ENVIRONMENTAL & ENGINEERING SOLUTIONS

MASSACHUSETTS CONTINGENCY PLAN
IMMEDIATE RESPONSE ACTION STATUS REPORT
and
LANDFILL MONITORING REPORT
3rd QUARTER 2016

TOWN OF EASTHAM LANDFILL
255 OLD ORCHARD ROAD
EASTHAM, MASSACHUSETTS

DEP RTN 4-24301

September 30, 2016

Prepared for:

Town of Eastham
2500 State Highway
Eastham, MA 02642-2544

Prepared by:

Environmental Strategies & Management, Inc.
273 West Main St
Norton, MA 02766

ES&M Project No. 2016-055

CONTENTS

1.0 INTRODUCTION

This Immediate Response Action (IRA) Status report has been prepared in accordance with the Massachusetts Contingency Plan (MCP) for Massachusetts Department of Environmental Protection (MassDEP) Release Tracking Number (RTN) 4-24301 by Environmental Strategies & Management, Inc. (ES&M) on behalf of the Town of Eastham. This report also satisfies the reporting requirements described in the Town of Eastham's Landfill Monitoring Plan (LMP), approved by MassDEP on August 14, 2012, and modified on September 25, 2014.

1.1 Background

Previous status reports published by ES&M have provided background information regarding the Eastham Landfill and the occurrence of 1,4-dioxane in drinking water wells around the landfill. The most recent report that includes this information is the IRA Status Report for the first quarter of 2014 (submitted to MassDEP by ES&M on March 31, 2014). Since the background information does not change, quarterly status reports focus on activities completed during the specific report period.

During Town Meeting held on Monday, May 4, 2015, voters in Eastham approved funding for a municipal water system that will bring public water to the entire town. This approval supplements the "backbone" water system that was approved in 2014. The municipal water system, once in place and operational, will serve as a permanent solution to mitigate the presence of 1,4-dioxane in private drinking water wells around the landfill.

1.2 Purpose

This IRA Status and Landfill Monitoring Report documents activities undertaken at and around the Eastham Landfill during the 3rd quarter of 2016 (June 1 through August 31, 2016).

2.0 IMMEDIATE RESPONSE ACTION ACTIVITIES

The primary focus of the IRA program has been to identify private drinking water wells that have been impacted by 1,4-dioxane in groundwater emanating from the landfill, and to provide alternative safe drinking water to affected residents. The IRA program has also included evaluation of appropriate and feasible mitigating measures to remove 1,4-dioxane from drinking water. In 2014, IRA measures also included activities to better understand the nature and origin of other sources of 1,4-dioxane in the drinking water aquifer.

The IRA status reports submitted in 2013 provided details of the initial IRA activities. An IRA Plan Modification was submitted on March 6, 2014, to describe implementation

of alternate laboratory methods, outline a revised private well sampling protocol, clarify the ongoing monitoring schedule, and summarize future IRA activities. A second IRA Plan Modification was submitted on June 30, 2015, to discontinue annual drinking water sample collection and laboratory analysis from wells exhibiting concentrations of 1,4-dioxane above 0.3 µg/L, since residents in this category have been advised to use bottled water for consumptive purposes. The Town offers to provide bottled water to all residents in this category until they are connected to the Town's municipal water system.

During the summer of 2016, the private well testing program was expanded to include several properties not previously tested on Salt Pond Road, Kingsbury Beach Road, and State Highway. This additional work was conducted to better define the southwesterly extent of 1,4 dioxane in the drinking water aquifer. Fourteen property owners in this southwestern expansion area were invited to participate in this sampling event, and water samples from four properties were tested.

The following summarizes the current sampling criteria:

1. Quarterly collection and laboratory analysis of water samples from wells where concentrations of 1,4-dioxane has been detected above the reporting limit of 0.2 µg/L but below the MCP GW-1 Standard and MassDEP Office of Research and Standards Guideline (ORSG) of 0.3 µg/L;

2. Confirmatory collection and laboratory analysis of water samples from wells within the study area that are adjacent to a private well with a concentration of 1,4-dioxane above 0.3 µg/L.

3. Collection and laboratory analysis of water samples from the water system at the Eastham Elementary School on a quarterly basis.

4. When possible, collection of drinking water samples from residential wells within the study area that have not yet been tested for 1,4-dioxane.

In addition to the above criteria, ES&M has collected numerous water samples from private wells outside of the study area (referred to as "background" study). While not part of the MassDEP-approved IRA Plan, the data from this background study has provided valuable information on the occurrence of 1,4-dioxane in groundwater that is not affected by the Eastham Landfill.

2.1 Private Well Sampling - Status Update

2.1.1 Summary of Sampling Activities

During this report period, drinking water samples were collected from four properties in the southwest expansion area, the Eastham Elementary School and four study area properties where concentrations of 1,4-dioxane have been detected above the laboratory reporting limit of 0.2 µg/L but below the GW-1 standard and the ORSG guideline of 0.3 µg/L. The sampling event was conducted on July 21, 2016. Field notes for this sampling

event are included in Appendix A. All samples were preserved in the field and submitted to Alpha Analytical Laboratories in Mansfield, Massachusetts, for 1,4-dioxane analysis by EPA Method 8270 SIM.

2.1.2 Sampling Results

All laboratory results were reviewed to determine if 1,4-dioxane was detected above the MCP GW-1 Standard/ORSG and bottled water action limit of 0.3 µg/L. The Town of Eastham continues to provide bottled water to residences where water tests have indicated a concentration of 1,4-dioxane above 0.3 µg/L. During this report period, one new property was added to the list of properties eligible for bottled water. The complete list of properties eligible for bottled water through this report period is presented in Table 1. Table 2 summarizes 1,4-dioxane analytical results of samples collected during this report period as well as all previous phases of the private well sampling program[1].

Private well water tested for 1,4-dioxane during this report period that have been tested previously, had results that were consistent with previous sampling results.

The Site Map included as Figure 1 shows the properties within the study area; each parcel is color coded with one of four colors to represent the sampling results:

- Gray = 1,4-dioxane has not been detected in any sample collected from these properties. Well water test results in this category were below the reporting limit for 1,4-dioxane (approximately 0.15 µg/L). Since an estimated concentration ("J" value) was not reported, it is inferred that 1,4-dioxane is not present above the detection limit (approximately 0.04 µg/L).
- Yellow = 1,4-dioxane has been detected in at least one sample collected from these properties, but at a concentration(s) below the MCP GW-1 Standard/ORSG of 0.3 µg/L. Laboratory results that are below 0.3 µg/L but above the laboratory reporting limit are quantified results, while results below the laboratory reporting limit and above the method detection limit of 0.04 µg/L are qualified as estimated values (reported with a "J" qualifier).
- Red = 1,4-dioxane has been detected in at least one sample collected from these properties at or above 0.3 µg/L. All residents in this category have been offered bottled water and have been advised to not use their well water for consumptive purposes.
- White = well water not tested, most likely because homeowners have not been available during scheduled sampling events.
- White with NR = owners of these properties were contacted by certified mail; however, no response was received or access was not granted.
- White/hatched = no well is present on these properties.

[1] Results for "background" samples collected outside of the study area are included at the end of Table 2.

Appendix B contains the laboratory report for samples collected during this report period. ES&M completed a quality assessment/quality control review of the laboratory report and it was deemed usable. ES&M's review log serves as the cover page for the laboratory report in Appendix B. As required by 310 CMR 40.1403(10) of the MCP, property owners were notified of the laboratory results for samples collected from their properties. Copies of the notification form (BWSC form 123) that were sent are included in Appendix C[2].

2.2 Activated Carbon Adsorption Treatment System - Status Update

A secondary goal of the IRA program was to evaluate appropriate and feasible mitigating measures to remove 1,4-dioxane from drinking water. As described in previous IRA status reports, an activated carbon system consisting of two carbon vessels and a flow meter was installed at 255 Alston Avenue. The efficacy of this system was conducted between November 2013 and February 2015. The test results allowed us to determine that for this residence, this system can effectively treat approximately 10,000 to 11,000 gallons of water (about 90 days of treatment).

Since the efficacy of the carbon system has been proven and well documented, the town has decided to conclude activated carbon system testing. The carbon treatment system remains in use at 255 Alston Avenue with scheduled carbon changes completed by ES&M approximately every 90 days.

2.3 MCP Notifications for IRA Status Report Submittal

As required by the MCP, notice of the electronic submittal of this IRA status report to MassDEP is provided to the Town of Eastham Board of Health and Chief Municipal Officer. A copy of the notification letter pertaining to this report is included in Appendix D.

3.0 LANDFILL MONITORING PROGRAM ACTIVITIES

On September 25, 2014, ES&M submitted a letter to MassDEP - Solid Waste Management Section titled "Work Plan for Comprehensive Site Assessment Update". The work plan described installation of temporary groundwater sampling wells (ESMT-1 through ESMT-7, shown on Figure 1), and collection of groundwater samples throughout the study area to better understand the nature and extent of 1,4-dioxane emanating from the landfill. The work also included the collection of water level data in monitoring wells and private wells to better understand horizontal and vertical groundwater flow direction in the study area. Much of the field work described in this work plan was completed in October and November 2014, and a letter report was issued to MassDEP on January 20, 2015, to summarize the findings (see Appendix E of IRA Status Report for Q1 2015).

[2]Although not included in Appendix C, each homeowner received a copy of the laboratory report for samples collected of their drinking water in addition to the BWSC transmittal form 123.

Permanent monitoring wells and additional groundwater sampling and monitoring activities were completed in the fall of 2015. The new monitoring wells (labeled ESMW-1 through 4) are also shown on Figure 1. An updated CSA report will be prepared in late in 2016 to document groundwater sampling and monitoring results.

The September 25th letter also proposed minor revisions to the August 2012 Landfill Monitoring Plan (LMP). The LMP required the collection of water samples from 19 private drinking water wells near the landfill as well as from monitoring wells and a non-potable well on the landfill property. The residential properties were included in the LMP to identify private wells that may be impacted by releases from the landfill. Since some of the residences included in the LMP now receive bottled drinking water from the Town of Eastham, and will continue to receive bottled water until the public drinking water system is installed and operational, continued sampling of these wells under the LMP no longer provides useful information. Residences on the LMP list that are not receiving bottled water from the Town will remain in the LMP (and IRA) sampling programs. A summary of the revised LMP sampling requirements and schedule is shown on Table 3.

3.1 Landfill Monitoring Well Sample Collection

The following section summarizes the landfill monitoring well samples collected during the report period as prescribed by the LMP. The locations of these wells within the limits of the landfill are shown on Figure 1. The following samples were collected by Barnstable County Department of Health and Environment (BCDHE) personnel and submitted to Alpha Analytical for analysis:

- On August 10, 2016, BCDHE personnel collected quarterly groundwater samples from landfill monitoring wells MW-3I and MW-3D for analysis of VOCs, 1,4-dioxane, metals and indicator parameters.

Current and historic laboratory results for LMP samples are summarized on Table 4, which includes applicable regulatory standards and/or guidelines. Field logs are included in Appendix A, and the complete laboratory report is included in Appendix B.

3.2 Landfill Soil Gas Monitoring

Personnel from BCDHE conduct soil gas monitoring at the Eastham Landfill semi-annually - once during the spring and once in the fall. Soil gas monitoring was not conducted during this report period.

3.3 Private Well Sample Collection

In accordance with the LMP, drinking water samples were collected from seven residences for laboratory testing during the previous reporting period. One property (125 Meetinghouse Road) on the LMP list was not included at that time because the homeowner was not available; however, a drinking water sample was collected from

this home on July 21, 2016. The laboratory test results from this private drinking water well are reported in Table 4 (the 1,4-dioxane results for the residence are also reported on Table 2) and the laboratory reports are included in Appendix B.

4.0 FUTURE SCHEDULE OF IRA AND LMP ACTIVITIES

During the next reporting period from September through November 2016, the following IRA and LMP activities are planned:

4.1 Immediate Response Action

- Collection of drinking water samples from residences within the study area that have not yet been tested for 1,4-dioxane;
- Continued collection of drinking water samples under the criteria outlined in the IRA Plan Modification;
- Review of laboratory results to determine if any additional residences meet the bottled water action limit of 0.3 ug/L; and
- Preparation of sampling results notification packages for all residents whose drinking water is tested during the report period.

Once homes in the landfill study area are connected to the municipal water supply and those private wells are no longer used for consumption, sampling of water from those private wells will no longer be conducted. Beginning in the fourth quarter of 2016, groundwater samples will be collected semiannually from the twelve, permanent sentry monitoring wells located at four points within public property around the perimeter of the landfill study area. The laboratory results from these wells will be reported in future IRA status reports. Once closure of the IRA is complete, this testing of groundwater in the sentry wells will be transitioned to the landfill monitoring plan.

4.2 Landfill Monitoring Plan

- Collection of quarterly groundwater samples from wells MW-3I and MW-3D in November 2016 for analysis of indicator parameters, metals and VOCs including 1,4-dioxane.
- Collection of semi-annual groundwater samples from well MW-21S in November 2016 for analysis of VOCs including 1,4-dioxane.
- Collection of annual groundwater samples from wells MW-2S, MW-4S and MW-5S in November 2016 for analysis of indicator parameters, metals and VOCs including 1,4-dioxane.
- Collection of annual groundwater samples from well MW-8 and the DPW Well in November 2016 for analysis of VOCs including 1,4-dioxane.

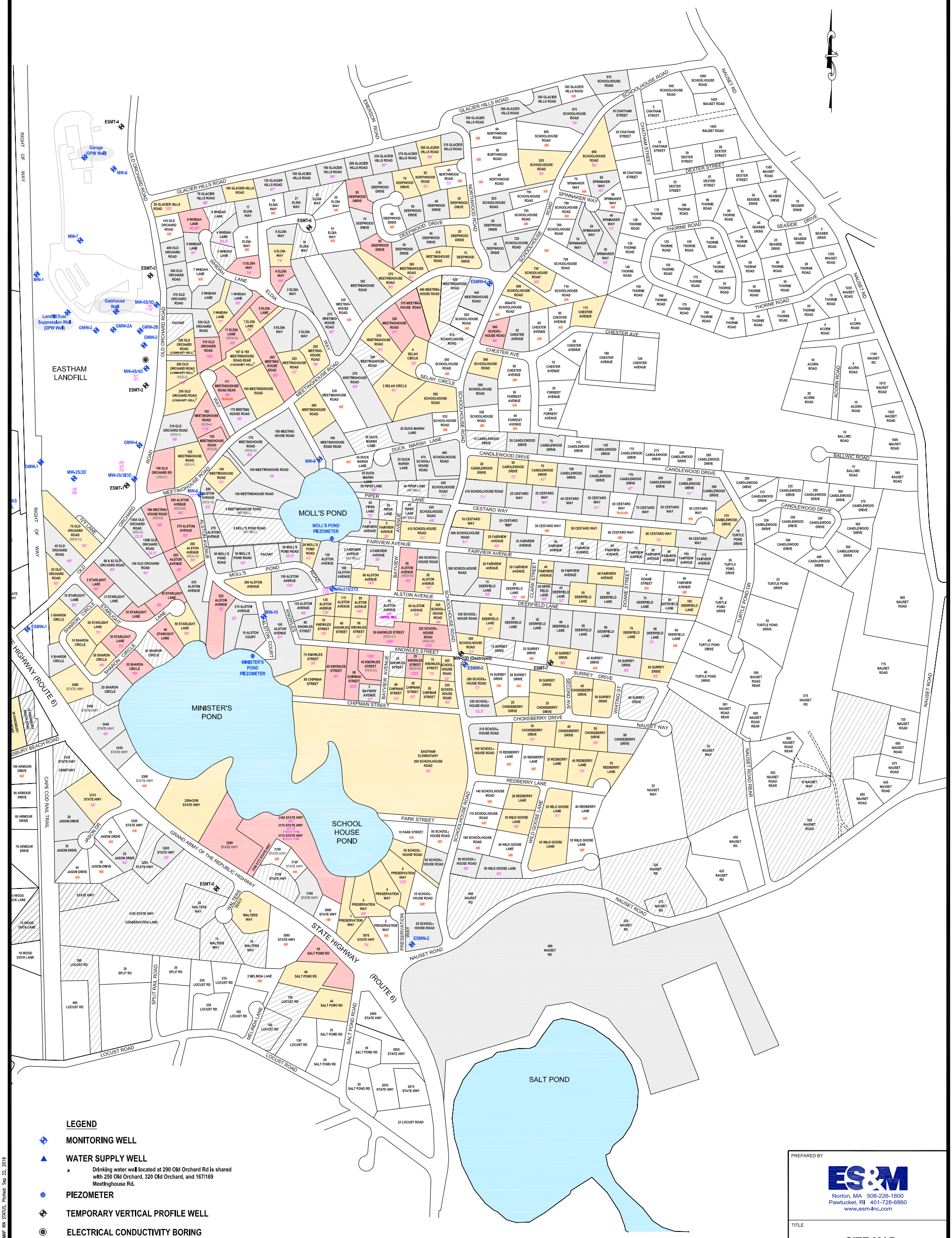
5.0 PUBLIC OUTREACH

Our communication plan continues to include the following elements to keep the public informed of all aspects of this project:

Availability of Reports
All reports required by MassDEP are available on their website (http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=4-0024301). The Town of Eastham's also posts these reports on their website (http://www.eastham-ma.gov/Public_Documents/EasthamMA_Health/LandfillFolder/). Hard copies of reports are available at Town Hall and at the Eastham Public Library.

Direct Communications
Questions on the ongoing work related to this matter may be directed to:

- Jane Crowley, Health Agent, Eastham Board of Health
  508-240-5900, x229 or by email at jcrowley@eastham-ma.gov
- Doug Heely, Licensed Site Professional, Environmental Strategies & Mgmt.
  508-226-1800 or by email at dheely@esm-inc.com



LEGEND

- MONITORING WELL
- WATER SUPPLY WELL
  - * Drinking water well located at 290 Old Orchard Rd is shared with 250 Old Orchard, 320 Old Orchard, and 167/169 Meetinghouse Rd.
- PIEZOMETER
- TEMPORARY VERTICAL PROFILE WELL
- ELECTRICAL CONDUCTIVITY BORING
- 52' WELL DEPTH BELOW GROUND SURFACE
- VACANT PROPERTY / NO WELL
- 1,4 DIOXANE DETECTED AT OR ABOVE 0.3 ug/L
- 1,4 DIOXANE DETECTED BELOW 0.3 ug/L
- 1,4 DIOXANE NOT DETECTED
- PROPERTY NOT TESTED

The color coding is based on the highest concentration of 1,4 dioxane detected in drinking water samples collected at the property.

PROPERTY LINES ARE APPROXIMATELY LOCATED AND ACQUIRED FROM ON-LINE SITE: WWW.MAPSONLINE.NET/EASTHAMMA.

PREPARED BY
ES&M
Norton, MA 508-226-1800
Pawtucket, RI 401-728-6860
www.esm-inc.com

TITLE
SITE MAP

REPORT
IRA STATUS REPORT

PREPARED FOR
TOWN OF EASTHAM

LOCATION
OLD ORCHARD ROAD
EASTHAM, MASSACHUSETTS

DRAWN	PM	LSP
DMR	DH	DH

DATE	PROJECT
9/21/2016	2016-055

RTN	FILENAME
4-24301	EASTHAM LANDFILL 2016.DWG

FIGURE 1

C:\Users\Doreen Local\Documents\ESM\Eastham Landfill\Eastham Landfill 2016.dwg, Tab: SITE MAP IRA STATUS, Plotted: Sep 22, 2016

TABLE 1
AFFECTED PROPERTIES ELIGIBLE FOR BOTTLED WATER
Eastham Landfill Private Well Sampling Program
Eastham, MA

50 ALSTON AVENUE
225 ALSTON AVENUE
255 ALSTON AVENUE
275 ALSTON AVENUE
285 ALSTON AVENUE
60 CHIPMAN STREET
65 DEEPWOOD DRIVE
85 DEEPWOOD DRIVE
4 ELDIA WAY
9 ELDIA WAY
11 ELDIA WAY
13 ELDIA WAY
25 KNOWLES STREET
30 KNOWLES STREET (A & B)
45 KNOWLES STREET
65 KNOWLES STREET
100 MEETINGHOUSE ROAD (A & B)
155 MEETINGHOUSE ROAD
165 MEETINGHOUSE ROAD
171 MEETINGHOUSE ROAD REAR (A, B & C)
205 MEETINGHOUSE ROAD
350 MEETINGHOUSE ROAD
370 MEETINGHOUSE ROAD
180 OLD ORCHARD ROAD
310 OLD ORCHARD ROAD
55 SALT POND ROAD
325 SCHOOLHOUSE ROAD
600 SCHOOLHOUSE ROAD
35 SHARON CIRCLE
5 STARLIGHT LANE
30 STARLIGHT LANE
35 STARLIGHT LANE
40 STARLIGHT LANE
45 STARLIGHT LANE
3168 STATE HWY
3172 STATE HWY BACKUP WELL
3172 STATE HWY PRIMARY WELL
3200 STATE HWY
8 WHIDAH LANE

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TABLE 2
SUMMARY OF
PRIVATE WELL SAMPLING PROGRAM ANALYTICAL RESULTS
1,4 DIOXANE
Residential Drinking Water Wells
Eastham, MA
(All results in ug/l)

Property	Date	Duplicate	1,4 Dioxane	
Study Area Samples				
20 ALSTON AVENUE	2/22/2013		0.18J	
50 ALSTON AVENUE	3/2/2015		0.278	
	3/2/2015	Duplicate	0.264	
	4/14/2014		0.218	
	4/14/2014	Duplicate	0.210	
	9/18/2013		0.37	
	7/25/2013		0.18J	
	6/27/2013		0.18J	
	5/29/2013		0.20	
	5/1/2013		0.18J	
	3/14/2013		0.20	
	3/4/2013		0.23	
	3/4/2013		0.23	
	2/14/2013		5.1	
	2/14/2013	Duplicate	5.0	
65 ALSTON AVENUE	3/24/2014		0.0813J	
	2/19/2013		0.099J	
80 ALSTON AVENUE	3/28/2014		<0.150	
	8/27/2013		0.057J	
	2/11/2013		<0.20	
85 ALSTON AVENUE	7/21/2016		0.168	**3Q2016**
	7/21/2016	Duplicate	0.184	**3Q2016**
	5/13/2016		0.135J	
	2/12/2016		0.125J	
	11/11/2015		0.130J	
	8/12/2015		0.175	
	8/12/2015	Duplicate	0.194	
	5/13/2015		0.207	
	5/13/2015	Duplicate	0.196	
	2/13/2015		0.163	
	11/20/2014		0.248	
	11/20/2014	Duplicate	0.236	
	5/5/2014		0.236	
	5/5/2014	Duplicate	0.210	
	2/12/2013		0.20	
100 ALSTON AVENUE	2/11/2013		<0.20	
115 ALSTON AVENUE	7/22/2013		0.12J	
130 ALSTON AVENUE	2/19/2013		<0.20	
135 ALSTON AVENUE	2/11/2013		0.11J	
150 ALSTON AVENUE	2/15/2013		<0.20	
155 ALSTON AVENUE	2/11/2013		<0.20	
185 ALSTON AVENUE	2/14/2013		<0.20	

Notes:
NS - Not Sampled
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Analyte detected in Blank and Sample
L - LCS or LCSD exceeded the control limits. Results may be biased high.
GW-1 Standard and ORSG for 1,4 dioxane is 0.3 ug/L
Samples collected during this quarter are highlighted in red.

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Property		Date	Duplicate	1,4 Dioxane	
200 ALSTON AVENUE		7/21/2016		<0.144	3Q2016
		5/9/2014		<0.144	
		12/2/2013		0.15J	
		5/1/2013		0.21	
215 ALSTON AVENUE		7/31/2014		<0.144	
		2/12/2013		<0.20	
225 ALSTON AVENUE		5/6/2014		0.350	
		5/6/2014	Duplicate	0.365	
		4/29/2013		1.2	
235 ALSTON AVENUE		8/5/2014		<0.142	
		7/31/2013		<0.20	
255 ALSTON AVENUE	Inf	2/13/2015		2.14	
	Inf	1/23/2015		2.13	
	Inf	11/19/2014		2.27	
	Inf	8/3/2014		2.03	
	Inf	6/19/2014		2.12	
		8/27/2013		1.8	
		5/6/2013		1.8	
		5/6/2013	Duplicate	1.5	
		2/14/2013		1.9	
		2/14/2013	Duplicate	1.8	
265 ALSTON AVENUE		5/12/2016		<0.147	
		4/1/2015		<0.148	
		3/28/2014		<0.139	
		12/18/2013		<0.20	
		3/14/2013		0.055J	
270 ALSTON AVENUE		8/4/2014		<0.142	
		2/11/2013		<0.20	
275 ALSTON AVENUE		7/17/2014		1.28	
		7/17/2014	Duplicate	1.35	
		5/16/2013		1.3	
		5/16/2013	Duplicate	0.99	
280 ALSTON AVENUE		5/12/2016		<0.147	
		5/13/2015		<0.156	
		12/17/2014		<0.142	
		12/18/2013		<0.20	
		2/22/2013		<0.20	
285 ALSTON AVENUE		9/18/2014		0.416	
		3/14/2014		0.636	
		11/20/2013		0.51	
		5/8/2013		0.35	
		2/22/2013		0.37	
		2/22/2013	Duplicate	0.33	
10 ALSTON COURT		2/14/2013		<0.20	
ATLANTIC OAKS 'H' WELL		7/21/2016		0.0778J	3Q2016
		7/25/2013		<0.20	
ATLANTIC OAKS NORTH WELL		7/21/2016		<0.156	3Q2016
		7/25/2013		<0.20	
ATLANTIC OAKS-SOUTH WELL		7/21/2016		<0.147	3Q2016
		7/23/2013		<0.20	

Notes:
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J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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GW-1 Standard and ORSG for 1,4 dioxane is 0.3 ug/L
Samples collected during this quarter are highlighted in red.

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Property	Date	Duplicate	1,4 Dioxane
5 BAYVIEW AVENUE	8/1/2014		<0.147
	2/25/2013		<0.20
20 CANDLEWOOD DRIVE	5/29/2013		0.056J
50 CANDLEWOOD DRIVE	5/3/2013		0.092J
55 CANDLEWOOD DRIVE	7/25/2013		<0.20
70 CANDLEWOOD DRIVE	5/3/2013		0.073J
75 CANDLEWOOD DRIVE	7/17/2014		<0.147
100 CANDLEWOOD DRIVE	5/3/2013		<0.20
145 CANDLEWOOD DRIVE	5/2/2013		<0.20
150 CANDLEWOOD DRIVE	5/2/2013		<0.20
170 CANDLEWOOD DRIVE	7/25/2013		<0.20
200 CANDLEWOOD DRIVE	5/8/2013		<0.20
250 CANDLEWOOD DRIVE	5/7/2013		<0.20
280 CANDLEWOOD DRIVE	5/6/2013		<0.20
310 CANDLEWOOD DRIVE	9/19/2014		<0.15
	4/30/2013		0.060J
10 CESTARO WAY	4/30/2013		0.11J
20 CESTARO WAY	5/2/2013		<0.20
25 CESTARO WAY	12/3/2013		<0.20
35 CESTARO WAY	4/30/2013		<0.20
45 CESTARO WAY	5/2/2013		<0.20
50 CESTARO WAY	5/6/2013		0.077J
55 CESTARO WAY	5/2/2013		<0.20
75 CESTARO WAY	5/6/2013		<0.20
80 CESTARO WAY	2/21/2013		0.061J
85 CESTARO WAY	12/3/2013		<0.20
90 CESTARO WAY	5/2/2013		<0.20
10 CHATHAM STREET	10/6/2015		<0.150
55 CHESTER AVE	1/30/2015		<0.144
115 CHESTER AVENUE	10/5/2015		0.114J
20 CHIPMAN STREET	7/25/2013		0.041J
30 CHIPMAN STREET	3/27/2014		0.0969J
	2/11/2013		0.14J
40 CHIPMAN STREET	6/26/2014		<0.139
	7/31/2013		0.046J
60 CHIPMAN STREET	5/8/2014		0.382
	5/8/2014	Duplicate	0.341
	12/6/2013		0.27
	12/6/2013	Duplicate	0.30
	4/30/2013		0.29
80 CHIPMAN STREET	2/15/2013		0.047J
25 CHOKEBERRY DRIVE	12/2/2013		0.15J
30 CHOKEBERRY DRIVE	5/7/2013		0.17J
35 CHOKEBERRY DRIVE	5/3/2013		0.050J
40 CHOKEBERRY DRIVE	5/2/2013		0.069J
45 CHOKEBERRY DRIVE	5/16/2013		0.11J
50 CHOKEBERRY DRIVE	5/10/2013		0.058J
60 CHOKEBERRY DRIVE	4/11/2014		<0.142
10 DEEPWOOD DR	1/30/2015		<0.142
15 DEEPWOOD DRIVE	9/17/2013		0.051J
20 DEEPWOOD DRIVE	5/29/2015		<0.147

Notes:
NS - Not Sampled
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GW-1 Standard and ORSG for 1,4 dioxane is 0.3 ug/L
Samples collected during this quarter are highlighted in red.

ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	Date	Duplicate	1,4 Dioxane
25 DEEPWOOD DRIVE	2/12/2016		<0.147
	11/11/2015		<0.150
	7/30/2013		0.073J
30 DEEPWOOD DRIVE	7/31/2013		0.040J
40 DEEPWOOD DRIVE	7/24/2013		<0.20
45 DEEPWOOD DRIVE	7/24/2013		<0.20
50 DEEPWOOD DRIVE	1/23/2015		<0.150
	12/3/2013		<0.20
55 DEEPWOOD DRIVE	8/25/2014		<0.139
	7/25/2013		<0.20
65 DEEPWOOD DRIVE	3/17/2015		0.481
	3/28/2014		0.297
	3/28/2014	Duplicate	0.336
	7/30/2013		0.29
	7/30/2013	Duplicate	0.24
70 DEEPWOOD DRIVE	7/30/2013		0.073J
75 DEEPWOOD DRIVE	8/1/2014		<0.144
	7/30/2013		<0.20
85 DEEPWOOD DRIVE	9/17/2013		0.63
95 DEEPWOOD DRIVE	3/17/2015		<0.158
	12/3/2013		<0.20
10 DEERFIELD LANE	5/1/2013		0.052J
15 DEERFIELD LANE	4/30/2013		<0.20
20 DEERFIELD LANE	5/8/2013		<0.20
30 DEERFIELD LANE	7/22/2013		<0.20
35 DEERFIELD LANE	2/25/2013		<0.20
40 DEERFIELD LANE	5/1/2013		<0.20
45 DEERFIELD LANE	5/2/2013		<0.20
50 DEERFIELD LANE	5/3/2013		<0.20
55 DEERFIELD LANE	4/29/2013		0.062J
60 DEERFIELD LANE	5/6/2013		<0.20
65 DEERFIELD LANE	5/6/2013		<0.20
70 DEERFIELD LANE	5/8/2013		0.048J
75 DEERFIELD LANE	7/25/2013		<0.20
80 DEERFIELD LANE	5/1/2013		<0.20
105 DEERFIELD LANE	5/8/2013		0.067J
DPW GARAGE	2/7/2014		<0.20
GATEHOUSE AT TRANSFER STATION	2/11/2014		<0.20
DPW NON-POTABLE WELL	2/25/2013		<0.20
20 DUCKMARSH LANE	4/30/2013		<0.20
25 DUCKMARSH LANE	5/2/2013		<0.20
35 DUCK MARSH LANE	12/6/2013		<0.20
2 ELDIA WAY	8/4/2014		<0.142
	8/2/2013		<0.20
3 ELDIA WAY	5/3/2013		<0.20
4 ELDIA WAY	8/4/2014		<0.144
	5/7/2014		0.451
	5/7/2014	Duplicate	0.449
	5/8/2013		0.089J
5 ELDIA WAY	1/23/2015		<0.163
	4/30/2013		<0.20

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ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	Date	Duplicate	1,4 Dioxane
6 ELDIA WAY	5/9/2014		<0.144
	12/5/2013		0.15J
7 ELDIA WAY	3/24/2014		<0.150
	5/10/2013		0.045J
8 ELDIA WAY	12/5/2013		<0.20
9 ELDIA WAY	5/6/2014		0.309
	5/6/2014	Duplicate	0.284
	12/5/2013		0.31
	12/5/2013	Duplicate	0.27
	5/2/2013		0.25
11 ELDIA WAY	5/7/2014		3.58
	5/7/2014	Duplicate	3.61
	9/17/2013		3.7
	7/25/2013		3.0
	6/27/2013		4.3
	6/27/2013	Duplicate	3.4
	5/29/2013		4.3
	5/29/2013	Duplicate	3.9B
	4/29/2013		4.2
	4/29/2013	Duplicate	3.3
	3/14/2013		2.9
	3/14/2013	Duplicate	3.1
13 ELDIA WAY	5/9/2014		0.660
	5/9/2014	Duplicate	0.659
	7/24/2013		0.33
17 ELDIA WAY	5/6/2013		<0.20
21 ELDIA WAY	12/5/2013		<0.20
3 FAIRVIEW AVENUE	5/10/2013		<0.20
4 FAIRVIEW AVENUE	8/15/2014		<0.147
	4/29/2013		<0.20
5 FAIRVIEW AVENUE	5/8/2014		<0.144
	2/14/2013		0.047J
20 FAIRVIEW AVENUE	5/7/2013		0.093J
25 FAIRVIEW AVENUE	5/7/2013		0.041J
30 FAIRVIEW AVENUE	12/3/2013		0.063J
35 FAIRVIEW AVENUE	5/2/2013		<0.20
40 FAIRVIEW AVENUE	5/16/2013		0.065J
50 FAIRVIEW AVENUE	5/2/2013		<0.20
60 FAIRVIEW AVENUE	5/1/2013		0.041J
115 FAIRVIEW AVENUE	7/22/2013		<0.20
15 GLACIER HILLS ROAD	3/13/2014		<0.139
20 GLACIER HILLS ROAD	5/6/2014		<0.144
	2/22/2013		0.071J
70 GLACIER HILLS ROAD	8/4/2014		<0.142
	7/22/2013		<0.20
75 GLACIER HILLS ROAD	6/17/2014		<0.142
100 GLACIER HILLS ROAD	5/8/2013		0.058J
115 GLACIER HILLS ROAD	4/14/2014		<0.144
130 GLACIER HILLS ROAD	7/23/2013		<0.20
145 GLACIER HILLS ROAD	4/14/2014		<0.144
150 GLACIER HILLS ROAD	7/24/2013		<0.20
165 GLACIER HILLS ROAD	3/13/2014		<0.139

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Property	Date	Duplicate	1,4 Dioxane	
175 GLACIER HILLS ROAD	3/14/2014		<0.139	
180 GLACIER HILLS ROAD	8/25/2014		<0.142	
	8/2/2013		<0.20	
200 GLACIER HILLS ROAD	8/5/2014		<0.144	
	7/31/2013		<0.20	
205 GLACIER HILLS ROAD	3/14/2014		<0.139	
230 GLACIER HILLS ROAD	7/25/2013		<0.20	
270 GLACIER HILLS ROAD	3/11/2014		<0.150	
300 GLACIER HILLS ROAD	7/31/2013		0.077J	
310 GLACIER HILLS ROAD	7/25/2013		<0.20	
350 GLACIER HILLS ROAD	10/9/2015		<0.142	
380 GLACIER HILLS ROAD	10/9/2015		<0.147	
395 GLACIER HILLS ROAD	10/6/2015		<0.153	
20 JASON DRIVE	3/12/2014		<0.150	
25 JASON DRIVE	4/14/2014		<0.147	
30 JASON DRIVE	3/10/2014		<0.147	
20 KINGSBURY BEACH ROAD	7/21/2016		0.0819J	**3Q2016**
15 KNOWLES STREET	5/13/2015		<0.147	
	4/26/2013		0.078J	
25 KNOWLES STREET	5/8/2014		3.72	
	5/8/2014	Duplicate	3.58	
	9/18/2013		4.3	
	8/27/2013		3.2	
	7/25/2013		2.8	
	6/27/2013		2.8	
	6/27/2013	Duplicate	3.0	
	5/29/2013		2.7	
	5/29/2013	Duplicate	2.8B	
	4/26/2013		2.8	
	4/26/2013	Duplicate	2.6	
	2/21/2013		3.1	
	2/21/2013	Duplicate	2.9	
30 KNOWLES STREET	5/6/2014		4.79	
	5/6/2014	Duplicate	4.92	
	9/17/2013		5.4	
	8/28/2013		5.6	
	7/30/2013		5.1	
	7/30/2013	Duplicate	5.1	
	6/27/2013		5.0	
	6/27/2013	Duplicate	5.1	
	5/29/2013		4.9	
	5/29/2013	Duplicate	5.9B	
	4/29/2013		6.0	
	4/29/2013	Duplicate	5.2	
	2/19/2013		6.9	
	2/19/2013	Duplicate	6.4	
45 KNOWLES STREET	5/6/2014		2.22	
	5/6/2014	Duplicate	2.38	
	8/28/2013		2.0	
	5/1/2013		2.3	
	5/1/2013	Duplicate	2.4	

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Property	Date	Duplicate	1,4 Dioxane	
50 KNOWLES STREET	7/21/2016		0.0809J	3Q2016
	11/11/2015		<0.144	
	8/12/2015		<0.144	
	8/12/2015	Duplicate	<0.144	
	2/16/2015		0.195	
	6/19/2014		0.0910J	
	4/14/2014		<0.144	
	2/19/2013		0.26	
	2/19/2013	Duplicate	0.23	
60 KNOWLES STREET	3/2/2015		<0.150	
	3/2/2015	Duplicate	<0.152	
	12/4/2013		0.049J	
	2/21/2013		0.063J	
65 KNOWLES STREET	10/28/2014		0.102J	
	6/16/2014		0.209	
	6/16/2014	Duplicate	0.217	
	3/27/2014		5.03	
	3/27/2014	Duplicate	5.42	
	7/23/2013		0.11J	
70 KNOWLES STREET	6/16/2014		<0.147	
	2/20/2013		0.057J	
75 KNOWLES STREET	5/8/2014		<0.144	
	4/30/2013		0.075J	
80 KNOWLES STREET	8/12/2015		<0.144	
	8/12/2015	Duplicate	<0.144	
100 MEETINGHOUSE ROAD	9/19/2014		1.75	
	5/6/2014		1.90	
	3/14/2014		1.73	
	11/20/2013		1.3	
	8/27/2013		1.9	
	5/8/2013		1.8	
	5/8/2013	Duplicate	1.7	
	2/14/2013		1.6	
	2/14/2013	Duplicate	1.5	
125 MEETINGHOUSE ROAD	7/21/2016		0.193	3Q2016
	7/21/2016	Duplicate	0.111J	3Q2016
	5/8/2013		0.15J	
140 MEETINGHOUSE ROAD	3/24/2014		<0.150	
	5/10/2013		0.11J	
150 MEETINGHOUSE ROAD	2/22/2013		<0.20	
155 MEETINGHOUSE ROAD	8/15/2014		0.379	
	8/15/2014	Duplicate	0.36	
	7/31/2013		0.46	
	7/31/2013	Duplicate	0.35	
160 MEETINGHOUSE ROAD	2/12/2013		<0.20	
165 MEETINGHOUSE ROAD	5/9/2014		0.746	
	5/9/2014	Duplicate	0.748	
	2/15/2013		0.75	
	2/15/2013	Duplicate	0.67	

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170 MEETINGHOUSE ROAD	5/12/2016		<0.147
	5/13/2015		<0.144
	8/15/2014		<0.144
	2/15/2013		<0.20
171 MEETINGHOUSE ROAD REAR	5/1/2013		0.58
175 MEETINGHOUSE ROAD	9/19/2014		<0.156
	5/2/2013		<0.20
180 MEETINGHOUSE ROAD	5/1/2013		<0.20
185 MEETINGHOUSE ROAD	3/27/2014		<0.139
	4/30/2013		0.081J
190 MEETINGHOUSE ROAD REAR	5/9/2014		<0.142
200 MEETINGHOUSE ROAD	7/23/2014		<0.147
	5/3/2013		0.093J
205 MEETINGHOUSE ROAD	5/5/2014		0.310
	5/5/2014	Duplicate	0.319
	12/3/2013		0.30
	12/3/2013	Duplicate	0.26
225 MEETINGHOUSE ROAD	5/9/2014		0.196
	5/9/2014	Duplicate	0.178
	5/10/2013		0.13J
255 MEETINGHOUSE ROAD	4/26/2013		0.065J
270 MEETINGHOUSE ROAD	2/16/2015		<0.146
275 MEETINGHOUSE ROAD	8/1/2014		<0.144
	7/23/2013		<0.20
310 MEETINGHOUSE ROAD	8/12/2015		0.103J
	8/12/2015	Duplicate	0.113J
350 MEETINGHOUSE ROAD	5/5/2014		1.23
	5/5/2014	Duplicate	1.24
	7/25/2013		1.3
	7/25/2013	Duplicate	1.2
355 MEETINGHOUSE ROAD	12/5/2013		<0.20
370 MEETINGHOUSE ROAD	5/8/2014		0.339
	5/8/2014	Duplicate	0.316
	4/30/2013		0.19J
375 MEETINGHOUSE ROAD	2/12/2016		0.133J
	11/11/2015		0.138J
	4/1/2015		0.114J
	11/20/2014		0.212
	11/20/2014	Duplicate	0.187
	3/24/2014		0.175
	3/24/2014	Duplicate	0.156
	8/2/2013		0.19J
385 MEETINGHOUSE ROAD	8/1/2014		<0.142
	7/24/2013		0.040J
400 MEETINGHOUSE ROAD	7/24/2013		0.12J
415 MEETINGHOUSE ROAD	12/3/2013		0.14J
440 MEETINGHOUSE ROAD	7/31/2013		<0.20
20 MOLLS POND ROAD	2/19/2013		0.050J
30 MOLLS POND ROAD	2/15/2013		<0.20
50 MOLLS POND ROAD	2/11/2013		<0.20
60 MOLLS POND ROAD	2/11/2013		<0.20

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Property		Date	Duplicate	1,4 Dioxane
400 NAUSET ROAD-SALT PND VIS CTR		8/12/2014		<0.144
		12/2/2013		<0.20
55 NORTHWOOD ROAD		8/2/2013		0.15J
25 OLD ORCHARD ROAD		5/6/2013		0.064J
45 OLD ORCHARD ROAD		3/17/2015		<0.167
		2/22/2013		<0.20
75 OLD ORCHARD ROAD		5/12/2016		0.100J
		8/15/2014		<0.150
		2/21/2013		0.17J
80 OLD ORCHARD ROAD		7/31/2014		<0.144
		2/12/2013		<0.20
100 OLD ORCHARD ROAD		7/31/2014		<0.144
		2/12/2013		<0.20
130A OLD ORCHARD ROAD		5/29/2015		<0.153
		12/17/2014		<0.142
		12/18/2013		<0.20
		2/25/2013		<0.20
130B OLD ORCHARD ROAD		5/13/2016		<0.142
		5/29/2015		<0.147
		12/17/2014		<0.142
		12/18/2013		<0.20
		2/25/2013		<0.20
180 OLD ORCHARD ROAD		9/18/2014		0.137J
		5/6/2014		0.527
		3/14/2014		0.0953J
		11/20/2013		0.17J
		8/28/2013		0.46
		6/27/2013		0.45
		5/8/2013		0.52
		2/22/2013		0.045J
210 OLD ORCHARD ROAD		5/13/2016		<0.144
		12/18/2013		<0.20
		2/15/2013		<0.20
290 OLD ORCHARD ROAD		5/12/2016		<0.147
	Effluent	3/2/2015		<0.144
	Untreated	3/2/2015		<0.156
		7/23/2014		<0.144
		5/16/2013		0.068J
		2/15/2013		<0.20
310 OLD ORCHARD ROAD		5/6/2014		0.431
		5/6/2014	Duplicate	0.433
		4/29/2013		0.41
350 OLD ORCHARD ROAD		8/1/2014		<0.142
		5/3/2013		<0.20
370 OLD ORCHARD ROAD		5/2/2013		<0.20
390 OLD ORCHARD ROAD		5/7/2013		<0.20
400 OLD ORCHARD ROAD		5/7/2013		<0.20
50 PIPER LANE		2/20/2013		<0.20
65 PIPER LANE		7/31/2013		<0.20

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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

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1 PRESERVATION WAY	8/25/2014		0.174	
	8/25/2014	Duplicate	0.199	
	12/2/2013		0.19J	
4 PRESERVATION WAY	7/21/2016		0.248	3Q2016
	7/21/2016	Duplicate	0.173	3Q2016
	5/13/2016		0.197	
	5/13/2016	Duplicate	0.21	
	2/12/2016		0.209	
	2/12/2016	Duplicate	0.208	
	11/11/2015		0.204	
	11/11/2015	Duplicate	0.165	
	8/12/2015		0.211	
	8/12/2015	Duplicate	0.222	
	4/1/2015		0.183	
	4/1/2015	Duplicate	0.207	
	10/28/2014		0.208	
	7/17/2014		0.192	
	7/17/2014	Duplicate	0.217	
	3/25/2014		0.208	
	3/25/2014	Duplicate	0.196	
	12/3/2013		0.18J	
	4/30/2013		0.21	
6 PRESERVATION WAY	12/2/2013		0.11J	
8 PRESERVATION WAY	12/2/2013		0.13J	
20 REDBERRY LANE	7/23/2013		0.046J	
35 REDBERRY LANE	12/2/2013		0.070J	
45 REDBERRY LANE	3/28/2014		0.105J	
55 REDBERRY LANE	7/22/2013		0.047J	
45 SALT POND ROAD	7/21/2016		0.195	3Q2016
	7/21/2016	Duplicate	0.188	3Q2016
49 SALT POND ROAD	3/11/2014		0.177	
	3/11/2014	Duplicate	0.166	
55 SALT POND ROAD	9/1/2016		0.681	3Q2016
	7/21/2016		0.596	3Q2016
25 SCHOOLHOUSE ROAD	3/10/2014		<0.150	
55 SCHOOLHOUSE ROAD	12/4/2013		0.044J	
85 SCHOOLHOUSE ROAD	12/5/2013		<0.20	
90 SCHOOLHOUSE ROAD	6/23/2014		<0.139	
180 SCHOOLHOUSE ROAD	7/23/2013		0.093J	

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200 SCHOOLHOUSE ROAD		7/21/2016		0.0799J	3Q2016
		5/13/2016		<0.144	
		2/12/2016		0.0763J	
		11/18/2015		<0.142	
		8/12/2015		0.0961J	
		8/12/2015	Duplicate	0.106J	
		5/13/2015		0.100J	
		2/13/2015		0.0892J	
		11/20/2014		0.0884J	
		11/20/2014	Duplicate	0.0808J	
		8/4/2014		0.0822J	
	PRE (filter)	5/6/2014		0.105J	
	PRE (filter)	2/14/2014		0.083J	
	POST (filter)	2/14/2014		0.094J	
	PRE (filter)	2/14/2014	Duplicate	0.076J	
	POST (filter)	2/11/2014		0.096J	
	PRE (filter)	2/11/2014		0.081J	
	PRE (filter)	2/11/2014	Duplicate	0.086J	
		2/12/2013		<0.20	
210 SCHOOLHOUSE ROAD		5/6/2013		<0.20	
230 SCHOOLHOUSE ROAD		5/8/2013		<0.20	
255 SCHOOLHOUSE ROAD		7/22/2013		0.055J	
265 SCHOOLHOUSE ROAD		7/23/2014		0.0945J	
		2/21/2013		0.053J	
280 SCHOOLHOUSE ROAD		2/22/2013		0.071J	
300 SCHOOLHOUSE ROAD		5/7/2014		0.168	
		5/7/2014	Duplicate	0.177	
		2/19/2013		0.14J	

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Property		Date	Duplicate	1,4 Dioxane
325 SCHOOLHOUSE ROAD	Effluent	9/19/2013		0.68
	Mid System	9/19/2013		0.095J
	Untreated	9/19/2013		10
	Mid System	8/27/2013		<0.20
	Untreated	8/27/2013		7.7
	Effluent	8/27/2013		<0.20
	Mid System	7/31/2013		<0.20
	Effluent	7/31/2013		<0.20
	Untreated	7/31/2013		9.4
	Untreated	7/31/2013	Duplicate	8.8
	Mid System	6/27/2013		0.041J
	Effluent	6/27/2013		<0.20
	Untreated	6/27/2013		8.2
	Untreated	6/27/2013	Duplicate	8.8
	Effluent	5/29/2013		<0.20
	Untreated	5/29/2013		7.8
	Mid System	5/29/2013		<0.20
	Untreated	5/29/2013	Duplicate	9.8B
	Untreated	4/29/2013		9.8
	Effluent	4/29/2013		<0.20
	Mid System	4/29/2013		<0.20
	Untreated	4/29/2013	Duplicate	8.3
	Effluent	3/21/2013		<0.20
	Mid System	3/21/2013		<0.20
	Mid System	3/14/2013		<0.20
	Effluent	3/14/2013		<0.20
	Effluent	3/8/2013		<0.20
	Mid System	3/8/2013		<0.20
	Mid System	2/25/2013		<0.20
	Effluent	2/25/2013		<0.20
	Untreated	2/22/2013		10
	Untreated	2/22/2013	Duplicate	9.7
345 SCHOOLHOUSE ROAD		5/7/2014		<0.153
		2/12/2013		0.12J
350 SCHOOLHOUSE ROAD		8/2/2013		<0.20
390 SCHOOLHOUSE ROAD		5/7/2013		<0.20
395 SCHOOLHOUSE ROAD		9/19/2013		<0.20
400 SCHOOLHOUSE ROAD		5/16/2013		<0.20
415 SCHOOLHOUSE ROAD		1/23/2015		<0.144
		8/5/2014		0.0895J
		2/25/2013		<0.20
418 SCHOOLHOUSE ROAD		5/2/2013		<0.20
425 SCHOOLHOUSE ROAD		2/25/2013		<0.20
455 SCHOOLHOUSE ROAD		5/6/2013		<0.20
475 SCHOOLHOUSE ROAD		12/6/2013		<0.20
495 SCHOOLHOUSE ROAD		12/6/2013		<0.20
555 SCHOOLHOUSE ROAD		5/29/2013		0.048J
560 SCHOOLHOUSE ROAD		10/5/2015		<0.142
590 SCHOOLHOUSE ROAD		5/13/2015		0.107J

Notes:
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J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Analyte detected in Blank and Sample
L - LCS or LCSD exceeded the control limits. Results may be biased high.
GW-1 Standard and ORSG for 1,4 dioxane is 0.3 ug/L
Samples collected during this quarter are highlighted in red.

Property	Date	Duplicate	1,4 Dioxane
600 SCHOOLHOUSE ROAD	10/28/2014		0.347
	6/26/2014		0.226
	6/26/2014	Duplicate	0.206
690 SCHOOLHOUSE ROAD	3/11/2014		0.105J
720 SCHOOLHOUSE ROAD	10/5/2015		0.117J
725 SCHOOLHOUSE ROAD	2/16/2015		<0.146
825 SCHOOLHOUSE ROAD	10/9/2015		<0.153
835 SCHOOLHOUSE ROAD	10/6/2015		0.132J
850 SCHOOLHOUSE ROAD	10/5/2015		0.0758J
875 SCHOOLHOUSE ROAD	10/5/2015		<0.147
915 SCHOOLHOUSE ROAD	10/6/2015		<0.142
3 SELAH CIRCLE	4/30/2013		0.072J
4 SELAH CIRCLE	5/6/2014		<0.143
	9/18/2013		0.065J
3 SHARON CIRCLE	7/31/2013		0.064J
5 SHARON CIRCLE	5/3/2013		<0.20
10 SHARON CIRCLE	5/16/2013		0.088J
20 SHARON CIRCLE	3/24/2014		0.104J
	4/30/2013		0.10J
25 SHARON CIRCLE	9/19/2014		<0.15
	9/19/2013		<0.20
35 SHARON CIRCLE	6/19/2014		0.143
	6/19/2014	Duplicate	0.154
	5/1/2013		0.34
20 SPINNAKER WAY	11/18/2015		<0.147
30 SPINNAKER WAY	10/6/2015		<0.142
40 SPINNAKER WAY	10/9/2015		<0.147
60 SPINNAKER WAY	10/9/2015		<0.142
5 STARLIGHT LANE	5/5/2014		0.394
	5/5/2014	Duplicate	0.362
	2/21/2013		0.37
	2/21/2013	Duplicate	0.37
10 STARLIGHT LANE	8/4/2014		<0.144
	5/10/2013		<0.20
13 STARLIGHT LANE	8/1/2014		<0.142
	5/10/2013		<0.20
20 STARLIGHT LANE	1/30/2015		0.164
	1/30/2015	Duplicate	0.171
	5/7/2013		<0.20
30 STARLIGHT LANE	6/26/2014		0.279
	6/26/2014	Duplicate	0.302
	3/25/2014		0.278
	3/25/2014	Duplicate	0.249
	12/4/2013		0.22
	12/4/2013	Duplicate	0.17J
	5/3/2013		0.21
35 STARLIGHT LANE	4/1/2015		0.315
	12/4/2013		0.37
	12/4/2013	Duplicate	0.30
	2/15/2013		0.26

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GW-1 Standard and ORSG for 1,4 dioxane is 0.3 ug/L
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Property	Date	Duplicate	1,4 Dioxane
40 STARLIGHT LANE	6/26/2014		0.874
	6/26/2014	Duplicate	0.936
	7/23/2013		0.83
45 STARLIGHT LANE	3/2/2015		1.21
	3/2/2015	Duplicate	1.29
	2/12/2013		1.1
	2/12/2013	Duplicate	0.93
50 STARLIGHT LANE	3/27/2014		<0.139
	7/31/2013		0.13J
3070 STATE HWY	12/6/2013		0.18J
3100 A STATE HWY	10/28/2014		<0.150
	3/13/2014		<0.139
3168 STATE HWY	3/17/2015		0.398
	5/5/2014		0.334
	5/5/2014	Duplicate	0.350
	12/6/2013		0.33
	12/6/2013	Duplicate	0.27
3172 STATE HWY BACKUP WELL	3/25/2014		0.335
	3/25/2014	Duplicate	0.338
3172 STATE HWY PRIMARY WELL	3/17/2015		0.345
	3/25/2014		0.326
	3/25/2014	Duplicate	0.306
	12/6/2013		0.20
	12/6/2013	Duplicate	0.21
3200 STATE HWY	5/8/2014		0.424
	5/8/2014	Duplicate	0.418
	12/6/2013		0.31
	12/6/2013	Duplicate	0.32
3265 STATE HWY	3/10/2014		<0.147
3280 STATE HWY	4/14/2014		0.248
	4/14/2014	Duplicate	0.198
3315 STATE HWY	3/12/2014		0.232
	3/12/2014	Duplicate	0.194
3430 STATE HWY	12/2/2013		<0.20
3440 STATE HWY	4/11/2014		<0.142
3460 STATE HWY	12/6/2013		0.14J
	4/30/2013		0.10J
30 SURREY DRIVE	9/17/2013		0.14J
35 SURREY DRIVE	7/31/2013		0.070J
50 SURREY DRIVE	4/30/2013		0.058J
55 SURREY DRIVE	5/1/2013		<0.20
65 SURREY DRIVE	7/22/2013		0.047J
10 TURTLE POND ROAD	5/10/2013		<0.20
5 WALTERS WAY	4/11/2014		0.147
	4/11/2014	Duplicate	<0.144
1 WHIDAH LANE	7/31/2014		<0.144
	4/29/2013		<0.20
3 WHIDAH LANE	5/5/2014		<0.144
	5/16/2013		0.071J
4 WHIDAH LANE	7/24/2013		<0.20
5 WHIDAH LANE	7/30/2013		<0.20
8 WHIDAH LANE	9/19/2013		0.57

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Samples collected during this quarter are highlighted in red.

Property	Date	Duplicate	1,4 Dioxane
9 WHIDAH LANE	7/31/2014		<0.144
	5/7/2013		<0.20
30 WILD GOOSE LANE	6/23/2014		0.109J
35 WILD GOOSE LANE	12/6/2013		0.081J
45 WILD GOOSE LANE	12/3/2013		0.058J
50 WILD GOOSE LANE	12/4/2013		<0.20

Notes:
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B - Analyte detected in Blank and Sample
L - LCS or LCSD exceeded the control limits. Results may be biased high.
GW-1 Standard and ORSG for 1,4 dioxane is 0.3 ug/L
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	Date	Duplicate	1,4 Dioxane
Background Samples			
5 ACORN ROAD	5/3/2013		0.042J
10 BALLWIC ROAD	3/13/2014		<0.139
215 BAYSIDE DRIVE	6/19/2014		<0.142
60 BISHOP ROAD	3/11/2014		<0.147
550 BRACKET ROAD	9/19/2014		0.119J
1825 BRIDGE ROAD	3/11/2014		<0.150
60 BRIGGS FIELD ROAD	5/1/2013		<0.20
395 CANDLEWOOD DRIVE	5/8/2013		<0.20
CCNS Stevens House 105 Brownell Rd.	8/13/2014		<0.147
CCNS Delfino House 880 Cable Rd.	8/13/2014		<0.144
CCNS Coast Guard Beach Doane Rd. Rear	8/12/2014		<0.144
CCNS Doane Rock Picnic Area Doane Rd.	8/12/2014		0.116J
CCNS Young House 585 Doane Rd. Rear	8/13/2014		<0.147
CCNS Humphrey House 25 MacPherson Wy.	8/12/2014		<0.144
CCNS Nauset Light Beach Ocean View Dr.	8/12/2014		<0.144
CCNS Nauset Ranger Station 1050 Nauset Rd.	8/12/2014		<0.147
CCNS Sparrow House 600 Nauset Rd.	8/12/2014		<0.147
CCNS Withus House 850 Nauset Rd.	8/12/2014		<0.147
CCNS Bartett House 40 Ocean View Dr.	8/13/2014		<0.15
CCNS Deane House 22 Tomahawk Trail	8/13/2014		<0.15
CCNS Lyman House 28 Tomahawk Trail	8/13/2014		<0.147
CCNS Benz House 30 Tomahawk Trail	8/13/2014		<0.144
20 CEDAR LANE	5/7/2014		<0.144
25 CEDAR LANE	5/7/2014		<0.144
30 CEDAR LANE	3/25/2014		0.289
	3/25/2014	Duplicate	0.285
35 CEDAR LANE	5/7/2014		<0.142
52 DYER PRINCE ROAD	7/17/2014		<0.144
235 ELDREDGE DRIVE	7/17/2014		<0.144
20 GUERRA WAY #42	4/29/2013		<0.20
20 GUERRA WAY #59	4/29/2013		0.15J
65 KETTLE HOLE ROAD	4/26/2013		<0.20
80 KETTLE HOLE ROAD	5/1/2013		<0.20
115 KINGSBURY BEACH ROAD	3/12/2014		<0.150
155 MARY CHASE ROAD	4/14/2014		<0.145
295 MASSASOIT ROAD	3/10/2014		<0.144
130 MASSASOIT TRAIL	6/26/2014		0.156
	6/26/2014	Duplicate	0.151
155 MEADOW DRIVE	3/13/2014		<0.139
1525 NAUSET ROAD	3/10/2014		<0.153
265 NORTH SUNKEN MEADOW ROAD	3/13/2014		<0.139
40 ROGERS LANE	6/23/2014		<0.139
190 SAMOSET ROAD	12/6/2013		0.048J
1000 SCHOOLHOUSE ROAD	7/23/2014		<0.144
20 SEASHELL LANE	6/23/2014		<0.139
10 SPINNAKER WAY	8/25/2014		<0.142
44 SQUIRREL RUN	7/17/2014		<0.142

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GW-1 Standard and ORSG for 1,4 dioxane is 0.3 ug/L
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

TABLE 3
SUMMARY OF
EASTHAM LANDFILL MONITORING PLAN REQUIREMENTS

Monitoring Type	RES #	Bottled Water List	Continue LMP Sampling	Frequency	Time Frame	VOCs & 1,4-Dioxane	Inorganics	Indicators	Methane, VOCs, O2 & H2S
Monitoring Wells									
MW-3I/3D			Yes	Quarterly	Quarterly	x	x	x	
MW-21S			Yes	Semi-Annually	Spring & Fall	x			
MW-2S, 4S & 5S			Yes	Annually	Fall	x	x	x	
MW-8, DPW Well			Yes	Annually	Fall	x			
Landfill Gas Wells									
GMW-1, 2, 2A, 2B, 3 & 4			Yes	Semi-Annually	Spring & Fall				x
Residential Wells									
265 Alston	RES-18	No	Yes	Annually	2nd Quarter	x	x		
280 Alston	RES-16	No	Yes	Annually	2nd Quarter	x	x		
125 Meetinghouse	RES-7	No	Yes	Annually	2nd Quarter	x	x		
170 Meetinghouse	RES-33	No	Yes	Annually	2nd Quarter	x			
75 Old Orchard	RES-13	No	Yes	Annually	2nd Quarter	x	x		
130 Old Orchard	RES-9	No	Yes	Annually	2nd Quarter	x	x		
210 Old Orchard	RES-3	No	Yes	Annually	2nd Quarter	x	x		
290 Old Orchard	RES-2	No	Yes	Annually	2nd Quarter	x	x		

1st Quarter: December - February (winter)
2nd Quarter: March - May (spring)
3rd Quarter: June - August (summer)
4th Quarter : September - November

TABLE 4.1
SECTION 1
SUMMARY OF LANDFILL MONITORNG PLAN
GROUNDWATER ANALYTICAL RESULTS
Volatile Organic Compounds

Eastham Landfill Monitoring Wells and Private Drinking Wells
Eastham, MA
(All results in ug/l)

Property	LMP Sample Frequency	Date	1,4-Dioxane	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene
Standards										
GW1			0.3	5	200	2	5	70	7	NA
GW3			50000	50000	20000	50000	50000	20000	30000	NA
MMCL			NA	NA	200	NA	5	NA	7	NA
ORSG			0.3	NA	NA	NA	NA	70	NA	NA
Results										
MW 10		10/27/2014	0.186	NS	NS	NS	NS	NS	NS	NS
MW 21D		10/27/2014	0.215	NS	NS	NS	NS	NS	NS	NS
		2/25/2013	<50	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0
MW 21S	Semi-Annual	5/13/2015	3.19	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		10/27/2014	2.93	NS	NS	NS	NS	NS	NS	NS
		5/16/2013	<50	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0
		12/7/2012	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 2D		2/14/2013	0.14 J	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 2S	Annual	11/24/2015	0.633	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		12/16/2014	0.337	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		12/18/2013	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013	0.47	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		7/10/2012	<500	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
ORSG-Office of Research and Standards Guideline
NS - Not Sampled
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Analyte detected in Blank and Sample
* Residential samples will be tested for all VOCs during 2nd quarter of the year.

ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		1,4-Dioxane	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene
MW 3D	Quarterly	8/10/2016		7.32	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		5/18/2016		7.79	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		2/23/2016		7.23	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		11/24/2015		8.65	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		8/26/2015		8.94	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		5/13/2015		11	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		11/10/2014		<2.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		11/10/2014	Duplicate	<2.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		10/27/2014		12.8	NS	NS	NS	NS	NS	NS	NS
		9/3/2014		<500	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/19/2014		13	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0
		2/27/2014		12	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0
		11/25/2013		16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		9/5/2013		<500	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		5/8/2013		17	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013		<500	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		12/6/2012		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		10/9/2012		18	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		7/10/2012		<500	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		3/20/2012		<500	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 3I	Quarterly	8/10/2016		<0.144	<1.0	<1.0	<1.0	<1.0	0.39J	<1.0	<2.0
		5/18/2016		<0.144	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		2/23/2016		<0.147	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		11/24/2015		<0.147	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		8/26/2015		<0.147	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		5/13/2015		<0.147	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		12/16/2014		<0.142	NS	NS	NS	NS	NS	NS	NS
		11/10/2014		<2.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		9/3/2014		<500	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/19/2014		<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0
		2/27/2014		<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0
		11/25/2013		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		9/5/2013		<500	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		5/8/2013		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013		<500	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013		<0.20	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		10/9/2012		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		7/10/2012		<500	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		3/20/2012		<500	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes: GW-1 and GW-3 MCP Method 1 Standards
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ORSG-Office of Research and Standards Guideline
NS - Not Sampled
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Analyte detected in Blank and Sample
* Residential samples will be tested for all VOCs during 2nd quarter of the year.

ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		1,4-Dioxane	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene
MW 3S		2/14/2013		<0.20	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 4D		10/27/2014		<0.150	NS	NS	NS	NS	NS	NS	NS
		2/14/2013		<0.20	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 4S	Annual	11/24/2015		0.842	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		12/16/2014		<250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		10/27/2014		0.652	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013		1.5	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		7/10/2012		<500	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 5D		10/27/2014		<0.153	NS	NS	NS	NS	NS	NS	NS
		2/14/2013		<0.20	NS	NS	NS	NS	NS	NS	NS
		12/5/2012		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 5S	Annual	11/24/2015		1.39	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		12/16/2014		<250	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		10/27/2014		1.65	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013		1.2	NS	NS	NS	NS	NS	NS	NS
		12/5/2012		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		7/10/2012		<500	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 7		10/27/2014		<0.150	NS	NS	NS	NS	NS	NS	NS
MW 8	Annual	11/24/2015		0.238	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		12/16/2014		0.283	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		12/18/2013		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		3/14/2013		0.33	NS	NS	NS	NS	NS	NS	NS
		12/7/2012		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 21S	Semi-Annual	11/10/2015		0.202	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
DPW WELL	Annual	11/24/2015		<0.144	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		12/16/2014		0.0793J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
265 ALSTON AVENUE	Annual	5/12/2016		<0.147	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		5/12/2016	Duplicate	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		4/1/2015		<0.148	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		3/28/2014		<0.139	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		3/14/2013		0.055J	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes: GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
ORSG-Office of Research and Standards Guideline
NS - Not Sampled
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Analyte detected in Blank and Sample
* Residential samples will be tested for all VOCs during 2nd quarter of the year.

ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		1,4-Dioxane	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene
280 ALSTON AVENUE	Annual	5/12/2016		<0.147	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		5/13/2015		<0.156	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		12/17/2014		<0.142	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/22/2013		<0.20	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
125 MEETINGHOUSE ROAD	Annual	7/21/2016		0.193	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		7/21/2016	Duplicate	0.111J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		5/8/2013		0.15J	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
170 MEETINGHOUSE ROAD	Annual	5/12/2016		<0.147	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		5/12/2016	Duplicate	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		5/13/2015		<0.144	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		8/15/2014		<0.144	NS	NS	NS	NS	NS	NS	NS
		2/15/2013		<0.20	NS	NS	NS	NS	NS	NS	NS
		12/8/2012		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
75 OLD ORCHARD ROAD	Annual	5/12/2016		0.100J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		5/12/2016	Duplicate	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		8/15/2014		<0.150	NS	NS	NS	NS	NS	NS	NS
		2/21/2013		0.17J	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
130 OLD ORCHARD ROAD	Annual	12/6/2012		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
130A OLD ORCHARD ROAD	Annual	5/29/2015		<0.153	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		12/17/2014		<0.142	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/25/2013		<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
130B OLD ORCHARD ROAD	Annual	5/13/2016		<0.142	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		5/29/2015		<0.147	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		12/17/2014		<0.142	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/25/2013		<0.20	NS	NS	NS	NS	NS	NS	NS
210 OLD ORCHARD ROAD	Annual	5/13/2016		<0.144	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		12/18/2013		<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/15/2013		<0.20	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes: GW-1 and GW-3 MCP Method 1 Standards
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		1,4-Dioxane	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene
290 OLD ORCHARD ROAD	Annual	5/12/2016		<0.147	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		3/2/2015	Inf.	<0.156	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		3/2/2015	Eff.	<0.144	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
		7/23/2014		<0.144	NS	NS	NS	NS	NS	NS	NS
		5/16/2013		0.068J	NS	NS	NS	NS	NS	NS	NS
		5/9/2013		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/15/2013		<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
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ENVIRONMENTAL & ENGINEERING SOLUTIONS

TABLE 4.1
SECTION 2
SUMMARY OF LANDFILL MONITORNG PLAN
GROUNDWATER ANALYTICAL RESULTS
Volatile Organic Compounds

Eastham Landfill Monitoring Wells and Private Drinking Wells
Eastham, MA
(All results in ug/l)

Property	LMP Sample Frequency	Date	EDB	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
Standards											
GW1			0.02	NA	NA	70	NA	NA	600	5	5
GW3			50000	NA	NA	50000	NA	NA	2000	20000	50000
MMCL			0.02	NA	NA	70	NA	0.2	600	5	5
ORSG			NA	NA	NA	NA	NA	NA	NA	NA	NA
Results											
MW 10		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW 21D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/25/2013		<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0
MW 21S	Semi-Annual	5/13/2015	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/16/2013		<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0
		12/7/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 2D		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 2S	Annual	11/24/2015	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		12/16/2014	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		12/18/2013	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		7/10/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
ORSG-Office of Research and Standards Guideline
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J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Analyte detected in Blank and Sample
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		EDB	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
MW 3D	Quarterly	8/10/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		5/18/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		2/23/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		11/24/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		8/26/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		5/13/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		11/10/2014		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		11/10/2014	Duplicate	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		9/3/2014		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/19/2014		<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0
		2/27/2014		<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0
		11/25/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		9/5/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		5/8/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		10/9/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		7/10/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		3/20/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date	EDB	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
MW 3I	Quarterly	8/10/2016	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		5/18/2016	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		2/23/2016	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		11/24/2015	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		8/26/2015	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		5/13/2015	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		12/16/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
		11/10/2014	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		9/3/2014	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/19/2014	<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0
		2/27/2014	<0.50	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0
		11/25/2013	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		9/5/2013	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		5/8/2013	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		10/9/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		7/10/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		3/20/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 3S		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 4D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 4S	Annual	11/24/2015	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		12/16/2014	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		7/10/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 5D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
ORSG-Office of Research and Standards Guideline
NS - Not Sampled
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Analyte detected in Blank and Sample
* Residential samples will be tested for all VOCs during 2nd quarter of the year.

ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		EDB	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
MW 5S	Annual	11/24/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		12/16/2014		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		7/10/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 7		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
MW 8	Annual	11/24/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		12/16/2014		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		3/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/7/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 21S	Semi-Annual	11/10/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
DPW WELL	Annual	11/24/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		12/16/2014		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
265 ALSTON AVENUE	Annual	5/12/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		5/12/2016	Duplicate	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		4/1/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		3/28/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		3/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
280 ALSTON AVENUE	Annual	5/12/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		5/13/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		12/17/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/22/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
125 MEETINGHOUSE	Annual	7/21/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		7/21/2016	Duplicate	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		5/8/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		EDB	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
170 MEETINGHOUSE	Annual	5/12/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		5/12/2016	Duplicate	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		5/13/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		8/15/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/15/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/8/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
75 OLD ORCHARD	Annual	5/12/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		5/12/2016	Duplicate	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		8/15/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/21/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
130 OLD ORCHARD	Annual	12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
130A OLD ORCHARD	Annual	5/29/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		12/17/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/25/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
130B OLD ORCHARD	Annual	5/13/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		5/29/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		12/17/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/25/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
210 OLD ORCHARD	Annual	5/13/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/15/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
290 OLD ORCHARD	Annual	5/12/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		3/2/2015	Inf.	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		3/2/2015	Eff.	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		7/23/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/16/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/9/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/15/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes: GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

TABLE 4.1
SECTION 3
SUMMARY OF LANDFILL MONITORNG PLAN
GROUNDWATER ANALYTICAL RESULTS
Volatile Organic Compounds

Eastham Landfill Monitoring Wells and Private Drinking Wells
Eastham, MA
(All results in ug/l)

Property	LMP Sample Frequency	Date	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone (MEK)	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene
Standards											
GW1			NA	100	NA	5	NA	4000	NA	NA	NA
GW3			NA	50000	NA	8000	NA	50000	NA	NA	NA
MMCL			NA	NA	NA	5	NA	NA	NA	NA	NA
ORSG			NA	NA	NA	NA	NA	4000	NA	NA	NA
Results											
MW 10		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW 21D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/25/2013	<1.0	<1.0	<1.0	<1.0	<1.0	2.1J *	<1.0	<10	<1.0
MW 21S	Semi-Annual	5/13/2015	<2.0	<1.0	<2.0	<1.0	<2.0		<2.0	<5.0	<2.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/16/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<10	<1.0
		12/7/2012	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50	NS	<0.50
MW 2D		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
MW 2S	Annual	11/24/2015	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		12/16/2014	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		12/18/2013	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		7/10/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
ORSG-Office of Research and Standards Guideline
NS - Not Sampled
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Analyte detected in Blank and Sample
* Residential samples will be tested for all VOCs during 2nd quarter of the year.

ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone (MEK)	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene
MW 3D	Quarterly	8/10/2016		<2.0	<1.0	<2.0	0.28J	<2.0	<5.0	<2.0	<5.0	<2.0
		5/18/2016		<2.0	<1.0	<2.0	0.23J	<2.0	<5.0	<2.0	<5.0	<2.0
		2/23/2016		<2.0	<1.0	<2.0	0.28J	<2.0	<5.0	<2.0	<5.0	<2.0
		11/24/2015		<2.0	<1.0	<2.0	0.30J	<2.0	<5.0	<2.0	<5.0	<2.0
		8/26/2015		<2.0	<1.0	<2.0	0.28 J	<2.0	<5.0	<2.0	<5.0	<2.0
		5/13/2015		<2.0	<1.0	<2.0	0.33J	<2.0	<5.0	<2.0	<5.0	<2.0
		11/10/2014		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		11/10/2014	Duplicate	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		9/3/2014		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/19/2014		<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<0.50	<1.0
		2/27/2014		<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<0.50	<1.0
		11/25/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		9/5/2013		<0.50	<0.50	<0.50	0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		5/8/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		2/14/2013		<0.50	<0.50	<0.50	0.51	<0.50	<5.0	<0.50	<5.0	<0.50
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		10/9/2012		<0.50	<0.50	<0.50	0.55	<0.50	<5.0	<0.50	<5.0	<0.50
		7/10/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		3/20/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
MW 3I	Quarterly	8/10/2016		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		5/18/2016		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		2/23/2016		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		11/24/2015		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		8/26/2015		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		5/13/2015		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		12/16/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		11/10/2014		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		9/3/2014		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/19/2014		<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<0.50	<1.0
		2/27/2014		<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<0.50	<1.0
		11/25/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		9/5/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		5/8/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		2/14/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		10/9/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		7/10/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		3/20/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50

Notes: GW-1 and GW-3 MCP Method 1 Standards
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone (MEK)	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene
MW 3S		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
MW 4D		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
MW 4S	Annual	11/24/2015		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		12/16/2014		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		7/10/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
MW 5D		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
MW 5S	Annual	11/24/2015		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		12/16/2014		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		7/10/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
MW 7		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
MW 8	Annual	11/24/2015		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		12/16/2014		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
		3/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/7/2012		<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50	NS	<0.50
MW 21S	Semi-Annual	11/10/2015		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
DPW WELL	Annual	11/24/2015		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		12/16/2014		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
265 ALSTON AVENUE	Annual	5/12/2016		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		5/12/2016	Duplicate	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		4/1/2015		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		3/28/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50		<0.50
		3/14/2013		NS	NS	NS	NS	NS	NS	NS		NS
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50		<0.50		<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50	NS	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
ORSG-Office of Research and Standards Guideline
NS - Not Sampled
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Analyte detected in Blank and Sample
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone (MEK)	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene
280 ALSTON AVENUE	Annual	5/12/2016		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		5/13/2015		<2.0	<1.0	<2.0	<1.0	<2.0	NS	<2.0	<5.0	<2.0
		12/17/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	NS	<0.50
		2/22/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50	NS	<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50	NS	<0.50
125 MEETINGHOUSE ROAD	Annual	7/21/2016		<2.0	<1.0	<2.0	<1.0	<2.0	6.5	<2.0	<5.0	<2.0
		7/21/2016	Duplicate	<2.0	<1.0	<2.0	<1.0	<2.0	7.5	<2.0	<5.0	<2.0
		5/8/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50		<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50	NS	<0.50
170 MEETINGHOUSE ROAD	Annual	5/12/2016		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		5/12/2016	Duplicate	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		5/13/2015		<2.0	<1.0	<2.0	<1.0	<2.0	NS	<2.0	<5.0	<2.0
		8/15/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/15/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/8/2012		<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50	NS	<0.50
75 OLD ORCHARD ROAD	Annual	5/12/2016		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		5/12/2016	Duplicate	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		8/15/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/21/2013		NS	NS	NS	NS	NS	NS	NS		NS
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50		<0.50		<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50	NS	<0.50
130 OLD ORCHARD ROAD	Annual	12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50		<0.50		<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50	NS	<0.50
130A OLD ORCHARD ROAD	Annual	5/29/2015		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		12/17/2014		NS	NS	NS	NS	NS	NS	NS		NS
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50		<0.50
		2/25/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50		<0.50
130B OLD ORCHARD ROAD	Annual	5/13/2016		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		5/29/2015		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		12/17/2014		NS	NS	NS	NS	NS	NS	NS		NS
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50		<0.50
		2/25/2013		NS	NS	NS	NS	NS	NS	NS		NS
210 OLD ORCHARD ROAD	Annual	5/13/2016		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50		<0.50
		2/15/2013		NS	NS	NS	NS	NS	NS	NS		NS
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50		<0.50		<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50	NS	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone (MEK)	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene
290 OLD ORCHARD ROAD	Annual	5/12/2016		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		3/2/2015	Inf.	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		3/2/2015	Eff.	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<5.0	<2.0
		7/23/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/16/2013		NS	NS	NS	NS	NS	NS	NS		NS
		5/9/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50		<0.50
		2/15/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50		<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50	NS	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

TABLE 4.1
SECTION 4
SUMMARY OF LANDFILL MONITORNG PLAN
GROUNDWATER ANALYTICAL RESULTS
Volatile Organic Compounds

Eastham Landfill Monitoring Wells and Private Drinking Wells
Eastham, MA
(All results in ug/l)

Property	LMP Sample Frequency	Date	4-Isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon tetrachloride
Standards												
GW1			NA	350	6300	5	NA	NA	4	10	NA	5
GW3			NA	50000	50000	10000	NA	NA	50000	800	NA	5000
MMCL			NA	NA	NA	5	NA	NA	NA	NA	NA	5
ORSG			NA	350	6300	NA	NA	NA	NA	10	NA	NA
Results												
MW 10		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW 21D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/25/2013	<1.0	<10	14J	<1.0	<1.0	<1.0	<1.0	<2.0	NS	<1.0
MW 21S	Semi-Annual	5/13/2015	<2.0	<5.0	<5.0	0.33J	<2.0	<2.0	<2.0	<2.0	1.0J	<1.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/16/2013	<1.0	<10	< 50	<1.0	<1.0	<1.0	<1.0	<2.0	NS	<1.0
		12/7/2012	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
MW 2D		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
MW 2S	Annual	11/24/2015	<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	0.45J	<1.0
		12/16/2014	<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		12/18/2013	<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		7/10/2012	<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		4-Isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon tetrachloride
MW 3D	Quarterly	8/10/2016		<2.0	<5.0	<5.0	0.58	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		5/18/2016		<2.0	<5.0	<5.0	0.58	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		2/23/2016		<2.0	<5.0	<5.0	0.64	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		11/24/2015		<2.0	<5.0	<5.0	0.69	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		8/26/2015		<2.0	<5.0	<5.0	0.76	<2.0	<2.0	<2.0	0.30 J	<2.0	<1.0
		5/13/2015		<2.0	<5.0	<5.0	0.81	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		11/10/2014		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NS	<5.0
		11/10/2014	Duplicate	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NS	<5.0
		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		9/3/2014		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NS	<5.0
		5/19/2014		<1.0	<5.0	<5.0	0.79	<1.0	<1.0	<1.0	<1.0	NS	<1.0
		2/27/2014		<1.0	<5.0	<10	1.2	<1.0	<1.0	<1.0	<1.0	NS	<1.0
		11/25/2013		<0.50	<5.0	<5.0	0.96	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		9/5/2013		<0.50	<5.0	<5.0	1.0	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		5/8/2013		<0.50	<5.0	<5.0	0.91	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		2/14/2013		<0.50	<5.0	<5.0	1.0	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		12/6/2012		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		10/9/2012		<0.50	<5.0	<5.0	1.2	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		7/10/2012		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		3/20/2012		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
MW 3I	Quarterly	8/10/2016		<2.0	<5.0	<5.0	<0.50	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		5/18/2016		<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		2/23/2016		<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		11/24/2015		<2.0	<5.0	1.8J	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		8/26/2015		<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	0.35 J	<2.0	<1.0
		5/13/2015		<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		12/16/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		11/10/2014		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NS	<5.0
		9/3/2014		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NS	<5.0
		5/19/2014		<1.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS	<1.0
		2/27/2014		<1.0	<5.0	<10	<1.0	<1.0	<1.0	<1.0	<1.0	NS	<1.0
		11/25/2013		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		9/5/2013		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		5/8/2013		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		2/14/2013		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		10/9/2012		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		7/10/2012		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		3/20/2012		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		4-Isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon tetrachloride
MW 3S		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
MW 4D		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<5.0	<5	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
MW 4S	Annual	11/24/2015		<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	0.30J	<1.0
		12/16/2014		<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		7/10/2012		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
MW 5D		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
MW 5S	Annual	11/24/2015		<2.0	<5.0	<5.0	0.21J	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		12/16/2014		<2.0	<5.0	<5.0	0.20J	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		7/10/2012		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
MW 7		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW 8	Annual	11/24/2015		<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		12/16/2014		<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		12/18/2013		<0.50	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		3/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/7/2012		<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
MW 21S	Semi-Annual	11/10/2015		<2.0	<5.0	1.6J	<0.50	<2.0	<2.0	<2.0	<2.0	0.42J	<1.0
DPW WELL	Annual	11/24/2015		<2.0	<5.0	2.1J	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		12/16/2014		<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
265 ALSTON AVENUE	Annual	5/12/2016		<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		5/12/2016	Duplicate	<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		4/1/2015		<2.0	<5.0	<5.0	<0.50	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		3/28/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<2.5	0.75J	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		3/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50			<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		6/21/2012		<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		4-Isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon tetrachloride
280 ALSTON AVENUE	Annual	5/12/2016		<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		5/13/2015		<2.0	<5.0	<5.0	<0.50	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		12/17/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<2.5	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		2/22/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		6/21/2012		<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
125 MEETINGHOUSE	Annual	7/21/2016		<2.0	<5.0	1.6J	<0.50	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		7/21/2016	Duplicate	<2.0	<5.0	1.8J	<0.50	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		5/8/2013		<0.50	<2.5	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		6/21/2012		<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
170 MEETINGHOUSE	Annual	5/12/2016		<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		5/12/2016	Duplicate	<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		5/13/2015		<2.0	<5.0	<5.0	<0.50	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		8/15/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/15/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/8/2012		<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
75 OLD ORCHARD	Annual	5/12/2016		<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		5/12/2016	Duplicate	<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		8/15/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/21/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50			<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		6/21/2012		<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
130 OLD ORCHARD	Annual	12/6/2012		<0.50			<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		6/21/2012		<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
130A OLD ORCHARD	Annual	5/29/2015		<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		12/17/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<2.5	1.9J	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		2/25/2013		<0.50	<2.5	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
130B OLD ORCHARD	Annual	5/13/2016		<2.0	<5.0	<5.0	<0.50	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		5/29/2015		<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		12/17/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<2.5	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		2/25/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
210 OLD ORCHARD	Annual	5/13/2016		<2.0	<5.0	<5.0	<0.50	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		12/18/2013		<0.50	<2.5	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		2/15/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50			<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		6/21/2012		<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		4-Isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromoform	Bromomethane	Carbon Disulfide	Carbon tetrachloride
290 OLD ORCHARD	Annual	5/12/2016		<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		3/2/2015	Inf.	<2.0	<5.0	<5.0	<0.50	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		3/2/2015	Eff.	<2.0	<5.0	<5.0	<0.50	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0
		7/23/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/16/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/9/2013		<0.50	<2.5	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		2/15/2013		<0.50	<2.5	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50
		6/21/2012		<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

TABLE 4.1
SECTION 5
SUMMARY OF LANDFILL MONITORNG PLAN
GROUNDWATER ANALYTICAL RESULTS
Volatile Organic Compounds

Eastham Landfill Monitoring Wells and Private Drinking Wells
Eastham, MA
(All results in ug/l)

Property	LMP Sample Frequency	Date	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromomethane
Standards										
GW1			100	2	NA	70	NA	70	NA	NA
GW3			1000	50000	NA	20000	NA	50000	NA	NA
MMCL			100	NA	NA	NA	NA	70	NA	NA
ORSG			NA	NA	NA	70	NA	NA	NA	NA
Results										
MW 10		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS
MW 21D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS
		2/25/2013	<1.0	<0.50	<2.0	<1.0	<2.0	<1.0	< 0.40	<1.0
MW 21S	Semi-Annual	5/13/2015	<1.0	<1.0	<2.0	<1.0	<2.0	0.37J	<0.50	<2.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS
		5/16/2013	<1.0	<0.50	<2.0	<1.0	<2.0	<1.0	< 0.40	<1.0
		12/7/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 2D		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 2S	Annual	11/24/2015	<1.0	<1.0	<2.0	<1.0	<2.0	0.36J	<0.5	<2.0
		12/16/2014	<1.0	<1.0	<2.0	<1.0	<2.0	0.20J	<0.5	<2.0
		12/18/2013	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		7/10/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromomethane
MW 3D	Quarterly	8/10/2016		0.80J	<1.0	<2.0	<1.0	<2.0	1.3	<0.50	<2.0
		5/18/2016		0.72J	<1.0	<2.0	<1.0	<2.0	1.3	<0.5	<2.0
		2/23/2016		0.81J	<1.0	<2.0	<1.0	<2.0	1.2	<0.5	<2.0
		11/24/2015		1.0	<1.0	<2.0	<1.0	<2.0	1.5	<0.5	<2.0
		8/26/2015		0.93 J	<1.0	<2.0	<1.0	<2.0	1.4	<0.5	<2.0
		5/13/2015		1.0	<1.0	0.38J	<1.0	<2.0	1.4	<0.5	<2.0
		11/10/2014		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		11/10/2014	Duplicate	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS
		9/3/2014		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/19/2014		1.3	<5.0	<1.0	<1.0	<1.0	1.1	<0.50	<1.0
		2/27/2014		1.6	<5.0	<1.0	<1.0	<1.0	2.0	<0.50	<1.0
		11/25/2013		<0.50	<0.50	1.3	<0.50	1.4	<0.50	<0.50	<0.50
		9/5/2013		1.6	<0.50	<0.50	<0.50	<0.50	1.6	<0.50	<0.50
		5/8/2013		1.4	<0.50	<0.50	<0.50	<0.50	1.1	<0.50	<0.50
		2/14/2013		1.6	<0.50	<0.50	<0.50	<0.50	1.5	<0.50	<0.50
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		10/9/2012		1.9	<0.50	0.58	<0.50	<0.50	1.3	<0.50	<0.50
		7/10/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		3/20/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes:
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Property	LMP Sample Frequency	Date	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromomethane
MW 3I	Quarterly	8/10/2016	0.31J	<1.0	<2.0	<1.0	<2.0	0.35J	<0.50	<2.0
		5/18/2016	0.28J	<1.0	<2.0	<1.0	<2.0	0.35J	<0.5	<2.0
		2/23/2016	0.27J	<1.0	<2.0	<1.0	<2.0	0.29J	<0.5	<2.0
		11/24/2015	0.37J	<1.0	<2.0	<1.0	<2.0	<1.0	<0.5	<2.0
		8/26/2015	0.32 J	<1.0	<2.0	<1.0	<2.0	0.30 J	<0.5	<2.0
		5/13/2015	0.30J	<1.0	<2.0	<1.0	<2.0	0.28J	<0.5	<2.0
		12/16/2014	NS	NS	NS	NS	NS	NS	NS	NS
		11/10/2014	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		9/3/2014	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/19/2014	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0
		2/27/2014	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0
		11/25/2013	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		9/5/2013	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		5/8/2013	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013	<0.50	<0.50	<0.50	<0.50	<0.50	0.84	<0.50	<0.50
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		10/9/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		7/10/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		3/20/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 3S		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 4D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 4S	Annual	11/24/2015	0.38J	<1.0	<2.0	<1.0	<2.0	0.40J	<0.5	<2.0
		12/16/2014	0.41J	<1.0	0.26J	<1.0	<2.0	0.28J	<0.5	<2.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		7/10/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 5D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
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NS - Not Sampled
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromomethane
MW 5S	Annual	11/24/2015		0.41J	<1.0	<2.0	<1.0	<2.0	0.57J	<0.5	<2.0
		12/16/2014		0.29J	<1.0	<2.0	<1.0	<2.0	0.50J	<0.5	<2.0
		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	0.51	<0.50	<0.50
		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012		<0.50	<0.50	<0.50	<0.50	<0.50	0.51	<0.50	<0.50
		7/10/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 7		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS
MW 8	Annual	11/24/2015		<1.0	<1.0	<2.0	0.28J	<2.0	<1.0	<0.5	<2.0
		12/16/2014		<1.0	<1.0	<2.0	0.22J	<2.0	<1.0	<0.5	<2.0
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		3/14/2013		NS	NS	NS	NS	NS	NS	NS	NS
		12/7/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 21S	Semi-Annual	11/10/2015		<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<0.50	<2.0
DPW WELL	Annual	11/24/2015		<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<0.5	<2.0
		12/16/2014		<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<0.5	<2.0
265 ALSTON AVENUE	Annual	5/12/2016		<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<0.5	<2.0
		5/12/2016	Duplicate	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<0.5	<2.0
		4/1/2015		<1.0	<1.0	<2.0	0.17J	<2.0	<1.0	<0.50	<2.0
		3/28/2014		NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	0.18J	<0.50	<0.50	<0.50	<0.50
		3/14/2013		NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
280 ALSTON AVENUE	Annual	5/12/2016		<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<0.5	<2.0
		5/13/2015		<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<0.50	<2.0
		12/17/2014		NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/22/2013		NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
125 MEETINGHOUSE ROAD	Annual	7/21/2016		<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<0.50	<2.0
		7/21/2016	Duplicate	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<0.50	<2.0
		5/8/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromomethane
170 MEETINGHOUSE ROAD	Annual	5/12/2016		<1.0	<1.0	<2.0	0.18J	<2.0	<1.0	<0.5	<2.0
		5/12/2016	Duplicate	<1.0	<1.0	<2.0	0.16J	<2.0	<1.0	<0.5	<2.0
		5/13/2015		<1.0	<1.0	<2.0	0.36J	<2.0	<1.0	<0.50	<2.0
		8/15/2014		NS	NS	NS	NS	NS	NS	NS	NS
		2/15/2013		NS	NS	NS	NS	NS	NS	NS	NS
		12/8/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
75 OLD ORCHARD ROAD	Annual	5/12/2016		<1.0	<1.0	<2.0	1.0	<2.0	<1.0	<0.5	<2.0
		5/12/2016	Duplicate	<1.0	<1.0	<2.0	0.98J	<2.0	<1.0	<0.5	<2.0
		8/15/2014		NS	NS	NS	NS	NS	NS	NS	NS
		2/21/2013		NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
130 OLD ORCHARD ROAD	Annual	12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
130A OLD ORCHARD ROAD	Annual	5/29/2015		<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<0.5	<2.0
		12/17/2014		NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/25/2013		<0.50	<0.50	<0.50	<0.50	0.13J	<0.50	<0.50	<0.50
130B OLD ORCHARD ROAD	Annual	5/13/2016		<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<0.50	<2.0
		5/29/2015		<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<0.5	<2.0
		12/17/2014		NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/25/2013		NS	NS	NS	NS	NS	NS	NS	NS
210 OLD ORCHARD ROAD	Annual	5/13/2016		<1.0	<1.0	<2.0	0.25J	<2.0	<1.0	<0.50	<2.0
		12/18/2013		<0.50	<0.50	<0.50	0.19J	<0.50	<0.50	<0.50	<0.50
		2/15/2013		NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
290 OLD ORCHARD ROAD	Annual	5/12/2016		<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<0.5	<2.0
		3/2/2015	Inf.	<1.0	<1.0	<2.0	0.46J	<2.0	<1.0	<0.50	<2.0
		3/2/2015	Eff.	<1.0	<1.0	<2.0	0.18J	<2.0	<1.0	<0.50	<2.0
		7/23/2014		NS	NS	NS	NS	NS	NS	NS	NS
		5/16/2013		NS	NS	NS	NS	NS	NS	NS	NS
		5/9/2013		<0.50	<0.50	<0.50	0.25J	<0.50	<0.50	<0.50	<0.50
		2/15/2013		<0.50	<0.50	<0.50	0.38J	0.099J	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes: GW-1 and GW-3 MCP Method 1 Standards
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

TABLE 4.1
SECTION 6
SUMMARY OF LANDFILL MONITORNG PLAN
GROUNDWATER ANALYTICAL RESULTS
Volatile Organic Compounds

Eastham Landfill Monitoring Wells and Private Drinking Wells
Eastham, MA
(All results in ug/l)

Property	LMP Sample Frequency	Date	Dichlorobromomethane	Dichlorodifluoromethane	Ethylbenzene	Ethyl Ether	ETBE	Hexachlorobutadiene	Isopropylbenzene	Methyl tert-butyl ether	Methylene Chloride
Standards											
GW1			3	NA	700	NA	NA	0.6	NA	70	5
GW3			50000	NA	5000	NA	NA	3000	NA	50000	50000
MMCL			NA	NA	700	NA	NA	NA	NA	NA	5
ORSG			NA	1400	NA	NA	NA	NA	NA	70	NA
Results											
MW 10		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW 21D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/25/2013	<0.50	<1.0	<1.0	NS	NS	< 0.40	<1.0	0.20J	<1.0
MW 21S	Semi-Annual	5/13/2015	<1.0	<2.0	<1.0	4.7	<2.0	<0.60	<2.0	0.68J	<2.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/16/2013	<0.50	<1.0	<1.0	NS	NS	< 0.40	<1.0	0.16J	<1.0
		12/7/2012	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
MW 2D		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
MW 2S	Annual	11/24/2015	<1.0	<2.0	<1.0	1.4J	<2.0	<0.6	<2.0	<2.0	<2.0
		12/16/2014	<1.0	<2.0	<1.0	0.82J	<2.0	< 0.6	<2.0	<2.0	<2.0
		12/18/2013	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		7/10/2012	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		Dichlorobromomethane	Dichlorodifluoromethane	Ethylbenzene	Ethyl Ether	ETBE	Hexachlorobutadiene	Isopropylbenzene	Methyl tert-butyl ether	Methylene Chloride
MW 3D	Quarterly	8/10/2016		<1.0	<2.0	<1.0	19	<2.0	<0.60	<2.0	0.74J	<2.0
		5/18/2016		<1.0	0.28J	<1.0	17	<2.0	<0.6	<2.0	0.55J	<2.0
		2/23/2016		<1.0	<2.0	<1.0	18	<2.0	<0.6	<2.0	0.58J	<2.0
		11/24/2015		<1.0	<2.0	<1.0	20	<2.0	<0.6	<2.0	0.94J	<2.0
		8/26/2015		<1.0	<2.0	<1.0	24	<2.0	<0.6	<2.0	0.89 J	<2.0
		5/13/2015		<1.0	<2.0	<1.0	26	<2.0	<0.6	<2.0	0.63J	<2.0
		11/10/2014		<5.0	<5.0	<5.0	NS	NS	<5.0	<5.0	<5.0	<5.0
		11/10/2014	Duplicate	<5.0	<5.0	<5.0	NS	NS	<5.0	<5.0	<5.0	<5.0
		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		9/3/2014		<5.0	<5.0	<5.0	NS	NS	<5.0	<5.0	<5.0	<5.0
		5/19/2014		<1.0	<1.0	<1.0	NS	NS	<0.50	<1.0	0.95	<5.0
		2/27/2014		<1.0	<1.0	<1.0	NS	NS	<0.50	<1.0	1.2	<5.0
		11/25/2013		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	0.92
		9/5/2013		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	0.95	<0.50
		5/8/2013		<0.50	0.60	<0.50	NS	NS	<0.50	<0.50	1.1	<0.50
		2/14/2013		<0.50	0.51	<0.50	NS	NS	<0.50	<0.50	1.2	<0.50
		12/6/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		10/9/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	1.6	<0.50
		7/10/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		3/20/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50

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Property	LMP Sample Frequency	Date	Dichlorobromomethane	Dichlorodifluoromethane	Ethylbenzene	Ethyl Ether	ETBE	Hexachlorobutadiene	Isopropylbenzene	Methyl tert-butyl ether	Methylene Chloride
MW 3I	Quarterly	8/10/2016	<1.0	<2.0	<1.0	0.35J	<2.0	<0.60	<2.0	<2.0	<2.0
		5/18/2016	<1.0	<2.0	<1.0	0.24J	<2.0	<0.6	<2.0	<2.0	<2.0
		2/23/2016	<1.0	<2.0	<1.0	0.22J	<2.0	<0.6	<2.0	<2.0	<2.0
		11/24/2015	<1.0	<2.0	<1.0	<2.0	<2.0	<0.6	<2.0	<2.0	<2.0
		8/26/2015	<1.0	<2.0	<1.0	0.24 J	<2.0	<0.6	<2.0	<2.0	<2.0
		5/13/2015	<1.0	<2.0	<1.0	0.18J	<2.0	<0.6	<2.0	<2.0	<2.0
		12/16/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
		11/10/2014	<5.0	<5.0	<5.0	NS	NS	<5.0	<5.0	<5.0	<5.0
		9/3/2014	<5.0	<5.0	<5.0	NS	NS	<5.0	<5.0	<5.0	<5.0
		5/19/2014	<1.0	<1.0	<1.0	NS	NS	<0.50	<1.0	<1.0	<5.0
		2/27/2014	<1.0	<1.0	<1.0	NS	NS	<0.50	<1.0	<1.0	<5.0
		11/25/2013	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		9/5/2013	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		5/8/2013	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		2/14/2013	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		10/9/2012	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		7/10/2012	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		3/20/2012	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
MW 3S		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
MW 4D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
MW 4S	Annual	11/24/2015	<1.0	<2.0	<1.0	2.0	<2.0	<0.6	<2.0	0.44J	<2.0
		12/16/2014	<1.0	<2.0	<1.0	1.9J	<2.0	< 0.6	<2.0	0.31J	<2.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		7/10/2012	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
MW 5D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012	<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50

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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		Dichlorobromomethane	Dichlorodifluoromethane	Ethylbenzene	Ethyl Ether	ETBE	Hexachlorobutadiene	Isopropylbenzene	Methyl tert-butyl ether	Methylene Chloride
MW 5S	Annual	11/24/2015		<1.0	<2.0	<1.0	2.6	<2.0	<0.6	<2.0	0.46J	<2.0
		12/16/2014		<1.0	<2.0	<1.0	2.4	<2.0	< 0.6	<2.0	0.32J	<2.0
		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		7/10/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
MW 7		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
MW 8	Annual	11/24/2015		<1.0	<2.0	<1.0	0.42J	<2.0	<0.6	<2.0	<2.0	<2.0
		12/16/2014		<1.0	<2.0	<1.0	0.39J	<2.0	< 0.6	<2.0	<2.0	<2.0
		12/18/2013		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		3/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/7/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
MW 21S	Semi-Annual	11/10/2015		<1.0	<2.0	<1.0	<2.0	<2.0	<0.60	<2.0	0.61J	<2.0
DPW WELL	Annual	11/24/2015		<1.0	<2.0	<1.0	<2.0	<2.0	<0.6	<2.0	<2.0	<2.0
		12/16/2014		<1.0	<2.0	<1.0	<2.0	<2.0	< 0.6	<2.0	<2.0	<2.0
265 ALSTON AVENUE	Annual	5/12/2016		<1.0	<2.0	<1.0	<2.0	<2.0	<0.6	<2.0	0.57J	<2.0
		5/12/2016	Duplicate	<1.0	<2.0	<1.0	<2.0	<2.0	<0.6	<2.0	0.50J	<2.0
		4/1/2015		<1.0	<2.0	<1.0	<2.0	<2.0	<0.60	<2.0	0.54J	<2.0
		3/28/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	0.26J	<0.50
		3/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
280 ALSTON AVENUE	Annual	5/12/2016		<1.0	<2.0	<1.0	<2.0	<2.0	<0.6	<2.0	<2.0	<2.0
		5/13/2015		<1.0	<2.0	<1.0	<2.0	<2.0	<0.60	<2.0	<2.0	<2.0
		12/17/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		2/22/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
125 MEETINGHOUSE	Annual	7/21/2016		<1.0	<2.0	<1.0	<2.0	<2.0	<0.60	<2.0	<2.0	<2.0
		7/21/2016	Duplicate	<1.0	<2.0	<1.0	<2.0	<2.0	<0.60	<2.0	<2.0	<2.0
		5/8/2013		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50

Notes: GW-1 and GW-3 MCP Method 1 Standards
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NS - Not Sampled
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Property	LMP Sample Frequency	Date		Dichlorobromomethane	Dichlorodifluoromethane	Ethylbenzene	Ethyl Ether	ETBE	Hexachlorobutadiene	Isopropylbenzene	Methyl tert-butyl ether	Methylene Chloride
170 MEETINGHOUSE	Annual	5/12/2016		<1.0	<2.0	<1.0	<2.0	<2.0	<0.6	<2.0	0.20J	<2.0
		5/12/2016	Duplicate	<1.0	<2.0	<1.0	<2.0	<2.0	<0.6	<2.0	0.20J	<2.0
		5/13/2015		<1.0	<2.0	<1.0	<2.0	<2.0	<0.60	<2.0	0.21J	<2.0
		8/15/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/15/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/8/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
75 OLD ORCHARD	Annual	5/12/2016		<1.0	<2.0	<1.0	<2.0	<2.0	<0.6	<2.0	<2.0	<2.0
		5/12/2016	Duplicate	<1.0	<2.0	<1.0	<2.0	<2.0	<0.6	<2.0	<2.0	<2.0
		8/15/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/21/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
130 OLD ORCHARD	Annual	12/6/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
130A OLD ORCHARD	Annual	5/29/2015		<1.0	<2.0	<1.0	<2.0	<2.0	<0.6	<2.0	<2.0	<2.0
		12/17/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		2/25/2013		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
130B OLD ORCHARD	Annual	5/13/2016		<1.0	<2.0	<1.0	<2.0	<2.0	<0.6	<2.0	<2.0	<2.0
		5/29/2015		<1.0	<2.0	<1.0	<2.0	<2.0	<0.6	<2.0	<2.0	<2.0
		12/17/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		2/25/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
210 OLD ORCHARD	Annual	5/13/2016		<1.0	<2.0	<1.0	<2.0	<2.0	<0.6	<2.0	<2.0	<2.0
		12/18/2013		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	1.1	<0.50
		2/15/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
290 OLD ORCHARD	Annual	5/12/2016		<1.0	<2.0	<1.0	<2.0	<2.0	<0.6	<2.0	<2.0	<2.0
		3/2/2015	Inf.	<1.0	<2.0	<1.0	<2.0	<2.0	<0.60	<2.0	<2.0	<2.0
		3/2/2015	Eff.	<1.0	<2.0	<1.0	<2.0	<2.0	<0.60	<2.0	<2.0	<2.0
		7/23/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/16/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/9/2013		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		2/15/2013		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50
		6/21/2012		<0.50	<0.50	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

TABLE 4.1
SECTION 7
SUMMARY OF LANDFILL MONITORNG PLAN
GROUNDWATER ANALYTICAL RESULTS
Volatile Organic Compounds

Eastham Landfill Monitoring Wells and Private Drinking Wells
Eastham, MA
(All results in ug/l)

Property	LMP Sample Frequency	Date	Isopropyl Ether	Naphthalene	n-Butylbenzene	N-Propylbenzene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene
Standards													
GW1			NA	140	NA	NA	NA	100	NA	5	1000	100	NA
GW3			NA	20000	NA	NA	NA	6000	NA	30000	40000	50000	NA
MMCL			NA	NA	NA	NA	NA	100	NA	5	1000	100	NA
ORSG			NA	140	NA	NA	NA	NA	NA	NA	NA	NA	NA
Results													
MW 10		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW 21D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/25/2013	NS	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 0.40
MW 21S	Semi-Annual	5/13/2015	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.50
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/16/2013	NS	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 0.40
		12/7/2012	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 2D		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 2S	Annual	11/24/2015	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		12/16/2014	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		12/18/2013	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		7/10/2012	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		Isopropyl Ether	Naphthalene	n-Butylbenzene	N-Propylbenzene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene
MW 3D	Quarterly	8/10/2016		<2.0	0.43J	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.50
		5/18/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		2/23/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		11/24/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		8/26/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		5/13/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		11/10/2014		NS	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		11/10/2014	Duplicate	NS	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		9/3/2014		NS	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/19/2014		NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50
		2/27/2014		NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50
		11/25/2013		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		9/5/2013		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		5/8/2013		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		12/6/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		10/9/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		7/10/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		3/20/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

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Property	LMP Sample Frequency	Date	Isopropyl Ether	Naphthalene	n-Butylbenzene	N-Propylbenzene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene
MW 3I	Quarterly	8/10/2016	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.50
		5/18/2016	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		2/23/2016	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		11/24/2015	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		8/26/2015	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		5/13/2015	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		12/16/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		11/10/2014	NS	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		9/3/2014	NS	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
		5/19/2014	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50
		2/27/2014	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50
		11/25/2013	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		9/5/2013	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		5/8/2013	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		10/9/2012	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		7/10/2012	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		3/20/2012	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 3S		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 4D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 4S	Annual	11/24/2015	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		12/16/2014	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		7/10/2012	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 5D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
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B - Analyte detected in Blank and Sample
* Residential samples will be tested for all VOCs during 2nd quarter of the year.

ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		Isopropyl Ether	Naphthalene	n-Butylbenzene	N-Propylbenzene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene
MW 5S	Annual	11/24/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		12/16/2014		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		7/10/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 7		10/27/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW 8	Annual	11/24/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		12/16/2014		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		12/18/2013		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		3/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/7/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW 21S	Semi-Annual	11/10/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	0.31J	<1.0	<0.50
DPW WELL	Annual	11/24/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		12/16/2014		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
265 ALSTON AVENUE	Annual	5/12/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		5/12/2016	Duplicate	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		4/1/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.50
		3/28/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		3/14/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
280 ALSTON AVENUE	Annual	5/12/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		5/13/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.50
		12/17/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/22/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		Isopropyl Ether	Naphthalene	n-Butylbenzene	N-Propylbenzene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene
125 MEETINGHOUSE ROAD	Annual	7/21/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.50
		7/21/2016	Duplicate	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.50
		5/8/2013		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
170 MEETINGHOUSE ROAD	Annual	5/12/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		5/12/2016	Duplicate	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		5/13/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.50
		8/15/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/15/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/8/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
75 OLD ORCHARD ROAD	Annual	5/12/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		5/12/2016	Duplicate	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		8/15/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/21/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
130 OLD ORCHARD ROAD	Annual	12/6/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
130A OLD ORCHARD ROAD	Annual	5/29/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		12/17/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/25/2013		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
130B OLD ORCHARD ROAD	Annual	5/13/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		5/29/2015		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		12/17/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/25/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
210 OLD ORCHARD ROAD	Annual	5/13/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		12/18/2013		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/15/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes: GW-1 and GW-3 MCP Method 1 Standards
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		Isopropyl Ether	Naphthalene	n-Butylbenzene	N-Propylbenzene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene
290 OLD ORCHARD ROAD	Annual	5/12/2016		<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		3/2/2015	Inf.	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.50
		3/2/2015	Eff.	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.50
		7/23/2014		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/16/2013		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/9/2013		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		2/15/2013		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

TABLE 4.1
SECTION 8
SUMMARY OF LANDFILL MONITORNG PLAN
GROUNDWATER ANALYTICAL RESULTS
Volatile Organic Compounds

Eastham Landfill Monitoring Wells and Private Drinking Wells
Eastham, MA
(All results in ug/l)

Property	LMP Sample Frequency	Date	TAME	Tetrahydrofuran	Trichloroethene	Trichlorofluoromethane	Vinyl chloride	Total Xylenes
Standards								
GW1			NA	NA	5	NA	2	10000
GW3			NA	NA	5000	NA	50000	5000
MMCL			NA	NA	5	NA	2	10000
ORSG			NA	NA	NA	NA	NA	NA
Results								
MW 10		10/27/2014	NS	NS	NS	NS	NS	NS
MW 21D		10/27/2014	NS	NS	NS	NS	NS	NS
		2/25/2013	NS	NS	<1.0	<1.0	<0.50	<2.0
MW 21S	Semi-Annual	5/13/2015	<2.0	0.90J	<1.0	<2.0	<1.0	<1.0
		10/27/2014	NS	NS	NS	NS	NS	NS
		5/16/2013	NS	NS	<1.0	<1.0	<1.0	<2.0
		12/7/2012	NS	NS	<0.50	<0.50	<0.50	<0.50
MW 2D		2/14/2013	NS	NS	NS	NS	NS	NS
		12/6/2012	NS	NS	<0.50	<0.50	<0.50	<0.50
MW 2S	Annual	11/24/2015	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		12/16/2014	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		12/18/2013	NS	NS	<0.50	<0.50	<0.50	<0.50
		2/14/2013	NS	NS	NS	NS	NS	NS
		12/6/2012	NS	NS	<0.50	<0.50	<0.50	<0.50
		7/10/2012	NS	NS	<0.50	<0.50	<0.50	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		TAME	Tetrahydrofuran	Trichloroethene	Trichlorofluoromethane	Vinyl chloride	Total Xylenes
MW 3D	Quarterly	8/10/2016		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		5/18/2016		<2.0	<2.0	<1.0	<2.0	0.20J	<1.0
		2/23/2016		<2.0	0.59J	<1.0	<2.0	0.27J	<1.0
		11/24/2015		<2.0	<2.0	<1.0	<2.0	0.20J	<1.0
		8/26/2015		<2.0	1.1 J	<1.0	<2.0	0.28 J	<1.0
		5/13/2015		<2.0	1.2J	<1.0	<2.0	0.37J	<1.0
		11/10/2014		NS	NS	<5.0	<5.0	<5.0	<5.0
		11/10/2014	Duplicate	NS	NS	<5.0	<5.0	<5.0	<5.0
		10/27/2014		NS	NS	NS	NS	NS	NS
		9/3/2014		NS	NS	<5.0	<5.0	<5.0	<5.0
		5/19/2014		NS	NS	<1.0	<1.0	<1.0	<1.0
		2/27/2014		NS	NS	<1.0	<1.0	<1.0	<1.0
		11/25/2013		NS	NS	<0.50	<0.50	<0.50	<0.50
		9/5/2013		NS	NS	<0.50	<0.50	<0.50	<0.50
		5/8/2013		NS	NS	<0.50	<0.50	<0.50	<0.50
		2/14/2013		NS	NS	<0.50	<0.50	<0.50	<0.50
		12/6/2012		NS	NS	<0.50	<0.50	<0.50	<0.50
		10/9/2012		NS	NS	<0.50	<0.50	0.58	<0.50
		7/10/2012		NS	NS	<0.50	<0.50	<0.50	<0.50
		3/20/2012		NS	NS	<0.50	<0.50	<0.50	<0.50

Notes:
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date	TAME	Tetrahydrofuran	Trichloroethene	Trichlorofluoromethane	Vinyl chloride	Total Xylenes
MW 3I	Quarterly	8/10/2016	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		5/18/2016	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		2/23/2016	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		11/24/2015	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		8/26/2015	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		5/13/2015	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		12/16/2014	NS	NS	NS	NS	NS	NS
		11/10/2014	NS	NS	<5.0	<5.0	<5.0	<5.0
		9/3/2014	NS	NS	<5.0	<5.0	<5.0	<5.0
		5/19/2014	NS	NS	<1.0	<1.0	<1.0	<1.0
		2/27/2014	NS	NS	<1.0	<1.0	<1.0	<1.0
		11/25/2013	NS	NS	<0.50	<0.50	<0.50	<0.50
		9/5/2013	NS	NS	<0.50	<0.50	<0.50	<0.50
		5/8/2013	NS	NS	<0.50	<0.50	<0.50	<0.50
		2/14/2013	NS	NS	<0.50	<0.50	<0.50	<0.50
		2/14/2013	NS	NS	NS	NS	NS	NS
		12/6/2012	NS	NS	<0.50	<0.50	<0.50	<0.50
		10/9/2012	NS	NS	<0.50	<0.50	<0.50	<0.50
		7/10/2012	NS	NS	<0.50	<0.50	<0.50	<0.50
		3/20/2012	NS	NS	<0.50	<0.50	<0.50	<0.50
MW 3S		2/14/2013	NS	NS	NS	NS	NS	NS
		12/6/2012	NS	NS	<0.50	<0.50	<0.50	<0.50
MW 4D		10/27/2014	NS	NS	NS	NS	NS	NS
		2/14/2013	NS	NS	NS	NS	NS	NS
		12/6/2012	NS	NS	<0.50	<0.50	<0.50	<0.50
MW 4S	Annual	11/24/2015	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		12/16/2014	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		10/27/2014	NS	NS	NS	NS	NS	NS
		12/18/2013	NS	NS	<0.50	<0.50	<0.50	<0.50
		2/14/2013	NS	NS	NS	NS	NS	NS
		12/6/2012	NS	NS	<0.50	<0.50	<0.50	<0.50
		7/10/2012	NS	NS	<0.50	<0.50	<0.50	<0.50
MW 5D		10/27/2014	NS	NS	NS	NS	NS	NS
		2/14/2013	NS	NS	NS	NS	NS	NS
		12/5/2012	NS	NS	<0.50	<0.50	<0.50	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
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J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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* Residential samples will be tested for all VOCs during 2nd quarter of the year.

ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		TAME	Tetrahydrofuran	Trichloroethene	Trichlorofluoromethane	Vinyl chloride	Total Xylenes
MW 5S	Annual	11/24/2015		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		12/16/2014		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		10/27/2014		NS	NS	NS	NS	NS	NS
		12/18/2013		NS	NS	<0.50	<0.50	<0.50	<0.50
		2/14/2013		NS	NS	NS	NS	NS	NS
		12/5/2012		NS	NS	<0.50	<0.50	<0.50	<0.50
		7/10/2012		NS	NS	<0.50	<0.50	<0.50	<0.50
MW 7		10/27/2014		NS	NS	NS	NS	NS	NS
MW 8	Annual	11/24/2015		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		12/16/2014		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		12/18/2013		NS	NS	<0.50	<0.50	<0.50	<0.50
		3/14/2013		NS	NS	NS	NS	NS	NS
		12/7/2012		NS	NS	<0.50	<0.50	<0.50	<0.50
MW 21S	Semi-Annual	11/10/2015		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
DPW WELL	Annual	11/24/2015		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		12/16/2014		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
265 ALSTON AVENUE	Annual	5/12/2016		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		5/12/2016	Duplicate	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		4/1/2015		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		3/28/2014		NS	NS	NS	NS	NS	NS
		12/18/2013		NS	NS	<0.50	<0.50	<0.50	<1.0
		3/14/2013		NS	NS	NS	NS	NS	NS
		12/6/2012		NS	NS	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	NS	<0.50	<0.50	<0.50	<0.50
280 ALSTON AVENUE	Annual	5/12/2016		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		5/13/2015		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		12/17/2014		NS	NS	NS	NS	NS	NS
		12/18/2013		NS	NS	<0.50	<0.50	<0.50	<1.0
		2/22/2013		NS	NS	NS	NS	NS	NS
		12/6/2012		NS	NS	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	NS	<0.50	<0.50	<0.50	<0.50
125 MEETINGHOUSE ROAD	Annual	7/21/2016		<2.0	5.8	<1.0	<2.0	<1.0	<1.0
		7/21/2016	Duplicate	<2.0	8.2	<1.0	<2.0	<1.0	<1.0
		5/8/2013		NS	NS	<0.50	<0.50	<0.50	<1.0
		6/21/2012		NS	NS	<0.50	<0.50	<0.50	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
ORSG-Office of Research and Standards Guideline
NS - Not Sampled
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Analyte detected in Blank and Sample
* Residential samples will be tested for all VOCs during 2nd quarter of the year.

ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	LMP Sample Frequency	Date		TAME	Tetrahydrofuran	Trichloroethene	Trichlorofluoromethane	Vinyl chloride	Total Xylenes
170 MEETINGHOUSE ROAD	Annual	5/12/2016		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		5/12/2016	Duplicate	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		5/13/2015		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		8/15/2014		NS	NS	NS	NS	NS	NS
		2/15/2013		NS	NS	NS	NS	NS	NS
		12/8/2012		NS	NS	<0.50	<0.50	<0.50	<0.50
75 OLD ORCHARD ROAD	Annual	5/12/2016		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		5/12/2016	Duplicate	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		8/15/2014		NS	NS	NS	NS	NS	NS
		2/21/2013		NS	NS	NS	NS	NS	NS
		12/6/2012		NS	NS	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	NS	<0.50	<0.50	<0.50	<0.50
130 OLD ORCHARD ROAD	Annual	12/6/2012		NS	NS	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	NS	<0.50	<0.50	<0.50	<0.50
130A OLD ORCHARD ROAD	Annual	5/29/2015		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		12/17/2014		NS	NS	NS	NS	NS	NS
		12/18/2013		NS	NS	<0.50	<0.50	<0.50	<1.0
		2/25/2013		NS	NS	<0.50	<0.50	<0.50	<1.0
130B OLD ORCHARD ROAD	Annual	5/13/2016		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		5/29/2015		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		12/17/2014		NS	NS	NS	NS	NS	NS
		12/18/2013		NS	NS	<0.50	<0.50	<0.50	<1.0
		2/25/2013		NS	NS	NS	NS	NS	NS
210 OLD ORCHARD ROAD	Annual	5/13/2016		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		12/18/2013		NS	NS	<0.50	<0.50	<0.50	<1.0
		2/15/2013		NS	NS	NS	NS	NS	NS
		12/6/2012		NS	NS	<0.50	<0.50	<0.50	<0.50
		6/21/2012		NS	NS	<0.50	<0.50	<0.50	<0.50
290 OLD ORCHARD ROAD	Annual	5/12/2016		<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		3/2/2015	Inf.	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		3/2/2015	Eff.	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0
		7/23/2014		NS	NS	NS	NS	NS	NS
		5/16/2013		NS	NS	NS	NS	NS	NS
		5/9/2013		NS	NS	<0.50	<0.50	<0.50	<1.0
		2/15/2013		NS	NS	<0.50	<0.50	<0.50	<1.0
		6/21/2012		NS	NS	<0.50	<0.50	<0.50	<0.50

Notes:
GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
ORSG-Office of Research and Standards Guideline
NS - Not Sampled
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ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

TABLE 4.2
SUMMARY OF LANDFILL MONITORING PLAN
GROUNDWATER ANALYTICAL RESULTS
Metals

Eastham Landfill
Eastham, MA
(All results in ug/l)

Property	Sample Frequency	Date		Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Selenium	Silver	Zinc
Standards															
GW-1				10	2000	5	100	NA	NA	15	NA	2.0	50	100	5000
GW-3				900	50000	4	300	NA	NA	10	NA	20	100	7	900
MMCL				10	2000	5	100	NA	NA	15	NA	2.0	50	NA	NA
SMCL				NA	NA	NA	NA	1000	300	NA	50	NA	NA	100	5000
Results															
MW 2D		12/6/2012		<3	3.2	<3	<3	<3	<100	<3	51	<0.5	<15	<2.0	<60
MW 2S	Annual	11/24/2015		<5	12	<4	5.5J	<10	440	<10	441	<0.2	<10	<7	<50
		12/16/2014		4.7 J	9.0 J	<4	<10	<10	430	<10	311	<0.2	<10	<7	<50
		12/18/2013		<3	10	<3	<3	<3	500	<3	410	<0.3	<15	<3.0	<60
		12/6/2012		<3	13	<3	<3	<3	680	<3	430	<0.5	<15	<2.0	<60
		7/10/2012		<3	13	<3	<3	<3	580	<3	390	<0.5	<15	<2.0	<100
MW 3D	Quarterly	8/10/2016		72	66	<4	<10	<10	30000	2J	1230	<0.2	<10	<7	<50
		5/18/2016		89	72	<4	<10	<10	32000	<100	1170	<0.2	<10	<7	<50
		2/23/2016		69	60	<4	<10	<10	27000	<10	970	<0.2	<10	<7	<50
		11/24/2015		67	68	<4	4.8J	<10	30000	<10	1180	<0.2	<10	<7	<50
		8/26/2015		66	71	<4	<10	<10	30000	<10	1220	<1.0	<10	<7	60
		5/13/2015		70	74	<4	<10	<10	30000	<10	1220	<0.2	6.0 J	<7	<50
		11/10/2014		70	81	<3	5	<3	33000	<3	1400	<0.3	<15	<2	<60
		11/10/2014	Duplicate	71	82	<3	5.2	<3	32000	<3	1400	<0.3	<15	<2	<60
		9/3/2014		73	86	<3	6.0	<3	35000	<3	1400	<0.3	<15	<2	<60
		5/19/2014		66	82	<3	<3	<3	31000	<3	1300	82	<15	<2	<60
		2/27/2014		54	77	<1	<2	<3	42000	<6	1800	<0.5	<6.0	<2	12
		11/25/2013		68	88	<3	3.3	<3	30000	<3	1400	NS	<15	<3.0	<60
		9/5/2013		64	89	<3	4.7	<3	36000	<3	1300	<0.3	<15	<3.0	<60
		5/8/2013		74	96	<3	6.3	<3	40000	<3	1300	<0.5	<15	<3.0	<60
		2/14/2013		68	96	<3	5.9	<3	40000	<3	1700	<0.5	<15	<2.0	<60
		12/6/2012		62	97	<3	<3	<3	40000	<3	1800	<0.5	<15	<2.0	<60
		10/9/2012		65	90	<3	3.0	<3	39000	<3	1400	<0.5	<15	<2.0	<100
		7/10/2012		66	99	<3	<3	<3	38000	<3	1400	<0.5	<15	<2.0	<100
		3/20/2012		69	100	<3	<3	<3	40000	<3	1700	<0.5	<15	<2.0	<60

Notes:
GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
SMCL-Secondary Max. Contaminant Level
NS - Not Sampled
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Analyte detected in Blank and Sample
* DPW Well sample was not filtered and results are therefore total metals rather than dissolved.
** Residential samples will be tested for metals during 2nd quarter of the year.

ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	Sample Frequency	Date		Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Selenium	Silver	Zinc
MW 3I	Quarterly	8/10/2016		42	9.7J	<4	<10	<10	57000	3J	1160	<0.2	<10	<7	<50
		5/18/2016		71	13	<4	<10	<10	63000	<100	1270	<0.2	<10	<7	<50
		2/23/2016		43	9J	<4	<10	<10	56000	<10	1050	<0.2	<10	<7	9J
		11/24/2015		46	11	<4	5.3J	<10	68000	<100	1240	<0.2	<10	<7	<50
		8/26/2015		44	10	<4	<10	<10	61000	<10	1190	<1.0	<10	<7	46 J
		5/13/2015		42	9.0 J	<4	<10	<10	52000	<10	996	<0.2	<10	<7	<50
		11/10/2014		44	11	<3	<3	<3	64000	<3	1100	<0.3	<15	<2	<60
		9/3/2014		43	10	<3	<3	<3	69000	<3	1100	<0.3	<15	<2	<60
		5/19/2014		41	11	<3	<3	<3	64000	<3	1100	<0.3	<15	<2	<60
		2/27/2014		23	10	5.0	<2	<3	78000	<6	1400	<0.5	<6.0	<2	16
		11/25/2013		<3	7.1	<3	<3	<3	33000	<3	1100	NS	<15	<3.0	<60
		9/5/2013		38	10	<3	<3	<3	68000	<3	1100	<0.3	<15	<3.0	<60
		5/8/2013		37	9	<3	<3	<3	64000	<3	980	<0.5	<15	<3.0	<60
		2/14/2013		41	12	<3	<3	<3	69000	<3	1100	<0.5	<15	<2.0	<60
		12/6/2012		39	11	<3	<3	<3	72000	<3	1100	<0.5	<15	<2.0	<60
		10/9/2012		40	11	<3	<3	<3	65000	<3	1000	<0.5	<15	<2.0	<100
		7/10/2012		42	<3	<3	<3	<3	68000	<3	1100	<0.5	<15	<2.0	<100
		3/20/2012		44	11	<3	<3	<3	65000	<3	1400	<0.5	<15	<2.0	<60
MW 3S		12/6/2012		<3	30	<3	<3	<3	250	<3	280	<0.5	<15	<2.0	<60
MW 4D		12/6/2012		<3	28	<3	<3	<3	<100	<3	160	<0.5	<15	<2.0	<60
MW 4S	Annual	11/24/2015		<5	29	<4	4.9J	<10	2800	<10	5010	<0.2	<10	<7	<50
		12/16/2014		6.0	35	<4	<10	<10	8700	<10	2690	<0.2	<10	<7	<50
		12/18/2013		<3	24	<3	<3	<3	2100	<3	4200	<0.3	<15	<3.0	<60
		12/6/2012		3.4	28	<3	<3	<3	2400	<3	5100	<0.5	<15	<2.0	<60
		7/10/2012		<3	31	<3	<3	<3	2400	<3	4400	<0.5	<15	<2.0	<100
MW 5D		12/5/2012		<3	64	<3	<3	<3	<150	<3	51	<0.5	<15	<2.0	<60
MW 5S	Annual	11/24/2015		<5	49	<4	5J	<10	6800	<10	2700	<0.2	<10	<7	<50
		12/16/2014		<5.0	22	<4	<10	<10	2000	2.0 J	4530	<0.2	<10	<7	<50
		12/18/2013		<3	37	<3	<3	<3	8600	<3	3200	<0.3	<15	<3.0	<60
		12/5/2012		<3	44	<3	<3	<3	5500	<3	3600	<0.5	<15	<2.0	<60
		7/10/2012		<3	47	<3	<3	<3	8500	<3	3200	<0.5	<15	<2.0	<100
MW 8	Annual	12/18/2013		<3	35	<3	<3	<3	<100	<3	300	<0.3	<15	<3.0	<60
265 ALSTON AVENUE	Annual	5/12/2016		<0.5	13.8	<0.5	<1	80.8	<50	1.6	2.8	<0.2	<5.0	<0.5	32.1
		4/1/2015		<0.5	13.4	<0.2	<0.5	15.1	<50	<0.5	3.3	<0.2	<1.0	<0.5	8.3
		4/1/2015	Duplicate	NS	12.5	NS	NS	21.9	NS	NS	3.4	NS	NS	NS	6.7
		12/18/2013		0.11J	13B	<0.5	0.43J	220B	NS	1.2	NS	<0.20	<1.0	<0.50	39B
		12/6/2012		<3	13	<3	<3	27	NS	3.3	NS	<0.5	<15	<3.0	<60
		6/21/2012		<10	10	<1	<2	<100	<100	<6	<100	<0.5	<6.0	<2.0	<100

Notes: GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
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NS - Not Sampled
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
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* DPW Well sample was not filtered and results are therefore total metals rather than dissolved.
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ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	Sample Frequency	Date		Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Selenium	Silver	Zinc
280 ALSTON AVENUE	Annual	5/12/2016		<0.5	12.5	<0.5	<1	99.6	165	<1.0	13.9	<0.2	<5.0	<0.5	44.7
		5/13/2015		<0.5	24.7	<0.2	<0.5	35.5	64	0.6	20.3	<0.2	<1.0	<0.5	60.7
		5/13/2015	Duplicate	NS	21.2	NS	NS	52.7	62	<0.5	19.7	NS	NS	NS	69.9
		12/18/2013		0.26J	22B	<0.5	0.29J	840B	NS	1.9	NS	<0.20	<1.0	0.025J	1200B
		12/6/2012		<3	19	<3	<3	1300	NS	5.1	NS	<0.5	<15	<3.0	350
		6/21/2012		<10	14	<1	<2	<100	<100	<6	<100	<0.5	<6.0	<2.0	<100
125 MEETINGHOUSE ROAD	Annual	7/21/2016		3J	45	<4	<10	NS	NS	<10	NS	<0.2	<10	<7	22J
		7/21/2016	Duplicate	<5	49	<4	<10	NS	NS	<10	NS	<0.2	<10	<7	16J
		5/8/2013		<3	42	<3	<3	25	NS	<3	NS	<0.3	<15	<3.0	<60
		6/21/2012		<10	42	<1	<2	<100	<100	<6	430	<0.5	<6.0	<2.0	<100
75 OLD ORCHARD ROAD	Annual	5/12/2016		<0.5	7.6	<0.5	2.0	1844	90	4.3	4.5	<0.2	<5.0	<0.5	157.3
		12/6/2012		<3	9	<3	<3	79	NS	<3	NS	<0.5	<15	<3.0	<60
		6/21/2012		<10	6	<1	<2	<100	<100	<6	<100	<0.5	<6.0	<2.0	<100
130 OLD ORCHARD ROAD		12/6/2012		<3	16	<3	<3	18	NS	<3	NS	<0.5	<15	<3.0	<60
		6/21/2012		<10	12	<1	<2	<100	<100	<6	<100	<0.5	<6.0	<2.0	<100
130A OLD ORCHARD ROAD	Annual	5/29/2015		<0.5	11.4	<0.2	<3	107.4	<50	1.0	4.2	<0.2	<1.0	<0.5	6.9
		5/29/2015	Duplicate	NS	11.7	NS	NS	111.7	NS	0.8	4.1	NS	NS	NS	6.7
		12/18/2013		<1	16B	<0.5	0.21J	180B	NS	0.91J	NS	<0.20	<1.0	0.037J	13B
130B OLD ORCHARD ROAD	Annual	5/13/2016		<0.5	23.8	<0.5	1.3	29.6	<50	<1.0	3	<0.2	<5.0	<0.5	<10
		5/29/2015		<0.5	11.0	<0.2	<3	27.9	<50	0.8	<1.0	<0.2	<1.0	<0.5	9.6
		5/29/2015	Duplicate	NS	11.3	NS	NS	102.2	NS	<0.5	NS	NS	NS	NS	15.4
		12/18/2013		<1	13B	<0.5	0.074J	92B	NS	0.63J	NS	<0.20	<1.0	<0.50	16B
210 OLD ORCHARD ROAD	Annual	5/13/2016		<0.5	65.8	<0.5	1.2	127.8	81	<1.0	2069	<0.2	<5.0	<0.5	<10
		12/18/2013		<1	59B	<0.5	<1.5	50B	NS	4.1	NS	<0.20	<1.0	<0.50	89B
		12/6/2012		<3	55	<3	<3	18	NS	<3	NS	<0.5	<15	<3.0	<60
		6/21/2012		<10	54	<1	<2	<100	<100	<6	540	<0.5	<6.0	<2.0	<100
290 OLD ORCHARD ROAD	Annual	5/12/2016		<0.5	43.5	<0.5	<1	238	<50	3.3	89.1	<0.2	<5.0	<0.5	26.3
		4/1/2015		<0.5	38.8	<0.2	<0.5	64.9	<50	<0.5	78.1	<0.2	<1.0	<0.5	23.9
		4/1/2015	Duplicate	NS	39.3	NS	NS	65.4	NS	NS	77.7	NS	NS	NS	21.2
		6/21/2012		<10	25	<1	<2	160	<100	<6	<100	<0.5	<6.0	<2.0	<100

Notes:
GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
SMCL-Secondary Max. Contaminant Level
NS - Not Sampled
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B - Analyte detected in Blank and Sample
* DPW Well sample was not filtered and results are therefore total metals rather than dissolved.
** Residential samples will be tested for metals during 2nd quarter of the year.

ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

TABLE 4.3
SUMMARY OF LANDFILL MONITORING PLAN
GROUNDWATER ANALYTICAL RESULTS
Inorganic Indicator Parameters

Eastham Landfill
Eastham, MA

Property	Sample Frequency	Date		Alkalinity mg/L as CaCO	Chloride mg/L	COD mg/L	Total Cyanide mg/L	Nitrate mg/L	Sulfate mg/L	Total Dissolved Solids mg/L
Standards										
MMCL							0.2	10		
SMCL					250				250	500
Results										
MW 2D		12/6/2012		23	22	<3.0	NS	0.6	6.7	81
MW 2S	Annual	11/24/2015		139	22	10.J	<0.005	0.061J	26	200
		12/16/2014		126	24	5.2 J	<0.005	<0.100	22	160
		12/18/2013		140	26	<5.0	<0.010	<0.05	24	310
		12/6/2012		150	27	<3.0	NS	0.45	40	280
		7/10/2012		150	28	10	<0.010	0.27	36	300
MW 3D	Quarterly	8/10/2016		561	64	44	<0.005	<0.100	49	530
		5/18/2016		599	65	47	<0.005	0.048J	50	600
		2/23/2016		563	64	48	<0.005	0.096J	52	540
		11/24/2015		638	64	60	<0.005	0.044J	59	630
		8/26/2015		673	70	48	<0.005	<0.100	46	600
		5/13/2015		669	74	77	<0.005	<0.500	59	630
		11/10/2014		680	91	56	<0.010	1.7	58	1,200
		11/10/2014	Duplicate	670	91	54	<0.010	1.7	57	1,200
		9/3/2014		780	85	50	<0.010	<0.10	54	1,200
		5/19/2014		830	80	27	<0.010	<0.10	51	1,300
		2/27/2014		720	86	62	<0.010	8.0	35	1,200
		11/25/2013		840	100	50	<0.010	3.1	58	1,200
		9/5/2013		870	96	56	<0.010	<0.10	66	2,500
		5/8/2013		870	100	63	<0.010	0.87	68	1,400
		2/14/2013		920	120	70	<0.010	<0.10	68	1,600
		12/6/2012		960	91	63	NS	1.4	73	1,700
		10/9/2012		960	130	5.8	<0.010	6.2	70	1,500
		7/10/2012		970	100	71	<0.010	0.72	67	1,700
		3/20/2012		1,000	240	62	<0.010	1.7	68	1,500

Notes: GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
SMCL-Secondary Max. Contaminant Level
NS - Not Sampled
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

ENVIRONMENTAL & ENGINEERING SOLUTIONS

Property	Sample Frequency	Date	Alkalinity mg/L as CaCO	Chloride mg/L	COD mg/L	Total Cyanide mg/L	Nitrate mg/L	Sulfate mg/L	Total Dissolved Solids mg/L
MW 3I	Quarterly	8/10/2016	142	10	11.J	<0.005	<0.100	20	240
		5/18/2016	161	11	17.J	<0.005	0.108	34	210
		2/23/2016	111	10	15.J	<0.005	0.155	29	210
		11/24/2015	136	10	25	<0.005	0.079J	31	230
		8/26/2015	162	13	12.J	<0.005	<0.100	27	200
		5/13/2015	149	13	<20	<0.005	<1.0	29	200
		11/10/2014	110	23	15	<0.010	1.1	25	260
		9/3/2014	200	20	16	<0.010	<0.10	30	300
		5/19/2014	200	19	20	<0.010	<0.10	29	300
		2/27/2014	110	17	22	<0.010	0.60	36	300
		11/25/2013	200	16	9.0	<0.010	1.4	46	260
		9/5/2013	190	12	13	<0.010	<0.10	39	240
		5/8/2013	160	13	7.0	<0.010	0.32	49	260
		2/14/2013	180	14	15	<0.010	0.14	70	250
		12/6/2012	190	10	17	NS	0.35	81	290
		10/9/2012	180	12	<3.0	<0.010	<0.10	79	270
		7/10/2012	180	19	18	<0.010	0.19	66	320
		3/20/2012	180	19	15	<0.010	0.42	63	290
MW 3S		12/6/2012	16	10	<3.0	NS	3.0	10	61
MW 4D		12/6/2012	16	50	<3.0	NS	2.3	18	140
MW 4S	Annual	11/24/2015	168	18	22	<0.005	0.033J	15	<10
		12/16/2014	166	21	12 J	<0.005	<0.500	14	190
		12/18/2013	170	20	6.0	<0.010	<0.05	14	300
		12/6/2012	180	21	14	NS	<0.10	22	240
		7/10/2012	180	26	13	<0.010	0.18	20	300
MW 5D		12/5/2012	23	77	<3.0	NS	2.3	25	230
MW 5S	Annual	11/24/2015	201	25	22	<0.005	0.037J	22	250
		12/16/2014	198	18	26	<0.005	<0.500	20	220
		12/18/2013	210	28	11	<0.010	0.40	22	370
		12/5/2012	200	34	8.0	NS	0.45	29	320
		7/10/2012	220	33	12	<0.010	0.28	29	380
MW 8	Annual	12/18/2013	110	34	<2.0	<0.010	1.6	16	280
75 OLD ORCHARD ROAD		6/21/2012	26	25	<3.0	<0.010	1.0	7.8	96
130 OLD ORCHARD ROAD		6/21/2012	37	69	<3.0	<0.010	3.5	8.6	220
180 OLD ORCHARD ROAD		6/21/2012	11	32	<3.0	<0.010	2.0	14	120
		3/23/2012	NS	35	<3.0	<0.010	2.0	16	100
210 OLD ORCHARD ROAD		6/21/2012	42	42	<3.0	<0.010	2.4	23	170
290 OLD ORCHARD ROAD		6/21/2012	17	32	<3.0	<0.010	3.3	14	130

Notes: GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
SMCL-Secondary Max. Contaminant Level
NS - Not Sampled
J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

ES&M ENVIRONMENTAL & ENGINEERING SOLUTIONS

Environmental Strategies & Management

Site Visit Form

PROJECT Eastham **DATE** Thursday, 7/21/2016

PERSONNEL M. Ducios **OTHER PERSONNEL** B. Paulsen

ARRIVAL TIME 0900 **DEPARTURE TIME** 1520

WEATHER CONDITIONS sunny, 70's

Check all that apply for this site visit:

- ☐ Samples taken (include location description and copy of COC)
- ☑ Rental equipment used (include rental form for ES&M rentals) D. Wells dedicated pole
- ☐ Materials purchased

Description of activities and observations:

- water samples at 10 residential properties
- testing for 1,4 Dioxane
- 1 property was tested for 1,4 Dioxane, VOC's, & metals
- checked for treatment systems at each house
- brought samples back to lab
- probe caught inside well at campground, later retrieved (probe broke inside well - not usable for other properties - if)

Work Completed By: _____

CHAIN OF CUSTODY

PAGE 3 OF 3

ALPHA ANALYTICAL — World Class Chemistry

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab:

ALPHA Job #:

Client Information

Client: Environmental Strategies & Managemen
Address: 273 West Main Street
Norton, MA 02703
Phone: 508-226-1800
Fax: 508-226-1811
Email: tflynn@esm-inc.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: Eastham DW
Project Location: Eastham MA
Project #: 2015-038
Project Manager: Lisa Flynn
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information — Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
8270 - MCP	0.15 ug/l for 1,4 dioxane, GW-1

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
email results to tflynn@esm-inc.com and eboyd@esm-inc.com

please invoice Eastham

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	1,4 dioxane by 8270	8260 C *	MCP Total Metals *	TOTAL # BOTTLES	Sample Specific Comments
	MEETINGHOUSE RD_125 *	7-21-16	1345			☒	☒	☒		
	MEETINGHOUSE RD_125 dup *	7-21-16	1345			☒	☒	☒		
	KNOWLES ST_050	7-21-16	1500			☒	☐	☐		
	KNOWLES ST_050 dup	7-21-16	1500			☒	☐	☐		
	ALSTON AVE_200	7-21-16	1330			☒	☐	☐		
	ALSTON AVE_200 dup	7-21-16	1330			☒	☐	☐		
	TRIP BLANK					☐	☒	☐		
						☐	☐	☐		
						☐	☐	☐		
						☐	☐	☐		

Container Type	-	-	-	-	-	-	-	-	-	-	-	-	
Preservative	-	-	-	-	-	-	-	-	-	-	-	-	

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I) (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
	7/21/16 1715		7/21/16 17:15

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

CHAIN OF CUSTODY

PAGE 1 OF 3

ALPHA ANALYTICAL — World Class Chemistry

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab:

ALPHA Job #:

Client Information

Client: Environmental Strategies & Managemen
Address: 273 West Main Street
Norton, MA 02703
Phone: 508-226-1800
Fax: 508-226-1811
Email: lflynn@esm-inc.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: Eastham DW
Project Location: Eastham MA
Project #: 2015-038
Project Manager: Lisa Flynn
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
8270 - MCP	0.15 ug/l for 1,4 dioxane, GW-1

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
email results to lflynn@esm-inc.com and aboyd@esm-inc.com

please invoice Eastham

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	1,4 dioxane by 8270	Sample Specific Comments
	SALT POND RD_045	7-21-16	1230	GW	MD	☒	
	SALT POND RD_045 dup	7-21-16	1230	GW	MD	☒	
	SALT POND RD_055	7-21-16	1245	GW	MD	☒	
	SALT POND RD_055 dup	7-21-16	1245	GW	MD	☒	
	ALSTON AVE_085	7-21-16	1320	GW	MD	☒	
	ALSTON AVE_085 dup	7-21-16	1320	GW	MD	☒	
	SCHOOLHOUSE RD_200	7-21-16	1400	GW	MD	☒	
	SCHOOLHOUSE RD_200 dup	7-21-16	1400	GW	MD	☒	
						☐	
						☐	

Container Type	-	-	-	-	-	-	-	-	-	-	-	-	
Preservative	-	-	-	-	-	-	-	-	-	-	-	-	

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

FORM NO: 01-01(I) (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
	7/21/16 1715		7/21/16 17:15

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

CHAIN OF CUSTODY

ALPHA ANALYTICAL — World Class Chemistry

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: Environmental Strategies & Managemen
Address: 273 West Main Street
Norton, MA 02703
Phone: 508-226-1800
Fax: 508-226-1811
Email: lflynn@esm-inc.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: Eastham DW
Project Location: Eastham MA
Project #: 2015-038
Project Manager: Lisa Flynn
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Other Project Specific Requirements/Comments/Detection Limits:
email results to lflynn@esm-inc.com and aboyd@esm-inc.com

please invoice Eastham

Date Rec'd in Lab:

ALPHA Job #:

Report Information Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
8270 - MCP	0.15 ug/l for 1,4 dioxane, GW-1

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	1,4 dioxane by 8270	TOTAL # BOTTLES	Sample Specific Comments
	PRESERVATION WAY_004	7-21-16	1300	GW	MD	☒		
	PRESERVATION WAY_004 dup	7-21-16	1300	GW	MD	☒		
	ATLANTICOAKS 'H' WELL	7-21-16	0950	GW	MD	☒		
	ATLANTICOAKS 'H' WELL D	7-21-16	0950	GW	MD	☒		
	ATLANTICOAKS NORTH	7-21-16	0940	GW	MD	☒		
	ATLANTICOAKS NORTH dup	7-21-16	0940	GW	MD	☒		
	ATLANTICOAKS-SOUTH	7-21-16	0935	GW	MD	☒		
	ATLANTICOAKS-SOUTH dup	7-21-16	0935	GW	MD	☒		
	KINGSBURY BEACH Rd 020	7-21-16	1415	GW	MD	☒		
	KINGSBURY BEACH Rd 020 dup	7-21-16	1415	GW	MD	☒		
	Container Type					-		
	Preservative					-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

FORM NO: 01-01(I) (rev. 6-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
	7/21/16 1716		7/21/16 17:18

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Eastham Landfill
Private Well Sampling Log

Address: Atlantic Oaks Campground North Well
Date: 7-21-16
Sampler: M. Duclos
Weather Conditions: Sunny
Temperature: 70's

Property Owner: Dan (Campground Mgr)
Property Contact:
Phone: 781-856-4810
Email: dan@capecamping.com
Contact Log Attached: Yes: No:

Analysis Required: 1,4-Dioxane (8270 SIM) [redacted]
Analytical Lab: Alpha
Sample Location: before meter
Describe water system including treatment: no treatment system
Water meter reading:

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: Continuous Finish:

Volume Purged: 20 gallons
Equipment Utilized:
Attach Equipment Calibration Log:

Eastham Landfill
Private Well Sampling Log

Address: 3700 State Highway - Atlantic Oaks Campground 'H' Well
Date: 7-21-16
Sampler: M. Ducas
Weather Conditions: sunny
Temperature: 70's

Property Owner: Dan (Campground Mgr.)
Property Contact:
Phone: 781-856-4810
Email: [redacted] dan@capecamping.com
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM), [redacted]
Analytical Lab: Alpha
Sample Location: before meter
Describe water system including treatment: no treatment system
Water meter reading: 4216,545

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: continuous Finish: _____

Volume Purged: 20 gallons
Equipment Utilized: _____
Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Address: Atlantic Oaks Campground Southwell
Date: 7-21-10
Sampler: M. Duclos
Weather Conditions: sunny
Temperature: 70's

Property Owner: Dan (Campground Mgr)
Property Contact:
Phone: 781-856-4810
Email: dan@capecamping.com
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM) [redacted]
Analytical Lab: Alpha
Sample Location: before meter
Describe water system including treatment: no treatment system
Water meter reading: 5,745,630

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: continuous Finish: _____

Volume Purged: 20 gallons
Equipment Utilized: _____
Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? 42.13 DTW South well
58.30 DTB

Summary of Sampling and Monitoring Activities:

Complete sketch of treatment system, if applicable:

Complete sketch below of property including location of house and well. Also include diagram of treatment system, if applicable:

Eastham Landfill
Private Well Sampling Log

Address: Salt Pond Rd. 045
Date: 7/21/16
Sampler: M. Duclos
Weather Conditions: 70s, sunny
Temperature:

Property Owner: Jim McGrath
Property Contact:
Phone: 774-722-3330
Email:
Contact Log Attached: Yes: No:

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: outside spigot
Describe water system including treatment: no treatment system
Water meter reading:

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: Continuous Finish:

Volume Purged: 45 gallons
Equipment Utilized:
Attach Equipment Calibration Log:

Eastham Landfill
Private Well Sampling Log

Address: Alston Ave. 085
Date: 7-21-16
Sampler: M. Duclos
Weather Conditions: sunny
Temperature: 70.5

Property Owner: Linda & William Burt
Property Contact:
Phone: 508-255-1385
Email:
Contact Log Attached: Yes: No:

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: kitchen sink
Describe water system including treatment: no treatment system
Water meter reading:

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: continuous Finish:

Volume Purged: 20 gallons
Equipment Utilized:
Attach Equipment Calibration Log:

Eastham Landfill
Private Well Sampling Log

85 Alston Ave

Well Depth: Measured or Provided? already gauged

Summary of Sampling and Monitoring Activities:

Complete sketch of treatment system, if applicable:

Complete sketch below of property including location of house and well. Also include diagram of treatment system, if applicable:

Eastham Landfill
Private Well Sampling Log

Address: Preservation Way 004
Date: 7-21-16
Sampler: M. Duclos
Weather Conditions: Sunny
Temperature: 70's

Property Owner: Stephen Montanez
Property Contact:
Phone: 774-368-0850
Email:
Contact Log Attached: Yes: No:

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: basement pressure tank
Describe water system including treatment: treatment system, diagram on file
Water meter reading:

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: continuous Finish:

Volume Purged: 20 gallons
Equipment Utilized:
Attach Equipment Calibration Log:

Eastham Landfill
Private Well Sampling Log

4 Preservation way

Well Depth: Measured or Provided? already gauged

Summary of Sampling and Monitoring Activities:

Complete sketch of treatment system, if applicable:

Complete sketch below of property including location of house and well. Also include diagram of treatment system, if applicable:

Eastham Landfill
Private Well Sampling Log

Address: Alston Ave. 200
Date: 7-21-16
Sampler: M. Dixlos
Weather Conditions: sunny
Temperature: 70's

Property Owner: Kim & Peter Radke
Property Contact:
Phone: 774-216-0332
Email:
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Kitchen Sink
Describe water system including treatment: no treatment system
Water meter reading:

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: continuous Finish: _____

Volume Purged: 20 gallons
Equipment Utilized:
Attach Equipment Calibration Log:

Eastham Landfill
Private Well Sampling Log

Address: Meeting House Rd 125
Date: 7-21-16
Sampler: M. Duclos
Weather Conditions: Sunny
Temperature: 70s

Property Owner: Jeff Breaks
Property Contact:
Phone: 804-832-6796
Email:
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM), VOCs, metals
Analytical Lab: Alpha
Sample Location: outside pump house, spigot
Describe water system including treatment: particulate filter
Water meter reading:

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: Continious Finish: _____

Volume Purged: 26 gallons
Equipment Utilized:
Attach Equipment Calibration Log:

Eastham Landfill
Private Well Sampling Log

Address: Schoolhouse Rd. 200
Date: 7-21-10
Sampler: M. Duclos
Weather Conditions: Sunny
Temperature: 70s

Property Owner:
Property Contact: Linda Burt
Phone: 508-255-0808
Email:
Contact Log Attached: Yes: No:

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Basement
Describe water system including treatment:
Water meter reading:

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: Continous Finish:

Volume Purged: 20 gallons
Equipment Utilized:
Attach Equipment Calibration Log:

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? already gauged

Summary of Sampling and Monitoring Activities:

Complete sketch of treatment system, if applicable:

Complete sketch below of property including location of house and well. Also include diagram of treatment system, if applicable:

Eastham Landfill
Private Well Sampling Log

Address: Knowles St. 050
Date: 7-21-16
Sampler: M. Duclos
Weather Conditions: Sunny
Temperature: 70s

Property Owner: Lesa Mikas
Property Contact:
Phone: 860-841-6237
Email:
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: basement pressure tank
Describe water system including treatment:
Water meter reading:

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: Continious Finish: _____

Volume Purged: 20 gallons
Equipment Utilized:
Attach Equipment Calibration Log:

Eastham Landfill
Private Well Sampling Log

Knowles St

Well Depth: Measured or Provided? already gauged

Summary of Sampling and Monitoring Activities:

Complete sketch of treatment system, if applicable:

Complete sketch below of property including location of house and well. Also include diagram of treatment system, if applicable:

Eastham Landfill
Private Well Sampling Log

Address: Kingsbury Beach Rd. 20
Date: 7-21-16
Sampler: M. Arcos
Weather Conditions: sunny
Temperature: 70.5

Property Owner: _____
Property Contact: _____
Phone: _____
Email: _____
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Kitchen Sink
Describe water system including treatment: no treatment system
Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: continuous Finish: _____

Volume Purged: 20 gallons
Equipment Utilized: _____
Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Address: Salt Pond Rd 055
Date: 7-21-16
Sampler: M. Duclos
Weather Conditions: sunny
Temperature: 70's

Property Owner: Jim McGrath
Property Contact:
Phone: 774-722-3330
Email:
Contact Log Attached: Yes: No:

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: basement pressure tank
Describe water system including treatment: no treatment system
Water meter reading:

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: continuous Finish:

Volume Purged: 20 gallons
Equipment Utilized:
Attach Equipment Calibration Log:

BARNSTABLE COUNTY
DEPARTMENT OF HEALTH AND ENVIRONMENT

BARNSTABLE COUNTY COMPLEX
3195 MAIN STREET / PO BOX 427
BARNSTABLE, MASSACHUSETTS 02630

Phone: (508) 375-6613
FAX (508) 362-2603
TDD (508) 362-5885

WATER SAMPLING LOG: EASTHAM LANDFILL

WELL NUMBER: mw 3I DATE: 8/10/16
WEATHER: sunny 80 TIME: 1100

EVACUATION DATA

DESCRIPTION OF MEASURING POINT: Top of ~~Casing~~ PVC
DEPTH TO BOTTOM OF WELL: 52.38 DIAMETER OF CASING: 2"
DEPTH TO WATER IN WELL: 19.81 MATERIAL OF WELL: PVC
FEET OF WATER IN WELL: 32.57 GALLONS PER FOOT: 0.16
GALLONS OF WATER IN WELL: 5.21 AMOUNT TO PURGE: 35gal

EVACUATION METHOD: DC Purgible Pump/dedicated bailer/dedicated watterra

SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: - APPEARANCE: -
PH: 5.21 TEMP: 12.49 COND: 324 DO: 1.06
OTHER:

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated waterra

All bottles supplied and samples picked up by Alpha Lab. Results sent directly to Environmental Strategies and Management.

REMARKS: * Field Filtered

SAMPLING PERSONNEL: Lynn K. Mulkeen-BCDHE

WELL CASING VOLUMES:
1 ¼"=0.06 1 ½"=0.09 2"=0.16 2 ½"=0.26 3"=0.37 3 ½"=0.50
4"=0.65 6"=1.47

BARNSTABLE COUNTY
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3195 MAIN STREET / PO BOX 427
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Phone: (508) 375-6613
FAX (508) 362-2603
TDD (508) 362-5885

WATER SAMPLING LOG: EASTHAM LANDFILL

WELL NUMBER: mw 3D DATE: 8/10/16
WEATHER: sunny 80 TIME: 1100

EVACUATION DATA

DESCRIPTION OF MEASURING POINT: Top of ~~Casing~~ PVC
DEPTH TO BOTTOM OF WELL: 73.42 DIAMETER OF CASING: 2"
DEPTH TO WATER IN WELL: 19.58 MATERIAL OF WELL: PVC
FEET OF WATER IN WELL: 53.84 GALLONS PER FOOT: 0.16
GALLONS OF WATER IN WELL: 8.61 AMOUNT TO PURGE: 55gal

EVACUATION METHOD: DC Purgible Pump/dedicated bailer/dedicated watterra

SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: - APPEARANCE: -
PH: 5.48 TEMP: 12.70 COND: 1131 DO: 1.49
OTHER:

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated waterra

All bottles supplied and samples picked up by Alpha Lab. Results sent directly to Environmental Strategies and Management.

REMARKS: * Field Filtered

SAMPLING PERSONNEL: Lynn K. Mulkeen-BCDHE

WELL CASING VOLUMES:
1 ¼"=0.06 1 ½"=0.09 2"=0.16 2 ½"=0.26 3"=0.37 3 ½"=0.50
4"=0.65 6"=1.47

ES&M QAQC Review Log

Lab	Project Number	Sample Date	Matrix	CAM Form Included?	Lab Presumptive Certainty?	QC Performance Standards Met?	Reporting Limits Achieved?	All Analytes Reported?	Data Usability Status
Alpha	L1622823	7/21/2016	DW	Yes	Yes	No	No	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis	Sample ID	Date	Lab ID	Matrix	Analysis
SALT POND RD_045	7/21/2016	L1622823 - 1	DW	8270	ATLANTICOAKS NORTH DUP	7/21/2016	L1622823 - 14	DW	Not Analyzed
SALT POND RD_045 DUP	7/21/2016	L1622823 - 2	DW	8270	ATLANTICOAKS-SOUTH	7/21/2016	L1622823 - 15	DW	8270
SALT POND RD_055	7/21/2016	L1622823 - 3	DW	8270	ATLANTICOAKS-SOUTH DUP	7/21/2016	L1622823 - 16	DW	Not Analyzed
SALT POND RD_055 DUP	7/21/2016	L1622823 - 4	DW	Not Analyzed	KINGSBURY BEACH RD_020	7/21/2016	L1622823 - 17	DW	8270
ALSTON AVE_085	7/21/2016	L1622823 - 5	DW	8270	KINGSBURY BEACH RD_020 DUP	7/21/2016	L1622823 - 18	DW	Not Analyzed
ALSTON AVE_085 DUP	7/21/2016	L1622823 - 6	DW	8270	MEETINGHOUSE RD_125	7/21/2016	L1622823 - 19	DW	8260, 8270, metals
SCHOOLHOUSE RD_200	7/21/2016	L1622823 - 7	DW	8270	MEETINGHOUSE RD_125 DUP	7/21/2016	L1622823 - 20	DW	8260, 8270, metals
SCHOOLHOUSE RD_200 DUP	7/21/2016	L1622823 - 8	DW	Not Analyzed	KNOWLES ST_050	7/21/2016	L1622823 - 21	DW	8270
PRESERVATION WAY_004	7/21/2016	L1622823 - 9	DW	8270	KNOWLES ST_050 DUP	7/21/2016	L1622823 - 22	DW	Not Analyzed
PRESERVATION WAY_004 DUP	7/21/2016	L1622823 - 10	DW	8270	ALSTON AVE_200	7/21/2016	L1622823 - 23	DW	8270
ATLANTICOAKS 'H' WELL	7/21/2016	L1622823 - 11	DW	8270	ALSTON AVE_200 DUP	7/21/2016	L1622823 - 24	DW	Not Analyzed
ATLANTICOAKS 'H' WELL D	7/21/2016	L1622823 - 12	DW	Not Analyzed	TRIP BLANK	7/21/2016	L1622823 - 25	DW	8260
ATLANTICOAKS NORTH	7/21/2016	L1622823 - 13	DW	8270					

The continuing calibration standard, associated with L1622823-19, is included as an addendum to this report. In reference to question H:

The initial calibration, associated with L1622823-19, did not meet the method required minimum response factor on the lowest calibration standard for 2-hexanone (0.0856), 4-methyl-2-pentanone (0.0552) and 1,4-dioxane (0.0009), as well as the average response factor for 4-methyl-2-pentanone and 1,4-dioxane. The initial calibration verification is outside acceptance criteria for dichlorodifluoromethane (140%), but within overall method criteria.

The initial calibration, associated with L1622823-20 and -25, did not meet the method required minimum response factor on the lowest calibration standard for acetone (0.0644), 2-butanone (0.0772) and 1,4-dioxane (0.0014), as well as the average response factor for acetone, 2-butanone and 1,4-dioxane.

The continuing calibration standard, associated with L1622823-20 and -25, 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.

All QAQC data, including surrogate, trip blank, method blank, laboratory control sample (LCS), and LCS duplicate results were reviewed. This report was deemed usable by Angela Boyd on 8/24/16.

ANALYTICAL REPORT

Lab Number:	L1622823
Client:	Environmental Strategies & Mgmt. 273 West Main Street Norton, MA 02766
ATTN:	Lisa Flynn
Phone:	(508) 226-1800
Project Name:	EASTHAM DW
Project Number:	2015-038
Report Date:	08/09/16

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), ME (MA00030), PA (68-02089), VA (460194), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), USFWS (Permit #LE2069641), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1622823
Report Date: 08/09/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1622823-01	SALT POND RD_045	WATER	EASTHAM, MA	07/21/16 12:30	07/21/16
L1622823-02	SALT POND RD_045 DUP	WATER	EASTHAM, MA	07/21/16 12:30	07/21/16
L1622823-03	SALT POND RD_055	WATER	EASTHAM, MA	07/21/16 12:45	07/21/16
L1622823-04	SALT POND RD_055 DUP	WATER	EASTHAM, MA	07/21/16 12:45	07/21/16
L1622823-05	ALSTON AVE_085	WATER	EASTHAM, MA	07/21/16 13:20	07/21/16
L1622823-06	ALSTON AVE_085 DUP	WATER	EASTHAM, MA	07/21/16 13:20	07/21/16
L1622823-07	SCHOOLHOUSE RD_200	WATER	EASTHAM, MA	07/21/16 14:00	07/21/16
L1622823-08	SCHOOLHOUSE RD_200 DUP	WATER	EASTHAM, MA	07/21/16 14:00	07/21/16
L1622823-09	PRESERVATION WAY_004	WATER	EASTHAM, MA	07/21/16 13:00	07/21/16
L1622823-10	PRESERVATION WAY_004 DUP	WATER	EASTHAM, MA	07/21/16 13:00	07/21/16
L1622823-11	ATLANTICOAKS 'H' WELL	WATER	EASTHAM, MA	07/21/16 09:50	07/21/16
L1622823-12	ATLANTICOAKS 'H' WELL D	WATER	EASTHAM, MA	07/21/16 09:50	07/21/16
L1622823-13	ATLANTICOAKS NORTH	WATER	EASTHAM, MA	07/21/16 09:40	07/21/16
L1622823-14	ATLANTICOAKS NORTH DUP	WATER	EASTHAM, MA	07/21/16 09:40	07/21/16
L1622823-15	ATLANTICOAKS-SOUTH	WATER	EASTHAM, MA	07/21/16 09:35	07/21/16
L1622823-16	ATLANTICOAKS-SOUTH DUP	WATER	EASTHAM, MA	07/21/16 09:35	07/21/16
L1622823-17	KINGSBURY BEACH RD_020	WATER	EASTHAM, MA	07/21/16 14:15	07/21/16
L1622823-18	KINGSBURY BEACH RD_020 DUP	WATER	EASTHAM, MA	07/21/16 14:15	07/21/16
L1622823-19	MEETINGHOUSE RD_125	WATER	EASTHAM, MA	07/21/16 13:45	07/21/16
L1622823-20	MEETINGHOUSE RD_125 DUP	WATER	EASTHAM, MA	07/21/16 13:45	07/21/16
L1622823-21	KNOWLES ST_050	WATER	EASTHAM, MA	07/21/16 15:00	07/21/16
L1622823-22	KNOWLES ST_050 DUP	WATER	EASTHAM, MA	07/21/16 15:00	07/21/16
L1622823-23	ALSTON AVE_200	WATER	EASTHAM, MA	07/21/16 13:30	07/21/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1622823-24	ALSTON AVE_200 DUP	WATER	EASTHAM, MA	07/21/16 13:30	07/21/16
L1622823-25	TRIP BLANK	WATER	EASTHAM, MA	07/21/16 00:00	07/21/16

Project Name: EASTHAM DW
Project Number: 2015-038
Lab Number: L1622823
Report Date: 08/09/16

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)?	NO
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: EASTHAM DW
Project Number: 2015-038

Lab Number: L1622823
Report Date: 08/09/16

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 NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. 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: EASTHAM DW **Lab Number:** L1622823
Project Number: 2015-038 **Report Date:** 08/09/16

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

MCP Related Narratives

Sample Receipt

L1622823-01 through -24: Sample matrix is drinking water.

Volatile Organics

The continuing calibration standard, associated with L1622823-19, is included as an addendum to this report.

In reference to question H:

The initial calibration, associated with L1622823-19, did not meet the method required minimum response factor on the lowest calibration standard for 2-hexanone (0.0856), 4-methyl-2-pentanone (0.0552) and 1,4-dioxane (0.0009), as well as the average response factor for 4-methyl-2-pentanone and 1,4-dioxane. The initial calibration verification is outside acceptance criteria for dichlorodifluoromethane (140%), but within overall method criteria.

The initial calibration, associated with L1622823-20 and -25, did not meet the method required minimum response factor on the lowest calibration standard for acetone (0.0644), 2-butanone (0.0772) and 1,4-dioxane (0.0014), as well as the average response factor for acetone, 2-butanone and 1,4-dioxane.

The continuing calibration standard, associated with L1622823-20 and -25, 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.

Semivolatile Organics

In reference to question I:

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

Project Name:	EASTHAM DW	**Lab Number:**	L1622823
Project Number:	2015-038	**Report Date:**	08/09/16

Case Narrative (continued)

Metals

In reference to question G:

L1622823-19 and -20: One or more of the target analytes did not achieve the requested CAM reporting limits.

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: 08/09/16

ORGANICS

VOLATILES

Project Name: EASTHAM DW
Project Number: 2015-038
Lab Number: L1622823
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-19
Client ID: MEETINGHOUSE RD_125
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 07/28/16 12:04
Analyst: MM

Date Collected: 07/21/16 13:45
Date Received: 07/21/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.29	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.16	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.17	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.16	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.18	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1

Project Name: EASTHAM DW **Lab Number:** L1622823

Project Number: 2015-038 **Report Date:** 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-19 Date Collected: 07/21/16 13:45

Client ID: MEETINGHOUSE RD_125 Date Received: 07/21/16

Sample Location: EASTHAM, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.16	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.33	1
Xylene (Total)	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene (total)	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	1.6	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
2-Butanone	6.5		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.14	1
Tetrahydrofuran	5.8		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.18	1
o-Chlorotoluene	ND		ug/l	2.0	0.17	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.33	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.17	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-19
Client ID: MEETINGHOUSE RD_125
Sample Location: EASTHAM, MA
Date Collected: 07/21/16 13:45
Date Received: 07/21/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	ND		ug/l	2.0	0.15	1
Isopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	41.	1
Tentatively Identified Compounds						
No Tentatively Identified Compounds	ND		ug/l			1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	107		70-130

Project Name: EASTHAM DW
Project Number: 2015-038
Lab Number: L1622823
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-20
Client ID: MEETINGHOUSE RD_125 DUP
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 08/01/16 13:52
Analyst: MM

Date Collected: 07/21/16 13:45
Date Received: 07/21/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.29	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.16	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.17	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.16	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.18	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1

Project Name: EASTHAM DW **Lab Number:** L1622823

Project Number: 2015-038 **Report Date:** 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-20 Date Collected: 07/21/16 13:45

Client ID: MEETINGHOUSE RD_125 DUP Date Received: 07/21/16

Sample Location: EASTHAM, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.16	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.33	1
Xylene (Total)	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene (total)	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	1.8	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
2-Butanone	7.5		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.14	1
Tetrahydrofuran	8.2		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.18	1
o-Chlorotoluene	ND		ug/l	2.0	0.17	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.33	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.17	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1

Project Name: EASTHAM DW **Lab Number:** L1622823

Project Number: 2015-038 **Report Date:** 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-20 Date Collected: 07/21/16 13:45

Client ID: MEETINGHOUSE RD_125 DUP Date Received: 07/21/16

Sample Location: EASTHAM, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	ND		ug/l	2.0	0.15	1
Isopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	41.	1
Tentatively Identified Compounds						
No Tentatively Identified Compounds	ND		ug/l			1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	102		70-130

Project Name: EASTHAM DW
Project Number: 2015-038
Lab Number: L1622823
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-25
Client ID: TRIP BLANK
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 08/01/16 13:20
Analyst: MM

Date Collected: 07/21/16 00:00
Date Received: 07/21/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.29	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.16	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.17	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.16	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.18	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1

Project Name: EASTHAM DW **Lab Number:** L1622823

Project Number: 2015-038 **Report Date:** 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-25 Date Collected: 07/21/16 00:00

Client ID: TRIP BLANK Date Received: 07/21/16

Sample Location: EASTHAM, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.16	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.33	1
Xylene (Total)	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene (total)	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.14	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.18	1
o-Chlorotoluene	ND		ug/l	2.0	0.17	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.33	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	0.26	J	ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.17	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-25
Client ID: TRIP BLANK
Sample Location: EASTHAM, MA
Date Collected: 07/21/16 00:00
Date Received: 07/21/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	ND		ug/l	2.0	0.15	1
Isopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	41.	1
Tentatively Identified Compounds						
Unknown	3.39	J	ug/l			1
Unknown	5.35	J	ug/l			1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	92		70-130
Dibromofluoromethane	101		70-130

Project Name: EASTHAM DW
Project Number: 2015-038
Lab Number: L1622823
Report Date: 08/09/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 07/28/16 09:53
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 19 Batch: WG917953-5					
Methylene chloride	ND		ug/l	2.0	0.29
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.16
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.17
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.16
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.18
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.14
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: EASTHAM DW
Project Number: 2015-038
Lab Number: L1622823
Report Date: 08/09/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 07/28/16 09:53
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 19 Batch: WG917953-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.16
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.33
Xylene (Total)	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene (total)	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
2-Butanone	ND		ug/l	5.0	1.9
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.14
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.18
o-Chlorotoluene	ND		ug/l	2.0	0.17

Project Name: EASTHAM DW
Project Number: 2015-038
Lab Number: L1622823
Report Date: 08/09/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 07/28/16 09:53
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 19 Batch: WG917953-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.33
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.17
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Ethyl ether	ND		ug/l	2.0	0.15
Isopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	41.
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.0	0.15
tert-Butyl Alcohol	ND		ug/l	10	0.90
2-Chloroethylvinyl ether	ND		ug/l	10	0.40

No Tentatively Identified Compounds ND ug/l

Project Name: EASTHAM DW
Project Number: 2015-038
Lab Number: L1622823
Report Date: 08/09/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 07/28/16 09:53
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 19 Batch: WG917953-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	100		70-130

Project Name: EASTHAM DW
Project Number: 2015-038
Lab Number: L1622823
Report Date: 08/09/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 08/01/16 07:31
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 20,25 Batch: WG919123-5					
Methylene chloride	ND		ug/l	2.0	0.29
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.16
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.17
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.16
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.18
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.14
trans-1,2-Dichloroethene	0.27	J	ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: EASTHAM DW
Project Number: 2015-038
Lab Number: L1622823
Report Date: 08/09/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 08/01/16 07:31
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 20,25 Batch: WG919123-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.16
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.33
Xylene (Total)	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene (total)	0.27	J	ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
2-Butanone	ND		ug/l	5.0	1.9
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.14
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.18
o-Chlorotoluene	ND		ug/l	2.0	0.17

Project Name: EASTHAM DW
Project Number: 2015-038
Lab Number: L1622823
Report Date: 08/09/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 08/01/16 07:31
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 20,25 Batch: WG919123-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.33
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	0.41	J	ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	0.34	J	ug/l	2.0	0.23
1,2,4-Trichlorobenzene	0.28	J	ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.17
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Ethyl ether	ND		ug/l	2.0	0.15
Isopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	41.

Tentatively Identified Compounds

No Tentatively Identified Compounds	ND	ug/l

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1622823
Report Date: 08/09/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 08/01/16 07:31
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 20,25 Batch: WG919123-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	103		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1622823
Report Date: 08/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 19 Batch: WG917953-3 WG917953-4								
Methylene chloride	93		97		70-130	4		20
1,1-Dichloroethane	95		96		70-130	1		20
Chloroform	94		95		70-130	1		20
Carbon tetrachloride	91		96		70-130	5		20
1,2-Dichloropropane	93		94		70-130	1		20
Dibromochloromethane	93		96		70-130	3		20
1,1,2-Trichloroethane	100		100		70-130	0		20
Tetrachloroethene	95		97		70-130	2		20
Chlorobenzene	95		98		70-130	3		20
Trichlorofluoromethane	88		92		70-130	4		20
1,2-Dichloroethane	92		94		70-130	2		20
1,1,1-Trichloroethane	92		93		70-130	1		20
Bromodichloromethane	89		94		70-130	5		20
trans-1,3-Dichloropropene	100		100		70-130	0		20
cis-1,3-Dichloropropene	92		96		70-130	4		20
1,1-Dichloropropene	97		97		70-130	0		20
Bromoform	95		95		70-130	0		20
1,1,2,2-Tetrachloroethane	98		100		70-130	2		20
Benzene	93		95		70-130	2		20
Toluene	95		96		70-130	1		20
Ethylbenzene	97		99		70-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM DW

Project Number: 2015-038

Lab Number: L1622823

Report Date: 08/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 19 Batch: WG917953-3 WG917953-4								
Chloromethane	94		100		70-130	6		20
Bromomethane	81		86		70-130	6		20
Vinyl chloride	90		98		70-130	9		20
Chloroethane	88		89		70-130	1		20
1,1-Dichloroethene	90		92		70-130	2		20
trans-1,2-Dichloroethene	91		96		70-130	5		20
Trichloroethene	93		94		70-130	1		20
1,2-Dichlorobenzene	96		96		70-130	0		20
1,3-Dichlorobenzene	97		96		70-130	1		20
1,4-Dichlorobenzene	98		95		70-130	3		20
Methyl tert butyl ether	91		96		70-130	5		20
p/m-Xylene	95		100		70-130	5		20
o-Xylene	95		100		70-130	5		20
cis-1,2-Dichloroethene	92		93		70-130	1		20
Dibromomethane	90		94		70-130	4		20
1,2,3-Trichloropropane	100		100		70-130	0		20
Styrene	95		100		70-130	5		20
Dichlorodifluoromethane	90		95		70-130	5		20
Acetone	110		100		70-130	10		20
Carbon disulfide	100		100		70-130	0		20
2-Butanone	94		98		70-130	4		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1622823
Report Date: 08/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 19 Batch: WG917953-3 WG917953-4								
4-Methyl-2-pentanone	96		100		70-130	4		20
2-Hexanone	95		100		70-130	5		20
Bromochloromethane	100		100		70-130	0		20
Tetrahydrofuran	100		100		70-130	0		20
2,2-Dichloropropane	110		120		70-130	9		20
1,2-Dibromoethane	95		100		70-130	5		20
1,3-Dichloropropane	97		99		70-130	2		20
1,1,1,2-Tetrachloroethane	95		96		70-130	1		20
Bromobenzene	94		91		70-130	3		20
n-Butylbenzene	99		99		70-130	0		20
sec-Butylbenzene	100		98		70-130	2		20
tert-Butylbenzene	99		97		70-130	2		20
o-Chlorotoluene	98		97		70-130	1		20
p-Chlorotoluene	97		98		70-130	1		20
1,2-Dibromo-3-chloropropane	93		100		70-130	7		20
Hexachlorobutadiene	98		93		70-130	5		20
Isopropylbenzene	100		99		70-130	1		20
p-Isopropyltoluene	99		98		70-130	1		20
Naphthalene	92		92		70-130	0		20
n-Propylbenzene	100		99		70-130	1		20
1,2,3-Trichlorobenzene	94		94		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM DW

Project Number: 2015-038

Lab Number: L1622823

Report Date: 08/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 19 Batch: WG917953-3 WG917953-4								
1,2,4-Trichlorobenzene	93		91		70-130	2		20
1,3,5-Trimethylbenzene	99		100		70-130	1		20
1,2,4-Trimethylbenzene	100		100		70-130	0		20
Ethyl ether	87		90		70-130	3		20
Isopropyl Ether	96		98		70-130	2		20
Ethyl-Tert-Butyl-Ether	93		97		70-130	4		20
Tertiary-Amyl Methyl Ether	92		96		70-130	4		20
1,4-Dioxane	88		100		70-130	13		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	90		91		70-130	1		20
tert-Butyl Alcohol	88		100		70-130	13		20
2-Chloroethylvinyl ether	90		93		70-130	3		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	96		98		70-130
Toluene-d8	102		104		70-130
4-Bromofluorobenzene	103		99		70-130
Dibromofluoromethane	96		101		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM DW

Project Number: 2015-038

Lab Number: L1622823

Report Date: 08/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 20,25 Batch: WG919123-3 WG919123-4								
Methylene chloride	99		96		70-130	3		20
1,1-Dichloroethane	97		92		70-130	5		20
Chloroform	96		92		70-130	4		20
Carbon tetrachloride	110		100		70-130	10		20
1,2-Dichloropropane	96		93		70-130	3		20
Dibromochloromethane	100		100		70-130	0		20
1,1,2-Trichloroethane	96		94		70-130	2		20
Tetrachloroethene	94		89		70-130	5		20
Chlorobenzene	98		96		70-130	2		20
Trichlorofluoromethane	110		99		70-130	11		20
1,2-Dichloroethane	97		92		70-130	5		20
1,1,1-Trichloroethane	100		98		70-130	2		20
Bromodichloromethane	97		94		70-130	3		20
trans-1,3-Dichloropropene	100		99		70-130	1		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
1,1-Dichloropropene	100		94		70-130	6		20
Bromoform	96		99		70-130	3		20
1,1,2,2-Tetrachloroethane	94		95		70-130	1		20
Benzene	100		96		70-130	4		20
Toluene	95		92		70-130	3		20
Ethylbenzene	91		88		70-130	3		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1622823
Report Date: 08/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 20,25 Batch: WG919123-3 WG919123-4								
Chloromethane	110		100		70-130	10		20
Bromomethane	100		97		70-130	3		20
Vinyl chloride	84		81		70-130	4		20
Chloroethane	110		110		70-130	0		20
1,1-Dichloroethene	100		96		70-130	4		20
trans-1,2-Dichloroethene	100		96		70-130	4		20
Trichloroethene	98		95		70-130	3		20
1,2-Dichlorobenzene	90		88		70-130	2		20
1,3-Dichlorobenzene	90		86		70-130	5		20
1,4-Dichlorobenzene	91		88		70-130	3		20
Methyl tert butyl ether	120		120		70-130	0		20
p/m-Xylene	90		85		70-130	6		20
o-Xylene	90		85		70-130	6		20
cis-1,2-Dichloroethene	100		98		70-130	2		20
Dibromomethane	100		98		70-130	2		20
1,2,3-Trichloropropane	98		96		70-130	2		20
Styrene	85		80		70-130	6		20
Dichlorodifluoromethane	110		110		70-130	0		20
Acetone	**140**	Q	**140**	Q	70-130	0		20
Carbon disulfide	95		92		70-130	3		20
2-Butanone	**140**	Q	130		70-130	7		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1622823
Report Date: 08/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 20,25 Batch: WG919123-3 WG919123-4								
4-Methyl-2-pentanone	110		110		70-130	0		20
2-Hexanone	120		120		70-130	0		20
Bromochloromethane	110		100		70-130	10		20
Tetrahydrofuran	130		130		70-130	0		20
2,2-Dichloropropane	110		100		70-130	10		20
1,2-Dibromoethane	96		93		70-130	3		20
1,3-Dichloropropane	96		94		70-130	2		20
1,1,1,2-Tetrachloroethane	97		96		70-130	1		20
Bromobenzene	98		97		70-130	1		20
n-Butylbenzene	89		86		70-130	3		20
sec-Butylbenzene	81		79		70-130	3		20
tert-Butylbenzene	84		82		70-130	2		20
o-Chlorotoluene	85		83		70-130	2		20
p-Chlorotoluene	84		82		70-130	2		20
1,2-Dibromo-3-chloropropane	130		120		70-130	8		20
Hexachlorobutadiene	91		92		70-130	1		20
Isopropylbenzene	87		85		70-130	2		20
p-Isopropyltoluene	91		88		70-130	3		20
Naphthalene	120		120		70-130	0		20
n-Propylbenzene	82		80		70-130	2		20
1,2,3-Trichlorobenzene	120		120		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1622823
Report Date: 08/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 20,25 Batch: WG919123-3 WG919123-4								
1,2,4-Trichlorobenzene	120		120		70-130	0		20
1,3,5-Trimethylbenzene	95		91		70-130	4		20
1,2,4-Trimethylbenzene	98		93		70-130	5		20
Ethyl ether	120		110		70-130	9		20
Isopropyl Ether	120		110		70-130	9		20
Ethyl-Tert-Butyl-Ether	120		120		70-130	0		20
Tertiary-Amyl Methyl Ether	120		120		70-130	0		20
1,4-Dioxane	**136**	Q	**132**	Q	70-130	3		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		98		70-130
Toluene-d8	98		97		70-130
4-Bromofluorobenzene	99		98		70-130
Dibromofluoromethane	105		101		70-130

SEMIVOLATILES

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-01
Client ID: SALT POND RD_045
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/26/16 04:21
Analyst: SF

Date Collected: 07/21/16 12:30
Date Received: 07/21/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/25/16 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.195		ug/l	0.147	0.0735	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	18		15-110

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-02
Client ID: SALT POND RD_045 DUP
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/27/16 15:01
Analyst: WR

Date Collected: 07/21/16 12:30
Date Received: 07/21/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/27/16 09:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.188		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	19		15-110

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-03
Client ID: SALT POND RD_055
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/26/16 05:03
Analyst: SF

Date Collected: 07/21/16 12:45
Date Received: 07/21/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/25/16 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.596		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	19		15-110

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-05
Client ID: ALSTON AVE_085
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/26/16 05:45
Analyst: SF

Date Collected: 07/21/16 13:20
Date Received: 07/21/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/25/16 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.168		ug/l	0.147	0.0735	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	19		15-110

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-06
Client ID: ALSTON AVE_085 DUP
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/27/16 15:48
Analyst: WR

Date Collected: 07/21/16 13:20
Date Received: 07/21/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/27/16 09:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.184		ug/l	0.147	0.0735	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	28		15-110

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-07
Client ID: SCHOOLHOUSE RD_200
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/26/16 06:27
Analyst: SF

Date Collected: 07/21/16 14:00
Date Received: 07/21/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/25/16 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.0799	J	ug/l	0.142	0.0708	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	18		15-110

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-09
Client ID: PRESERVATION WAY_004
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/26/16 07:10
Analyst: SF

Date Collected: 07/21/16 13:00
Date Received: 07/21/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/25/16 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.248		ug/l	0.156	0.0781	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	19		15-110

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-10
Client ID: PRESERVATION WAY_004 DUP
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/27/16 16:35
Analyst: WR

Date Collected: 07/21/16 13:00
Date Received: 07/21/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/27/16 09:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.173		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	24		15-110

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-11
Client ID: ATLANTICOAKS 'H' WELL
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/26/16 07:52
Analyst: SF

Date Collected: 07/21/16 09:50
Date Received: 07/21/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/25/16 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.0778	J	ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	20		15-110

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-13
Client ID: ATLANTICOAKS NORTH
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/26/16 08:34
Analyst: SF

Date Collected: 07/21/16 09:40
Date Received: 07/21/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/25/16 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.156	0.0781	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	22		15-110

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-15
Client ID: ATLANTICOAKS-SOUTH
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/26/16 09:16
Analyst: SF

Date Collected: 07/21/16 09:35
Date Received: 07/21/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/25/16 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.147	0.0735	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	21		15-110

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-17
Client ID: KINGSBURY BEACH RD_020
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/26/16 09:58
Analyst: SF

Date Collected: 07/21/16 14:15
Date Received: 07/21/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/25/16 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.0819	J	ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	21		15-110

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-19
Client ID: MEETINGHOUSE RD_125
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/26/16 10:40
Analyst: SF

Date Collected: 07/21/16 13:45
Date Received: 07/21/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/25/16 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.193		ug/l	0.147	0.0735	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	23		15-110

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-20
Client ID: MEETINGHOUSE RD_125 DUP
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/27/16 17:22
Analyst: WR

Date Collected: 07/21/16 13:45
Date Received: 07/21/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/27/16 09:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.111	J	ug/l	0.147	0.0735	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	33		15-110

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-21
Client ID: KNOWLES ST_050
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/26/16 11:23
Analyst: SF

Date Collected: 07/21/16 15:00
Date Received: 07/21/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/25/16 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.0809	J	ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	21		15-110

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-23
Client ID: ALSTON AVE_200
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/26/16 12:05
Analyst: SF

Date Collected: 07/21/16 13:30
Date Received: 07/21/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/25/16 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	19		15-110

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1622823
Report Date: 08/09/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 07/25/16 18:21
Analyst: SF

Extraction Method: EPA 3510C
Extraction Date: 07/25/16 11:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01,03,05,07,09,11,13,15,17,19,21,23 Batch: WG916615-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	24		15-110

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1622823
Report Date: 08/09/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 07/27/16 12:42
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 07/27/16 09:13

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 02,06,10,20 Batch: WG917388-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	29		15-110

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM DW

Project Number: 2015-038

Lab Number: L1622823

Report Date: 08/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab	Associated sample(s):	01,03,05,07,09,11,13,15,17,19,21,23	Batch:	WG916615-2	WG916615-3			
1,4-Dioxane	119		121		40-140	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	25		25		15-110

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM DW

Project Number: 2015-038

Lab Number: L1622823

Report Date: 08/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 02,06,10,20 Batch: WG917388-2 WG917388-3								
1,4-Dioxane	108		109		40-140	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	29		28		15-110

METALS

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-19
Client ID: MEETINGHOUSE RD_125
Sample Location: EASTHAM, MA
Matrix: Water
Date Collected: 07/21/16 13:45
Date Received: 07/21/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Antimony, Total	0.0012	J	mg/l	0.0020	0.0005	1	07/25/16 09:20	08/05/16 14:53	EPA 3005A	97,6020A	AM
Arsenic, Total	0.003	J	mg/l	0.005	0.002	1	07/25/16 09:20	08/03/16 20:14	EPA 3005A	97,6010C	JH
Barium, Total	0.045		mg/l	0.010	0.003	1	07/25/16 09:20	07/25/16 19:23	EPA 3005A	97,6010C	AB
Beryllium, Total	ND		mg/l	0.005	0.001	1	07/25/16 09:20	07/25/16 19:23	EPA 3005A	97,6010C	AB
Cadmium, Total	ND		mg/l	0.004	0.001	1	07/25/16 09:20	07/25/16 19:23	EPA 3005A	97,6010C	AB
Chromium, Total	ND		mg/l	0.01	0.002	1	07/25/16 09:20	07/25/16 19:23	EPA 3005A	97,6010C	AB
Lead, Total	ND		mg/l	0.010	0.002	1	07/25/16 09:20	07/25/16 19:23	EPA 3005A	97,6010C	AB
Mercury, Total	ND		mg/l	0.0002	0.0002	1	07/25/16 14:48	07/26/16 18:46	EPA 7470A	97,7470A	EA
Nickel, Total	ND		mg/l	0.025	0.004	1	07/25/16 09:20	07/25/16 19:23	EPA 3005A	97,6010C	AB
Selenium, Total	ND		mg/l	0.010	0.003	1	07/25/16 09:20	08/03/16 20:14	EPA 3005A	97,6010C	JH
Silver, Total	ND		mg/l	0.007	0.002	1	07/25/16 09:20	07/25/16 19:23	EPA 3005A	97,6010C	AB
Thallium, Total	ND		mg/l	0.0005	0.0005	1	07/25/16 09:20	08/05/16 14:53	EPA 3005A	97,6020A	AM
Vanadium, Total	ND		mg/l	0.010	0.001	1	07/25/16 09:20	07/25/16 19:23	EPA 3005A	97,6010C	AB
Zinc, Total	0.022	J	mg/l	0.050	0.007	1	07/25/16 09:20	07/25/16 19:23	EPA 3005A	97,6010C	AB

Project Name: EASTHAM DW
Lab Number: L1622823
Project Number: 2015-038
Report Date: 08/09/16

SAMPLE RESULTS

Lab ID: L1622823-20
Client ID: MEETINGHOUSE RD_125 DUP
Sample Location: EASTHAM, MA
Matrix: Water
Date Collected: 07/21/16 13:45
Date Received: 07/21/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Antimony, Total	0.0028		mg/l	0.0020	0.0005	1	07/29/16 08:20	08/05/16 14:50	EPA 3005A	97,6020A	AM
Arsenic, Total	ND		mg/l	0.005	0.002	1	07/29/16 08:20	07/29/16 13:46	EPA 3005A	97,6010C	JH
Barium, Total	0.049		mg/l	0.010	0.003	1	07/29/16 08:20	07/29/16 13:46	EPA 3005A	97,6010C	JH
Beryllium, Total	ND		mg/l	0.005	0.001	1	07/29/16 08:20	07/29/16 13:46	EPA 3005A	97,6010C	JH
Cadmium, Total	ND		mg/l	0.004	0.001	1	07/29/16 08:20	07/29/16 13:46	EPA 3005A	97,6010C	JH
Chromium, Total	ND		mg/l	0.01	0.002	1	07/29/16 08:20	07/29/16 13:46	EPA 3005A	97,6010C	JH
Lead, Total	ND		mg/l	0.010	0.002	1	07/29/16 08:20	07/29/16 13:46	EPA 3005A	97,6010C	JH
Mercury, Total	ND		mg/l	0.0002	0.0002	1	07/29/16 11:33	08/01/16 16:59	EPA 7470A	97,7470A	EA
Nickel, Total	ND		mg/l	0.025	0.004	1	07/29/16 08:20	07/29/16 13:46	EPA 3005A	97,6010C	JH
Selenium, Total	ND		mg/l	0.010	0.003	1	07/29/16 08:20	07/29/16 13:46	EPA 3005A	97,6010C	JH
Silver, Total	ND		mg/l	0.007	0.002	1	07/29/16 08:20	07/29/16 13:46	EPA 3005A	97,6010C	JH
Thallium, Total	ND		mg/l	0.0005	0.0005	1	07/29/16 08:20	08/05/16 14:50	EPA 3005A	97,6020A	AM
Vanadium, Total	ND		mg/l	0.010	0.001	1	07/29/16 08:20	07/29/16 13:46	EPA 3005A	97,6010C	JH
Zinc, Total	0.016	J	mg/l	0.050	0.007	1	07/29/16 08:20	07/29/16 13:46	EPA 3005A	97,6010C	JH

Project Name: EASTHAM DW
Project Number: 2015-038
Lab Number: L1622823
Report Date: 08/09/16

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 19 Batch: WG916582-1										
Arsenic, Total	ND		mg/l	0.005	0.002	1	07/25/16 09:20	07/25/16 21:23	97,6010C	AB
Barium, Total	ND		mg/l	0.010	0.003	1	07/25/16 09:20	07/25/16 18:12	97,6010C	AB
Beryllium, Total	ND		mg/l	0.005	0.001	1	07/25/16 09:20	07/25/16 18:12	97,6010C	AB
Cadmium, Total	ND		mg/l	0.004	0.001	1	07/25/16 09:20	07/25/16 18:12	97,6010C	AB
Chromium, Total	ND		mg/l	0.01	0.002	1	07/25/16 09:20	07/25/16 18:12	97,6010C	AB
Lead, Total	ND		mg/l	0.010	0.002	1	07/25/16 09:20	07/25/16 18:12	97,6010C	AB
Nickel, Total	ND		mg/l	0.025	0.004	1	07/25/16 09:20	07/25/16 18:12	97,6010C	AB
Selenium, Total	ND		mg/l	0.010	0.003	1	07/25/16 09:20	07/25/16 18:12	97,6010C	AB
Silver, Total	ND		mg/l	0.007	0.002	1	07/25/16 09:20	07/25/16 18:12	97,6010C	AB
Vanadium, Total	ND		mg/l	0.010	0.001	1	07/25/16 09:20	07/25/16 18:12	97,6010C	AB
Zinc, Total	ND		mg/l	0.050	0.007	1	07/25/16 09:20	07/25/16 18:12	97,6010C	AB

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 19 Batch: WG916763-1										
Mercury, Total	ND		mg/l	0.0002	0.0002	1	07/25/16 14:48	07/26/16 18:40	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 - Mansfield Lab for sample(s): 20 Batch: WG918154-1										
Arsenic, Total	ND		mg/l	0.005	0.002	1	07/29/16 08:20	07/29/16 13:21	97,6010C	PS
Barium, Total	ND		mg/l	0.010	0.003	1	07/29/16 08:20	07/29/16 13:21	97,6010C	PS
Beryllium, Total	ND		mg/l	0.005	0.001	1	07/29/16 08:20	07/29/16 13:21	97,6010C	PS
Cadmium, Total	ND		mg/l	0.004	0.001	1	07/29/16 08:20	07/29/16 13:21	97,6010C	PS
Chromium, Total	ND		mg/l	0.01	0.002	1	07/29/16 08:20	07/29/16 13:21	97,6010C	PS
Lead, Total	ND		mg/l	0.010	0.002	1	07/29/16 08:20	07/29/16 13:21	97,6010C	PS

Project Name: EASTHAM DW **Lab Number:** L1622823

Project Number: 2015-038 **Report Date:** 08/09/16

Method Blank Analysis
Batch Quality Control

Nickel, Total	ND	mg/l	0.025	0.004	1	07/29/16 08:20	07/29/16 13:21	97,6010C	PS
Selenium, Total	ND	mg/l	0.010	0.003	1	07/29/16 08:20	07/29/16 13:21	97,6010C	PS
Silver, Total	ND	mg/l	0.007	0.002	1	07/29/16 08:20	07/29/16 13:21	97,6010C	PS
Vanadium, Total	ND	mg/l	0.010	0.001	1	07/29/16 08:20	07/29/16 13:21	97,6010C	PS
Zinc, Total	ND	mg/l	0.050	0.007	1	07/29/16 08:20	07/29/16 13:21	97,6010C	PS

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 20 Batch: WG918262-1										
Mercury, Total	ND		mg/l	0.0002	0.0002	1	07/29/16 11:33	08/01/16 16:50	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 - Mansfield Lab for sample(s): 19 Batch: WG920384-1										
Antimony, Total	ND		mg/l	0.0020	0.0005	1	07/25/16 09:20	08/05/16 14:35	97,6020A	AM
Thallium, Total	ND		mg/l	0.0005	0.0005	1	07/25/16 09:20	08/05/16 14:35	97,6020A	AM

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 20 Batch: WG920388-1										
Antimony, Total	ND		mg/l	0.0020	0.0005	1	07/29/16 08:20	08/05/16 14:32	97,6020A	AM
Thallium, Total	ND		mg/l	0.0005	0.0005	1	07/29/16 08:20	08/05/16 14:32	97,6020A	AM

Project Name: EASTHAM DW
Project Number: 2015-038
Lab Number: L1622823
Report Date: 08/09/16

Method Blank Analysis
Batch Quality Control

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM DW

Project Number: 2015-038

Lab Number: L1622823

Report Date: 08/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Total Metals - Mansfield Lab Associated sample(s): 19 Batch: WG916582-2 WG916582-3								
Arsenic, Total	113		111		80-120	2		20
Barium, Total	95		94		80-120	1		20
Beryllium, Total	97		95		80-120	2		20
Cadmium, Total	104		103		80-120	1		20
Chromium, Total	100		100		80-120	0		20
Lead, Total	102		101		80-120	1		20
Nickel, Total	99		98		80-120	1		20
Selenium, Total	112		113		80-120	1		20
Silver, Total	96		94		80-120	2		20
Vanadium, Total	105		104		80-120	1		20
Zinc, Total	103		102		80-120	1		20
MCP Total Metals - Mansfield Lab Associated sample(s): 19 Batch: WG916763-2 WG916763-3								
Mercury, Total	94		100		80-120	6		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM DW

Project Number: 2015-038

Lab Number: L1622823

Report Date: 08/09/16

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Total Metals - Mansfield Lab Associated sample(s): 20 Batch: WG918154-2 WG918154-3					
Arsenic, Total	109	111	80-120	2	20
Barium, Total	96	97	80-120	1	20
Beryllium, Total	96	97	80-120	1	20
Cadmium, Total	110	111	80-120	1	20
Chromium, Total	95	95	80-120	0	20
Lead, Total	105	106	80-120	1	20
Nickel, Total	96	97	80-120	1	20
Selenium, Total	112	113	80-120	1	20
Silver, Total	95	97	80-120	2	20
Vanadium, Total	102	103	80-120	1	20
Zinc, Total	102	102	80-120	0	20
MCP Total Metals - Mansfield Lab Associated sample(s): 20 Batch: WG918262-2 WG918262-3					
Mercury, Total	98	100	80-120	2	20
MCP Total Metals - Mansfield Lab Associated sample(s): 19 Batch: WG920384-2 WG920384-3					
Antimony, Total	87	88	80-120	1	20
Thallium, Total	104	101	80-120	3	20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM DW

Project Number: 2015-038

Lab Number: L1622823

Report Date: 08/09/16

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Total Metals - Mansfield Lab Associated sample(s): 20 Batch: WG920388-2 WG920388-3					
Antimony, Total	91	88	80-120	3	20
Thallium, Total	106	104	80-120	2	20

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1622823
Report Date: 08/09/16

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
A	Absent
D	Absent
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1622823-01A	Amber 500ml unpreserved	D	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-01B	Amber 500ml unpreserved	D	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-02A	Amber 500ml unpreserved	D	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-02B	Amber 500ml unpreserved	D	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-03A	Amber 500ml unpreserved	D	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-03B	Amber 500ml unpreserved	D	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-04A	Amber 500ml unpreserved	D	7	5.5	Y	Absent	HOLD-1,4DIOX(7)
L1622823-04B	Amber 500ml unpreserved	D	7	5.5	Y	Absent	HOLD-1,4DIOX(7)
L1622823-05A	Amber 500ml unpreserved	D	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-05B	Amber 500ml unpreserved	D	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-06A	Amber 500ml unpreserved	D	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-06B	Amber 500ml unpreserved	D	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-07A	Amber 500ml unpreserved	D	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-07B	Amber 500ml unpreserved	D	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-08A	Amber 500ml unpreserved	D	7	5.5	Y	Absent	HOLD-1,4DIOX(7)
L1622823-08B	Amber 500ml unpreserved	D	7	5.5	Y	Absent	HOLD-1,4DIOX(7)
L1622823-09A	Amber 500ml unpreserved	C	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-09B	Amber 500ml unpreserved	C	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-10A	Amber 500ml unpreserved	C	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-10B	Amber 500ml unpreserved	C	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-11A	Amber 500ml unpreserved	C	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-11B	Amber 500ml unpreserved	C	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-12A	Amber 500ml unpreserved	C	7	5.4	Y	Absent	HOLD-1,4DIOX(7)
L1622823-12B	Amber 500ml unpreserved	C	7	5.4	Y	Absent	HOLD-1,4DIOX(7)
L1622823-13A	Amber 500ml unpreserved	C	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-13B	Amber 500ml unpreserved	C	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1622823
Report Date: 08/09/16

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1622823-14A	Amber 500ml unpreserved	C	7	5.4	Y	Absent	HOLD-1,4DIOX(7)
L1622823-14B	Amber 500ml unpreserved	C	7	5.4	Y	Absent	HOLD-1,4DIOX(7)
L1622823-15A	Amber 500ml unpreserved	C	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-15B	Amber 500ml unpreserved	C	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-16A	Amber 500ml unpreserved	C	7	5.4	Y	Absent	HOLD-1,4DIOX(7)
L1622823-16B	Amber 500ml unpreserved	C	7	5.4	Y	Absent	HOLD-1,4DIOX(7)
L1622823-17A	Amber 500ml unpreserved	B	7	2.3	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-17B	Amber 500ml unpreserved	B	7	2.3	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-18A	Amber 500ml unpreserved	B	7	2.3	Y	Absent	HOLD-1,4DIOX(7)
L1622823-18B	Amber 500ml unpreserved	B	7	2.3	Y	Absent	HOLD-1,4DIOX(7)
L1622823-19A	Amber 500ml unpreserved	A	7	5.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-19B	Amber 500ml unpreserved	A	7	5.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-19C	Vial HCl preserved	A	N/A	5.7	Y	Absent	MCP-8260-10(14)
L1622823-19D	Vial HCl preserved	A	N/A	5.7	Y	Absent	MCP-8260-10(14)
L1622823-19E	Vial HCl preserved	A	N/A	5.7	Y	Absent	MCP-8260-10(14)
L1622823-19F	Plastic 250ml HNO3 preserved	A	<2	5.7	Y	Absent	MCP-CR-6010T-10(180),MCP-7470T-10(28),MCP-AS-6010T-10(180),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1622823-20A	Amber 500ml unpreserved	A	7	5.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-20B	Amber 500ml unpreserved	A	7	5.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-20C	Vial HCl preserved	A	N/A	5.7	Y	Absent	MCP-8260-10(14)
L1622823-20D	Vial HCl preserved	A	N/A	5.7	Y	Absent	MCP-8260-10(14)
L1622823-20E	Vial HCl preserved	A	N/A	5.7	Y	Absent	MCP-8260-10(14)
L1622823-20F	Plastic 250ml HNO3 preserved	A	<2	5.7	Y	Absent	MCP-CR-6010T-10(180),MCP-7470T-10(28),MCP-AS-6010T-10(180),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1622823-21A	Amber 500ml unpreserved	C	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-21B	Amber 500ml unpreserved	C	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1622823
Report Date: 08/09/16

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1622823-22A	Amber 500ml unpreserved	C	7	5.4	Y	Absent	HOLD-1,4DIOX(7)
L1622823-22B	Amber 500ml unpreserved	C	7	5.4	Y	Absent	HOLD-1,4DIOX(7)
L1622823-23A	Amber 500ml unpreserved	C	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-23B	Amber 500ml unpreserved	C	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1622823-24A	Amber 500ml unpreserved	C	7	5.4	Y	Absent	HOLD-1,4DIOX(7)
L1622823-24B	Amber 500ml unpreserved	C	7	5.4	Y	Absent	HOLD-1,4DIOX(7)
L1622823-25A	Vial HCl preserved	A	N/A	5.7	Y	Absent	MCP-8260-10(14)
L1622823-25B	Vial HCl preserved	A	N/A	5.7	Y	Absent	MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name:	EASTHAM DW	**Lab Number:**	L1622823
Project Number:	2015-038	**Report Date:**	08/09/16

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.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
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.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
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

Report Format: DU Report with 'J' Qualifiers

Project Name:	EASTHAM DW	**Lab Number:**	L1622823
Project Number:	2015-038	**Report Date:**	08/09/16

Data Qualifiers

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.

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. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

REFERENCES

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

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

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
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.
Biological Tissue Matrix: ***EPA 3050B***

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
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, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, 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**.

Mansfield Facility:

Drinking Water
EPA 200.7: Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1** Hg.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

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

CHAIN OF CUSTODY

PAGE 1 OF 3

ALPHA ANALYTICAL
World Class Chemistry

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 7/21/16

ALPHA Job #: L1622823

Client Information

Client: Environmental Strategies & Managemen
Address: 273 West Main Street
Norton, MA 02703
Phone: 508-226-1800
Fax: 508-226-1811
Email: lflynn@esm-inc.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: Eastham DW
Project Location: Eastham MA
Project #: 2015-038
Project Manager: Lisa Flynn
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
8270 - MCP	0.15 ug/l for 1,4 dioxane, GW-1

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
email results to lflynn@esm-inc.com and aboyd@esm-inc.com

please invoice Eastham

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	1,4 dioxane by 8270	Sample Specific Comments
22823.01	SALT POND RD_045	7-21-16	1230	GW	MD	☒	
.02	SALT POND RD_045 dup	7-21-16	1230	GW	MD	☒	
.03	SALT POND RD_055	7-21-16	1245	GW	MD	☒	
.04	SALT POND RD_055 dup	7-21-16	1245	GW	MD	☒	
.05	ALSTON AVE_085	7-21-16	1320	GW	MD	☒	
.06	ALSTON AVE_085 dup	7-21-16	1320	GW	MD	☒	
.07	SCHOOLHOUSE RD_200	7-21-16	1400	GW	MD	☒	
.08	SCHOOLHOUSE RD_200 dup	7-21-16	1400	GW	MD	☒	
						☐	
						☐	

Container Type
Preservative

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
	7/21/16 1715		7/21/16 17:15

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01(I) (rev. 5-JAN-12)

CHAIN OF CUSTODY

PAGE 2 OF 3

ALPHA ANALYTICAL — World Class Chemistry

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 7/21/16

ALPHA Job #: L1622823

Client Information

Client: Environmental Strategies &.Managemen
Address: 273 West Main Street
Norton, MA 02703
Phone: 508-226-1800
Fax: 508-226-1811
Email: lflynn@esm-inc.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: Eastham DW
Project Location: Eastham MA
Project #: 2015-038
Project Manager: Lisa Flynn
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information — ☐ FAX ☒ EMAIL ☒ ADEx ☐ Add'l Deliverables

Billing Information — ☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
8270 - MCP	0.15 ug/l for 1,4 dioxane, GW-1

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
email results to lflynn@esm-inc.com and aboyd@esm-inc.com

please invoice Eastham

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done ☐ Not Needed ☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

TOTAL # BOTTLES

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	1,4 dioxane by 8270													Sample Specific Comments
22823.09	PRESERVATION WAY_004	7-21-16	1300	GW	MD	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
.10	PRESERVATION WAY_004 dup	7-21-16	1300	GW	MD	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
.11	ATLANTICOAKS 'H' WELL	7-21-16	0950	GW	MD	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
.12	ATLANTICOAKS 'H' WELL D	7-21-16	0950	GW	MD	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
.13	ATLANTICOAKS NORTH	7-21-16	0940	GW	MD	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
.14	ATLANTICOAKS NORTH dup	7-21-16	0940	GW	MD	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
.15	ATLANTICOAKS-SOUTH	7-21-16	0935	GW	MD	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
.16	ATLANTICOAKS-SOUTH dup	7-21-16	0935	GW	MD	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
.17	KINGSBURY BEACH Rd 020	7-21-16	1415	GW	MD	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
.18	KINGSBURY BEACH Rd 020 dup	7-21-16	1415	GW	MD	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						Container Type	-	-	-	-	-	-	-	-	-	-	-	-	
						Preservative	-	-	-	-	-	-	-	-	-	-	-	-	

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

FORM NO: 01-01(f) (rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
	7/21/16 1716		7/21/16 17:18

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

CHAIN OF CUSTODY

ALPHA ANALYTICAL
World Class Chemistry

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Date Rec'd in Lab: 7/21/16

ALPHA Job #: L1622823

Project Information

Project Name: Eastham DW

Project Location: Eastham MA

Project #: 2015-038

Project Manager: Lisa Flynn

ALPHA Quote #:

Client Information

Client: Environmental Strategies & Managemen

Address: 273 West Main Street

Norton, MA 02703

Phone: 508-226-1800

Fax: 508-226-1811

Email: lflynn@esm-inc.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information — Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
8270 - MCP	0.15 ug/l for 1,4 dioxane, GW-1

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

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please invoice Eastham

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	1,4 dioxane by 8270	8260 C *	MCP Total Metals *	Sample Specific Comments	TOTAL # BOTTLES
22823, 19	MEETINGHOUSE RD_125 *	7-21-16	1345			☒	☒	☒		
20	MEETINGHOUSE RD_125 dup *	7-21-16	1345			☒	☒	☒		
21	KNOWLES ST_050	7-21-16	1500			☒	☐	☐		
22	KNOWLES ST_050 dup	7-21-16	1500			☒	☐	☐		
23	ALSTON AVE_200	7-21-16	1330			☒	☐	☐		
24	ALSTON AVE_200 dup	7-21-16	1330			☒	☐	☐		
25	TRIP BLANK					☐	☒	☐		
						☐	☐	☐		
						☐	☐	☐		
						☐	☐	☐		

Container Type	-	-	-	-	-	-	-	-	-	-	-	-
Preservative	-	-	-	-	-	-	-	-	-	-	-	-

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
	7/21/16 1715		7/21/16 C7:5

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01(I) (rev. 5-JAN-12)

Method Blank Summary
Form 4

Client	: Environmental Strategies & Mgmt.	**Lab Number**	: L1622823
Project Name	: EASTHAM DW	**Project Number**	: 2015-038
Lab Sample ID	: WG917953-5	**Lab File ID**	: V16160728A05
Instrument ID	: VOA116		
Matrix	: WATER	**Analysis Date**	: 07/28/16 09:53

Client Sample No.	Lab Sample ID	Analysis Date
WG917953-3LCS	WG917953-3	07/28/16 08:09
WG917953-4LCSD	WG917953-4	07/28/16 08:35
MEETINGHOUSE RD_125	L1622823-19	07/28/16 12:04

Method Blank Summary
Form 4

Client	: Environmental Strategies & Mgmt.	**Lab Number**	: L1622823
Project Name	: EASTHAM DW	**Project Number**	: 2015-038
Lab Sample ID	: WG919123-5	**Lab File ID**	: VQ160801C04
Instrument ID	: QUIMBY		
Matrix	: WATER	**Analysis Date**	: 08/01/16 07:31

Client Sample No.	Lab Sample ID	Analysis Date
WG919123-3LCS	WG919123-3	08/01/16 05:56
WG919123-4LCSD	WG919123-4	08/01/16 06:28
TRIP BLANK	L1622823-25	08/01/16 13:20
MEETINGHOUSE RD_125 DUP	L1622823-20	08/01/16 13:52

Continuing Calibration
Form 7

Client	: Environmental Strategies & Mgmt.	**Lab Number**	: L1622823	
Project Name	: EASTHAM DW	**Project Number**	: 2015-038	
Instrument ID	: VOA116	**Calibration Date**	: 07/28/16 08:09	
Lab File ID	: V16160728A01	**Init. Calib. Date(s)**	: 07/27/16	07/28/16
Sample No	: WG917953-2	**Init. Calib. Times**	: 23:29	03:20
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	126	0
Dichlorodifluoromethane	0.279	0.251	-	10	20	107	0
Chloromethane	0.322	0.302	-	6.2	20	117	0
Vinyl chloride	0.299	0.27	-	9.7	20	117	0
Bromomethane	10	8.13	-	18.7	20	120	0
Chloroethane	0.143	0.125	-	12.6	20	117	0
Trichlorofluoromethane	0.403	0.353	-	12.4	20	106	0
Ethyl ether	0.102	0.089	-	12.7	20	115	0
1,1-Dichloroethene	0.195	0.176	-	9.7	20	116	0
Carbon disulfide	0.587	0.598	-	-1.9	20	135	0
Freon-113	0.19	0.171	-	10	20	110	0
Methylene chloride	0.216	0.2	-	7.4	20	116	0
Acetone	10	10.696	-	-7	20	117	0
trans-1,2-Dichloroethene	0.22	0.2	-	9.1	20	112	0
Methyl tert-butyl ether	0.523	0.476	-	9	20	111	0
tert-Butyl alcohol	0.012	0.011*	-	8.3	20	104	0
Diisopropyl ether	0.661	0.633	-	4.2	20	117	0
1,1-Dichloroethane	0.416	0.396	-	4.8	20	116	0
Ethyl tert-butyl ether	0.625	0.582	-	6.9	20	113	0
cis-1,2-Dichloroethene	0.256	0.235	-	8.2	20	112	0
2,2-Dichloropropane	0.344	0.393	-	-14.2	20	140	0
Bromochloromethane	0.061	0.061	-	0	20	120	0
Chloroform	0.34	0.319	-	6.2	20	113	0
Carbon tetrachloride	0.298	0.271	-	9.1	20	109	0
Tetrahydrofuran	10	10.066	-	-0.7	20	115	0
Dibromofluoromethane	0.197	0.19	-	3.6	20	120	0
1,1,1-Trichloroethane	0.319	0.295	-	7.5	20	110	0
2-Butanone	10	9.389	-	6.1	20	106	0
1,1-Dichloropropene	0.25	0.242	-	3.2	20	114	0
Benzene	0.753	0.701	-	6.9	20	117	0
tert-Amyl methyl ether	0.452	0.417	-	7.7	20	117	0
1,2-Dichloroethane-d4	0.218	0.209	-	4.1	20	115	0
1,2-Dichloroethane	0.236	0.217	-	8.1	20	112	0
Trichloroethene	0.205	0.191*	-	6.8	20	115	0
Dibromomethane	0.111	0.1	-	9.9	20	111	0
1,2-Dichloropropane	0.194	0.18	-	7.2	20	120	0
2-Chloroethyl vinyl ether	0.094	0.085	-	9.6	20	113	0
Bromodichloromethane	0.276	0.245	-	11.2	20	108	0
1,4-Dioxane	0.00103	0.00091*	-	11.7	20	102	0
cis-1,3-Dichloropropene	0.307	0.284	-	7.5	20	116	0
Chlorobenzene-d5	1	1	-	0	20	120	0
Toluene-d8	0.999	1.017	-	-1.8	20	122	0
Toluene	0.662	0.631	-	4.7	20	117	0
4-Methyl-2-pentanone	0.063	0.06*	-	4.8	20	118	0
Tetrachloroethene	0.325	0.309	-	4.9	20	112	0

* Value outside of QC limits.

Continuing Calibration
Form 7

Client	: Environmental Strategies & Mgmt.	**Lab Number**	: L1622823	
Project Name	: EASTHAM DW	**Project Number**	: 2015-038	
Instrument ID	: VOA116	**Calibration Date**	: 07/28/16 08:09	
Lab File ID	: V16160728A01	**Init. Calib. Date(s)**	: 07/27/16	07/28/16
Sample No	: WG917953-2	**Init. Calib. Times**	: 23:29	03:20
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
trans-1,3-Dichloropropene	0.352	0.352	-	0	20	117	0
1,1,2-Trichloroethane	0.17	0.17	-	0	20	115	0
Chlorodibromomethane	0.274	0.255	-	6.9	20	110	0
1,3-Dichloropropane	0.36	0.349	-	3.1	20	113	0
1,2-Dibromoethane	0.21	0.199	-	5.2	20	115	0
2-Hexanone	0.102	0.097*	-	4.9	20	110	0
Chlorobenzene	0.762	0.724	-	5	20	113	0
Ethylbenzene	1.298	1.261	-	2.9	20	113	0
1,1,1,2-Tetrachloroethane	0.281	0.267	-	5	20	111	0
p/m Xylene	0.504	0.486	-	3.6	20	115	0
o Xylene	0.489	0.473	-	3.3	20	113	0
Styrene	0.809	0.779	-	3.7	20	114	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	115	0
Bromoform	0.319	0.302	-	5.3	20	109	0
Isopropylbenzene	2.286	2.278	-	0.3	20	112	0
4-Bromofluorobenzene	0.654	0.673	-	-2.9	20	119	0
Bromobenzene	0.598	0.562	-	6	20	110	0
n-Propylbenzene	2.779	2.822	-	-1.5	20	113	0
1,1,2,2-Tetrachloroethane	0.451	0.444	-	1.6	20	108	0
2-Chlorotoluene	1.875	1.848	-	1.4	20	112	0
1,3,5-Trimethylbenzene	1.883	1.866	-	0.9	20	109	0
1,2,3-Trichloropropane	0.351	0.354	-	-0.9	20	111	0
4-Chlorotoluene	1.65	1.605	-	2.7	20	109	0
tert-Butylbenzene	1.666	1.652	-	0.8	20	112	0
1,2,4-Trimethylbenzene	1.885	1.896	-	-0.6	20	111	0
sec-Butylbenzene	2.531	2.519	-	0.5	20	112	0
p-Isopropyltoluene	2.08	2.054	-	1.3	20	111	0
1,3-Dichlorobenzene	1.18	1.143	-	3.1	20	109	0
1,4-Dichlorobenzene	1.172	1.145	-	2.3	20	112	0
n-Butylbenzene	1.908	1.893	-	0.8	20	110	0
1,2-Dichlorobenzene	1.085	1.04	-	4.1	20	110	0
1,2-Dibromo-3-chloropropan	0.075	0.07	-	6.7	20	98	0
Hexachlorobutadiene	0.282	0.276	-	2.1	20	115	0
1,2,4-Trichlorobenzene	0.732	0.683	-	6.7	20	110	0
Naphthalene	1.441	1.325	-	8	20	108	0
1,2,3-Trichlorobenzene	0.666	0.629	-	5.6	20	111	0

* Value outside of QC limits.

Continuing Calibration
Form 7

Client	: Environmental Strategies & Mgmt.	Lab Number	: L1622823	
Project Name	: EASTHAM DW	Project Number	: 2015-038	
Instrument ID	: QUIMBY	Calibration Date	: 08/01/16 05:56	
Lab File ID	: VQ160801C01	Init. Calib. Date(s)	: 07/01/16	07/01/16
Sample No	: WG919123-2	Init. Calib. Times	: 04:56	08:35
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	132	-.01
Dichlorodifluoromethane	0.364	0.416	-	-14.3	20	165	-.01
Chloromethane	0.72	0.77	-	-6.9	20	152	0
Vinyl chloride	0.686	0.574	-	16.3	20	125	0
Bromomethane	0.291	0.303	-	-4.1	20	143	0
Chloroethane	0.321	0.367	-	-14.3	20	163	-.01
Trichlorofluoromethane	0.548	0.585	-	-6.8	20	160	-.01
Ethyl ether	0.154	0.184	-	-19.5	20	157	0
1,1-Dichloroethene	0.33	0.344	-	-4.2	20	151	0
Carbon disulfide	1.152	1.098	-	4.7	20	140	-.01
Methylene chloride	10	9.901	-	1	20	141	-.01
Acetone	0.054	0.076*	-	-40.7*	20	198	0
trans-1,2-Dichloroethene	0.385	0.404	-	-4.9	20	151	0
Methyl tert-butyl ether	0.681	0.809	-	-18.8	20	165	-.01
Diisopropyl ether	1.6	1.876	-	-17.2	20	166	0
1,1-Dichloroethane	0.841	0.815	-	3.1	20	132	-.01
Ethyl tert-butyl ether	1.147	1.394	-	-21.5*	20	177	-.01
cis-1,2-Dichloroethene	0.41	0.424	-	-3.4	20	140	0
2,2-Dichloropropane	0.552	0.609	-	-10.3	20	179	-.01
Bromochloromethane	0.137	0.157	-	-14.6	20	149	-.01
Chloroform	0.715	0.685	-	4.2	20	130	0
Carbon tetrachloride	0.472	0.51	-	-8.1	20	179	0
Tetrahydrofuran	10	12.923	-	-29.2*	20	190	0
Dibromofluoromethane	0.19	0.199	-	-4.7	20	140	-.01
1,1,1-Trichloroethane	0.62	0.626	-	-1	20	154	0
2-Butanone	0.087	0.12	-	-37.9*	20	185	-.02
1,1-Dichloropropene	0.592	0.589	-	0.5	20	147	0
Benzene	1.805	1.798	-	0.4	20	135	0
tert-Amyl methyl ether	0.821	0.962	-	-17.2	20	170	0
1,2-Dichloroethane-d4	0.23	0.224	-	2.6	20	128	0
1,2-Dichloroethane	0.527	0.51	-	3.2	20	133	-.01
Trichloroethene	0.438	0.43	-	1.8	20	137	0
Dibromomethane	0.176	0.179	-	-1.7	20	134	0
1,2-Dichloropropane	0.489	0.471	-	3.7	20	134	0
Bromodichloromethane	0.521	0.504	-	3.3	20	136	0
1,4-Dioxane	0.00163	0.00221*	-	-35.6*	20	176	0
cis-1,3-Dichloropropene	0.603	0.624	-	-3.5	20	149	-.01
Chlorobenzene-d5	1	1	-	0	20	144	0
Toluene-d8	1.398	1.371	-	1.9	20	140	0
Toluene	1.627	1.55	-	4.7	20	142	0
4-Methyl-2-pentanone	0.113	0.125	-	-10.6	20	168	0
Tetrachloroethene	0.581	0.548	-	5.7	20	141	0
trans-1,3-Dichloropropene	0.566	0.581	-	-2.7	20	163	0
1,1,2-Trichloroethane	0.283	0.27	-	4.6	20	136	0
Chlorodibromomethane	0.336	0.351	-	-4.5	20	161	0

* Value outside of QC limits.

Continuing Calibration
Form 7

Client	: Environmental Strategies & Mgmt.	**Lab Number**	: L1622823	
Project Name	: EASTHAM DW	**Project Number**	: 2015-038	
Instrument ID	: QUIMBY	**Calibration Date**	: 08/01/16 05:56	
Lab File ID	: VQ160801C01	**Init. Calib. Date(s)**	: 07/01/16	07/01/16
Sample No	: WG919123-2	**Init. Calib. Times**	: 04:56	08:35
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,3-Dichloropropane	0.628	0.603	-	4	20	138	0
1,2-Dibromoethane	0.314	0.301	-	4.1	20	140	0
2-Hexanone	0.199	0.247	-	-24.1*	20	188	0
Chlorobenzene	1.616	1.591	-	1.5	20	145	0
Ethylbenzene	2.909	2.639	-	9.3	20	143	0
1,1,1,2-Tetrachloroethane	0.484	0.471	-	2.7	20	153	0
p/m Xylene	0.863	0.757	-	12.3	20	142	0
o Xylene	0.829	0.732	-	11.7	20	139	0
Styrene	1.409	1.2	-	14.8	20	139	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	143	0
Bromoform	0.576	0.554	-	3.8	20	171	0
Isopropylbenzene	7.033	6.095	-	13.3	20	143	0
4-Bromofluorobenzene	1.294	1.276	-	1.4	20	151	0
Bromobenzene	1.566	1.531	-	2.2	20	144	0
n-Propylbenzene	7.566	6.207	-	18	20	130	0
1,1,2,2-Tetrachloroethane	10	9.352	-	6.5	20	133	0
2-Chlorotoluene	5.412	4.61	-	14.8	20	131	0
1,3,5-Trimethylbenzene	4.82	4.559	-	5.4	20	128	0
1,2,3-Trichloropropane	10	9.822	-	1.8	20	144	0
4-Chlorotoluene	4.722	3.967	-	16	20	133	0
tert-Butylbenzene	3.975	3.336	-	16.1	20	133	0
1,2,4-Trimethylbenzene	4.766	4.651	-	2.4	20	130	0
sec-Butylbenzene	6.056	4.925	-	18.7	20	130	0
p-Isopropyltoluene	4.804	4.361	-	9.2	20	130	0
1,3-Dichlorobenzene	2.719	2.455	-	9.7	20	133	0
1,4-Dichlorobenzene	2.57	2.334	-	9.2	20	134	0
n-Butylbenzene	5.597	4.964	-	11.3	20	125	0
1,2-Dichlorobenzene	2.426	2.174	-	10.4	20	130	0
1,2-Dibromo-3-chloropropan	10	12.764	-	-27.6*	20	213	0
Hexachlorobutadiene	0.537	0.488	-	9.1	20	133	0
1,2,4-Trichlorobenzene	1.23	1.434	-	-16.6	20	153	0
Naphthalene	2.075	2.532	-	-22*	20	164	0
1,2,3-Trichlorobenzene	0.963	1.172	-	-21.7*	20	158	0

* Value outside of QC limits.

ES&M QAQC Review Log

Lab	Project Number	Sample Date	Matrix	CAM Form Included?	Lab Presumptive Certainty?	QC Performance Standards Met?	Reporting Limits Achieved?	All Analytes Reported?	Data Usability Status
Alpha	L1625029	8/10/2016	GW	Yes	Yes	No	Yes	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis
MW-3I	8/10/2016	L1625029-1	GW	8260, 8270, metals, cyanide, alkalinity, TDS, chloride, nitrate, sulfate, COD
MW-3D	8/10/2016	L1625029-2	GW	8260, 8270, metals, cyanide, alkalinity, TDS, chloride, nitrate, sulfate, COD
TRIP BLANK	8/10/2016	L1625029-3	GW	8260

The initial calibration, associated with L1625029-01 through -03, did not meet the method required minimum response factor on the lowest calibration standard for 2-butanone (0.0887) and 1,4-dioxane (0.0012), as well as the average response factor for 2-butanone and 1,4-dioxane. In addition, a quadratic fit was utilized for bromoform.

The continuing calibration standard, associated with L1625029-01 through -03, 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.

All QAQC data, including surrogate, trip blank, method blank, laboratory control sample (LCS), LCS duplicate, lab duplicate and matrix spike results were reviewed. This report was deemed usable by Angela Boyd on 8/24/16.

ANALYTICAL REPORT

Lab Number:	L1625029
Client:	Environmental Strategies & Mgmt. 273 West Main Street Norton, MA 02766
ATTN:	Lisa Flynn
Phone:	(508) 226-1800
Project Name:	EASTHAM LANDFILL
Project Number:	2013-027
Report Date:	08/17/16

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: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1625029
Report Date: 08/17/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1625029-01	MW-3I	WATER	EASTHAM, MA	08/10/16 11:00	08/10/16
L1625029-02	MW-3D	WATER	EASTHAM, MA	08/10/16 11:00	08/10/16
L1625029-03	TRIP BLANK	WATER	EASTHAM, MA	08/10/16 00:00	08/10/16

Project Name:	EASTHAM LANDFILL	**Lab Number:**	L1625029
Project Number:	2013-027	**Report Date:**	08/17/16

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: EASTHAM LANDFILL
Project Number: 2013-027
Lab Number: L1625029
Report Date: 08/17/16

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 NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. 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:	EASTHAM LANDFILL	**Lab Number:**	L1625029
Project Number:	2013-027	**Report Date:**	08/17/16

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

MCP Related Narratives

Volatile Organics

In reference to question H:

The initial calibration, associated with L1625029-01 through -03, did not meet the method required minimum response factor on the lowest calibration standard for 2-butanone (0.0887) and 1,4-dioxane (0.0012), as well as the average response factor for 2-butanone and 1,4-dioxane. In addition, a quadratic fit was utilized for bromoform.

The continuing calibration standard, associated with L1625029-01 through -03, 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.

Dissolved Metals

In reference to question I:

All samples were analyzed for a subset of MCP analytes 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: Lura L Troy

Title: Technical Director/Representative Date: 08/17/16

ORGANICS

VOLATILES

Project Name: EASTHAM LANDFILL
Project Number: 2013-027
Lab Number: L1625029
Report Date: 08/17/16

SAMPLE RESULTS

Lab ID: L1625029-01
Client ID: MW-3I
Sample Location: EASTHAM, MA

Date Collected: 08/10/16 11:00
Date Received: 08/10/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 08/15/16 14:42
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.29	1
1,1-Dichloroethane	0.39	J	ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.16	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	0.31	J	ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.17	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.16	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.18	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1
Trichloroethene	ND		ug/l	1.0	0.18	1

Project Name: EASTHAM LANDFILL **Lab Number:** L1625029

Project Number: 2013-027 **Report Date:** 08/17/16

SAMPLE RESULTS

Lab ID: L1625029-01 Date Collected: 08/10/16 11:00

Client ID: MW-3I Date Received: 08/10/16

Sample Location: EASTHAM, MA Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.16	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.33	1
Xylene (Total)	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.35	J	ug/l	1.0	0.19	1
1,2-Dichloroethene (total)	0.35	J	ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.14	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.18	1
o-Chlorotoluene	ND		ug/l	2.0	0.17	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.33	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	ND		ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1

Project Name: EASTHAM LANDFILL
Lab Number: L1625029
Project Number: 2013-027
Report Date: 08/17/16

SAMPLE RESULTS

Lab ID: L1625029-01
Client ID: MW-3I
Sample Location: EASTHAM, MA
Date Collected: 08/10/16 11:00
Date Received: 08/10/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.17	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Ethyl ether	0.35	J	ug/l	2.0	0.15	1
Isopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	41.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	100		70-130

Project Name: EASTHAM LANDFILL
Project Number: 2013-027
Lab Number: L1625029
Report Date: 08/17/16

SAMPLE RESULTS

Lab ID: L1625029-02
Client ID: MW-3D
Sample Location: EASTHAM, MA

Date Collected: 08/10/16 11:00
Date Received: 08/10/16
Field Prep: Field Filtered (Dissolved Metals)

Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 08/15/16 15:50
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.29	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.16	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	0.80	J	ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.17	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.14	1
Benzene	0.58		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.16	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.18	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1
Trichloroethene	ND		ug/l	1.0	0.18	1

Project Name: EASTHAM LANDFILL
Lab Number: L1625029
Project Number: 2013-027
Report Date: 08/17/16

SAMPLE RESULTS

Lab ID: L1625029-02
Client ID: MW-3D
Sample Location: EASTHAM, MA
Date Collected: 08/10/16 11:00
Date Received: 08/10/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	0.28	J	ug/l	1.0	0.19	1
Methyl tert butyl ether	0.74	J	ug/l	2.0	0.16	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.33	1
Xylene (Total)	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	1.3		ug/l	1.0	0.19	1
1,2-Dichloroethene (total)	1.3		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.14	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.18	1
o-Chlorotoluene	ND		ug/l	2.0	0.17	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.33	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	0.43	J	ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1

Project Name: EASTHAM LANDFILL
Lab Number: L1625029
Project Number: 2013-027
Report Date: 08/17/16

SAMPLE RESULTS

Lab ID: L1625029-02
Client ID: MW-3D
Sample Location: EASTHAM, MA
Date Collected: 08/10/16 11:00
Date Received: 08/10/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.17	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1
Ethyl ether	19		ug/l	2.0	0.15	1
Isopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	41.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	101		70-130

Project Name: EASTHAM LANDFILL
Lab Number: L1625029
Project Number: 2013-027
Report Date: 08/17/16

SAMPLE RESULTS

Lab ID: L1625029-03
Client ID: TRIP BLANK
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 08/15/16 07:58
Analyst: MM

Date Collected: 08/10/16 00:00
Date Received: 08/10/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.29	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.16	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.17	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.16	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.18	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.0	0.13	1
1,1-Dichloroethene	ND		ug/l	1.0	0.14	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16	1
Trichloroethene	ND		ug/l	1.0	0.18	1
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1

Project Name: EASTHAM LANDFILL **Lab Number:** L1625029

Project Number: 2013-027 **Report Date:** 08/17/16

SAMPLE RESULTS

Lab ID: L1625029-03 Date Collected: 08/10/16 00:00

Client ID: TRIP BLANK Date Received: 08/10/16

Sample Location: EASTHAM, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.16	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.33	1
Xylene (Total)	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene (total)	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.14	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.18	1
o-Chlorotoluene	ND		ug/l	2.0	0.17	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.33	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	0.38	J	ug/l	2.0	0.22	1
n-Propylbenzene	ND		ug/l	2.0	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.17	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19	1

Project Name: EASTHAM LANDFILL **Lab Number:** L1625029

Project Number: 2013-027 **Report Date:** 08/17/16

SAMPLE RESULTS

Lab ID: L1625029-03 Date Collected: 08/10/16 00:00

Client ID: TRIP BLANK Date Received: 08/10/16

Sample Location: EASTHAM, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	ND		ug/l	2.0	0.15	1
Isopropyl Ether	ND		ug/l	2.0	0.42	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28	1
1,4-Dioxane	ND		ug/l	250	41.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	100		70-130

Project Name: EASTHAM LANDFILL
Project Number: 2013-027
Lab Number: L1625029
Report Date: 08/17/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 08/15/16 06:17
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-03 Batch: WG922951-5					
Methylene chloride	ND		ug/l	2.0	0.29
1,1-Dichloroethane	ND		ug/l	1.0	0.21
Chloroform	ND		ug/l	1.0	0.16
Carbon tetrachloride	ND		ug/l	1.0	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.13
Dibromochloromethane	ND		ug/l	1.0	0.15
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14
Tetrachloroethene	ND		ug/l	1.0	0.18
Chlorobenzene	ND		ug/l	1.0	0.18
Trichlorofluoromethane	ND		ug/l	2.0	0.16
1,2-Dichloroethane	ND		ug/l	1.0	0.13
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16
Bromodichloromethane	ND		ug/l	1.0	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.0	0.17
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.14
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	1.0	0.16
Ethylbenzene	ND		ug/l	1.0	0.17
Chloromethane	ND		ug/l	2.0	0.18
Bromomethane	ND		ug/l	2.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.0	0.13
1,1-Dichloroethene	ND		ug/l	1.0	0.14
trans-1,2-Dichloroethene	ND		ug/l	1.0	0.16
Trichloroethene	ND		ug/l	1.0	0.18

Project Name: EASTHAM LANDFILL
Project Number: 2013-027
Lab Number: L1625029
Report Date: 08/17/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 08/15/16 06:17
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-03 Batch: WG922951-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19
Methyl tert butyl ether	ND		ug/l	2.0	0.16
p/m-Xylene	ND		ug/l	2.0	0.33
o-Xylene	ND		ug/l	1.0	0.33
Xylene (Total)	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19
1,2-Dichloroethene (total)	ND		ug/l	1.0	0.16
Dibromomethane	ND		ug/l	2.0	0.36
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	2.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	2.0	0.30
2-Butanone	ND		ug/l	5.0	1.9
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.14
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.18
o-Chlorotoluene	ND		ug/l	2.0	0.17

Project Name: EASTHAM LANDFILL
Project Number: 2013-027
Lab Number: L1625029
Report Date: 08/17/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 08/15/16 06:17
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-03 Batch: WG922951-5					
p-Chlorotoluene	ND		ug/l	2.0	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.33
Hexachlorobutadiene	ND		ug/l	0.60	0.22
Isopropylbenzene	ND		ug/l	2.0	0.19
p-Isopropyltoluene	ND		ug/l	2.0	0.19
Naphthalene	ND		ug/l	2.0	0.22
n-Propylbenzene	ND		ug/l	2.0	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.0	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.0	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.0	0.17
1,2,4-Trimethylbenzene	ND		ug/l	2.0	0.19
Ethyl ether	ND		ug/l	2.0	0.15
Isopropyl Ether	ND		ug/l	2.0	0.42
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,4-Dioxane	ND		ug/l	250	41.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	99		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1625029
Report Date: 08/17/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-03 Batch: WG922951-3 WG922951-4								
Methylene chloride	100		100		70-130	0		20
1,1-Dichloroethane	100		100		70-130	0		20
Chloroform	100		100		70-130	0		20
Carbon tetrachloride	100		100		70-130	0		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	110		100		70-130	10		20
1,1,2-Trichloroethane	100		100		70-130	0		20
Tetrachloroethene	99		96		70-130	3		20
Chlorobenzene	100		98		70-130	2		20
Trichlorofluoromethane	100		100		70-130	0		20
1,2-Dichloroethane	100		100		70-130	0		20
1,1,1-Trichloroethane	100		100		70-130	0		20
Bromodichloromethane	110		100		70-130	10		20
trans-1,3-Dichloropropene	110		100		70-130	10		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
1,1-Dichloropropene	100		100		70-130	0		20
Bromoform	120		120		70-130	0		20
1,1,2,2-Tetrachloroethane	110		110		70-130	0		20
Benzene	99		98		70-130	1		20
Toluene	94		94		70-130	0		20
Ethylbenzene	99		98		70-130	1		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Project Number: 2013-027

Lab Number: L1625029

Report Date: 08/17/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-03 Batch: WG922951-3 WG922951-4								
Chloromethane	82		87		70-130	6		20
Bromomethane	110		110		70-130	0		20
Vinyl chloride	98		96		70-130	2		20
Chloroethane	100		100		70-130	0		20
1,1-Dichloroethene	100		100		70-130	0		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	97		97		70-130	0		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	100		99		70-130	1		20
1,4-Dichlorobenzene	99		98		70-130	1		20
Methyl tert butyl ether	110		100		70-130	10		20
p/m-Xylene	95		95		70-130	0		20
o-Xylene	95		95		70-130	0		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Dibromomethane	110		100		70-130	10		20
1,2,3-Trichloropropane	110		120		70-130	9		20
Styrene	100		95		70-130	5		20
Dichlorodifluoromethane	97		94		70-130	3		20
Acetone	120		130		70-130	8		20
Carbon disulfide	110		110		70-130	0		20
2-Butanone	120		120		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Project Number: 2013-027

Lab Number: L1625029

Report Date: 08/17/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-03 Batch: WG922951-3 WG922951-4								
4-Methyl-2-pentanone	110		110		70-130	0		20
2-Hexanone	120		120		70-130	0		20
Bromochloromethane	110		100		70-130	10		20
Tetrahydrofuran	120		120		70-130	0		20
2,2-Dichloropropane	110		110		70-130	0		20
1,2-Dibromoethane	110		100		70-130	10		20
1,3-Dichloropropane	100		100		70-130	0		20
1,1,1,2-Tetrachloroethane	100		100		70-130	0		20
Bromobenzene	100		100		70-130	0		20
n-Butylbenzene	93		94		70-130	1		20
sec-Butylbenzene	89		93		70-130	4		20
tert-Butylbenzene	90		92		70-130	2		20
o-Chlorotoluene	99		100		70-130	1		20
p-Chlorotoluene	95		100		70-130	5		20
1,2-Dibromo-3-chloropropane	110		120		70-130	9		20
Hexachlorobutadiene	92		100		70-130	8		20
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	93		90		70-130	3		20
Naphthalene	95		93		70-130	2		20
n-Propylbenzene	97		97		70-130	0		20
1,2,3-Trichlorobenzene	95		98		70-130	3		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1625029
Report Date: 08/17/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-03 Batch: WG922951-3 WG922951-4								
1,2,4-Trichlorobenzene	92		92		70-130	0		20
1,3,5-Trimethylbenzene	93		93		70-130	0		20
1,2,4-Trimethylbenzene	92		95		70-130	3		20
Ethyl ether	100		100		70-130	0		20
Isopropyl Ether	100		100		70-130	0		20
Ethyl-Tert-Butyl-Ether	110		110		70-130	0		20
Tertiary-Amyl Methyl Ether	110		110		70-130	0		20
1,4-Dioxane	128		124		70-130	3		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	107		104		70-130
Toluene-d8	94		96		70-130
4-Bromofluorobenzene	101		101		70-130
Dibromofluoromethane	99		100		70-130

SEMIVOLATILES

Project Name: EASTHAM LANDFILL
Lab Number: L1625029
Project Number: 2013-027
Report Date: 08/17/16

SAMPLE RESULTS

Lab ID: L1625029-01
Client ID: MW-3I
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 08/14/16 01:42
Analyst: WR

Date Collected: 08/10/16 11:00
Date Received: 08/10/16
Field Prep: Field Filtered (Dissolved Metals)
Extraction Method: EPA 3510C
Extraction Date: 08/12/16 14:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	21		15-110

Project Name: EASTHAM LANDFILL
Lab Number: L1625029
Project Number: 2013-027
Report Date: 08/17/16

SAMPLE RESULTS

Lab ID: L1625029-02
Client ID: MW-3D
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 08/14/16 02:24
Analyst: WR

Date Collected: 08/10/16 11:00
Date Received: 08/10/16
Field Prep: Field Filtered (Dissolved Metals)
Extraction Method: EPA 3510C
Extraction Date: 08/12/16 14:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	7.32		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	23		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027
Lab Number: L1625029
Report Date: 08/17/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 08/13/16 17:21
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 08/12/16 14:15

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-02 Batch: WG922315-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	15		15-110

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Project Number: 2013-027

Lab Number: L1625029

Report Date: 08/17/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01-02 Batch: WG922315-2 WG922315-3								
1,4-Dioxane	118		117		40-140	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	16		17		15-110

METALS

Project Name: EASTHAM LANDFILL
Lab Number: L1625029
Project Number: 2013-027
Report Date: 08/17/16

SAMPLE RESULTS

Lab ID: L1625029-01
Client ID: MW-3I
Sample Location: EASTHAM, MA
Matrix: Water
Date Collected: 08/10/16 11:00
Date Received: 08/10/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Metals - Mansfield Lab											
Arsenic, Dissolved	0.042		mg/l	0.005	0.002	1	08/11/16 09:30	08/11/16 21:26	EPA 3005A	97,6010C	AB
Barium, Dissolved	0.0097	J	mg/l	0.0100	0.0030	1	08/11/16 09:30	08/11/16 21:26	EPA 3005A	97,6010C	AB
Cadmium, Dissolved	ND		mg/l	0.004	0.001	1	08/11/16 09:30	08/11/16 21:26	EPA 3005A	97,6010C	AB
Chromium, Dissolved	ND		mg/l	0.01	0.002	1	08/11/16 09:30	08/11/16 21:26	EPA 3005A	97,6010C	AB
Copper, Dissolved	ND		mg/l	0.010	0.002	1	08/11/16 09:30	08/11/16 21:26	EPA 3005A	97,6010C	AB
Iron, Dissolved	57		mg/l	0.05	0.02	1	08/11/16 09:30	08/11/16 21:26	EPA 3005A	97,6010C	AB
Lead, Dissolved	0.003	J	mg/l	0.010	0.002	1	08/11/16 09:30	08/11/16 21:26	EPA 3005A	97,6010C	AB
Manganese, Dissolved	1.16		mg/l	0.010	0.002	1	08/11/16 09:30	08/11/16 21:26	EPA 3005A	97,6010C	AB
Mercury, Dissolved	ND		mg/l	0.0002	0.0002	1	08/11/16 10:43	08/12/16 16:53	EPA 7470A	97,7470A	EA
Selenium, Dissolved	ND		mg/l	0.010	0.003	1	08/11/16 09:30	08/11/16 21:26	EPA 3005A	97,6010C	AB
Silver, Dissolved	ND		mg/l	0.007	0.002	1	08/11/16 09:30	08/11/16 21:26	EPA 3005A	97,6010C	AB
Zinc, Dissolved	ND		mg/l	0.050	0.007	1	08/11/16 09:30	08/11/16 21:26	EPA 3005A	97,6010C	AB

Project Name: EASTHAM LANDFILL
Lab Number: L1625029
Project Number: 2013-027
Report Date: 08/17/16

SAMPLE RESULTS

Lab ID: L1625029-02
Client ID: MW-3D
Sample Location: EASTHAM, MA
Matrix: Water

Date Collected: 08/10/16 11:00
Date Received: 08/10/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Metals - Mansfield Lab											
Arsenic, Dissolved	0.072		mg/l	0.005	0.002	1	08/11/16 09:30	08/11/16 21:30	EPA 3005A	97,6010C	AB
Barium, Dissolved	0.066		mg/l	0.010	0.003	1	08/11/16 09:30	08/11/16 21:30	EPA 3005A	97,6010C	AB
Cadmium, Dissolved	ND		mg/l	0.004	0.001	1	08/11/16 09:30	08/11/16 21:30	EPA 3005A	97,6010C	AB
Chromium, Dissolved	ND		mg/l	0.01	0.002	1	08/11/16 09:30	08/11/16 21:30	EPA 3005A	97,6010C	AB
Copper, Dissolved	ND		mg/l	0.010	0.002	1	08/11/16 09:30	08/11/16 21:30	EPA 3005A	97,6010C	AB
Iron, Dissolved	30		mg/l	0.05	0.02	1	08/11/16 09:30	08/11/16 21:30	EPA 3005A	97,6010C	AB
Lead, Dissolved	0.002	J	mg/l	0.010	0.002	1	08/11/16 09:30	08/11/16 21:30	EPA 3005A	97,6010C	AB
Manganese, Dissolved	1.23		mg/l	0.010	0.002	1	08/11/16 09:30	08/11/16 21:30	EPA 3005A	97,6010C	AB
Mercury, Dissolved	ND		mg/l	0.0002	0.0002	1	08/11/16 10:43	08/12/16 16:59	EPA 7470A	97,7470A	EA
Selenium, Dissolved	ND		mg/l	0.010	0.003	1	08/11/16 09:30	08/11/16 21:30	EPA 3005A	97,6010C	AB
Silver, Dissolved	ND		mg/l	0.007	0.002	1	08/11/16 09:30	08/11/16 21:30	EPA 3005A	97,6010C	AB
Zinc, Dissolved	ND		mg/l	0.050	0.007	1	08/11/16 09:30	08/11/16 21:30	EPA 3005A	97,6010C	AB

Project Name: EASTHAM LANDFILL
Project Number: 2013-027
Lab Number: L1625029
Report Date: 08/17/16

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Dissolved Metals - Mansfield Lab for sample(s): 01-02 Batch: WG921793-1										
Arsenic, Dissolved	ND		mg/l	0.005	0.002	1	08/11/16 09:30	08/11/16 18:36	97,6010C	AB
Barium, Dissolved	ND		mg/l	0.010	0.003	1	08/11/16 09:30	08/11/16 18:36	97,6010C	AB
Cadmium, Dissolved	ND		mg/l	0.004	0.001	1	08/11/16 09:30	08/11/16 18:36	97,6010C	AB
Chromium, Dissolved	ND		mg/l	0.01	0.002	1	08/11/16 09:30	08/11/16 18:36	97,6010C	AB
Copper, Dissolved	ND		mg/l	0.010	0.002	1	08/11/16 09:30	08/11/16 18:36	97,6010C	AB
Iron, Dissolved	ND		mg/l	0.05	0.02	1	08/11/16 09:30	08/11/16 18:36	97,6010C	AB
Lead, Dissolved	ND		mg/l	0.010	0.002	1	08/11/16 09:30	08/11/16 18:36	97,6010C	AB
Manganese, Dissolved	ND		mg/l	0.010	0.002	1	08/11/16 09:30	08/11/16 18:36	97,6010C	AB
Selenium, Dissolved	ND		mg/l	0.010	0.003	1	08/11/16 09:30	08/11/16 18:36	97,6010C	AB
Silver, Dissolved	ND		mg/l	0.007	0.002	1	08/11/16 09:30	08/11/16 18:36	97,6010C	AB
Zinc, Dissolved	ND		mg/l	0.050	0.007	1	08/11/16 09:30	08/11/16 18:36	97,6010C	AB

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Dissolved Metals - Mansfield Lab for sample(s): 01-02 Batch: WG921854-1										
Mercury, Dissolved	ND		mg/l	0.0002	0.0002	1	08/11/16 10:43	08/12/16 16:45	97,7470A	EA

Prep Information

Digestion Method: EPA 7470A

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Project Number: 2013-027

Lab Number: L1625029

Report Date: 08/17/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Dissolved Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG921793-2 WG921793-3								
Arsenic, Dissolved	102		103		80-120	1		20
Barium, Dissolved	91		92		80-120	1		20
Cadmium, Dissolved	102		103		80-120	1		20
Chromium, Dissolved	90		90		80-120	0		20
Copper, Dissolved	97		98		80-120	1		20
Iron, Dissolved	84		85		80-120	1		20
Lead, Dissolved	101		101		80-120	0		20
Manganese, Dissolved	86		89		80-120	3		20
Selenium, Dissolved	103		105		80-120	2		20
Silver, Dissolved	97		95		80-120	2		20
Zinc, Dissolved	92		92		80-120	0		20
MCP Dissolved Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG921854-2 WG921854-3								
Mercury, Dissolved	114		115		80-120	1		20

INORGANICS
&
MISCELLANEOUS

Project Name: EASTHAM LANDFILL
Project Number: 2013-027
Lab Number: L1625029
Report Date: 08/17/16

SAMPLE RESULTS

Lab ID: L1625029-01
Client ID: MW-3I
Sample Location: EASTHAM, MA
Matrix: Water

Date Collected: 08/10/16 11:00
Date Received: 08/10/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	0.005	1	08/15/16 10:05	08/15/16 16:04	97,9014	ML
General Chemistry - Westborough Lab										
Alkalinity, Total	142.		mg CaCO3/L	2.00	NA	1	-	08/11/16 10:28	121,2320B	AW
Solids, Total Dissolved	240		mg/l	20	7.1	2	-	08/11/16 12:15	121,2540C	DW
Chloride	10.		mg/l	1.0	0.20	1	-	08/11/16 13:31	1,9251	ML
Nitrogen, Nitrate	ND		mg/l	0.100	0.018	1	-	08/11/16 20:41	121,4500NO3-F	MR
Sulfate	20.		mg/l	10	3.1	1	08/11/16 12:55	08/11/16 12:55	1,9038	AM
Chemical Oxygen Demand	11.	J	mg/l	20	3.5	1	08/12/16 17:40	08/12/16 21:25	121,5220D	TL

Project Name: EASTHAM LANDFILL
Project Number: 2013-027
Lab Number: L1625029
Report Date: 08/17/16

SAMPLE RESULTS

Lab ID: L1625029-02
Client ID: MW-3D
Sample Location: EASTHAM, MA
Matrix: Water

Date Collected: 08/10/16 11:00
Date Received: 08/10/16
Field Prep: Field Filtered (Dissolved Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	0.005	1	08/15/16 10:05	08/15/16 16:06	97,9014	ML
General Chemistry - Westborough Lab										
Alkalinity, Total	561.		mg CaCO3/L	2.00	NA	1	-	08/11/16 10:28	121,2320B	AW
Solids, Total Dissolved	530		mg/l	20	7.1	2	-	08/11/16 12:15	121,2540C	DW
Chloride	64.		mg/l	1.0	0.20	1	-	08/11/16 13:32	1,9251	ML
Nitrogen, Nitrate	ND		mg/l	0.100	0.018	1	-	08/11/16 20:43	121,4500NO3-F	MR
Sulfate	49.		mg/l	20	6.2	2	08/11/16 12:55	08/11/16 12:55	1,9038	AM
Chemical Oxygen Demand	44.		mg/l	20	3.5	1	08/12/16 17:40	08/12/16 21:26	121,5220D	TL

Project Name: EASTHAM LANDFILL
Project Number: 2013-027
Lab Number: L1625029
Report Date: 08/17/16

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG921750-1										
Solids, Total Dissolved	ND		mg/l	10	3.6	1	-	08/11/16 12:15	121,2540C	DW
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG921830-1										
Sulfate	ND		mg/l	10	3.1	1	08/11/16 12:55	08/11/16 12:55	1,9038	AM
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG921841-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	08/11/16 10:28	121,2320B	AW
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG921884-1										
Chloride	0.23	J	mg/l	1.0	0.20	1	-	08/11/16 11:51	1,9251	ML
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG922039-1										
Nitrogen, Nitrate	ND		mg/l	0.100	0.018	1	-	08/11/16 20:22	121,4500NO3-F	MR
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG922373-1										
Chemical Oxygen Demand	ND		mg/l	20	3.5	1	08/12/16 17:40	08/12/16 21:24	121,5220D	TL
MCP General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG922764-1										
Cyanide, Total	ND		mg/l	0.005	0.005	1	08/15/16 10:05	08/15/16 15:49	97,9014	ML

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1625029
Report Date: 08/17/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG921750-2								
Solids, Total Dissolved	98		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG921830-2								
Sulfate	90		-		84-119	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG921841-2								
Alkalinity, Total	103		-		90-110	-		10
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG921884-2								
Chloride	103		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG922039-2								
Nitrogen, Nitrate	102		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG922373-2								
Chemical Oxygen Demand	98		-		93-106	-		
MCP General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG922764-2 WG922764-3								
Cyanide, Total	96		93		80-120	3		20

Matrix Spike Analysis
Batch Quality Control

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1625029
Report Date: 08/17/16

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG922373-3 QC Sample: L1625029-02 Client ID: MW-3D												
Chemical Oxygen Demand	44.	238	290	105		-	-		84-120	-		12

Lab Duplicate Analysis
Batch Quality Control

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1625029
Report Date: 08/17/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG922373-4 QC Sample: L1625029-02 Client ID: MW-3D						
Chemical Oxygen Demand	44.	46	mg/l	4		12

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1625029
Report Date: 08/17/16

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1625029-01A	Vial HCl preserved	A	N/A	3.0	Y	Absent	MCP-8260-10(14)
L1625029-01B	Vial HCl preserved	A	N/A	3.0	Y	Absent	MCP-8260-10(14)
L1625029-01C	Vial HCl preserved	A	N/A	3.0	Y	Absent	MCP-8260-10(14)
L1625029-01D	Plastic 120ml HNO3 preserved	A	<2	3.0	Y	Absent	MCP-CD-6010S-10(180),MCP-FE-6010S-10(180),MCP-7470S-10(28),MCP-AG-6010S-10(180),MCP-ZN-6010S-10(180),MCP-AS-6010S-10(180),MCP-CR-6010S-10(180),MCP-BA-6010S-10(180),MCP-MN-6010S-10(180),MCP-PB-6010S-10(180),MCP-CU-6010S-10(180),MCP-SE-6010S-10(180)
L1625029-01E	Plastic 250ml unpreserved w/No H	A	N/A	3.0	Y	Absent	ALK-T-2320(14)
L1625029-01F	Plastic 500ml unpreserved	A	7	3.0	Y	Absent	CL-9251(28),SO4-9038(28),NO3-4500(2),TDS-2540(7)
L1625029-01G	Plastic 120ml H2SO4 preserved	A	<2	3.0	Y	Absent	COD-5220(28)
L1625029-01H	Plastic 250ml NaOH preserved	A	>12	3.0	Y	Absent	MCP-TCN9014-10(14)
L1625029-01I	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1625029-01J	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1625029-02A	Vial HCl preserved	A	N/A	3.0	Y	Absent	MCP-8260-10(14)
L1625029-02B	Vial HCl preserved	A	N/A	3.0	Y	Absent	MCP-8260-10(14)
L1625029-02C	Vial HCl preserved	A	N/A	3.0	Y	Absent	MCP-8260-10(14)
L1625029-02D	Plastic 120ml HNO3 preserved	A	<2	3.0	Y	Absent	MCP-CD-6010S-10(180),MCP-FE-6010S-10(180),MCP-7470S-10(28),MCP-AG-6010S-10(180),MCP-ZN-6010S-10(180),MCP-AS-6010S-10(180),MCP-CR-6010S-10(180),MCP-BA-6010S-10(180),MCP-MN-6010S-10(180),MCP-PB-6010S-10(180),MCP-CU-6010S-10(180),MCP-SE-6010S-10(180)
L1625029-02E	Plastic 250ml unpreserved w/No H	A	N/A	3.0	Y	Absent	ALK-T-2320(14)

*Values in parentheses indicate holding time in days

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1625029
Report Date: 08/17/16

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1625029-02F	Plastic 500ml unpreserved	A	7	3.0	Y	Absent	CL-9251(28),SO4-9038(28),NO3-4500(2),TDS-2540(7)
L1625029-02G	Plastic 120ml H2SO4 preserved	A	<2	3.0	Y	Absent	COD-5220(28)
L1625029-02H	Plastic 250ml NaOH preserved	A	>12	3.0	Y	Absent	MCP-TCN9014-10(14)
L1625029-02I	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1625029-02J	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1625029-03A	Vial HCl preserved	A	N/A	3.0	Y	Absent	MCP-8260-10(14)
L1625029-03B	Vial HCl preserved	A	N/A	3.0	Y	Absent	MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name:	EASTHAM LANDFILL	**Lab Number:**	L1625029
Project Number:	2013-027	**Report Date:**	08/17/16

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.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
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.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
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

Report Format: DU Report with 'J' Qualifiers

Project Name:	EASTHAM LANDFILL	**Lab Number:**	L1625029
Project Number:	2013-027	**Report Date:**	08/17/16

Data Qualifiers

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.

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. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	EASTHAM LANDFILL	**Lab Number:**	L1625029
Project Number:	2013-027	**Report Date:**	08/17/16

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

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.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

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

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

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
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.
Biological Tissue Matrix: ***EPA 3050B***

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
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, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, 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**.

Mansfield Facility:

Drinking Water
EPA 200.7: Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1** Hg.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

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

coc edited 8/11/16-KER

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL — World Class Chemistry

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 8/10/16

ALPHA Job #: L1625029

Project Information

Project Name: Eastham Landfill

Project Location: Eastham MA

Project #: 2013-027

Project Manager: Lisa Flynn

ALPHA Quote #:

Client Information

Client: Environmental Strategies & Managemen

Address: 273 West Main Street

Norton, MA 02703

Phone: 508-226-1800

Fax: 508-226-1811

Email: lflynn@esm-inc.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
B8260 & 8270 & Metals - MCP	0.15 ug/l for 1,4 dioxane, GW-1

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

Samples collected by BCHD - Ship coolers to Lynn Mulkeen at Barnstable County
Results emailed to Lisa Flynn at ES&M lflynn@esm-inc.com
Invoices to Eastham Board of Health

ANALYSIS

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☒ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	1,4 DIOXANE BY 8270 SIM	VOCS BY 8260	Dis. AsBaCdCrCuFeHgMnPbSeAgZn	Cyanide	Alkalinity	Chloride, Sulfate, Nitrate, TDS	COD						Sample Specific Comments	TOTAL # BOTTLES
25029-01	MW-3I	8/10/16	11:00	GW	LKM	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐	☐	☐		10
-02	MW-3D	8/10/16	11:00	GW	LKM	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐	☐	☐		10
-03	Tripblank			W		☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		2
Container Type						A	V	P	P	P	P	P	-	-	-	-	-		
Preservative						A	B	C	E	A	A	D	-	-	-	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I)
(rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
Lynn K Mulkeen	8/10/16 1400	[signature] AAL	8/10/16 1600
[signature]	8/10/16 1815	[signature]	8/10/16 1815

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL
World Class Chemistry

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 8/10/16

ALPHA Job #: L1625029

Project Information

Project Name: Eastham Landfill

Project Location: Eastham MA

Project #: 2013-027

Project Manager: Lisa Flynn

ALPHA Quote #:

Client Information

Client: Environmental Strategies & Managemen

Address: 273 West Main Street

Norton, MA 02703

Phone: 508-226-1800

Fax: 508-226-1811

Email: lflynn@esm-inc.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
B8260 & 8270 & Metals - MCP	0.15 ug/l for 1,4 dioxane, GW-1

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

Samples collected by BCHD - Ship coolers to Lynn Mulkeen at Barnstable County
Results emailed to Lisa Flynn at ES&M lflynn@esm-inc.com
Invoices to Eastham Board of Health

ANALYSIS

SAMPLE HANDLING
Filtration
☒ Done
☐ Not Needed
☐ Lab to do
Preservation
☒ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	1,4 DIOXANE BY 8270 SIM	VOCS BY 8260	Dis. AsBaCdCrCuFeHgMnPbDeAgZn	Cyanide	Alkalinity	Chloride, Sulfate, Nitrate, TDS	COD						Sample Specific Comments	TOTAL # BOTTLES
25029-01	MW-3I	8/10/16	11:00	GW	LKM	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐	☐	☐		10
-02	MW-3D	8/10/16	11:00	GW	LKM	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐	☐	☐		10
-03	Tripblank			W		☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		2
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		

PLEASE ANSWER QUESTIONS ABOVE!

Container Type	A	V	P	P	P	P	P	-	-	-	-	-
Preservative	A	B	C	E	A	A	D	-	-	-	-	-

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I)
(rev. 5-JAN-12)

Relinquished By:	Date/Time	Received By:	Date/Time
Lynn K Mulkeen	8/10/16 1400	[signature] AAL	8/10/16 1600
[signature]	8/10/16 1815	[signature]	8/10/16 1815

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Method Blank Summary
Form 4

Client	: Environmental Strategies & Mgmt.	**Lab Number**	: L1625029
Project Name	: EASTHAM LANDFILL	**Project Number**	: 2013-027
Lab Sample ID	: WG922951-5	**Lab File ID**	: VJ160815A08
Instrument ID	: JACK		
Matrix	: WATER	**Analysis Date**	: 08/15/16 06:17

Client Sample No.	Lab Sample ID	Analysis Date
WG922951-3LCS	WG922951-3	08/15/16 04:36
WG922951-4LCSD	WG922951-4	08/15/16 05:10
TRIP BLANK	L1625029-03	08/15/16 07:58
MW-3I	L1625029-01	08/15/16 14:42
MW-3D	L1625029-02	08/15/16 15:50

Continuing Calibration
Form 7

Client	: Environmental Strategies & Mgmt.	Lab Number	: L1625029	
Project Name	: EASTHAM LANDFILL	Project Number	: 2013-027	
Instrument ID	: JACK	Calibration Date	: 08/15/16 04:36	
Lab File ID	: VJ160815A02	Init. Calib. Date(s)	: 08/09/16	08/09/16
Sample No	: WG922951-2	Init. Calib. Times	: 08:13	14:55
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	96	0
Dichlorodifluoromethane	0.238	0.23	-	3.4	20	85	0
Chloromethane	0.299	0.247	-	17.4	20	79	.02
Vinyl chloride	0.384	0.377	-	1.8	20	89	0
Bromomethane	10	11.342	-	-13.4	20	105	0
Chloroethane	0.17	0.176	-	-3.5	20	93	0
Trichlorofluoromethane	0.426	0.442	-	-3.8	20	94	0
Ethyl ether	0.171	0.181	-	-5.8	20	101	0
1,1-Dichloroethene	0.309	0.311	-	-0.6	20	94	0
Carbon disulfide	10	10.733	-	-7.3	20	94	0
Methylene chloride	0.265	0.272	-	-2.6	20	96	0
Acetone	10	12.404	-	-24*	20	120	.02
trans-1,2-Dichloroethene	0.334	0.342	-	-2.4	20	96	0
Methyl tert-butyl ether	0.726	0.786	-	-8.3	20	104	0
Diisopropyl ether	1.103	1.157	-	-4.9	20	99	0
1,1-Dichloroethane	0.622	0.635	-	-2.1	20	95	0
Ethyl tert-butyl ether	0.897	0.98	-	-9.3	20	102	0
cis-1,2-Dichloroethene	0.35	0.36	-	-2.9	20	96	0
2,2-Dichloropropane	0.431	0.492	-	-14.2	20	100	0
Bromochloromethane	0.14	0.149	-	-6.4	20	99	0
Chloroform	0.535	0.543	-	-1.5	20	97	0
Carbon tetrachloride	0.393	0.4	-	-1.8	20	96	0
Tetrahydrofuran	0.067	0.081	-	-20.9*	20	113	0
Dibromofluoromethane	0.177	0.176	-	0.6	20	96	0
1,1,1-Trichloroethane	0.458	0.463	-	-1.1	20	96	0
2-Butanone	0.086	0.105	-	-22.1*	20	113	0
1,1-Dichloropropene	0.45	0.458	-	-1.8	20	95	0
Benzene	1.427	1.408	-	1.3	20	94	0
tert-Amyl methyl ether	0.743	0.812	-	-9.3	20	103	0
1,2-Dichloroethane-d4	0.189	0.201	-	-6.3	20	105	0
1,2-Dichloroethane	0.328	0.34	-	-3.7	20	98	0
Trichloroethene	0.335	0.325	-	3	20	93	0
Dibromomethane	0.14	0.151	-	-7.9	20	102	0
1,2-Dichloropropane	0.318	0.348	-	-9.4	20	99	0
Bromodichloromethane	0.341	0.362	-	-6.2	20	97	0
1,4-Dioxane	0.00123	0.00158*	-	-28.5*	20	121	0
cis-1,3-Dichloropropene	0.445	0.496	-	-11.5	20	101	0
Chlorobenzene-d5	1	1	-	0	20	95	0
Toluene-d8	1.378	1.296	-	6	20	95	0
Toluene	1.462	1.382	-	5.5	20	94	0
4-Methyl-2-pentanone	0.126	0.144	-	-14.3	20	106	0
Tetrachloroethene	0.61	0.603	-	1.1	20	94	0
trans-1,3-Dichloropropene	0.672	0.736	-	-9.5	20	106	0
1,1,2-Trichloroethane	0.332	0.352	-	-6	20	103	0
Chlorodibromomethane	0.382	0.405	-	-6	20	102	0

* Value outside of QC limits.

Continuing Calibration
Form 7

Client	: Environmental Strategies & Mgmt.	**Lab Number**	: L1625029	
Project Name	: EASTHAM LANDFILL	**Project Number**	: 2013-027	
Instrument ID	: JACK	**Calibration Date**	: 08/15/16 04:36	
Lab File ID	: VJ160815A02	**Init. Calib. Date(s)**	: 08/09/16	08/09/16
Sample No	: WG922951-2	**Init. Calib. Times**	: 08:13	14:55
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,3-Dichloropropane	0.707	0.737	-	-4.2	20	100	0
1,2-Dibromoethane	0.339	0.37	-	-9.1	20	105	0
2-Hexanone	0.179	0.213	-	-19	20	106	0
Chlorobenzene	1.163	1.166	-	-0.3	20	94	0
Ethylbenzene	2.018	2.001	-	0.8	20	93	0
1,1,1,2-Tetrachloroethane	0.393	0.414	-	-5.3	20	96	0
p/m Xylene	0.746	0.72	-	3.5	20	94	0
o Xylene	0.689	0.647	-	6.1	20	91	0
Styrene	1.134	1.124	-	0.9	20	97	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	100	.01
Bromoform	0.324	0.386	-	-19.1	20	105	0
Isopropylbenzene	3.645	3.779	-	-3.7	20	92	.01
4-Bromofluorobenzene	0.676	0.686	-	-1.5	20	100	0
Bromobenzene	0.814	0.821	-	-0.9	20	97	.01
n-Propylbenzene	4.147	4.009	-	3.3	20	92	.01
1,1,2,2-Tetrachloroethane	0.551	0.617	-	-12	20	108	.01
2-Chlorotoluene	2.733	2.71	-	0.8	20	95	0
1,3,5-Trimethylbenzene	2.683	2.5	-	6.8	20	93	0
1,2,3-Trichloropropane	0.433	0.487	-	-12.5	20	104	0
4-Chlorotoluene	2.522	2.404	-	4.7	20	93	0
tert-Butylbenzene	2.454	2.201	-	10.3	20	91	0
1,2,4-Trimethylbenzene	2.532	2.329	-	8	20	94	0
sec-Butylbenzene	3.514	3.115	-	11.4	20	88	0
p-Isopropyltoluene	2.815	2.618	-	7	20	93	0
1,3-Dichlorobenzene	1.747	1.762	-	-0.9	20	95	.01
1,4-Dichlorobenzene	1.712	1.699	-	0.8	20	99	.01
n-Butylbenzene	2.617	2.434	-	7	20	91	0
1,2-Dichlorobenzene	1.646	1.674	-	-1.7	20	97	.01
1,2-Dibromo-3-chloropropan	10	10.963	-	-9.6	20	111	0
Hexachlorobutadiene	0.329	0.303	-	7.9	20	84	0
1,2,4-Trichlorobenzene	10	9.23	-	7.7	20	100	0
Naphthalene	10	9.462	-	5.4	20	107	0
1,2,3-Trichlorobenzene	10	9.472	-	5.3	20	101	.01

* Value outside of QC limits.

ES&M QAQC Review Log

Lab	Project Number	Sample Date	Matrix	CAM Form Included?	Lab Presumptive Certainty?	QC Performance Standards Met?	Reporting Limits Achieved?	All Analytes Reported?	Data Usability Status
Alpha	L1627501	9/1/2016	DW	Yes	Yes	Yes	Yes	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis
SALT POND RD_055	9/1/2016	L1627501-01	DW	8270
SALT POND RD_055 DUP	9/1/2016	L1627501-02	DW	Not Analyzed

All QAQC data, including surrogate, method blank, laboratory control sample (LCS), and LCS duplicate results were reviewed. This report was deemed usable by Angela Boyd on 9/16/16.

ANALYTICAL REPORT

Lab Number:	L1627501
Client:	Environmental Strategies & Mgmt. 273 West Main Street Norton, MA 02766
ATTN:	Lisa Flynn
Phone:	(508) 226-1800
Project Name:	EASTHAM DW
Project Number:	2015-038
Report Date:	09/08/16

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), ME (MA00030), PA (68-02089), VA (460194), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), USFWS (Permit #LE2069641), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1627501
Report Date: 09/08/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1627501-01	SALT POND RD_055	DW	EASTHAM, MA	09/01/16 09:05	09/01/16
L1627501-02	SALT POND RD_055 DUP	WATER	EASTHAM, MA	09/01/16 09:10	09/01/16

Project Name:	EASTHAM DW	**Lab Number:**	L1627501
Project Number:	2015-038	**Report Date:**	09/08/16

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?	YES
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: EASTHAM DW
Project Number: 2015-038

Lab Number: L1627501
Report Date: 09/08/16

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 NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. 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:	EASTHAM DW	**Lab Number:**	L1627501
Project Number:	2015-038	**Report Date:**	09/08/16

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

MCP Related Narratives

Semivolatiles

In reference to question I:

All samples were analyzed for a subset of MCP analytes 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: Susan E O'Neil Susan O' Neil

Title: Technical Director/Representative Date: 09/08/16

ORGANICS

SEMIVOLATILES

Project Name: EASTHAM DW
Lab Number: L1627501
Project Number: 2015-038
Report Date: 09/08/16

SAMPLE RESULTS

Lab ID: L1627501-01
Client ID: SALT POND RD_055
Sample Location: EASTHAM, MA
Matrix: Dw
Analytical Method: 97,8270D-SIM
Analytical Date: 09/06/16 22:09
Analyst: WR

Date Collected: 09/01/16 09:05
Date Received: 09/01/16
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/03/16 09:15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.681		ug/l	0.142	0.071	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	26		15-110

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1627501
Report Date: 09/08/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 09/06/16 19:57
Analyst: WR

Extraction Method: EPA 3510C
Extraction Date: 09/03/16 09:15

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01 Batch: WG928756-1					
1,4-Dioxane	ND		ug/l	0.150	0.075

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	30		15-110

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM DW

Project Number: 2015-038

Lab Number: L1627501

Report Date: 09/08/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01 Batch: WG928756-2 WG928756-3								
1,4-Dioxane	120		120		40-140	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	32		29		15-110

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1627501
Report Date: 09/08/16

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1627501-01A	Amber 500ml unpreserved	A	7	3.8	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1627501-01B	Amber 500ml unpreserved	A	7	3.8	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1627501-02A	Amber 500ml unpreserved	A	7	3.8	Y	Absent	HOLD-1,4DIOX(7)
L1627501-02B	Amber 500ml unpreserved	A	7	3.8	Y	Absent	HOLD-1,4DIOX(7)

*Values in parentheses indicate holding time in days

Project Name:	EASTHAM DW	**Lab Number:**	L1627501
Project Number:	2015-038	**Report Date:**	09/08/16

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.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
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.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
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

Report Format: DU Report with 'J' Qualifiers

Project Name:	EASTHAM DW	**Lab Number:**	L1627501
Project Number:	2015-038	**Report Date:**	09/08/16

Data Qualifiers

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.

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. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	EASTHAM DW	**Lab Number:**	L1627501
Project Number:	2015-038	**Report Date:**	09/08/16

REFERENCES

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

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

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
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.
Biological Tissue Matrix: ***EPA 3050B***

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
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, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, 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**.

Mansfield Facility:

Drinking Water
EPA 200.7: Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1** Hg.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

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

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL — World Class Chemistry

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 9/1/16

ALPHA Job #: L1627501

Client Information

Client: Environmental Strategies & Managemen
Address: 273 West Main Street
Norton, MA 02703
Phone: 508-226-1800
Fax: 508-226-1811
Email: lflynn@esm-inc.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: Eastham DW
Project Location: Eastham MA
Project #: 2015-038
Project Manager: Lisa Flynn
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Other Project Specific Requirements/Comments/Detection Limits:
email results to lflynn@esm-inc.com and aboyd@esm-inc.com

please invoice Eastham

Report Information — Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
8270 - MCP	0.15 ug/l for 1,4 dioxane, GW-1

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	1,4 dioxane by 8270	Sample Specific Comments	TOTAL # BOTTLES
27501. 01	SALT POND RD_055	9/1/16	0905	DW	DB	☒		2
. 02	SALT POND RD_055 dup	9/1/16	0910	DW	DB	☒		2
						☐		
						☐		
						☐		
						☐		
						☐		
						☐		
						☐		
						☐		
						☐		

Container Type	A	-	-	-	-	-	-	-	-	-	-	-	
Preservative	A	-	-	-	-	-	-	-	-	-	-	-	

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
	9/1/16 1315		9/1/16 1345

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01(I)
(rev. 5-JAN-12)

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

4 | 24301

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: EASTHAM LANDFILL, 255 OLD ORCHARD ROAD

City/Town: EASTHAM Zip Code: 02642

B. This notice is being provided to the following party:

1. Name: Kim and Peter R Jr Radke

2. Street Address: 205 Queen Ann Dr.

City/Town: Eastham, MA Zip Code: 02642

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 200 Alston Avenue

City/Town: EASTHAM MA Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

☑ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☐ Other _____ (specify)

3. Description of property where sampling will be/has been conducted:

☑ residential ☐ commerical ☐ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

Private well drinking water.

E. Contact information related to the party providing this notice:

Contact Name: DOUGLAS HEELY

Street Address: 273 WEST MAIN ST

City/Town: NORTON, MA Zip Code: 02766

Telephone: (508) 226-1800 Email: dheely@esm-inc.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

4 | 24301

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: EASTHAM LANDFILL, 255 OLD ORCHARD ROAD

City/Town: EASTHAM Zip Code: 02642

B. This notice is being provided to the following party:

1. Name: William P & Linda S Burt

2. Street Address: PO Box 666

City/Town: Eastham, MA Zip Code: 02651

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 85 Alston Ave

City/Town: EASTHAM MA Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

☑ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☐ Other _____ (specify)

3. Description of property where sampling will be/has been conducted:

☑ residential ☐ commerical ☐ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

Private well drinking water.

E. Contact information related to the party providing this notice:

Contact Name: DOUGLAS HEELY

Street Address: 273 WEST MAIN ST

City/Town: NORTON, MA Zip Code: 02766

Telephone: (508) 226-1800 Email: dheely@esm-inc.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

4 | 24301

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: EASTHAM LANDFILL, 255 OLD ORCHARD ROAD

City/Town: EASTHAM Zip Code: 02642

B. This notice is being provided to the following party:

1. Name: David Nussdorfer, Atlantic Oaks Realty LLC

2. Street Address: 1709 Main Street

City/Town: Brewster MA Zip Code: 02631

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 3700 STATE HWY

City/Town: EASTHAM MA Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

☑ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☐ Other _____ (specify)

3. Description of property where sampling will be/has been conducted:

☑ residential ☐ commerical ☐ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

Private well drinking water.

E. Contact information related to the party providing this notice:

Contact Name: DOUGLAS HEELY

Street Address: 273 WEST MAIN ST

City/Town: NORTON, MA Zip Code: 02766

Telephone: (508) 226-1800 Email: dheely@esm-inc.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

4 | 24301

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: EASTHAM LANDFILL, 255 OLD ORCHARD ROAD

City/Town: EASTHAM Zip Code: 02642

B. This notice is being provided to the following party:

1. Name: Eric & Boonlune Lindholm

2. Street Address: 20 Kingsbury Beach Road

City/Town: Eastham MA Zip Code: 02642

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 20 Kingsbury Beach Road

City/Town: EASTHAM MA Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

☑ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☐ Other _____ (specify)

3. Description of property where sampling will be/has been conducted:

☑ residential ☐ commerical ☐ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

Private well drinking water.

E. Contact information related to the party providing this notice:

Contact Name: DOUGLAS HEELY

Street Address: 273 WEST MAIN ST

City/Town: NORTON, MA Zip Code: 02766

Telephone: (508) 226-1800 Email: dheely@esm-inc.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

4 | 24301

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: Eastham Landfill, 255 Old Orchard Road

City/Town: Eastham Zip Code: 02642

B. This notice is being provided to the following party:

1. Name: Michele Burnat & Lesa Milas

2. Street Address: 396 Old Colchester Rd

City/Town: Amston CT Zip Code: 06231

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 50 Knowles St

City/Town: Eastham Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

☑ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☐ Other _____ (specify)

3. Description of property where sampling will be/has been conducted:

☑ residential ☐ commerical ☐ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

Private well drinking water.

E. Contact information related to the party providing this notice:

Contact Name: Douglas Heely

Street Address: 273 West Main Street

City/Town: Norton Zip Code: 02766

Telephone: (508) 226-1800 Email: dheely@esm-inc.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

4 | 24301

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: EASTHAM LANDFILL, 255 OLD ORCHARD ROAD

City/Town: EASTHAM Zip Code: 02642

B. This notice is being provided to the following party:

1. Name: Jeff Breaks, Trustee Dulce Domum Living Trust

2. Street Address: 7841 Kildee Dr.

City/Town: Gloucester Point, VA Zip Code: 23062

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 125 Meetinghouse Road

City/Town: EASTHAM MA Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

☑ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☐ Other _____ (specify)

3. Description of property where sampling will be/has been conducted:

☑ residential ☐ commerical ☐ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

Private well drinking water.

E. Contact information related to the party providing this notice:

Contact Name: DOUGLAS HEELY

Street Address: 273 WEST MAIN ST

City/Town: NORTON, MA Zip Code: 02766

Telephone: (508) 226-1800 Email: dheely@esm-inc.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

4 | 24301

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: EASTHAM LANDFILL, 255 OLD ORCHARD ROAD

City/Town: EASTHAM Zip Code: 02642

B. This notice is being provided to the following party:

1. Name: Stephen Montanez

2. Street Address: 4 Preservation Way

City/Town: Eastham, MA Zip Code: 02642

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 4 Preservation Way

City/Town: EASTHAM MA Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

☑ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☐ Other _____ (specify)

3. Description of property where sampling will be/has been conducted:

☑ residential ☐ commerical ☐ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

Private well drinking water.

E. Contact information related to the party providing this notice:

Contact Name: DOUGLAS HEELY

Street Address: 273 WEST MAIN ST

City/Town: NORTON, MA Zip Code: 02766

Telephone: (508) 226-1800 Email: dheely@esm-inc.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

4 | 24301

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: EASTHAM LANDFILL, 255 OLD ORCHARD ROAD

City/Town: EASTHAM Zip Code: 02642

B. This notice is being provided to the following party:

1. Name: James McGrath & Lori Bivolcic

2. Street Address: 45 Salt Pond Rd

City/Town: Eastham, MA Zip Code: 02642

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 45 Salt Pond Rd

City/Town: EASTHAM MA Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

☑ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☐ Other _____ (specify)

3. Description of property where sampling will be/has been conducted:

☑ residential ☐ commerical ☐ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

Private well drinking water.

E. Contact information related to the party providing this notice:

Contact Name: DOUGLAS HEELY

Street Address: 273 WEST MAIN ST

City/Town: NORTON, MA Zip Code: 02766

Telephone: (508) 226-1800 Email: dheely@esm-inc.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

4 | 24301

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: EASTHAM LANDFILL, 255 OLD ORCHARD ROAD

City/Town: EASTHAM Zip Code: 02642

B. This notice is being provided to the following party:

1. Name: James McGrath & Lori Bivolcic

2. Street Address: 45 Salt Pond Rd

City/Town: Eastham, MA Zip Code: 02642

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 55 Salt Pond Rd

City/Town: EASTHAM MA Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

☑ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☐ Other _____ (specify)

3. Description of property where sampling will be/has been conducted:

☑ residential ☐ commerical ☐ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

Private well drinking water.

E. Contact information related to the party providing this notice:

Contact Name: DOUGLAS HEELY

Street Address: 273 WEST MAIN ST

City/Town: NORTON, MA Zip Code: 02766

Telephone: (508) 226-1800 Email: dheely@esm-inc.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to Release Tracking Number

4 | 24301

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: EASTHAM LANDFILL, 255 OLD ORCHARD ROAD

City/Town: EASTHAM Zip Code: 02642

B. This notice is being provided to the following party:

1. Name: Eastham Elementary School Attn: Linda Burt

2. Street Address: 200 Schoolhouse Rd

City/Town: Eastham, MA Zip Code: 02642

C. This notice is being given to inform its recipient (the party listed in Section B):

☑ 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.

☑ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.

☑ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 200 Schoolhouse Rd

City/Town: EASTHAM MA Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

☑ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☐ Phase V/Remedy Operation Status
☐ Post-Class C Operation, Maintenance and Monitoring
☐ Other _____ (specify)

3. Description of property where sampling will be/has been conducted:

☑ residential ☐ commerical ☐ industrial ☐ school/playground ☐ Other _____ (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

Private well drinking water.

E. Contact information related to the party providing this notice:

Contact Name: DOUGLAS HEELY

Street Address: 273 WEST MAIN ST

City/Town: NORTON, MA Zip Code: 02766

Telephone: (508) 226-1800 Email: dheely@esm-inc.com

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at http://www.mass.gov/dep/cleanup/oview.htm. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See http://mass.gov/dep/about/region/schedule.htm if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

ENVIRONMENTAL & ENGINEERING SOLUTIONS

September 30, 2016

Town of Eastham Board of Health
2500 State Highway
Eastham, MA 02642-2544

Eastham Board of Selectmen
Eastham Town Hall
2500 State Highway
Eastham MA 02643-2544

Subject: Immediate Response Action Status Report -3rd Quarter 2016
Town of Eastham Landfill
255 Old Orchard Road, Eastham MA
RTN 4-24301

As required by the Massachusetts Contingency Plan (MCP), notice is hereby given that the above referenced document has been submitted electronically to the Massachusetts Department of Environmental Protection (MassDEP).

The objective of the Immediate Response Action program is to identify private water wells in the vicinity of the Eastham Landfill that have been impacted by 1,4 dioxane, and to provide alternative safe drinking water to affected residents. In addition, the IRA program includes implementation of appropriate and feasible mitigating measures to remove 1,4 dioxane and other VOCs related to the Eastham landfill from drinking water. This IRA Status report (and the incorporated Landfill Monitoring Plan report) discusses activities completed between June 1, 2016, and August 31, 2016.

The submitted documents for this RTN can be viewed on line at http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=4-0024301 or at the MassDEP Southeast regional office. For more information about these options, please visit http://www.mass.gov/eea/agencies/massdep/.

If you have any questions, please contact our office at 508-226-1800.

Sincerely,
Environmental Strategies & Management, Inc.

Douglas Heely, LSP

Copy: MassDEP Southeast Region