

February 9, 2016

US Environmental Protection Agency
Dewatering GP Processing
Industrial Permit Unit (OEP 06-4)
5 Post Office Square, Suite 100
Boston, MA 02109-3912

**Re: Notice of Intent for Dewatering General Permit
Wayland Town Offices, 41 Cochituate Way, Wayland, MA**

To Whom It May Concern:

AMEC Massachusetts, Inc. (AMEC) is submitting this Notice of Intent (NOI) and applicable supporting documentation on behalf of Ameresco, Inc. (Ameresco) for the property located at the Wayland Town Offices, 41 Cochituate Road in Wayland, Massachusetts (the Site). This NOI is being submitted to request authorization under the National Pollutant Discharge Elimination System (NPDES) Dewatering General Permit (DGP) in Massachusetts (MAG70000) to allow the discharge of pumped groundwater to Pine Brook, which ultimately discharges into the Sudbury River. The proposed dewatering activity is necessary to install the foundations for solar PV carports (the Project). Ameresco has determined that the filing of this NOI is appropriate because the Project requires the dewatering of the Site area to complete temporary excavation work. The Project and related permit information are discussed below.

Proposed Project & Dewatering Activities

The proposed Project consists of solar PV carports to be installed at the Wayland Town Offices to provide renewable energy to the on-site buildings. The general location of the project is depicted on **Figure 1** in **Attachment A**. Project plans are also provided in Attachment A to illustrate the location of construction activities and foundations that require dewatering. Dewatering is anticipated due to groundwater detected at approximately 5 feet below ground surface. The Project will maintain existing ground surface elevations and is also subject to permitting under the Massachusetts Wetlands Protection Act due to on-site resource areas.

Groundwater & Surface Water Monitoring Results

A representative groundwater sample was collected from a temporary well in the area of the proposed dewatering for the car port foundations. A site plan showing the location of soil borings for geotechnical investigation are provided in Attachment A. An unfiltered groundwater sample was collected from location WTO-C2 and analyzed for the parameters in Appendix VIII of the DGP. The 2-inch temporary well at WTO-C2 was screened from 3-18' below ground surface and developed prior to sampling. A surface water grab sample (WTO-SW) was collected from the Sudbury River at the Pelham Island Road bridge and analyzed for hardness. The laboratory results for groundwater are summarized in **Table 1** below and compared to the

permit limits at a zero dilution factor for metals. Laboratory data sheets are provided in **Attachment B**.

The laboratory results indicate that several metals are present in the groundwater sample and the results for Cadmium, Copper, Iron and Lead exceed the permit limit. It is important to note that the result for Cadmium was non-detect, but the reporting limit exceeds the permit limit. Per the requirements of the DGP, a dilution factor can be calculated for metals to determine the appropriate limit for the site to discharge to the closest receiving water. This is discussed further below.

Table 1. Total Metals for Raw Influent

Analyte	Result (ug/l)	Permit Limit*
Antimony	ND	5.6
Arsenic	5.6	10
Cadmium	(0.5) ¹	0.2
pH	6.9	6.5 - 8.3
Chromium III	5.8	48.8
Chromium VI	ND	11.4
Copper	7.3	5.2
Chloride	316	monitor only
Iron	4,400	1,000
Mercury	ND	0.9
Nickel	10.7	29
Silver	ND	1.2
Zinc	17.3	66.6
Lead	3.6	1.3

Notes:

*Permit limit with no dilution for metals.

ND = not detected

Bold values are detected values.

1. Cadmium was not detected, but the reporting limit exceeds the permit limit.

Highlighted cells exceed the permit limit.

Metals Dilution Factor Calculations

As discussed above, the laboratory results for metals indicate that Cadmium, Copper, Iron and Lead exceed the zero dilution limit under the DGP. A dilution factor was calculated in accordance with the requirements in Appendix VII of the DGP to determine the allowable effluent limit based on the proposed flow rate for the dewatering system and characteristics of the receiving water (Pine Brook). This information is presented in **Table 2** in **Attachment C**. Additional supporting documentation related to the 7Q10 calculation for Pine Brook is provided in Attachment C.

Notice of Intent

The Notice of Intent (NOI) for permit coverage under the NPDES Dewatering General Permit is provided in **Attachment D** and additional supporting documentation for the NOI is provided in Attachments A-C and E-F. Permit eligibility related to endangered species and historic properties is discussed below.

Endangered Species Permit Eligibility

Endangered species permit eligibility requirements were evaluated in accordance with the guidelines in Appendix IV of the DGP. The U.S. Fish and Wildlife Service has identified the Northern long-eared Bat (*Myotis Septentrionalis*) to be present in or near the vicinity of the action area for the Wayland Town Offices Solar PV Carport Project. This information is provided in the Official Species List for Consultation Code: 05E1NE00-2015-SLI-2053 in **Attachment E**. The proposed Project is within an existing developed parking area and the Solar PV Carport Project does not involve clearing of trees that would potentially impact the habitat of the Northern long-eared Bat. Based on this information and prior correspondence with EPA regarding the Northern long-eared Bat habitat and NPDES permits, the Project meets the requirements for Criterion A.

AMEC also requested a review of the proposed Project by the Natural Heritage and Endangered Species Program (NHESP) and this evaluation identified two state-listed rare species in the vicinity of the project area. This information is provided in Attachment E, NHESP Tracking No. 15-34597. The NPDES DGP establishes permit eligibility requirements for federal-listed species and the NHESP requires further review under state permits that apply to the Project, specifically the Massachusetts Wetlands Protection Act (WPA) that will require the submittal of a Notice of Intent in conjunction with the DGP. It is anticipated that these requirements will be addressed as part of the NOI under the WPA.

Historic Properties Permit Eligibility

AMEC reviewed the National Register of Historic Places database and only three properties in Wayland are listed on the National Register: Wayland Center Historic District, Hopestill Bent Tavern, and Noyes-Parris House. None of these places are located at or in the vicinity of the Project. Additionally, Appendix III of the NPDES DGP discusses that the majority of activities authorized under the DGP are expected to have no potential to affect historic properties. Specifically, “. . . to the extent EPA’s issuance of this General Permit authorizes discharges of pollutants confined to existing channels, outfalls or natural drainage areas, the permitting action does not have the potential to affect historic properties.” The dewatering discharge associated with the proposed Project does not include subsurface disturbance to implement control measures and meet the requirements of the DGP. The proposed dewatering discharge is to an area that receives stormwater runoff from the existing parking lot and discharges to a bordering vegetated wetland area that abuts Pine Brook. Based on this information and the guidance in Appendix III of the NPDES DGP, the Project meets Criterion A: “the discharges do not have the potential to cause effects to historic properties.” This information is documented in the NOI in Attachment D.

Dewatering Treatment System

The treatment system layout and proposed discharge location are identified on the site plan in Attachment A schematic of the proposed treatment system is provided in **Attachment F**, which is based on the anticipated system and layout that will be used by the contractor. The location

Wayland Town Offices DGP
February 9, 2015



and layout of equipment on-site may vary, but the operating parameters (i.e., max flow rate) and discharge location will not change.

If you have any questions or need additional information, please do not hesitate to contact me by phone at (978) 392-5355 or via email: rich.niles@amecfw.com.

AMEC Massachusetts, Inc.

A handwritten signature in black ink, appearing to read "Rich Niles".

Rich Niles
Water Resources Project Manager

cc: Robert Bukowski, P.E., AMEC Massachusetts, Inc.
Nicholas Nikolaou, Ameresco

Attachments: A – Figure 1 & Site Plan
B – Laboratory Data Report
C – Table 2. Metals Dilution Calculations & 7Q10 Supporting Information
D – Notice of Intent
E – Endangered Species Information
F – Treatment System Layout & Schematic

Attachment A – Figure 1 & Site Plan



SITE LOCATION MAP

Town of Wayland

41 Cochituate Road
Wayland, MA

Location of Site



Notes & Sources

0 1,000 2,000
Feet



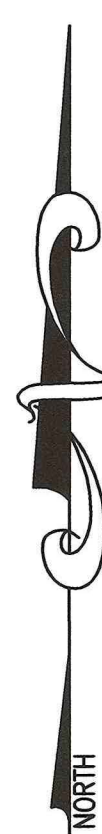
Amec Foster Wheeler
Environment & Infrastructure, Inc.
271 Mill Road
Chelmsford, MA 01824
(978) 692-9090



FIGURE

1

Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community. Copyright: © 2013 National Geographic Society, i-cubed



Attachment B – Laboratory Data Report



ANALYTICAL REPORT

Lab Number:	L1514913
Client:	AMEC Earth & Environmental 271 Mill Road 3rd Floor Chelmsford, MA 01824
ATTN:	Rob Bukowski
Phone:	(978) 392-5372
Project Name:	AMERESCO WAYLAND TO
Project Number:	3652150017
Report Date:	07/09/15

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: AMERESCO WAYLAND TO
Project Number: 3652150017

Lab Number: L1514913
Report Date: 07/09/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1514913-01	WTO-SS	SOIL	WAYLAND, MA	06/30/15 13:00	06/30/15
L1514913-02	WTO-SW	WATER	WAYLAND, MA	06/30/15 09:30	06/30/15
L1514913-03	WTO-GW	WATER	WAYLAND, MA	06/30/15 13:30	06/30/15

Project Name: AMERESCO WAYLAND TO

Lab Number: L1514913

Project Number: 3652150017

Report Date: 07/09/15

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is 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
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
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
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
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
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO
For any questions answered "No", please refer to the case narrative section on the following page(s).		

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: AMERESCO WAYLAND TO
Project Number: 3652150017

Lab Number: L1514913
Report Date: 07/09/15

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: AMERESCO WAYLAND TO
Project Number: 3652150017

Lab Number: L1514913
Report Date: 07/09/15

Case Narrative (continued)

MCP Related Narratives

Sample Receipt

In reference to question H:

L1514913-01: A Matrix Spike was not submitted for the analysis of Total Metals.

Volatile Organics

In reference to question H:

The initial calibration, associated with L1514913-01, did not meet the method required minimum response factor on the lowest calibration standard for acetone (0.08968), 2-butanone (0.09387), and 4-methyl-2-pentanone (0.07228), as well as the average response factor for acetone and 4-methyl-2-pentanone.

The continuing calibration standard, associated with L1514913-01, is outside the acceptance criteria for several compounds; however, it is within overall method allowances. A copy of the continuing calibration standard is included as an addendum to this report.

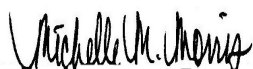
Metals

In reference to question I:

All samples were analyzed for a subset of MCP elements per the Chain of Custody.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Michelle M. Morris

Title: Technical Director/Representative

Date: 07/09/15

ORGANICS

VOLATILES

Project Name: AMERESCO WAYLAND TO**Lab Number:** L1514913**Project Number:** 3652150017**Report Date:** 07/09/15**SAMPLE RESULTS**

Lab ID: L1514913-01
Client ID: WTO-SS
Sample Location: WAYLAND, MA
Matrix: Soil
Analytical Method: 97,8260C
Analytical Date: 07/08/15 09:51
Analyst: BN
Percent Solids: 84%

Date Collected: 06/30/15 13:00
Date Received: 06/30/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	8.5	--	1
1,1-Dichloroethane	ND		ug/kg	1.3	--	1
Chloroform	ND		ug/kg	1.3	--	1
Carbon tetrachloride	ND		ug/kg	0.85	--	1
1,2-Dichloropropane	ND		ug/kg	3.0	--	1
Dibromochloromethane	ND		ug/kg	0.85	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.3	--	1
Tetrachloroethene	ND		ug/kg	0.85	--	1
Chlorobenzene	ND		ug/kg	0.85	--	1
Trichlorofluoromethane	ND		ug/kg	3.4	--	1
1,2-Dichloroethane	ND		ug/kg	0.85	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.85	--	1
Bromodichloromethane	ND		ug/kg	0.85	--	1
trans-1,3-Dichloropropene	ND		ug/kg	0.85	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.85	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.85	--	1
1,1-Dichloropropene	ND		ug/kg	3.4	--	1
Bromoform	ND		ug/kg	3.4	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.85	--	1
Benzene	ND		ug/kg	0.85	--	1
Toluene	ND		ug/kg	1.3	--	1
Ethylbenzene	ND		ug/kg	0.85	--	1
Chloromethane	ND		ug/kg	3.4	--	1
Bromomethane	ND		ug/kg	1.7	--	1
Vinyl chloride	ND		ug/kg	1.7	--	1
Chloroethane	ND		ug/kg	1.7	--	1
1,1-Dichloroethene	ND		ug/kg	0.85	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.3	--	1
Trichloroethene	ND		ug/kg	0.85	--	1
1,2-Dichlorobenzene	ND		ug/kg	3.4	--	1

Project Name: AMERESCO WAYLAND TO**Lab Number:** L1514913**Project Number:** 3652150017**Report Date:** 07/09/15**SAMPLE RESULTS****Lab ID:** L1514913-01**Date Collected:** 06/30/15 13:00**Client ID:** WTO-SS**Date Received:** 06/30/15**Sample Location:** WAYLAND, MA**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	3.4	--	1
1,4-Dichlorobenzene	ND		ug/kg	3.4	--	1
Methyl tert butyl ether	ND		ug/kg	1.7	--	1
p/m-Xylene	ND		ug/kg	1.7	--	1
o-Xylene	ND		ug/kg	1.7	--	1
Xylenes, Total	ND		ug/kg	1.7	--	1
cis-1,2-Dichloroethene	ND		ug/kg	0.85	--	1
1,2-Dichloroethene, Total	ND		ug/kg	0.85	--	1
Dibromomethane	ND		ug/kg	3.4	--	1
1,2,3-Trichloropropane	ND		ug/kg	3.4	--	1
Styrene	ND		ug/kg	1.7	--	1
Dichlorodifluoromethane	ND		ug/kg	8.5	--	1
Acetone	ND		ug/kg	30	--	1
Carbon disulfide	ND		ug/kg	3.4	--	1
Methyl ethyl ketone	ND		ug/kg	8.5	--	1
Methyl isobutyl ketone	ND		ug/kg	8.5	--	1
2-Hexanone	ND		ug/kg	8.5	--	1
Bromochloromethane	ND		ug/kg	3.4	--	1
Tetrahydrofuran	ND		ug/kg	3.4	--	1
2,2-Dichloropropane	ND		ug/kg	4.2	--	1
1,2-Dibromoethane	ND		ug/kg	3.4	--	1
1,3-Dichloropropane	ND		ug/kg	3.4	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.85	--	1
Bromobenzene	ND		ug/kg	4.2	--	1
n-Butylbenzene	ND		ug/kg	0.85	--	1
sec-Butylbenzene	ND		ug/kg	0.85	--	1
tert-Butylbenzene	ND		ug/kg	3.4	--	1
o-Chlorotoluene	ND		ug/kg	3.4	--	1
p-Chlorotoluene	ND		ug/kg	3.4	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.4	--	1
Hexachlorobutadiene	ND		ug/kg	3.4	--	1
Isopropylbenzene	ND		ug/kg	0.85	--	1
p-Isopropyltoluene	ND		ug/kg	0.85	--	1
Naphthalene	ND		ug/kg	3.4	--	1
n-Propylbenzene	ND		ug/kg	0.85	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	3.4	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	3.4	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	3.4	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	3.4	--	1

Project Name: AMERESCO WAYLAND TO
Project Number: 3652150017

Lab Number: L1514913
Report Date: 07/09/15

SAMPLE RESULTS

Lab ID: L1514913-01
Client ID: WTO-SS
Sample Location: WAYLAND, MA

Date Collected: 06/30/15 13:00
Date Received: 06/30/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Diethyl ether	ND		ug/kg	4.2	--	1
Diisopropyl Ether	ND		ug/kg	3.4	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	3.4	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	3.4	--	1
1,4-Dioxane	ND		ug/kg	34	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	105		70-130

Project Name: AMERESCO WAYLAND TO

Lab Number: L1514913

Project Number: 3652150017

Report Date: 07/09/15

Method Blank Analysis Batch Quality Control

Analytical Method: 97,8260C
 Analytical Date: 07/08/15 09:22
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01 Batch: WG800821-3					
Methylene chloride	ND		ug/kg	10	--
1,1-Dichloroethane	ND		ug/kg	1.5	--
Chloroform	ND		ug/kg	1.5	--
Carbon tetrachloride	ND		ug/kg	1.0	--
1,2-Dichloropropane	ND		ug/kg	3.5	--
Dibromochloromethane	ND		ug/kg	1.0	--
1,1,2-Trichloroethane	ND		ug/kg	1.5	--
Tetrachloroethene	ND		ug/kg	1.0	--
Chlorobenzene	ND		ug/kg	1.0	--
Trichlorofluoromethane	ND		ug/kg	4.0	--
1,2-Dichloroethane	ND		ug/kg	1.0	--
1,1,1-Trichloroethane	ND		ug/kg	1.0	--
Bromodichloromethane	ND		ug/kg	1.0	--
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--
cis-1,3-Dichloropropene	ND		ug/kg	1.0	--
1,3-Dichloropropene, Total	ND		ug/kg	1.0	--
1,1-Dichloropropene	ND		ug/kg	4.0	--
Bromoform	ND		ug/kg	4.0	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	1.0	--
Benzene	ND		ug/kg	1.0	--
Toluene	ND		ug/kg	1.5	--
Ethylbenzene	ND		ug/kg	1.0	--
Chloromethane	ND		ug/kg	4.0	--
Bromomethane	ND		ug/kg	2.0	--
Vinyl chloride	ND		ug/kg	2.0	--
Chloroethane	ND		ug/kg	2.0	--
1,1-Dichloroethene	ND		ug/kg	1.0	--
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--
Trichloroethene	ND		ug/kg	1.0	--

Project Name: AMERESCO WAYLAND TO

Lab Number: L1514913

Project Number: 3652150017

Report Date: 07/09/15

Method Blank Analysis Batch Quality Control

Analytical Method: 97,8260C
 Analytical Date: 07/08/15 09:22
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01 Batch: WG800821-3					
1,2-Dichlorobenzene	ND		ug/kg	4.0	--
1,3-Dichlorobenzene	ND		ug/kg	4.0	--
1,4-Dichlorobenzene	ND		ug/kg	4.0	--
Methyl tert butyl ether	ND		ug/kg	2.0	--
p/m-Xylene	ND		ug/kg	2.0	--
o-Xylene	ND		ug/kg	2.0	--
Xylene (Total)	ND		ug/kg	2.0	--
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--
1,2-Dichloroethene (total)	ND		ug/kg	1.0	--
Dibromomethane	ND		ug/kg	4.0	--
1,2,3-Trichloropropane	ND		ug/kg	4.0	--
Styrene	ND		ug/kg	2.0	--
Dichlorodifluoromethane	ND		ug/kg	10	--
Acetone	ND		ug/kg	36	--
Carbon disulfide	ND		ug/kg	4.0	--
2-Butanone	ND		ug/kg	10	--
4-Methyl-2-pentanone	ND		ug/kg	10	--
2-Hexanone	ND		ug/kg	10	--
Bromochloromethane	ND		ug/kg	4.0	--
Tetrahydrofuran	ND		ug/kg	4.0	--
2,2-Dichloropropane	ND		ug/kg	5.0	--
1,2-Dibromoethane	ND		ug/kg	4.0	--
1,3-Dichloropropane	ND		ug/kg	4.0	--
1,1,1,2-Tetrachloroethane	ND		ug/kg	1.0	--
Bromobenzene	ND		ug/kg	5.0	--
n-Butylbenzene	ND		ug/kg	1.0	--
sec-Butylbenzene	ND		ug/kg	1.0	--
tert-Butylbenzene	ND		ug/kg	4.0	--
o-Chlorotoluene	ND		ug/kg	4.0	--

Project Name: AMERESCO WAYLAND TO

Lab Number: L1514913

Project Number: 3652150017

Report Date: 07/09/15

Method Blank Analysis Batch Quality Control

Analytical Method: 97,8260C
 Analytical Date: 07/08/15 09:22
 Analyst: BN

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 01 Batch: WG800821-3					
p-Chlorotoluene	ND		ug/kg	4.0	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.0	--
Hexachlorobutadiene	ND		ug/kg	4.0	--
Isopropylbenzene	ND		ug/kg	1.0	--
p-Isopropyltoluene	ND		ug/kg	1.0	--
Naphthalene	ND		ug/kg	4.0	--
n-Propylbenzene	ND		ug/kg	1.0	--
1,2,3-Trichlorobenzene	ND		ug/kg	4.0	--
1,2,4-Trichlorobenzene	ND		ug/kg	4.0	--
1,3,5-Trimethylbenzene	ND		ug/kg	4.0	--
1,2,4-Trimethylbenzene	ND		ug/kg	4.0	--
Ethyl ether	ND		ug/kg	5.0	--
Isopropyl Ether	ND		ug/kg	4.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	4.0	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	4.0	--
1,4-Dioxane	ND		ug/kg	40	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	98		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: AMERESCO WAYLAND TO

Project Number: 3652150017

Lab Number: L1514913

Report Date: 07/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG800821-1 WG800821-2								
Methylene chloride	91		90		70-130	1		20
1,1-Dichloroethane	91		90		70-130	1		20
Chloroform	92		91		70-130	1		20
Carbon tetrachloride	88		86		70-130	2		20
1,2-Dichloropropane	92		91		70-130	1		20
Dibromochloromethane	99		100		70-130	1		20
1,1,2-Trichloroethane	93		93		70-130	0		20
Tetrachloroethene	93		92		70-130	1		20
Chlorobenzene	93		94		70-130	1		20
Trichlorofluoromethane	101		99		70-130	2		20
1,2-Dichloroethane	96		94		70-130	2		20
1,1,1-Trichloroethane	86		84		70-130	2		20
Bromodichloromethane	90		91		70-130	1		20
trans-1,3-Dichloropropene	91		93		70-130	2		20
cis-1,3-Dichloropropene	94		94		70-130	0		20
1,1-Dichloropropene	81		80		70-130	1		20
Bromoform	93		93		70-130	0		20
1,1,2,2-Tetrachloroethane	89		88		70-130	1		20
Benzene	88		86		70-130	2		20
Toluene	84		85		70-130	1		20
Ethylbenzene	86		87		70-130	1		20

Lab Control Sample Analysis Batch Quality Control

Project Name: AMERESCO WAYLAND TO

Project Number: 3652150017

Lab Number: L1514913

Report Date: 07/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG800821-1 WG800821-2								
Chloromethane	99		93		70-130	6		20
Bromomethane	96		90		70-130	6		20
Vinyl chloride	78		74		70-130	5		20
Chloroethane	86		83		70-130	4		20
1,1-Dichloroethene	86		85		70-130	1		20
trans-1,2-Dichloroethene	87		86		70-130	1		20
Trichloroethene	88		88		70-130	0		20
1,2-Dichlorobenzene	98		97		70-130	1		20
1,3-Dichlorobenzene	96		95		70-130	1		20
1,4-Dichlorobenzene	98		96		70-130	2		20
Methyl tert butyl ether	93		92		70-130	1		20
p/m-Xylene	91		91		70-130	0		20
o-Xylene	93		93		70-130	0		20
cis-1,2-Dichloroethene	91		90		70-130	1		20
Dibromomethane	98		97		70-130	1		20
1,2,3-Trichloropropane	91		86		70-130	6		20
Styrene	96		96		70-130	0		20
Dichlorodifluoromethane	104		100		70-130	4		20
Acetone	105		102		70-130	3		20
Carbon disulfide	78		78		70-130	0		20
Methyl ethyl ketone	101		98		70-130	3		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMERESCO WAYLAND TO

Project Number: 3652150017

Lab Number: L1514913

Report Date: 07/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG800821-1 WG800821-2								
Methyl isobutyl ketone	96		94		70-130	2		20
2-Hexanone	92		87		70-130	6		20
Bromochloromethane	101		101		70-130	0		20
Tetrahydrofuran	102		103		70-130	1		20
2,2-Dichloropropane	90		88		70-130	2		20
1,2-Dibromoethane	95		95		70-130	0		20
1,3-Dichloropropane	94		92		70-130	2		20
1,1,1,2-Tetrachloroethane	93		94		70-130	1		20
Bromobenzene	97		96		70-130	1		20
n-Butylbenzene	87		84		70-130	4		20
sec-Butylbenzene	85		84		70-130	1		20
tert-Butylbenzene	87		85		70-130	2		20
o-Chlorotoluene	88		86		70-130	2		20
p-Chlorotoluene	88		87		70-130	1		20
1,2-Dibromo-3-chloropropane	96		93		70-130	3		20
Hexachlorobutadiene	96		92		70-130	4		20
Isopropylbenzene	85		84		70-130	1		20
p-Isopropyltoluene	91		89		70-130	2		20
Naphthalene	98		97		70-130	1		20
n-Propylbenzene	84		83		70-130	1		20
1,2,3-Trichlorobenzene	107		107		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMERESCO WAYLAND TO

Project Number: 3652150017

Lab Number: L1514913

Report Date: 07/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 01 Batch: WG800821-1 WG800821-2								
1,2,4-Trichlorobenzene	109		106		70-130	3		20
1,3,5-Trimethylbenzene	88		88		70-130	0		20
1,2,4-Trimethylbenzene	90		89		70-130	1		20
Diethyl ether	94		92		70-130	2		20
Diisopropyl Ether	97		96		70-130	1		20
Ethyl-Tert-Butyl-Ether	94		94		70-130	0		20
Tertiary-Amyl Methyl Ether	91		90		70-130	1		20
1,4-Dioxane	94		94		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101		101		70-130
Toluene-d8	100		101		70-130
4-Bromofluorobenzene	94		93		70-130
Dibromofluoromethane	104		104		70-130

SEMIVOLATILES

Project Name: AMERESCO WAYLAND TO
Project Number: 3652150017

Lab Number: L1514913
Report Date: 07/09/15

SAMPLE RESULTS

Lab ID: L1514913-01
Client ID: WTO-SS
Sample Location: WAYLAND, MA
Matrix: Soil
Analytical Method: 97,8270D
Analytical Date: 07/09/15 04:16
Analyst: MY
Percent Solids: 84%

Date Collected: 06/30/15 13:00
Date Received: 06/30/15
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 07/05/15 14:57

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	160	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	200	--	1
Hexachlorobenzene	ND		ug/kg	120	--	1
Bis(2-chloroethyl)ether	ND		ug/kg	180	--	1
2-Chloronaphthalene	ND		ug/kg	200	--	1
1,2-Dichlorobenzene	ND		ug/kg	200	--	1
1,3-Dichlorobenzene	ND		ug/kg	200	--	1
1,4-Dichlorobenzene	ND		ug/kg	200	--	1
3,3'-Dichlorobenzidine	ND		ug/kg	200	--	1
2,4-Dinitrotoluene	ND		ug/kg	200	--	1
2,6-Dinitrotoluene	ND		ug/kg	200	--	1
Azobenzene	ND		ug/kg	200	--	1
Fluoranthene	140		ug/kg	120	--	1
4-Bromophenyl phenyl ether	ND		ug/kg	200	--	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	230	--	1
Bis(2-chloroethoxy)methane	ND		ug/kg	210	--	1
Hexachlorobutadiene	ND		ug/kg	200	--	1
Hexachloroethane	ND		ug/kg	160	--	1
Isophorone	ND		ug/kg	180	--	1
Naphthalene	ND		ug/kg	200	--	1
Nitrobenzene	ND		ug/kg	180	--	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	200	--	1
Butyl benzyl phthalate	ND		ug/kg	200	--	1
Di-n-butylphthalate	ND		ug/kg	200	--	1
Di-n-octylphthalate	ND		ug/kg	200	--	1
Diethyl phthalate	ND		ug/kg	200	--	1
Dimethyl phthalate	ND		ug/kg	200	--	1
Benzo(a)anthracene	ND		ug/kg	120	--	1
Benzo(a)pyrene	ND		ug/kg	160	--	1
Benzo(b)fluoranthene	130		ug/kg	120	--	1

Project Name: AMERESCO WAYLAND TO**Lab Number:** L1514913**Project Number:** 3652150017**Report Date:** 07/09/15**SAMPLE RESULTS****Lab ID:** L1514913-01**Date Collected:** 06/30/15 13:00**Client ID:** WTO-SS**Date Received:** 06/30/15**Sample Location:** WAYLAND, MA**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(k)fluoranthene	ND		ug/kg	120	--	1
Chrysene	ND		ug/kg	120	--	1
Acenaphthylene	ND		ug/kg	160	--	1
Anthracene	ND		ug/kg	120	--	1
Benzo(ghi)perylene	ND		ug/kg	160	--	1
Fluorene	ND		ug/kg	200	--	1
Phenanthrene	ND		ug/kg	120	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	120	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	160	--	1
Pyrene	140		ug/kg	120	--	1
Aniline	ND		ug/kg	230	--	1
4-Chloroaniline	ND		ug/kg	200	--	1
Dibenzofuran	ND		ug/kg	200	--	1
2-Methylnaphthalene	ND		ug/kg	230	--	1
Acetophenone	ND		ug/kg	200	--	1
2,4,6-Trichlorophenol	ND		ug/kg	120	--	1
2-Chlorophenol	ND		ug/kg	200	--	1
2,4-Dichlorophenol	ND		ug/kg	180	--	1
2,4-Dimethylphenol	ND		ug/kg	200	--	1
2-Nitrophenol	ND		ug/kg	420	--	1
4-Nitrophenol	ND		ug/kg	270	--	1
2,4-Dinitrophenol	ND		ug/kg	940	--	1
Pentachlorophenol	ND		ug/kg	390	--	1
Phenol	ND		ug/kg	200	--	1
2-Methylphenol	ND		ug/kg	200	--	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	--	1
2,4,5-Trichlorophenol	ND		ug/kg	200	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	79		30-130
Phenol-d6	82		30-130
Nitrobenzene-d5	81		30-130
2-Fluorobiphenyl	80		30-130
2,4,6-Tribromophenol	85		30-130
4-Terphenyl-d14	60		30-130

Project Name: AMERESCO WAYLAND TO

Lab Number: L1514913

Project Number: 3652150017

Report Date: 07/09/15

Method Blank Analysis Batch Quality Control

Analytical Method: 97,8270D
 Analytical Date: 07/08/15 12:46
 Analyst: MY

Extraction Method: EPA 3546
 Extraction Date: 07/05/15 14:57

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01 Batch: WG799962-1					
Acenaphthene	ND		ug/kg	130	--
1,2,4-Trichlorobenzene	ND		ug/kg	160	--
Hexachlorobenzene	ND		ug/kg	99	--
Bis(2-chloroethyl)ether	ND		ug/kg	150	--
2-Chloronaphthalene	ND		ug/kg	160	--
1,2-Dichlorobenzene	ND		ug/kg	160	--
1,3-Dichlorobenzene	ND		ug/kg	160	--
1,4-Dichlorobenzene	ND		ug/kg	160	--
3,3'-Dichlorobenzidine	ND		ug/kg	160	--
2,4-Dinitrotoluene	ND		ug/kg	160	--
2,6-Dinitrotoluene	ND		ug/kg	160	--
Azobenzene	ND		ug/kg	160	--
Fluoranthene	ND		ug/kg	99	--
4-Bromophenyl phenyl ether	ND		ug/kg	160	--
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	--
Bis(2-chloroethoxy)methane	ND		ug/kg	180	--
Hexachlorobutadiene	ND		ug/kg	160	--
Hexachloroethane	ND		ug/kg	130	--
Isophorone	ND		ug/kg	150	--
Naphthalene	ND		ug/kg	160	--
Nitrobenzene	ND		ug/kg	150	--
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	160	--
Butyl benzyl phthalate	ND		ug/kg	160	--
Di-n-butylphthalate	ND		ug/kg	160	--
Di-n-octylphthalate	ND		ug/kg	160	--
Diethyl phthalate	ND		ug/kg	160	--
Dimethyl phthalate	ND		ug/kg	160	--
Benzo(a)anthracene	ND		ug/kg	99	--
Benzo(a)pyrene	ND		ug/kg	130	--

Project Name: AMERESCO WAYLAND TO

Lab Number: L1514913

Project Number: 3652150017

Report Date: 07/09/15

Method Blank Analysis Batch Quality Control

Analytical Method: 97,8270D
 Analytical Date: 07/08/15 12:46
 Analyst: MY

Extraction Method: EPA 3546
 Extraction Date: 07/05/15 14:57

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01 Batch: WG799962-1					
Benzo(b)fluoranthene	ND		ug/kg	99	--
Benzo(k)fluoranthene	ND		ug/kg	99	--
Chrysene	ND		ug/kg	99	--
Acenaphthylene	ND		ug/kg	130	--
Anthracene	ND		ug/kg	99	--
Benzo(ghi)perylene	ND		ug/kg	130	--
Fluorene	ND		ug/kg	160	--
Phenanthrene	ND		ug/kg	99	--
Dibenzo(a,h)anthracene	ND		ug/kg	99	--
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	130	--
Pyrene	ND		ug/kg	99	--
Aniline	ND		ug/kg	200	--
4-Chloroaniline	ND		ug/kg	160	--
Dibenzofuran	ND		ug/kg	160	--
2-Methylnaphthalene	ND		ug/kg	200	--
Acetophenone	ND		ug/kg	160	--
2,4,6-Trichlorophenol	ND		ug/kg	99	--
2-Chlorophenol	ND		ug/kg	160	--
2,4-Dichlorophenol	ND		ug/kg	150	--
2,4-Dimethylphenol	ND		ug/kg	160	--
2-Nitrophenol	ND		ug/kg	360	--
4-Nitrophenol	ND		ug/kg	230	--
2,4-Dinitrophenol	ND		ug/kg	790	--
Pentachlorophenol	ND		ug/kg	330	--
Phenol	ND		ug/kg	160	--
2-Methylphenol	ND		ug/kg	160	--
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	--
2,4,5-Trichlorophenol	ND		ug/kg	160	--

Project Name: AMERESCO WAYLAND TO**Lab Number:** L1514913**Project Number:** 3652150017**Report Date:** 07/09/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
 Analytical Date: 07/08/15 12:46
 Analyst: MY

Extraction Method: EPA 3546
 Extraction Date: 07/05/15 14:57

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01 Batch: WG799962-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	87		30-130
Phenol-d6	88		30-130
Nitrobenzene-d5	84		30-130
2-Fluorobiphenyl	88		30-130
2,4,6-Tribromophenol	87		30-130
4-Terphenyl-d14	88		30-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: AMERESCO WAYLAND TO

Project Number: 3652150017

Lab Number: L1514913

Report Date: 07/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG799962-2 WG799962-3								
Acenaphthene	90		88		40-140	2		30
1,2,4-Trichlorobenzene	87		85		40-140	2		30
Hexachlorobenzene	96		92		40-140	4		30
Bis(2-chloroethyl)ether	81		80		40-140	1		30
2-Chloronaphthalene	89		86		40-140	3		30
1,2-Dichlorobenzene	80		79		40-140	1		30
1,3-Dichlorobenzene	77		77		40-140	0		30
1,4-Dichlorobenzene	78		77		40-140	1		30
3,3'-Dichlorobenzidine	84		82		40-140	2		30
2,4-Dinitrotoluene	98		96		40-140	2		30
2,6-Dinitrotoluene	99		95		40-140	4		30
Azobenzene	90		87		40-140	3		30
Fluoranthene	90		88		40-140	2		30
4-Bromophenyl phenyl ether	92		88		40-140	4		30
Bis(2-chloroisopropyl)ether	77		76		40-140	1		30
Bis(2-chloroethoxy)methane	84		81		40-140	4		30
Hexachlorobutadiene	82		80		40-140	2		30
Hexachloroethane	77		76		40-140	1		30
Isophorone	82		80		40-140	2		30
Naphthalene	85		84		40-140	1		30
Nitrobenzene	85		82		40-140	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMERESCO WAYLAND TO

Project Number: 3652150017

Lab Number: L1514913

Report Date: 07/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG799962-2 WG799962-3								
Bis(2-Ethylhexyl)phthalate	91		85		40-140	7		30
Butyl benzyl phthalate	91		90		40-140	1		30
Di-n-butylphthalate	92		88		40-140	4		30
Di-n-octylphthalate	91		89		40-140	2		30
Diethyl phthalate	93		90		40-140	3		30
Dimethyl phthalate	95		92		40-140	3		30
Benzo(a)anthracene	92		88		40-140	4		30
Benzo(a)pyrene	92		87		40-140	6		30
Benzo(b)fluoranthene	94		89		40-140	5		30
Benzo(k)fluoranthene	94		90		40-140	4		30
Chrysene	93		88		40-140	6		30
Acenaphthylene	93		89		40-140	4		30
Anthracene	91		87		40-140	4		30
Benzo(ghi)perylene	93		89		40-140	4		30
Fluorene	93		89		40-140	4		30
Phenanthrene	91		87		40-140	4		30
Dibenzo(a,h)anthracene	94		90		40-140	4		30
Indeno(1,2,3-cd)Pyrene	95		89		40-140	7		30
Pyrene	91		88		40-140	3		30
Aniline	65		65		40-140	0		30
4-Chloroaniline	79		81		40-140	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMERESCO WAYLAND TO

Project Number: 3652150017

Lab Number: L1514913

Report Date: 07/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG799962-2 WG799962-3								
Dibenzofuran	93		90		40-140	3		30
2-Methylnaphthalene	89		86		40-140	3		30
Acetophenone	83		82		40-140	1		30
2,4,6-Trichlorophenol	95		91		30-130	4		30
2-Chlorophenol	86		84		30-130	2		30
2,4-Dichlorophenol	94		92		30-130	2		30
2,4-Dimethylphenol	88		84		30-130	5		30
2-Nitrophenol	88		86		30-130	2		30
4-Nitrophenol	100		96		30-130	4		30
2,4-Dinitrophenol	97		95		30-130	2		30
Pentachlorophenol	91		84		30-130	8		30
Phenol	88		86		30-130	2		30
2-Methylphenol	87		86		30-130	1		30
3-Methylphenol/4-Methylphenol	90		88		30-130	2		30
2,4,5-Trichlorophenol	98		94		30-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMERESCO WAYLAND TO

Project Number: 3652150017

Lab Number: L1514913

Report Date: 07/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG799962-2 WG799962-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	90		89		30-130
Phenol-d6	92		89		30-130
Nitrobenzene-d5	86		84		30-130
2-Fluorobiphenyl	94		91		30-130
2,4,6-Tribromophenol	100		93		30-130
4-Terphenyl-d14	94		89		30-130

PETROLEUM HYDROCARBONS

Project Name: AMERESCO WAYLAND TO
Project Number: 3652150017

Lab Number: L1514913
Report Date: 07/09/15

SAMPLE RESULTS

Lab ID: L1514913-01
 Client ID: WTO-SS
 Sample Location: WAYLAND, MA
 Matrix: Soil
 Analytical Method: 1,8015C(M)
 Analytical Date: 07/07/15 20:42
 Analyst: AR
 Percent Solids: 84%

Date Collected: 06/30/15 13:00
 Date Received: 06/30/15
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 07/06/15 14:27

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
-----------	--------	-----------	-------	----	-----	-----------------

Petroleum Hydrocarbon Quantitation - Westborough Lab						
--	--	--	--	--	--	--

TPH	48500		ug/kg	39100	--	1
-----	-------	--	-------	-------	----	---

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	64		40-140

Project Name: AMERESCO WAYLAND TO**Lab Number:** L1514913**Project Number:** 3652150017**Report Date:** 07/09/15**Method Blank Analysis**
Batch Quality ControlAnalytical Method: 1,8015C(M)
Analytical Date: 07/07/15 19:05
Analyst: ARExtraction Method: EPA 3546
Extraction Date: 07/06/15 14:27

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbon Quantitation - Westborough Lab for sample(s): 01 Batch: WG800141-1					
TPH	ND		ug/kg	31600	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	78		40-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMERESCO WAYLAND TO
Project Number: 3652150017

Lab Number: L1514913
Report Date: 07/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Petroleum Hydrocarbon Quantitation - Westborough Lab Associated sample(s): 01 Batch: WG800141-2								
TPH	81		-		40-140	-		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
o-Terphenyl	88				40-140

PCBS

Project Name: AMERESCO WAYLAND TO
Project Number: 3652150017

Lab Number: L1514913
Report Date: 07/09/15

SAMPLE RESULTS

Lab ID: L1514913-01
Client ID: WTO-SS
Sample Location: WAYLAND, MA
Matrix: Soil
Analytical Method: 97,8082
Analytical Date: 07/07/15 18:58
Analyst: KB
Percent Solids: 84%

Date Collected: 06/30/15 13:00
Date Received: 06/30/15
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 07/06/15 12:37
Cleanup Method: EPA 3665A
Cleanup Date: 07/06/15
Cleanup Method: EPA 3660B
Cleanup Date: 07/06/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	39.3	--	1	A
Aroclor 1221	ND		ug/kg	39.3	--	1	A
Aroclor 1232	ND		ug/kg	39.3	--	1	A
Aroclor 1242	ND		ug/kg	39.3	--	1	A
Aroclor 1248	ND		ug/kg	39.3	--	1	A
Aroclor 1254	ND		ug/kg	39.3	--	1	A
Aroclor 1260	ND		ug/kg	39.3	--	1	A
Aroclor 1262	ND		ug/kg	39.3	--	1	A
Aroclor 1268	ND		ug/kg	39.3	--	1	A
PCBs, Total	ND		ug/kg	39.3	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	80		30-150	A
Decachlorobiphenyl	55		30-150	A
2,4,5,6-Tetrachloro-m-xylene	84		30-150	B
Decachlorobiphenyl	81		30-150	B

Project Name: AMERESCO WAYLAND TO**Lab Number:** L1514913**Project Number:** 3652150017**Report Date:** 07/09/15

Method Blank Analysis Batch Quality Control

Analytical Method: 97,8082A
 Analytical Date: 07/07/15 19:29
 Analyst: KB

Extraction Method: EPA 3546
 Extraction Date: 07/06/15 12:37
 Cleanup Method: EPA 3665A
 Cleanup Date: 07/06/15
 Cleanup Method: EPA 3660B
 Cleanup Date: 07/06/15

Parameter	Result	Qualifier	Units	RL	MDL	Column
MCP Polychlorinated Biphenyls - Westborough Lab for sample(s): 01 Batch: WG800101-1						
Aroclor 1016	ND		ug/kg	32.6	--	A
Aroclor 1221	ND		ug/kg	32.6	--	A
Aroclor 1232	ND		ug/kg	32.6	--	A
Aroclor 1242	ND		ug/kg	32.6	--	A
Aroclor 1248	ND		ug/kg	32.6	--	A
Aroclor 1254	ND		ug/kg	32.6	--	A
Aroclor 1260	ND		ug/kg	32.6	--	A
Aroclor 1262	ND		ug/kg	32.6	--	A
Aroclor 1268	ND		ug/kg	32.6	--	A
PCBs, Total	ND		ug/kg	32.6	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	84		30-150	A
Decachlorobiphenyl	67		30-150	A
2,4,5,6-Tetrachloro-m-xylene	87		30-150	B
Decachlorobiphenyl	87		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMERESCO WAYLAND TO

Project Number: 3652150017

Lab Number: L1514913

Report Date: 07/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
MCP Polychlorinated Biphenyls - Westborough Lab Associated sample(s): 01 Batch: WG800101-2 WG800101-3									
Aroclor 1016	95		101		40-140	6		30	A
Aroclor 1260	87		93		40-140	7		30	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	84		89		30-150	A
Decachlorobiphenyl	70		73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	87		92		30-150	B
Decachlorobiphenyl	88		90		30-150	B

METALS

Project Name: AMERESCO WAYLAND TO**Lab Number:** L1514913**Project Number:** 3652150017**Report Date:** 07/09/15**SAMPLE RESULTS****Lab ID:** L1514913-01**Date Collected:** 06/30/15 13:00**Client ID:** WTO-SS**Date Received:** 06/30/15**Sample Location:** WAYLAND, MA**Field Prep:** Not Specified**Matrix:** Soil**Percent Solids:** 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	4.5		mg/kg	0.46	--	1	07/07/15 16:20	07/08/15 23:48	EPA 3050B	97,6010C	MC
Cadmium, Total	ND		mg/kg	0.46	--	1	07/07/15 16:20	07/08/15 23:48	EPA 3050B	97,6010C	MC
Chromium, Total	20		mg/kg	0.46	--	1	07/07/15 16:20	07/08/15 23:48	EPA 3050B	97,6010C	MC
Lead, Total	ND		mg/kg	2.3	--	1	07/07/15 16:20	07/08/15 23:48	EPA 3050B	97,6010C	MC
Mercury, Total	ND		mg/kg	0.076	--	1	07/07/15 09:23	07/07/15 12:24	EPA 7471B	97,7471B	DB



Project Name: AMERESCO WAYLAND TO**Lab Number:** L1514913**Project Number:** 3652150017**Report Date:** 07/09/15**SAMPLE RESULTS**

Lab ID: L1514913-02

Date Collected: 06/30/15 09:30

Client ID: WTO-SW

Date Received: 06/30/15

Sample Location: WAYLAND, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Westborough Lab											
Hardness	89.		mg/l	0.66	NA	1	07/04/15 06:46	07/08/15 20:27	EPA 3005A	1,6010C	MC



Project Name: AMERESCO WAYLAND TO

Lab Number: L1514913

Project Number: 3652150017

Report Date: 07/09/15

SAMPLE RESULTS

Lab ID: L1514913-03
 Client ID: WTO-GW
 Sample Location: WAYLAND, MA
 Matrix: Water

Date Collected: 06/30/15 13:30
 Date Received: 06/30/15
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Antimony, Total	ND		mg/l	0.0020	--	1	07/03/15 13:38	07/08/15 21:32	EPA 3005A	97,6020A	BM
Arsenic, Total	0.0056		mg/l	0.0005	--	1	07/03/15 13:38	07/08/15 21:32	EPA 3005A	97,6020A	BM
Cadmium, Total	ND		mg/l	0.0005	--	1	07/03/15 13:38	07/08/15 21:32	EPA 3005A	97,6020A	BM
Chromium, Total	0.0058		mg/l	0.0010	--	1	07/03/15 13:38	07/08/15 21:32	EPA 3005A	97,6020A	BM
Copper, Total	0.0073		mg/l	0.0010	--	1	07/03/15 13:38	07/08/15 21:32	EPA 3005A	97,6020A	BM
Iron, Total	4.4		mg/l	0.05	--	1	07/03/15 13:35	07/08/15 19:53	EPA 3005A	97,6010C	MC
Lead, Total	0.0036		mg/l	0.0010	--	1	07/03/15 13:38	07/08/15 21:32	EPA 3005A	97,6020A	BM
Mercury, Total	ND		mg/l	0.0002	--	1	07/03/15 12:33	07/03/15 15:38	EPA 7470A	97,7470A	EA
Nickel, Total	0.0107		mg/l	0.0005	--	1	07/03/15 13:38	07/08/15 21:32	EPA 3005A	97,6020A	BM
Silver, Total	ND		mg/l	0.0005	--	1	07/03/15 13:38	07/08/15 21:32	EPA 3005A	97,6020A	BM
Zinc, Total	0.0173		mg/l	0.0100	--	1	07/03/15 13:38	07/08/15 21:32	EPA 3005A	97,6020A	BM



Project Name: AMERESCO WAYLAND TO

Lab Number: L1514913

Project Number: 3652150017

Report Date: 07/09/15

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 03 Batch: WG799719-1										
Mercury, Total	ND		mg/l	0.0002	--	1	07/03/15 12:33	07/03/15 15:33	97,7470A	EA

Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 03 Batch: WG799737-1										
Iron, Total	ND		mg/l	0.05	--	1	07/03/15 13:35	07/08/15 18:48	97,6010C	MC

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 03 Batch: WG799740-1										
Antimony, Total	ND		mg/l	0.0020	--	1	07/03/15 13:38	07/08/15 21:10	97,6020A	BM
Arsenic, Total	ND		mg/l	0.0005	--	1	07/03/15 13:38	07/08/15 21:10	97,6020A	BM
Cadmium, Total	ND		mg/l	0.0005	--	1	07/03/15 13:38	07/08/15 21:10	97,6020A	BM
Chromium, Total	ND		mg/l	0.0010	--	1	07/03/15 13:38	07/08/15 21:10	97,6020A	BM
Copper, Total	ND		mg/l	0.0010	--	1	07/03/15 13:38	07/08/15 21:10	97,6020A	BM
Lead, Total	ND		mg/l	0.0010	--	1	07/03/15 13:38	07/08/15 21:10	97,6020A	BM
Nickel, Total	ND		mg/l	0.0005	--	1	07/03/15 13:38	07/08/15 21:10	97,6020A	BM
Silver, Total	ND		mg/l	0.0005	--	1	07/03/15 13:38	07/08/15 21:10	97,6020A	BM
Zinc, Total	ND		mg/l	0.0100	--	1	07/03/15 13:38	07/08/15 21:10	97,6020A	BM

Prep Information

Digestion Method: EPA 3005A



Project Name: AMERESCO WAYLAND TO

Lab Number: L1514913

Project Number: 3652150017

Report Date: 07/09/15

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Westborough Lab for sample(s): 02 Batch: WG799800-1										
Hardness	ND		mg/l	0.66	NA	1	07/04/15 06:46	07/08/15 19:37	1,6010C	MC

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 01 Batch: WG800303-1										
Mercury, Total	ND		mg/kg	0.083	--	1	07/07/15 09:23	07/07/15 11:59	97,7471B	DB

Prep Information

Digestion Method: EPA 7471B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 01 Batch: WG800509-1										
Arsenic, Total	ND		mg/kg	0.40	--	1	07/07/15 16:20	07/08/15 23:02	97,6010C	MC
Cadmium, Total	ND		mg/kg	0.40	--	1	07/07/15 16:20	07/08/15 23:02	97,6010C	MC
Chromium, Total	ND		mg/kg	0.40	--	1	07/07/15 16:20	07/08/15 23:02	97,6010C	MC
Lead, Total	ND		mg/kg	2.0	--	1	07/07/15 16:20	07/08/15 23:02	97,6010C	MC

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMERESCO WAYLAND TO

Project Number: 3652150017

Lab Number: L1514913

Report Date: 07/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Total Metals - Westborough Lab Associated sample(s): 03 Batch: WG799719-2 WG799719-3								
Mercury, Total	109		108		80-120	1		20
MCP Total Metals - Westborough Lab Associated sample(s): 03 Batch: WG799737-2 WG799737-3								
Iron, Total	97		96		80-120	1		20
MCP Total Metals - Westborough Lab Associated sample(s): 03 Batch: WG799740-2 WG799740-3								
Antimony, Total	95		96		80-120	1		20
Arsenic, Total	98		96		80-120	2		20
Cadmium, Total	107		101		80-120	6		20
Chromium, Total	93		91		80-120	2		20
Copper, Total	94		92		80-120	2		20
Lead, Total	97		96		80-120	1		20
Nickel, Total	96		92		80-120	4		20
Silver, Total	95		94		80-120	1		20
Zinc, Total	95		95		80-120	0		20
Total Hardness by SM 2340B - Westborough Lab Associated sample(s): 02 Batch: WG799800-2								
Hardness	103		-		80-120	-		
MCP Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG800303-2 WG800303-3 SRM Lot Number: D088-540								
Mercury, Total	92		90		72-128	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMERESCO WAYLAND TO

Project Number: 3652150017

Lab Number: L1514913

Report Date: 07/09/15

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Total Metals - Westborough Lab Associated sample(s): 01 Batch: WG800509-2 WG800509-3 SRM Lot Number: D088-540					
Arsenic, Total	96	88	79-121	9	30
Cadmium, Total	92	85	83-117	8	30
Chromium, Total	92	86	80-120	7	30
Lead, Total	88	82	81-117	7	30

INORGANICS & MISCELLANEOUS

Project Name: AMERESCO WAYLAND TO
Project Number: 3652150017

Lab Number: L1514913
Report Date: 07/09/15

SAMPLE RESULTS

Lab ID: L1514913-01
Client ID: WTO-SS
Sample Location: WAYLAND, MA
Matrix: Soil

Date Collected: 06/30/15 13:00
Date Received: 06/30/15
Field Prep: Not Specified

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Damp Clay
Particle Size: Medium
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	07/07/15 12:58	1,1030	AB



Project Name: AMERESCO WAYLAND TO
Project Number: 3652150017

Lab Number: L1514913
Report Date: 07/09/15

SAMPLE RESULTS

Lab ID: L1514913-01
Client ID: WTO-SS
Sample Location: WAYLAND, MA
Matrix: Soil

Date Collected: 06/30/15 13:00
Date Received: 06/30/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Specific Conductance	190		umhos/cm	10	--	1	-	06/30/15 18:05	1,9050A	AS
Solids, Total	84.3		%	0.100	NA	1	-	07/02/15 01:49	30,2540G	RT
pH (H)	6.2		SU	-	NA	1	-	07/01/15 05:15	1,9045D	LH
Cyanide, Reactive	ND		mg/kg	10	--	1	07/08/15 18:45	07/08/15 21:04	1,7.3	TL
Sulfide, Reactive	ND		mg/kg	10	--	1	07/08/15 18:45	07/08/15 20:56	1,7.3	TL



Project Name: AMERESCO WAYLAND TO
Project Number: 3652150017

Lab Number: L1514913
Report Date: 07/09/15

SAMPLE RESULTS

Lab ID: L1514913-03
Client ID: WTO-GW
Sample Location: WAYLAND, MA
Matrix: Water

Date Collected: 06/30/15 13:30
Date Received: 06/30/15
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry - Westborough Lab										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	06/30/15 21:30	06/30/15 22:18	97,7196A	ML
General Chemistry - Westborough Lab										
pH (H)	6.9		SU	-	NA	1	-	07/01/15 05:15	30,4500H+-B	LH
Anions by Ion Chromatography - Westborough Lab										
Chloride	3160		mg/l	125	--	250	-	07/01/15 21:06	44,300.0	AU



Project Name: AMERESCO WAYLAND TO

Lab Number: L1514913

Project Number: 3652150017

Report Date: 07/09/15

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry - Westborough Lab for sample(s): 03 Batch: WG798815-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	06/30/15 21:30	06/30/15 22:14	97,7196A	ML
Anions by Ion Chromatography - Westborough Lab for sample(s): 03 Batch: WG799221-1										
Chloride	ND		mg/l	0.500	--	1	-	07/01/15 17:42	44,300.0	AU
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG800944-1										
Cyanide, Reactive	ND		mg/kg	10	--	1	07/08/15 18:45	07/08/15 21:04	1,7.3	TL
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG800945-1										
Sulfide, Reactive	ND		mg/kg	10	--	1	07/08/15 18:45	07/08/15 20:55	1,7.3	TL

Lab Control Sample Analysis

Batch Quality Control

Project Name: AMERESCO WAYLAND TO

Project Number: 3652150017

Lab Number: L1514913

Report Date: 07/09/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG798754-1								
Specific Conductance	95		-		80-120	-		
MCP General Chemistry - Westborough Lab Associated sample(s): 03 Batch: WG798815-2 WG798815-3								
Chromium, Hexavalent	91		90		80-120	1		20
General Chemistry - Westborough Lab Associated sample(s): 03 Batch: WG798858-1								
pH	101		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG798860-1								
pH	101		-		99-101	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 03 Batch: WG799221-2								
Chloride	99		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG800944-2								
Cyanide, Reactive	91		-		30-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG800945-2								
Sulfide, Reactive	96		-		60-125	-		40

Lab Duplicate Analysis
Batch Quality Control**Project Name:** AMERESCO WAYLAND TO**Project Number:** 3652150017**Lab Number:** L1514913**Report Date:** 07/09/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG799251-1 QC Sample: L1514913-01 Client ID: WTO-SS						
Solids, Total	84.3	84.9	%	1		20

Project Name: AMERESCO WAYLAND TO

Lab Number: L1514913

Project Number: 3652150017

Report Date: 07/09/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: 06/30/2015 17:22

Cooler Information Custody Seal

Cooler

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1514913-01A	Vial MeOH preserved	A	N/A	2.9	Y	Absent	MCP-8260HLW-10(14)
L1514913-01B	Vial water preserved	A	N/A	2.9	Y	Absent	MCP-8260HLW-10(14)
L1514913-01C	Vial water preserved	A	N/A	2.9	Y	Absent	MCP-8260HLW-10(14)
L1514913-01D	Glass 500ml/16oz unpreserved	A	N/A	2.9	Y	Absent	IGNIT-1030(14),MCP-8082-10(365),MCP-CR-6010T-10(180),REACTS(14),MCP-8270-10(14),MCP-AS-6010T-10(180),MCP-7471T-10(28),MCP-CD-6010T-10(180),PH-9045(1),REACTCN(14),TPH-DRO-D(14),COND-9050(28),MCP-PB-6010T-10(180)
L1514913-01E	Plastic 2oz unpreserved for TS	A	N/A	2.9	Y	Absent	TS(7)
L1514913-02A	Plastic 500ml HNO3 preserved	A	<2	2.9	Y	Absent	HARDT(180)
L1514913-03A	Plastic 500ml HNO3 preserved	A	<2	2.9	Y	Absent	MCP-FE-6010T-10(180),MCP-CR-6020T-10(180),MCP-7470T-10(28),MCP-CU-6020T-10(180),MCP-ZN-6020T-10(180),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-AG-6020T-10(180),MCP-CD-6020T-10(180),MCP-PB-6020T-10(180),MCP-SB-6020T-10(180)
L1514913-03B	Plastic 500ml unpreserved	A	7	2.9	Y	Absent	CL-300(28),PH-4500(.01),MCP-HEXCR7196-10(1)

*Values in parentheses indicate holding time in days



Project Name: AMERESCO WAYLAND TO
Project Number: 3652150017

Lab Number: L1514913
Report Date: 07/09/15

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

Report Format: Data Usability Report



Project Name: AMERESCO WAYLAND TO
Project Number: 3652150017

Lab Number: L1514913
Report Date: 07/09/15

Data Qualifiers

- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e., co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: AMERESCO WAYLAND TO
Project Number: 3652150017

Lab Number: L1514913
Report Date: 07/09/15

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.
- 97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

Last revised December 16, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility

EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.

EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 625: 4-Chloroaniline, 4-Methylphenol.

SM4500: Soil: Total Phosphorus, TKN, NO₂, NO₃.

EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water

EPA 200.8: Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, Tl; **EPA 200.7:** Ba, Be, Ca, Cd, Cr, Cu, Na; **EPA 245.1:** Mercury;

EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO₃-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

EPA 332: Perchlorate.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.

Non-Potable Water

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, Tl, Zn;

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, Ti, Tl, V, Zn;

EPA 245.1, SM4500H-B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH₃-BH, EPA 350.1: Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO₃-F, EPA 353.2:** Nitrate-N, **SM4500NH₃-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**

EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



CHAIN OF CUSTODY

PAGE 1 OF 1

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Serial No: 07091517.32

ALPHA Job #: 21514913

Project Information

Project Name: Ameresco Wayland TO

Project Location: Wayland, MA

Project #: 3652150017

Project Manager: Rds Bckawski

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due:

Date Rec'd in Lab: 6/30/15

Report Information - Data Deliverables

☒ ADEX ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☒ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☒ No CT RCP Analytical Methods
☐ Yes ☒ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☒ No GW1 Standards (Info Required for Metals & EPH with Targets)
☒ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Client Information

Client: Ameresco Foster Wheeler

Address: 271 Mill Road
Chelmsford, MA 01824

Phone: 978-727-4006

Email: jeff.ragucci@amerfwr.com

Additional Project Information:

- Metals groundwater analytes & methods:
ICP MS 6020: Antimony, Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Silver, Zinc. 200.7: Iron. 245: Mercury, SM 3500: Hex Chromium
- For soil, run TCLP if 20x criteria exceeded.

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials
		Date	Time		

14913-01	WTO-SS	6/30/15	1300	S	JMR
----------	--------	---------	------	---	-----

02	Trap Blank S-30-15	6/30/15		S	JMR
---------------	-------------------------------	--------------------	--	--------------	----------------

02	WTO-SW	6/30/15	0930	SW	JMR
----	--------	---------	------	----	-----

03	WTO-GW	6/30/15	1330	GW	JMR
----	--------	---------	------	----	-----

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO₃
D= H₂SO₄
E= NaOH
F= MeOH
G= NaHSO₄
H= Na₂S₂O₃
I= Ascorbic Acid
J= NH₄Cl
K= Zn Acetate
O= Other

Container Type

Preservative

Relinquished By:

Date/Time

Received By:

Date/Time

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO. 01-01 (rev. 12-Mar-2012)

ANALYSIS									
VOC: <input checked="" type="checkbox"/> 8260C <input type="checkbox"/> 624 <input type="checkbox"/> 524.2 High/Low									
SVOC: <input type="checkbox"/> ABN <input type="checkbox"/> PAH <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15									
METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15									
METALS: <input checked="" type="checkbox"/> EPA 8260C <input type="checkbox"/> EPA 8260C <input type="checkbox"/> EPA 8260C									
EDL: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only <input type="checkbox"/> Ranges Only									
VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only <input type="checkbox"/> Ranges Only									
TPH: <input checked="" type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint <input type="checkbox"/> Fingerprint									
Total Solids <input checked="" type="checkbox"/> EPA 8082A									
pH <input checked="" type="checkbox"/> EPA 9045									
Specific Conductance <input checked="" type="checkbox"/> EPA 9045									
Reactivity (Cyanide) <input checked="" type="checkbox"/> EPA 9045									
Plasmapaint <input checked="" type="checkbox"/> EPA 9045									
Hardness <input checked="" type="checkbox"/> EPA 1010A									
SAMPLE INFO									
Filtration									
<input type="checkbox"/> Field <input type="checkbox"/> Lab to do									
Preservation									
<input type="checkbox"/> Lab to do									
Sample Comments									

TOTAL # BOTTLES

5

2

1

2

7A
Volatile Organics CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1514913

Instrument ID: Charlie.i Calibration Date: 08-JUL-2015 Time: 07:26

Lab File ID: 0708A01 Init. Calib. Date(s): 12-JUN-2 12-JUN-2

Sample No: 8260 CCAL Init. Calib. Times : 13:25 17:15

Compound	RRF	RRF	MIN RRF	%D	MAX %D	
=====	=====	=====	=====	=====	=====	
dichlorodifluoromethane	.19143	.2002	.1	5	20	
chloromethane	.34466	.34226	.1	-1	20	
vinyl chloride	.28468	.2215	.1	-22	20	F
bromomethane	100	95.960	.1	-4	20	
chloroethane	.13711	.11851	.1	-14	20	
trichlorofluoromethane	.24127	.24481	.1	1	20	
ethyl ether	.14746	.13832	.05	-6	20	
1,1,-dichloroethene	.19966	.17087	.1	-14	20	
carbon disulfide	.71112	.5574	.1	-22	20	F
methylene chloride	.26756	.2439	.1	-9	20	
acetone	.07027	.07363	.1	5	20	F
trans-1,2-dichloroethene	.23581	.20559	.1	-13	20	
methyl tert butyl ether	.6997	.65047	.1	-7	20	
Diisopropyl Ether	1.0521	1.0172	.05	-3	20	
1,1-dichloroethane	.4981	.45388	.2	-9	20	
Ethyl-Tert-Butyl-Ether	.93543	.8765	.05	-6	20	
cis-1,2-dichloroethene	.26276	.24024	.1	-9	20	
2,2-dichloropropane	.34425	.30985	.05	-10	20	
bromochloromethane	.11031	.11182	.05	1	20	
chloroform	.4394	.40541	.2	-8	20	
carbontetrachloride	.27973	.24553	.1	-12	20	
tetrahydrofuran	.08869	.09003	.05	2	20	
1,1,1-trichloroethane	.36198	.31035	.1	-14	20	
2-butanone	.11495	.11571	.1	1	20	
1,1-dichloropropene	.32395	.26221	.05	-19	20	
benzene	.97216	.85684	.5	-12	20	
Tertiary-Amyl Methyl Ether	.68871	.62814	.05	-9	20	
1,2-dichloroethane	.36736	.35447	.1	-4	20	
trichloroethene	.26097	.22905	.2	-12	20	
dibromomethane	.13923	.13667	.05	-2	20	
1,2-dichloropropane	.28463	.262	.1	-8	20	
bromodichloromethane	.3328	.29878	.2	-10	20	
1,4-dioxane	5000	4700	.05	-6	20	
cis-1,3-dichloropropene	.38314	.35813	.2	-7	20	
toluene	.89371	.74742	.4	-16	20	
4-methyl-2-pentanone	.09467	.09043	.1	-4	20	F
tetrachloroethene	.32643	.30447	.2	-7	20	
trans-1,3-dichloropropene	.50606	.45923	.1	-9	20	

FORM VII MCP-8260HLW-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1514913

Instrument ID: Charlie.i Calibration Date: 08-JUL-2015 Time: 07:26

Lab File ID: 0708A01 Init. Calib. Date(s): 12-JUN-2 12-JUN-2

Sample No: 8260 CCAL Init. Calib. Times : 13:25 17:15

Compound	RRF	RRF	MIN RRF	%D	MAX %D
=====	=====	=====	=====	=====	=====
1,1,2-trichloroethane	.26226	.24465	.1	-7	20
chlorodibromomethane	.31685	.313	.1	-1	20
1,3-dichloropropane	.53227	.49759	.05	-7	20
1,2-dibromoethane	.2752	.26117	.1	-5	20
2-hexanone	.27021	.24752	.1	-8	20
chlorobenzene	.92105	.85711	.5	-7	20
ethyl benzene	1.6482	1.4221	.1	-14	20
1,1,1,2-tetrachloroethane	.32203	.2989	.05	-7	20
p/m xylene	.59323	.53782	.1	-9	20
o xylene	.57615	.53352	.3	-7	20
styrene	.94609	.9073	.3	-4	20
bromoform	.38262	.35478	.1	-7	20
isopropylbenzene	2.8589	2.4310	.1	-15	20
bromobenzene	.68654	.66622	.05	-3	20
n-propylbenzene	3.5756	3.0201	.05	-16	20
1,1,2,2,-tetrachloroethane	.66902	.59309	.3	-11	20
2-chlorotoluene	2.4131	2.1209	.05	-12	20
1,3,5-trimethylbenzene	2.4499	2.1674	.05	-12	20
1,2,3-trichloropropane	.59561	.54212	.05	-9	20
4-chlorotoluene	2.212	1.9434	.05	-12	20
tert-butylbenzene	1.9215	1.6771	.05	-13	20
1,2,4-trimethylbenzene	2.4329	2.1955	.05	-10	20
sec-butylbenzene	3.0325	2.5806	.05	-15	20
p-isopropyltoluene	2.4042	2.1937	.05	-9	20
1,3-dichlorobenzene	1.3090	1.2599	.6	-4	20
1,4-dichlorobenzene	1.3232	1.2936	.5	-2	20
n-butylbenzene	2.461	2.1378	.05	-13	20
1,2-dichlorobenzene	1.2083	1.1788	.4	-2	20
1,2-dibromo-3-chloropropane	.08968	.08629	.05	-4	20
hexachlorobutadiene	.40207	.38382	.05	-5	20
1,2,4-trichlorobenzene	.78228	.85049	.2	9	20
naphthalene	1.8945	1.8609	.05	-2	20
1,2,3-trichlorobenzene	.71849	.76764	.05	7	20
=====	=====	=====	=====	=====	=====
dibromofluoromethane	.249	.26005	.05	4	30
1,2-dichloroethane-d4	.30334	.30738	.05	1	30
toluene-d8	1.4350	1.4310	.05	0	30
4-bromofluorobenzene	1.0883	1.0282	.05	-6	30

FORM VII MCP-8260HLW-10

**Attachment C – Table 2. Metals Dilution Calculations & 7Q10
Supporting Information**

Table 2. Metals Dilution Calculations

$$DF = [(Q_r + (Q_p \times 1.55))/Q_p \times 1.55]$$

DF = Dilution Factor

Q_p = Discharge rate in million gallons per day (MGD)

Q_r = Receiving water 7Q10 flow in cfs

1.55 = Factor to convert MGD to cfs

Discharge

Max System Flow (gpm) = 45

Q_p (MGD) = 0.0648

Q_r (cfs) = 0.36

DF = **4.6**

Note: the 7Q10 for Pine Brook adjacent to the project location was obtained using StreamStats Version 3 Beta.

Analyte	Highest Detected Concentration (ug/l)	DF	Zero Dilution Concentration Limit (ug/l)	Dilution Factor Concentration Limit (ug/l)
Cadmium ¹	0.5	4.6	0.2	0.9
Copper	7.3	4.6	5.2	23.8
Iron	4,400	4.6	1,000	4,584.2
Lead	3.6	4.6	1.3	6.0

Note:

1. Cadmium was not detected, but the reporting limit exceeds the permit limit.

Parameter	Chloride & Total Recoverable Metal Limitations (ug/l) by Dilution Factor Range					Ceiling Value ²
	1 – 5 ⁶	>5 - 10	>10 - 50	>50 - 100	>100	
38. Chloride	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
39. Antimony	5.6	30	60	141	141	141 ³
40. Arsenic	10	50	100	500	540	540 ⁴
41. Cadmium	0.2	1	2	10	20	260
42. ChromiumIII (Trivalent)	48.8	244	489	1,710	1,710	1,710
43. ChromiumVI (Hexavalent)	11.4	57	114	570	1,140	1,710 ⁵
44. Copper	5.2	26	52	260	520	2,070
45. Lead	1.3	6.5	13	66	132	430
46. Mercury	0.9	2.3	2.3	2.3	2.3	2.3 ³
47. Nickel	29	145	290	1,451	2,380	2,380
48. Selenium	5	25	50	250	408	408 ³
49. Silver	1.2	6	12	57	115	240
50. Zinc	66.6	333	666	1,480	1,480	1,480
51. Iron	1,000	5,000	5,000	5,000	5,000	5,000

StreamStats Version 3 Beta

Flow Statistics Ungaged Site Report

Date: Mon July 13, 2015 3:06:38 PM GMT-4

Site Location: Massachusetts

NAD 1983 Latitude: 42.3606 (42 21 38)

NAD 1983 Longitude: -71.3641 (-71 21 51)

Drainage Area: 5.6 mi²

Low Flows Basin Characteristics			
100% Statewide Low Flow WRIR00 4135 (5.6 mi ²)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	5.6	1.61	149
Mean Basin Slope from 250K DEM (percent)	1.723	0.32	24.6
Stratified Drift per Stream Length (square mile per mile)	0.41	0	1.29
Massachusetts Region (dimensionless)	0	0	1

Probability of Perennial Flow Basin Characteristics			
100% Perennial Flow Probability (5.6 mi ²)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	5.6 (above max value 1.99)	0.01	1.99
Percent Underlain By Sand And Gravel (percent)	70.29	0	100
Percent Forest (percent)	40.88	0	100
Massachusetts Region (dimensionless)	0	0	1

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Bankfull Flows Basin Characteristics			
100% Bankfull Statewide SIR2013 5155 (5.6 mi ²)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	5.6	0.6	329
Mean Basin Slope from 10m DEM (percent)	5.477	2.2	23.9

Low Flows Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
D50	5.54	ft ³ /s	18		2.81	10.8
D60	4.29	ft ³ /s	20		1.47	12.4
D70	3.02	ft ³ /s	24		1.19	7.57
D75	2.45	ft ³ /s	26		1	5.94

D80	2.19	ft3/s	28		0.94	5.02
D85	1.63	ft3/s	32		0.64	4.1
D90	1.35	ft3/s	37		0.53	3.35
D95	0.77	ft3/s	46		0.25	2.27
D98	0.51	ft3/s	60		0.15	1.65
D99	0.38	ft3/s	65		0.1	1.3
M7D2Y	0.79	ft3/s	50		0.25	2.35
AUGD50	1.79	ft3/s	33		0.68	4.63
M7D10Y	0.36	ft3/s	71		0.0918	1.31

<http://pubs.usgs.gov/wri/wri004135/> (<http://pubs.usgs.gov/wri/wri004135/>)

Ries, K.G., III, 2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p.

Probability of Perennial Flow Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
PROBPEREN	0.99	dim				

http://pubs.usgs.gov/sir/2006/5031/pdfs/SIR_2006-5031rev.pdf (http://pubs.usgs.gov/sir/2006/5031/pdfs/SIR_2006-5031rev.pdf)

Bent, G.C., and Steeves, P.A., 2006, A revised logistic regression equation and an automated procedure for mapping the probability of a stream flowing perennially in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2006-5031, 107 p.

Bankfull Flows Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
BFWDTH	28.3	ft	21			
BFDPTH	1.51	ft	20			
BFAREA	42.3	ft2	29			
BFFLOW	111	ft3/s	55			

<http://pubs.usgs.gov/sir/2013/5155/> (<http://pubs.usgs.gov/sir/2013/5155/>)

Bent, G.C., and Waite, A.M., 2013, Equations for estimating bankfull channel geometry and discharge for streams in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2013-5155, 62 p.

Accessibility

FOIA

Privacy

Policies and Notices

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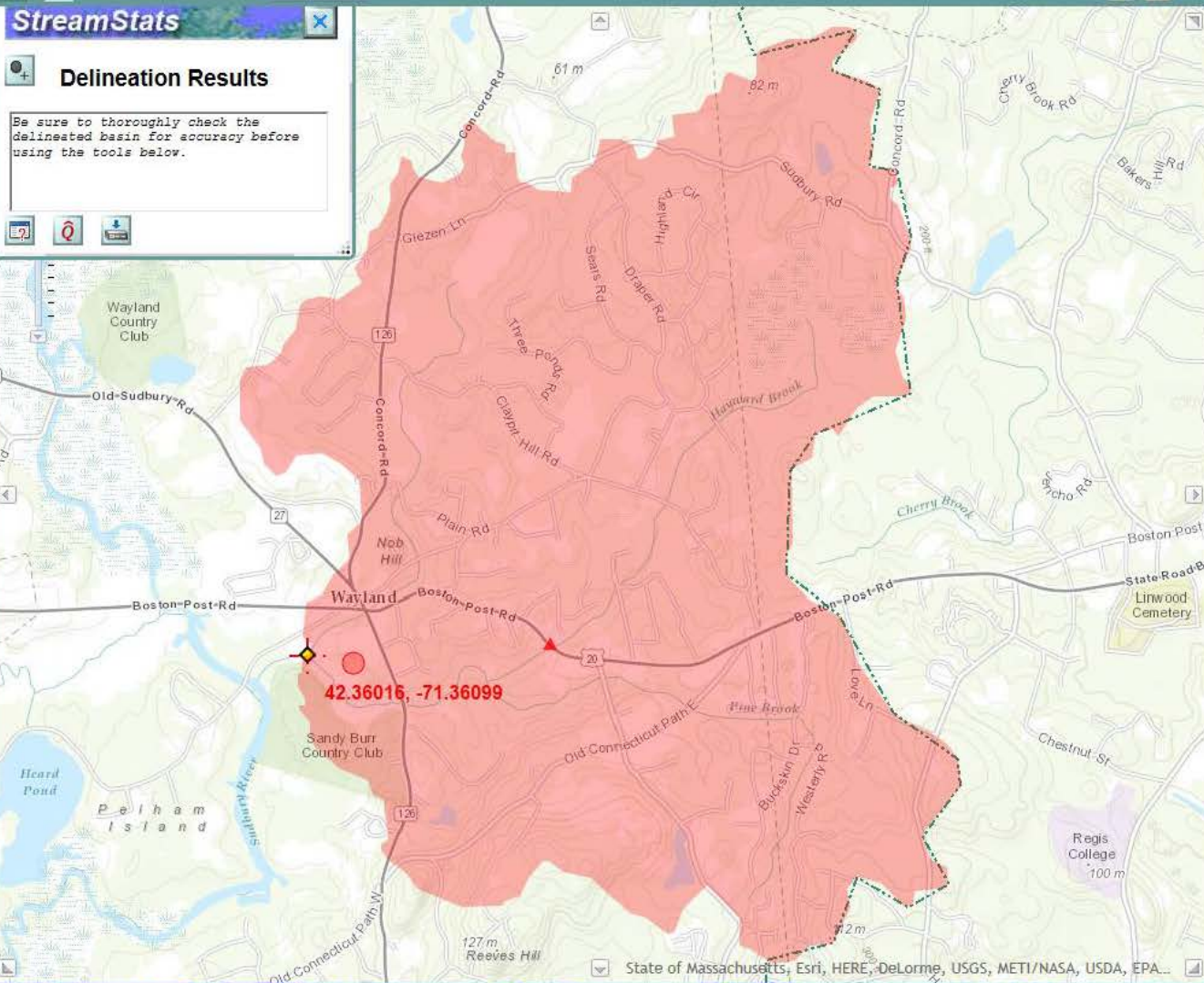
StreamStats

Delineation Results

☒ Streammanager

- #### Base layers

- Copyright © 2006 John Wiley & Sons, Ltd.



Attachment D – Notice of Intent

II. Suggested Notice of Intent (NOI) Format

1. General facility information. Please provide the following information about the facility.

a) Name of facility:	Mailing Address for the Facility:	
b) Location Address of the Facility (if different from mailing address):	Facility Location	Type of Business:
	longitude: _____ latitude: _____	Facility SIC codes:
c) Name of facility owner: _____ Owner's email: _____ Owner's Tel #: _____ Owner's Fax #: _____ Address of owner (if different from facility address) _____ Owner is (check one): 1. Federal _____ 2. State _____ 3. Private _____ 4. Other _____ (Describe) _____		
Legal name of Operator, if not owner: _____ Operator Contact Name: _____ Operator Tel Number: _____ Fax Number: _____ Operator's email: _____ Operator Address (if different from owner) _____		
d) Attach a topographic map indicating the location of the facility and the outfall(s) to the receiving water. Map attached? _____		
e) Check Yes or No for the following: 1. Has a prior NPDES permit been granted for the discharge? Yes _____ No _____ If Yes, Permit Number: _____ 2. Is the discharge a "new discharger" as defined by 40 CFR Section 122.2? Yes _____ No _____ 3. Is the facility covered by an individual NPDES permit? Yes _____ No _____ If Yes, Permit Number _____ 4. Is there a pending application on file with EPA for this discharge? Yes _____ No _____ If Yes, date of submittal: _____		

2. Discharge information. Please provide information about the discharge, (attaching additional sheets as needed)

a) Name of receiving water into which discharge will occur: _____

State Water Quality Classification: _____ Freshwater: _____ Marine Water: _____

b) Describe the discharge activities for which the owner/applicant is seeking coverage:

1. Construction dewatering of groundwater intrusion and/or storm water accumulation.
2. Short-term or long-term dewatering of foundation sumps.
3. Other.

c) Number of outfalls _____

For each outfall:

d) Estimate the maximum daily and average monthly flow of the discharge (in gallons per day – GPD). Max Daily Flow _____ GPD
Average Monthly Flow _____ GPD

e.) What is the maximum and minimum monthly pH of the discharge (in s.u.)? Max pH _____ Min pH _____

f.) Identify the source of the discharge (i.e. potable water, surface water, or groundwater). If groundwater, the facility shall submit effluent test results, as required in Section 4.4.5 of the General Permit.

g.) What treatment does the wastewater receive prior to discharge?

h.) Is the discharge continuous? Yes _____ No _____ If no, is the discharge periodic (P) (occurs regularly, i.e., monthly or seasonally, but is not continuous all year) or intermittent (I) (occurs sometimes but not regularly) or both (B) _____

If (P), number of days or months per year of the discharge _____ and the specific months of discharge _____;

If (I), number of days/year there is a discharge _____

Is the discharge temporary? Yes _____ No _____

If yes, approximate start date of dewatering _____ approximate end date of dewatering _____

i.) Latitude and longitude of each discharge within 100 feet (See http://www.epa.gov/tri/report/siting_tool): Outfall 1: long. _____ lat. _____; Outfall 2: long. _____ lat. _____; Outfall 3: long. _____ lat. _____.

j.) If the source of the discharge is potable water, please provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water and attach any calculation sheets used to support stream flow and dilution calculations _____ cfs

(See Appendix VII for equations and additional information)

<p>MASSACHUSETTS FACILITIES: See Section 3.4 and Appendix 1 of the General Permit for more information on Areas of Critical Environmental Concern (ACEC):</p> <p>k.) Does the discharge occur in an ACEC? Yes _____ No _____ If yes, provide the name of the ACEC: _____</p>

3. Contaminant Information

<p>a) Are any pH neutralization and/or dechlorination chemicals used in the discharge? If so, include the chemical name and manufacturer; maximum and average daily quantity used as well as the maximum and average daily expected concentrations (mg/l) in the discharge, and the vendor's reported aquatic toxicity (NOAEL and/or LC₅₀ in percent for aquatic organism(s)). No</p> <p>b) Please report any known remediation activities or water-quality issues in the vicinity of the discharge. None</p>
--

4. Determination of Endangered Species Act Eligibility: Provide documentation of ESA eligibility as required at Part 3.4 and Appendix IV. In addition, respond to the following questions.

<p>a) Which of the three eligibility criteria listed in Appendix IV, Criterion (A, B, or C) have you met? _____</p> <p>b) Please attach documentation with your NOI supporting your response. Please see Appendix IV for acceptable documentation</p>

5. Documentation of National Historic Preservation Act requirements: Please respond to the following questions:

<p>a) See Screening Process in Appendix III and respond to questions regarding your site and any historic properties listed or eligible for listing on the National Register of Historic Places. Question 1: Yes _____ No _____ ; Question 2: No _____ Yes _____</p> <p>b) Have any State or Tribal historic preservation officers been consulted in this determination? Yes _____ or No _____ If yes, attach the results of the consultation(s).</p> <p>c) Which of the three National Historic Preservation Act eligibility criterion listed in Appendix III, Criterion (A, B, or C) have you met? _____</p> <p>d) Is the project located on property of religious or cultural significance to an Indian Tribe? Yes _____ or No _____ If yes, provide that name of the Indian Tribe associated with the property. _____</p>


6. Supplemental Information: Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit

7. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22 (see below) including the following certification:

I certify under penalty of law that (1) no biocides or other chemical additives except for those used for pH adjustment and/or dechlorination are used in the dewatering system; (2) the discharge consists solely of dewatering and authorized pH adjustment and/or dechlorination chemicals; (3) the discharge does not come in contact with any raw materials, intermediate product, water product or finished product; (4) if the discharge of dewatering subsequently mixes with other permitted wastewater (i.e. stormwater) prior to discharging to the receiving water, any monitoring provided under this permit will be only for dewatering discharge; (5) where applicable, the facility has complied with the requirements of this permit specific to the Endangered Species Act and National Historic Preservation Act; and (6) this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility Name: Wayland Town Offices Solar PV Project

Operator signature: 

Print Full Name and Title: Peter Christakis, Vice President - Construction & Operations

Date: 2/9/2016

Federal regulations require this application to be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For partnership or sole proprietorship, by a general partner or the proprietor, respectively, or,
3. For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

Attachment E – Endangered Species Information



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
PHONE: (603)223-2541 FAX: (603)223-0104
URL: www.fws.gov/newengland

Consultation Code: 05E1NE00-2015-SLI-2053

September 28, 2015

Event Code: 05E1NE00-2015-E-02589

Project Name: Wayland Town Offices Solar PV Carport Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: Wayland Town Offices Solar PV Carport Project

Official Species List

Provided by:

New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
(603) 223-2541
<http://www.fws.gov/newengland>

Consultation Code: 05E1NE00-2015-SLI-2053

Event Code: 05E1NE00-2015-E-02589

Project Type: POWER GENERATION

Project Name: Wayland Town Offices Solar PV Carport Project

Project Description: Proposed solar PV carports at the Town Offices within an existing developed parking lot. Foundations will be installed within the existing developed footprint and no work is proposed outside of the developed area. Dewatering will occur during construction to be permitted under the NPDES Dewatering General Permit in Massachusetts (MAG70000).

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: Wayland Town Offices Solar PV Carport Project

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-71.36220288270124 42.36115693152038, -71.36271357536316 42.36057345238456, -71.36343026148097 42.36035781743939, -71.36267066001892 42.36054491257722, -71.36196684830793 42.360227801928076, -71.36145186384964 42.36083348182874, -71.36220288270124 42.36115693152038)))

Project Counties: Middlesex, MA



United States Department of Interior
Fish and Wildlife Service

Project name: Wayland Town Offices Solar PV Carport Project

Endangered Species Act Species List

There are a total of 1 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Mammals	Status	Has Critical Habitat	Condition(s)
Northern long-eared Bat (<i>Myotis septentrionalis</i>)	Threatened		



United States Department of Interior
Fish and Wildlife Service

Project name: Wayland Town Offices Solar PV Carport Project

Critical habitats that lie within your project area

There are no critical habitats within your project area.



Commonwealth of Massachusetts

Division of Fisheries & Wildlife

MassWildlife

Jack Buckley, *Director*

July 31, 2015

Paige Samblanet
Amec Foster Wheeler Environment and Infrastructure, Inc.
271 Mill Road
Chelmsford MA 01824

RE: Project Location: 41 Cochituate Road
Town: WAYLAND
NHESP Tracking No.: 15-34597

To Whom It May Concern:

Thank you for contacting the Natural Heritage and Endangered Species Program of the MA Division of Fisheries & Wildlife (the "Division") for information regarding state-listed rare species in the vicinity of the above referenced site. Based on the information provided, this project site, or a portion thereof, is located **within** *Priority Habitat 1516* (PH 1516) and *Estimated Habitat 38* (EH 38) as indicated in the *Massachusetts Natural Heritage Atlas* (13th Edition). Our database indicates that the following state-listed rare species have been found in the vicinity of the site:

<u>Scientific name</u>	<u>Common Name</u>	<u>Taxonomic Group</u>	<u>State Status</u>
<i>Botaurus lentiginosus</i>	American Bittern	Bird	Endangered
<i>Bolboschoenus fluviatilis</i>	River Bulrush	Plant	Not Listed

The species listed above is protected under the Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00). State-listed wildlife are also protected under the state's Wetlands Protection Act (WPA) (M.G.L. c. 131, s. 40) and its implementing regulations (310 CMR 10.00). Fact sheets for most state-listed rare species can be found on our website (www.mass.gov/nhesp).

Please note that projects and activities located within Priority and/or Estimated Habitat **must** be reviewed by the Division for compliance with the state-listed rare species protection provisions of MESA (321 CMR 10.00) and/or the WPA (310 CMR 10.00).

Wetlands Protection Act (WPA)

If the project site is within Estimated Habitat and a Notice of Intent (NOI) is required, then a copy of the NOI must be submitted to the Division so that it is received at the same time as the local conservation commission. If the Division determines that the proposed project will adversely affect the actual Resource Area habitat of state-protected wildlife, then the proposed project may not be permitted (310 CMR 10.37, 10.58(4)(b) & 10.59). In such a case, the project proponent may request a consultation with the Division to discuss potential project design modifications that would avoid adverse effects to rare wildlife habitat.

www.mass.gov/nhesp

Division of Fisheries and Wildlife

Field Headquarters, One Rabbit Hill Road, Westborough, MA 01581 (508) 389-6300 Fax (508) 389-7890

An Agency of the Department of Fish and Game

A streamlined joint MESA/WPA review process is available. When filing a Notice of Intent (NOI), the applicant may file concurrently under the MESA on the same NOI form and qualify for a 30-day streamlined joint review. For a copy of the NOI form, please visit the MA Department of Environmental Protection's website: <http://www.mass.gov/dep/water/approvals/wpaform3.doc>.

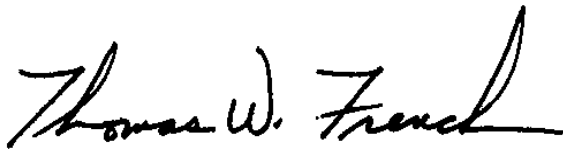
MA Endangered Species Act (MESA)

If the proposed project is located within Priority Habitat and is not exempt from review (see 321 CMR 10.14), then project plans, a fee, and other required materials must be sent to Natural Heritage Regulatory Review to determine whether a probable "take" under the MA Endangered Species Act would occur (321 CMR 10.18). Please note that all proposed and anticipated development must be disclosed, as MESA does not allow project segmentation (321 CMR 10.16). For a MESA filing checklist and additional information please see our website: www.mass.gov/nhesp ("Regulatory Review" tab).

We recommend that rare species habitat concerns be addressed during the project design phase prior to submission of a formal MESA filing, as avoidance and minimization of impacts to rare species and their habitats is likely to expedite endangered species regulatory review.

This evaluation is based on the most recent information available in the Natural Heritage database, which is constantly being expanded and updated through ongoing research and inventory. If you have any questions regarding this letter please contact Lauren Glorioso, Endangered Species Review Assistant, at (508) 389-6361.

Sincerely,

A handwritten signature in black ink that reads "Thomas W. French". The signature is written in a cursive, flowing style with a large, prominent 'T' and 'F'.

Thomas W. French, Ph.D.
Assistant Director

Attachment F – Treatment System Schematic

Dewatering Treatment System Schematic

