

**MASSACHUSETTS CONTINGENCY PLAN
IMMEDIATE RESPONSE ACTION STATUS REPORT
and
LANDFILL MONITORING REPORT
4th QUARTER 2015**

**TOWN OF EASTHAM LANDFILL
255 OLD ORCHARD ROAD
EASTHAM, MASSACHUSETTS**

DEP RTN 4-24301

December 18, 2015

Prepared for:

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

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ES&M Project No. 2015-038

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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.

1.2 Purpose

This IRA Status and Landfill Monitoring Report documents activities undertaken at and around the Eastham Landfill between September 1, 2015 and November 30, 2015.

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 submitted on June 30, 2015 discontinued 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 everyone in this category until they are connected to the Town's municipal water system.

During the fall of 2015, testing of private wells was expanded to include several properties not previously tested on Northwood Road, Glacier Hills Road, Schoolhouse Road and Spinnaker Way, in an effort to better define the north-easterly extent of 1,4 dioxane in drinking water. Thirty-nine homeowners in this northeastern expansion area were invited to participate in this sampling event and ES&M received permission to collect samples from sixteen of these properties.

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

Drinking water samples were collected from twenty-two properties in the study area during this report period. The sampling events were conducted on October 5, 6, and 9 and on November 11 and 18, 2015. During these sampling events, field visit forms were completed to document the date and time when each sample was collected, the sample location (e.g. kitchen tap, outside spigot), and the configuration of the water system. Field forms summarizing this information 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, no new properties were 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 program¹.

Sixteen of the properties tested for 1,4-dioxane during this report period had not been tested before this period. None of the sixteen properties in the northeastern expansion area had results over 0.3 µg/L. Twelve of those sixteen properties had results with 1,4 dioxane not detected above the laboratory reporting limit and four properties had 1,4 dioxane detected at an estimated concentration below the reporting limit. The results from the other properties tested during this report period were generally consistent with previous sampling results. As stated in previous status reports, data collected from the study area properties suggests that wells impacted by 1,4-dioxane emanating from the landfill exhibit relatively consistent concentrations.

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.

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

- 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.

Appendix B contains the laboratory reports for samples collected during this report period. ES&M completed a quality assessment/quality control review of each laboratory report and all were deemed usable. ES&M's review log serves as the cover page for each 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 C².

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, and testing of the efficacy of the 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 to be conducted 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

²Although not included in Appendix C, each homeowner received copies of the laboratory report for samples collected from their well in addition to the BWSC transmittal form 123, and a lab report diagram.

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 the Solid Waste Management Section on January 20, 2015 to summarize the findings (see Appendix E of IRA Status Report for Q1 2015). Permanent monitoring wells and additional groundwater sampling and monitoring work will be completed in the fall of 2015, and an updated CSA report will be prepared in the summer of 2016.

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 November 24, 2015, 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.
- On November 10, 2015, ES&M personnel collected semi-annual groundwater samples from landfill monitoring wells MW-21S for analysis of VOCs and 1,4-dioxane. Because of the depth of this well, BCDHE's equipment cannot be used to collect these samples.
- On November 24, 2015, BCDHE personnel collected annual groundwater samples from landfill monitoring wells MW-2S, MW-4S and MW-5S for analysis of VOCs, 1,4-dioxane, metals and indicator parameters.
- On November 24, 2015, BCDHE personnel collected annual groundwater samples from landfill monitoring well MW-8 and the DPW monitoring well for analysis of VOCs and 1,4-dioxane.

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 Gas Monitoring

Personnel from BCDHE conducted semi-annual soil gas monitoring at the Eastham Landfill on November 5, 2015. Six soil gas monitoring points were screened for percent methane (%CH₄), percent of the lower explosion limit (%LEL), hydrogen sulfide (H₂S) in parts per million (ppm), percent oxygen (%O₂), and VOCs (in ppm). With the exception of oxygen levels, all other readings were zero. The Eastham Landfill Soil Gas report prepared by BCDHE is included in Appendix E.

3.3 Private Well Sample Collection

As previously stated, the LMP sampling program was recently revised to include only collection of drinking water samples from eight residences (nine wells) that are not currently receiving bottled water. The 2015 annual drinking water samples were collected from all but three of the residences on this list during previous report periods³. The next round of LMP residential drinking water samples will be collected during the second quarter of 2016.

4.0 FUTURE SCHEDULE OF IRA AND LMP ACTIVITIES

During the next reporting period from December 2015 through February 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.

4.2 Landfill Monitoring Plan

- Collection of quarterly groundwater samples from wells MW-3I and MW-3D in February 2016, for analysis of indicator parameters, metals and VOCs including 1,4-dioxane.

³ Homeowners from three properties on the LMP list could not be reached to set up sampling appointments.

5.0 PUBLIC OUTREACH

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

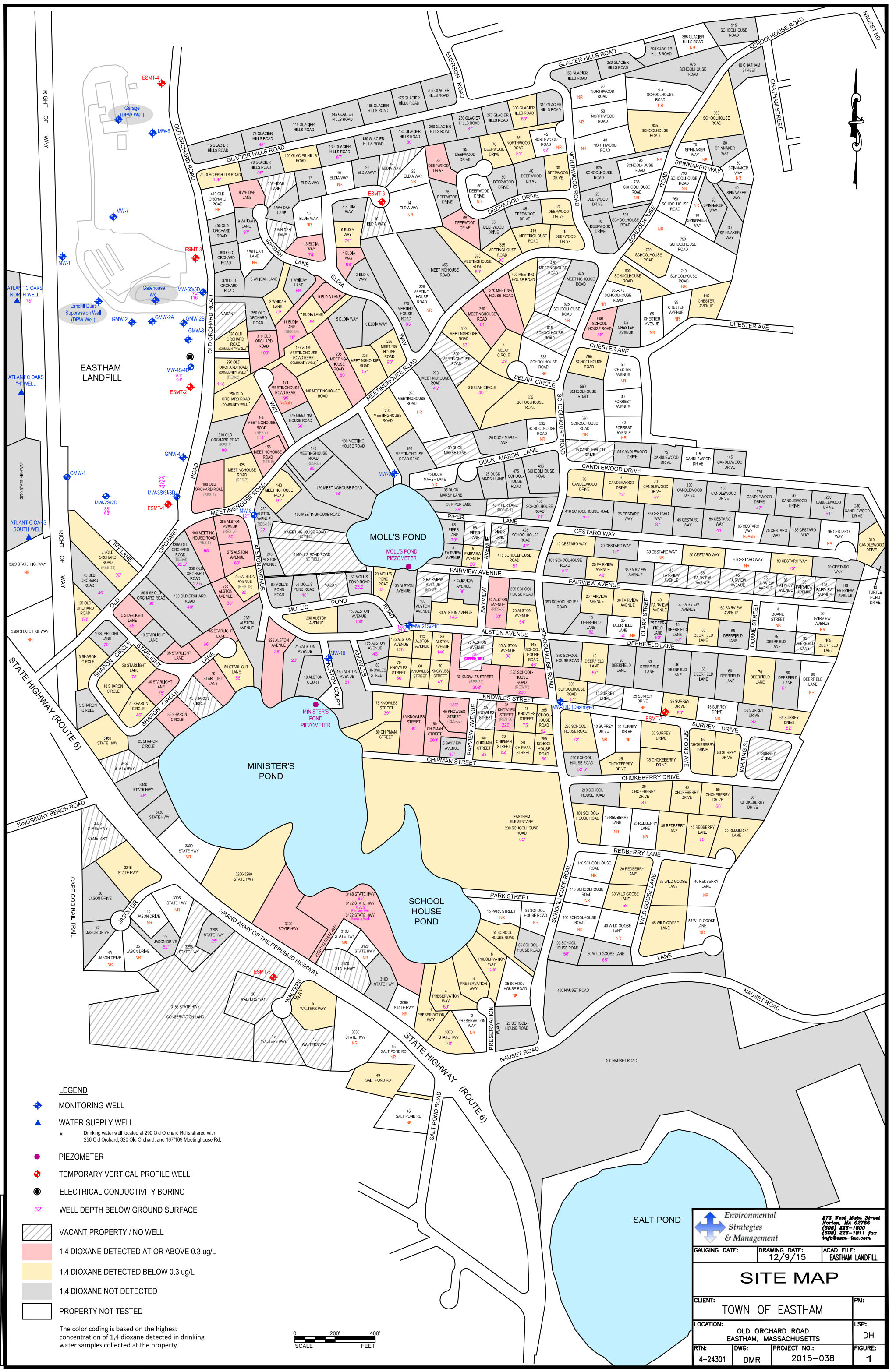
Availability of Reports

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
jcrowley@eastham-ma.gov
- Doug Heely, Licensed Site Professional, Environmental Strategies & Mgmt.
508-226-1800
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 1677/169 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.



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GAUGING DATE:	DRAWING DATE:	ACAD FILE:
	12/9/15	EASTHAM LANDFILL
SITE MAP		
CLIENT:	TOWN OF EASTHAM	PM:
LOCATION:	OLD ORCHARD ROAD EASTHAM, MASSACHUSETTS	LSP: DH
RTN:	DWG:	PROJECT NO.:
4-24301	DMR	2015-038
		FIGURE:
		1

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
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

**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	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
200 ALSTON AVENUE	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

4Q2015

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.



Property	Date	Duplicate	1,4 Dioxane
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	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	5/13/2015		<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	7/25/2013		<0.20
ATLANTIC OAKS NORTH WELL	7/25/2013		<0.20
ATLANTIC OAKS-SOUTH WELL	7/23/2013		<0.20
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

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.

Property	Date	Duplicate	1,4 Dioxane	
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	4Q2015
55 CHESTER AVE	1/30/2015		<0.144	
115 CHESTER AVENUE	10/5/2015		0.114J	4Q2015
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	
25 DEEPWOOD DRIVE	11/11/2015		<0.150	4Q2015
	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	

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.
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Property	Date	Duplicate	1,4 Dioxane
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
	5/3/2013		<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
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

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Property	Date	Duplicate	1,4 Dioxane
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
	8/4/2014		<0.142
70 GLACIER HILLS ROAD	7/22/2013		<0.20
	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
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

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Property	Date	Duplicate	1,4 Dioxane	
350 GLACIER HILLS ROAD	10/9/2015		<0.142	4Q2015
380 GLACIER HILLS ROAD	10/9/2015		<0.147	4Q2015
395 GLACIER HILLS ROAD	10/6/2015		<0.153	4Q2015
20 JASON DRIVE	3/12/2014		<0.150	
25 JASON DRIVE	4/14/2014		<0.147	
30 JASON DRIVE	3/10/2014		<0.147	
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	
50 KNOWLES STREET	11/11/2015		<0.144	4Q2015
	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	

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Property	Date	Duplicate	1,4 Dioxane
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	5/8/2013	
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
170 MEETINGHOUSE ROAD	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
	5/9/2014		<0.142
190 MEETINGHOUSE ROAD REAR	5/9/2014		<0.142
200 MEETINGHOUSE ROAD	7/23/2014		<0.147
	5/3/2013		0.093J
	5/5/2014		0.310
205 MEETINGHOUSE ROAD	5/5/2014	Duplicate	0.319
	12/3/2013		0.30
	12/3/2013	Duplicate	0.26

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Property	Date	Duplicate	1,4 Dioxane
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	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
	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
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	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

4Q2015

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Property	Date	Duplicate	1,4 Dioxane
130B OLD ORCHARD ROAD	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
210 OLD ORCHARD ROAD	2/22/2013		0.045J
	12/18/2013		<0.20
290 OLD ORCHARD ROAD	2/15/2013		<0.20
	Untreated 3/2/2015		<0.156
310 OLD ORCHARD ROAD	Effluent 3/2/2015		<0.144
	7/23/2014		<0.144
	5/16/2013		0.068J
	2/15/2013		<0.20
350 OLD ORCHARD ROAD	5/6/2014		0.431
	5/6/2014 Duplicate		0.433
	4/29/2013		0.41
370 OLD ORCHARD ROAD	8/1/2014		<0.142
	5/3/2013		<0.20
390 OLD ORCHARD ROAD	5/2/2013		<0.20
400 OLD ORCHARD ROAD	5/7/2013		<0.20
50 PIPER LANE	5/7/2013		<0.20
65 PIPER LANE	2/20/2013		<0.20
1 PRESERVATION WAY	7/31/2013		<0.20
	8/25/2014		0.174
4 PRESERVATION WAY	8/25/2014 Duplicate		0.199
	12/2/2013		0.19J
	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

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Property	Date	Duplicate	1,4 Dioxane	
49 SALT POND ROAD	3/11/2014		0.177	
	3/11/2014	Duplicate	0.166	
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	
200 SCHOOLHOUSE ROAD	11/18/2015		<0.142	4Q2015
	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	
	PRE (filter) 2/11/2014		0.081J	
	POST (filter) 2/11/2014		0.096J	
	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	
	Untreated	9/19/2013		10	
	Mid System	9/19/2013		0.095J	
	Mid System	8/27/2013		<0.20	
	Effluent	8/27/2013		<0.20	
	Untreated	8/27/2013		7.7	
	Effluent	7/31/2013		<0.20	
	Mid System	7/31/2013		<0.20	
	Untreated	7/31/2013		9.4	
	Untreated	7/31/2013	Duplicate	8.8	
	Effluent	6/27/2013		<0.20	
	Untreated	6/27/2013		8.2	
	Mid System	6/27/2013		0.041J	
	Untreated	6/27/2013	Duplicate	8.8	
	Untreated	5/29/2013		7.8	
	Effluent	5/29/2013		<0.20	
	Mid System	5/29/2013		<0.20	
	Untreated	5/29/2013	Duplicate	9.8B	
	Mid System	4/29/2013		<0.20	
	Effluent	4/29/2013		<0.20	
	Untreated	4/29/2013		9.8	
	Untreated	4/29/2013	Duplicate	8.3	
	Mid System	3/21/2013		<0.20	
	Effluent	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	4Q2015
590 SCHOOLHOUSE ROAD		5/13/2015		0.107J	

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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	4Q2015
725 SCHOOLHOUSE ROAD	2/16/2015		<0.146	
825 SCHOOLHOUSE ROAD	10/9/2015		<0.153	4Q2015
835 SCHOOLHOUSE ROAD	10/6/2015		0.132J	4Q2015
875 SCHOOLHOUSE ROAD	10/5/2015		<0.147	4Q2015
915 SCHOOLHOUSE ROAD	10/6/2015		<0.142	4Q2015
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	4Q2015
30 SPINNAKER WAY	10/6/2015		<0.142	4Q2015
40 SPINNAKER WAY	10/9/2015		<0.147	4Q2015
60 SPINNAKER WAY	10/9/2015		<0.142	4Q2015
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	
35 STARLIGHT LANE	5/3/2013		0.21	
	4/1/2015		0.315	
	12/4/2013		0.37	
	12/4/2013	Duplicate	0.30	
40 STARLIGHT LANE	2/15/2013		0.26	
	6/26/2014		0.874	
	6/26/2014	Duplicate	0.936	
	7/23/2013		0.83	

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.

Property	Date	Duplicate	1,4 Dioxane
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
3172 STATE HWY BACKUP WELL	12/6/2013	Duplicate	0.27
	3/25/2014		0.335
3172 STATE HWY PRIMARY WELL	3/25/2014	Duplicate	0.338
	3/17/2015		0.345
3200 STATE HWY	3/25/2014		0.326
	3/25/2014	Duplicate	0.306
	12/6/2013		0.20
	12/6/2013	Duplicate	0.21
3265 STATE HWY	5/8/2014		0.424
	5/8/2014	Duplicate	0.418
	12/6/2013		0.31
3280 STATE HWY	12/6/2013	Duplicate	0.32
	3/10/2014		<0.147
3315 STATE HWY	4/14/2014		0.248
	4/14/2014	Duplicate	0.198
3430 STATE HWY	3/12/2014		0.232
	3/12/2014	Duplicate	0.194
3440 STATE HWY	12/2/2013		<0.20
3460 STATE HWY	4/11/2014		<0.142
30 SURREY DRIVE	12/6/2013		0.14J
	4/30/2013		0.10J
35 SURREY DRIVE	9/17/2013		0.14J
50 SURREY DRIVE	7/31/2013		0.070J
55 SURREY DRIVE	4/30/2013		0.058J
65 SURREY DRIVE	5/1/2013		<0.20
10 TURTLE POND ROAD	7/22/2013		0.047J
5 WALTERS WAY	5/10/2013		<0.20
	4/11/2014		0.147
1 WHIDAH LANE	4/11/2014	Duplicate	<0.144
	7/31/2014		<0.144
3 WHIDAH LANE	4/29/2013		<0.20
	5/5/2014		<0.144
4 WHIDAH LANE	5/16/2013		0.071J
	7/24/2013		<0.20
5 WHIDAH LANE	7/30/2013		<0.20
8 WHIDAH LANE	9/19/2013		0.57
9 WHIDAH LANE	7/31/2014		<0.144
	5/7/2013		<0.20
30 WILD GOOSE LANE	6/23/2014		0.109J

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
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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.

Property	Date	Duplicate	1,4 Dioxane
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
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

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.

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 MONITORING 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		GW-1	0.3	5	200	2	5	70	7	NA
GW3		GW-3	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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 2D		2/14/2013	0.14 J	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	0.47	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 3D	Quarterly	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	<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

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.

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Report: GW VOC 1

Datebase: Eastham Landfill Monitoring



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	2/27/2014	12	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0	<1.0
		11/25/2013	16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		9/5/2013	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		5/8/2013	17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		12/6/2012	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		10/9/2012	18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		3/20/2012	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 3I	Quarterly	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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		9/5/2013	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		5/8/2013	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	<0.20	NS	NS	NS	NS	NS	NS	NS
		2/14/2013	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		12/6/2012	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		10/9/2012	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
7/10/2012	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
3/20/2012	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
MW 3S		2/14/2013	<0.20	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	1.5	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 5D		7/10/2012	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	

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.



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 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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	1.2	NS	NS	NS	NS	NS	NS	NS
		12/5/2012	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 7		10/27/2014	<0.150	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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		3/14/2013	0.33	NS	NS	NS	NS	NS	NS	NS
		12/7/2012	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
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	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
280 ALSTON AVENUE	Annual	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	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	5/13/2015	<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	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

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.



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
130 OLD ORCHARD ROAD	Annual	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	5/29/2015	<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	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
290 OLD ORCHARD ROAD	Annual	3/2/2015	Inf.	<0.156	<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	<2.0
		7/23/2014		<0.144	NS	NS	NS	NS	NS	NS
		5/16/2013		0.068J	NS	NS	NS	NS	NS	NS
		5/9/2013		NS	<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
		6/21/2012		NS	<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.

12/8/2015

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Report:

GW VOC 1

Datebase:

Eastham Landfill Monitoring



TABLE 4.1
SECTION 2
SUMMARY OF LANDFILL MONITORING 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	1,2,3-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		GW-1	NA	NA	70	NA	NA	600	5	5
GW3		GW-3	NA	NA	50000	NA	NA	2000	20000	50000
MMCL			NA	NA	70	NA	0.2	600	5	5
ORSG			NA	NA	NA	NA	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	<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	<1.0	<1.0	<1.0
		10/27/2014	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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 2D		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 2S	Annual	11/24/2015	<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	<1.0	<1.0	<1.0
		12/18/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 3D	Quarterly	11/24/2015	<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	<1.0	<1.0	<1.0
		5/13/2015	<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
		11/10/2014	Duplicate	<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

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



Property	LMP Sample Frequency	Date	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	9/3/2014	<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	<0.50	<1.0	<1.0	<1.0
		2/27/2014	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0
		11/25/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		9/5/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		5/8/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		10/9/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		3/20/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 3I	Quarterly	11/24/2015	<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	<1.0	<1.0	<1.0
		5/13/2015	<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
		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	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0
		2/27/2014	<1.0	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<1.0
		11/25/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		9/5/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		5/8/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		10/9/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
7/10/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
3/20/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
MW 3S		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 4S	Annual	11/24/2015	<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	<1.0	<1.0	<1.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS

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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Property	LMP Sample Frequency	Date	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 4S	Annual	12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 5S	Annual	11/24/2015	<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	<1.0	<1.0	<1.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 7		10/27/2014	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	<1.0	<1.0
		12/16/2014	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
		12/18/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		3/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/7/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 21S	Semi-Annual	11/10/2015	<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	<1.0	<1.0	<1.0
		12/16/2014	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
265 ALSTON AVENUE	Annual	4/1/2015	<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
		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
		12/6/2012	<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	5/13/2015	<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
		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	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
170 MEETINGHOUSE ROAD	Annual	5/13/2015	<2.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0

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.
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Report: GW VOC 2
Datebase: Eastham Landfill Monitoring



Property	LMP Sample Frequency	Date	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 ROAD	Annual	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	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	<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
		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	<0.50	<0.50	<0.50	<0.50
130B OLD ORCHARD ROAD	Annual	5/29/2015	<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
		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	12/18/2013	<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
		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	3/2/2015 Inf.	<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	<1.0	<1.0	<1.0
		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	<0.50	<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
		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
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.

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Report: GW VOC 2
Datebase: Eastham Landfill Monitoring



TABLE 4.1
SECTION 3
SUMMARY OF LANDFILL MONITORING 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	4-Chlorotoluene
Standards										
GW1		GW-1	NA	100	NA	5	NA	4000		NA
GW3		GW-3	NA	50000	NA	8000	NA	50000		NA
MMCL			NA	NA	NA	5	NA	NA	NA	NA
ORSG			NA	NA	NA	NA	NA	4000	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	<1.0	<1.0	<1.0	<1.0	2.1J *	<1.0	<1.0
MW 21S	Semi-Annual	5/13/2015	<2.0	<1.0	<2.0	<1.0	<2.0		<2.0	<2.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS
		5/16/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0
		12/7/2012	<0.5	<0.5	<0.5	<0.5	<0.5	NS	<0.5	<0.5
MW 2D		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
MW 2S	Annual	11/24/2015	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<2.0
		12/16/2014	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<2.0
		12/18/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
MW 3D	Quarterly	7/10/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
		11/24/2015	<2.0	<1.0	<2.0	0.30J	<2.0	<5.0	<2.0	<2.0
		8/26/2015	<2.0	<1.0	<2.0	0.28 J	<2.0	<5.0	<2.0	<2.0
		5/13/2015	<2.0	<1.0	<2.0	0.33J	<2.0	<5.0	<2.0	<2.0
		11/10/2014	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	

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.

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Report: GW VOC 3

Datebase: Eastham Landfill Monitoring



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	4-Chlorotoluene
MW 3D	Quarterly	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		<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0
		2/27/2014		<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0
		11/25/2013		<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
		9/5/2013		<0.5	<0.5	<0.5	0.50	<0.5	<5.0	<0.5	<0.5
		5/8/2013		<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
		2/14/2013		<0.5	<0.5	<0.5	0.51	<0.5	<5.0	<0.5	<0.5
		12/6/2012		<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
		10/9/2012		<0.5	<0.5	<0.5	0.55	<0.5	<5.0	<0.5	<0.5
		7/10/2012		<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
		3/20/2012		<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
MW 3I	Quarterly	11/24/2015		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<2.0
		8/26/2015		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<2.0
		5/13/2015		<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<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	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0
		2/27/2014		<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0
		11/25/2013		<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
		9/5/2013		<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
		5/8/2013		<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013		<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
		12/6/2012		<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
		10/9/2012		<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
7/10/2012		<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5		
3/20/2012		<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5		
MW 3S		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
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		<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5

Notes: GW-1 and GW-3 MCP Method 1 Standards
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Report: GW VOC 3
Database: Eastham Landfill Monitoring



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	4-Chlorotoluene
MW 4S	Annual	11/24/2015	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<2.0
		12/16/2014	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<2.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
		7/10/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
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	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
MW 5S	Annual	11/24/2015	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<2.0
		12/16/2014	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<2.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
		7/10/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
MW 7		10/27/2014	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	<2.0
		12/16/2014	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<2.0
		12/18/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
		3/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/7/2012	<0.5	<0.5	<0.5	<0.5	<0.5	NS	<0.5	<0.5
MW 21S	Semi-Annual	11/10/2015	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<2.0
DPW WELL	Annual	11/24/2015	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<2.0
		12/16/2014	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<2.0
265 ALSTON AVENUE	Annual	4/1/2015	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<2.0
		3/28/2014	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
		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	<0.50
280 ALSTON AVENUE	Annual	5/13/2015	<2.0	<1.0	<2.0	<1.0	<2.0	NS	<2.0	<2.0
		12/17/2014	NS	NS	NS	NS	NS	NS	NS	NS

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.

12/8/2015
Report: GW VOC 3
Datebase: Eastham Landfill Monitoring



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	4-Chlorotoluene	
280 ALSTON AVENUE	Annual	12/18/2013	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<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	NS	<0.50	<0.50	
		6/21/2012	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50	<0.50	
125 MEETINGHOUSE ROAD	Annual	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	<0.50	
170 MEETINGHOUSE ROAD	Annual	5/13/2015	<2.0	<1.0	<2.0	<1.0	<2.0	NS	<2.0	<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	NS	<0.50	<0.50	
75 OLD ORCHARD ROAD	Annual	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	
		6/21/2012	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<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	
		6/21/2012	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50	<0.50	
130A OLD ORCHARD ROAD	Annual	5/29/2015	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<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	5/29/2015	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<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	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	<0.50	
290 OLD ORCHARD ROAD	Annual	3/2/2015	Inf.	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	<2.0	
		3/2/2015	Eff.	<2.0	<1.0	<2.0	<1.0	<2.0	<5.0	<2.0	
		7/23/2014		NS	NS	NS	NS	NS	NS	NS	
		5/16/2013		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

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.

12/8/2015
Report: GW VOC 3
Datebase: Eastham Landfill Monitoring



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	4-Chlorotoluene
290 OLD ORCHARD ROAD	Annual	6/21/2012	<0.50	<0.50	<0.50	<0.50	<0.50	NS	<0.50	<0.50

Notes: GW-1 and GW-3 MCP Method 1 Standards
MMCL-Massachusetts Max. Contaminant Level
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NS - Not Sampled
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12/8/2015 Page 5 of 5
Report: GW VOC 3
Datebase: Eastham Landfill Monitoring



TABLE 4.1
SECTION 4
SUMMARY OF LANDFILL MONITORING 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 tetrachloride
Standards											
GW1		GW-1	NA	350	6300	5	NA	NA	4	10	5
GW3		GW-3	NA	50000	50000	10000	NA	NA	50000	800	5000
MMCL			NA	NA	NA	5	NA	NA	NA	NA	5
ORSG			NA	350	6300	NA	NA	NA	NA	10	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	<10	14J	<1.0	<1.0	<1.0	<1.0	<2.0	<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	<1.0
		10/27/2014	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	<1.0
		12/7/2012	<0.5	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 2D		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 2S	Annual	11/24/2015	<2.0	<5.0	<5.0	<0.5	<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	<1.0
		12/18/2013	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 3D	Quarterly	11/24/2015	<2.0	<5.0	<5.0	0.69	<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	<1.0
		5/13/2015	<2.0	<5.0	<5.0	0.81	<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	<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	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	<5.0	<5.0	0.79	<1.0	<1.0	<1.0	<1.0	<1.0

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



Property	LMP Sample Frequency	Date	4-Isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromoform	Bromomethane	Carbon tetrachloride
MW 3D	Quarterly	2/27/2014	<1.0	<5.0	<10	1.2	<1.0	<1.0	<1.0	<1.0	<1.0
		11/25/2013	<0.5	<5.0	<5.0	0.96	<0.5	<0.5	<0.5	<0.5	<0.5
		9/5/2013	<0.5	<5.0	<5.0	1.0	<0.5	<0.5	<0.5	<0.5	<0.5
		5/8/2013	<0.5	<5.0	<5.0	0.91	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	<0.5	<5.0	<5.0	1.0	<0.5	<0.5	<0.5	<0.5	<0.5
		12/6/2012	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		10/9/2012	<0.5	<5.0	<5.0	1.2	<0.5	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		3/20/2012	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 3I	Quarterly	11/24/2015	<2.0	<5.0	1.8J	<0.5	<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	<1.0
		5/13/2015	<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<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	<1.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		2/27/2014	<1.0	<5.0	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		11/25/2013	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		9/5/2013	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		5/8/2013	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		12/6/2012	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		10/9/2012	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
7/10/2012	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
3/20/2012	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
MW 3S		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
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
MW 4S	Annual	12/6/2012	<0.5	<5.0	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		11/24/2015	<2.0	<5.0	<5.0	<0.5	<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	<1.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
7/10/2012	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
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

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B - Analyte detected in Blank and Sample
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Property	LMP Sample Frequency	Date	4-Isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromoform	Bromomethane	Carbon tetrachloride
MW 5D		12/5/2012	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 5S	Annual	11/24/2015	<2.0	<5.0	<5.0	0.21J	<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	<1.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 7		10/27/2014	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	<1.0
		12/16/2014	<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<1.0
		12/18/2013	<0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		3/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/7/2012	<0.5	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 21S	Semi-Annual	11/10/2015	<2.0	<5.0	1.6J	<0.50	<2.0	<2.0	<2.0	<1.0	
DPW WELL	Annual	11/24/2015	<2.0	<5.0	2.1J	<0.5	<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	<1.0
265 ALSTON AVENUE	Annual	4/1/2015	<2.0	<5.0	<5.0	<0.50	<2.0	<2.0	<2.0	<2.0	<1.0
		3/28/2014	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	<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
280 ALSTON AVENUE	Annual	6/21/2012	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		5/13/2015	<2.0	<5.0	<5.0	<0.50	<2.0	<2.0	<2.0	<2.0	<1.0
		12/17/2014	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	<0.50
		2/22/2013	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	<0.50
125 MEETINGHOUSE ROAD	Annual	6/21/2012	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		5/8/2013	<0.50	<2.5	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
170 MEETINGHOUSE ROAD	Annual	6/21/2012	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		5/13/2015	<2.0	<5.0	<5.0	<0.50	<2.0	<2.0	<2.0	<2.0	<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
75 OLD ORCHARD ROAD	Annual	12/8/2012	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
		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
		6/21/2012	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	

Notes: GW-1 and GW-3 MCP Method 1 Standards
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Report: GW VOC 4
Datebase: Eastham Landfill Monitoring



Property	LMP Sample Frequency	Date	4-Isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane	Bromoform	Bromomethane	Carbon tetrachloride
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	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
130A OLD ORCHARD ROAD	Annual	5/29/2015	<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<1.0
		12/17/2014	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	<0.50
		2/25/2013	<0.50	<2.5	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
130B OLD ORCHARD ROAD	Annual	5/29/2015	<2.0	<5.0	<5.0	<0.5	<2.0	<2.0	<2.0	<2.0	<1.0
		12/17/2014	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	<0.50
		2/25/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
210 OLD ORCHARD ROAD	Annual	12/18/2013	<0.50	<2.5	<2.5	<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
		6/21/2012	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
290 OLD ORCHARD ROAD	Annual	3/2/2015	Inf.	<5.0	<5.0	<0.50	<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	<1.0
		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	<2.5	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50
		2/15/2013		<0.50	<2.5	<2.5	<0.50	<0.50	<0.50	<0.50	<0.50
		6/21/2012	<0.50	NS	NS	<0.50	<0.50	<0.50	<0.50	<0.50	

Notes: GW-1 and GW-3 MCP Method 1 Standards
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Report: GW VOC 4
Datebase: Eastham Landfill Monitoring



TABLE 4.1
SECTION 5
SUMMARY OF LANDFILL MONITORING 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	Method 1 Std	GW-1	100	2	NA	70	NA	70	NA	NA
GW3	Method 1 Std	GW-3	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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 2D		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 3D	Quarterly	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

Notes: GW-1 and GW-3 MCP Method 1 Standards
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Property	LMP Sample Frequency	Date		Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromomethane
MW 3D	Quarterly	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		<0.5	<0.5	1.3	<0.5	1.4	<0.5	<0.5	<0.5
		9/5/2013		1.6	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5
		5/8/2013		1.4	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5
		2/14/2013		1.6	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5
		12/6/2012		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		10/9/2012		1.9	<0.5	0.58	<0.5	<0.5	1.3	<0.5	<0.5
		7/10/2012		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		3/20/2012		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		MW 3I	Quarterly	11/24/2015		0.37J	<1.0	<2.0	<1.0	<2.0	<1.0
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				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
9/5/2013				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
5/8/2013				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2/14/2013				NS	NS	NS	NS	NS	NS	NS	NS
2/14/2013				<0.5	<0.5	<0.5	<0.5	<0.5	0.84	<0.5	<0.5
12/6/2012				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10/9/2012		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
7/10/2012		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
3/20/2012		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
MW 3S		2/14/2013		NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
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		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

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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Report: GW VOC 5
Datebase: Eastham Landfill Monitoring



Property	LMP Sample Frequency	Date	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromomethane
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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
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	<0.5	<0.5	<0.5	<0.5	<0.5	0.51	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012	<0.5	<0.5	<0.5	<0.5	<0.5	0.51	<0.5	<0.5
7/10/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
MW 7		10/27/2014	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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		3/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/7/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
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	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	5/13/2015	<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

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Property	LMP Sample Frequency	Date	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromomethane
280 ALSTON AVENUE	Annual	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	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
170 MEETINGHOUSE ROAD	Annual	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	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	5/29/2015	<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	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	3/2/2015	Inf.	<1.0	<2.0	0.46J	<2.0	<1.0	<0.50	<2.0
		3/2/2015	Eff.	<1.0	<2.0	0.18J	<2.0	<1.0	<0.50	<2.0
		7/23/2014		NS	NS	NS	NS	NS	NS	NS
		5/16/2013		NS	NS	NS	NS	NS	NS	NS
		5/9/2013		<0.50	<0.50	<0.50	0.25J	<0.50	<0.50	<0.50
		2/15/2013		<0.50	<0.50	<0.50	0.38J	0.099J	<0.50	<0.50

Notes: GW-1 and GW-3 MCP Method 1 Standards
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Report: GW VOC 5
Datebase: Eastham Landfill Monitoring



Property	LMP Sample Frequency	Date	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromomethane
290 OLD ORCHARD ROAD	Annual	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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Report: GW VOC 5
Datebase: Eastham Landfill Monitoring



TABLE 4.1
SECTION 6
SUMMARY OF LANDFILL MONITORING 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	Hexachlorobutadiene	Isopropylbenzene	Methyl tert-butyl ether	Methylene Chloride	Naphthalene
Standards										
GW1		GW-1	3	NA	700	0.6	NA	70	5	140
GW3		GW-3	50000	NA	5000	3000	NA	50000	50000	20000
MMCL			NA	NA	700	NA	NA	NA	5	NA
ORSG			NA	1400	NA	NA	NA	70	NA	140
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	<0.50	<1.0	<1.0	< 0.40	<1.0	0.20J	<1.0	<5.0
MW 21S	Semi-Annual	5/13/2015	<1.0	<2.0	<1.0	<0.60	<2.0	0.68J	<2.0	<2.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS
		5/16/2013	<0.50	<1.0	<1.0	< 0.40	<1.0	0.16J	<1.0	<5.0
		12/7/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 2D		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 2S	Annual	11/24/2015	<1.0	<2.0	<1.0	<0.6	<2.0	<2.0	<2.0	<2.0
		12/16/2014	<1.0	<2.0	<1.0	< 0.6	<2.0	<2.0	<2.0	<2.0
		12/18/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 3D	Quarterly	11/24/2015	<1.0	<2.0	<1.0	<0.6	<2.0	0.94J	<2.0	<2.0
		8/26/2015	<1.0	<2.0	<1.0	<0.6	<2.0	0.89 J	<2.0	<2.0
		5/13/2015	<1.0	<2.0	<1.0	<0.6	<2.0	0.63J	<2.0	<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
		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	<1.0	<1.0	<1.0	<0.50	<1.0	0.95	<5.0	<1.0

Notes: GW-1 and GW-3 MCP Method 1 Standards
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Report: GW VOC 6
Datebase: Eastham Landfill Monitoring



Property	LMP Sample Frequency	Date	Dichlorobromomethane	Dichlorodifluoromethane	Ethylbenzene	Hexachlorobutadiene	Isopropylbenzene	Methyl tert-butyl ether	Methylene Chloride	Naphthalene
MW 3D	Quarterly	2/27/2014	<1.0	<1.0	<1.0	<0.50	<1.0	1.2	<5.0	<1.0
		11/25/2013	<0.5	<0.5	<0.5	<0.5	<0.5	0.92	<0.5	
		9/5/2013	<0.5	<0.5	<0.5	<0.5	<0.5	0.95	<0.5	
		5/8/2013	<0.5	0.60	<0.5	<0.5	<0.5	1.1	<0.5	
		2/14/2013	<0.5	0.51	<0.5	<0.5	<0.5	1.2	<0.5	
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
		10/9/2012	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	
		7/10/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
		3/20/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
MW 3I	Quarterly	11/24/2015	<1.0	<2.0	<1.0	<0.6	<2.0	<2.0	<2.0	<2.0
		8/26/2015	<1.0	<2.0	<1.0	<0.6	<2.0	<2.0	<2.0	<2.0
		5/13/2015	<1.0	<2.0	<1.0	<0.6	<2.0	<2.0	<2.0	<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	<1.0	<1.0	<0.50	<1.0	<1.0	<5.0	<1.0
		2/27/2014	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	<5.0	<1.0
		11/25/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		9/5/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		5/8/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		10/9/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
7/10/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
3/20/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		
MW 3S		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 4S	Annual	11/24/2015	<1.0	<2.0	<1.0	<0.6	<2.0	0.44J	<2.0	<2.0
		12/16/2014	<1.0	<2.0	<1.0	<0.6	<2.0	0.31J	<2.0	<2.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 5D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS

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Property	LMP Sample Frequency	Date	Dichlorobromomethane	Dichlorodifluoromethane	Ethylbenzene	Hexachlorobutadiene	Isopropylbenzene	Methyl tert-butyl ether	Methylene Chloride	Naphthalene
MW 5D		12/5/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 5S	Annual	11/24/2015	<1.0	<2.0	<1.0	<0.6	<2.0	0.46J	<2.0	<2.0
		12/16/2014	<1.0	<2.0	<1.0	< 0.6	<2.0	0.32J	<2.0	<2.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 7		10/27/2014	NS	NS	NS	NS	NS	NS	NS	
MW 8	Annual	11/24/2015	<1.0	<2.0	<1.0	<0.6	<2.0	<2.0	<2.0	<2.0
		12/16/2014	<1.0	<2.0	<1.0	< 0.6	<2.0	<2.0	<2.0	<2.0
		12/18/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		3/14/2013	NS	NS	NS	NS	NS	NS	NS	NS
		12/7/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 21S	Semi-Annual	11/10/2015	<1.0	<2.0	<1.0	<0.60	<2.0	0.61J	<2.0	<2.0
DPW WELL	Annual	11/24/2015	<1.0	<2.0	<1.0	<0.6	<2.0	<2.0	<2.0	<2.0
		12/16/2014	<1.0	<2.0	<1.0	< 0.6	<2.0	<2.0	<2.0	<2.0
265 ALSTON AVENUE	Annual	4/1/2015	<1.0	<2.0	<1.0	<0.60	<2.0	0.54J	<2.0	<2.0
		3/28/2014	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013	<0.50	<0.50	<0.50	<0.50	<0.50	0.26J	<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	5/13/2015	<1.0	<2.0	<1.0	<0.60	<2.0	<2.0	<2.0	<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	<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	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
170 MEETINGHOUSE ROAD	Annual	5/13/2015	<1.0	<2.0	<1.0	<0.60	<2.0	0.21J	<2.0	<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	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

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.
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Report: GW VOC 6
Datebase: Eastham Landfill Monitoring



Property	LMP Sample Frequency	Date	Dichlorobromomethane	Dichlorodifluoromethane	Ethylbenzene	Hexachlorobutadiene	Isopropylbenzene	Methyl tert-butyl ether	Methylene Chloride	Naphthalene
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	<2.0	<1.0	<0.6	<2.0	<2.0	<2.0	<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	<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
130B OLD ORCHARD ROAD	Annual	5/29/2015	<1.0	<2.0	<1.0	<0.6	<2.0	<2.0	<2.0	<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	<0.50	<0.50	<0.50
		2/25/2013	NS	NS	NS	NS	NS	NS	NS	NS
210 OLD ORCHARD ROAD	Annual	12/18/2013	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	<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	3/2/2015	Inf.	<1.0	<2.0	<1.0	<0.60	<2.0	<2.0	<2.0
		3/2/2015	Eff.	<1.0	<2.0	<1.0	<0.60	<2.0	<2.0	<2.0
		7/23/2014		NS	NS	NS	NS	NS	NS	NS
		5/16/2013		NS	NS	NS	NS	NS	NS	NS
		5/9/2013		<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
		6/21/2012		<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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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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Report: GW VOC 6
Datebase: Eastham Landfill Monitoring



TABLE 4.1
SECTION 7
SUMMARY OF LANDFILL MONITORING 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	n-Butylbenzene	N-Propylbenzene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene
Standards											
GW1		GW-1	NA	NA	NA	100	NA	5	1000	100	NA
GW3		GW-3	NA	NA	NA	6000	NA	30000	40000	50000	NA
MMCL			NA	NA	NA	100	NA	5	1000	100	NA
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	<1.0	<1.0	<1.0	<1.0	< 0.40
MW 21S	Semi-Annual	5/13/2015	<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
		5/16/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 0.40
		12/7/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 2D		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 2S	Annual	11/24/2015	<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	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		12/18/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 3D	Quarterly	11/24/2015	<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	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		5/13/2015	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		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
		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	<1.0	<1.0	<1.0	<0.50

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



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

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Property	LMP Sample Frequency	Date	n-Butylbenzene	N-Propylbenzene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene
MW 5D		12/5/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 5S	Annual	11/24/2015	<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	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 7		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	
MW 8	Annual	11/24/2015	<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	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		12/18/2013	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
		3/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/7/2012	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW 21S	Semi-Annual	11/10/2015	<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	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
		12/16/2014	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<0.5
265 ALSTON AVENUE	Annual	4/1/2015	<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
		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	5/13/2015	<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
		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 ROAD	Annual	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
170 MEETINGHOUSE ROAD	Annual	5/13/2015	<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
		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 ROAD	Annual	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

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.



Property	LMP Sample Frequency	Date	n-Butylbenzene	N-Propylbenzene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene
130 OLD ORCHARD ROAD	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 ROAD	Annual	5/29/2015	<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
		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 ROAD	Annual	5/29/2015	<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
		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 ROAD	Annual	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 ROAD	Annual	3/2/2015	Inf.	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<0.50
		3/2/2015	Eff.	<2.0	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<0.50
		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	<0.50	<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
		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
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.

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Report: GW VOC 7
Datebase: Eastham Landfill Monitoring



TABLE 4.1
SECTION 8
SUMMARY OF LANDFILL MONITORING 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	Trichloroethene	Trichlorofluoromethane	Vinyl chloride	Total Xylenes
Standards						
GW1		GW-1	5	NA	2	10000
GW3		GW-3	5000	NA	50000	5000
MMCL			5	NA	2	10000
ORSG			NA	NA	NA	NA
Results						
MW 10		10/27/2014	NS	NS	NS	NS
MW 21D		10/27/2014	NS	NS	NS	NS
		2/25/2013	<1.0	<1.0	<0.50	<2.0
MW 21S	Semi-Annual	5/13/2015	<1.0	<2.0	<1.0	<1.0
		10/27/2014	NS	NS	NS	NS
		5/16/2013	<1.0	<1.0	<1.0	<2.0
		12/7/2012	<0.5	<0.5	<0.5	<0.5
MW 2D		2/14/2013	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5
MW 2S	Annual	11/24/2015	<1.0	<2.0	<1.0	<1.0
		12/16/2014	<1.0	<2.0	<1.0	<1.0
		12/18/2013	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<0.5	<0.5	<0.5	<0.5
MW 3D	Quarterly	11/24/2015	<1.0	<2.0	0.20J	<1.0
		8/26/2015	<1.0	<2.0	0.28 J	<1.0
		5/13/2015	<1.0	<2.0	0.37J	<1.0
		11/10/2014	<5.0	<5.0	<5.0	<5.0
		11/10/2014	Duplicate	<5.0	<5.0	<5.0
		10/27/2014	NS	NS	NS	NS
		9/3/2014	<5.0	<5.0	<5.0	<5.0
		5/19/2014	<1.0	<1.0	<1.0	<1.0

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.

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Report: GW VOC 8
Datebase: Eastham Landfill Monitoring



Property	LMP Sample Frequency	Date	Trichloroethene	Trichlorofluoromethane	Vinyl chloride	Total Xylenes
MW 3D	Quarterly	2/27/2014	<1.0	<1.0	<1.0	<1.0
		11/25/2013	<0.5	<0.5	<0.5	<0.5
		9/5/2013	<0.5	<0.5	<0.5	<0.5
		5/8/2013	<0.5	<0.5	<0.5	<0.5
		2/14/2013	<0.5	<0.5	<0.5	<0.5
		12/6/2012	<0.5	<0.5	<0.5	<0.5
		10/9/2012	<0.5	<0.5	0.58	<0.5
		7/10/2012	<0.5	<0.5	<0.5	<0.5
		3/20/2012	<0.5	<0.5	<0.5	<0.5
MW 3I	Quarterly	11/24/2015	<1.0	<2.0	<1.0	<1.0
		8/26/2015	<1.0	<2.0	<1.0	<1.0
		5/13/2015	<1.0	<2.0	<1.0	<1.0
		12/16/2014	NS	NS	NS	NS
		11/10/2014	<5.0	<5.0	<5.0	<5.0
		9/3/2014	<5.0	<5.0	<5.0	<5.0
		5/19/2014	<1.0	<1.0	<1.0	<1.0
		2/27/2014	<1.0	<1.0	<1.0	<1.0
		11/25/2013	<0.5	<0.5	<0.5	<0.5
		9/5/2013	<0.5	<0.5	<0.5	<0.5
		5/8/2013	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS
		2/14/2013	<0.5	<0.5	<0.5	<0.5
		12/6/2012	<0.5	<0.5	<0.5	<0.5
		10/9/2012	<0.5	<0.5	<0.5	<0.5
7/10/2012	<0.5	<0.5	<0.5	<0.5		
3/20/2012	<0.5	<0.5	<0.5	<0.5		
MW 3S		2/14/2013	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5
MW 4D		10/27/2014	NS	NS	NS	NS
		2/14/2013	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5
MW 4S	Annual	11/24/2015	<1.0	<2.0	<1.0	<1.0
		12/16/2014	<1.0	<2.0	<1.0	<1.0
		10/27/2014	NS	NS	NS	NS
		12/18/2013	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS
		12/6/2012	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<0.5	<0.5	<0.5	<0.5
MW 5D		10/27/2014	NS	NS	NS	NS
		2/14/2013	NS	NS	NS	NS
		12/5/2012	<0.5	<0.5	<0.5	<0.5

Notes: GW-1 and GW-3 MCP Method 1 Standards
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Report: GW VOC 8
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Property	LMP Sample Frequency	Date	Trichloroethene	Trichlorofluoromethane	Vinyl chloride	Total Xylenes
MW 5S	Annual	11/24/2015	<1.0	<2.0	<1.0	<1.0
		12/16/2014	<1.0	<2.0	<1.0	<1.0
		10/27/2014	NS	NS	NS	NS
		12/18/2013	<0.5	<0.5	<0.5	<0.5
		2/14/2013	NS	NS	NS	NS
		12/5/2012	<0.5	<0.5	<0.5	<0.5
		7/10/2012	<0.5	<0.5	<0.5	<0.5
MW 7		10/27/2014	NS	NS	NS	NS
MW 8	Annual	11/24/2015	<1.0	<2.0	<1.0	<1.0
		12/16/2014	<1.0	<2.0	<1.0	<1.0
		12/18/2013	<0.5	<0.5	<0.5	<0.5
		3/14/2013	NS	NS	NS	NS
		12/7/2012	<0.5	<0.5	<0.5	<0.5
MW 21S	Semi-Annual	11/10/2015	<1.0	<2.0	<1.0	<1.0
DPW WELL	Annual	11/24/2015	<1.0	<2.0	<1.0	<1.0
		12/16/2014	<1.0	<2.0	<1.0	<1.0
265 ALSTON AVENUE	Annual	4/1/2015	<1.0	<2.0	<1.0	<1.0
		3/28/2014	NS	NS	NS	NS
		12/18/2013	<0.50	<0.50	<0.50	<1.0
		3/14/2013	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	<0.50
		6/21/2012	<0.50	<0.50	<0.50	<0.50
280 ALSTON AVENUE	Annual	5/13/2015	<1.0	<2.0	<1.0	<1.0
		12/17/2014	NS	NS	NS	NS
		12/18/2013	<0.50	<0.50	<0.50	<1.0
		2/22/2013	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	<0.50
		6/21/2012	<0.50	<0.50	<0.50	<0.50
125 MEETINGHOUSE ROAD	Annual	5/8/2013	<0.50	<0.50	<0.50	<1.0
		6/21/2012	<0.50	<0.50	<0.50	<0.50
170 MEETINGHOUSE ROAD	Annual	5/13/2015	<1.0	<2.0	<1.0	<1.0
		8/15/2014	NS	NS	NS	NS
		2/15/2013	NS	NS	NS	NS
		12/8/2012	<0.50	<0.50	<0.50	<0.50
75 OLD ORCHARD ROAD	Annual	8/15/2014	NS	NS	NS	NS
		2/21/2013	NS	NS	NS	NS
		12/6/2012	<0.50	<0.50	<0.50	<0.50
		6/21/2012	<0.50	<0.50	<0.50	<0.50
130 OLD ORCHARD ROAD	Annual	12/6/2012	<0.50	<0.50	<0.50	<0.50

Notes: GW-1 and GW-3 MCP Method 1 Standards
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Report: GW VOC 8
Datebase: Eastham Landfill Monitoring



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

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Report: GW VOC 8
Datebase: Eastham Landfill Monitoring



**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	<3.0	3.2	<3.0	<3.0	<3.0	<100	<3.0	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	<4.0	<10	<10	430	<10	311	<0.2	<10	<7.0	<50	
		12/18/2013	<3.0	10	<3.0	<3.0	<3.0	500	<3.0	410	<0.3	<15	<3.0	<60	
		12/6/2012	<3.0	13	<3.0	<3.0	<3.0	680	<3.0	430	<0.5	<15	<2.0	<60	
		7/10/2012	<3.0	13	<3.0	<3.0	<3.0	580	<3.0	390	<0.5	<15	<2.0	<100	
MW 3D	Quarterly	11/24/2015	67	68	<4	4.8J	<10	30000	<10	1180	<0.2	<10	<7	<50	
		8/26/2015	66	71	<4.0	<10	<10	30000	<10	1220	<1.0	<10	<7.0	60	
		5/13/2015	70	74	<4.0	<10	<10	30000	<10	1220	<0.2	6.0 J	<7.0	<50	
		11/10/2014	70	81	<3.0	5	<3.0	33000	<3.0	1400	<0.3	<15	<2.0	<60	
		11/10/2014	Duplicate	71	82	<3.0	5.2	<3.0	32000	<3.0	1400	<0.3	<15	<2.0	<60
		9/3/2014		73	86	<3.0	6.0	<3.0	35000	<3.0	1400	<0.3	<15	<2.0	<60
		5/19/2014		66	82	<3.0	<3.0	<3.0	31000	<3.0	1300	82	<15	<2.0	<60
		2/27/2014		54	77	<1.0	<2.0	<3.0	42000	<6.0	1800	<0.5	<6.0	<2.0	12
		11/25/2013		68	88	<3.0	3.3	<3.0	30000	<3.0	1400	NS	<15	<3.0	<60
		9/5/2013		64	89	<3.0	4.7	<3.0	36000	<3.0	1300	<0.3	<15	<3.0	<60
		5/8/2013		74	96	<3.0	6.3	<3.0	40000	<3.0	1300	<0.5	<15	<3.0	<60
		2/14/2013		68	96	<3.0	5.9	<3.0	40000	<3.0	1700	<0.5	<15	<2.0	<60
		12/6/2012		62	97	<3.0	<3.0	<3.0	40000	<3.0	1800	<0.5	<15	<2.0	<60
		10/9/2012		65	90	<3.0	3.0	<3.0	39000	<3.0	1400	<0.5	<15	<2.0	<100
		7/10/2012		66	99	<3.0	<3.0	<3.0	38000	<3.0	1400	<0.5	<15	<2.0	<100
3/20/2012		69	100	<3.0	<3.0	<3.0	40000	<3.0	1700	<0.5	<15	<2.0	<60		
MW 3I	Quarterly	11/24/2015	46	11	<4	5.3J	<10	68000	<100	1240	<0.2	<10	<7	<50	
		8/26/2015	44	10	<4.0	<10	<10	61000	<10	1190	<1.0	<10	<7.0	46 J	
		5/13/2015	42	9.0 J	<4.0	<10	<10	52000	<10	996	<0.2	<10	<7.0	<50	

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.



Property	Sample Frequency	Date	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Selenium	Silver	Zinc	
MW 3I	Quarterly	11/10/2014	44	11	<3.0	<3.0	<3.0	64000	<3.0	1100	<0.3	<15	<2.0	<60	
		9/3/2014	43	10	<3.0	<3.0	<3.0	69000	<3.0	1100	<0.3	<15	<2.0	<60	
		5/19/2014	41	11	<3.0	<3.0	<3.0	64000	<3.0	1100	<0.3	<15	<2.0	<60	
		2/27/2014	23	10	5.0	<2.0	<3.0	78000	<6.0	1400	<0.5	<6.0	<2.0	16	
		11/25/2013	<3.0	7.1	<3.0	<3.0	<3.0	33000	<3.0	1100	NS	<15	<3.0	<60	
		9/5/2013	38	10	<3.0	<3.0	<3.0	68000	<3.0	1100	<0.3	<15	<3.0	<60	
		5/8/2013	37	9	<3.0	<3.0	<3.0	64000	<3.0	980	<0.5	<15	<3.0	<60	
		2/14/2013	41	12	<3.0	<3.0	<3.0	69000	<3.0	1100	<0.5	<15	<2.0	<60	
		12/6/2012	39	11	<3.0	<3.0	<3.0	72000	<3.0	1100	<0.5	<15	<2.0	<60	
		10/9/2012	40	11	<3.0	<3.0	<3.0	65000	<3.0	1000	<0.5	<15	<2.0	<100	
		7/10/2012	42	<3.0	<3.0	<3.0	<3.0	68000	<3.0	1100	<0.5	<15	<2.0	<100	
		3/20/2012	44	11	<3.0	<3.0	<3.0	65000	<3.0	1400	<0.5	<15	<2.0	<60	
		MW 3S		12/6/2012	<3.0	30	<3.0	<3.0	<3.0	250	<3.0	280	<0.5	<15	<2.0
MW 4D		12/6/2012	<3.0	28	<3.0	<3.0	<3.0	<100	<3.0	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	<4.0	<10	<10	8700	<10	2690	<0.2	<10	<7.0	<50	
		12/18/2013	<3.0	24	<3.0	<3.0	<3.0	2100	<3.0	4200	<0.3	<15	<3.0	<60	
		12/6/2012	3.4	28	<3.0	<3.0	<3.0	2400	<3.0	5100	<0.5	<15	<2.0	<60	
		7/10/2012	<3.0	31	<3.0	<3.0	<3.0	2400	<3.0	4400	<0.5	<15	<2.0	<100	
MW 5D		12/5/2012	<3.0	64	<3.0	<3.0	<3.0	<150	<3.0	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	<4.0	<10	<10	2000	2.0 J	4530	<0.2	<10	<7.0	<50	
		12/18/2013	<3.0	37	<3.0	<3.0	<3.0	8600	<3.0	3200	<0.3	<15	<3.0	<60	
		12/5/2012	<3.0	44	<3.0	<3.0	<3.0	5500	<3.0	3600	<0.5	<15	<2.0	<60	
		7/10/2012	<3.0	47	<3.0	<3.0	<3.0	8500	<3.0	3200	<0.5	<15	<2.0	<100	
MW 8	Annual	12/18/2013	<3.0	35	<3.0	<3.0	<3.0	<100	<3.0	300	<0.3	<15	<3.0	<60	
265 ALSTON AVENUE	Annual	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	<0.50	0.43J	220B	NS	1.2	NS	<0.20	<1.0	<0.50	39B
		12/6/2012		<3.0	13	<3.0	<3.0	27	NS	3.3	NS	<0.5	<15	<3.0	<60
		6/21/2012		<10	10	<1.0	<2.0	<100	<100	<6.0	<100	<0.5	<6.0	<2.0	<100
280 ALSTON AVENUE	Annual	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	<0.50	0.29J	840B	NS	1.9	NS	<0.20	<1.0	0.025J	1200B
		12/6/2012		<3.0	19	<3.0	<3.0	1300	NS	5.1	NS	<0.5	<15	<3.0	350
		6/21/2012		<10	14	<1.0	<2.0	<100	<100	<6.0	<100	<0.5	<6.0	<2.0	<100
125 MEETINGHOUSE ROAD	Annual	5/8/2013	<3.0	42	<3.0	<3.0	25	NS	<3.0	NS	<0.3	<15	<3.0	<60	
		6/21/2012	<10	42	<1.0	<2.0	<100	<100	<6.0	430	<0.5	<6.0	<2.0	<100	
75 OLD ORCHARD ROAD	Annual	12/6/2012	<3.0	9	<3.0	<3.0	79	NS	<3.0	NS	<0.5	<15	<3.0	<60	
		6/21/2012	<10	6	<1.0	<2.0	<100	<100	<6.0	<100	<0.5	<6.0	<2.0	<100	
130 OLD ORCHARD ROAD		12/6/2012	<3.0	16	<3.0	<3.0	18	NS	<3.0	NS	<0.5	<15	<3.0	<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.



Property	Sample Frequency	Date		Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Selenium	Silver	Zinc
130 OLD ORCHARD ROAD		6/21/2012		<10	12	<1.0	<2.0	<100	<100	<6.0	<100	<0.5	<6.0	<2.0	<100
130A OLD ORCHARD ROAD	Annual	5/29/2015		<0.5	11.4	<0.2	<3.0	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		<1.0	16B	<0.50	0.21J	180B	NS	0.91J	NS	<0.20	<1.0	0.037J	13B
130B OLD ORCHARD ROAD	Annual	5/29/2015		<0.5	11.0	<0.2	<3.0	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		<1.0	13B	<0.50	0.074J	92B	NS	0.63J	NS	<0.20	<1.0	<0.50	16B
210 OLD ORCHARD ROAD	Annual	12/18/2013		<1.0	59B	<0.50	<1.5	50B	NS	4.1	NS	<0.20	<1.0	<0.50	89B
		12/6/2012		<3.0	55	<3.0	<3.0	18	NS	<3.0	NS	<0.5	<15	<3.0	<60
		6/21/2012		<10	54	<1.0	<2.0	<100	<100	<6.0	540	<0.5	<6.0	<2.0	<100
290 OLD ORCHARD ROAD	Annual	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	<1.0	<2.0	160	<100	<6.0	<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.

12/8/2015 Page 3 of 3
Report: GW Metals
Datebase: Eastham Landfill Monitoring



**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	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			
MW 3I	Quarterly	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	

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.



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	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
		12/6/2012	16	10	<3.0	NS	3.0	10	61
MW 3S		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.

Eastham Landfill
Private Well Sampling Log

Date: October 5, 2015
Sampler: E. Cole
Weather Conditions: mostly sunny, 5-10 mph wind
Temperature: 62° F

Location: 850 Schoolhouse Rd.
Property Owner: Mary Shaw
Property Contact: _____
Phone: 508-255-9049
Email: _____
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Pressure tank, prior to treatment
Describe water system pH neutralizer
including treatment: _____
Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters

Purge Time: Start: 10:35 Finish: 10:55

Volume Purged: 21 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

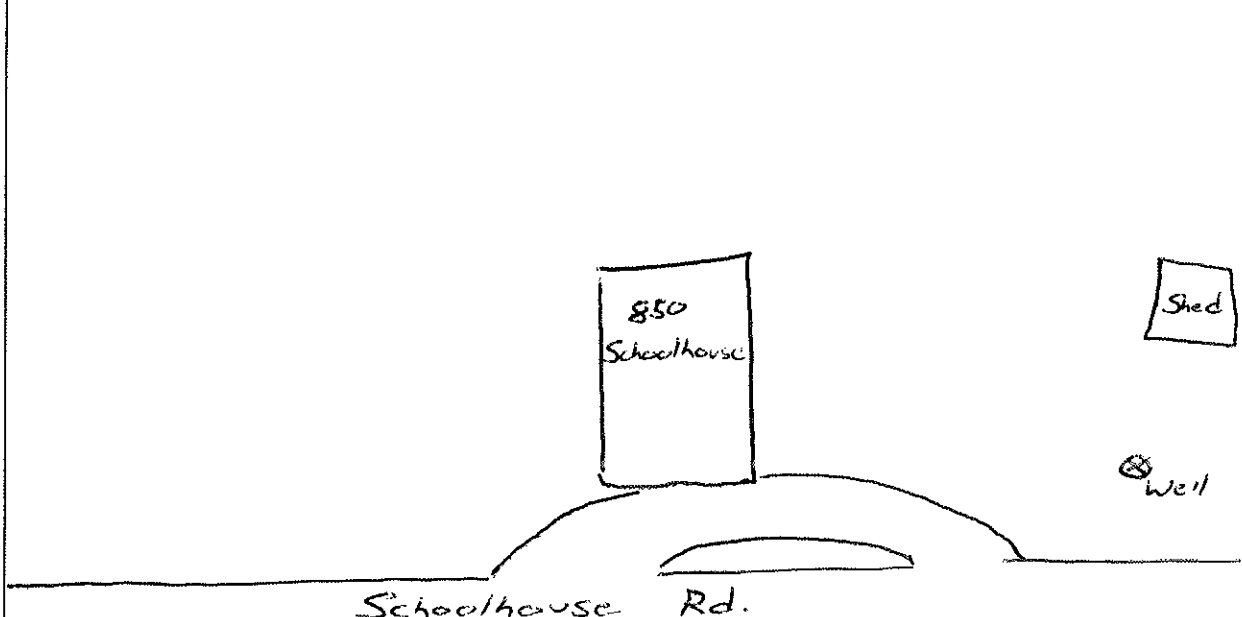
Well Depth: Measured or Provided? Gauged: DTB: 80'

DTW: 44'

Summary of Sampling and Monitoring Activities: Purge from kitchen sink, collect
sample from valve on pressure tank prior to
pH neutralizer. Gauge well in side yard.

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

Date: October 5, 2015
Sampler: E. Lucé
Weather Conditions: mostly sunny, 5-10 mph wind
Temperature: 62° F

Location: 720 Schoolhouse Rd.
Property Owner: Vincent + Kelly Bizilj
Property Contact: _____
Phone: _____
Email: _____
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Outside spigot, back of house
Describe water system
including treatment: _____
Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters

Purge Time: Start: 11:05 Finish: 11:20

Volume Purged: 24 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

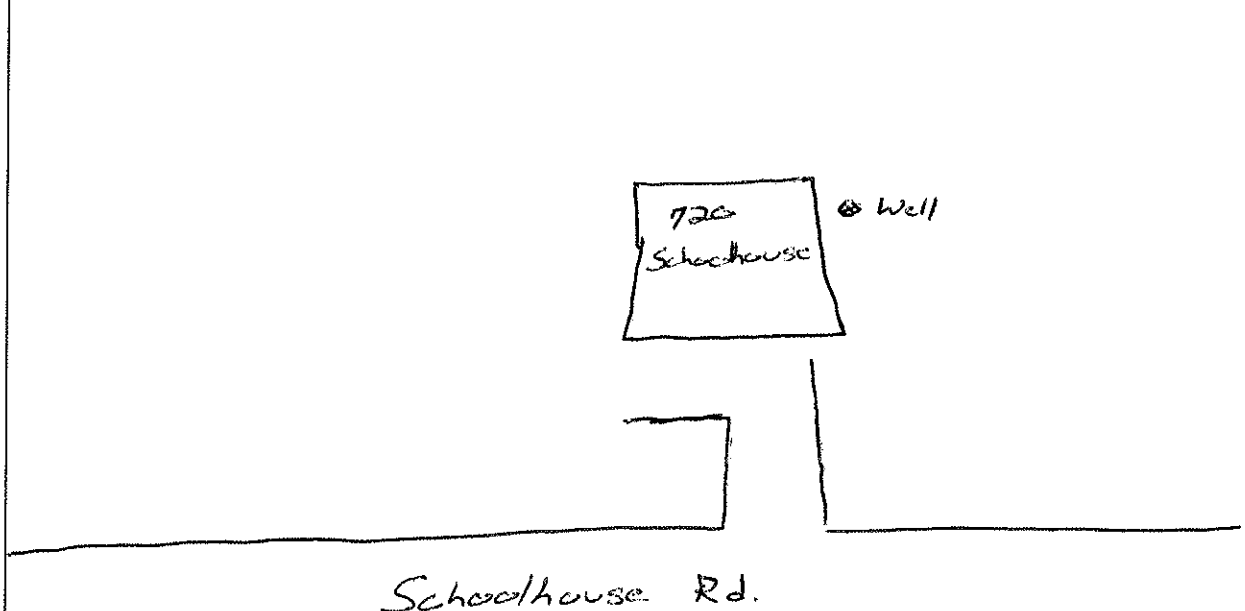
Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Gauged: DTB: 66'
DTW: 43'

Summary of Sampling and Monitoring Activities: Purge and sample from outside
spigot on back of house. Gauge well on right
side of house

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

Date: October 5, 2015
Sampler: E. Cuccè
Weather Conditions: mostly sunny
Temperature: 62°F

Location: 560 Schoolhouse Rd.
Property Owner: George Spirito
Property Contact: _____
Phone: 508-685-5925
Email: _____
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Outside spigot, side of garage
Describe water system No treatment or filtration
including treatment: _____
Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters

Purge Time: Start: 09:40 Finish: 09:55

Volume Purged: 25 gallons
Equipment Utilized: _____
Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Well is buried, could not access

Summary of Sampling and Monitoring Activities: Purge and sample from outdoor spigot on side of garage. System contains no treatment or filtration.

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

Date: October 5, 2015
Sampler: E. Cuccé
Weather Conditions: mostly sunny, 5-10 mph wind
Temperature: 62°F

Location: 115 Chester Ave.
Property Owner: Paula Serbin
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 No treatment or filtration
including treatment: _____
Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters

Purge Time: Start: 08:30 Finish: 8:55

Volume Purged: 20 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

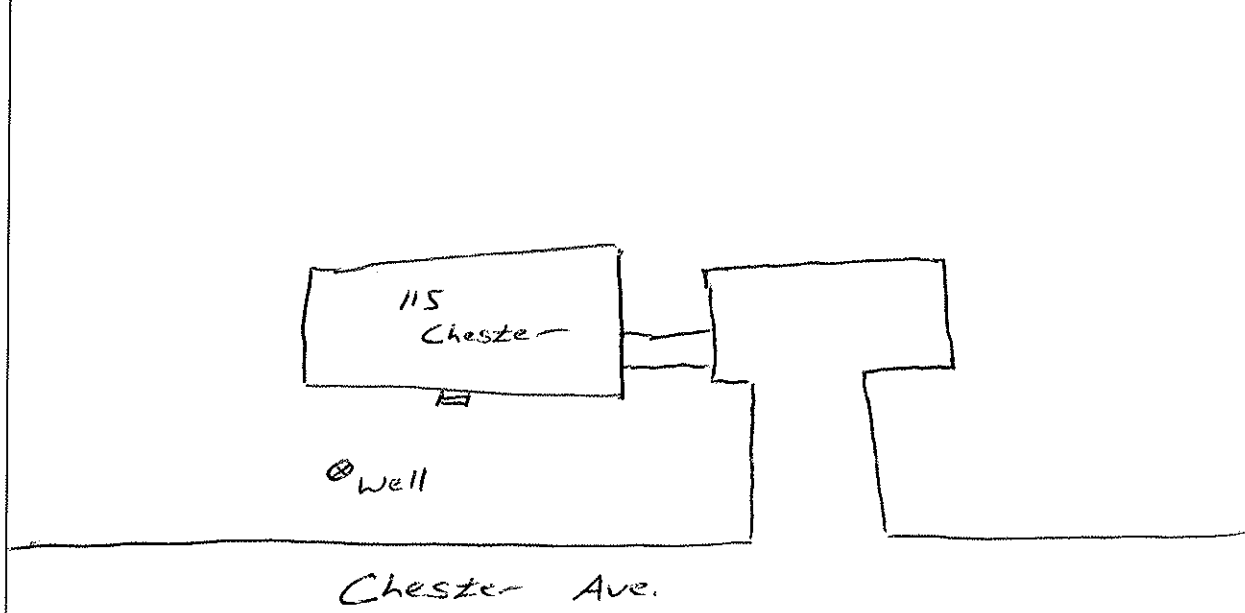
Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Measured at 41' DTB

Summary of Sampling and Monitoring Activities: Purge and sample from
Kitchen sink. No treatment or filtration

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

Date: Oct. 5, 2015
Sampler: E. Cuce
Weather Conditions: mostly sunny, 5-10 mph wind
Temperature: 62° F

Location: 875 Schoolhouse Rd.
Property Owner: Maureen Andujar
Property Contact: _____
Phone: _____
Email: _____
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: outside spigot; front of house
Describe water system including treatment: pH neutralizer and filter, water to spigot bypasses treatment
Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters

Purge Time: Start: 11:40 Finish: 12:00

Volume Purged: 28 gallons
Equipment Utilized: _____
Attach Equipment Calibration Log: _____

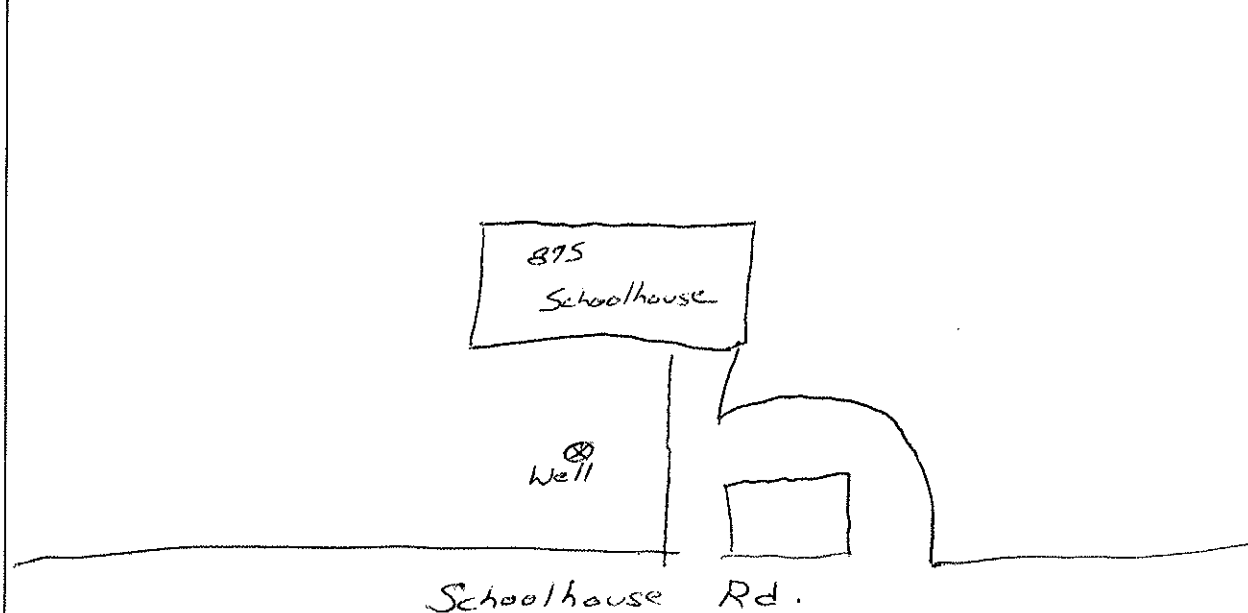
Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? 54'. Documentation provided by
homeowner.

Summary of Sampling and Monitoring Activities: Water system contains pH
neutralizer and filter, however water to outside
spigot is untreated. Purge and sample from spigot.

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:





Environmental
Strategies
& Management

Site Visit Form

PROJECT Eastham Landfill DATE October 6, 2015

PERSONNEL EC, RDH OTHER PERSONNEL _____

ARRIVAL TIME 07:45 DEPARTURE TIME 13:00

WEATHER CONDITIONS 60's, clear, 0-5 mph wind

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)
- Materials purchased

Description of activities and observations:

Complete carbon change at 255 Alston Ave.

Water Meter: 78,806 gallons

Collect drinking water samples from 10 Chatham St,
395 Glacier Hills Rd, 825 Schoolhouse Rd, 30 Spinnaker Way,
and 915 Schoolhouse Rd.

Attempted to collect sample from 825 Schoolhouse Rd, water was
shut off to outside spigot

Work Completed By: _____

Eastham Landfill
Private Well Sampling Log

Date: October 6, 2015
Sampler: E. Cuccè
Weather Conditions: Sunny, 0-5 mph wind
Temperature: 65° F
Location: 30 Spinnaker Way
Property Owner: James + Mary Maiolo
Property Contact: _____
Phone: 413-374-1548
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: _____
Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: 10:45 Finish: 10:55
Volume Purged: 20 gallons
Equipment Utilized: _____
Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Gauged DTW: 42'
DTB: 55'

Summary of Sampling and Monitoring Activities: Homeowner not home at time
of sample. Purge and sample from outside spigot.
Gauge well located to left of driveway.

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

Date: October 6, 2015
Sampler: E. Cuce
Weather Conditions: Sunny, 0-5 mph wind
Temperature: 65°F
Location: 835 Schoolhouse Rd.
Property Owner: Keith + Betty Simpson
Property Contact: _____
Phone: 508-247-8925
Email: _____
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Pressure tank, pre-treatment
Describe water system including treatment: Filter and pH neutralizer
Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: 12:15 Finish: 12:30
Volume Purged: 30 gallons
Equipment Utilized: _____
Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Gauged DTW: 52'

DTB: 55'

Summary of Sampling and Monitoring Activities: Purge from outside spigot. Collect
sample from pressure tank prior to treatment. Gauged
well to right of driveway.

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

Date: October 6, 2015
Sampler: E. Luce
Weather Conditions: Sunny, 0-5 mph wind
Temperature: 65° F

Location: 395 Glacier Hills Rd.
Property Owner: John + Costanza McGough
Property Contact: _____
Phone: _____
Email: _____

Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Outside spigot, backyard near pool
Describe water system including treatment: Water softener
Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: 11:20 Finish: 11:30

Volume Purged: 33 gallons
Equipment Utilized: _____
Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? *Could not located*

Summary of Sampling and Monitoring Activities: *Scheduled appointment, but not at home. Confirm w/ homeowner that water to spigot in backyard near pool bypasses water softener.*

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

Date: October 6, 2015
Sampler: E. Cuce
Weather Conditions: Sunny, 0-5 mph wind
Temperature: 65° F

Location: 10 Chatham St.
Property Owner: Janez Merteka
Property Contact: _____
Phone: 508-255-3802
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 or filtration
Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters

Purge Time: Start: 10:05 Finish: 10:25

Volume Purged: 24 gallons
Equipment Utilized: _____
Attach Equipment Calibration Log: _____

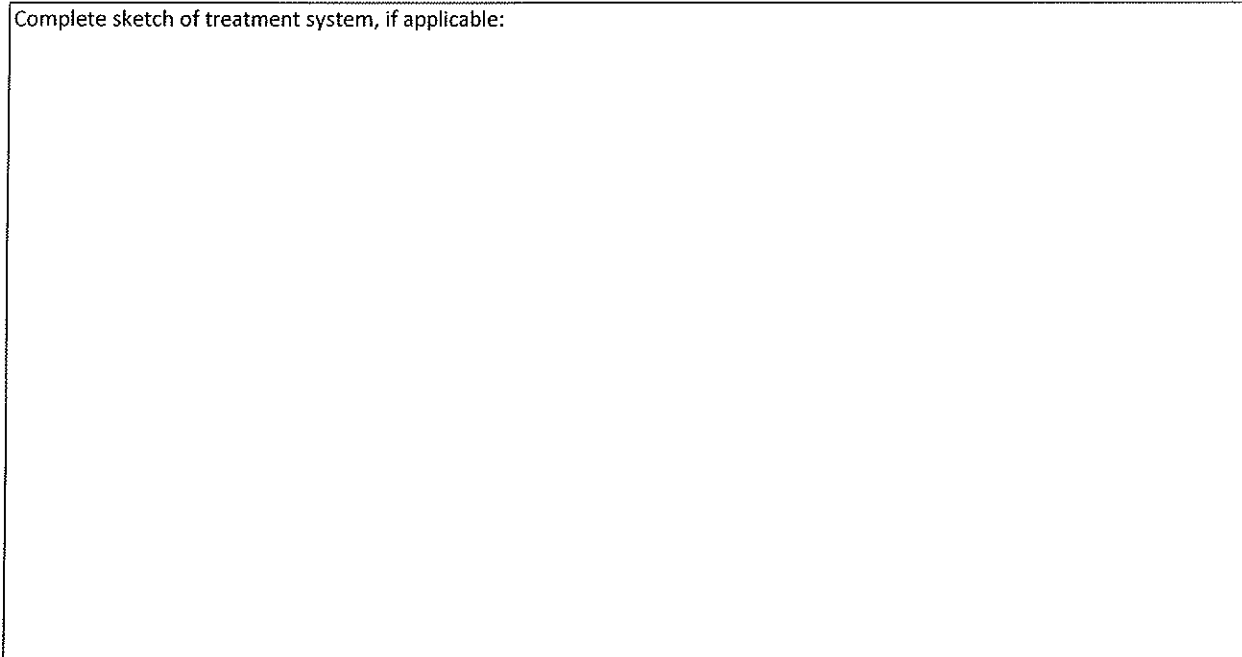
Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Gauged DTW: 38'

DTB: 54'

Summary of Sampling and Monitoring Activities: Purge and sample from kitchen sink. Gauge well located next to driveway.

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

Date: October 6, 2015
Sampler: E. Cuccé
Weather Conditions: Sunny, 0-5 mph wind
Temperature: 65° F

Location: 415 Schoolhouse Rd.

Property Owner: Sandra + Melvin Goldman

Property Contact: _____

Phone: 203-229-7723

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: _____

Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters

Purge Time: Start: 09:20 Finish: 09:30

Volume Purged: 21 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? *Could not locate*

Summary of Sampling and Monitoring Activities: *Homeowner not home at time of sample. Purge and sample from outside spigot*

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:



Site Visit Form

PROJECT Eastham Landfill DATE October 9, 2015

PERSONNEL EC OTHER PERSONNEL _____

ARRIVAL TIME 07:50 DEPARTURE TIME 13:15

WEATHER CONDITIONS 60's, partly cloudy, 5-10 mph wind

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)
- Materials purchased

Description of activities and observations:

Collect drinking water samples from 40 Spinner, 60 Spinner, 825 Schoolhouse, 380 Glacier Hills, and 350 Glacier Hills.
Go to DPW office to see Neil Andres about monitoring well locations, but he was out of office for day. Review list of roads and see that most side streets within study area are private. Mark out well locations as close to areas marked on map as possible (maps attached):
1) In grassy area of right away, next to bike path, across Old Orchard Rd. from Arnolds.
2) On Eastham Historical Society Museum property (25 Schoolhouse) near corner of Nauset Rd + Preservation Way.
3) On side of Schoolhouse Rd near corner of Surrey Dr.
4) On corner of Schoolhouse + Meetinghouse

Work Completed By: _____

Eastham Landfill
Private Well Sampling Log

Date: October 7, 2015
Sampler: E. Cuccè
Weather Conditions: mostly sunny, 5-10 mph wind
Temperature: 60°F

Location: 825 Schoolhouse Rd.
Property Owner: James + Elizabeth Legasse
Property Contact: _____
Phone: 960-651-4487
Email: _____

Contact Log Attached: Yes: _____ No: _____

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

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters

Purge Time: Start: 10:00 Finish: 10:20

Volume Purged: 25 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Could not gauge; sealed cap

Summary of Sampling and Monitoring Activities: Homeowner not home at time of sample. Purge and collect sample at outdoor shower.

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

Date: October 9, 2015
Sampler: E. CUCÉ
Weather Conditions: cloudy, 5-10 mph wind
Temperature: 60°F

Location: 60 Spinnaker Way
Property Owner: Marc and Luanne Citrin
Property Contact: _____
Phone: 914-238-6350
Email: _____

Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Outside spigot, left side of house
Describe water system _____
including treatment: _____
Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters

Purge Time: Start: 09:05 Finish: 09:20

Volume Purged: 25 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Gauged DTW: 32'

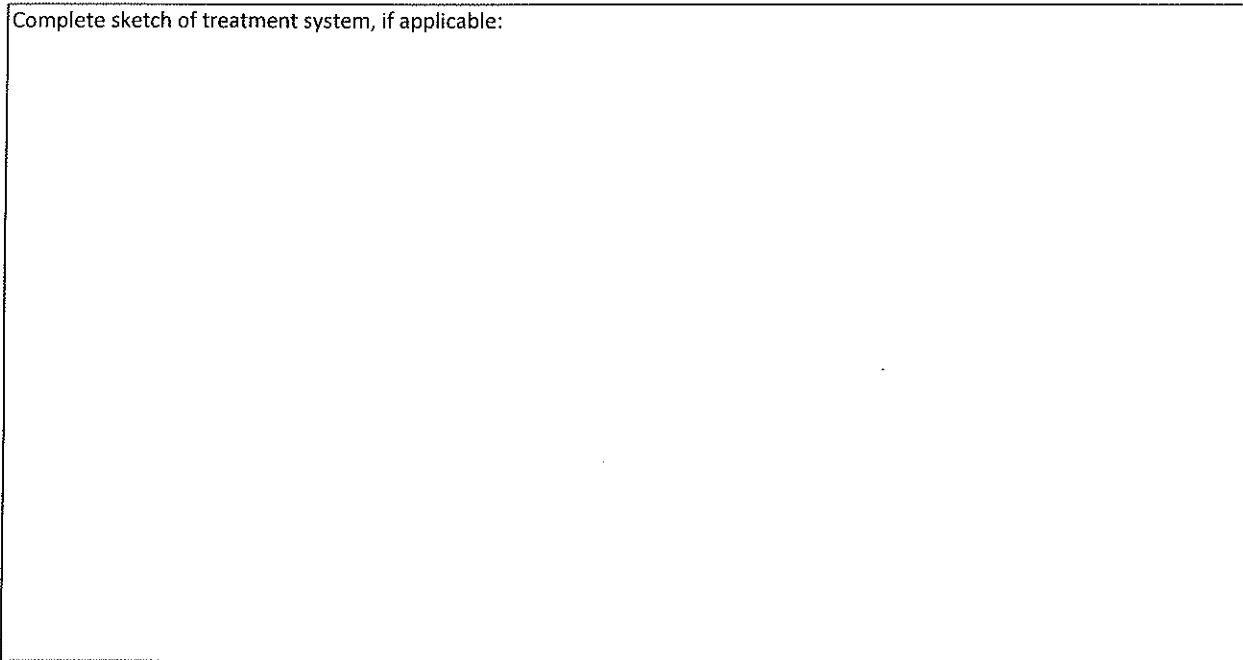
DTB: 41'

Summary of Sampling and Monitoring Activities: Nobody home at time of sample.

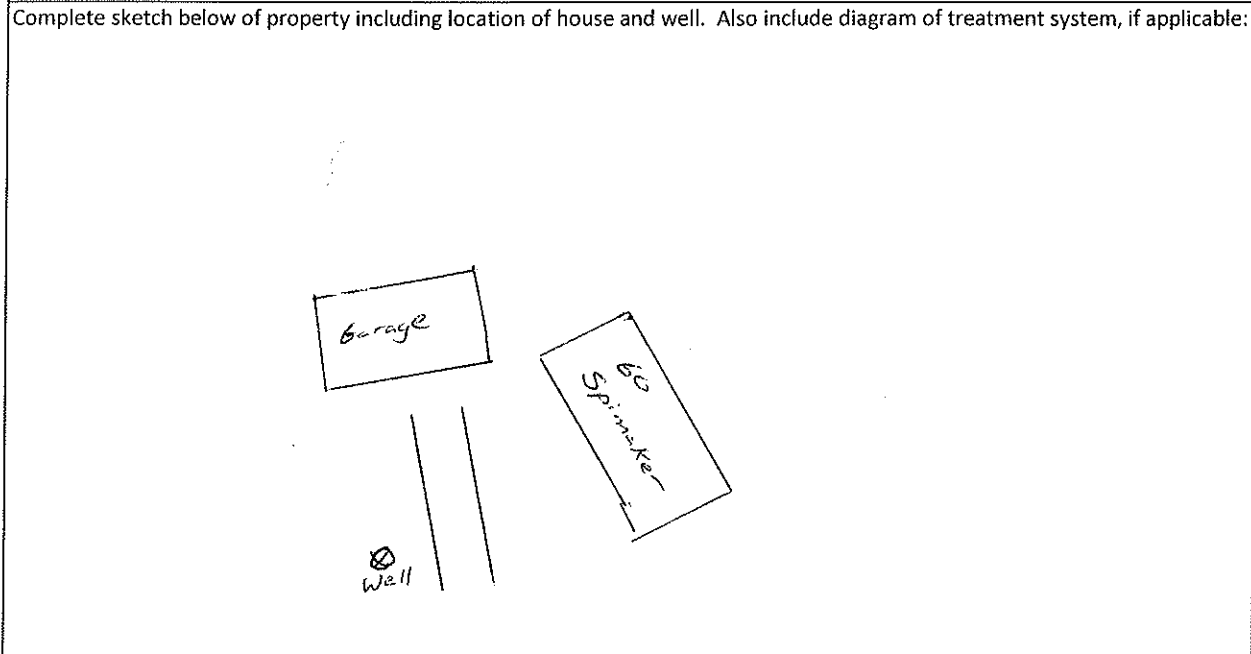
Purge and sample from spigot on left side of house.

Gauge well located on left side of driveway.

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

Date: October 9, 2015
Sampler: E. Cucé
Weather Conditions: cloudy, 5-10 mph wind
Temperature: 60° F

Location: 40 Spinnaker Way
Property Owner: John Pakszis
Property Contact: _____
Phone: 978-375-0578
Email: _____

Contact Log Attached: Yes: _____ No: _____

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

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters

Purge Time: Start: 08:15 Finish: 08:40

Volume Purged: 22 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

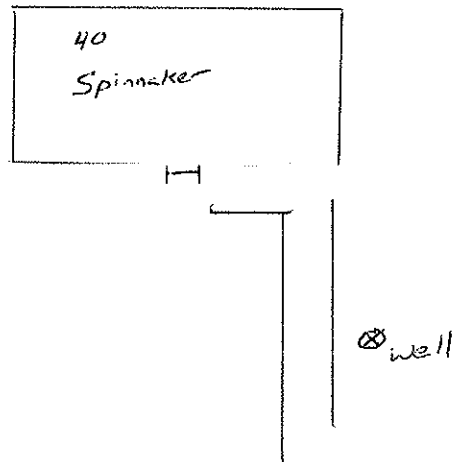
Well Depth: Measured or Provided? Gauged DTW: 40'

DTB: 51'

Summary of Sampling and Monitoring Activities: Purge and sample from kitchen sink. Gauge well located on right side of driveway

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

Date: October 9, 2015
Sampler: E. Cuce
Weather Conditions: mostly sunny, 5-10 mph wind
Temperature: 65°F

Location: 350 Glacier Hills Rd.
Property Owner: Robert + Victoria Hambrecht
Property Contact: _____
Phone: 508-255-2913
Email: _____

Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Outside spigot, rear of house
Describe water system No treatment or filtration
including treatment: _____
Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters

Purge Time: Start: 12:25 Finish: 12:40

Volume Purged: 29 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Well is buried in yard, could not gauge.

Summary of Sampling and Monitoring Activities: Purge and sample from outdoor spigot on rear of house.

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

Date: October 9, 2015
Sampler: E. Cole
Weather Conditions: mostly sunny, 5-10 mph wind
Temperature: 65°F

Location: 380 Glacier Hills Rd.
Property Owner: William + Christine Zajac
Property Contact: _____
Phone: 508-255-1945
Email: _____
Contact Log Attached: Yes: _____ No: _____

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

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: 11:50 Finish: 12:05

Volume Purged: 22 gallons
Equipment Utilized: _____
Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Well is buried; could not access to gauge.

Summary of Sampling and Monitoring Activities: Purge and sample from kitchen sink. System contains no treatment or filtration.

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

Date: 11/11/15
Sampler: E. Cuce
Weather Conditions: rain, 5-10 mph wind
Temperature: 50°F

Location: 85 Alston
Property Owner: William + Linda Burk
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 or filtration
Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters

Purge Time: Start: 10:35 Finish: 10:55

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

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided?

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

Date: 11/11/15
Sampler: E. Cuccè
Weather Conditions: rain, 5-10 mph wind
Temperature: 50° F
Location: 50 Knowles ST
Property Owner: Leslie Milas
Property Contact: _____
Phone: _____
Email: milasj@comcast.net
Contact Log Attached: Yes: _____ No: _____

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

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters

Purge Time: Start: 08:40 Finish: 09:00

Volume Purged: 20 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Previously gauged

Summary of Sampling and Monitoring Activities: Purge approx 20 gallons from
Kitchen sink. Collect sample from pressure tank
in basement, pre-treatment by water softener

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

Date: 11/11/15
Sampler: E. Lucé
Weather Conditions: rain, 5-10 mph wind
Temperature: 50°F

Location: 25 Deepwood Drive
Property Owner: Barbara Komins
Property Contact: ~~Barbara~~
Phone: 774-262-6599
Email: bkom4@aol.com
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 or filtration
Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters

Purge Time: Start: 09:30 Finish: 09:55

Volume Purged: 20 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? DTW: 50.36

DTB: 68

Summary of Sampling and Monitoring Activities: Purge and sample from kitchen sink. System contains no treatment or filtration. Homeowner says new well was installed approx. 1 month ago.

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

Date: 11/11/15
Sampler: E. Cucé
Weather Conditions: rain, 5-10 mph wind
Temperature: 50°F

Location: 375 Meetinghouse
Property Owner: Richard Ellesen
Property Contact: _____
Phone: 203-597-7842 (Sandy)
Email: _____
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Outside spigot, back of house
Describe water system including treatment: No treatment or filtration
Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: 10:05 Finish: 10:20

Volume Purged: 29 gallons
Equipment Utilized: _____
Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided?

Summary of Sampling and Monitoring Activities: *Purge and sample from outside spigot on rear of house.*

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

Date: 11/11/15
Sampler: E. Luce
Weather Conditions: rain, 5-10 mph wind
Temperature: 50°F

Location: 4 Preservation Way
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: Pressure tank, pre-treatment
Describe water system including treatment: _____
Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters

Purge Time: Start: 12:30 Finish: 12:50

Volume Purged: 21 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: - Measured or Provided?

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:



Site Visit Form

PROJECT Eastham Landfill DATE 11/18/15

PERSONNEL EC, DH OTHER PERSONNEL _____

ARRIVAL TIME 08:00 DEPARTURE TIME 15:00

WEATHER CONDITIONS 50's, clear, 0-5 mph wind

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)
- Materials purchased

Description of activities and observations:

Complete elevation survey of new monitoring wells and private drinking water wells in northeast portion of site.
Install additional 15' of well casing to ESMW-4s. Well is now screened from 38-45'. Collect sample from 4s.
Collect drinking water samples from Elementary School and 20 Spinnaker Way per homeowner requests.
Drop samples off at Alpha.
* Survey data in DH notes.

Work Completed By: [Signature]



BARNSTABLE COUNTY
DEPARTMENT OF HEALTH AND
ENVIRONMENT
BARNSTABLE COUNTY COMPLEX
3195 MAIN STREET/PO BOX 427
BARNSTABLE, MA 02630

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

WATER SAMPLING LOG: EASTHAM LANDFILL

WELL NUMBER: mw 2s DATE: 11/24/15
WEATHER: sunny 30 TIME: 9:30

I. EVACUATION DATA

DESCRIPTION OF MEASURING POINT: Top of Casing PVC
DEPTH TO BOTTOM OF WELL: 37.92 DIAMETER OF CASING: 2"
DEPTH TO WATER IN WELL: 21.78 MATERIAL OF WELL: PVC
FEET OF WATER IN WELL: 16.14 GALLONS PER FOOT: 0.16
GALLONS OF WATER IN WELL: 2.58 AMOUNT TO PURGE: 20gal

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

II. SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: - APPEARANCE: -
PH: 5.17 TEMP: 11.80 COND: 302 DO: 1.94
OTHER: _____

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated watterra

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
DEPARTMENT OF HEALTH AND
ENVIRONMENT**

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

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

WATER SAMPLING LOG: EASTHAM LANDFILL

WELL NUMBER: mw 3I DATE: 11/24/15
WEATHER: sunny 30 TIME: 1015

I. EVACUATION DATA

DESCRIPTION OF MEASURING POINT: Top of Casing PVC
DEPTH TO BOTTOM OF WELL: 48.61 DIAMETER OF CASING: 2"
DEPTH TO WATER IN WELL: 20.56 MATERIAL OF WELL: PVC
FEET OF WATER IN WELL: 28.05 GALLONS PER FOOT: 0.16
GALLONS OF WATER IN WELL: 4.49 AMOUNT TO PURGE: 25gal

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

II. SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: - APPEARANCE: -
PH: 5.84 TEMP: 12.19 COND: 334 DO: 2.76
OTHER: _____

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated watterra

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
DEPARTMENT OF HEALTH AND
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BARNSTABLE COUNTY COMPLEX
3195 MAIN STREET/PO BOX 427
BARNSTABLE, MA 02630

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

WATER SAMPLING LOG: EASTHAM LANDFILL

WELL NUMBER: mw 3D DATE: 11/24/15
WEATHER: sunny 30 TIME: 1015

I. EVACUATION DATA

DESCRIPTION OF MEASURING POINT: Top of Casing
DEPTH TO BOTTOM OF WELL: 73.44 DIAMETER OF CASING: 2"
DEPTH TO WATER IN WELL: 20.60 MATERIAL OF WELL: PVC
FEET OF WATER IN WELL: 52.84 GALLONS PER FOOT: 0.16
GALLONS OF WATER IN WELL: 8.45 AMOUNT TO PURGE: 55gal

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

II. SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: slight H₂S odor APPEARANCE: -
PH: 6.14 TEMP: 12.52 COND: 1215 DO: 2.51
OTHER: _____

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated watterra

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



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3195 MAIN STREET/PO BOX 427
BARNSTABLE, MA 02630**

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

WATER SAMPLING LOG: EASTHAM LANDFILL

WELL NUMBER: mw 4s DATE: 11/24/15
WEATHER: sunny 30 TIME: 1130

I. EVACUATION DATA

DESCRIPTION OF MEASURING POINT: Top of Casing PVC
DEPTH TO BOTTOM OF WELL: 61.37 DIAMETER OF CASING: 2"
DEPTH TO WATER IN WELL: 48.85 MATERIAL OF WELL: PVC
FEET OF WATER IN WELL: 12.52 GALLONS PER FOOT: 0.16
GALLONS OF WATER IN WELL: 2.00 AMOUNT TO PURGE: 15gal

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

II. SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: - APPEARANCE: -
PH: 6.01 TEMP: 13.06 COND: 332 DO: 2.73
OTHER: _____

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated watterra

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



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BARNSTABLE, MA 02630

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

WATER SAMPLING LOG: EASTHAM LANDFILL

WELL NUMBER: mw 5s DATE: 11/24/15
WEATHER: sunny 30 TIME: 1230

I. 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: 45.75 MATERIAL OF WELL: PVC
FEET OF WATER IN WELL: 27.67 GALLONS PER FOOT: 0.16
GALLONS OF WATER IN WELL: 4.43 AMOUNT TO PURGE: 30 gal

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

II. SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: - APPEARANCE: -
PH: 5.99 TEMP: 13.46 COND: 401 DO: 3.11
OTHER: _____

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated watterra

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



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3195 MAIN STREET/PO BOX 427
BARNSTABLE, MA 02630**

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

WATER SAMPLING LOG: EASTHAM LANDFILL

WELL NUMBER: DPW well DATE: 11/24/15
WEATHER: sunny 30 TIME: 1215

I. EVACUATION DATA

DESCRIPTION OF MEASURING POINT: Top of Casing
DEPTH TO BOTTOM OF WELL: _____ DIAMETER OF CASING: 2"
DEPTH TO WATER IN WELL: N/A MATERIAL OF WELL: PVC
FEET OF WATER IN WELL: _____ GALLONS PER FOOT: 0.16
GALLONS OF WATER IN WELL: _____ AMOUNT TO PURGE: _____

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

II. SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: _____ APPEARANCE: _____
PH: 5.85 TEMP: 13.55 COND: 563 DO: 5.43
OTHER: _____

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated watterra

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

REMARKS: * ~~Field Filtered~~ TOTAL

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
DEPARTMENT OF HEALTH AND
ENVIRONMENT
BARNSTABLE COUNTY COMPLEX
3195 MAIN STREET/PO BOX 427
BARNSTABLE, MA 02630**

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

WATER SAMPLING LOG: EASTHAM LANDFILL

WELL NUMBER: mw 8 DATE: 11/24/15
WEATHER: sunny 30 TIME: 1315

I. EVACUATION DATA

DESCRIPTION OF MEASURING POINT: Top of Casing
DEPTH TO BOTTOM OF WELL: 127.18 DIAMETER OF CASING: 2"
DEPTH TO WATER IN WELL: 32.27 MATERIAL OF WELL: PVC
FEET OF WATER IN WELL: 94.91 GALLONS PER FOOT: 0.16
GALLONS OF WATER IN WELL: 15.19 AMOUNT TO PURGE: 95gal

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

II. SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: - APPEARANCE: -
PH: 5.62 TEMP: 12.05 COND: 312 DO: 1.22
OTHER: _____

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated watterra

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	L1525010	10/5/2015	DW	Yes	Yes	Yes	Yes	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis	Sample ID	Date	Lab ID	Matrix	Analysis
Chester Ave_115	10/5/2015	L1525010-1	DW	8270	Schoolhouse Rd_850 Dup	10/5/2015	L1525010-6	DW	Not Analyzed
Chester Ave_115 Dup	10/5/2015	L1525010-2	DW	Not Analyzed	Schoolhouse Rd_875	10/5/2015	L1525010-7	DW	8270
Schoolhouse Rd_560	10/5/2015	L1525010-3	DW	8270	Schoolhouse Rd_875 Dup	10/5/2015	L1525010-8	DW	Not Analyzed
Schoolhouse Rd_560 Dup	10/5/2015	L1525010-4	DW	Not Analyzed	Schoolhouse Rd_720	10/5/2015	L1525010-9	DW	8270
Schoolhouse Rd_850	10/5/2015	L1525010-5	DW	8270	Schoolhouse Rd_720 Dup	10/5/2015	L1525010-10	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 10/14/15.



ANALYTICAL REPORT

Lab Number:	L1525010
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:	10/12/15

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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: L1525010

Report Date: 10/12/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1525010-01	CHESTER AVE_115	DRINKING WATER	EASTHAM, MA	10/05/15 08:55	10/05/15
L1525010-02	CHESTER AVE_115 DUP	DRINKING WATER	EASTHAM, MA	10/05/15 09:00	10/05/15
L1525010-03	SCHOOLHOUSE RD_560	DRINKING WATER	EASTHAM, MA	10/05/15 09:55	10/05/15
L1525010-04	SCHOOLHOUSE RD_560 DUP	DRINKING WATER	EASTHAM, MA	10/05/15 10:00	10/05/15
L1525010-05	SCHOOLHOUSE RD_850	DRINKING WATER	EASTHAM, MA	10/05/15 10:55	10/05/15
L1525010-06	SCHOOLHOUSE RD_850 DUP	DRINKING WATER	EASTHAM, MA	10/05/15 11:00	10/05/15
L1525010-07	SCHOOLHOUSE RD_875	DRINKING WATER	EASTHAM, MA	10/05/15 12:00	10/05/15
L1525010-08	SCHOOLHOUSE RD_875 DUP	DRINKING WATER	EASTHAM, MA	10/05/15 12:05	10/05/15
L1525010-09	SCHOOLHOUSE RD_720	DRINKING WATER	EASTHAM, MA	10/05/15 11:20	10/05/15
L1525010-10	SCHOOLHOUSE RD_720 DUP	DRINKING WATER	EASTHAM, MA	10/05/15 11:25	10/05/15
L1525010-11	TRIP BLANK	DRINKING WATER	EASTHAM, MA	10/05/15 00:00	10/05/15

Project Name: EASTHAM DW

Lab Number: L1525010

Project Number: 2015-038

Report Date: 10/12/15

MADEP MCP Response Action Analytical Report Certification

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

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

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	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: L1525010
Report Date: 10/12/15

Case Narrative

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

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

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

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

HOLD POLICY

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

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

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525010
Report Date: 10/12/15

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

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:



Elizabeth Porta

Title: Technical Director/Representative

Date: 10/12/15

ORGANICS

SEMIVOLATILES

Project Name: EASTHAM DW**Lab Number:** L1525010**Project Number:** 2015-038**Report Date:** 10/12/15**SAMPLE RESULTS**

Lab ID: L1525010-01
Client ID: CHESTER AVE_115
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 10/08/15 19:39
Analyst: SF

Date Collected: 10/05/15 08:55
Date Received: 10/05/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/07/15 08:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
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1,4-Dioxane	0.114	J	ug/l	0.144	0.0721	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	24		15-110

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525010
Report Date: 10/12/15

SAMPLE RESULTS

Lab ID: L1525010-03
 Client ID: SCHOOLHOUSE RD_560
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 10/08/15 20:24
 Analyst: SF

Date Collected: 10/05/15 09:55
 Date Received: 10/05/15
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 10/07/15 08:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab

1,4-Dioxane	ND		ug/l	0.142	0.0708	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	27		15-110

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525010
Report Date: 10/12/15

SAMPLE RESULTS

Lab ID: L1525010-05
 Client ID: SCHOOLHOUSE RD_850
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 10/08/15 21:09
 Analyst: SF

Date Collected: 10/05/15 10:55
 Date Received: 10/05/15
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 10/07/15 08:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab

1,4-Dioxane	0.0758	J	ug/l	0.142	0.0708	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	25		15-110

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525010
Report Date: 10/12/15

SAMPLE RESULTS

Lab ID: L1525010-07
 Client ID: SCHOOLHOUSE RD_875
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 10/08/15 21:55
 Analyst: SF

Date Collected: 10/05/15 12:00
 Date Received: 10/05/15
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 10/07/15 08:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab

1,4-Dioxane	ND		ug/l	0.147	0.0735	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	25		15-110

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525010
Report Date: 10/12/15

SAMPLE RESULTS

Lab ID: L1525010-09
Client ID: SCHOOLHOUSE RD_720
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 10/08/15 22:40
Analyst: SF

Date Collected: 10/05/15 11:20
Date Received: 10/05/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/07/15 08:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab

1,4-Dioxane	0.117	J	ug/l	0.150	0.0750	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	25		15-110

Project Name: EASTHAM DW

Lab Number: L1525010

Project Number: 2015-038

Report Date: 10/12/15

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 10/08/15 17:23

Extraction Date: 10/07/15 08:55

Analyst: SF

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01,03,05,07,09 Batch: WG828563-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	31		15-110

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525010
Report Date: 10/12/15

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01,03,05,07,09 Batch: WG828563-2 WG828563-3								
1,4-Dioxane	118		120		40-140	2		20

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
1,4-Dioxane-d8	32		31		15-110

Project Name: EASTHAM DW

Lab Number: L1525010

Project Number: 2015-038

Report Date: 10/12/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1525010-01A	Amber 500ml unpreserved	A	7	3.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525010-01B	Amber 500ml unpreserved	A	7	3.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525010-02A	Amber 500ml unpreserved	A	7	3.5	Y	Absent	HOLD-8270(7)
L1525010-02B	Amber 500ml unpreserved	A	7	3.5	Y	Absent	HOLD-8270(7)
L1525010-03A	Amber 500ml unpreserved	A	7	3.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525010-03B	Amber 500ml unpreserved	A	7	3.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525010-04A	Amber 500ml unpreserved	A	7	3.5	Y	Absent	HOLD-8270(7)
L1525010-04B	Amber 500ml unpreserved	A	7	3.5	Y	Absent	HOLD-8270(7)
L1525010-05A	Amber 500ml unpreserved	A	7	3.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525010-05B	Amber 500ml unpreserved	A	7	3.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525010-06A	Amber 500ml unpreserved	A	7	3.5	Y	Absent	HOLD-8270(7)
L1525010-06B	Amber 500ml unpreserved	A	7	3.5	Y	Absent	HOLD-8270(7)
L1525010-07A	Amber 500ml unpreserved	A	7	3.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525010-07B	Amber 500ml unpreserved	A	7	3.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525010-08A	Amber 500ml unpreserved	A	7	3.5	Y	Absent	HOLD-8270(7)
L1525010-08B	Amber 500ml unpreserved	A	7	3.5	Y	Absent	HOLD-8270(7)
L1525010-09A	Amber 500ml unpreserved	A	7	3.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525010-09B	Amber 500ml unpreserved	A	7	3.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525010-10A	Amber 500ml unpreserved	A	7	3.5	Y	Absent	HOLD-8270(7)
L1525010-10B	Amber 500ml unpreserved	A	7	3.5	Y	Absent	HOLD-8270(7)
L1525010-11A	Amber 500ml unpreserved	A	7	3.5	Y	Absent	HOLD-8270(7)
L1525010-11B	Amber 500ml unpreserved	A	7	3.5	Y	Absent	HOLD-8270(7)
L1525010-11C	Amber 500ml unpreserved	A	7	3.5	Y	Absent	HOLD-8270(7)
L1525010-11D	Amber 500ml unpreserved	A	7	3.5	Y	Absent	HOLD-8270(7)

*Values in parentheses indicate holding time in days



Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525010
Report Date: 10/12/15

GLOSSARY

Acronyms

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

Footnotes

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

Terms

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

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

Data Qualifiers

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

Report Format: DU Report with 'J' Qualifiers



Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525010
Report Date: 10/12/15

Data Qualifiers

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

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525010
Report Date: 10/12/15

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

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

EPA 625: 4-Chloroaniline, 4-Methylphenol.

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

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

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

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

Drinking Water

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

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

EPA 332: Perchlorate.

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

Non-Potable Water

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

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

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

EPA 624: Volatile Halocarbons & Aromatics,

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

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

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

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

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	L1525135	10/6/2015	DW	Yes	Yes	Yes	Yes	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis	Sample ID	Date	Lab ID	Matrix	Analysis
Chatham St_010	10/6/2015	L1525135-1	DW	8270	Spinnaker Way_030	10/6/2015	L1525135-7	DW	8270
Chatham St_010 Dup	10/6/2015	L1525135-2	DW	Not Analyzed	Spinnaker Way_030 Dup	10/6/2015	L1525135-8	DW	Not Analyzed
Glacier Hills Rd_395	10/6/2015	L1525135-3	DW	8270	Schoolhouse Rd_915	10/6/2015	L1525135-9	DW	8270
Glacier Hills Rd_395 Dup	10/6/2015	L1525135-4	DW	Not Analyzed	Schoolhouse Rd_915 Dup	10/6/2015	L1525135-10	DW	Not Analyzed
Schoolhouse Rd_835	10/6/2015	L1525135-5	DW	8270	Trip Blank	10/6/2015	L1525135-11	DW	Not Analyzed
Schoolhouse Rd_835 Dup	10/6/2015	L1525135-6	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 10/14/15.



ANALYTICAL REPORT

Lab Number:	L1525135
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:	10/12/15

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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: L1525135
Report Date: 10/12/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1525135-01	CHATHAM ST_010	DRINKING WATER	EASTHAM, MA	10/06/15 10:25	10/06/15
L1525135-02	CHATHAM ST_010 DUP	DRINKING WATER	EASTHAM, MA	10/06/15 10:30	10/06/15
L1525135-03	GLACIER HILLS RD_395	DRINKING WATER	EASTHAM, MA	10/06/15 11:30	10/06/15
L1525135-04	GLACIER HILLS RD_395 DUP	DRINKING WATER	EASTHAM, MA	10/06/15 11:35	10/06/15
L1525135-05	SCHOOLHOUSE RD_835	DRINKING WATER	EASTHAM, MA	10/06/15 12:30	10/06/15
L1525135-06	SCHOOLHOUSE RD_835 DUP	DRINKING WATER	EASTHAM, MA	10/06/15 12:35	10/06/15
L1525135-07	SPINNAKER WAY_030	DRINKING WATER	EASTHAM, MA	10/06/15 10:55	10/06/15
L1525135-08	SPINNAKER WAY_030 DUP	DRINKING WATER	EASTHAM, MA	10/06/15 11:00	10/06/15
L1525135-09	SCHOOLHOUSE RD_915	DRINKING WATER	EASTHAM, MA	10/06/15 09:30	10/06/15
L1525135-10	SCHOOLHOUSE RD_915 DUP	DRINKING WATER	EASTHAM, MA	10/06/15 09:35	10/06/15
L1525135-11	TRIP BLANK	DRINKING WATER	EASTHAM, MA	10/06/15 00:00	10/06/15

Project Name: EASTHAM DW

Lab Number: L1525135

Project Number: 2015-038

Report Date: 10/12/15

MADEP MCP Response Action Analytical Report Certification

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

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	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: L1525135
Report Date: 10/12/15

Case Narrative

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

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

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

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

HOLD POLICY

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

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

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525135
Report Date: 10/12/15

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

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:



Elizabeth Porta

Title: Technical Director/Representative

Date: 10/12/15

ORGANICS

SEMIVOLATILES

Project Name: EASTHAM DW**Lab Number:** L1525135**Project Number:** 2015-038**Report Date:** 10/12/15**SAMPLE RESULTS**

Lab ID: L1525135-01
Client ID: CHATHAM ST_010
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 10/08/15 23:26
Analyst: SF

Date Collected: 10/06/15 10:25
Date Received: 10/06/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/07/15 08:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
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1,4-Dioxane	ND		ug/l	0.150	0.0750	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	27		15-110

Project Name: EASTHAM DW**Lab Number:** L1525135**Project Number:** 2015-038**Report Date:** 10/12/15**SAMPLE RESULTS**

Lab ID: L1525135-03

Date Collected: 10/06/15 11:30

Client ID: GLACIER HILLS RD_395

Date Received: 10/06/15

Sample Location: EASTHAM, MA

Field Prep: Not Specified

Matrix: Drinking Water

Extraction Method:EPA 3510C

Analytical Method: 97,8270D-SIM

Extraction Date: 10/07/15 08:55

Analytical Date: 10/09/15 00:11

Analyst: SF

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab

1,4-Dioxane	ND		ug/l	0.153	0.0765	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	28		15-110

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525135
Report Date: 10/12/15

SAMPLE RESULTS

Lab ID: L1525135-05
Client ID: SCHOOLHOUSE RD_835
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 10/09/15 00:56
Analyst: SF

Date Collected: 10/06/15 12:30
Date Received: 10/06/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/07/15 08:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab

1,4-Dioxane	0.132	J	ug/l	0.153	0.0765	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	27		15-110

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525135
Report Date: 10/12/15

SAMPLE RESULTS

Lab ID: L1525135-07
 Client ID: SPINNAKER WAY_030
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 10/09/15 01:42
 Analyst: SF

Date Collected: 10/06/15 10:55
 Date Received: 10/06/15
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 10/07/15 08:55

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

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

Project Name: EASTHAM DW**Lab Number:** L1525135**Project Number:** 2015-038**Report Date:** 10/12/15**SAMPLE RESULTS**

Lab ID: L1525135-09
Client ID: SCHOOLHOUSE RD_915
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 10/09/15 02:27
Analyst: SF

Date Collected: 10/06/15 09:30
Date Received: 10/06/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/07/15 08:55

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

MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
--	--	--	--	--	--	--

1,4-Dioxane	ND		ug/l	0.142	0.0708	1
-------------	----	--	------	-------	--------	---

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	27		15-110

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525135
Report Date: 10/12/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 10/08/15 17:23
Analyst: SF

Extraction Method: EPA 3510C
Extraction Date: 10/07/15 08:55

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01,03,05,07,09 Batch: WG828563-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	31		15-110

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525135
Report Date: 10/12/15

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01,03,05,07,09 Batch: WG828563-2 WG828563-3								
1,4-Dioxane	118		120		40-140	2		20

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
1,4-Dioxane-d8	32		31		15-110

Project Name: EASTHAM DW

Lab Number: L1525135

Project Number: 2015-038

Report Date: 10/12/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1525135-01A	Amber 500ml unpreserved	A	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525135-01B	Amber 500ml unpreserved	A	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525135-02A	Amber 500ml unpreserved	A	7	5.5	Y	Absent	HOLD-8270(7)
L1525135-02B	Amber 500ml unpreserved	A	7	5.5	Y	Absent	HOLD-8270(7)
L1525135-03A	Amber 500ml unpreserved	A	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525135-03B	Amber 500ml unpreserved	A	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525135-04A	Amber 500ml unpreserved	A	7	5.5	Y	Absent	HOLD-8270(7)
L1525135-04B	Amber 500ml unpreserved	A	7	5.5	Y	Absent	HOLD-8270(7)
L1525135-05A	Amber 500ml unpreserved	A	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525135-05B	Amber 500ml unpreserved	A	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525135-06A	Amber 500ml unpreserved	A	7	5.5	Y	Absent	HOLD-8270(7)
L1525135-06B	Amber 500ml unpreserved	A	7	5.5	Y	Absent	HOLD-8270(7)
L1525135-07A	Amber 500ml unpreserved	A	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525135-07B	Amber 500ml unpreserved	A	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525135-08A	Amber 500ml unpreserved	A	7	5.5	Y	Absent	HOLD-8270(7)
L1525135-08B	Amber 500ml unpreserved	A	7	5.5	Y	Absent	HOLD-8270(7)
L1525135-09A	Amber 500ml unpreserved	A	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525135-09B	Amber 500ml unpreserved	A	7	5.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525135-10A	Amber 500ml unpreserved	A	7	5.5	Y	Absent	HOLD-8270(7)
L1525135-10B	Amber 500ml unpreserved	A	7	5.5	Y	Absent	HOLD-8270(7)
L1525135-11A	Amber 500ml unpreserved	A	7	5.5	Y	Absent	HOLD-8270(7)
L1525135-11B	Amber 500ml unpreserved	A	7	5.5	Y	Absent	HOLD-8270(7)

*Values in parentheses indicate holding time in days



Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525135
Report Date: 10/12/15

GLOSSARY

Acronyms

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

Footnotes

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

Terms

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

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

Data Qualifiers

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

Report Format: DU Report with 'J' Qualifiers



Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525135
Report Date: 10/12/15

Data Qualifiers

- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e., co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. 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
Project Number: 2015-038

Lab Number: L1525135
Report Date: 10/12/15

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

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

EPA 625: 4-Chloroaniline, 4-Methylphenol.

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

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

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

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

Drinking Water

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

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

EPA 332: Perchlorate.

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

Non-Potable Water

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

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

EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC,

SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F,**

EPA 353.2: Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4,**

SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

EPA 624: Volatile Halocarbons & Aromatics,

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

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

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

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



CHAIN OF CUSTODY

PAGE 1 OF 2

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

Client Information

Client: Environmental Strategies & Management
 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

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

PLEASE BILL EASTHAM BOARD OF HEALTH

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:

Date Rec'd in Lab: 10/6/15

ALPHA Job #: L1525135

Report Information Data Deliverables

FAX EMAIL
 ADEX Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: 8270 - MCP Criteria: 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

1,4 DIOXANE BY 8270																			
---------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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		Sample Matrix	Sampler's Initials														
		Date	Time																
25135 -01	CHATHAM ST_010	10/6/15	10:25	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-02	CHATHAM ST_010 DUP	10/6/15	10:30	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-03	GLACIER HILLS RD_395	10/6/15	11:30	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-04	GLACIER HILLS RD_395 DUP	10/6/15	11:35	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-05	SCHOOLHOUSE RD_835	10/6/15	12:30	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-06	SCHOOLHOUSE RD_835 DUP	10/6/15	12:35	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-07	SPINNAKER WAY_030	10/6/15	10:55	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-08	SPINNAKER WAY_030 DUP	10/6/15	11:00	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	SCHOOLHOUSE RD_825	10/6/15		DW		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	SCHOOLHOUSE RD_825 DUP	10/6/15		DW		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PLEASE ANSWER QUESTIONS ABOVE!

**IS YOUR PROJECT
 MA MCP or CT RCP?**

FORM NO: 01-01(1)
 (rev. 5-JAN-12)

Container Type

Preservative

Relinquished By:	Date/Time	Received By:	Date/Time
<i>[Signature]</i>	10/6/15 14:50	<i>[Signature]</i>	10/6/15 14:50

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 2 OF 2

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:

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

Other Project Specific Requirements/Comments/Detection Limits:

email results to lflynn@esm-inc.com and aboyd@esm-inc.com

PLEASE BILL EASTHAM BOARD OF HEALTH

Date Rec'd in Lab: 10/6/15

ALPHA Job #: L1525135

Report Information Data Deliverables Billing Information

FAX EMAIL
 ADEx Add'l Deliverables

Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: 8270 - MCP Criteria: 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

1,4 DIOXANE BY 8270																				

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		Sample Matrix	Sampler's Initials
		Date	Time		
-09	SCHOOLHOUSE RD_915	10/6/15	09:30	DW	EC
-10	SCHOOLHOUSE RD_915 DUP	10/6/15	09:35	DW	EC

PLEASE ANSWER QUESTIONS ABOVE!

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

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
<i>[Signature]</i>	10/6/15 14:50	<i>[Signature]</i>	10/6/15 14:50

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)

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	L1525640	10/9/2015	DW	Yes	Yes	Yes	Yes	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis	Sample ID	Date	Lab ID	Matrix	Analysis
Spinnaker Way_040	10/9/2015	L1525640-1	DW	8270	Glacier Hills Rd_380	10/9/2015	L1525640-7	DW	8270
Spinnaker Way_040 Dup	10/9/2015	L1525640-2	DW	Not Analyzed	Glacier Hills Rd_380 Dup	10/9/2015	L1525640-8	DW	Not Analyzed
Spinnaker Way_060	10/9/2015	L1525640-3	DW	8270	Glacier Hills Rd_350	10/9/2015	L1525640-9	DW	8270
Spinnaker Way_060 Dup	10/9/2015	L1525640-4	DW	Not Analyzed	Glacier Hills Rd_350 Dup	10/9/2015	L1525640-10	DW	Not Analyzed
Schoolhouse Rd_825	10/9/2015	L1525640-5	DW	8270	Trip Blank	10/9/2015	L1525640-11	DW	Not Analyzed
Schoolhouse Rd_825 Dup	10/9/2015	L1525640-6	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 10/16/15.



ANALYTICAL REPORT

Lab Number:	L1525640
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:	10/15/15

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

Certifications & Approvals: 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: L1525640
Report Date: 10/15/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1525640-01	SPINNAKER WAY_040	WATER	EASTHAM, MA	10/09/15 08:40	10/09/15
L1525640-02	SPINNAKER WAY_040 DUP	WATER	EASTHAM, MA	10/09/15 08:45	10/09/15
L1525640-03	SPINNAKER WAY_060	WATER	EASTHAM, MA	10/09/15 09:20	10/09/15
L1525640-04	SPINNAKER WAY_060 DUP	WATER	EASTHAM, MA	10/09/15 09:25	10/09/15
L1525640-05	SCHOOLHOUSE RD_825	WATER	EASTHAM, MA	10/09/15 10:20	10/09/15
L1525640-06	SCHOOLHOUSE RD_825 DUP	WATER	EASTHAM, MA	10/09/15 10:25	10/09/15
L1525640-07	GLACIER HILLS RD_380	WATER	EASTHAM, MA	10/09/15 12:05	10/09/15
L1525640-08	GLACIER HILLS RD_380 DUP	WATER	EASTHAM, MA	10/09/15 12:10	10/09/15
L1525640-09	GLACIER HILLS RD_350	WATER	EASTHAM, MA	10/09/15 12:40	10/09/15
L1525640-10	GLACIER HILLS RD_350 DUP	WATER	EASTHAM, MA	10/09/15 12:45	10/09/15
L1525640-11	TRIP BLANK	WATER	EASTHAM, MA	10/09/15 00:00	10/09/15

Project Name: EASTHAM DW

Lab Number: L1525640

Project Number: 2015-038

Report Date: 10/15/15

MADEP MCP Response Action Analytical Report Certification

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

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	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: L1525640
Report Date: 10/15/15

Case Narrative

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

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

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

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

HOLD POLICY

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

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

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525640
Report Date: 10/15/15

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

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:

 Elizabeth Porta

Title: Technical Director/Representative

Date: 10/15/15

ORGANICS

SEMIVOLATILES

Project Name: EASTHAM DW**Lab Number:** L1525640**Project Number:** 2015-038**Report Date:** 10/15/15**SAMPLE RESULTS**

Lab ID: L1525640-01
Client ID: SPINNAKER WAY_040
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 10/14/15 16:07
Analyst: SF

Date Collected: 10/09/15 08:40
Date Received: 10/09/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/12/15 12:00

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	24		15-110

Project Name: EASTHAM DW**Lab Number:** L1525640**Project Number:** 2015-038**Report Date:** 10/15/15**SAMPLE RESULTS**

Lab ID: L1525640-03
Client ID: SPINNAKER WAY_060
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 10/14/15 16:53
Analyst: SF

Date Collected: 10/09/15 09:20
Date Received: 10/09/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/12/15 12:00

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

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

Project Name: EASTHAM DW**Lab Number:** L1525640**Project Number:** 2015-038**Report Date:** 10/15/15**SAMPLE RESULTS**

Lab ID: L1525640-05
Client ID: SCHOOLHOUSE RD_825
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 10/14/15 17:38
Analyst: SF

Date Collected: 10/09/15 10:20
Date Received: 10/09/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/12/15 12:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.153	0.0765	1

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

Project Name: EASTHAM DW**Lab Number:** L1525640**Project Number:** 2015-038**Report Date:** 10/15/15**SAMPLE RESULTS**

Lab ID: L1525640-07
Client ID: GLACIER HILLS RD_380
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 10/14/15 18:24
Analyst: SF

Date Collected: 10/09/15 12:05
Date Received: 10/09/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/12/15 12:00

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	24		15-110

Project Name: EASTHAM DW**Lab Number:** L1525640**Project Number:** 2015-038**Report Date:** 10/15/15**SAMPLE RESULTS**

Lab ID: L1525640-09
Client ID: GLACIER HILLS RD_350
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 10/14/15 19:10
Analyst: SF

Date Collected: 10/09/15 12:40
Date Received: 10/09/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/12/15 12:00

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

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

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525640
Report Date: 10/15/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 10/12/15 18:25
Analyst: SF

Extraction Method: EPA 3510C
Extraction Date: 10/12/15 12:00

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01,03,05,07,09 Batch: WG829918-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

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: L1525640
Report Date: 10/15/15

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 Batch: WG829918-2 WG829918-3								
1,4-Dioxane	122		123		40-140	1		20

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

Project Name: EASTHAM DW

Lab Number: L1525640

Project Number: 2015-038

Report Date: 10/15/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1525640-01A	Amber 500ml unpreserved	A	7	5.8	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525640-01B	Amber 500ml unpreserved	A	7	5.8	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525640-02A	Amber 500ml unpreserved	A	7	5.8	Y	Absent	HOLD-8270(7)
L1525640-02B	Amber 500ml unpreserved	A	7	5.8	Y	Absent	HOLD-8270(7)
L1525640-03A	Amber 500ml unpreserved	A	7	5.8	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525640-03B	Amber 500ml unpreserved	A	7	5.8	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525640-04A	Amber 500ml unpreserved	A	7	5.8	Y	Absent	HOLD-8270(7)
L1525640-04B	Amber 500ml unpreserved	A	7	5.8	Y	Absent	HOLD-8270(7)
L1525640-05A	Amber 500ml unpreserved	A	7	5.8	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525640-05B	Amber 500ml unpreserved	A	7	5.8	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525640-06A	Amber 500ml unpreserved	A	7	5.8	Y	Absent	HOLD-8270(7)
L1525640-06B	Amber 500ml unpreserved	A	7	5.8	Y	Absent	HOLD-8270(7)
L1525640-07A	Amber 500ml unpreserved	A	7	5.8	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525640-07B	Amber 500ml unpreserved	A	7	5.8	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525640-08A	Amber 500ml unpreserved	A	7	5.8	Y	Absent	HOLD-8270(7)
L1525640-08B	Amber 500ml unpreserved	A	7	5.8	Y	Absent	HOLD-8270(7)
L1525640-09A	Amber 500ml unpreserved	A	7	5.8	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525640-09B	Amber 500ml unpreserved	A	7	5.8	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1525640-10A	Amber 500ml unpreserved	A	7	5.8	Y	Absent	HOLD-8270(7)
L1525640-10B	Amber 500ml unpreserved	A	7	5.8	Y	Absent	HOLD-8270(7)
L1525640-11A	Amber 500ml unpreserved	A	7	5.8	Y	Absent	HOLD-8270(7)
L1525640-11B	Amber 500ml unpreserved	A	7	5.8	Y	Absent	HOLD-8270(7)
L1525640-11C	Amber 500ml unpreserved	A	7	5.8	Y	Absent	HOLD-8270(7)
L1525640-11D	Amber 500ml unpreserved	A	7	5.8	Y	Absent	HOLD-8270(7)

*Values in parentheses indicate holding time in days



Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525640
Report Date: 10/15/15

GLOSSARY

Acronyms

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

Footnotes

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

Terms

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

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

Data Qualifiers

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

Report Format: DU Report with 'J' Qualifiers



Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525640
Report Date: 10/15/15

Data Qualifiers

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

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1525640
Report Date: 10/15/15

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

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

EPA 625: 4-Chloroaniline, 4-Methylphenol.

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

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

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

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

Drinking Water

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

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

EPA 332: Perchlorate.

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

Non-Potable Water

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

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

EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F,**

EPA 353.2: Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**

EPA 624: Volatile Halocarbons & Aromatics,

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

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

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

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



CHAIN OF CUSTODY

PAGE 1 OF 1

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

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

Project Information

Project Name: *Eastham DW*

Project Location: *Eastham, MA*

Project #: *2015-038*

Project Manager: *Lisa Flynn*

ALPHA Quote #:

Date Rec'd in Lab: *10/9/15*

ALPHA Job #: *L1525640*

Client Information

Client: *ES+M*

Address: *273 W. Main St.
Norton, MA 02766*

Phone: *508-226-1800*

Email: *lflynn@esm-inc.com*

Additional Project Information:

0.15 ug/l for 1,4-Dioxane

Turn-Around Time

Standard RUSH (only confirmed if pre-approved!)

Date Due:

Report Information - Data Deliverables

ADEX EMAIL

Billing Information

Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

Yes No MA MCP Analytical Methods Yes No CT RCP Analytical Methods

Yes No Matrix Spike Required on this SDG? (Required for MCP Inorganics)

Yes No GW1 Standards (Info Required for Metals & EPH with Targets)

Yes No NPDES RGP

Other State /Fed Program _____ Criteria _____

ANALYSIS		SAMPLE INFO	
VOC: <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> 524.2	<input type="checkbox"/> ABN <input type="checkbox"/> PAH	Filtration	<input type="checkbox"/> Field
METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15	<input type="checkbox"/> FCRA5 <input type="checkbox"/> RCRA8 <input type="checkbox"/> PP13	<input type="checkbox"/> Lab to do	Preservation
EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	<input type="checkbox"/> PCB <input type="checkbox"/> PEST	<input type="checkbox"/> Lab to do	
VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint		
<i>1,4 Dioxane by 8220</i>			

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials
		Date	Time		
<i>25640-01</i>	<i>SPINNAKER WAY_040</i>	<i>10/9/15</i>	<i>08:40</i>		
<i>-02</i>	<i>SPINNAKER WAY_040 DUP</i>	<i>10/9/15</i>	<i>08:45</i>		
<i>-03</i>	<i>SPINNAKER WAY_060</i>	<i>10/9/15</i>	<i>09:20</i>		
<i>-04</i>	<i>SPINNAKER WAY_060 DUP</i>	<i>10/9/15</i>	<i>09:25</i>		
<i>-05</i>	<i>SCHOOLHOUSE RD_825</i>	<i>10/9/15</i>	<i>10:20</i>		
<i>-06</i>	<i>SCHOOLHOUSE RD-825 DUP</i>	<i>10/9/15</i>	<i>10:25</i>		
<i>-07</i>	<i>GLACIER HILLS RD_380</i>	<i>10/9/15</i>	<i>12:05</i>		
<i>-08</i>	<i>GLACIER HILLS RD-380 DUP</i>	<i>10/9/15</i>	<i>12:10</i>		
<i>-09</i>	<i>GLACIER HILLS RD-350</i>	<i>10/9/15</i>	<i>12:40</i>		
<i>-10</i>	<i>GLACIER HILLS RD-350 DUP</i>	<i>10/9/15</i>	<i>12:45</i>		

TOTAL # BOTTLES

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

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

Container Type

Preservative

Relinquished By:	Date/Time	Received By:	Date/Time
<i>[Signature]</i>	<i>10/9/15 14:35</i>	<i>[Signature]</i>	<i>10/9/15 14:35</i>

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

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	L1529438	11/11/2015	DW	Yes	Yes	Yes	Yes	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis	Sample ID	Date	Lab ID	Matrix	Analysis
Knowles St_050	11/11/2015	L1529438-1	DW	8270	Alson Ave_085 dup	11/11/2015	L1529438-6	DW	Not Analyzed
Knowles St_050 dup	11/11/2015	L1529438-2	DW	Not Analyzed	Preservation Way_004	11/11/2015	L1529438-7	DW	8270
Deepwood Dr_025	11/11/2015	L1529438-3	DW	8270	Preservation Way_004 dup	11/11/2015	L1529438-8	DW	8270
Deepwood Dr_025 dup	11/11/2015	L1529438-4	DW	Not Analyzed	Meetinghouse Rd_375	11/11/2015	L1529438-9	DW	8270
Alson Ave_085	11/11/2015	L1529438-5	DW	8270	Meetinghouse Rd_375 dup	11/11/2015	L1529438-10	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 11/25/15.



ANALYTICAL REPORT

Lab Number:	L1529438
Client:	Environmental Strategies & Mgmt. 273 West Main Street Norton, MA 02766
ATTN:	Lisa Flynn
Phone:	(508) 226-1800
Project Name:	EASTHAM DW
Project Number:	2013-027
Report Date:	11/19/15

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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: 2013-027

Lab Number: L1529438
Report Date: 11/19/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1529438-01	KNOWLES ST_050	DRINKING WATER	EASTHAM, MA	11/11/15 09:00	11/11/15
L1529438-02	KNOWLES ST_050 DUP	DRINKING WATER	EASTHAM, MA	11/11/15 09:05	11/11/15
L1529438-03	DEEPWOOD DR_025	DRINKING WATER	EASTHAM, MA	11/11/15 09:55	11/11/15
L1529438-04	DEEPWOOD DR_025 DUP	DRINKING WATER	EASTHAM, MA	11/11/15 10:00	11/11/15
L1529438-05	ALSTON AVE_085	DRINKING WATER	EASTHAM, MA	11/11/15 10:55	11/11/15
L1529438-06	ALSTON AVE_085 DUP	DRINKING WATER	EASTHAM, MA	11/11/15 11:00	11/11/15
L1529438-07	PRESERVATION WAY_004	DRINKING WATER	EASTHAM, MA	11/11/15 12:50	11/11/15
L1529438-08	PRESERVATION WAY_004 DUP	DRINKING WATER	EASTHAM, MA	11/11/15 12:55	11/11/15
L1529438-09	MEETINGHOUSE RD_375	DRINKING WATER	EASTHAM, MA	11/11/15 10:20	11/11/15
L1529438-10	MEETINGHOUSE RD_375 DUP	DRINKING WATER	EASTHAM, MA	11/11/15 10:25	11/11/15

Project Name: EASTHAM DW

Lab Number: L1529438

Project Number: 2013-027

Report Date: 11/19/15

MADEP MCP Response Action Analytical Report Certification

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

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	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: 2013-027

Lab Number: L1529438
Report Date: 11/19/15

Case Narrative

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

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

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

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

HOLD POLICY

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

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

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1529438
Report Date: 11/19/15

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

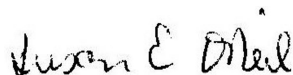
Semi-Volatiles

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 O'Neil

Title: Technical Director/Representative

Date: 11/19/15

ORGANICS

SEMIVOLATILES

Project Name: EASTHAM DW**Lab Number:** L1529438**Project Number:** 2013-027**Report Date:** 11/19/15**SAMPLE RESULTS**

Lab ID: L1529438-01
Client ID: KNOWLES ST_050
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 11/15/15 00:29
Analyst: SF

Date Collected: 11/11/15 09:00
Date Received: 11/11/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 11/12/15 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	29		15-110

Project Name: EASTHAM DW**Lab Number:** L1529438**Project Number:** 2013-027**Report Date:** 11/19/15**SAMPLE RESULTS**

Lab ID: L1529438-03
Client ID: DEEPWOOD DR_025
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 11/15/15 01:14
Analyst: SF

Date Collected: 11/11/15 09:55
Date Received: 11/11/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 11/12/15 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	0.150	0.0750	1

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

Project Name: EASTHAM DW**Lab Number:** L1529438**Project Number:** 2013-027**Report Date:** 11/19/15**SAMPLE RESULTS**

Lab ID: L1529438-05
Client ID: ALSTON AVE_085
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 11/15/15 01:59
Analyst: SF

Date Collected: 11/11/15 10:55
Date Received: 11/11/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 11/12/15 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.130	J	ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	31		15-110

Project Name: EASTHAM DW**Lab Number:** L1529438**Project Number:** 2013-027**Report Date:** 11/19/15**SAMPLE RESULTS**

Lab ID: L1529438-07
Client ID: PRESERVATION WAY_004
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 11/15/15 02:43
Analyst: SF

Date Collected: 11/11/15 12:50
Date Received: 11/11/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 11/12/15 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.204		ug/l	0.144	0.0721	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	32		15-110

Project Name: EASTHAM DW**Lab Number:** L1529438**Project Number:** 2013-027**Report Date:** 11/19/15**SAMPLE RESULTS**

Lab ID: L1529438-08
Client ID: PRESERVATION WAY_004 DUP
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 11/18/15 14:57
Analyst: SF

Date Collected: 11/11/15 12:55
Date Received: 11/11/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 11/17/15 17:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.165		ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	32		15-110

Project Name: EASTHAM DW**Lab Number:** L1529438**Project Number:** 2013-027**Report Date:** 11/19/15**SAMPLE RESULTS**

Lab ID: L1529438-09
Client ID: MEETINGHOUSE RD_375
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 11/15/15 03:28
Analyst: SF

Date Collected: 11/11/15 10:20
Date Received: 11/11/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 11/12/15 11:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	0.138	J	ug/l	0.150	0.0750	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	31		15-110

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1529438
Report Date: 11/19/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 11/14/15 11:46
Analyst: SF

Extraction Method: EPA 3510C
Extraction Date: 11/12/15 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 Batch: WG839974-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	31		15-110

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1529438
Report Date: 11/19/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 11/18/15 12:43
Analyst: SF

Extraction Method: EPA 3510C
Extraction Date: 11/17/15 17:03

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 08 Batch: WG841549-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	45		15-110

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1529438
Report Date: 11/19/15

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01,03,05,07,09 Batch: WG839974-2 WG839974-3								
1,4-Dioxane	100		103		40-140	3		20

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
1,4-Dioxane-d8	37		38		15-110

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1529438
Report Date: 11/19/15

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): 08 Batch: WG841549-2 WG841549-3								
1,4-Dioxane	105		104		40-140	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	44		47		15-110

Project Name: EASTHAM DW

Project Number: 2013-027

Lab Number: L1529438

Report Date: 11/19/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal**Cooler**

A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1529438-01A	Amber 500ml unpreserved	B	7	5.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1529438-01B	Amber 500ml unpreserved	B	7	5.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1529438-02A	Amber 500ml unpreserved	B	7	5.1	Y	Absent	HOLD-8270(7)
L1529438-02B	Amber 500ml unpreserved	B	7	5.1	Y	Absent	HOLD-8270(7)
L1529438-03A	Amber 500ml unpreserved	B	7	5.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1529438-03B	Amber 500ml unpreserved	B	7	5.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1529438-04A	Amber 500ml unpreserved	B	7	5.1	Y	Absent	HOLD-8270(7)
L1529438-04B	Amber 500ml unpreserved	B	7	5.1	Y	Absent	HOLD-8270(7)
L1529438-05A	Amber 500ml unpreserved	A	7	7.8	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1529438-05B	Amber 500ml unpreserved	A	7	7.8	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1529438-06A	Amber 500ml unpreserved	A	7	7.8	Y	Absent	HOLD-8270(7)
L1529438-06B	Amber 500ml unpreserved	A	7	7.8	Y	Absent	HOLD-8270(7)
L1529438-07A	Amber 500ml unpreserved	A	7	7.8	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1529438-07B	Amber 500ml unpreserved	A	7	7.8	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1529438-08A	Amber 500ml unpreserved	A	7	7.8	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1529438-08B	Amber 500ml unpreserved	A	7	7.8	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1529438-09A	Amber 500ml unpreserved	B	7	5.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1529438-09B	Amber 500ml unpreserved	B	7	5.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1529438-10A	Amber 500ml unpreserved	B	7	5.1	Y	Absent	HOLD-8270(7)
L1529438-10B	Amber 500ml unpreserved	B	7	5.1	Y	Absent	HOLD-8270(7)

*Values in parentheses indicate holding time in days



Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1529438
Report Date: 11/19/15

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCS D	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
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 reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

Report Format: DU Report with 'J' Qualifiers



Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1529438
Report Date: 11/19/15

Data Qualifiers

- 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
Project Number: 2013-027

Lab Number: L1529438
Report Date: 11/19/15

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

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

EPA 625: 4-Chloroaniline, 4-Methylphenol.

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

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

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

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

Drinking Water

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

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

EPA 332: Perchlorate.

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

Non-Potable Water

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

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

EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC,

SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F,**

EPA 353.2: Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4,**

SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

EPA 624: Volatile Halocarbons & Aromatics,

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

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

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

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



CHAIN OF CUSTODY

PAGE 1 OF 1

Project Information

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

Project Name: Eastham DW

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

Project Location: Eastham MA

Project #: 2013-027

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 BILL EASTHAM BOARD OF HEALTH

Date Rec'd in Lab: 11/11/15

ALPHA Job #: L1529438

Report Information Data Deliverables

FAX EMAIL
 ADEx Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: 8270 - MCP Criteria: 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

1,4 DIOXANE BY 8270																				

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		Sample Matrix	Sampler's Initials														
		Date	Time																
29438.01	KNOWLES ST_050	11/11/15	09:00	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
02	KNOWLES ST_050 dup	11/11/15	09:05	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
03	DEEPWOOD DR_025	11/11/15	09:55	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
04	DEEPWOOD DR_025 dup	11/11/15	10:00	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
05	ALSTON AVE_085	11/11/15	10:55	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
06	ALSTON AVE_085 dup	11/11/15	11:00	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
07	PRESERVATION WAY_004	11/11/15	12:50	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
08	PRESERVATION WAY_004 dup	11/11/15	12:55	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
09	MEETINGHOUSE RD_375	11/11/15	10:20	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	MEETINGHOUSE RD_375 dup	11/11/15	10:25	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PLEASE ANSWER QUESTIONS ABOVE!

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

**IS YOUR PROJECT
 MA MCP or CT RCP?**

Relinquished By:	Date/Time	Received By:	Date/Time
	11/11/15 14:25		11/11/15 14:25

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)

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	L1530332	11/18/2015	DW	Yes	Yes	Yes	Yes	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis
ESMW-4S (38-48')	11/18/2015	L1530332-01	DW	8270
SCHOOLHOUSE RD_200	11/18/2015	L1530332-02	DW	8270
SCHOOLHOUSE RD_200 DUP	11/18/2015	L1530332-03	DW	Not Analyzed
SPINNAKER WAY_020	11/18/2015	L1530332-04	DW	8270
SPINNAKER WAY_020 DUP	11/18/2015	L1530332-05	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 11/25/15.



ANALYTICAL REPORT

Lab Number:	L1530332
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:	11/23/15

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

Certifications & Approvals: 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.

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



Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1530332
Report Date: 11/23/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1530332-01	ESMW-4S (38-48')	WATER	EASTHAM, MA	11/18/15 14:15	11/18/15
L1530332-02	SCHOOLHOUSE RD_200	DRINKING WATER	EASTHAM, MA	11/18/15 14:30	11/18/15
L1530332-03	SCHOOLHOUSE RD_200 DUP	DRINKING WATER	EASTHAM, MA	11/18/15 14:35	11/18/15
L1530332-04	SPINNAKER WAY_020	DRINKING WATER	EASTHAM, MA	11/18/15 14:50	11/18/15
L1530332-05	SPINNAKER WAY_020 DUP	DRINKING WATER	EASTHAM, MA	11/18/15 14:55	11/18/15

Project Name: EASTHAM DW

Lab Number: L1530332

Project Number: 2015-038

Report Date: 11/23/15

MADEP MCP Response Action Analytical Report Certification

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

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	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: L1530332
Report Date: 11/23/15

Case Narrative

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

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

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

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

HOLD POLICY

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

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

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1530332
Report Date: 11/23/15

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


1,4-Dioxane by 8270-SIM

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:

 Elizabeth Porta

Title: Technical Director/Representative

Date: 11/23/15

ORGANICS

SEMIVOLATILES

Project Name: EASTHAM DW**Lab Number:** L1530332**Project Number:** 2015-038**Report Date:** 11/23/15**SAMPLE RESULTS**

Lab ID: L1530332-01
Client ID: ESMW-4S (38-48')
Sample Location: EASTHAM, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 11/20/15 13:36
Analyst: SF

Date Collected: 11/18/15 14:15
Date Received: 11/18/15
Field Prep: None
Extraction Method:EPA 3510C
Extraction Date: 11/19/15 17:00

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

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

Project Name: EASTHAM DW**Lab Number:** L1530332**Project Number:** 2015-038**Report Date:** 11/23/15**SAMPLE RESULTS**

Lab ID: L1530332-02
Client ID: SCHOOLHOUSE RD_200
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 11/20/15 14:20
Analyst: SF

Date Collected: 11/18/15 14:30
Date Received: 11/18/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 11/19/15 17:00

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	35		15-110

Project Name: EASTHAM DW**Lab Number:** L1530332**Project Number:** 2015-038**Report Date:** 11/23/15**SAMPLE RESULTS**

Lab ID: L1530332-04
Client ID: SPINNAKER WAY_020
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 11/20/15 15:05
Analyst: SF

Date Collected: 11/18/15 14:50
Date Received: 11/18/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 11/19/15 17:00

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	38		15-110

Project Name: EASTHAM DW

Lab Number: L1530332

Project Number: 2015-038

Report Date: 11/23/15

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 11/20/15 11:21

Extraction Date: 11/19/15 17:00

Analyst: SF

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-02,04 Batch: WG842459-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	48		15-110

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1530332
Report Date: 11/23/15

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01-02,04 Batch: WG842459-2 WG842459-3								
1,4-Dioxane	98		103		40-140	5		20

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
1,4-Dioxane-d8	49		48		15-110

Project Name: EASTHAM DW

Project Number: 2015-038

Lab Number: L1530332

Report Date: 11/23/15

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(*)
L1530332-01A	Amber 500ml unpreserved	A	7	7.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1530332-01B	Amber 500ml unpreserved	A	7	7.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1530332-02A	Amber 500ml unpreserved	A	7	7.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1530332-02B	Amber 500ml unpreserved	A	7	7.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1530332-03A	Amber 500ml unpreserved	A	7	7.5	Y	Absent	HOLD(14)
L1530332-03B	Amber 500ml unpreserved	A	7	7.5	Y	Absent	HOLD(14)
L1530332-04A	Amber 500ml unpreserved	A	7	7.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1530332-04B	Amber 500ml unpreserved	A	7	7.5	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1530332-05A	Amber 500ml unpreserved	A	7	7.5	Y	Absent	HOLD(14)
L1530332-05B	Amber 500ml unpreserved	A	7	7.5	Y	Absent	HOLD(14)

*Values in parentheses indicate holding time in days

Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1530332
Report Date: 11/23/15

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCS D	- 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.
MS D	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
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 reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

Report Format: DU Report with 'J' Qualifiers



Project Name: EASTHAM DW
Project Number: 2015-038

Lab Number: L1530332
Report Date: 11/23/15

Data Qualifiers

- 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
Project Number: 2015-038

Lab Number: L1530332
Report Date: 11/23/15

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

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

EPA 625: 4-Chloroaniline, 4-Methylphenol.

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

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

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

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

Drinking Water

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

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

EPA 332: Perchlorate.

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

Non-Potable Water

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

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

EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F,**

EPA 353.2: Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**

EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT,

Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

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

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

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

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	L1530960	11/24/2015	GW	Yes	Yes	No	No	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis	Sample ID	Date	Lab ID	Matrix	Analysis
MW-2S	11/24/2015	L1530960-01	GW	8260, 8270, metals, cyanide, alkalinity, TDS, chloride, nitrate, sulfate, COD	MW-5S	11/24/2015	L1530960-05	GW	8260, 8270, metals, cyanide, alkalinity, TDS, chloride, nitrate, sulfate, COD
MW-3I	11/24/2015	L1530960-02	GW	8260, 8270, metals, cyanide, alkalinity, TDS, chloride, nitrate, sulfate, COD	MW-8	11/24/2015	L1530960-06	GW	8260, 8270, metals, cyanide, alkalinity, TDS, chloride, nitrate, sulfate, COD
MW-3D	11/24/2015	L1530960-03	GW	8260, 8270, metals, cyanide, alkalinity, TDS, chloride, nitrate, sulfate, COD	DPW WELL	11/24/2015	L1530960-07	GW	8260, 8270, metals, cyanide, alkalinity, TDS, chloride, nitrate, sulfate, COD
MW-4S	11/24/2015	L1530960-04	GW	8260, 8270, metals, cyanide, alkalinity, TDS, chloride, nitrate, sulfate, COD					

VOCs - The initial calibration, associated with L1530960-01 through -07, did not meet the method required minimum response factor on the lowest calibration standard for 1,4-dioxane (0.00352), as well as the average response factor for 1,4-dioxane. (AB note - 1,4 dioxane also run via 8270)

VOCs - The continuing calibration standard, associated with L1530960-01 through -07, 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 lead - L1530960-02: The sample has an elevated detection limit for lead due to the dilution required by matrix interferences encountered during analysis. Lead did not achieve the requested CAM reporting limit. In reference to question I

All QAQC data, including surrogate, 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 12/9/15.



ANALYTICAL REPORT

Lab Number:	L1530960
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:	12/07/15

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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: L1530960
Report Date: 12/07/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1530960-01	MW-2S	WATER	EASTHAM, MA	11/24/15 09:30	11/24/15
L1530960-02	MW-3I	WATER	EASTHAM, MA	11/24/15 10:15	11/24/15
L1530960-03	MW-3D	WATER	EASTHAM, MA	11/24/15 10:15	11/24/15
L1530960-04	MW-4S	WATER	EASTHAM, MA	11/24/15 11:30	11/24/15
L1530960-05	MW-5S	WATER	EASTHAM, MA	11/24/15 12:30	11/24/15
L1530960-06	MW-8	WATER	EASTHAM, MA	11/24/15 13:15	11/24/15
L1530960-07	DPW WELL	WATER	EASTHAM, MA	11/24/15 12:15	11/24/15

Project Name: EASTHAM LANDFILL

Lab Number: L1530960

Project Number: 2013-027

Report Date: 12/07/15

MADEP MCP Response Action Analytical Report Certification

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

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	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 LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

Case Narrative

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

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

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

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

HOLD POLICY

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

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

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

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 L1530960-01 through -07, did not meet the method required minimum response factor on the lowest calibration standard for 1,4-dioxane (0.00352), as well as the average response factor for 1,4-dioxane.

The continuing calibration standard, associated with L1530960-01 through -07, 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 G:

L1530960-02: The sample has an elevated detection limit for lead due to the dilution required by matrix interferences encountered during analysis. Lead did not achieve the requested CAM reporting limit.

In reference to question I:

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


Total 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:

 Michelle M. Morris

Title: Technical Director/Representative

Date: 12/07/15

ORGANICS

VOLATILES

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-01
 Client ID: MW-2S
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 97,8260C
 Analytical Date: 12/04/15 00:24
 Analyst: PK

Date Collected: 11/24/15 09:30
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)

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: L1530960

Project Number: 2013-027

Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-01
 Client ID: MW-2S
 Sample Location: EASTHAM, MA

Date Collected: 11/24/15 09:30
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)

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	0.36	J	ug/l	1.0	0.19	1
1,2-Dichloroethene (total)	0.36	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	0.45	J	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
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
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-01
 Client ID: MW-2S
 Sample Location: EASTHAM, MA

Date Collected: 11/24/15 09:30
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	1.4	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	111		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	122		70-130
Dibromofluoromethane	111		70-130

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-02
 Client ID: MW-3I
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 97,8260C
 Analytical Date: 12/04/15 00:56
 Analyst: PK

Date Collected: 11/24/15 10:15
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)

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	0.37	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
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1

Project Name: EASTHAM LANDFILL

Lab Number: L1530960

Project Number: 2013-027

Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-02
 Client ID: MW-3I
 Sample Location: EASTHAM, MA

Date Collected: 11/24/15 10:15
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)

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	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
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
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-02
 Client ID: MW-3I
 Sample Location: EASTHAM, MA

Date Collected: 11/24/15 10:15
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)

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	110		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	106		70-130

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-03
 Client ID: MW-3D
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 97,8260C
 Analytical Date: 12/04/15 01:28
 Analyst: PK

Date Collected: 11/24/15 10:15
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)

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	1.0		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	0.69		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	0.20	J	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: L1530960

Project Number: 2013-027

Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-03
 Client ID: MW-3D
 Sample Location: EASTHAM, MA

Date Collected: 11/24/15 10:15
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)

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	0.30	J	ug/l	1.0	0.19	1
Methyl tert butyl ether	0.94	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	1.5		ug/l	1.0	0.19	1
1,2-Dichloroethene (total)	1.5		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
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
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-03
 Client ID: MW-3D
 Sample Location: EASTHAM, MA

Date Collected: 11/24/15 10:15
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	20		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	105		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	124		70-130
Dibromofluoromethane	105		70-130

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-04
 Client ID: MW-4S
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 97,8260C
 Analytical Date: 12/04/15 02:01
 Analyst: PK

Date Collected: 11/24/15 11:30
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)

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	0.38	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
1,2-Dichlorobenzene	ND		ug/l	1.0	0.18	1

Project Name: EASTHAM LANDFILL

Lab Number: L1530960

Project Number: 2013-027

Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-04
 Client ID: MW-4S
 Sample Location: EASTHAM, MA

Date Collected: 11/24/15 11:30
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)

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	0.44	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	0.40	J	ug/l	1.0	0.19	1
1,2-Dichloroethene (total)	0.40	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	0.30	J	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
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
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-04
 Client ID: MW-4S
 Sample Location: EASTHAM, MA

Date Collected: 11/24/15 11:30
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	2.0		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	110		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	103		70-130

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-05
 Client ID: MW-5S
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 97,8260C
 Analytical Date: 12/04/15 02:33
 Analyst: PK

Date Collected: 11/24/15 12:30
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)

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	0.41	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	0.21	J	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
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-05
Client ID: MW-5S
Sample Location: EASTHAM, MA

Date Collected: 11/24/15 12:30
Date Received: 11/24/15
Field Prep: Field Filtered (Metals)

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	0.46	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	0.57	J	ug/l	1.0	0.19	1
1,2-Dichloroethene (total)	0.57	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
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
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-05
 Client ID: MW-5S
 Sample Location: EASTHAM, MA

Date Collected: 11/24/15 12:30
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	2.6		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	115		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	110		70-130

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-06
 Client ID: MW-8
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 97,8260C
 Analytical Date: 12/04/15 03:06
 Analyst: PK

Date Collected: 11/24/15 13:15
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)

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	0.28	J	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: L1530960

Project Number: 2013-027

Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-06
 Client ID: MW-8
 Sample Location: EASTHAM, MA

Date Collected: 11/24/15 13:15
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)

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	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 LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-06
 Client ID: MW-8
 Sample Location: EASTHAM, MA

Date Collected: 11/24/15 13:15
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	0.42	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	117		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	118		70-130
Dibromofluoromethane	110		70-130

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-07
 Client ID: DPW WELL
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 97,8260C
 Analytical Date: 12/04/15 03:38
 Analyst: PK

Date Collected: 11/24/15 12:15
 Date Received: 11/24/15
 Field Prep: None

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: L1530960

Project Number: 2013-027

Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-07
 Client ID: DPW WELL
 Sample Location: EASTHAM, MA

Date Collected: 11/24/15 12:15
 Date Received: 11/24/15
 Field Prep: None

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	2.1	J	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
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
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-07
 Client ID: DPW WELL
 Sample Location: EASTHAM, MA

Date Collected: 11/24/15 12:15
 Date Received: 11/24/15
 Field Prep: None

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	116		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	114		70-130

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 12/03/15 23:51
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-07 Batch: WG846773-3					
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: L1530960
Report Date: 12/07/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 12/03/15 23:51
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-07 Batch: WG846773-3					
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	0.35	J	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: L1530960
Report Date: 12/07/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 12/03/15 23:51
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-07 Batch: WG846773-3					
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	56	J	ug/l	250	41.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	121		70-130
Dibromofluoromethane	100		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Project Number: 2013-027

Lab Number: L1530960

Report Date: 12/07/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-07 Batch: WG846773-1 WG846773-2								
Methylene chloride	94		92		70-130	2		20
1,1-Dichloroethane	85		88		70-130	3		20
Chloroform	89		90		70-130	1		20
Carbon tetrachloride	90		86		70-130	5		20
1,2-Dichloropropane	90		89		70-130	1		20
Dibromochloromethane	85		85		70-130	0		20
1,1,2-Trichloroethane	90		93		70-130	3		20
Tetrachloroethene	84		84		70-130	0		20
Chlorobenzene	86		86		70-130	0		20
Trichlorofluoromethane	92		96		70-130	4		20
1,2-Dichloroethane	99		98		70-130	1		20
1,1,1-Trichloroethane	88		94		70-130	7		20
Bromodichloromethane	91		89		70-130	2		20
trans-1,3-Dichloropropene	85		80		70-130	6		20
cis-1,3-Dichloropropene	84		84		70-130	0		20
1,1-Dichloropropene	84		87		70-130	4		20
Bromoform	79		101		70-130	24	Q	20
1,1,2,2-Tetrachloroethane	89		113		70-130	24	Q	20
Benzene	84		84		70-130	0		20
Toluene	81		82		70-130	1		20
Ethylbenzene	86		83		70-130	4		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Lab Number: L1530960

Project Number: 2013-027

Report Date: 12/07/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-07 Batch: WG846773-1 WG846773-2								
Chloromethane	83		89		70-130	7		20
Bromomethane	88		86		70-130	2		20
Vinyl chloride	90		90		70-130	0		20
Chloroethane	88		93		70-130	6		20
1,1-Dichloroethene	86		86		70-130	0		20
trans-1,2-Dichloroethene	89		87		70-130	2		20
Trichloroethene	83		85		70-130	2		20
1,2-Dichlorobenzene	87		98		70-130	12		20
1,3-Dichlorobenzene	84		97		70-130	14		20
1,4-Dichlorobenzene	83		96		70-130	15		20
Methyl tert butyl ether	92		89		70-130	3		20
p/m-Xylene	91		87		70-130	4		20
o-Xylene	85		83		70-130	2		20
cis-1,2-Dichloroethene	83		84		70-130	1		20
Dibromomethane	95		91		70-130	4		20
1,2,3-Trichloropropane	86		114		70-130	28	Q	20
Styrene	86		86		70-130	0		20
Dichlorodifluoromethane	93		90		70-130	3		20
Acetone	117		115		70-130	2		20
Carbon disulfide	78		80		70-130	3		20
2-Butanone	103		100		70-130	3		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Project Number: 2013-027

Lab Number: L1530960

Report Date: 12/07/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-07 Batch: WG846773-1 WG846773-2								
4-Methyl-2-pentanone	103		91		70-130	12		20
2-Hexanone	96		90		70-130	6		20
Bromochloromethane	96		85		70-130	12		20
Tetrahydrofuran	110		100		70-130	10		20
2,2-Dichloropropane	86		85		70-130	1		20
1,2-Dibromoethane	90		90		70-130	0		20
1,3-Dichloropropane	88		88		70-130	0		20
1,1,1,2-Tetrachloroethane	89		83		70-130	7		20
Bromobenzene	91		105		70-130	14		20
n-Butylbenzene	85		94		70-130	10		20
sec-Butylbenzene	84		102		70-130	19		20
tert-Butylbenzene	80		99		70-130	21	Q	20
o-Chlorotoluene	87		103		70-130	17		20
p-Chlorotoluene	79		99		70-130	22	Q	20
1,2-Dibromo-3-chloropropane	106		95		70-130	11		20
Hexachlorobutadiene	89		110		70-130	21	Q	20
Isopropylbenzene	82		101		70-130	21	Q	20
p-Isopropyltoluene	83		99		70-130	18		20
Naphthalene	81		96		70-130	17		20
n-Propylbenzene	83		98		70-130	17		20
1,2,3-Trichlorobenzene	87		110		70-130	23	Q	20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Project Number: 2013-027

Lab Number: L1530960

Report Date: 12/07/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-07 Batch: WG846773-1 WG846773-2								
1,2,4-Trichlorobenzene	85		94		70-130	10		20
1,3,5-Trimethylbenzene	86		101		70-130	16		20
1,2,4-Trimethylbenzene	85		97		70-130	13		20
Ethyl ether	93		89		70-130	4		20
Isopropyl Ether	92		92		70-130	0		20
Ethyl-Tert-Butyl-Ether	86		84		70-130	2		20
Tertiary-Amyl Methyl Ether	89		85		70-130	5		20
1,4-Dioxane	68	Q	121		70-130	56	Q	20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	110		95		70-130
Toluene-d8	101		97		70-130
4-Bromofluorobenzene	103		118		70-130
Dibromofluoromethane	105		95		70-130

SEMIVOLATILES

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-01
 Client ID: MW-2S
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 1,8270D-SIM
 Analytical Date: 11/30/15 15:06
 Analyst: SF

Date Collected: 11/24/15 09:30
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)
 Extraction Method: EPA 3510C
 Extraction Date: 11/25/15 14:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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1,4 Dioxane by 8270D-SIM - Mansfield Lab						
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1,4-Dioxane	0.633		ug/l	0.150	0.0750	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	32		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-02
 Client ID: MW-3I
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 1,8270D-SIM
 Analytical Date: 11/30/15 15:51
 Analyst: SF

Date Collected: 11/24/15 10:15
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)
 Extraction Method: EPA 3510C
 Extraction Date: 11/25/15 14:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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1,4 Dioxane by 8270D-SIM - Mansfield Lab

1,4-Dioxane	ND		ug/l	0.147	0.0735	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	36		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-03
 Client ID: MW-3D
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 1,8270D-SIM
 Analytical Date: 11/30/15 16:36
 Analyst: SF

Date Collected: 11/24/15 10:15
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)
 Extraction Method: EPA 3510C
 Extraction Date: 11/25/15 14:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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1,4 Dioxane by 8270D-SIM - Mansfield Lab						
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1,4-Dioxane	8.65		ug/l	0.147	0.0735	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	34		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-04
 Client ID: MW-4S
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 1,8270D-SIM
 Analytical Date: 11/30/15 17:21
 Analyst: SF

Date Collected: 11/24/15 11:30
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)
 Extraction Method: EPA 3510C
 Extraction Date: 11/25/15 14:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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1,4 Dioxane by 8270D-SIM - Mansfield Lab

1,4-Dioxane	0.842		ug/l	0.144	0.0721	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	34		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-05
 Client ID: MW-5S
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 1,8270D-SIM
 Analytical Date: 11/30/15 19:31
 Analyst: SF

Date Collected: 11/24/15 12:30
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)
 Extraction Method: EPA 3510C
 Extraction Date: 11/25/15 14:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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1,4 Dioxane by 8270D-SIM - Mansfield Lab						
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1,4-Dioxane	1.39		ug/l	0.144	0.0721	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	36		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-06
 Client ID: MW-8
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 1,8270D-SIM
 Analytical Date: 11/30/15 20:16
 Analyst: SF

Date Collected: 11/24/15 13:15
 Date Received: 11/24/15
 Field Prep: Field Filtered (Metals)
 Extraction Method: EPA 3510C
 Extraction Date: 11/25/15 14:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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1,4 Dioxane by 8270D-SIM - Mansfield Lab						
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1,4-Dioxane	0.238		ug/l	0.147	0.0735	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	32		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-07
 Client ID: DPW WELL
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 1,8270D-SIM
 Analytical Date: 11/30/15 21:01
 Analyst: SF

Date Collected: 11/24/15 12:15
 Date Received: 11/24/15
 Field Prep: None
 Extraction Method: EPA 3510C
 Extraction Date: 11/25/15 14:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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1,4 Dioxane by 8270D-SIM - Mansfield Lab						
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1,4-Dioxane	ND		ug/l	0.144	0.0721	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	34		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 11/30/15 12:51
Analyst: SF

Extraction Method: EPA 3510C
Extraction Date: 11/25/15 14:56

Parameter	Result	Qualifier	Units	RL	MDL
1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-07 Batch: WG844416-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	48		15-110

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01-07 Batch: WG844416-2 WG844416-3								
1,4-Dioxane	106		102		40-140	4		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	55		56		15-110

METALS

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-01
 Client ID: MW-2S
 Sample Location: EASTHAM, MA
 Matrix: Water

Date Collected: 11/24/15 09:30
 Date Received: 11/24/15
 Field Prep: Field Filtered
 (Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	ND		mg/l	0.005	0.002	1	11/30/15 10:45	12/02/15 18:30	EPA 3005A	97,6010C	JH
Barium, Dissolved	0.012		mg/l	0.010	0.003	1	11/30/15 10:45	12/02/15 18:30	EPA 3005A	97,6010C	JH
Cadmium, Dissolved	ND		mg/l	0.004	0.001	1	11/30/15 10:45	12/02/15 18:30	EPA 3005A	97,6010C	JH
Chromium, Dissolved	0.0055	J	mg/l	0.0100	0.0020	1	11/30/15 10:45	12/02/15 18:30	EPA 3005A	97,6010C	JH
Copper, Dissolved	ND		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 18:30	EPA 3005A	97,6010C	JH
Iron, Dissolved	0.44		mg/l	0.05	0.02	1	11/30/15 10:45	12/02/15 18:30	EPA 3005A	97,6010C	JH
Lead, Dissolved	ND		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 18:30	EPA 3005A	97,6010C	JH
Manganese, Dissolved	0.441		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 18:30	EPA 3005A	97,6010C	JH
Mercury, Dissolved	ND		mg/l	0.0002	0.0002	1	11/25/15 11:02	11/25/15 22:09	EPA 7470A	97,7470A	EA
Selenium, Dissolved	ND		mg/l	0.010	0.003	1	11/30/15 10:45	12/02/15 18:30	EPA 3005A	97,6010C	JH
Silver, Dissolved	ND		mg/l	0.007	0.002	1	11/30/15 10:45	12/02/15 18:30	EPA 3005A	97,6010C	JH
Zinc, Dissolved	ND		mg/l	0.050	0.007	1	11/30/15 10:45	12/02/15 18:30	EPA 3005A	97,6010C	JH



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-02
 Client ID: MW-3I
 Sample Location: EASTHAM, MA
 Matrix: Water

Date Collected: 11/24/15 10:15
 Date Received: 11/24/15
 Field Prep: Field Filtered
 (Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	0.046		mg/l	0.005	0.002	1	11/30/15 10:45	12/02/15 18:34	EPA 3005A	97,6010C	JH
Barium, Dissolved	0.011		mg/l	0.010	0.003	1	11/30/15 10:45	12/02/15 18:34	EPA 3005A	97,6010C	JH
Cadmium, Dissolved	ND		mg/l	0.004	0.001	1	11/30/15 10:45	12/02/15 18:34	EPA 3005A	97,6010C	JH
Chromium, Dissolved	0.0053	J	mg/l	0.0100	0.0020	1	11/30/15 10:45	12/02/15 18:34	EPA 3005A	97,6010C	JH
Copper, Dissolved	ND		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 18:34	EPA 3005A	97,6010C	JH
Iron, Dissolved	68		mg/l	0.05	0.02	1	11/30/15 10:45	12/02/15 18:34	EPA 3005A	97,6010C	JH
Lead, Dissolved	ND		mg/l	0.100	0.020	10	11/30/15 10:45	12/02/15 19:28	EPA 3005A	97,6010C	JH
Manganese, Dissolved	1.24		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 18:34	EPA 3005A	97,6010C	JH
Mercury, Dissolved	ND		mg/l	0.0002	0.0002	1	11/25/15 11:02	11/25/15 22:11	EPA 7470A	97,7470A	EA
Selenium, Dissolved	ND		mg/l	0.010	0.003	1	11/30/15 10:45	12/02/15 18:34	EPA 3005A	97,6010C	JH
Silver, Dissolved	ND		mg/l	0.007	0.002	1	11/30/15 10:45	12/02/15 18:34	EPA 3005A	97,6010C	JH
Zinc, Dissolved	ND		mg/l	0.050	0.007	1	11/30/15 10:45	12/02/15 18:34	EPA 3005A	97,6010C	JH



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-03
 Client ID: MW-3D
 Sample Location: EASTHAM, MA
 Matrix: Water

Date Collected: 11/24/15 10:15
 Date Received: 11/24/15
 Field Prep: Field Filtered
 (Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	0.067		mg/l	0.005	0.002	1	11/30/15 10:45	12/02/15 18:42	EPA 3005A	97,6010C	JH
Barium, Dissolved	0.068		mg/l	0.010	0.003	1	11/30/15 10:45	12/02/15 18:42	EPA 3005A	97,6010C	JH
Cadmium, Dissolved	ND		mg/l	0.004	0.001	1	11/30/15 10:45	12/02/15 18:42	EPA 3005A	97,6010C	JH
Chromium, Dissolved	0.0048	J	mg/l	0.0100	0.0020	1	11/30/15 10:45	12/02/15 18:42	EPA 3005A	97,6010C	JH
Copper, Dissolved	ND		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 18:42	EPA 3005A	97,6010C	JH
Iron, Dissolved	30		mg/l	0.05	0.02	1	11/30/15 10:45	12/02/15 18:42	EPA 3005A	97,6010C	JH
Lead, Dissolved	ND		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 18:42	EPA 3005A	97,6010C	JH
Manganese, Dissolved	1.18		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 18:42	EPA 3005A	97,6010C	JH
Mercury, Dissolved	ND		mg/l	0.0002	0.0002	1	11/25/15 11:02	11/25/15 22:13	EPA 7470A	97,7470A	EA
Selenium, Dissolved	ND		mg/l	0.010	0.003	1	11/30/15 10:45	12/02/15 18:42	EPA 3005A	97,6010C	JH
Silver, Dissolved	ND		mg/l	0.007	0.002	1	11/30/15 10:45	12/02/15 18:42	EPA 3005A	97,6010C	JH
Zinc, Dissolved	ND		mg/l	0.050	0.007	1	11/30/15 10:45	12/02/15 18:42	EPA 3005A	97,6010C	JH



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-04
 Client ID: MW-4S
 Sample Location: EASTHAM, MA
 Matrix: Water

Date Collected: 11/24/15 11:30
 Date Received: 11/24/15
 Field Prep: Field Filtered
 (Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	ND		mg/l	0.005	0.002	1	11/30/15 10:45	12/02/15 18:46	EPA 3005A	97,6010C	JH
Barium, Dissolved	0.029		mg/l	0.010	0.003	1	11/30/15 10:45	12/02/15 18:46	EPA 3005A	97,6010C	JH
Cadmium, Dissolved	ND		mg/l	0.004	0.001	1	11/30/15 10:45	12/02/15 18:46	EPA 3005A	97,6010C	JH
Chromium, Dissolved	0.0049	J	mg/l	0.0100	0.0020	1	11/30/15 10:45	12/02/15 18:46	EPA 3005A	97,6010C	JH
Copper, Dissolved	ND		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 18:46	EPA 3005A	97,6010C	JH
Iron, Dissolved	2.8		mg/l	0.05	0.02	1	11/30/15 10:45	12/02/15 18:46	EPA 3005A	97,6010C	JH
Lead, Dissolved	ND		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 18:46	EPA 3005A	97,6010C	JH
Manganese, Dissolved	5.01		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 18:46	EPA 3005A	97,6010C	JH
Mercury, Dissolved	ND		mg/l	0.0002	0.0002	1	11/25/15 11:02	11/25/15 22:15	EPA 7470A	97,7470A	EA
Selenium, Dissolved	ND		mg/l	0.010	0.003	1	11/30/15 10:45	12/02/15 18:46	EPA 3005A	97,6010C	JH
Silver, Dissolved	ND		mg/l	0.007	0.002	1	11/30/15 10:45	12/02/15 18:46	EPA 3005A	97,6010C	JH
Zinc, Dissolved	ND		mg/l	0.050	0.007	1	11/30/15 10:45	12/02/15 18:46	EPA 3005A	97,6010C	JH



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-05
 Client ID: MW-5S
 Sample Location: EASTHAM, MA
 Matrix: Water

Date Collected: 11/24/15 12:30
 Date Received: 11/24/15
 Field Prep: Field Filtered
 (Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	ND		mg/l	0.005	0.002	1	11/30/15 10:45	12/02/15 19:12	EPA 3005A	97,6010C	JH
Barium, Dissolved	0.049		mg/l	0.010	0.003	1	11/30/15 10:45	12/02/15 21:45	EPA 3005A	97,6010C	JH
Cadmium, Dissolved	ND		mg/l	0.004	0.001	1	11/30/15 10:45	12/02/15 19:12	EPA 3005A	97,6010C	JH
Chromium, Dissolved	0.005	J	mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 21:45	EPA 3005A	97,6010C	JH
Copper, Dissolved	ND		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 19:12	EPA 3005A	97,6010C	JH
Iron, Dissolved	6.8		mg/l	0.05	0.02	1	11/30/15 10:45	12/02/15 19:12	EPA 3005A	97,6010C	JH
Lead, Dissolved	ND		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 19:12	EPA 3005A	97,6010C	JH
Manganese, Dissolved	2.70		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 19:12	EPA 3005A	97,6010C	JH
Mercury, Dissolved	ND		mg/l	0.0002	0.0002	1	11/25/15 11:02	11/25/15 22:16	EPA 7470A	97,7470A	EA
Selenium, Dissolved	ND		mg/l	0.010	0.003	1	11/30/15 10:45	12/02/15 19:12	EPA 3005A	97,6010C	JH
Silver, Dissolved	ND		mg/l	0.007	0.002	1	11/30/15 10:45	12/02/15 19:12	EPA 3005A	97,6010C	JH
Zinc, Dissolved	ND		mg/l	0.050	0.007	1	11/30/15 10:45	12/02/15 19:12	EPA 3005A	97,6010C	JH



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-06
 Client ID: MW-8
 Sample Location: EASTHAM, MA
 Matrix: Water

Date Collected: 11/24/15 13:15
 Date Received: 11/24/15
 Field Prep: Field Filtered
 (Metals)

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	ND		mg/l	0.005	0.002	1	11/30/15 10:45	12/02/15 19:16	EPA 3005A	97,6010C	JH
Barium, Dissolved	0.052		mg/l	0.010	0.003	1	11/30/15 10:45	12/02/15 21:48	EPA 3005A	97,6010C	JH
Cadmium, Dissolved	ND		mg/l	0.004	0.001	1	11/30/15 10:45	12/02/15 19:16	EPA 3005A	97,6010C	JH
Chromium, Dissolved	0.004	J	mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 21:48	EPA 3005A	97,6010C	JH
Copper, Dissolved	ND		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 19:16	EPA 3005A	97,6010C	JH
Iron, Dissolved	0.06		mg/l	0.05	0.02	1	11/30/15 10:45	12/02/15 19:16	EPA 3005A	97,6010C	JH
Lead, Dissolved	ND		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 19:16	EPA 3005A	97,6010C	JH
Manganese, Dissolved	0.375		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 19:16	EPA 3005A	97,6010C	JH
Mercury, Dissolved	ND		mg/l	0.0002	0.0002	1	11/25/15 11:02	11/25/15 22:18	EPA 7470A	97,7470A	EA
Selenium, Dissolved	ND		mg/l	0.010	0.003	1	11/30/15 10:45	12/02/15 19:16	EPA 3005A	97,6010C	JH
Silver, Dissolved	ND		mg/l	0.007	0.002	1	11/30/15 10:45	12/02/15 19:16	EPA 3005A	97,6010C	JH
Zinc, Dissolved	ND		mg/l	0.050	0.007	1	11/30/15 10:45	12/02/15 19:16	EPA 3005A	97,6010C	JH



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-07
 Client ID: DPW WELL
 Sample Location: EASTHAM, MA
 Matrix: Water

Date Collected: 11/24/15 12:15
 Date Received: 11/24/15
 Field Prep: None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	ND		mg/l	0.005	0.002	1	11/30/15 08:20	12/02/15 00:46	EPA 3005A	97,6010C	AB
Barium, Total	0.149		mg/l	0.010	0.003	1	11/30/15 08:20	12/02/15 00:46	EPA 3005A	97,6010C	AB
Cadmium, Total	ND		mg/l	0.004	0.001	1	11/30/15 08:20	12/02/15 00:46	EPA 3005A	97,6010C	AB
Chromium, Total	0.02		mg/l	0.01	0.002	1	11/30/15 08:20	12/02/15 00:46	EPA 3005A	97,6010C	AB
Copper, Total	0.282		mg/l	0.010	0.002	1	11/30/15 08:20	12/02/15 00:46	EPA 3005A	97,6010C	AB
Iron, Total	0.13		mg/l	0.05	0.02	1	11/30/15 08:20	12/02/15 00:46	EPA 3005A	97,6010C	AB
Lead, Total	0.003	J	mg/l	0.010	0.002	1	11/30/15 08:20	12/02/15 00:46	EPA 3005A	97,6010C	AB
Manganese, Total	0.022		mg/l	0.010	0.002	1	11/30/15 08:20	12/02/15 00:46	EPA 3005A	97,6010C	AB
Mercury, Total	ND		mg/l	0.0002	0.0002	1	11/25/15 13:52	11/25/15 22:58	EPA 7470A	97,7470A	EA
Selenium, Total	ND		mg/l	0.010	0.003	1	11/30/15 08:20	12/02/15 00:46	EPA 3005A	97,6010C	AB
Silver, Total	ND		mg/l	0.007	0.002	1	11/30/15 08:20	12/02/15 00:46	EPA 3005A	97,6010C	AB
Zinc, Total	0.022	J	mg/l	0.050	0.007	1	11/30/15 08:20	12/02/15 00:46	EPA 3005A	97,6010C	AB



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab for sample(s): 01-06 Batch: WG844301-1									
Mercury, Dissolved	ND	mg/l	0.0002	0.0002	1	11/25/15 11:02	11/25/15 22:00	97,7470A	EA

Prep Information

Digestion Method: EPA 7470A

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 07 Batch: WG844383-1									
Mercury, Total	ND	mg/l	0.0002	0.0002	1	11/25/15 13:52	11/25/15 22:50	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 - Westborough Lab for sample(s): 07 Batch: WG844954-1									
Arsenic, Total	ND	mg/l	0.005	0.002	1	11/30/15 08:20	12/02/15 00:20	97,6010C	AB
Barium, Total	ND	mg/l	0.010	0.003	1	11/30/15 08:20	12/02/15 00:20	97,6010C	AB
Cadmium, Total	ND	mg/l	0.004	0.001	1	11/30/15 08:20	12/02/15 00:20	97,6010C	AB
Chromium, Total	ND	mg/l	0.01	0.002	1	11/30/15 08:20	12/02/15 16:50	97,6010C	JH
Copper, Total	ND	mg/l	0.010	0.002	1	11/30/15 08:20	12/02/15 00:20	97,6010C	AB
Iron, Total	ND	mg/l	0.05	0.02	1	11/30/15 08:20	12/02/15 16:50	97,6010C	JH
Lead, Total	ND	mg/l	0.010	0.002	1	11/30/15 08:20	12/02/15 00:20	97,6010C	AB
Manganese, Total	ND	mg/l	0.010	0.002	1	11/30/15 08:20	12/02/15 00:20	97,6010C	AB
Selenium, Total	ND	mg/l	0.010	0.003	1	11/30/15 08:20	12/02/15 00:20	97,6010C	AB
Silver, Total	ND	mg/l	0.007	0.002	1	11/30/15 08:20	12/02/15 00:20	97,6010C	AB
Zinc, Total	ND	mg/l	0.050	0.007	1	11/30/15 08:20	12/02/15 00:20	97,6010C	AB

Prep Information

Digestion Method: EPA 3005A



Project Name: EASTHAM LANDFILL

Lab Number: L1530960

Project Number: 2013-027

Report Date: 12/07/15

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab for sample(s): 01-06 Batch: WG844996-1										
Arsenic, Dissolved	ND		mg/l	0.005	0.002	1	11/30/15 10:45	12/02/15 16:54	97,6010C	JH
Barium, Dissolved	ND		mg/l	0.010	0.003	1	11/30/15 10:45	12/02/15 16:54	97,6010C	JH
Cadmium, Dissolved	ND		mg/l	0.004	0.001	1	11/30/15 10:45	12/02/15 16:54	97,6010C	JH
Chromium, Dissolved	ND		mg/l	0.01	0.002	1	11/30/15 10:45	12/02/15 16:54	97,6010C	JH
Copper, Dissolved	ND		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 16:54	97,6010C	JH
Iron, Dissolved	ND		mg/l	0.05	0.02	1	11/30/15 10:45	12/02/15 16:54	97,6010C	JH
Lead, Dissolved	ND		mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 16:54	97,6010C	JH
Manganese, Dissolved	0.003	J	mg/l	0.010	0.002	1	11/30/15 10:45	12/02/15 16:54	97,6010C	JH
Selenium, Dissolved	ND		mg/l	0.010	0.003	1	11/30/15 10:45	12/02/15 16:54	97,6010C	JH
Silver, Dissolved	ND		mg/l	0.007	0.002	1	11/30/15 10:45	12/02/15 16:54	97,6010C	JH
Zinc, Dissolved	ND		mg/l	0.050	0.007	1	11/30/15 10:45	12/02/15 16:54	97,6010C	JH

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Dissolved Metals - Westborough Lab Associated sample(s): 01-06 Batch: WG844301-2 WG844301-3								
Mercury, Dissolved	111		110		80-120	1		20
MCP Total Metals - Westborough Lab Associated sample(s): 07 Batch: WG844383-2 WG844383-3								
Mercury, Total	104		104		80-120	0		20
MCP Total Metals - Westborough Lab Associated sample(s): 07 Batch: WG844954-2 WG844954-3								
Arsenic, Total	108		109		80-120	1		20
Barium, Total	102		102		80-120	0		20
Cadmium, Total	112		111		80-120	1		20
Chromium, Total	110		110		80-120	0		20
Copper, Total	103		103		80-120	0		20
Iron, Total	110		110		80-120	0		20
Lead, Total	108		108		80-120	0		20
Manganese, Total	103		103		80-120	0		20
Selenium, Total	110		112		80-120	2		20
Silver, Total	105		102		80-120	3		20
Zinc, Total	104		103		80-120	1		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Project Number: 2013-027

Lab Number: L1530960

Report Date: 12/07/15

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Dissolved Metals - Westborough Lab Associated sample(s): 01-06 Batch: WG844996-2 WG844996-3					
Arsenic, Dissolved	107	104	80-120	3	20
Barium, Dissolved	92	96	80-120	4	20
Cadmium, Dissolved	108	112	80-120	4	20
Chromium, Dissolved	95	95	80-120	0	20
Copper, Dissolved	96	100	80-120	4	20
Iron, Dissolved	100	98	80-120	2	20
Lead, Dissolved	106	104	80-120	2	20
Manganese, Dissolved	92	97	80-120	5	20
Selenium, Dissolved	108	107	80-120	1	20
Silver, Dissolved	98	95	80-120	3	20
Zinc, Dissolved	96	100	80-120	4	20

INORGANICS & MISCELLANEOUS

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-01
Client ID: MW-2S
Sample Location: EASTHAM, MA
Matrix: Water

Date Collected: 11/24/15 09:30
Date Received: 11/24/15
Field Prep: Field Filtered (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	11/25/15 06:17	11/25/15 09:38	97,9014	ML
General Chemistry - Westborough Lab										
Alkalinity, Total	139.		mg CaCO3/L	2.00	NA	1	-	11/30/15 10:04	30,2320B	SG
Solids, Total Dissolved	200		mg/l	10	3.6	1	-	11/25/15 15:18	30,2540C	SD
Chloride	22.		mg/l	1.0	0.20	1	-	12/01/15 22:07	1,9251	LA
Nitrogen, Nitrate	0.061	J	mg/l	0.100	0.018	1	-	11/25/15 19:28	30,4500NO3-F	MR
Sulfate	26.		mg/l	10	3.1	1	12/01/15 15:00	12/01/15 15:00	1,9038	MP
Chemical Oxygen Demand	10.	J	mg/l	20	3.5	1	11/30/15 18:00	11/30/15 21:03	30,5220D	TL



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-02
Client ID: MW-3I
Sample Location: EASTHAM, MA
Matrix: Water

Date Collected: 11/24/15 10:15
Date Received: 11/24/15
Field Prep: Field Filtered (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	11/25/15 06:17	11/25/15 09:39	97,9014	ML
General Chemistry - Westborough Lab										
Alkalinity, Total	136.		mg CaCO3/L	2.00	NA	1	-	11/30/15 10:04	30,2320B	SG
Solids, Total Dissolved	230		mg/l	10	3.6	1	-	11/25/15 15:18	30,2540C	SD
Chloride	10.		mg/l	1.0	0.20	1	-	12/01/15 22:07	1,9251	LA
Nitrogen, Nitrate	0.079	J	mg/l	0.100	0.018	1	-	11/25/15 19:29	30,4500NO3-F	MR
Sulfate	31.		mg/l	10	3.1	1	12/01/15 15:00	12/01/15 15:00	1,9038	MP
Chemical Oxygen Demand	25.		mg/l	20	3.5	1	11/30/15 18:00	11/30/15 21:03	30,5220D	TL



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-03
Client ID: MW-3D
Sample Location: EASTHAM, MA
Matrix: Water

Date Collected: 11/24/15 10:15
Date Received: 11/24/15
Field Prep: Field Filtered (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	11/25/15 06:17	11/25/15 09:40	97,9014	ML
General Chemistry - Westborough Lab										
Alkalinity, Total	638.		mg CaCO3/L	4.00	NA	2	-	11/30/15 10:04	30,2320B	SG
Solids, Total Dissolved	630		mg/l	10	3.6	1	-	11/25/15 15:18	30,2540C	SD
Chloride	64.		mg/l	1.0	0.20	1	-	12/01/15 22:08	1,9251	LA
Nitrogen, Nitrate	0.044	J	mg/l	0.100	0.018	1	-	11/25/15 19:31	30,4500NO3-F	MR
Sulfate	59.		mg/l	20	6.2	2	12/01/15 15:00	12/01/15 15:00	1,9038	MP
Chemical Oxygen Demand	60.		mg/l	20	3.5	1	11/30/15 18:00	11/30/15 21:03	30,5220D	TL



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-04
Client ID: MW-4S
Sample Location: EASTHAM, MA
Matrix: Water

Date Collected: 11/24/15 11:30
Date Received: 11/24/15
Field Prep: Field Filtered (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	11/25/15 06:17	11/25/15 09:40	97,9014	ML
General Chemistry - Westborough Lab										
Alkalinity, Total	168.		mg CaCO3/L	2.00	NA	1	-	11/30/15 10:04	30,2320B	SG
Solids, Total Dissolved	ND		mg/l	10	3.6	1	-	11/25/15 15:18	30,2540C	SD
Chloride	18.		mg/l	1.0	0.20	1	-	12/01/15 22:09	1,9251	LA
Nitrogen, Nitrate	0.033	J	mg/l	0.100	0.018	1	-	11/25/15 19:32	30,4500NO3-F	MR
Sulfate	15.		mg/l	10	3.1	1	12/01/15 15:00	12/01/15 15:00	1,9038	MP
Chemical Oxygen Demand	22.		mg/l	20	3.5	1	11/30/15 18:00	11/30/15 21:03	30,5220D	TL



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-05
Client ID: MW-5S
Sample Location: EASTHAM, MA
Matrix: Water

Date Collected: 11/24/15 12:30
Date Received: 11/24/15
Field Prep: Field Filtered (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	11/25/15 06:17	11/25/15 09:41	97,9014	ML
General Chemistry - Westborough Lab										
Alkalinity, Total	201.		mg CaCO3/L	2.00	NA	1	-	11/30/15 10:04	30,2320B	SG
Solids, Total Dissolved	250		mg/l	10	3.6	1	-	11/25/15 15:18	30,2540C	SD
Chloride	25.		mg/l	1.0	0.20	1	-	12/01/15 22:10	1,9251	LA
Nitrogen, Nitrate	0.037	J	mg/l	0.100	0.018	1	-	11/25/15 19:33	30,4500NO3-F	MR
Sulfate	22.		mg/l	10	3.1	1	12/01/15 15:00	12/01/15 15:00	1,9038	MP
Chemical Oxygen Demand	22.		mg/l	20	3.5	1	11/30/15 18:00	11/30/15 21:03	30,5220D	TL



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-06
Client ID: MW-8
Sample Location: EASTHAM, MA
Matrix: Water

Date Collected: 11/24/15 13:15
Date Received: 11/24/15
Field Prep: Field Filtered (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	11/25/15 06:17	11/25/15 09:42	97,9014	ML
General Chemistry - Westborough Lab										
Alkalinity, Total	114.		mg CaCO3/L	2.00	NA	1	-	11/30/15 10:04	30,2320B	SG
Solids, Total Dissolved	220		mg/l	10	3.6	1	-	11/25/15 15:18	30,2540C	SD
Chloride	30.		mg/l	1.0	0.20	1	-	12/01/15 22:11	1,9251	LA
Nitrogen, Nitrate	2.42		mg/l	0.100	0.018	1	-	11/25/15 19:34	30,4500NO3-F	MR
Sulfate	22.		mg/l	10	3.1	1	12/01/15 15:00	12/01/15 15:00	1,9038	MP
Chemical Oxygen Demand	10.	J	mg/l	20	3.5	1	11/30/15 18:00	11/30/15 21:04	30,5220D	TL



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

SAMPLE RESULTS

Lab ID: L1530960-07
Client ID: DPW WELL
Sample Location: EASTHAM, MA
Matrix: Water

Date Collected: 11/24/15 12:15
Date Received: 11/24/15
Field Prep: None

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	11/25/15 06:17	11/25/15 09:44	97,9014	ML
General Chemistry - Westborough Lab										
Alkalinity, Total	21.2		mg CaCO3/L	2.00	NA	1	-	11/30/15 10:04	30,2320B	SG
Solids, Total Dissolved	460		mg/l	10	3.6	1	-	11/25/15 15:18	30,2540C	SD
Chloride	180		mg/l	10	2.0	10	-	12/01/15 22:28	1,9251	LA
Nitrogen, Nitrate	3.02		mg/l	0.100	0.018	1	-	11/25/15 19:36	30,4500NO3-F	MR
Sulfate	17.		mg/l	10	3.1	1	12/01/15 15:00	12/01/15 15:00	1,9038	MP
Chemical Oxygen Demand	13.	J	mg/l	20	3.5	1	11/30/15 18:00	11/30/15 21:04	30,5220D	TL



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

Method Blank Analysis
Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry - Westborough Lab for sample(s): 01-07 Batch: WG844217-1									
Cyanide, Total	ND	mg/l	0.005	0.005	1	11/25/15 06:17	11/25/15 09:35	97,9014	ML
General Chemistry - Westborough Lab for sample(s): 01-07 Batch: WG844358-1									
Solids, Total Dissolved	ND	mg/l	10	3.6	1	-	11/25/15 15:18	30,2540C	SD
General Chemistry - Westborough Lab for sample(s): 01-07 Batch: WG844486-1									
Nitrogen, Nitrate	ND	mg/l	0.100	0.018	1	-	11/25/15 18:54	30,4500NO3-F	MR
General Chemistry - Westborough Lab for sample(s): 01-07 Batch: WG845068-1									
Alkalinity, Total	ND	mg CaCO3/L	2.00	NA	1	-	11/30/15 10:04	30,2320B	SG
General Chemistry - Westborough Lab for sample(s): 01-07 Batch: WG845188-1									
Chemical Oxygen Demand	ND	mg/l	20	3.5	1	11/30/15 18:00	11/30/15 21:01	30,5220D	TL
General Chemistry - Westborough Lab for sample(s): 01-07 Batch: WG845386-1									
Sulfate	ND	mg/l	10	3.1	1	12/01/15 15:00	12/01/15 15:00	1,9038	MP
General Chemistry - Westborough Lab for sample(s): 01-07 Batch: WG845646-1									
Chloride	ND	mg/l	1.0	0.20	1	-	12/01/15 21:55	1,9251	LA

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Project Number: 2013-027

Lab Number: L1530960

Report Date: 12/07/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP General Chemistry - Westborough Lab Associated sample(s): 01-07 Batch: WG844217-2 WG844217-3								
Cyanide, Total	108		92		80-120	16		20
General Chemistry - Westborough Lab Associated sample(s): 01-07 Batch: WG844358-2								
Solids, Total Dissolved	102		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01-07 Batch: WG844486-2								
Nitrogen, Nitrate	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-07 Batch: WG845068-3								
Alkalinity, Total	104		-		90-110	-		10
General Chemistry - Westborough Lab Associated sample(s): 01-07 Batch: WG845188-2								
Chemical Oxygen Demand	102		-		93-106	-		
General Chemistry - Westborough Lab Associated sample(s): 01-07 Batch: WG845386-2								
Sulfate	95		-		84-119	-		
General Chemistry - Westborough Lab Associated sample(s): 01-07 Batch: WG845646-2								
Chloride	93		-		90-110	-		

Matrix Spike Analysis Batch Quality Control

Project Name: EASTHAM LANDFILL

Lab Number: L1530960

Project Number: 2013-027

Report Date: 12/07/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG845188-3 QC Sample: L1530960-01 Client ID: MW-2S												
Chemical Oxygen Demand	10.J	238	260	109	-	-	-	-	84-120	-	-	12
General Chemistry - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG845386-4 QC Sample: L1530960-01 Client ID: MW-2S												
Sulfate	26.	40	72	115	-	-	-	-	55-147	-	-	14
General Chemistry - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG845646-4 QC Sample: L1530960-06 Client ID: MW-8												
Chloride	30.	20	48	90	-	-	-	-	58-140	-	-	7

Lab Duplicate Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Project Number: 2013-027

Lab Number: L1530960

Report Date: 12/07/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG844358-3 QC Sample: L1530960-02 Client ID: MW-3I						
Solids, Total Dissolved	230	240	mg/l	4		17
General Chemistry - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG845188-4 QC Sample: L1530960-01 Client ID: MW-2S						
Chemical Oxygen Demand	10.J	15.J	mg/l	NC		12
General Chemistry - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG845386-3 QC Sample: L1530960-01 Client ID: MW-2S						
Sulfate	26.	25	mg/l	4		14
General Chemistry - Westborough Lab Associated sample(s): 01-07 QC Batch ID: WG845646-3 QC Sample: L1530960-06 Client ID: MW-8						
Chloride	30.	30	mg/l	0		7

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler

A Absent
 B Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1530960-01A	Vial HCl preserved	A	N/A	3.6	Y	Absent	MCP-8260-10(14)
L1530960-01B	Vial HCl preserved	A	N/A	3.6	Y	Absent	MCP-8260-10(14)
L1530960-01C	Vial HCl preserved	A	N/A	3.6	Y	Absent	MCP-8260-10(14)
L1530960-01D	Plastic 120ml HNO3 preserved	A	<2	3.6	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)
L1530960-01E	Plastic 250ml unpreserved w/No H	A	N/A	3.6	Y	Absent	ALK-T-2320(14)
L1530960-01F	Plastic 500ml unpreserved	A	7	3.6	Y	Absent	CL-9251(28),SO4-9038(28),NO3-4500(2),TDS-2540(7)
L1530960-01G	Plastic 120ml H2SO4 preserved	A	<2	3.6	Y	Absent	COD-5220(28)
L1530960-01H	Plastic 250ml NaOH preserved	A	>12	3.6	Y	Absent	MCP-TCN9014-10(14)
L1530960-01I	Amber 500ml unpreserved	A	7	3.6	Y	Absent	A2-14-DIOXANESIM-PPB(7)
L1530960-01J	Amber 500ml unpreserved	A	7	3.6	Y	Absent	A2-14-DIOXANESIM-PPB(7)
L1530960-02A	Vial HCl preserved	B	N/A	4.4	Y	Absent	MCP-8260-10(14)
L1530960-02B	Vial HCl preserved	B	N/A	4.4	Y	Absent	MCP-8260-10(14)
L1530960-02C	Vial HCl preserved	B	N/A	4.4	Y	Absent	MCP-8260-10(14)
L1530960-02D	Plastic 120ml HNO3 preserved	B	<2	4.4	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)
L1530960-02E	Plastic 250ml unpreserved w/No H	B	N/A	4.4	Y	Absent	ALK-T-2320(14)

*Values in parentheses indicate holding time in days

Project Name: EASTHAM LANDFILL

Project Number: 2013-027

Lab Number: L1530960

Report Date: 12/07/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1530960-02F	Plastic 500ml unpreserved	B	7	4.4	Y	Absent	CL-9251(28),SO4-9038(28),NO3-4500(2),TDS-2540(7)
L1530960-02G	Plastic 120ml H2SO4 preserved	B	<2	4.4	Y	Absent	COD-5220(28)
L1530960-02H	Plastic 250ml NaOH preserved	B	>12	4.4	Y	Absent	MCP-TCN9014-10(14)
L1530960-02I	Amber 500ml unpreserved	B	7	4.4	Y	Absent	A2-14-DIOXANESIM-PPB(7)
L1530960-02J	Amber 500ml unpreserved	B	7	4.4	Y	Absent	A2-14-DIOXANESIM-PPB(7)
L1530960-03A	Vial HCl preserved	B	N/A	4.4	Y	Absent	MCP-8260-10(14)
L1530960-03B	Vial HCl preserved	B	N/A	4.4	Y	Absent	MCP-8260-10(14)
L1530960-03C	Vial HCl preserved	B	N/A	4.4	Y	Absent	MCP-8260-10(14)
L1530960-03D	Plastic 120ml HNO3 preserved	B	<2	4.4	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)
L1530960-03E	Plastic 250ml unpreserved w/No H	B	N/A	4.4	Y	Absent	ALK-T-2320(14)
L1530960-03F	Plastic 500ml unpreserved	B	7	4.4	Y	Absent	CL-9251(28),SO4-9038(28),NO3-4500(2),TDS-2540(7)
L1530960-03G	Plastic 120ml H2SO4 preserved	B	<2	4.4	Y	Absent	COD-5220(28)
L1530960-03H	Plastic 250ml NaOH preserved	B	>12	4.4	Y	Absent	MCP-TCN9014-10(14)
L1530960-03I	Amber 500ml unpreserved	B	7	4.4	Y	Absent	A2-14-DIOXANESIM-PPB(7)
L1530960-03J	Amber 500ml unpreserved	B	7	4.4	Y	Absent	A2-14-DIOXANESIM-PPB(7)
L1530960-04A	Vial HCl preserved	A	N/A	3.6	Y	Absent	MCP-8260-10(14)
L1530960-04B	Vial HCl preserved	A	N/A	3.6	Y	Absent	MCP-8260-10(14)
L1530960-04C	Vial HCl preserved	A	N/A	3.6	Y	Absent	MCP-8260-10(14)
L1530960-04D	Plastic 120ml HNO3 preserved	A	<2	3.6	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)
L1530960-04E	Plastic 250ml unpreserved w/No H	A	N/A	3.6	Y	Absent	ALK-T-2320(14)
L1530960-04F	Plastic 500ml unpreserved	A	7	3.6	Y	Absent	CL-9251(28),SO4-9038(28),NO3-4500(2),TDS-2540(7)

*Values in parentheses indicate holding time in days



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1530960-04G	Plastic 120ml H2SO4 preserved	A	<2	3.6	Y	Absent	COD-5220(28)
L1530960-04H	Plastic 250ml NaOH preserved	A	>12	3.6	Y	Absent	MCP-TCN9014-10(14)
L1530960-04I	Amber 500ml unpreserved	A	7	3.6	Y	Absent	A2-14-DIOXANESIM-PPB(7)
L1530960-04J	Amber 500ml unpreserved	A	7	3.6	Y	Absent	A2-14-DIOXANESIM-PPB(7)
L1530960-05A	Vial HCl preserved	B	N/A	4.4	Y	Absent	MCP-8260-10(14)
L1530960-05B	Vial HCl preserved	B	N/A	4.4	Y	Absent	MCP-8260-10(14)
L1530960-05C	Vial HCl preserved	B	N/A	4.4	Y	Absent	MCP-8260-10(14)
L1530960-05D	Plastic 120ml HNO3 preserved	B	<2	4.4	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)
L1530960-05E	Plastic 250ml unpreserved w/No H	B	N/A	4.4	Y	Absent	ALK-T-2320(14)
L1530960-05F	Plastic 500ml unpreserved	B	7	4.4	Y	Absent	CL-9251(28),SO4-9038(28),NO3-4500(2),TDS-2540(7)
L1530960-05G	Plastic 120ml H2SO4 preserved	B	<2	4.4	Y	Absent	COD-5220(28)
L1530960-05H	Plastic 250ml NaOH preserved	B	>12	4.4	Y	Absent	MCP-TCN9014-10(14)
L1530960-05I	Amber 500ml unpreserved	B	7	4.4	Y	Absent	A2-14-DIOXANESIM-PPB(7)
L1530960-05J	Amber 500ml unpreserved	B	7	4.4	Y	Absent	A2-14-DIOXANESIM-PPB(7)
L1530960-06A	Vial HCl preserved	B	N/A	4.4	Y	Absent	MCP-8260-10(14)
L1530960-06B	Vial HCl preserved	B	N/A	4.4	Y	Absent	MCP-8260-10(14)
L1530960-06C	Vial HCl preserved	B	N/A	4.4	Y	Absent	MCP-8260-10(14)
L1530960-06D	Plastic 120ml HNO3 preserved	B	<2	4.4	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)
L1530960-06E	Plastic 250ml unpreserved w/No H	B	N/A	4.4	Y	Absent	ALK-T-2320(14)
L1530960-06F	Plastic 500ml unpreserved	B	7	4.4	Y	Absent	CL-9251(28),SO4-9038(28),NO3-4500(2),TDS-2540(7)
L1530960-06G	Plastic 120ml H2SO4 preserved	B	<2	4.4	Y	Absent	COD-5220(28)
L1530960-06H	Plastic 250ml NaOH preserved	B	>12	4.4	Y	Absent	MCP-TCN9014-10(14)

*Values in parentheses indicate holding time in days



Project Name: EASTHAM LANDFILL

Project Number: 2013-027

Lab Number: L1530960

Report Date: 12/07/15

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1530960-06I	Amber 500ml unpreserved	B	7	4.4	Y	Absent	A2-14-DIOXANESIM-PPB(7)
L1530960-06J	Amber 500ml unpreserved	B	7	4.4	Y	Absent	A2-14-DIOXANESIM-PPB(7)
L1530960-07A	Vial HCl preserved	A	N/A	3.6	Y	Absent	MCP-8260-10(14)
L1530960-07B	Vial HCl preserved	A	N/A	3.6	Y	Absent	MCP-8260-10(14)
L1530960-07C	Vial HCl preserved	A	N/A	3.6	Y	Absent	MCP-8260-10(14)
L1530960-07D	Plastic 120ml HNO3 preserved	A	<2	3.6	Y	Absent	MCP-CR-6010T-10(180),MCP-FE-6010T-10(180),MCP-MN-6010T-10(180),MCP-7470T-10(28),MCP-AS-6010T-10(180),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-CU-6010T-10(180),MCP-ZN-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-PB-6010T-10(180)
L1530960-07E	Plastic 250ml unpreserved w/No H	A	N/A	3.6	Y	Absent	ALK-T-2320(14)
L1530960-07F	Plastic 500ml unpreserved	A	7	3.6	Y	Absent	CL-9251(28),SO4-9038(28),NO3-4500(2),TDS-2540(7)
L1530960-07G	Plastic 120ml H2SO4 preserved	A	<2	3.6	Y	Absent	COD-5220(28)
L1530960-07H	Plastic 250ml NaOH preserved	A	>12	3.6	Y	Absent	MCP-TCN9014-10(14)
L1530960-07I	Amber 500ml unpreserved	A	7	3.6	Y	Absent	A2-14-DIOXANESIM-PPB(7)
L1530960-07J	Amber 500ml unpreserved	A	7	3.6	Y	Absent	A2-14-DIOXANESIM-PPB(7)

*Values in parentheses indicate holding time in days

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCS D	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
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 reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

Report Format: DU Report with 'J' Qualifiers



Project Name: EASTHAM LANDFILL
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Data Qualifiers

- 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.

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1530960
Report Date: 12/07/15

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 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 8260C: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; Iodomethane (methyl iodide) (soil); Methyl methacrylate (soil); Azobenzene.

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

EPA 625: 4-Chloroaniline, 4-Methylphenol.

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

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

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

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

Drinking Water

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

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

EPA 332: Perchlorate.

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

Non-Potable Water

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

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

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

EPA 624: Volatile Halocarbons & Aromatics,

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

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

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

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

7A
Volatile Organics CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1530960

Instrument ID: Jack.i Calibration Date: 03-DEC-2015 Time: 21:06

Lab File ID: 1203N02 Init. Calib. Date(s): 01-DEC-2 01-DEC-2

Sample No: 8260 CCAL Init. Calib. Times : 07:02 12:26

Compound	RRF	RRF	MIN RRF	%D	MAX %D
=====	=====	=====	=====	=====	=====
dichlorodifluoromethane	.83942	.77993	.1	-7	20
chloromethane	1.1854	.98763	.1	-17	20
vinyl chloride	.93272	.83598	.1	-10	20
bromomethane	.41378	.3628	.1	-12	20
chloroethane	.54132	.47635	.1	-12	20
trichlorofluoromethane	1.3217	1.2149	.1	-8	20
ethyl ether	.34485	.32123	.05	-7	20
1,1,-dichloroethene	.67936	.58436	.1	-14	20
carbon disulfide	2.1282	1.6581	.1	-22	20
methylene chloride	.72805	.68295	.1	-6	20
acetone	.13162	.1545	.1	17	20
trans-1,2-dichloroethene	.7658	.68033	.1	-11	20
methyl tert butyl ether	1.6866	1.5465	.1	-8	20
Diisopropyl Ether	2.9986	2.7496	.01	-8	20
1,1-dichloroethane	1.6743	1.4186	.2	-15	20
Ethyl-Tert-Butyl-Ether	2.5230	2.1607	.05	-14	20
cis-1,2-dichloroethene	.88132	.72927	.1	-17	20
2,2-dichloropropane	1.4447	1.2493	.05	-14	20
bromochloromethane	.37492	.35834	.05	-4	20
chloroform	1.5783	1.3977	.2	-11	20
carbontetrachloride	1.2896	1.1546	.1	-10	20
tetrahydrofuran	.17281	.19094	.05	10	20
1,1,1-trichloroethane	1.4379	1.2679	.1	-12	20
1,1-dichloropropene	1.1006	.92321	.05	-16	20
2-butanone	.231	.23829	.1	3	20
benzene	3.1664	2.6497	.5	-16	20
Tertiary-Amyl Methyl Ether	1.7540	1.5618	.05	-11	20
1,2-dichloroethane	1.1332	1.1196	.1	-1	20
trichloroethene	.86983	.72104	.2	-17	20
dibromomethane	.45105	.4277	.05	-5	20
1,2-dichloropropane	.80409	.72522	.1	-10	20
bromodichloromethane	1.0661	.96675	.2	-9	20
1,4-dioxane	.00328	.00224	.05	-32	20
cis-1,3-dichloropropene	1.1804	.98964	.2	-16	20
toluene	2.6193	2.1211	.4	-19	20
tetrachloroethene	1.2457	1.0530	.2	-15	20
4-methyl-2-pentanone	.19128	.19672	.1	3	20
trans-1,3-dichloropropene	1.2395	1.0514	.1	-15	20

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FORM VII MCP-8260-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1530960

Instrument ID: Jack.i Calibration Date: 03-DEC-2015 Time: 21:06

Lab File ID: 1203N02 Init. Calib. Date(s): 01-DEC-2 01-DEC-2

Sample No: 8260 CCAL Init. Calib. Times : 07:02 12:26

Compound	RRF	RRF	MIN RRF	%D	MAX %D
1,1,2-trichloroethane	.51276	.46375	.1	-10	20
chlorodibromomethane	.8751	.74007	.1	-15	20
1,3-dichloropropane	1.1942	1.0500	.05	-12	20
1,2-dibromoethane	.69933	.62767	.1	-10	20
2-hexanone	.4088	.39365	.1	-4	20
chlorobenzene	2.9938	2.5800	.5	-14	20
ethyl benzene	4.9690	4.2667	.1	-14	20
1,1,1,2-tetrachloroethane	1.0596	.94361	.05	-11	20
p/m xylene	2.0218	1.8374	.1	-9	20
o xylene	1.9771	1.6751	.3	-15	20
styrene	3.0915	2.6628	.3	-14	20
bromoform	.81938	.64841	.1	-21	20
isopropylbenzene	9.0304	7.3951	.1	-18	20
bromobenzene	2.0755	1.8915	.05	-9	20
n-propylbenzene	10.034	8.3422	.05	-17	20
1,1,2,2,-tetrachloroethane	1.0929	.97035	.3	-11	20
2-chlorotoluene	6.7792	5.9107	.05	-13	20
1,2,3-trichloropropane	1.0165	.8721	.05	-14	20
1,3,5-trimethylbenzene	7.5982	6.5024	.05	-14	20
4-chorotoluene	6.2345	4.9208	.05	-21	20
tert-butylbenzene	6.6307	5.2998	.05	-20	20
1,2,4-trimethylbenzene	7.6662	6.486	.05	-15	20
sec-butylbenzene	9.2087	7.7131	.01	-16	20
p-isopropyltoluene	8.0023	6.657	.05	-17	20
1,3-dichlorobenzene	4.2364	3.5734	.6	-16	20
1,4-dichlorobenzene	4.1135	3.4143	.5	-17	20
n-butylbenzene	6.2501	5.2970	.05	-15	20
1,2-dichlorobenzene	3.6402	3.1774	.4	-13	20
1,2-dibromo-3-chloropropane	.19117	.20377	.05	7	20
1,2,4-trichlorobenzene	1.5742	1.3336	.2	-15	20
hexachlorobutadiene	100	88.660	.05	-11	20
naphthalene	2.1927	1.7704	.05	-19	20
1,2,3-trichlorobenzene	1.0014	.87432	.05	-13	20
dibromofluoromethane	.26898	.28255	.05	5	20
1,2-dichloroethane-d4	.33727	.36978	.05	10	20
toluene-d8	1.1695	1.1826	.01	1	20
4-bromofluorobenzene	.8138	.83471	.05	3	20

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F

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FORM VII MCP-8260-10



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 & Mary Maiolo
2. Street Address: PO Bx 851
City/Town: E Longmeadow, MA Zip Code: 01028

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: 30 Spinnaker 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
- commercial
- 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

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: Robert & Victoria Hambrecht
2. Street Address: 350 Glacier Hills 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: 350 Glacier Hills Rd
City/Town: EASTHAM MA Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

- | | |
|---|---|
| <input type="checkbox"/> Immediate Response Action | <input type="checkbox"/> Phase III Feasibility Evaluation |
| <input type="checkbox"/> Release Abatement Measure | <input type="checkbox"/> Phase IV Remedy Implementation Plan |
| <input type="checkbox"/> Utility-related Abatement Measure | <input type="checkbox"/> Phase V/Remedy Operation Status |
| <input type="checkbox"/> Phase I Initial Site Investigation | <input type="checkbox"/> Post-Class C Operation, Maintenance and Monitoring |
| <input type="checkbox"/> Phase II Comprehensive Site Assessment | <input type="checkbox"/> Other _____ |
- (specify)

3. Description of property where sampling will be/has been conducted:

- residential commercial 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

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 & Christine Zajac
2. Street Address: 380 Glacier Hills 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: 380 Glacier Hills Rd
City/Town: EASTHAM MA Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

- | | |
|---|---|
| <input type="checkbox"/> Immediate Response Action | <input type="checkbox"/> Phase III Feasibility Evaluation |
| <input type="checkbox"/> Release Abatement Measure | <input type="checkbox"/> Phase IV Remedy Implementation Plan |
| <input type="checkbox"/> Utility-related Abatement Measure | <input type="checkbox"/> Phase V/Remedy Operation Status |
| <input type="checkbox"/> Phase I Initial Site Investigation | <input type="checkbox"/> Post-Class C Operation, Maintenance and Monitoring |
| <input type="checkbox"/> Phase II Comprehensive Site Assessment | <input type="checkbox"/> Other _____ |
- (specify)

3. Description of property where sampling will be/has been conducted:

- residential commercial 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

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: John & Costanza McGough
2. Street Address: PO Box 537
City/Town: N. 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: 395 Glacier Hills Rd
City/Town: EASTHAM MA Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

- | | |
|---|---|
| <input type="checkbox"/> Immediate Response Action | <input type="checkbox"/> Phase III Feasibility Evaluation |
| <input type="checkbox"/> Release Abatement Measure | <input type="checkbox"/> Phase IV Remedy Implementation Plan |
| <input type="checkbox"/> Utility-related Abatement Measure | <input type="checkbox"/> Phase V/Remedy Operation Status |
| <input type="checkbox"/> Phase I Initial Site Investigation | <input type="checkbox"/> Post-Class C Operation, Maintenance and Monitoring |
| <input type="checkbox"/> Phase II Comprehensive Site Assessment | <input type="checkbox"/> Other _____ |
- (specify)

3. Description of property where sampling will be/has been conducted:

- residential commercial 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

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: John C Pakstis Ttee
2. Street Address: 27 Lincoln St
City/Town: Andover, MA Zip Code: 01810

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: 40 Spinnaker Way
City/Town: EASTHAM MA Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

- | | |
|---|---|
| <input type="checkbox"/> Immediate Response Action | <input type="checkbox"/> Phase III Feasibility Evaluation |
| <input type="checkbox"/> Release Abatement Measure | <input type="checkbox"/> Phase IV Remedy Implementation Plan |
| <input type="checkbox"/> Utility-related Abatement Measure | <input type="checkbox"/> Phase V/Remedy Operation Status |
| <input type="checkbox"/> Phase I Initial Site Investigation | <input type="checkbox"/> Post-Class C Operation, Maintenance and Monitoring |
| <input type="checkbox"/> Phase II Comprehensive Site Assessment | <input type="checkbox"/> Other _____ |
- (specify)

3. Description of property where sampling will be/has been conducted:

- residential commercial 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

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: George W Spirito Jr
2. Street Address: 560 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: 560 Schoolhouse Rd
City/Town: EASTHAM MA Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

- | | |
|---|---|
| <input type="checkbox"/> Immediate Response Action | <input type="checkbox"/> Phase III Feasibility Evaluation |
| <input type="checkbox"/> Release Abatement Measure | <input type="checkbox"/> Phase IV Remedy Implementation Plan |
| <input type="checkbox"/> Utility-related Abatement Measure | <input type="checkbox"/> Phase V/Remedy Operation Status |
| <input type="checkbox"/> Phase I Initial Site Investigation | <input type="checkbox"/> Post-Class C Operation, Maintenance and Monitoring |
| <input type="checkbox"/> Phase II Comprehensive Site Assessment | <input type="checkbox"/> Other _____
(specify) |

3. Description of property where sampling will be/has been conducted:

- residential commercial 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

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: Marc & Luanne Citrin
2. Street Address: 43 Pinecliff Rd
City/Town: Chappaqua, NY, MA Zip Code: 10514

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: 60 Spinnaker 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
- commercial
- 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

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: Vincent & Kelly Bizilj
2. Street Address: 2 Stonehedge Cir
City/Town: Billerica , MA Zip Code: 01821

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: 720 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

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 & Elizabeth Lagasse
2. Street Address: 74 Holcomb St
City/Town: Simsbury , CT Zip Code: 06070

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: 825 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
- commercial
- 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

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: Keith & Betty Simpson
2. Street Address: 835 Schoolhouse Rd
City/Town: Simsbury , CT Zip Code: 06070

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: 835 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

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: Mary M Shaw Ttee
2. Street Address: PO Box 1361
City/Town: No 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: 850 Schoolhouse Rd
City/Town: EASTHAM MA Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

- | | |
|---|---|
| <input type="checkbox"/> Immediate Response Action | <input type="checkbox"/> Phase III Feasibility Evaluation |
| <input type="checkbox"/> Release Abatement Measure | <input type="checkbox"/> Phase IV Remedy Implementation Plan |
| <input type="checkbox"/> Utility-related Abatement Measure | <input type="checkbox"/> Phase V/Remedy Operation Status |
| <input type="checkbox"/> Phase I Initial Site Investigation | <input type="checkbox"/> Post-Class C Operation, Maintenance and Monitoring |
| <input type="checkbox"/> Phase II Comprehensive Site Assessment | <input type="checkbox"/> Other _____ |
- (specify)

3. Description of property where sampling will be/has been conducted:

- residential commercial 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

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: Maureen H Andujar
2. Street Address: PO Box 175
City/Town: No 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: 875 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
- commercial
- 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

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: Sandra & Melvyn Goldman
2. Street Address: 6 Big Pines Rd
City/Town: Westport, CT Zip Code: 06880

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: 915 Schoolhouse Rd
City/Town: EASTHAM MA Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

- | | |
|---|---|
| <input type="checkbox"/> Immediate Response Action | <input type="checkbox"/> Phase III Feasibility Evaluation |
| <input type="checkbox"/> Release Abatement Measure | <input type="checkbox"/> Phase IV Remedy Implementation Plan |
| <input type="checkbox"/> Utility-related Abatement Measure | <input type="checkbox"/> Phase V/Remedy Operation Status |
| <input type="checkbox"/> Phase I Initial Site Investigation | <input type="checkbox"/> Post-Class C Operation, Maintenance and Monitoring |
| <input type="checkbox"/> Phase II Comprehensive Site Assessment | <input type="checkbox"/> Other _____ |
- (specify)

3. Description of property where sampling will be/has been conducted:

- residential commercial 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

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: Janet L Marteka
2. Street Address: PO Box 787
City/Town: No 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: 10 Chatham St
City/Town: EASTHAM MA Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

- | | |
|---|---|
| <input type="checkbox"/> Immediate Response Action | <input type="checkbox"/> Phase III Feasibility Evaluation |
| <input type="checkbox"/> Release Abatement Measure | <input type="checkbox"/> Phase IV Remedy Implementation Plan |
| <input type="checkbox"/> Utility-related Abatement Measure | <input type="checkbox"/> Phase V/Remedy Operation Status |
| <input type="checkbox"/> Phase I Initial Site Investigation | <input type="checkbox"/> Post-Class C Operation, Maintenance and Monitoring |
| <input type="checkbox"/> Phase II Comprehensive Site Assessment | <input type="checkbox"/> Other _____ |
- (specify)

3. Description of property where sampling will be/has been conducted:

- residential commercial 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

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: Paula Serbin & Wm Kachadorian
2. Street Address: 4400 Clifton Spring Ct
City/Town: Olney , MD Zip Code: 20832

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: 115 Chester Ave
City/Town: EASTHAM MA Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

- | | |
|---|---|
| <input type="checkbox"/> Immediate Response Action | <input type="checkbox"/> Phase III Feasibility Evaluation |
| <input type="checkbox"/> Release Abatement Measure | <input type="checkbox"/> Phase IV Remedy Implementation Plan |
| <input type="checkbox"/> Utility-related Abatement Measure | <input type="checkbox"/> Phase V/Remedy Operation Status |
| <input type="checkbox"/> Phase I Initial Site Investigation | <input type="checkbox"/> Post-Class C Operation, Maintenance and Monitoring |
| <input type="checkbox"/> Phase II Comprehensive Site Assessment | <input type="checkbox"/> Other _____ |
- (specify)

3. Description of property where sampling will be/has been conducted:

- residential commercial 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

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: N. Eastham 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 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
- commercial
- 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

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: Barbara Komins
2. Street Address: 25 Deepwood Drive
City/Town: Eastham 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: 25 Deepwood Drive
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
- commercial
- 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

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:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Immediate Response Action | <input type="checkbox"/> Phase III Feasibility Evaluation |
| <input type="checkbox"/> Release Abatement Measure | <input type="checkbox"/> Phase IV Remedy Implementation Plan |
| <input type="checkbox"/> Utility-related Abatement Measure | <input type="checkbox"/> Phase V/Remedy Operation Status |
| <input type="checkbox"/> Phase I Initial Site Investigation | <input type="checkbox"/> Post-Class C Operation, Maintenance and Monitoring |
| <input type="checkbox"/> Phase II Comprehensive Site Assessment | <input type="checkbox"/> Other _____ |
- (specify)

3. Description of property where sampling will be/has been conducted:

- residential commercial 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

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: Richard Ellefsen
2. Street Address: 9 Todd Rd
City/Town: Plymouth CT Zip Code: 06782

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: 375 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
- commercial
- 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

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 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:

- | | |
|---|---|
| <input type="checkbox"/> Immediate Response Action | <input type="checkbox"/> Phase III Feasibility Evaluation |
| <input type="checkbox"/> Release Abatement Measure | <input type="checkbox"/> Phase IV Remedy Implementation Plan |
| <input type="checkbox"/> Utility-related Abatement Measure | <input type="checkbox"/> Phase V/Remedy Operation Status |
| <input type="checkbox"/> Phase I Initial Site Investigation | <input type="checkbox"/> Post-Class C Operation, Maintenance and Monitoring |
| <input type="checkbox"/> Phase II Comprehensive Site Assessment | <input type="checkbox"/> Other _____
(specify) |

3. Description of property where sampling will be/has been conducted:

- residential commercial 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

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: TOWN OF EASTHAM
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 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
- commercial
- 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.

E. Contact information related to the party providing this notice:

Contact Name: _____
Street Address: _____
City/Town: _____ Zip Code: _____
Telephone: _____ Email: _____



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: Raymond & Patrica Charest
2. Street Address: 20 Spinnaker 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: 20 Spinnaker 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
- commercial
- 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

December 18, 2015

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 -4th Quarter 2015
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 September 1, 2015, and November 30, 2015.

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



BARNSTABLE COUNTY
DEPARTMENT OF HEALTH AND ENVIRONMENT

BARNSTABLE OLD COUNTY JAIL
3195 MAIN STREET P.O. BOX 427
BARNSTABLE, MASSACHUSETTS 02630

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

November 16, 2015

Lisa Flynn
Environmental Strategies & Mgt. Inc.
273 West Main Street
Norton, MA 02766

Re: Soil/Gas results for Eastham Landfill

Dear Ms. Flynn:

Please find the enclosed results from samples dated November 5, 2015 for the soil/gas monitoring wells at the Eastham Landfill site.

The average barometric pressure the day of sampling was 30.11 in Hg, the weather was partly cloudy and ~60 °F.

The instruments used to collect the data were a MiniRAE Lite Photo-Ionization Detector (PID) meter and a Gem 5000 Multi-Gas meter. The next round of bi-annual sampling is scheduled for May 2016. Should you have any questions or concerns, please feel free to contact me at (508) 375-6620 or Lynn K. Mulkeen at (508) 375-6676.

Sincerely,

Erika A. Woods, RS
Senior Environmental Specialist
Barnstable County Department of Health and Environment

C: Mark Dakers, MassDEP
Jane Crowley, Eastham HD

