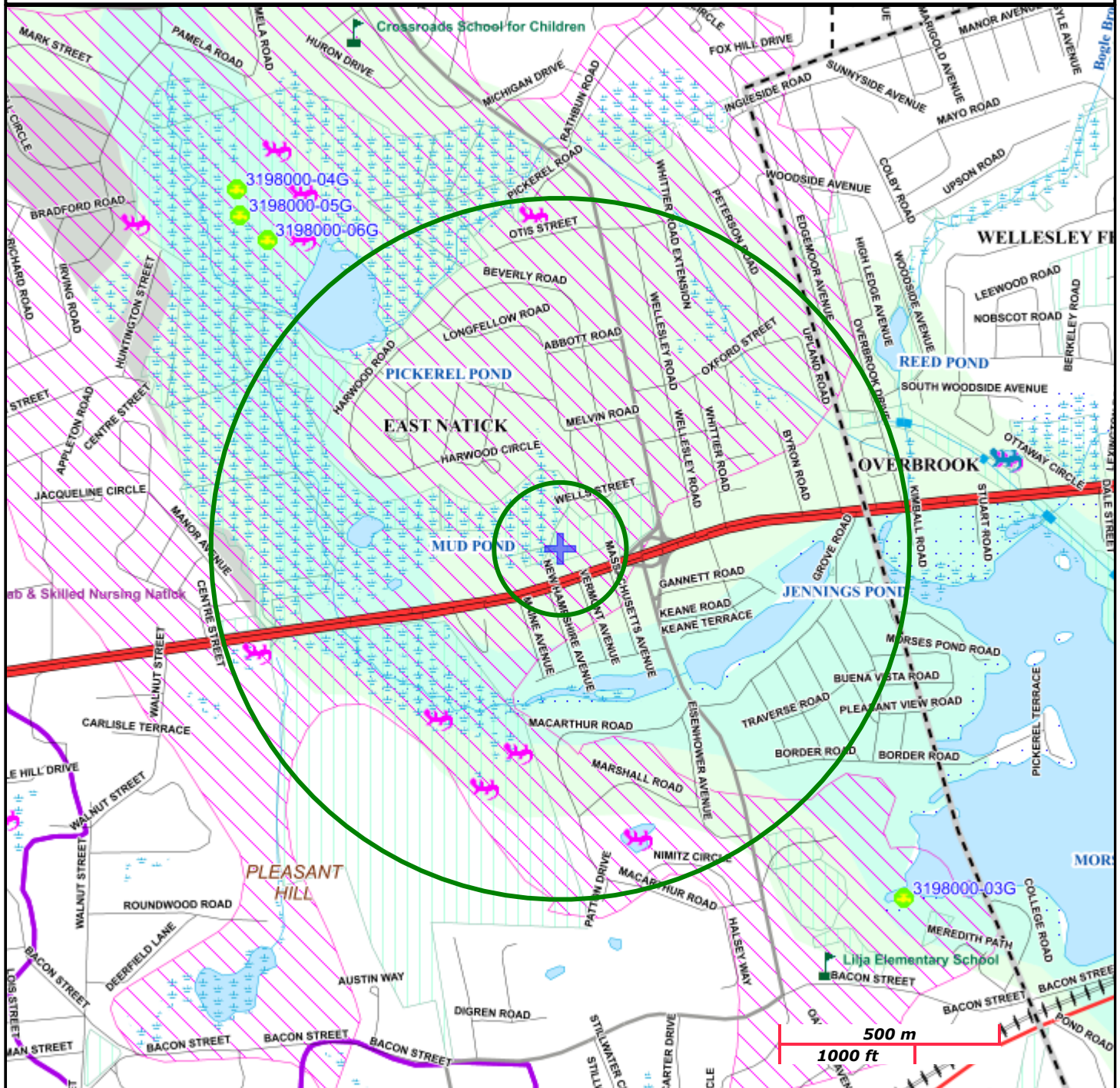
90 OAK STREET NATICK, MA
3-000035941
NAD83 UTM Meters:
4686120mN, 307546mE (Zone: 19)
November 20, 2019

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at:
<https://www.mass.gov/orgs/massgis-bureau-of-geographic-information>



MassDEP

Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com. GW, SW, Emerg., Non-Com.

APPENDIX C
LABORATORY ANALYTICAL REPORTS



CERTIFICATE OF ANALYSIS

Molly Cote
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

RE: 90 Oak Street Natick (195-909)
ESS Laboratory Work Order Number: 19K0221

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 12:46 pm, Nov 14, 2019

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0221

SAMPLE RECEIPT

The following samples were received on November 07, 2019 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
19K0221-01	B-1 0-0.5ft 0.5-1ft	Soil	8082A
19K0221-02	B-2 0-0.5ft 0.5-1ft	Soil	8082A
19K0221-03	B-3 0-0.5ft 0.5-1ft	Soil	8082A
19K0221-04	B-4 0-0.5ft 0.5-1ft	Soil	8082A
19K0221-05	B-5 0-0.5ft 0.5-1ft	Soil	8082A
19K0221-06	G-1 0-0.5ft	Soil	8082A
19K0221-07	G-2 0-0.5ft	Soil	8082A
19K0221-08	G-3 0-0.5ft	Soil	8082A
19K0221-09	G-4 0-0.5ft	Soil	8082A
19K0221-10	G-5 0-0.5ft	Soil	8082A



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0221

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0221

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0221

MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **19K0221-01 through 19K0221-10**

Matrices: ☐ Ground Water/Surface Water ☒ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other: _____

CAM Protocol (check all that apply below):

- | | | | | | |
|---|--|--|---|--|---|
| <input type="checkbox"/> 8260 VOC
CAM II A | <input type="checkbox"/> 7470/7471 Hg
CAM III B | <input type="checkbox"/> MassDEP VPH
(GC/PID/FID)
CAM IV A | <input checked="" type="checkbox"/> 8082 PCB
CAM V A | <input type="checkbox"/> 9014 Total
Cyanide/PAC
CAM VI A | <input type="checkbox"/> 6860 Perchlorate
CAM VIII B |
| <input type="checkbox"/> 8270 SVOC
CAM II B | <input type="checkbox"/> 7010 Metals
CAM III C | <input type="checkbox"/> MassDEP VPH
(GC/MS)
CAM IV C | <input type="checkbox"/> 8081 Pesticides
CAM V B | <input type="checkbox"/> 7196 Hex Cr
CAM VI B | <input type="checkbox"/> MassDEP APH
CAM IX A |
| <input type="checkbox"/> 6010 Metals
CAM III A | <input type="checkbox"/> 6020 Metals
CAM III D | <input type="checkbox"/> MassDEP EPH
CAM IV B | <input type="checkbox"/> 8151 Herbicides
CAM V C | <input type="checkbox"/> Explosives
CAM VIII A | <input type="checkbox"/> TO-15 VOC
CAM IX B |

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

- | | | |
|---|--|----------------------------------|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (X) No () |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (X) No () |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (X) No () |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (X) No () |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).
b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes () No ()
Yes (X) No () |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (X) No () |

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

- | | | |
|---|--|-----------------|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)?
<i>Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056 (2)(k) and WSC-07-350.</i> | Yes (X) No ()* |
| H | Were all QC performance standards specified in the CAM protocol(s) achieved? | Yes (X) No ()* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (X) No ()* |

****All negative responses must be addressed in an attached laboratory narrative.***

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

Signature: Laurel Stoddard

Printed Name: Laurel Stoddard

Date: November 14, 2019

Position: Laboratory Director



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: B-1 0-0.5ft 0.5-1ft
Date Sampled: 10/31/19 12:10
Percent Solids: 86
Initial Volume: 19.6
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0221
ESS Laboratory Sample ID: 19K0221-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:08

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/11/19 22:44		CK90803
Aroclor 1221	ND (0.06)		8082A		1	11/11/19 22:44		CK90803
Aroclor 1232	ND (0.06)		8082A		1	11/11/19 22:44		CK90803
Aroclor 1242	ND (0.06)		8082A		1	11/11/19 22:44		CK90803
Aroclor 1248	ND (0.06)		8082A		1	11/11/19 22:44		CK90803
Aroclor 1254 [2C]	0.4 (0.06)		8082A		1	11/11/19 22:44		CK90803
Aroclor 1260 [2C]	0.6 (0.06)		8082A		1	11/11/19 22:44		CK90803
Aroclor 1262	ND (0.06)		8082A		1	11/11/19 22:44		CK90803
Aroclor 1268	ND (0.06)		8082A		1	11/11/19 22:44		CK90803

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	68 %		30-150
Surrogate: Decachlorobiphenyl [2C]	77 %		30-150
Surrogate: Tetrachloro-m-xylene	72 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	76 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: B-2 0-0.5ft 0.5-1ft
Date Sampled: 10/31/19 12:15
Percent Solids: 83
Initial Volume: 19.7
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0221
ESS Laboratory Sample ID: 19K0221-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:08

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/11/19 23:03		CK90803
Aroclor 1221	ND (0.06)		8082A		1	11/11/19 23:03		CK90803
Aroclor 1232	ND (0.06)		8082A		1	11/11/19 23:03		CK90803
Aroclor 1242	ND (0.06)		8082A		1	11/11/19 23:03		CK90803
Aroclor 1248	ND (0.06)		8082A		1	11/11/19 23:03		CK90803
Aroclor 1254	ND (0.06)		8082A		1	11/11/19 23:03		CK90803
Aroclor 1260	0.2 (0.06)		8082A		1	11/11/19 23:03		CK90803
Aroclor 1262	ND (0.06)		8082A		1	11/11/19 23:03		CK90803
Aroclor 1268	ND (0.06)		8082A		1	11/11/19 23:03		CK90803

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	66 %		30-150
Surrogate: Decachlorobiphenyl [2C]	77 %		30-150
Surrogate: Tetrachloro-m-xylene	70 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	78 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: B-3 0-0.5ft 0.5-1ft
Date Sampled: 10/31/19 13:20
Percent Solids: 89
Initial Volume: 19.5
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0221
ESS Laboratory Sample ID: 19K0221-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:30

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/12/19 21:37		CK90804
Aroclor 1221	ND (0.06)		8082A		1	11/12/19 21:37		CK90804
Aroclor 1232	ND (0.06)		8082A		1	11/12/19 21:37		CK90804
Aroclor 1242	ND (0.06)		8082A		1	11/12/19 21:37		CK90804
Aroclor 1248	ND (0.06)		8082A		1	11/12/19 21:37		CK90804
Aroclor 1254 [2C]	0.1 (0.06)		8082A		1	11/12/19 21:37		CK90804
Aroclor 1260 [2C]	0.2 (0.06)		8082A		1	11/12/19 21:37		CK90804
Aroclor 1262	ND (0.06)		8082A		1	11/12/19 21:37		CK90804
Aroclor 1268	ND (0.06)		8082A		1	11/12/19 21:37		CK90804

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	66 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	76 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	65 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	71 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: B-4 0-0.5ft 0.5-1ft
Date Sampled: 10/31/19 13:30
Percent Solids: 88
Initial Volume: 19.7
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0221
ESS Laboratory Sample ID: 19K0221-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:30

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/12/19 21:56		CK90804
Aroclor 1221	ND (0.06)		8082A		1	11/12/19 21:56		CK90804
Aroclor 1232	ND (0.06)		8082A		1	11/12/19 21:56		CK90804
Aroclor 1242	ND (0.06)		8082A		1	11/12/19 21:56		CK90804
Aroclor 1248	ND (0.06)		8082A		1	11/12/19 21:56		CK90804
Aroclor 1254	ND (0.06)		8082A		1	11/12/19 21:56		CK90804
Aroclor 1260	ND (0.06)		8082A		1	11/12/19 21:56		CK90804
Aroclor 1262	ND (0.06)		8082A		1	11/12/19 21:56		CK90804
Aroclor 1268	ND (0.06)		8082A		1	11/12/19 21:56		CK90804

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	70 %		30-150
Surrogate: Decachlorobiphenyl [2C]	78 %		30-150
Surrogate: Tetrachloro-m-xylene	70 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	74 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: B-5 0-0.5ft 0.5-1ft
Date Sampled: 10/31/19 13:25
Percent Solids: 84
Initial Volume: 19.8
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0221
ESS Laboratory Sample ID: 19K0221-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:30

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/12/19 22:15		CK90804
Aroclor 1221	ND (0.06)		8082A		1	11/12/19 22:15		CK90804
Aroclor 1232	ND (0.06)		8082A		1	11/12/19 22:15		CK90804
Aroclor 1242	ND (0.06)		8082A		1	11/12/19 22:15		CK90804
Aroclor 1248	ND (0.06)		8082A		1	11/12/19 22:15		CK90804
Aroclor 1254 [2C]	0.1 (0.06)		8082A		1	11/12/19 22:15		CK90804
Aroclor 1260 [2C]	0.2 (0.06)		8082A		1	11/12/19 22:15		CK90804
Aroclor 1262	ND (0.06)		8082A		1	11/12/19 22:15		CK90804
Aroclor 1268	ND (0.06)		8082A		1	11/12/19 22:15		CK90804

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	66 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	70 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	65 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	69 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: G-1 0-0.5ft
Date Sampled: 10/31/19 15:00
Percent Solids: 90
Initial Volume: 20
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0221
ESS Laboratory Sample ID: 19K0221-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:30

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/12/19 22:35		CK90804
Aroclor 1221	ND (0.06)		8082A		1	11/12/19 22:35		CK90804
Aroclor 1232	ND (0.06)		8082A		1	11/12/19 22:35		CK90804
Aroclor 1242	ND (0.06)		8082A		1	11/12/19 22:35		CK90804
Aroclor 1248	ND (0.06)		8082A		1	11/12/19 22:35		CK90804
Aroclor 1254 [2C]	0.08 (0.06)		8082A		1	11/12/19 22:35		CK90804
Aroclor 1260 [2C]	0.1 (0.06)		8082A		1	11/12/19 22:35		CK90804
Aroclor 1262	ND (0.06)		8082A		1	11/12/19 22:35		CK90804
Aroclor 1268	ND (0.06)		8082A		1	11/12/19 22:35		CK90804

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	65 %		30-150
Surrogate: Decachlorobiphenyl [2C]	71 %		30-150
Surrogate: Tetrachloro-m-xylene	64 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	68 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: G-2 0-0.5ft
Date Sampled: 10/31/19 15:05
Percent Solids: 87
Initial Volume: 20.3
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0221
ESS Laboratory Sample ID: 19K0221-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:30

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/12/19 22:54		CK90804
Aroclor 1221	ND (0.06)		8082A		1	11/12/19 22:54		CK90804
Aroclor 1232	ND (0.06)		8082A		1	11/12/19 22:54		CK90804
Aroclor 1242	ND (0.06)		8082A		1	11/12/19 22:54		CK90804
Aroclor 1248	ND (0.06)		8082A		1	11/12/19 22:54		CK90804
Aroclor 1254 [2C]	0.2 (0.06)		8082A		1	11/12/19 22:54		CK90804
Aroclor 1260 [2C]	0.2 (0.06)		8082A		1	11/12/19 22:54		CK90804
Aroclor 1262	ND (0.06)		8082A		1	11/12/19 22:54		CK90804
Aroclor 1268	ND (0.06)		8082A		1	11/12/19 22:54		CK90804

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	70 %		30-150
Surrogate: Decachlorobiphenyl [2C]	77 %		30-150
Surrogate: Tetrachloro-m-xylene	66 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	71 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: G-3 0-0.5ft
Date Sampled: 10/31/19 15:10
Percent Solids: 92
Initial Volume: 19.3
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0221
ESS Laboratory Sample ID: 19K0221-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:30

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/12/19 23:13		CK90804
Aroclor 1221	ND (0.06)		8082A		1	11/12/19 23:13		CK90804
Aroclor 1232	ND (0.06)		8082A		1	11/12/19 23:13		CK90804
Aroclor 1242	ND (0.06)		8082A		1	11/12/19 23:13		CK90804
Aroclor 1248	ND (0.06)		8082A		1	11/12/19 23:13		CK90804
Aroclor 1254 [2C]	0.2 (0.06)		8082A		1	11/12/19 23:13		CK90804
Aroclor 1260 [2C]	0.2 (0.06)		8082A		1	11/12/19 23:13		CK90804
Aroclor 1262	ND (0.06)		8082A		1	11/12/19 23:13		CK90804
Aroclor 1268	ND (0.06)		8082A		1	11/12/19 23:13		CK90804

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	66 %		30-150
Surrogate: Decachlorobiphenyl [2C]	74 %		30-150
Surrogate: Tetrachloro-m-xylene	66 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	76 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: G-4 0-0.5ft
Date Sampled: 10/31/19 15:10
Percent Solids: 85
Initial Volume: 20.9
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0221
ESS Laboratory Sample ID: 19K0221-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:30

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/12/19 23:32		CK90804
Aroclor 1221	ND (0.06)		8082A		1	11/12/19 23:32		CK90804
Aroclor 1232	ND (0.06)		8082A		1	11/12/19 23:32		CK90804
Aroclor 1242	ND (0.06)		8082A		1	11/12/19 23:32		CK90804
Aroclor 1248	ND (0.06)		8082A		1	11/12/19 23:32		CK90804
Aroclor 1254 [2C]	0.1 (0.06)		8082A		1	11/12/19 23:32		CK90804
Aroclor 1260 [2C]	0.2 (0.06)		8082A		1	11/12/19 23:32		CK90804
Aroclor 1262	ND (0.06)		8082A		1	11/12/19 23:32		CK90804
Aroclor 1268	ND (0.06)		8082A		1	11/12/19 23:32		CK90804

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	66 %		30-150
Surrogate: Decachlorobiphenyl [2C]	75 %		30-150
Surrogate: Tetrachloro-m-xylene	66 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	70 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: G-5 0-0.5ft
Date Sampled: 10/31/19 15:15
Percent Solids: 86
Initial Volume: 19.6
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0221
ESS Laboratory Sample ID: 19K0221-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:30

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/12/19 23:51		CK90804
Aroclor 1221	ND (0.06)		8082A		1	11/12/19 23:51		CK90804
Aroclor 1232	ND (0.06)		8082A		1	11/12/19 23:51		CK90804
Aroclor 1242	ND (0.06)		8082A		1	11/12/19 23:51		CK90804
Aroclor 1248	ND (0.06)		8082A		1	11/12/19 23:51		CK90804
Aroclor 1254 [2C]	0.1 (0.06)		8082A		1	11/12/19 23:51		CK90804
Aroclor 1260 [2C]	0.2 (0.06)		8082A		1	11/12/19 23:51		CK90804
Aroclor 1262	ND (0.06)		8082A		1	11/12/19 23:51		CK90804
Aroclor 1268	ND (0.06)		8082A		1	11/12/19 23:51		CK90804

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	68 %		30-150
Surrogate: Decachlorobiphenyl [2C]	75 %		30-150
Surrogate: Tetrachloro-m-xylene	66 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	70 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0221

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8082A Polychlorinated Biphenyls (PCB)

Batch CK90803 - 3540C

Blank

Aroclor 1016	ND	0.05	mg/kg wet							
Aroclor 1016 [2C]	ND	0.05	mg/kg wet							
Aroclor 1221	ND	0.05	mg/kg wet							
Aroclor 1221 [2C]	ND	0.05	mg/kg wet							
Aroclor 1232	ND	0.05	mg/kg wet							
Aroclor 1232 [2C]	ND	0.05	mg/kg wet							
Aroclor 1242	ND	0.05	mg/kg wet							
Aroclor 1242 [2C]	ND	0.05	mg/kg wet							
Aroclor 1248	ND	0.05	mg/kg wet							
Aroclor 1248 [2C]	ND	0.05	mg/kg wet							
Aroclor 1254	ND	0.05	mg/kg wet							
Aroclor 1254 [2C]	ND	0.05	mg/kg wet							
Aroclor 1260	ND	0.05	mg/kg wet							
Aroclor 1260 [2C]	ND	0.05	mg/kg wet							
Aroclor 1262	ND	0.05	mg/kg wet							
Aroclor 1262 [2C]	ND	0.05	mg/kg wet							
Aroclor 1268	ND	0.05	mg/kg wet							
Aroclor 1268 [2C]	ND	0.05	mg/kg wet							

Surrogate: Decachlorobiphenyl	0.0189		mg/kg wet	0.02500		75	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0205		mg/kg wet	0.02500		82	30-150			
Surrogate: Tetrachloro-m-xylene	0.0170		mg/kg wet	0.02500		68	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0185		mg/kg wet	0.02500		74	30-150			

LCS

Aroclor 1016	0.5	0.05	mg/kg wet	0.5000		94	40-140			
Aroclor 1016 [2C]	0.5	0.05	mg/kg wet	0.5000		96	40-140			
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		87	40-140			
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		90	40-140			

Surrogate: Decachlorobiphenyl	0.0199		mg/kg wet	0.02500		79	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0210		mg/kg wet	0.02500		84	30-150			
Surrogate: Tetrachloro-m-xylene	0.0182		mg/kg wet	0.02500		73	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0182		mg/kg wet	0.02500		73	30-150			

LCS Dup

Aroclor 1016	0.5	0.05	mg/kg wet	0.5000		95	40-140	2	30	
Aroclor 1016 [2C]	0.5	0.05	mg/kg wet	0.5000		98	40-140	2	30	
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		90	40-140	3	30	
Aroclor 1260 [2C]	0.5	0.05	mg/kg wet	0.5000		93	40-140	4	30	

Surrogate: Decachlorobiphenyl	0.0205		mg/kg wet	0.02500		82	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0214		mg/kg wet	0.02500		86	30-150			
Surrogate: Tetrachloro-m-xylene	0.0187		mg/kg wet	0.02500		75	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0187		mg/kg wet	0.02500		75	30-150			

Batch CK90804 - 3540C



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0221

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8082A Polychlorinated Biphenyls (PCB)

Batch CK90804 - 3540C

Blank

Aroclor 1016	ND	0.02	mg/kg wet							
Aroclor 1016 [2C]	ND	0.02	mg/kg wet							
Aroclor 1221	ND	0.02	mg/kg wet							
Aroclor 1221 [2C]	ND	0.02	mg/kg wet							
Aroclor 1232	ND	0.02	mg/kg wet							
Aroclor 1232 [2C]	ND	0.02	mg/kg wet							
Aroclor 1242	ND	0.02	mg/kg wet							
Aroclor 1242 [2C]	ND	0.02	mg/kg wet							
Aroclor 1248	ND	0.02	mg/kg wet							
Aroclor 1248 [2C]	ND	0.02	mg/kg wet							
Aroclor 1254	ND	0.02	mg/kg wet							
Aroclor 1254 [2C]	ND	0.02	mg/kg wet							
Aroclor 1260	ND	0.02	mg/kg wet							
Aroclor 1260 [2C]	ND	0.02	mg/kg wet							
Aroclor 1262	ND	0.02	mg/kg wet							
Aroclor 1262 [2C]	ND	0.02	mg/kg wet							
Aroclor 1268	ND	0.02	mg/kg wet							
Aroclor 1268 [2C]	ND	0.02	mg/kg wet							

Surrogate: Decachlorobiphenyl	0.0168		mg/kg wet	0.02500		67	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0214		mg/kg wet	0.02500		85	30-150			
Surrogate: Tetrachloro-m-xylene	0.0160		mg/kg wet	0.02500		64	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0172		mg/kg wet	0.02500		69	30-150			

LCS

Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		89	40-140			
Aroclor 1016 [2C]	0.5	0.05	mg/kg wet	0.5000		93	40-140			
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		81	40-140			
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		83	40-140			

Surrogate: Decachlorobiphenyl	0.0179		mg/kg wet	0.02500		72	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0199		mg/kg wet	0.02500		80	30-150			
Surrogate: Tetrachloro-m-xylene	0.0177		mg/kg wet	0.02500		71	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0178		mg/kg wet	0.02500		71	30-150			

LCS Dup

Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		88	40-140	1	30	
Aroclor 1016 [2C]	0.5	0.05	mg/kg wet	0.5000		93	40-140	0.8	30	
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		81	40-140	0.8	30	
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		83	40-140	0.4	30	

Surrogate: Decachlorobiphenyl	0.0184		mg/kg wet	0.02500		73	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0196		mg/kg wet	0.02500		79	30-150			
Surrogate: Tetrachloro-m-xylene	0.0174		mg/kg wet	0.02500		69	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0175		mg/kg wet	0.02500		70	30-150			



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0221

Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0221

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutOfStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GEI Consultants, Inc. - TB/MM
 Shipped/Delivered Via: Client

ESS Project ID: 19K0221
 Date Received: 11/7/2019
 Project Due Date: 11/14/2019
 Days for Project: 5 Day

1. Air bill manifest present? ☐ No
 Air No.: NA
2. Were custody seals present? ☐ No
3. Is radiation count <100 CPM? ☐ Yes
4. Is a Cooler Present? ☐ Yes
 Temp: 4.4 Iced with: Ice
5. Was COC signed and dated by client? ☐ Yes

6. Does COC match bottles? ☐ Yes
7. Is COC complete and correct? ☐ Yes
8. Were samples received intact? ☐ Yes
9. Were labs informed about short holds & rushes? Yes / No / NA
10. Were any analyses received outside of hold time? Yes / NO

11. Any Subcontracting needed? Yes / No
 ESS Sample IDs: _____
 Analysis: _____
 TAT: _____

12. Were VOAs received? Yes / No
 a. Air bubbles in aqueous VOAs? Yes / No
 b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? Yes / No
 a. If metals preserved upon receipt: Date: _____ Time: _____ By: _____
 b. Low Level VOA vials frozen: Date: _____ Time: _____ By: _____

Sample Receiving Notes:

Relog of 19J1157 11-20, 54-58

14. Was there a need to contact Project Manager? Yes / No
 a. Was there a need to contact the client? Yes / No
 Who was contacted? _____ Date: _____ Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	410573	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
01	410574	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
02	410571	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
02	410572	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
03	410569	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
03	410570	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
04	410567	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
04	410568	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
05	410565	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
05	410566	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
06	410557	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
07	410556	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
08	410555	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
09	410554	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
10	410553	Yes	NA	Yes	8 oz. Jar - Unpres	NP	

2nd Review

Were all containers scanned into storage/lab?

Are barcode labels on correct containers?

Are all Flashpoint stickers attached/container ID # circled?

Are all Hex Chrome stickers attached?

Are all QC stickers attached?

Initials: SA
 Yes / No
 Yes / No / NA
 Yes / No / NA
 Yes / No / NA

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GEI Consultants, Inc. - TB/MM

ESS Project ID: 19K0221

Date Received: 11/7/2019

Are VOA stickers attached if bubbles noted?

Yes / No / NA

Completed

By:

Date & Time:

Reviewed

By:

Date & Time:

Delivered

By:

[Handwritten signatures]

11/7/19 2150

11/7/19 2259

11/7/19 2259

*Samples being removed from hold and run, B samples being composited - ~~due 11/9/19~~ LLB

11/7/19 *corrected 11/13/19 LLB

19K0221

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

Turn Time 5 Days 2
Regulatory State MA
Is this project for any of the following?:
☐ CT RCP ☒ MA MCP ☐ RGP

ESS Lab #

195H57-19K0222

Reporting Limits

MA RCL-1

Electronic Deliverables

☒ Data Checker ☒ Excel
☒ Other (Please Specify ->) PDF

Company Name
Civil + Environmental Consultants

Project #

90 Oak Street Natick

Contact Person
Molly Cote

Address

31 Bellows Road

City
Rumford

State

MA

Zip Code

02767

PO #

Telephone Number
774 561 2176

FAX Number

mccote@cecinc.com

Email Address

Sample ID

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix
11	10/31/19	1210	Grab	Soil
12 ¹		1210		
13 ²		1215		
14 ²		1215		
15 ³		1320		
16 ³		1320		
17 ⁴		1330		
18 ⁴		1330		
19 ⁵		1325		
20 ⁵		1325		

B-1 0-0.5'
B-1 0.5-1'
B-2 0-0.5'
B-2 0.5-1'
B-3 0-0.5'
B-3 0.5-1'
B-4 0-0.5'
B-4 0.5-1'
B-5 0-0.5'
B-5 0.5-1'

Analysis

PLPS 10/31/19

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubtainer J-Jar O-Other P-Poly S-Sterile V-Vial
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*

Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAc2, NaOH 9-NH4Cl 10-DI H2O 11-Other*

Number of Containers per Sample: 1

Laboratory Use Only

Cooler Present

yes

☐ Drop Off

Seals Intact

☐ Pickup

Cooler Temperature: 4.4 °C Ice 33

Sampled by:

Molly Cote

Comments:

HOLD

Please specify "Other" preservative and containers types in this space

Relinquished by: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished By: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Molly Cote 10/31/19 1921

20 10/31/19 1921

Relinquished by: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished By: (Signature, Date & Time)

Received By: (Signature, Date & Time)

*Samples being removed from hold and run, B samples being composited - ~~due 11/9/19~~ LLB

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

Turn Time	5	Days	2
Regulatory State	MA		
Is this project for any of the following?:			
<input type="radio"/> CT RCP <input checked="" type="radio"/> MA MCP <input type="radio"/> RGP			
Project #	Project Name		
	90 Oak Street Nahick		
Address			
31 Bellow Road			
State	Zip Code	PO #	
	02746		
Number	Email Address		
	mco@ocellinc.com		

Electronic Deliverables

☒ Other (Please Specify →)

Analysis

Dr. P. R. H. H. H.

Telephone Number

FAX Number

C 1 0-05'

G-1 U-103

$C=1 \quad n=0.5$

 ~~$a = 7 \quad 0.5 - 1$~~

$l_2 = 3$ $D = 0.5$

$n=3$ $D.S=1$

6-4 0-0.5

$$f = 1 \quad 0,5 = 1$$

G-5 0-0.5

$$G = 5 \quad 0.15$$

Preservation Code: 1-Non Preserved 2-HCl 3-H₂SO₄ 4-HNO₃ 5-NaOH 6-Nitrogen 7-Freeze Dried

Number of Containers per Sample:

COLE

Please specify "Other" preservative and containers types in this space

Samples received corrected

~~Hold~~

4.4 °C 3.3 16

Received By: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Received By: (Signature, Date & Time)

*Samples being removed from hold and run, B samples being composited - due 11/9/19 LLB

19K0221

ESS Laboratory

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Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

Turn Time 5 Days 2
Regulatory State MA
Is this project for any of the following?:
☐ CT RCP ☒ MA MCP ☐ RGP

ESS Lab #

195157-19K0222

Reporting Limits

MA RCL-1

Electronic Deliverables

☒ Data Checker

☒ Other (Please Specify ->)

☒ Excel

PDF

Company Name
Civil + Environmental Consultants

Project #

90 Oak Street Natick

Contact Person
Molly Cote

Address

31 Bellows Road

City
Rumford

State

MA

Zip Code

02767

PO #

Telephone Number
774 561 2176

FAX Number

mollycote@ecinc.com

Email Address

Sample ID

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix
11	10/31/19	1210	Grab	Soil
12		1210		
13		1215		
14		1215		
15		1320		
16		1320		
17		1330		
18		1330		
19		1325		
20		1325		

B-1 0-0.5'
B-1 0.5-1'
B-2 0-0.5'
B-2 0.5-1'
B-3 0-0.5'
B-3 0.5-1'
B-4 0-0.5'
B-4 0.5-1'
B-5 0-0.5'
B-5 0.5-1'

Analysis

PLPS 10/31/19

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubittainer J-Jar O-Other P-Poly S-Sterile V-Vial

Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*

Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAc2, NaOH 9-NH4Cl 10-DI H2O 11-Other*

Number of Containers per Sample: 1

Laboratory Use Only

Cooler Present: yes

☐ Drop Off

Seals Intact:

☐ Pickup

Cooler Temperature: 4.4 °C Ice 33

Sampled by:

Molly Cote

Comments:

HOLD

Please specify "Other" preservative and containers types in this space

Relinquished by: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished By: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Molly Cote 10/31/19 1921

20 10/31/19 1921

Relinquished By: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished by: (Signature, Date & Time)

Received By: (Signature, Date & Time)

*Samples being removed from hold and run, B samples being composited - due 11/9/19 LLB

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CHAIN OF CUSTODY

Turn Time	5	Days	2
Regulatory State	MA		
Is this project for any of the following?:			
<input type="radio"/> CT RCP <input checked="" type="radio"/> MA MCP <input type="radio"/> RGP			
Project #	Project Name		
	90 Oak Street Nahick		
Address			
31 Bellow Road			
State	Zip Code	PO #	
	02746		
Number	Email Address		
	mco@coelinc.com		

ESS Lab #

Reporting Limits

Electronic Deliverables

☒ Data Checker☒ Other (Please Specify →)☒ Excel

Analysis

Dr. P. R. H. H. H.

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID
56	10/31/19	1500	Grub	Soil	G-1 0-0.5'
57		1500	Grub	Soil	G-1 0-0.5'
58		1505			G-2 0-0.5'
59		1505			G-2 0.5-1'
60		1510	1510		G-3 0-0.5'
61		1510	1510		G-3 0.5-1'
62		1510	1510		G-4 0-0.5'
63		1510	1510		G-4 0.5-1'
64		1515	1515		G-5 0-0.5'
65		1515	1515		G-5 0.5-1'

	1515	1515		6-3								
Container Type:	AC-Air Cassette	AG-Amber Glass	B-BOD Bottle	C-Cubitainer	J-Jar	O-Other	P-Poly	S-Sterile	V-Vial			
	500 ml	500 ml	8.4 L	7-VOA	8-2 oz	9-4 oz	10-8 oz	11-Other*				

Container Volume:	1-100 mL	2-2.5 gal	3-250 mL	4-300 mL	5-500 mL	6-1L	7-VOA	8-2.0Z	9-4.0Z	10-10.0Z	11-Other*
Container Type:	1-100 mL	2-2.5 gal	3-250 mL	4-300 mL	5-500 mL	6-1L	7-VOA	8-2.0Z	9-4.0Z	10-10.0Z	11-Other*

Preservation Code:	1-Non Preserved	2-HCl	3-H ₂ SO ₄	4-HNO ₃	5-NaOH	6-Methanol	7-Na ₂ SO ₃	8-ZnAc ₂ , NaOH
--------------------	-----------------	-------	----------------------------------	--------------------	--------	------------	-----------------------------------	----------------------------

Number of Containers per Sample:

Number of Containers per Sample:

Laboratory Use Only

Sampled by: Mouly COTE

Comments:

COLE

Please specify "Other" preservative and containers types in this space

Samples received cor

11//19 - PRB

Cooler Present:

☐ Drop Off

Seals Intact:

☐ Pickup

Cooler Temperature: 4.4 °C 3.3 Ice

Relinquished by: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished By: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Molly CG 10/31/19 1921

Relinquished by: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Received By: (Signature, Date & Time)

Relinquished By: (Signature, Date & Time)

Received By: (Signature, Date & Time)



CERTIFICATE OF ANALYSIS

Molly Cote
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

RE: 90 Oak Street Natick (195-909)
ESS Laboratory Work Order Number: 19J1156

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 5:50 pm, Nov 04, 2019

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19J1156

SAMPLE RECEIPT

The following samples were received on October 31, 2019 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
19J1156-01	CS-A 0-1ft	Soil	8082A
19J1156-02	CS-B 0-1ft	Soil	8082A
19J1156-03	CS-C 0-1ft	Soil	8082A
19J1156-04	CS-D 0-1ft	Soil	8082A
19J1156-05	CS-E 0-1ft	Soil	8082A
19J1156-06	CS-F 0-1ft	Soil	8082A
19J1156-07	CS-G 0-1ft	Soil	8082A



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19J1156

PROJECT NARRATIVE

8082A Polychlorinated Biphenyls (PCB)

19J1156-01 [Elevated Method Reporting Limits due to sample matrix \(EL\).](#)

19J1156-01 [Surrogate recovery\(ies\) diluted below the MRL \(SD\).](#)

Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19J1156

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19J1156

MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **19J1156-01 through 19J1156-07**

Matrices: ☐ Ground Water/Surface Water ☒ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other: _____

CAM Protocol (check all that apply below):

<input type="checkbox"/> 8260 VOC CAM II A	<input type="checkbox"/> 7470/7471 Hg CAM III B	<input type="checkbox"/> MassDEP VPH (GC/PID/FID) CAM IV A	<input checked="" type="checkbox"/> 8082 PCB CAM V A	<input type="checkbox"/> 9014 Total Cyanide/PAC CAM VI A	<input type="checkbox"/> 6860 Perchlorate CAM VIII B
<input type="checkbox"/> 8270 SVOC CAM II B	<input type="checkbox"/> 7010 Metals CAM III C	<input type="checkbox"/> MassDEP VPH (GC/MS) CAM IV C	<input type="checkbox"/> 8081 Pesticides CAM V B	<input type="checkbox"/> 7196 Hex Cr CAM VI B	<input type="checkbox"/> MassDEP APH CAM IX A
<input type="checkbox"/> 6010 Metals CAM III A	<input type="checkbox"/> 6020 Metals CAM III D	<input type="checkbox"/> MassDEP EPH CAM IV B	<input type="checkbox"/> 8151 Herbicides CAM V C	<input type="checkbox"/> Explosives CAM VIII A	<input type="checkbox"/> TO-15 VOC CAM IX B

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
D	Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
E	VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? <i>Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056 (2)(k) and WSC-07-350.</i>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> *
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> *
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> *

****All negative responses must be addressed in an attached laboratory narrative.***

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

Signature: Laurel Stoddard

Printed Name: Laurel Stoddard

Date: November 04, 2019

Position: Laboratory Director



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: CS-A 0-1ft
Date Sampled: 10/31/19 12:40
Percent Solids: 84
Initial Volume: 20
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19J1156
ESS Laboratory Sample ID: 19J1156-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/1/19 15:00

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (2.4)		8082A		40	11/04/19 16:29		CK90123
Aroclor 1221	ND (2.4)		8082A		40	11/04/19 16:29		CK90123
Aroclor 1232	ND (2.4)		8082A		40	11/04/19 16:29		CK90123
Aroclor 1242	ND (2.4)		8082A		40	11/04/19 16:29		CK90123
Aroclor 1248	ND (2.4)		8082A		40	11/04/19 16:29		CK90123
Aroclor 1254 [2C]	20.1 (2.4)		8082A		40	11/04/19 16:29		CK90123
Aroclor 1260 [2C]	31.5 (2.4)		8082A		40	11/04/19 16:29		CK90123
Aroclor 1262	ND (2.4)		8082A		40	11/04/19 16:29		CK90123
Aroclor 1268	ND (2.4)		8082A		40	11/04/19 16:29		CK90123

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	%	SD	30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	%	SD	30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	%	SD	30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	%	SD	30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: CS-B 0-1ft
Date Sampled: 10/31/19 13:40
Percent Solids: 85
Initial Volume: 20.9
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19J1156
ESS Laboratory Sample ID: 19J1156-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/1/19 15:00

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/04/19 15:12		CK90123
Aroclor 1221	ND (0.06)		8082A		1	11/04/19 15:12		CK90123
Aroclor 1232	ND (0.06)		8082A		1	11/04/19 15:12		CK90123
Aroclor 1242	ND (0.06)		8082A		1	11/04/19 15:12		CK90123
Aroclor 1248	ND (0.06)		8082A		1	11/04/19 15:12		CK90123
Aroclor 1254 [2C]	0.2 (0.06)		8082A		1	11/04/19 15:12		CK90123
Aroclor 1260 [2C]	0.3 (0.06)		8082A		1	11/04/19 15:12		CK90123
Aroclor 1262	ND (0.06)		8082A		1	11/04/19 15:12		CK90123
Aroclor 1268	ND (0.06)		8082A		1	11/04/19 15:12		CK90123

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	62 %		30-150
Surrogate: Decachlorobiphenyl [2C]	72 %		30-150
Surrogate: Tetrachloro-m-xylene	63 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	66 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: CS-C 0-1ft
Date Sampled: 10/31/19 14:10
Percent Solids: 80
Initial Volume: 20.9
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19J1156
ESS Laboratory Sample ID: 19J1156-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/1/19 15:00

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/04/19 15:32		CK90123
Aroclor 1221	ND (0.06)		8082A		1	11/04/19 15:32		CK90123
Aroclor 1232	ND (0.06)		8082A		1	11/04/19 15:32		CK90123
Aroclor 1242	ND (0.06)		8082A		1	11/04/19 15:32		CK90123
Aroclor 1248	ND (0.06)		8082A		1	11/04/19 15:32		CK90123
Aroclor 1254	ND (0.06)		8082A		1	11/04/19 15:32		CK90123
Aroclor 1260	0.1 (0.06)		8082A		1	11/04/19 15:32		CK90123
Aroclor 1262	ND (0.06)		8082A		1	11/04/19 15:32		CK90123
Aroclor 1268	ND (0.06)		8082A		1	11/04/19 15:32		CK90123

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	71 %		30-150
Surrogate: Decachlorobiphenyl [2C]	74 %		30-150
Surrogate: Tetrachloro-m-xylene	67 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	71 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: CS-D 0-1ft
Date Sampled: 10/31/19 15:55
Percent Solids: 84
Initial Volume: 19
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19J1156
ESS Laboratory Sample ID: 19J1156-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/1/19 15:00

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/04/19 15:51		CK90123
Aroclor 1221	ND (0.06)		8082A		1	11/04/19 15:51		CK90123
Aroclor 1232	ND (0.06)		8082A		1	11/04/19 15:51		CK90123
Aroclor 1242	ND (0.06)		8082A		1	11/04/19 15:51		CK90123
Aroclor 1248	ND (0.06)		8082A		1	11/04/19 15:51		CK90123
Aroclor 1254	ND (0.06)		8082A		1	11/04/19 15:51		CK90123
Aroclor 1260	ND (0.06)		8082A		1	11/04/19 15:51		CK90123
Aroclor 1262	ND (0.06)		8082A		1	11/04/19 15:51		CK90123
Aroclor 1268	ND (0.06)		8082A		1	11/04/19 15:51		CK90123

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	61 %		30-150
Surrogate: Decachlorobiphenyl [2C]	70 %		30-150
Surrogate: Tetrachloro-m-xylene	61 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	63 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: CS-E 0-1ft
Date Sampled: 10/31/19 15:40
Percent Solids: 74
Initial Volume: 20
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19J1156
ESS Laboratory Sample ID: 19J1156-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/1/19 15:00

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.07)		8082A		1	11/04/19 16:10		CK90123
Aroclor 1221	ND (0.07)		8082A		1	11/04/19 16:10		CK90123
Aroclor 1232	ND (0.07)		8082A		1	11/04/19 16:10		CK90123
Aroclor 1242	ND (0.07)		8082A		1	11/04/19 16:10		CK90123
Aroclor 1248	ND (0.07)		8082A		1	11/04/19 16:10		CK90123
Aroclor 1254	ND (0.07)		8082A		1	11/04/19 16:10		CK90123
Aroclor 1260	ND (0.07)		8082A		1	11/04/19 16:10		CK90123
Aroclor 1262	ND (0.07)		8082A		1	11/04/19 16:10		CK90123
Aroclor 1268	ND (0.07)		8082A		1	11/04/19 16:10		CK90123

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	62 %		30-150
Surrogate: Decachlorobiphenyl [2C]	72 %		30-150
Surrogate: Tetrachloro-m-xylene	62 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	65 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: CS-F 0-1ft
Date Sampled: 10/31/19 16:40
Percent Solids: 89
Initial Volume: 19.8
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19J1156
ESS Laboratory Sample ID: 19J1156-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/1/19 15:20

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/04/19 14:15		CK90124
Aroclor 1221	ND (0.06)		8082A		1	11/04/19 14:15		CK90124
Aroclor 1232	ND (0.06)		8082A		1	11/04/19 14:15		CK90124
Aroclor 1242	ND (0.06)		8082A		1	11/04/19 14:15		CK90124
Aroclor 1248	ND (0.06)		8082A		1	11/04/19 14:15		CK90124
Aroclor 1254 [2C]	0.1 (0.06)		8082A		1	11/04/19 14:15		CK90124
Aroclor 1260 [2C]	0.1 (0.06)		8082A		1	11/04/19 14:15		CK90124
Aroclor 1262	ND (0.06)		8082A		1	11/04/19 14:15		CK90124
Aroclor 1268	ND (0.06)		8082A		1	11/04/19 14:15		CK90124

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	65 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	79 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	68 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	70 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: CS-G 0-1ft
Date Sampled: 10/31/19 15:15
Percent Solids: 87
Initial Volume: 20.5
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19J1156
ESS Laboratory Sample ID: 19J1156-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/1/19 15:20

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/04/19 14:34		CK90124
Aroclor 1221	ND (0.06)		8082A		1	11/04/19 14:34		CK90124
Aroclor 1232	ND (0.06)		8082A		1	11/04/19 14:34		CK90124
Aroclor 1242	ND (0.06)		8082A		1	11/04/19 14:34		CK90124
Aroclor 1248	ND (0.06)		8082A		1	11/04/19 14:34		CK90124
Aroclor 1254 [2C]	0.3 (0.06)		8082A		1	11/04/19 14:34		CK90124
Aroclor 1260 [2C]	0.4 (0.06)		8082A		1	11/04/19 14:34		CK90124
Aroclor 1262	ND (0.06)		8082A		1	11/04/19 14:34		CK90124
Aroclor 1268	ND (0.06)		8082A		1	11/04/19 14:34		CK90124

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	70 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	78 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	69 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	73 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19J1156

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8082A Polychlorinated Biphenyls (PCB)

Batch CK90123 - 3540C

Blank

Aroclor 1016	ND	0.05	mg/kg wet							
Aroclor 1016 [2C]	ND	0.05	mg/kg wet							
Aroclor 1221	ND	0.05	mg/kg wet							
Aroclor 1221 [2C]	ND	0.05	mg/kg wet							
Aroclor 1232	ND	0.05	mg/kg wet							
Aroclor 1232 [2C]	ND	0.05	mg/kg wet							
Aroclor 1242	ND	0.05	mg/kg wet							
Aroclor 1242 [2C]	ND	0.05	mg/kg wet							
Aroclor 1248	ND	0.05	mg/kg wet							
Aroclor 1248 [2C]	ND	0.05	mg/kg wet							
Aroclor 1254	ND	0.05	mg/kg wet							
Aroclor 1254 [2C]	ND	0.05	mg/kg wet							
Aroclor 1260	ND	0.05	mg/kg wet							
Aroclor 1260 [2C]	ND	0.05	mg/kg wet							
Aroclor 1262	ND	0.05	mg/kg wet							
Aroclor 1262 [2C]	ND	0.05	mg/kg wet							
Aroclor 1268	ND	0.05	mg/kg wet							
Aroclor 1268 [2C]	ND	0.05	mg/kg wet							

Surrogate: Decachlorobiphenyl	0.0205		mg/kg wet	0.02500		82	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0181		mg/kg wet	0.02500		72	30-150			
Surrogate: Tetrachloro-m-xylene	0.0182		mg/kg wet	0.02500		73	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0169		mg/kg wet	0.02500		68	30-150			

LCS

Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		86	40-140			
Aroclor 1016 [2C]	0.4	0.05	mg/kg wet	0.5000		84	40-140			
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		88	40-140			
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		84	40-140			

Surrogate: Decachlorobiphenyl	0.0223		mg/kg wet	0.02500		89	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0199		mg/kg wet	0.02500		79	30-150			
Surrogate: Tetrachloro-m-xylene	0.0202		mg/kg wet	0.02500		81	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0192		mg/kg wet	0.02500		77	30-150			

LCS Dup

Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		86	40-140	0.3	30	
Aroclor 1016 [2C]	0.4	0.05	mg/kg wet	0.5000		83	40-140	0.5	30	
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		89	40-140	1	30	
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		87	40-140	3	30	

Surrogate: Decachlorobiphenyl	0.0225		mg/kg wet	0.02500		90	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0200		mg/kg wet	0.02500		80	30-150			
Surrogate: Tetrachloro-m-xylene	0.0199		mg/kg wet	0.02500		80	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0190		mg/kg wet	0.02500		76	30-150			

Batch CK90124 - 3540C



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19J1156

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8082A Polychlorinated Biphenyls (PCB)

Batch CK90124 - 3540C

Blank

Aroclor 1016	ND	0.05	mg/kg wet							
Aroclor 1016 [2C]	ND	0.05	mg/kg wet							
Aroclor 1221	ND	0.05	mg/kg wet							
Aroclor 1221 [2C]	ND	0.05	mg/kg wet							
Aroclor 1232	ND	0.05	mg/kg wet							
Aroclor 1232 [2C]	ND	0.05	mg/kg wet							
Aroclor 1242	ND	0.05	mg/kg wet							
Aroclor 1242 [2C]	ND	0.05	mg/kg wet							
Aroclor 1248	ND	0.05	mg/kg wet							
Aroclor 1248 [2C]	ND	0.05	mg/kg wet							
Aroclor 1254	ND	0.05	mg/kg wet							
Aroclor 1254 [2C]	ND	0.05	mg/kg wet							
Aroclor 1260	ND	0.05	mg/kg wet							
Aroclor 1260 [2C]	ND	0.05	mg/kg wet							
Aroclor 1262	ND	0.05	mg/kg wet							
Aroclor 1262 [2C]	ND	0.05	mg/kg wet							
Aroclor 1268	ND	0.05	mg/kg wet							
Aroclor 1268 [2C]	ND	0.05	mg/kg wet							

Surrogate: Decachlorobiphenyl	0.0163		mg/kg wet	0.02500		65	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0192		mg/kg wet	0.02500		77	30-150			
Surrogate: Tetrachloro-m-xylene	0.0145		mg/kg wet	0.02500		58	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0166		mg/kg wet	0.02500		66	30-150			

LCS

Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		73	40-140			
Aroclor 1016 [2C]	0.4	0.05	mg/kg wet	0.5000		73	40-140			
Aroclor 1260	0.3	0.05	mg/kg wet	0.5000		68	40-140			
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		70	40-140			

Surrogate: Decachlorobiphenyl	0.0157		mg/kg wet	0.02500		63	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0179		mg/kg wet	0.02500		72	30-150			
Surrogate: Tetrachloro-m-xylene	0.0150		mg/kg wet	0.02500		60	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0153		mg/kg wet	0.02500		61	30-150			

LCS Dup

Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		78	40-140	7	30	
Aroclor 1016 [2C]	0.4	0.05	mg/kg wet	0.5000		79	40-140	7	30	
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		74	40-140	8	30	
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		76	40-140	8	30	

Surrogate: Decachlorobiphenyl	0.0171		mg/kg wet	0.02500		68	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0193		mg/kg wet	0.02500		77	30-150			
Surrogate: Tetrachloro-m-xylene	0.0163		mg/kg wet	0.02500		65	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0165		mg/kg wet	0.02500		66	30-150			



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19J1156

Notes and Definitions

U	Analyte included in the analysis, but not detected
SD	Surrogate recovery(ies) diluted below the MRL (SD).
EL	Elevated Method Reporting Limits due to sample matrix (EL).
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19J1156

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutOfStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Env'tal Consultants - KPB/TB/MM

ESS Project ID: 19J1156

Shipped/Delivered Via: Client

Date Received: 10/31/2019

Project Due Date: 11/4/2019

Days for Project: 2 Day

1. Air bill manifest present? ☐ No

Air No.: NA

2. Were custody seals present? ☐ No

3. Is radiation count <100 CPM? ☐ Yes

4. Is a Cooler Present? ☐ Yes

Temp: 4.4 Iced with: Ice

5. Was COC signed and dated by client? ☐ Yes

6. Does COC match bottles? ☐ Yes

7. Is COC complete and correct? ☐ Yes

8. Were samples received intact? ☐ Yes

9. Were labs informed about short holds & rushes? ☒ Yes / No / NA

10. Were any analyses received outside of hold time? Yes / ☒ No

11. Any Subcontracting needed? Yes / ☒ No

ESS Sample IDs: _____

Analysis: _____

TAT: _____

12. Were VOAs received? Yes / ☒ No

a. Air bubbles in aqueous VOAs? Yes / No

b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? ☒ Yes / No

a. If metals preserved upon receipt: Date: _____ Time: _____ By: _____

b. Low Level VOA vials frozen: Date: _____ Time: _____ By: _____

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / ☒ No

a. Was there a need to contact the client? Yes / No

Who was contacted? _____ Date: _____ Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	408047	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
02	408046	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
03	408045	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
04	408044	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
05	408043	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
06	408042	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
07	408041	Yes	NA	Yes	8 oz. Jar - Unpres	NP	

2nd Review

Were all containers scanned into storage/lab?

Are barcode labels on correct containers?

Are all Flashpoint stickers attached/container ID # circled?

Are all Hex Chrome stickers attached?

Are all QC stickers attached?

Are VOA stickers attached if bubbles noted?

Initials: W

☒ Yes / No

Yes / No / NA

Yes / No / NA

Yes / No / NA

Yes / No / NA

Completed

By: [Signature]

Date & Time: 12/31/19 2057

Reviewed

By: [Signature]

Date & Time: 10-31-19 2254

Delivered

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

Turn Time		5	Days	2	ESS Lab #	1951156
Regulatory State		MA			Reporting Limits	MA CCS-1
Is this project for any of the following?:						
<input type="radio"/> CT RCP <input checked="" type="radio"/> MA MCP <input type="radio"/> RGP						
Project #		195-509		Project Name		Natick
Address		31 Bellow Road		Address		
City		MA		Zip Code		02467
FAX Number				Email Address		mcoate@cecinc.com
PO #						
ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Analysis
1	10/31/19	1240	comp	soil	CS-A 0-1'	X
2	1340				CS-B 0-1'	X
3	1410				CS-C 0-1'	X
4	1555				CS-D 0-1'	X
5	1540				CS-E 0-1'	X
6	1040				CS-F 0-1'	X
7	1515				CS-G 0-1'	X
Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitalner J-Jar O-Other P-Poly S-Sterile V-Vial Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* Preservation Code: 1-Non Preserved 2-HCI 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAcAc, NaOH 9-NH4Cl 10-DI H2O 11-Other*						
Number of Containers per Sample:						1

Laboratory Use Only		Sampled by: MOLLY COTE		Please specify "Other" preservative and containers types in this space	
Cooler Present:	<input checked="" type="radio"/> Yes	Comments: RUSH			
Seals Intact:	<input type="radio"/> Drop Off <input type="radio"/> Pickup				
Cooler Temperature:	4.9 °C 3.3 1.2				
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)		Relinquished By: (Signature, Date & Time)		Received By: (Signature, Date & Time)
Molly Cote 10/31/19 1921		21 10/31/19 1921			
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)		Relinquished By: (Signature, Date & Time)		Received By: (Signature, Date & Time)



CERTIFICATE OF ANALYSIS

Molly Cote
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

RE: 90 Oak Street Natick (195-909)
ESS Laboratory Work Order Number: 19K0222

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 5:55 pm, Nov 11, 2019

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0222

SAMPLE RECEIPT

The following samples were received on November 07, 2019 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
19K0222-01	F-1 0-0.5' F-1 0.5-1.0' Comp	Soil	8082A
19K0222-02	F-2 0-0.5' F-2 0.5-1.0' Comp	Soil	8082A
19K0222-03	F-3 0-0.5' F-3 0.5-1.0' Comp	Soil	8082A
19K0222-04	F-4 0-0.5' F-4 0.5-1.0' Comp	Soil	8082A
19K0222-05	F-5 0-0.5' F-5 0.5-1.0' Comp	Soil	8082A



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0222

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0222

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0222

MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **19K0222-01 through 19K0222-05**

Matrices: ☐ Ground Water/Surface Water ☒ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other: _____

CAM Protocol (check all that apply below):

- | | | | | | |
|---|--|--|---|--|---|
| <input type="checkbox"/> 8260 VOC
CAM II A | <input type="checkbox"/> 7470/7471 Hg
CAM III B | <input type="checkbox"/> MassDEP VPH
(GC/PID/FID)
CAM IV A | <input checked="" type="checkbox"/> 8082 PCB
CAM V A | <input type="checkbox"/> 9014 Total
Cyanide/PAC
CAM VI A | <input type="checkbox"/> 6860 Perchlorate
CAM VIII B |
| <input type="checkbox"/> 8270 SVOC
CAM II B | <input type="checkbox"/> 7010 Metals
CAM III C | <input type="checkbox"/> MassDEP VPH
(GC/MS)
CAM IV C | <input type="checkbox"/> 8081 Pesticides
CAM V B | <input type="checkbox"/> 7196 Hex Cr
CAM VI B | <input type="checkbox"/> MassDEP APH
CAM IX A |
| <input type="checkbox"/> 6010 Metals
CAM III A | <input type="checkbox"/> 6020 Metals
CAM III D | <input type="checkbox"/> MassDEP EPH
CAM IV B | <input type="checkbox"/> 8151 Herbicides
CAM V C | <input type="checkbox"/> Explosives
CAM VIII A | <input type="checkbox"/> TO-15 VOC
CAM IX B |

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

- | | | |
|---|--|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).
b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

- | | | |
|---|--|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)?
<i>Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056 (2)(k) and WSC-07-350.</i> | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> * |
| H | Were all QC performance standards specified in the CAM protocol(s) achieved? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> * |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> * |

****All negative responses must be addressed in an attached laboratory narrative.***

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

Signature: Laurel Stoddard

Printed Name: Laurel Stoddard

Date: November 11, 2019

Position: Laboratory Director



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: F-1 0-0.5' F-1 0.5-1.0' Comp
Date Sampled: 10/31/19 16:10
Percent Solids: 86
Initial Volume: 19.5
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0222
ESS Laboratory Sample ID: 19K0222-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/7/19 15:54

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/08/19 21:32		CK90703
Aroclor 1221	ND (0.06)		8082A		1	11/08/19 21:32		CK90703
Aroclor 1232	ND (0.06)		8082A		1	11/08/19 21:32		CK90703
Aroclor 1242	ND (0.06)		8082A		1	11/08/19 21:32		CK90703
Aroclor 1248	ND (0.06)		8082A		1	11/08/19 21:32		CK90703
Aroclor 1254 [2C]	0.09 (0.06)		8082A		1	11/08/19 21:32		CK90703
Aroclor 1260 [2C]	0.1 (0.06)		8082A		1	11/08/19 21:32		CK90703
Aroclor 1262	ND (0.06)		8082A		1	11/08/19 21:32		CK90703
Aroclor 1268	ND (0.06)		8082A		1	11/08/19 21:32		CK90703

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	53 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	65 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	57 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	62 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: F-2 0-0.5' F-2 0.5-1.0' Comp
Date Sampled: 10/31/19 16:20
Percent Solids: 84
Initial Volume: 19.2
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0222
ESS Laboratory Sample ID: 19K0222-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/7/19 15:54

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/08/19 21:51		CK90703
Aroclor 1221	ND (0.06)		8082A		1	11/08/19 21:51		CK90703
Aroclor 1232	ND (0.06)		8082A		1	11/08/19 21:51		CK90703
Aroclor 1242	ND (0.06)		8082A		1	11/08/19 21:51		CK90703
Aroclor 1248	ND (0.06)		8082A		1	11/08/19 21:51		CK90703
Aroclor 1254 [2C]	0.1 (0.06)		8082A		1	11/08/19 21:51		CK90703
Aroclor 1260 [2C]	0.2 (0.06)		8082A		1	11/08/19 21:51		CK90703
Aroclor 1262	ND (0.06)		8082A		1	11/08/19 21:51		CK90703
Aroclor 1268	ND (0.06)		8082A		1	11/08/19 21:51		CK90703

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	57 %		30-150
Surrogate: Decachlorobiphenyl [2C]	70 %		30-150
Surrogate: Tetrachloro-m-xylene	65 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	73 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: F-3 0-0.5' F-3 0.5-1.0' Comp
Date Sampled: 10/31/19 16:20
Percent Solids: 92
Initial Volume: 19.9
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0222
ESS Laboratory Sample ID: 19K0222-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/7/19 15:54

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.05)		8082A		1	11/08/19 22:10		CK90703
Aroclor 1221	ND (0.05)		8082A		1	11/08/19 22:10		CK90703
Aroclor 1232	ND (0.05)		8082A		1	11/08/19 22:10		CK90703
Aroclor 1242	ND (0.05)		8082A		1	11/08/19 22:10		CK90703
Aroclor 1248	ND (0.05)		8082A		1	11/08/19 22:10		CK90703
Aroclor 1254	ND (0.05)		8082A		1	11/08/19 22:10		CK90703
Aroclor 1260 [2C]	0.08 (0.05)		8082A		1	11/08/19 22:10		CK90703
Aroclor 1262	ND (0.05)		8082A		1	11/08/19 22:10		CK90703
Aroclor 1268	ND (0.05)		8082A		1	11/08/19 22:10		CK90703

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	59 %		30-150
Surrogate: Decachlorobiphenyl [2C]	68 %		30-150
Surrogate: Tetrachloro-m-xylene	62 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	65 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: F-4 0-0.5' F-4 0.5-1.0' Comp
Date Sampled: 10/31/19 16:40
Percent Solids: 90
Initial Volume: 19.6
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0222
ESS Laboratory Sample ID: 19K0222-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/7/19 15:54

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/08/19 22:29		CK90703
Aroclor 1221	ND (0.06)		8082A		1	11/08/19 22:29		CK90703
Aroclor 1232	ND (0.06)		8082A		1	11/08/19 22:29		CK90703
Aroclor 1242	ND (0.06)		8082A		1	11/08/19 22:29		CK90703
Aroclor 1248	ND (0.06)		8082A		1	11/08/19 22:29		CK90703
Aroclor 1254 [2C]	0.09 (0.06)		8082A		1	11/08/19 22:29		CK90703
Aroclor 1260 [2C]	0.1 (0.06)		8082A		1	11/08/19 22:29		CK90703
Aroclor 1262	ND (0.06)		8082A		1	11/08/19 22:29		CK90703
Aroclor 1268	ND (0.06)		8082A		1	11/08/19 22:29		CK90703

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	64 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	71 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	63 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	67 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: F-5 0-0.5' F-5 0.5-1.0' Comp
Date Sampled: 10/31/19 16:30
Percent Solids: 92
Initial Volume: 19.5
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0222
ESS Laboratory Sample ID: 19K0222-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:08

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/11/19 12:58		CK90703
Aroclor 1221	ND (0.06)		8082A		1	11/11/19 12:58		CK90703
Aroclor 1232	ND (0.06)		8082A		1	11/11/19 12:58		CK90703
Aroclor 1242	ND (0.06)		8082A		1	11/11/19 12:58		CK90703
Aroclor 1248	ND (0.06)		8082A		1	11/11/19 12:58		CK90703
Aroclor 1254 [2C]	0.09 (0.06)		8082A		1	11/11/19 12:58		CK90703
Aroclor 1260 [2C]	0.1 (0.06)		8082A		1	11/11/19 12:58		CK90703
Aroclor 1262	ND (0.06)		8082A		1	11/11/19 12:58		CK90703
Aroclor 1268	ND (0.06)		8082A		1	11/11/19 12:58		CK90703

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	72 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	86 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	67 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	74 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0222

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8082A Polychlorinated Biphenyls (PCB)

Batch CK90703 - 3540C

Blank

Aroclor 1016	ND	0.02	mg/kg wet							
Aroclor 1016 [2C]	ND	0.02	mg/kg wet							
Aroclor 1221	ND	0.02	mg/kg wet							
Aroclor 1221 [2C]	ND	0.02	mg/kg wet							
Aroclor 1232	ND	0.02	mg/kg wet							
Aroclor 1232 [2C]	ND	0.02	mg/kg wet							
Aroclor 1242	ND	0.02	mg/kg wet							
Aroclor 1242 [2C]	ND	0.02	mg/kg wet							
Aroclor 1248	ND	0.02	mg/kg wet							
Aroclor 1248 [2C]	ND	0.02	mg/kg wet							
Aroclor 1254	ND	0.02	mg/kg wet							
Aroclor 1254 [2C]	ND	0.02	mg/kg wet							
Aroclor 1260	ND	0.02	mg/kg wet							
Aroclor 1260 [2C]	ND	0.02	mg/kg wet							
Aroclor 1262	ND	0.02	mg/kg wet							
Aroclor 1262 [2C]	ND	0.02	mg/kg wet							
Aroclor 1268	ND	0.02	mg/kg wet							
Aroclor 1268 [2C]	ND	0.02	mg/kg wet							

Surrogate: Decachlorobiphenyl	0.0178		mg/kg wet	0.02500		71	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0195		mg/kg wet	0.02500		78	30-150			
Surrogate: Tetrachloro-m-xylene	0.0159		mg/kg wet	0.02500		64	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0172		mg/kg wet	0.02500		69	30-150			

LCS

Aroclor 1016	0.4	0.02	mg/kg wet	0.5000		86	40-140			
Aroclor 1016 [2C]	0.5	0.02	mg/kg wet	0.5000		90	40-140			
Aroclor 1260	0.4	0.02	mg/kg wet	0.5000		81	40-140			
Aroclor 1260 [2C]	0.4	0.02	mg/kg wet	0.5000		84	40-140			

Surrogate: Decachlorobiphenyl	0.0197		mg/kg wet	0.02500		79	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0212		mg/kg wet	0.02500		85	30-150			
Surrogate: Tetrachloro-m-xylene	0.0182		mg/kg wet	0.02500		73	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0184		mg/kg wet	0.02500		74	30-150			

LCS Dup

Aroclor 1016	0.4	0.02	mg/kg wet	0.5000		85	40-140	1	30	
Aroclor 1016 [2C]	0.4	0.02	mg/kg wet	0.5000		89	40-140	1	30	
Aroclor 1260	0.4	0.02	mg/kg wet	0.5000		80	40-140	0.9	30	
Aroclor 1260 [2C]	0.4	0.02	mg/kg wet	0.5000		84	40-140	0.7	30	

Surrogate: Decachlorobiphenyl	0.0191		mg/kg wet	0.02500		76	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0206		mg/kg wet	0.02500		82	30-150			
Surrogate: Tetrachloro-m-xylene	0.0174		mg/kg wet	0.02500		70	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0177		mg/kg wet	0.02500		71	30-150			



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0222

Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0222

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutOfStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GEI Consultants, Inc. - TB/MM
 Shipped/Delivered Via: Client

ESS Project ID: 19K0222
 Date Received: 11/7/2019
 Project Due Date: 11/11/2019
 Days for Project: 2 Day

1. Air bill manifest present? ☒ No
 Air No.: NA
2. Were custody seals present? ☒ No
3. Is radiation count <100 CPM? ☒ Yes
4. Is a Cooler Present? ☒ Yes
 Temp: 4.4 Iced with: Ice
5. Was COC signed and dated by client? ☒ Yes

6. Does COC match bottles? ☒ Yes
7. Is COC complete and correct? ☒ Yes
8. Were samples received intact? ☒ Yes
9. Were labs informed about short holds & rushes? ☒ Yes / ☒ No / ☒ NA
10. Were any analyses received outside of hold time? ☒ Yes / ☒ No

11. Any Subcontracting needed? ☒ Yes / ☒ No
 ESS Sample IDs: _____
 Analysis: _____
 TAT: _____

12. Were VOAs received? ☒ Yes / ☒ No
 a. Air bubbles in aqueous VOAs? ☒ Yes / ☒ No
 b. Does methanol cover soil completely? ☒ Yes / ☒ No / ☒ NA

13. Are the samples properly preserved? ☒ Yes / ☒ No
 a. If metals preserved upon receipt: Date: _____ Time: _____ By: _____
 b. Low Level VOA vials frozen: Date: _____ Time: _____ By: _____

Sample Receiving Notes:

14. Was there a need to contact Project Manager? ☒ Yes / ☒ No
 a. Was there a need to contact the client? ☒ Yes / ☒ No
 Who was contacted? _____ Date: _____ Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	410621	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
01	410622	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
02	410619	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
02	410620	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
03	410617	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
03	410618	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
04	410615	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
04	410616	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
05	410613	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
05	410614	Yes	NA	Yes	8 oz. Jar - Unpres	NP	

2nd Review

Were all containers scanned into storage/lab?

Are barcode labels on correct containers?

Are all Flashpoint stickers attached/container ID # circled?

Are all Hex Chrome stickers attached?

Are all QC stickers attached?

Are VOA stickers attached if bubbles noted?

Initials: [Signature]
☒ Yes / ☒ No / ☒ NA
☒ Yes / ☒ No / ☒ NA
☒ Yes / ☒ No / ☒ NA
☒ Yes / ☒ No / ☒ NA
☒ Yes / ☒ No / ☒ NA

Completed By: [Signature]

Date & Time: 11/7/19 1513

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GEI Consultants, Inc. - TB/MM ESS Project ID: 19K0222
Date Received: 11/7/2019
Reviewed By: [Signature] Date & Time: 11/7/19 15:15
Delivered By: [Signature] 11/7/19 15:15

*samples being removed from hold, composited, and run - due 11/8/19 LLB

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

Turn Time	-5-	Days	2
Regulatory State			
Is this project for any of the following?:			
<input type="radio"/> CT RCP	<input type="radio"/> MA MCP	<input type="radio"/> RGP	

ESS Lab # 195157 19K0222

Reporting Limits MA RCS-1

Electronic Deliverables ☒ Data Checker ☒ Excel ☒ Other (Please Specify ->) PDF

Company Name <u>Civil + Environmental Cons.</u>		Project # <u>195-909</u>	Project Name <u>90 Oak Street</u>
Contact Person <u>MOLLY COTE</u>		Address <u>31 Bellows Road</u>	
City <u>Rushham</u>	State <u>MA</u>	Zip Code <u>02707</u>	PO #
Telephone Number <u>774 501 2176</u>	FAX Number	Email Address <u>mcote@cecinc.com</u>	

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID
39	10/31/19	1610	Grab	Soil	E-1 0-0.5'
40		1610			E-1 0.5-1'
41		1530			E-2 0-0.5'
42		1530			E-2 0.5-1'
43		1535			E-3 0-0.5'
44 ¹		1610			F-1 0-0.5'
45 ¹		1610			F-1 0.5-1'
46 ²		1620			F-2 0-0.5'
47 ²		1620			F-2 0.5-1'
48 ³		1620			F-3 0-0.5'

Container Type:	AC-Air Cassette	AG-Amber Glass	B-BOD Bottle	C-Cubitainer	J-Jar	O-Other	P-Poly	S-Sterile	V-Vial		
Container Volume:	1-100 mL	2-2.5 gal	3-250 mL	4-300 mL	5-500 mL	6-1L	7-VOA	8-2 oz	9-4 oz	10-8 oz	11-Other*
Preservation Code:	1-Non Preserved	2-HCl	3-H2SO4	4-HNO3	5-NaOH	6-Methanol	7-Na2S2O3	8-ZnAc2, NaOH	9-NH4Cl	10-DI H2O	11-Other*
Number of Containers per Sample: <u>1</u>											

Laboratory Use Only		Sampled by: <u>MOLLY COTE</u>	
Cooler Present: <u>yes</u>	<input type="radio"/> Drop Off	Comments: <u>HOLD - F-1 through F-3 802</u>	
Seals Intact: <u>yes</u>	<input type="radio"/> Pickup	Please specify "Other" preservative and containers types in this space	
Cooler Temperature: <u>4.4 °C 3.3 °C</u>			
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
<u>Molly Cote 10/31/19 1921</u>	<u>[Signature] 10/31/19 1921</u>		
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)



CERTIFICATE OF ANALYSIS

Molly Cote
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

RE: 90 Oak Street Natick (195-909)
ESS Laboratory Work Order Number: 19K0688

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 3:09 pm, Nov 25, 2019

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0688

SAMPLE RECEIPT

The following samples were received on November 19, 2019 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

These samples were originally received on hold on November 8, 2019.

Lab Number	Sample Name	Matrix	Analysis
19K0688-01	N-1 0-1ft	Soil	8082A
19K0688-02	N-2 0-1ft	Soil	8082A
19K0688-03	N-3 0-1ft	Soil	8082A



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0688

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0688

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0688

MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **19K0688-01 through 19K0688-03**

Matrices: ☐ Ground Water/Surface Water ☒ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other: _____

CAM Protocol (check all that apply below):

<input type="checkbox"/> 8260 VOC CAM II A	<input type="checkbox"/> 7470/7471 Hg CAM III B	<input type="checkbox"/> MassDEP VPH (GC/PID/FID) CAM IV A	<input checked="" type="checkbox"/> 8082 PCB CAM V A	<input type="checkbox"/> 9014 Total Cyanide/PAC CAM VI A	<input type="checkbox"/> 6860 Perchlorate CAM VIII B
<input type="checkbox"/> 8270 SVOC CAM II B	<input type="checkbox"/> 7010 Metals CAM III C	<input type="checkbox"/> MassDEP VPH (GC/MS) CAM IV C	<input type="checkbox"/> 8081 Pesticides CAM V B	<input type="checkbox"/> 7196 Hex Cr CAM VI B	<input type="checkbox"/> MassDEP APH CAM IX A
<input type="checkbox"/> 6010 Metals CAM III A	<input type="checkbox"/> 6020 Metals CAM III D	<input type="checkbox"/> MassDEP EPH CAM IV B	<input type="checkbox"/> 8151 Herbicides CAM V C	<input type="checkbox"/> Explosives CAM VIII A	<input type="checkbox"/> TO-15 VOC CAM IX B

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	Yes (X) No ()
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	Yes (X) No ()
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	Yes (X) No ()
D	Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	Yes (X) No ()
E	VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes () No () Yes () No ()
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	Yes (X) No ()

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)? Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.	Yes (X) No ()*
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes (X) No ()*
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes (X) No ()*

***All negative responses must be addressed in an attached laboratory narrative.**

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

Signature: Laurel Stoddard

Printed Name: Laurel Stoddard

Date: November 25, 2019

Position: Laboratory Director



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: N-1 0-1ft
Date Sampled: 11/07/19 14:35
Percent Solids: 85
Initial Volume: 19.8
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0688
ESS Laboratory Sample ID: 19K0688-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/21/19 16:15

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/22/19 21:33		CK92106
Aroclor 1221	ND (0.06)		8082A		1	11/22/19 21:33		CK92106
Aroclor 1232	ND (0.06)		8082A		1	11/22/19 21:33		CK92106
Aroclor 1242	ND (0.06)		8082A		1	11/22/19 21:33		CK92106
Aroclor 1248	ND (0.06)		8082A		1	11/22/19 21:33		CK92106
Aroclor 1254 [2C]	0.2 (0.06)		8082A		1	11/22/19 21:33		CK92106
Aroclor 1260	0.2 (0.06)		8082A		1	11/22/19 21:33		CK92106
Aroclor 1262	ND (0.06)		8082A		1	11/22/19 21:33		CK92106
Aroclor 1268	ND (0.06)		8082A		1	11/22/19 21:33		CK92106

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	53 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	46 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	82 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	86 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: N-2 0-1ft
Date Sampled: 11/07/19 14:40
Percent Solids: 82
Initial Volume: 19.3
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0688
ESS Laboratory Sample ID: 19K0688-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/21/19 16:15

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/22/19 21:53		CK92106
Aroclor 1221	ND (0.06)		8082A		1	11/22/19 21:53		CK92106
Aroclor 1232	ND (0.06)		8082A		1	11/22/19 21:53		CK92106
Aroclor 1242	ND (0.06)		8082A		1	11/22/19 21:53		CK92106
Aroclor 1248	ND (0.06)		8082A		1	11/22/19 21:53		CK92106
Aroclor 1254 [2C]	0.2 (0.06)		8082A		1	11/22/19 21:53		CK92106
Aroclor 1260	0.3 (0.06)		8082A		1	11/22/19 21:53		CK92106
Aroclor 1262	ND (0.06)		8082A		1	11/22/19 21:53		CK92106
Aroclor 1268	ND (0.06)		8082A		1	11/22/19 21:53		CK92106

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	54 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	48 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	78 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	82 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: N-3 0-1ft
Date Sampled: 11/07/19 14:45
Percent Solids: 84
Initial Volume: 20.3
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0688
ESS Laboratory Sample ID: 19K0688-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/21/19 16:15

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/22/19 22:12		CK92106
Aroclor 1221	ND (0.06)		8082A		1	11/22/19 22:12		CK92106
Aroclor 1232	ND (0.06)		8082A		1	11/22/19 22:12		CK92106
Aroclor 1242	ND (0.06)		8082A		1	11/22/19 22:12		CK92106
Aroclor 1248	ND (0.06)		8082A		1	11/22/19 22:12		CK92106
Aroclor 1254 [2C]	0.3 (0.06)		8082A		1	11/22/19 22:12		CK92106
Aroclor 1260 [2C]	0.4 (0.06)		8082A		1	11/22/19 22:12		CK92106
Aroclor 1262	ND (0.06)		8082A		1	11/22/19 22:12		CK92106
Aroclor 1268	ND (0.06)		8082A		1	11/22/19 22:12		CK92106

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	58 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	51 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	86 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	90 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0688

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8082A Polychlorinated Biphenyls (PCB)

Batch CK92106 - 3540C

Blank

Aroclor 1016	ND	0.02	mg/kg wet							
Aroclor 1016 [2C]	ND	0.02	mg/kg wet							
Aroclor 1221	ND	0.02	mg/kg wet							
Aroclor 1221 [2C]	ND	0.02	mg/kg wet							
Aroclor 1232	ND	0.02	mg/kg wet							
Aroclor 1232 [2C]	ND	0.02	mg/kg wet							
Aroclor 1242	ND	0.02	mg/kg wet							
Aroclor 1242 [2C]	ND	0.02	mg/kg wet							
Aroclor 1248	ND	0.02	mg/kg wet							
Aroclor 1248 [2C]	ND	0.02	mg/kg wet							
Aroclor 1254	ND	0.02	mg/kg wet							
Aroclor 1254 [2C]	ND	0.02	mg/kg wet							
Aroclor 1260	ND	0.02	mg/kg wet							
Aroclor 1260 [2C]	ND	0.02	mg/kg wet							
Aroclor 1262	ND	0.02	mg/kg wet							
Aroclor 1262 [2C]	ND	0.02	mg/kg wet							
Aroclor 1268	ND	0.02	mg/kg wet							
Aroclor 1268 [2C]	ND	0.02	mg/kg wet							

Surrogate: Decachlorobiphenyl	0.0192		mg/kg wet	0.02500		77	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0219		mg/kg wet	0.02500		88	30-150			
Surrogate: Tetrachloro-m-xylene	0.0175		mg/kg wet	0.02500		70	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0194		mg/kg wet	0.02500		78	30-150			

LCS

Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		88	40-140			
Aroclor 1016 [2C]	0.5	0.05	mg/kg wet	0.5000		94	40-140			
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		80	40-140			
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		87	40-140			

Surrogate: Decachlorobiphenyl	0.0194		mg/kg wet	0.02500		78	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0198		mg/kg wet	0.02500		79	30-150			
Surrogate: Tetrachloro-m-xylene	0.0181		mg/kg wet	0.02500		72	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0188		mg/kg wet	0.02500		75	30-150			

LCS Dup

Aroclor 1016	0.5	0.05	mg/kg wet	0.5000		93	40-140	5	30	
Aroclor 1016 [2C]	0.5	0.05	mg/kg wet	0.5000		97	40-140	3	30	
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		88	40-140	9	30	
Aroclor 1260 [2C]	0.5	0.05	mg/kg wet	0.5000		95	40-140	9	30	

Surrogate: Decachlorobiphenyl	0.0203		mg/kg wet	0.02500		81	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0212		mg/kg wet	0.02500		85	30-150			
Surrogate: Tetrachloro-m-xylene	0.0187		mg/kg wet	0.02500		75	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0194		mg/kg wet	0.02500		78	30-150			



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0688

Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0688

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meedc/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Env'tal Consultants - KPB/TB/MM

ESS Project ID: 19K0688
 Date Received: 11/21/2019
 Project Due Date: 12/2/2019 11/25/2019
 Days for Project: 11/21/19 5 Day 2 day

Shipped/Delivered Via: ESS Courier

1. Air bill manifest present?
 Air No.: NA
2. Were custody seals present?
3. Is radiation count <100 CPM?
4. Is a Cooler Present?
 Temp: 1.8 Iced with: Ice
5. Was COC signed and dated by client?

6. Does COC match bottles?
7. Is COC complete and correct?
8. Were samples received intact?
9. Were labs informed about short holds & rushes?
10. Were any analyses received outside of hold time?

11. Any Subcontracting needed?
 ESS Sample IDs: _____
 Analysis: _____
 TAT: _____

12. Were VOAs received?
 a. Air bubbles in aqueous VOAs?
 b. Does methanol cover soil completely?

13. Are the samples properly preserved?
 a. If metals preserved upon receipt: Date: _____ Time: _____ By: _____
 b. Low Level VOA vials frozen: Date: _____ Time: _____ By: _____

Sample Receiving Notes:

Relog of 19K0300 -22, -23, -24

14. Was there a need to contact Project Manager?
 a. Was there a need to contact the client?
 Who was contacted? _____ Date: _____ Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	414935	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
02	414934	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
03	414933	Yes	NA	Yes	8 oz. Jar - Unpres	NP	

2nd Review

Were all containers scanned into storage/lab?

Initials JA

Are barcode labels on correct containers?

Yes / No

Are all Flashpoint stickers attached/container ID # circled?

Yes / No / NA

Are all Hex Chrome stickers attached?

Yes / No / NA

Are all QC stickers attached?

Yes / No / NA

Are VOA stickers attached if bubbles noted?

Yes / No / NA

Completed By: [Signature] Date & Time: 11/21/19 1506
 Reviewed By: [Signature] Date & Time: 11/21/19 1537
 Delivered By: [Signature] 11/21/19 1537



CERTIFICATE OF ANALYSIS

Molly Cote
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

RE: 90 Oak Street Natick (195-909)
ESS Laboratory Work Order Number: 19K0288

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 2:33 pm, Nov 12, 2019

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0288

SAMPLE RECEIPT

The following samples were received on November 08, 2019 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
19K0288-01	CH-H 0-1ft	Soil	8082A
19K0288-02	CH-I 0-1ft	Soil	8082A
19K0288-03	CH-J 0-1ft	Soil	8082A
19K0288-04	CH-K 0-1ft	Soil	8082A
19K0288-05	CH-L 0-1ft	Soil	8082A
19K0288-06	CH-M 0-1ft	Soil	8082A
19K0288-07	CH-N 0-1ft	Soil	8082A
19K0288-08	CH-O 0-1ft	Soil	8082A
19K0288-09	CH-P 0-1ft	Soil	8082A



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0288

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0288

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0288

MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **19K0288-01 through 19K0288-09**

Matrices: ☐ Ground Water/Surface Water ☒ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other: _____

CAM Protocol (check all that apply below):

<input type="checkbox"/> 8260 VOC CAM II A	<input type="checkbox"/> 7470/7471 Hg CAM III B	<input type="checkbox"/> MassDEP VPH (GC/PID/FID) CAM IV A	<input checked="" type="checkbox"/> 8082 PCB CAM V A	<input type="checkbox"/> 9014 Total Cyanide/PAC CAM VI A	<input type="checkbox"/> 6860 Perchlorate CAM VIII B
<input type="checkbox"/> 8270 SVOC CAM II B	<input type="checkbox"/> 7010 Metals CAM III C	<input type="checkbox"/> MassDEP VPH (GC/MS) CAM IV C	<input type="checkbox"/> 8081 Pesticides CAM V B	<input type="checkbox"/> 7196 Hex Cr CAM VI B	<input type="checkbox"/> MassDEP APH CAM IX A
<input type="checkbox"/> 6010 Metals CAM III A	<input type="checkbox"/> 6020 Metals CAM III D	<input type="checkbox"/> MassDEP EPH CAM IV B	<input type="checkbox"/> 8151 Herbicides CAM V C	<input type="checkbox"/> Explosives CAM VIII A	<input type="checkbox"/> TO-15 VOC CAM IX B

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

- | | | |
|---|--|---|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).
b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

- | | | |
|---|--|---|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)?
<i>Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056 (2)(k) and WSC-07-350.</i> | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> * |
| H | Were all QC performance standards specified in the CAM protocol(s) achieved? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> * |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> * |

****All negative responses must be addressed in an attached laboratory narrative.***

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

Signature: Laurel Stoddard

Printed Name: Laurel Stoddard

Date: November 12, 2019

Position: Laboratory Director



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: CH-H 0-1ft
Date Sampled: 11/07/19 12:15
Percent Solids: 83
Initial Volume: 19.4
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0288
ESS Laboratory Sample ID: 19K0288-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:08

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/11/19 15:23		CK90803
Aroclor 1221	ND (0.06)		8082A		1	11/11/19 15:23		CK90803
Aroclor 1232	ND (0.06)		8082A		1	11/11/19 15:23		CK90803
Aroclor 1242	ND (0.06)		8082A		1	11/11/19 15:23		CK90803
Aroclor 1248	ND (0.06)		8082A		1	11/11/19 15:23		CK90803
Aroclor 1254	ND (0.06)		8082A		1	11/11/19 15:23		CK90803
Aroclor 1260 [2C]	0.1 (0.06)		8082A		1	11/11/19 15:23		CK90803
Aroclor 1262	ND (0.06)		8082A		1	11/11/19 15:23		CK90803
Aroclor 1268	ND (0.06)		8082A		1	11/11/19 15:23		CK90803

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	74 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	80 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	73 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	79 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: CH-I 0-1ft
Date Sampled: 11/07/19 11:45
Percent Solids: 84
Initial Volume: 19.9
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0288
ESS Laboratory Sample ID: 19K0288-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:08

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/11/19 15:43		CK90803
Aroclor 1221	ND (0.06)		8082A		1	11/11/19 15:43		CK90803
Aroclor 1232	ND (0.06)		8082A		1	11/11/19 15:43		CK90803
Aroclor 1242	ND (0.06)		8082A		1	11/11/19 15:43		CK90803
Aroclor 1248	ND (0.06)		8082A		1	11/11/19 15:43		CK90803
Aroclor 1254	ND (0.06)		8082A		1	11/11/19 15:43		CK90803
Aroclor 1260	0.1 (0.06)		8082A		1	11/11/19 15:43		CK90803
Aroclor 1262	ND (0.06)		8082A		1	11/11/19 15:43		CK90803
Aroclor 1268	ND (0.06)		8082A		1	11/11/19 15:43		CK90803

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	73 %		30-150
Surrogate: Decachlorobiphenyl [2C]	82 %		30-150
Surrogate: Tetrachloro-m-xylene	70 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	76 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: CH-J 0-1ft
Date Sampled: 11/07/19 12:40
Percent Solids: 83
Initial Volume: 19.4
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0288
ESS Laboratory Sample ID: 19K0288-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:08

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/11/19 16:02		CK90803
Aroclor 1221	ND (0.06)		8082A		1	11/11/19 16:02		CK90803
Aroclor 1232	ND (0.06)		8082A		1	11/11/19 16:02		CK90803
Aroclor 1242	ND (0.06)		8082A		1	11/11/19 16:02		CK90803
Aroclor 1248	ND (0.06)		8082A		1	11/11/19 16:02		CK90803
Aroclor 1254	ND (0.06)		8082A		1	11/11/19 16:02		CK90803
Aroclor 1260	ND (0.06)		8082A		1	11/11/19 16:02		CK90803
Aroclor 1262	ND (0.06)		8082A		1	11/11/19 16:02		CK90803
Aroclor 1268	ND (0.06)		8082A		1	11/11/19 16:02		CK90803

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	56 %		30-150
Surrogate: Decachlorobiphenyl [2C]	60 %		30-150
Surrogate: Tetrachloro-m-xylene	51 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	54 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: CH-K 0-1ft
Date Sampled: 11/07/19 13:00
Percent Solids: 84
Initial Volume: 19.5
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0288
ESS Laboratory Sample ID: 19K0288-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:08

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/11/19 16:21		CK90803
Aroclor 1221	ND (0.06)		8082A		1	11/11/19 16:21		CK90803
Aroclor 1232	ND (0.06)		8082A		1	11/11/19 16:21		CK90803
Aroclor 1242	ND (0.06)		8082A		1	11/11/19 16:21		CK90803
Aroclor 1248	ND (0.06)		8082A		1	11/11/19 16:21		CK90803
Aroclor 1254	ND (0.06)		8082A		1	11/11/19 16:21		CK90803
Aroclor 1260 [2C]	0.08 (0.06)		8082A		1	11/11/19 16:21		CK90803
Aroclor 1262	ND (0.06)		8082A		1	11/11/19 16:21		CK90803
Aroclor 1268	ND (0.06)		8082A		1	11/11/19 16:21		CK90803

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	62 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	75 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	70 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	75 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: CH-L 0-1ft
Date Sampled: 11/07/19 13:30
Percent Solids: 86
Initial Volume: 19.7
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0288
ESS Laboratory Sample ID: 19K0288-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:08

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/11/19 16:40		CK90803
Aroclor 1221	ND (0.06)		8082A		1	11/11/19 16:40		CK90803
Aroclor 1232	ND (0.06)		8082A		1	11/11/19 16:40		CK90803
Aroclor 1242	ND (0.06)		8082A		1	11/11/19 16:40		CK90803
Aroclor 1248	ND (0.06)		8082A		1	11/11/19 16:40		CK90803
Aroclor 1254 [2C]	0.1 (0.06)		8082A		1	11/11/19 16:40		CK90803
Aroclor 1260 [2C]	0.2 (0.06)		8082A		1	11/11/19 16:40		CK90803
Aroclor 1262	ND (0.06)		8082A		1	11/11/19 16:40		CK90803
Aroclor 1268	ND (0.06)		8082A		1	11/11/19 16:40		CK90803

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	58 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	72 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	71 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	75 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: CH-M 0-1ft
Date Sampled: 11/07/19 13:50
Percent Solids: 87
Initial Volume: 19.7
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0288
ESS Laboratory Sample ID: 19K0288-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:08

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/11/19 16:59		CK90803
Aroclor 1221	ND (0.06)		8082A		1	11/11/19 16:59		CK90803
Aroclor 1232	ND (0.06)		8082A		1	11/11/19 16:59		CK90803
Aroclor 1242	ND (0.06)		8082A		1	11/11/19 16:59		CK90803
Aroclor 1248	ND (0.06)		8082A		1	11/11/19 16:59		CK90803
Aroclor 1254	ND (0.06)		8082A		1	11/11/19 16:59		CK90803
Aroclor 1260	0.08 (0.06)		8082A		1	11/11/19 16:59		CK90803
Aroclor 1262	ND (0.06)		8082A		1	11/11/19 16:59		CK90803
Aroclor 1268	ND (0.06)		8082A		1	11/11/19 16:59		CK90803

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	75 %		30-150
Surrogate: Decachlorobiphenyl [2C]	78 %		30-150
Surrogate: Tetrachloro-m-xylene	73 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	78 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: CH-N 0-1ft
Date Sampled: 11/07/19 15:00
Percent Solids: 87
Initial Volume: 19.2
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0288
ESS Laboratory Sample ID: 19K0288-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:08

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/11/19 17:18		CK90803
Aroclor 1221	ND (0.06)		8082A		1	11/11/19 17:18		CK90803
Aroclor 1232	ND (0.06)		8082A		1	11/11/19 17:18		CK90803
Aroclor 1242	ND (0.06)		8082A		1	11/11/19 17:18		CK90803
Aroclor 1248	ND (0.06)		8082A		1	11/11/19 17:18		CK90803
Aroclor 1254 [2C]	0.2 (0.06)		8082A		1	11/11/19 17:18		CK90803
Aroclor 1260 [2C]	0.2 (0.06)		8082A		1	11/11/19 17:18		CK90803
Aroclor 1262	ND (0.06)		8082A		1	11/11/19 17:18		CK90803
Aroclor 1268	ND (0.06)		8082A		1	11/11/19 17:18		CK90803

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	59 %		30-150
Surrogate: Decachlorobiphenyl [2C]	72 %		30-150
Surrogate: Tetrachloro-m-xylene	71 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	75 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: CH-O 0-1ft
Date Sampled: 11/07/19 14:40
Percent Solids: 86
Initial Volume: 19.6
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0288
ESS Laboratory Sample ID: 19K0288-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:08

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/11/19 17:37		CK90803
Aroclor 1221	ND (0.06)		8082A		1	11/11/19 17:37		CK90803
Aroclor 1232	ND (0.06)		8082A		1	11/11/19 17:37		CK90803
Aroclor 1242	ND (0.06)		8082A		1	11/11/19 17:37		CK90803
Aroclor 1248	ND (0.06)		8082A		1	11/11/19 17:37		CK90803
Aroclor 1254	ND (0.06)		8082A		1	11/11/19 17:37		CK90803
Aroclor 1260	0.08 (0.06)		8082A		1	11/11/19 17:37		CK90803
Aroclor 1262	ND (0.06)		8082A		1	11/11/19 17:37		CK90803
Aroclor 1268	ND (0.06)		8082A		1	11/11/19 17:37		CK90803

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Surrogate: Decachlorobiphenyl	65 %		30-150
Surrogate: Decachlorobiphenyl [2C]	77 %		30-150
Surrogate: Tetrachloro-m-xylene	68 %		30-150
Surrogate: Tetrachloro-m-xylene [2C]	78 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: CH-P 0-1ft
Date Sampled: 11/07/19 11:20
Percent Solids: 86
Initial Volume: 19.4
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0288
ESS Laboratory Sample ID: 19K0288-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/8/19 15:08

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/11/19 17:57		CK90803
Aroclor 1221	ND (0.06)		8082A		1	11/11/19 17:57		CK90803
Aroclor 1232	ND (0.06)		8082A		1	11/11/19 17:57		CK90803
Aroclor 1242	ND (0.06)		8082A		1	11/11/19 17:57		CK90803
Aroclor 1248	ND (0.06)		8082A		1	11/11/19 17:57		CK90803
Aroclor 1254	ND (0.06)		8082A		1	11/11/19 17:57		CK90803
Aroclor 1260 [2C]	0.1 (0.06)		8082A		1	11/11/19 17:57		CK90803
Aroclor 1262	ND (0.06)		8082A		1	11/11/19 17:57		CK90803
Aroclor 1268	ND (0.06)		8082A		1	11/11/19 17:57		CK90803

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	69 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	80 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	75 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	80 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0288

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8082A Polychlorinated Biphenyls (PCB)

Batch CK90803 - 3540C

Blank

Aroclor 1016	ND	0.05	mg/kg wet							
Aroclor 1016 [2C]	ND	0.05	mg/kg wet							
Aroclor 1221	ND	0.05	mg/kg wet							
Aroclor 1221 [2C]	ND	0.05	mg/kg wet							
Aroclor 1232	ND	0.05	mg/kg wet							
Aroclor 1232 [2C]	ND	0.05	mg/kg wet							
Aroclor 1242	ND	0.05	mg/kg wet							
Aroclor 1242 [2C]	ND	0.05	mg/kg wet							
Aroclor 1248	ND	0.05	mg/kg wet							
Aroclor 1248 [2C]	ND	0.05	mg/kg wet							
Aroclor 1254	ND	0.05	mg/kg wet							
Aroclor 1254 [2C]	ND	0.05	mg/kg wet							
Aroclor 1260	ND	0.05	mg/kg wet							
Aroclor 1260 [2C]	ND	0.05	mg/kg wet							
Aroclor 1262	ND	0.05	mg/kg wet							
Aroclor 1262 [2C]	ND	0.05	mg/kg wet							
Aroclor 1268	ND	0.05	mg/kg wet							
Aroclor 1268 [2C]	ND	0.05	mg/kg wet							

Surrogate: Decachlorobiphenyl	0.0189		mg/kg wet	0.02500		75	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0205		mg/kg wet	0.02500		82	30-150			
Surrogate: Tetrachloro-m-xylene	0.0170		mg/kg wet	0.02500		68	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0185		mg/kg wet	0.02500		74	30-150			

LCS

Aroclor 1016	0.5	0.05	mg/kg wet	0.5000		94	40-140			
Aroclor 1016 [2C]	0.5	0.05	mg/kg wet	0.5000		96	40-140			
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		87	40-140			
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		90	40-140			

Surrogate: Decachlorobiphenyl	0.0199		mg/kg wet	0.02500		79	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0210		mg/kg wet	0.02500		84	30-150			
Surrogate: Tetrachloro-m-xylene	0.0182		mg/kg wet	0.02500		73	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0182		mg/kg wet	0.02500		73	30-150			

LCS Dup

Aroclor 1016	0.5	0.05	mg/kg wet	0.5000		95	40-140	2	30	
Aroclor 1016 [2C]	0.5	0.05	mg/kg wet	0.5000		98	40-140	2	30	
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		90	40-140	3	30	
Aroclor 1260 [2C]	0.5	0.05	mg/kg wet	0.5000		93	40-140	4	30	

Surrogate: Decachlorobiphenyl	0.0205		mg/kg wet	0.02500		82	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0214		mg/kg wet	0.02500		86	30-150			
Surrogate: Tetrachloro-m-xylene	0.0187		mg/kg wet	0.02500		75	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0187		mg/kg wet	0.02500		75	30-150			



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0288

Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0288

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutOfStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Env'tal Consultants - KPB/TB/MM
 Shipped/Delivered Via: ESS Courier

ESS Project ID: 19K0288
 Date Received: 11/8/2019
 Project Due Date: 11/11/2019
 Days for Project: 1 Day

1. Air bill manifest present?
 Air No.: NA
2. Were custody seals present?
3. Is radiation count <100 CPM?
4. Is a Cooler Present?
 Temp: 1.7 Iced with: Ice
5. Was COC signed and dated by client?

6. Does COC match bottles?
7. Is COC complete and correct?
8. Were samples received intact?
9. Were labs informed about short holds & rushes?
10. Were any analyses received outside of hold time?

11. Any Subcontracting needed?
 ESS Sample IDs: _____
 Analysis: _____
 TAT: _____

12. Were VOAs received?
 a. Air bubbles in aqueous VOAs?
 b. Does methanol cover soil completely?

13. Are the samples properly preserved?
 a. If metals preserved upon receipt: Date: _____ Time: _____ By: _____
 b. Low Level VOA vials frozen: Date: _____ Time: _____ By: _____

Sample Receiving Notes:

14. Was there a need to contact Project Manager?
 a. Was there a need to contact the client?
 Who was contacted? _____ Date: _____ Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	411136	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
02	411137	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
03	411138	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
04	411139	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
05	411140	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
06	411141	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
07	411142	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
08	411143	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
09	411144	Yes	NA	Yes	4 oz. Jar - Unpres	NP	

2nd Review

Were all containers scanned into storage/lab?

Are barcode labels on correct containers?

Are all Flashpoint stickers attached/container ID # circled?

Are all Hex Chrome stickers attached?

Are all QC stickers attached?

Are VOA stickers attached if bubbles noted?

Initials: [Signature]

Completed By: [Signature] Date & Time: 11/8/19 10:21
 Reviewed

ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Env'tal Consultants - KPB/TB/MM ESS Project ID: 19K0288
By: [Signature] Date Received: 11/8/2019
Delivered [Signature] Date & Time: 11/8/19 10:38
By: [Signature] 11/8/19 10:43



CERTIFICATE OF ANALYSIS

Molly Cote
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767

RE: 90 Oak Street Natick (195-909)
ESS Laboratory Work Order Number: 19K0629

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED

By ESS Laboratory at 4:38 pm, Nov 27, 2019

Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0629

SAMPLE RECEIPT

The following samples were received on November 20, 2019 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

<u>Lab Number</u>	<u>Sample Name</u>	<u>Matrix</u>	<u>Analysis</u>
19K0629-01	Q-1 0-1ft	Soil	8082A
19K0629-02	Q-2 0-1ft	Soil	8082A
19K0629-03	Q-3 0-1ft	Soil	8082A
19K0629-04	Q-4 0-1ft	Soil	8082A
19K0629-05	Q-5 0-1ft	Soil	8082A
19K0629-06	Q-6 0-1ft	Soil	8082A
19K0629-07	Q-7 0-1ft	Soil	8082A
19K0629-08	Q-8 0-1ft	Soil	8082A
19K0629-09	Q-9 0-1ft	Soil	8082A



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0629

PROJECT NARRATIVE

8082A Polychlorinated Biphenyls (PCB)

19K0629-04 [Elevated Method Reporting Limits due to sample matrix \(EL\).](#)

19K0629-04 [Surrogate recovery\(ies\) diluted below the MRL \(SD\).](#)

Decachlorobiphenyl (% @ 30-150%), Decachlorobiphenyl [2C] (% @ 30-150%), Tetrachloro-m-xylene (% @ 30-150%), Tetrachloro-m-xylene [2C] (% @ 30-150%)

19K0629-09 [Percent difference between primary and confirmation results exceeds 40% \(P\).](#)

Aroclor 1254 [2C]

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0629

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0629

MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **19K0629-01 through 19K0629-09**

Matrices: ☐ Ground Water/Surface Water ☒ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other: _____

CAM Protocol (check all that apply below):

- | | | | | | |
|---|--|--|---|--|---|
| <input type="checkbox"/> 8260 VOC
CAM II A | <input type="checkbox"/> 7470/7471 Hg
CAM III B | <input type="checkbox"/> MassDEP VPH
(GC/PID/FID)
CAM IV A | <input checked="" type="checkbox"/> 8082 PCB
CAM V A | <input type="checkbox"/> 9014 Total
Cyanide/PAC
CAM VI A | <input type="checkbox"/> 6860 Perchlorate
CAM VIII B |
| <input type="checkbox"/> 8270 SVOC
CAM II B | <input type="checkbox"/> 7010 Metals
CAM III C | <input type="checkbox"/> MassDEP VPH
(GC/MS)
CAM IV C | <input type="checkbox"/> 8081 Pesticides
CAM V B | <input type="checkbox"/> 7196 Hex Cr
CAM VI B | <input type="checkbox"/> MassDEP APH
CAM IX A |
| <input type="checkbox"/> 6010 Metals
CAM III A | <input type="checkbox"/> 6020 Metals
CAM III D | <input type="checkbox"/> MassDEP EPH
CAM IV B | <input type="checkbox"/> 8151 Herbicides
CAM V C | <input type="checkbox"/> Explosives
CAM VIII A | <input type="checkbox"/> TO-15 VOC
CAM IX B |

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

- | | | |
|---|--|----------------------------------|
| A | Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times? | Yes (X) No () |
| B | Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed? | Yes (X) No () |
| C | Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances? | Yes (X) No () |
| D | Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? | Yes (X) No () |
| E | VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).
b. APH and TO-15 Methods only: Was the complete analyte list reported for each method? | Yes () No ()
Yes () No () |
| F | Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)? | Yes (X) No () |

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

- | | | |
|---|--|-----------------|
| G | Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocols(s)?
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350. | Yes () No (X)* |
| H | Were all QC performance standards specified in the CAM protocol(s) achieved? | Yes () No (X)* |
| I | Were results reported for the complete analyte list specified in the selected CAM protocol(s)? | Yes (X) No ()* |

***All negative responses must be addressed in an attached laboratory narrative.**

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

Signature: Laurel Stoddard

Printed Name: Laurel Stoddard

Date: November 27, 2019

Position: Laboratory Director



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: Q-1 0-1ft
Date Sampled: 11/19/19 12:40
Percent Solids: 57
Initial Volume: 19.8
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0629
ESS Laboratory Sample ID: 19K0629-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/21/19 16:15

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.09)		8082A		1	11/26/19 1:31		CK92105
Aroclor 1221	ND (0.09)		8082A		1	11/26/19 1:31		CK92105
Aroclor 1232	ND (0.09)		8082A		1	11/26/19 1:31		CK92105
Aroclor 1242	ND (0.09)		8082A		1	11/26/19 1:31		CK92105
Aroclor 1248	ND (0.09)		8082A		1	11/26/19 1:31		CK92105
Aroclor 1254	ND (0.09)		8082A		1	11/26/19 1:31		CK92105
Aroclor 1260	ND (0.09)		8082A		1	11/26/19 1:31		CK92105
Aroclor 1262	ND (0.09)		8082A		1	11/26/19 1:31		CK92105
Aroclor 1268	ND (0.09)		8082A		1	11/26/19 1:31		CK92105

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	53 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	69 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	62 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	70 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: Q-2 0-1ft
Date Sampled: 11/19/19 12:50
Percent Solids: 79
Initial Volume: 20.5
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0629
ESS Laboratory Sample ID: 19K0629-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/21/19 16:15

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/26/19 1:50		CK92105
Aroclor 1221	ND (0.06)		8082A		1	11/26/19 1:50		CK92105
Aroclor 1232	ND (0.06)		8082A		1	11/26/19 1:50		CK92105
Aroclor 1242	ND (0.06)		8082A		1	11/26/19 1:50		CK92105
Aroclor 1248	ND (0.06)		8082A		1	11/26/19 1:50		CK92105
Aroclor 1254	ND (0.06)		8082A		1	11/26/19 1:50		CK92105
Aroclor 1260	ND (0.06)		8082A		1	11/26/19 1:50		CK92105
Aroclor 1262	ND (0.06)		8082A		1	11/26/19 1:50		CK92105
Aroclor 1268	ND (0.06)		8082A		1	11/26/19 1:50		CK92105

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	67 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	77 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	68 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	73 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: Q-3 0-1ft
Date Sampled: 11/19/19 13:00
Percent Solids: 78
Initial Volume: 19.7
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0629
ESS Laboratory Sample ID: 19K0629-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/21/19 16:15

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.07)		8082A		1	11/26/19 2:09		CK92105
Aroclor 1221	ND (0.07)		8082A		1	11/26/19 2:09		CK92105
Aroclor 1232	ND (0.07)		8082A		1	11/26/19 2:09		CK92105
Aroclor 1242	ND (0.07)		8082A		1	11/26/19 2:09		CK92105
Aroclor 1248	ND (0.07)		8082A		1	11/26/19 2:09		CK92105
Aroclor 1254	ND (0.07)		8082A		1	11/26/19 2:09		CK92105
Aroclor 1260	0.09 (0.07)		8082A		1	11/26/19 2:09		CK92105
Aroclor 1262	ND (0.07)		8082A		1	11/26/19 2:09		CK92105
Aroclor 1268	ND (0.07)		8082A		1	11/26/19 2:09		CK92105

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	68 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	78 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	69 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	75 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: Q-4 0-1ft
Date Sampled: 11/19/19 13:10
Percent Solids: 83
Initial Volume: 19.8
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0629
ESS Laboratory Sample ID: 19K0629-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/21/19 16:15

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (1.2)		8082A		20	11/26/19 13:28		CK92105
Aroclor 1221	ND (1.2)		8082A		20	11/26/19 13:28		CK92105
Aroclor 1232	ND (1.2)		8082A		20	11/26/19 13:28		CK92105
Aroclor 1242	ND (1.2)		8082A		20	11/26/19 13:28		CK92105
Aroclor 1248	ND (1.2)		8082A		20	11/26/19 13:28		CK92105
Aroclor 1254 [2C]	10.9 (1.2)		8082A		20	11/26/19 13:28		CK92105
Aroclor 1260 [2C]	22.3 (1.2)		8082A		20	11/26/19 13:28		CK92105
Aroclor 1262	ND (1.2)		8082A		20	11/26/19 13:28		CK92105
Aroclor 1268	ND (1.2)		8082A		20	11/26/19 13:28		CK92105

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	%	SD	30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	%	SD	30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	%	SD	30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	%	SD	30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: Q-5 0-1ft
Date Sampled: 11/19/19 13:25
Percent Solids: 76
Initial Volume: 19.5
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0629
ESS Laboratory Sample ID: 19K0629-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/21/19 16:15

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.07)		8082A		1	11/26/19 2:48		CK92105
Aroclor 1221	ND (0.07)		8082A		1	11/26/19 2:48		CK92105
Aroclor 1232	ND (0.07)		8082A		1	11/26/19 2:48		CK92105
Aroclor 1242	ND (0.07)		8082A		1	11/26/19 2:48		CK92105
Aroclor 1248	ND (0.07)		8082A		1	11/26/19 2:48		CK92105
Aroclor 1254	ND (0.07)		8082A		1	11/26/19 2:48		CK92105
Aroclor 1260 [2C]	0.2 (0.07)		8082A		1	11/26/19 2:48		CK92105
Aroclor 1262	ND (0.07)		8082A		1	11/26/19 2:48		CK92105
Aroclor 1268	ND (0.07)		8082A		1	11/26/19 2:48		CK92105

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	69 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	77 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	69 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	76 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: Q-6 0-1ft
Date Sampled: 11/19/19 13:40
Percent Solids: 59
Initial Volume: 19.5
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0629
ESS Laboratory Sample ID: 19K0629-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/21/19 16:15

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.09)		8082A		1	11/26/19 3:07		CK92105
Aroclor 1221	ND (0.09)		8082A		1	11/26/19 3:07		CK92105
Aroclor 1232	ND (0.09)		8082A		1	11/26/19 3:07		CK92105
Aroclor 1242	ND (0.09)		8082A		1	11/26/19 3:07		CK92105
Aroclor 1248	ND (0.09)		8082A		1	11/26/19 3:07		CK92105
Aroclor 1254	ND (0.09)		8082A		1	11/26/19 3:07		CK92105
Aroclor 1260 [2C]	0.2 (0.09)		8082A		1	11/26/19 3:07		CK92105
Aroclor 1262	ND (0.09)		8082A		1	11/26/19 3:07		CK92105
Aroclor 1268	ND (0.09)		8082A		1	11/26/19 3:07		CK92105

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	70 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	83 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	74 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	80 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: Q-7 0-1ft
Date Sampled: 11/19/19 13:50
Percent Solids: 82
Initial Volume: 19.4
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0629
ESS Laboratory Sample ID: 19K0629-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/21/19 16:15

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.06)		8082A		1	11/26/19 3:26		CK92105
Aroclor 1221	ND (0.06)		8082A		1	11/26/19 3:26		CK92105
Aroclor 1232	ND (0.06)		8082A		1	11/26/19 3:26		CK92105
Aroclor 1242	ND (0.06)		8082A		1	11/26/19 3:26		CK92105
Aroclor 1248	ND (0.06)		8082A		1	11/26/19 3:26		CK92105
Aroclor 1254	ND (0.06)		8082A		1	11/26/19 3:26		CK92105
Aroclor 1260	ND (0.06)		8082A		1	11/26/19 3:26		CK92105
Aroclor 1262	ND (0.06)		8082A		1	11/26/19 3:26		CK92105
Aroclor 1268	ND (0.06)		8082A		1	11/26/19 3:26		CK92105

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	82 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	84 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	71 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	79 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: Q-8 0-1ft
Date Sampled: 11/19/19 14:00
Percent Solids: 13
Initial Volume: 20.9
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0629
ESS Laboratory Sample ID: 19K0629-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/21/19 16:15

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.4)		8082A		1	11/26/19 3:45		CK92105
Aroclor 1221	ND (0.4)		8082A		1	11/26/19 3:45		CK92105
Aroclor 1232	ND (0.4)		8082A		1	11/26/19 3:45		CK92105
Aroclor 1242	ND (0.4)		8082A		1	11/26/19 3:45		CK92105
Aroclor 1248	ND (0.4)		8082A		1	11/26/19 3:45		CK92105
Aroclor 1254	ND (0.4)		8082A		1	11/26/19 3:45		CK92105
Aroclor 1260	ND (0.4)		8082A		1	11/26/19 3:45		CK92105
Aroclor 1262	ND (0.4)		8082A		1	11/26/19 3:45		CK92105
Aroclor 1268	ND (0.4)		8082A		1	11/26/19 3:45		CK92105

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	67 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	83 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	73 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	80 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick
Client Sample ID: Q-9 0-1ft
Date Sampled: 11/19/19 14:15
Percent Solids: 20
Initial Volume: 19.2
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 19K0629
ESS Laboratory Sample ID: 19K0629-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MJV
Prepared: 11/26/19 15:55

8082A Polychlorinated Biphenyls (PCB)

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>	<u>Sequence</u>	<u>Batch</u>
Aroclor 1016	ND (0.3)		8082A		1	11/27/19 10:08		CK92602
Aroclor 1221	ND (0.3)		8082A		1	11/27/19 10:08		CK92602
Aroclor 1232	ND (0.3)		8082A		1	11/27/19 10:08		CK92602
Aroclor 1242	ND (0.3)		8082A		1	11/27/19 10:08		CK92602
Aroclor 1248	ND (0.3)		8082A		1	11/27/19 10:08		CK92602
Aroclor 1254 [2C]	P 1.8 (0.3)		8082A		1	11/27/19 10:08		CK92602
Aroclor 1260 [2C]	3.4 (0.3)		8082A		1	11/27/19 10:08		CK92602
Aroclor 1262	ND (0.3)		8082A		1	11/27/19 10:08		CK92602
Aroclor 1268	ND (0.3)		8082A		1	11/27/19 10:08		CK92602

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: Decachlorobiphenyl</i>	62 %		30-150
<i>Surrogate: Decachlorobiphenyl [2C]</i>	85 %		30-150
<i>Surrogate: Tetrachloro-m-xylene</i>	66 %		30-150
<i>Surrogate: Tetrachloro-m-xylene [2C]</i>	78 %		30-150



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0629

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8082A Polychlorinated Biphenyls (PCB)

Batch CK92105 - 3540C

Blank

Aroclor 1016	ND	0.02	mg/kg wet							
Aroclor 1016 [2C]	ND	0.02	mg/kg wet							
Aroclor 1221	ND	0.02	mg/kg wet							
Aroclor 1221 [2C]	ND	0.02	mg/kg wet							
Aroclor 1232	ND	0.02	mg/kg wet							
Aroclor 1232 [2C]	ND	0.02	mg/kg wet							
Aroclor 1242	ND	0.02	mg/kg wet							
Aroclor 1242 [2C]	ND	0.02	mg/kg wet							
Aroclor 1248	ND	0.02	mg/kg wet							
Aroclor 1248 [2C]	ND	0.02	mg/kg wet							
Aroclor 1254	ND	0.02	mg/kg wet							
Aroclor 1254 [2C]	ND	0.02	mg/kg wet							
Aroclor 1260	ND	0.02	mg/kg wet							
Aroclor 1260 [2C]	ND	0.02	mg/kg wet							
Aroclor 1262	ND	0.02	mg/kg wet							
Aroclor 1262 [2C]	ND	0.02	mg/kg wet							
Aroclor 1268	ND	0.02	mg/kg wet							
Aroclor 1268 [2C]	ND	0.02	mg/kg wet							

Surrogate: Decachlorobiphenyl	0.0195		mg/kg wet	0.02500		78	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0213		mg/kg wet	0.02500		85	30-150			
Surrogate: Tetrachloro-m-xylene	0.0171		mg/kg wet	0.02500		68	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0190		mg/kg wet	0.02500		76	30-150			

LCS

Aroclor 1016	0.5	0.05	mg/kg wet	0.5000		91	40-140			
Aroclor 1016 [2C]	0.5	0.05	mg/kg wet	0.5000		96	40-140			
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		86	40-140			
Aroclor 1260 [2C]	0.5	0.05	mg/kg wet	0.5000		95	40-140			

Surrogate: Decachlorobiphenyl	0.0205		mg/kg wet	0.02500		82	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0222		mg/kg wet	0.02500		89	30-150			
Surrogate: Tetrachloro-m-xylene	0.0186		mg/kg wet	0.02500		74	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0193		mg/kg wet	0.02500		77	30-150			

LCS Dup

Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		90	40-140	2	30	
Aroclor 1016 [2C]	0.5	0.05	mg/kg wet	0.5000		93	40-140	3	30	
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		85	40-140	1	30	
Aroclor 1260 [2C]	0.5	0.05	mg/kg wet	0.5000		93	40-140	2	30	

Surrogate: Decachlorobiphenyl	0.0200		mg/kg wet	0.02500		80	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0218		mg/kg wet	0.02500		87	30-150			
Surrogate: Tetrachloro-m-xylene	0.0179		mg/kg wet	0.02500		72	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0186		mg/kg wet	0.02500		75	30-150			

Batch CK92602 - 3540C



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0629

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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8082A Polychlorinated Biphenyls (PCB)

Batch CK92602 - 3540C

Blank

Aroclor 1016	ND	0.05	mg/kg wet							
Aroclor 1016 [2C]	ND	0.05	mg/kg wet							
Aroclor 1221	ND	0.05	mg/kg wet							
Aroclor 1221 [2C]	ND	0.05	mg/kg wet							
Aroclor 1232	ND	0.05	mg/kg wet							
Aroclor 1232 [2C]	ND	0.05	mg/kg wet							
Aroclor 1242	ND	0.05	mg/kg wet							
Aroclor 1242 [2C]	ND	0.05	mg/kg wet							
Aroclor 1248	ND	0.05	mg/kg wet							
Aroclor 1248 [2C]	ND	0.05	mg/kg wet							
Aroclor 1254	ND	0.05	mg/kg wet							
Aroclor 1254 [2C]	ND	0.05	mg/kg wet							
Aroclor 1260	ND	0.05	mg/kg wet							
Aroclor 1260 [2C]	ND	0.05	mg/kg wet							
Aroclor 1262	ND	0.05	mg/kg wet							
Aroclor 1262 [2C]	ND	0.05	mg/kg wet							
Aroclor 1268	ND	0.05	mg/kg wet							
Aroclor 1268 [2C]	ND	0.05	mg/kg wet							

Surrogate: Decachlorobiphenyl	0.0180		mg/kg wet	0.02500		72	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0199		mg/kg wet	0.02500		80	30-150			
Surrogate: Tetrachloro-m-xylene	0.0168		mg/kg wet	0.02500		67	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0188		mg/kg wet	0.02500		75	30-150			

LCS

Aroclor 1016	0.5	0.05	mg/kg wet	0.5000		92	40-140			
Aroclor 1016 [2C]	0.5	0.05	mg/kg wet	0.5000		100	40-140			
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		87	40-140			
Aroclor 1260 [2C]	0.5	0.05	mg/kg wet	0.5000		97	40-140			

Surrogate: Decachlorobiphenyl	0.0198		mg/kg wet	0.02500		79	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0217		mg/kg wet	0.02500		87	30-150			
Surrogate: Tetrachloro-m-xylene	0.0192		mg/kg wet	0.02500		77	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0201		mg/kg wet	0.02500		80	30-150			

LCS Dup

Aroclor 1016	0.5	0.05	mg/kg wet	0.5000		90	40-140	2	30	
Aroclor 1016 [2C]	0.5	0.05	mg/kg wet	0.5000		98	40-140	3	30	
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		86	40-140	1	30	
Aroclor 1260 [2C]	0.5	0.05	mg/kg wet	0.5000		96	40-140	2	30	

Surrogate: Decachlorobiphenyl	0.0193		mg/kg wet	0.02500		77	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.0212		mg/kg wet	0.02500		85	30-150			
Surrogate: Tetrachloro-m-xylene	0.0185		mg/kg wet	0.02500		74	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0193		mg/kg wet	0.02500		77	30-150			



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0629

Notes and Definitions

U	Analyte included in the analysis, but not detected
SD	Surrogate recovery(ies) diluted below the MRL (SD).
P	Percent difference between primary and confirmation results exceeds 40% (P).
EL	Elevated Method Reporting Limits due to sample matrix (EL).
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: Civil & Environmental Consultants, Inc.
Client Project ID: 90 Oak Street Natick

ESS Laboratory Work Order: 19K0629

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meedc/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC - Civil & Env'tal Consultants - KPB/TB/MM

Shipped/Delivered Via: ESS Courier

ESS Project ID: 19K0629
Date Received: 11/20/2019
Project Due Date: 11/27/2019
Days for Project: 5 Day

1. Air bill manifest present? ☐ No
Air No.: NA
2. Were custody seals present? ☐ No
3. Is radiation count <100 CPM? ☐ Yes
4. Is a Cooler Present? ☐ Yes
Temp: 1.4 Iced with: Ice
5. Was COC signed and dated by client? ☐ Yes

6. Does COC match bottles? ☐ Yes
7. Is COC complete and correct? ☐ Yes
8. Were samples received intact? ☐ Yes
9. Were labs informed about short holds & rushes? Yes / No ☒ NA
10. Were any analyses received outside of hold time? Yes ☒ No

11. Any Subcontracting needed? Yes ☒ No
ESS Sample IDs: _____
Analysis: _____
TAT: _____

12. Were VOAs received? Yes ☒ No
a. Air bubbles in aqueous VOAs? Yes / No
b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? Yes ☒ No
a. If metals preserved upon receipt: Date: _____ Time: _____ By: _____
b. Low Level VOA vials frozen: Date: _____ Time: _____ By: _____

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes ☒ No
a. Was there a need to contact the client? Yes ☒ No
Who was contacted? _____ Date: _____ Time: _____ By: _____

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	414412	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
02	414411	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
03	414410	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
04	414409	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
05	414408	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
06	414407	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
07	414406	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
08	414405	Yes	NA	Yes	4 oz. Jar - Unpres	NP	
09	414404	Yes	NA	Yes	4 oz. Jar - Unpres	NP	

2nd Review

Were all containers scanned into storage/lab?

Are barcode labels on correct containers?

Are all Flashpoint stickers attached/container ID # circled?

Are all Hex Chrome stickers attached?

Are all QC stickers attached?

Are VOA stickers attached if bubbles noted?

Initials: RC
Yes / No
Yes / No / NA
Yes / No / NA
Yes / No / NA
Yes / No / NA

Completed

By: _____

Reviewed

Date & Time: 11/20/19 16:37

ESS Laboratory Sample and Cooler Receipt Checklist

Client: CEC/Env & Envtal Consultants - KPB/TB/MM ESS Project ID: 19K0629
By: [Signature] Date Received: 11/20/2019
Delivered: [Signature] Date & Time: 11/20/19 1601
By: [Signature] 11/20/19 1601

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

Turn Time	5-Day	Rush
Regulatory State	Massachusetts	
Is this project for any of the following?:		
<input type="radio"/> OCT RCP	<input checked="" type="radio"/> MA MCP	<input type="radio"/> ORGP

Reporting Limits	MassDEP RCS-1
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Electronic ☒ Limit Checker ☒ Standard Excel
Deliverables ☒ Other (Please Specify →) 206

[illegible]

APPENDIX D

PUBLIC NOTIFICATION DOCUMENTATION



January 3, 2020

James M. White, Director of Public Health
Natick Town Hall, 2nd Floor
13 East Central Street
Natick, Massachusetts 01760

Subject: Availability of Release Notification Form & Immediate Response Action Plan
RTN 3-35941
90 Oak Street, Natick, Massachusetts, 01760
CEC Project #195-909

Dear Mr. White:

Civil & Environmental Consultants, Inc. (CEC) is writing to notify you, in accordance with 310 CMR 40.1403(3) of the Massachusetts Contingency Plan (MCP), that a release of polychlorinated biphenyls (PCBs) occurred on the Town owned property located at 90 Oak Street in Natick, Massachusetts. The Town of Natick is a Potentially Responsible Party (PRP) for the release. The Release was reported to the Massachusetts Department of Environmental Protection (MassDEP) by the Town on November 5, 2019, and Release Tracking Number (RTN) 3-35941 was assigned.

Details regarding the assessment and remediation activities can be found in the Release Notification Form and Immediate Response Action Plan. This report is available for public review online at the MassDEP Waste Site/Reportable Release File Viewer found at <https://eeaonline.eea.state.ma.us/portal#!/search/wastesite>. Public involvement opportunities are available under 310 CMR 40.1403(9). If you have any questions regarding this matter, please either of the undersigned at (774) 501-2176.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

Jonathan D. Kitchen, P.G., LSP
Principal

Molly Cote, LSP
Project Manager III



January 3, 2020

Melissa Malone, Town Manager
Natick Town Hall
13 East Central Street
Natick, Massachusetts 01760

Subject: Availability of Release Notification Form & Immediate Response Action Plan
RTN 3-35941
90 Oak Street, Natick, Massachusetts, 01760
CEC Project #195-909

Dear Ms. Malone:

Civil & Environmental Consultants, Inc. (CEC) is writing to notify you, in accordance with 310 CMR 40.1403(3) of the Massachusetts Contingency Plan (MCP), that a release of polychlorinated biphenyls (PCBs) occurred on the Town owned property located at 90 Oak Street in Natick, Massachusetts. The Town of Natick is a Potentially Responsible Party (PRP) for the release. The Release was reported to the Massachusetts Department of Environmental Protection (MassDEP) by the Town on November 5, 2019, and Release Tracking Number (RTN) 3-35941 was assigned.

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Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

Jonathan D. Kitchen, P.G., LSP
Principal

Molly Cote, LSP
Project Manager III