

**MASSACHUSETTS CONTINGENCY PLAN
IMMEDIATE RESPONSE ACTION STATUS REPORT
and
LANDFILL MONITORING REPORT**

1st QUARTER 2015

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

DEP RTN 4-24301

March 16, 2015

Prepared for:

Town of Eastham
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ES&M Project No. 2013-027

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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) by Environmental Strategies & Management, Inc. (ES&M) on behalf of the Town of Eastham. The report describes recent IRA activities conducted under Massachusetts Department of Environmental Protection (MassDEP) Release Tracking Number (RTN) 4-24301. This report also includes a summary of activities completed under the Town of Eastham's Landfill Monitoring Plan (LMP), approved by MassDEP on August 14, 2012.

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, this and future reports will focus on activities completed during the report period.

1.2 Purpose

This IRA Status and Landfill Monitoring Report has been prepared to document activities undertaken at and around the Eastham Landfill from December 1, 2014, through February 28, 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, the IRA 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. The IRA Plan Modification described the following revised sampling criteria:

1. Quarterly collection and laboratory analysis of water samples from wells where concentrations of 1,4-dioxane were 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, and whose previous test results revealed an estimated concentration of 1,4-dioxane (i.e., a “J” value)¹;
 3. Annual collection and laboratory analysis of water samples from wells exhibiting concentrations of 1,4-dioxane above 0.3 µg/L; and
 4. Collection and laboratory analysis of water samples from the water system at the Eastham Elementary School on a quarterly basis.

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 fifteen properties in the study area during this report period. The sampling events were conducted on December 17, 2014, January 23 and 30, 2015 and February 13 and 16, 2015. During each sampling event, a field visit form was completed to document the date and time when the 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 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 program².

¹ This criteria has been modified slightly to include wells where 1,4-dioxane was previously not detected.

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

Four of the fifteen properties tested for 1,4 dioxane during this report period had not been tested before. 1,4 Dioxane was not detected above the reporting limit in drinking water samples from any of these homes. The results from the eleven other properties tested during this report period were generally consistent with previous sampling results. As stated in the previous status report, 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 GW-1 Standard/ORSG of 0.3 µg/L. Laboratory results that are below 0.3 µg/L but above the laboratory reporting limit are quantified results, while results below the laboratory reporting limit and above the method detection limit of 0.04 µg/L are qualified as estimated values (reported with a “J” qualifier).
- Red = 1,4-dioxane has been detected in at least one sample collected from these properties at or above 0.3 µg/L. All residents in this category have been offered bottled water and have been advised to not use their well water for consumptive purposes.
- White = well water not tested, most likely because homeowners have not been available during scheduled sampling events.
- White with NR = owners of these properties were contacted by certified mail; however, no response was received or access was not granted.
- White/hatched = no well is present on these properties.

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 homeowner sample result notification letters and BWSC form 123 are included in Appendix C³.

³Although 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.

2.2 Activated Carbon Adsorption Treatment System - Status Update

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. Testing of this system included the periodic collection of influent (untreated), mid-point (between the two carbon vessels) and effluent (after both carbon vessels) samples. During the initial phase of the test, samples were collected on a weekly basis so that contaminant “breakthrough” in the first carbon vessel would be detected well before breakthrough in the second vessel. This procedure has allowed us to determine that for this residence, the primary adsorber can treat approximately 10,000 to 11,000 gallons of water (about 90 days) before 1,4-dioxane is detected in the mid-point sample above 0.3 ug/L. The sampling data collected since November 2013 has shown consistent results; therefore, the ongoing monitoring of this system dictates the collection of water samples less frequently (currently every 45 days), and the replacement of the primary adsorber approximately every 90 days.

During this report period, samples were collected from the system on January 23, 2015. During this sample collection event, the volume of water that was treated was recorded. Water samples were shipped under chain-of-custody to Alpha Analytical for laboratory analysis of 1,4-dioxane by EPA Method 8270 SIM. The test results were consistent with expectations and continued to indicate that a water treatment system utilizing virgin, coconut-based activated carbon is effective at removing 1,4-dioxane from drinking water.

On February 13, 2015, the secondary carbon vessel (which has received little, if any influx of 1,4-dioxane) was moved to the primary position of the system, and a new vessel with virgin, coconut-based, activated carbon was installed in the secondary position. Drinking water samples were collected from the influent, mid-point and effluent of the system before the carbon change, and then from the effluent and mid-point of the system after the carbon change. 1,4-Dioxane was not detected above the method detection limit in either of the post-carbon change results. Laboratory reports containing the results from the carbon treatment system samples are included in Appendix B. Table 2 includes only influent (untreated) drinking water results for this property.

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 included installation of temporary groundwater sampling wells (ESMT-1 through ESMT-7, shown on Figure 1), and collection groundwater samples throughout the study area to better understand the nature and extent of 1,4-dioxane emanating from the landfill. The work also included the collection of water level data in monitoring wells and private wells to better understand horizontal and vertical groundwater flow direction in the study area. Much of the field work described in this work plan was completed in October and November 2014, and a letter report was issued to the Solid Waste Management Section on January 20, 2015 to summarize the findings (see Appendix E). Permanent monitoring wells and additional groundwater sampling and monitoring work will be completed between July 2015 and June 2016, and an updated CSA report will be prepared prior to June 30, 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 December 16, 2014, annual groundwater samples were collected from landfill monitoring wells MW-2S, MW-4S, and MW-5S for analysis of VOCs, 1,4-dioxane, metals and indicator parameters.
- On December 16, 2014, annual groundwater samples were collected from landfill monitoring well MW-8 and the DPW Well for analysis of VOCs and 1,4-dioxane.
- On February 27, 2015, BCDHE personnel attempted to collect quarterly groundwater samples from landfill monitoring wells MW-3I and MW-3D for analysis of VOCs, 1,4-dioxane, metals and indicator parameters; however, heavy snow accumulation at the DPW property prevented this.

The laboratory results 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 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 that are not currently receiving bottled water. On December 17, 2014, drinking water samples were collected from three private wells included in this program (280 Alston Avenue, 130A Old Orchard Road and 130B Old Orchard Road). Attempts to reach two property owners to set up sampling appointments were not successful, and two other homes were not available until the spring. Laboratory test results from the private drinking water wells included in the current LMP are reported on Table 4 (as well as on Table 2).

4.0 FUTURE SCHEDULE OF IRA AND LMP ACTIVITIES

During the next reporting period from March through May 2015, 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;
- Preparation of sampling results notification packages for all residents whose drinking water is tested during the report period; and
- Continued collection of influent, mid-point and effluent samples from the activated carbon system at 255 Alston Avenue.

4.2 Landfill Monitoring Plan

- Collection of quarterly groundwater samples from wells MW-3I and MW-3D in March (since this was not possible in February) and May 2015 for analysis of indicator parameters, metals and VOCs including 1,4-dioxane.
- Collection of annual samples from landfill monitoring well MW-21S in May 2015 for analysis of VOCs including 1,4-dioxane.
- Collection of annual drinking water samples from residential properties as described on Section 3.2.

5.0 PUBLIC OUTREACH

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

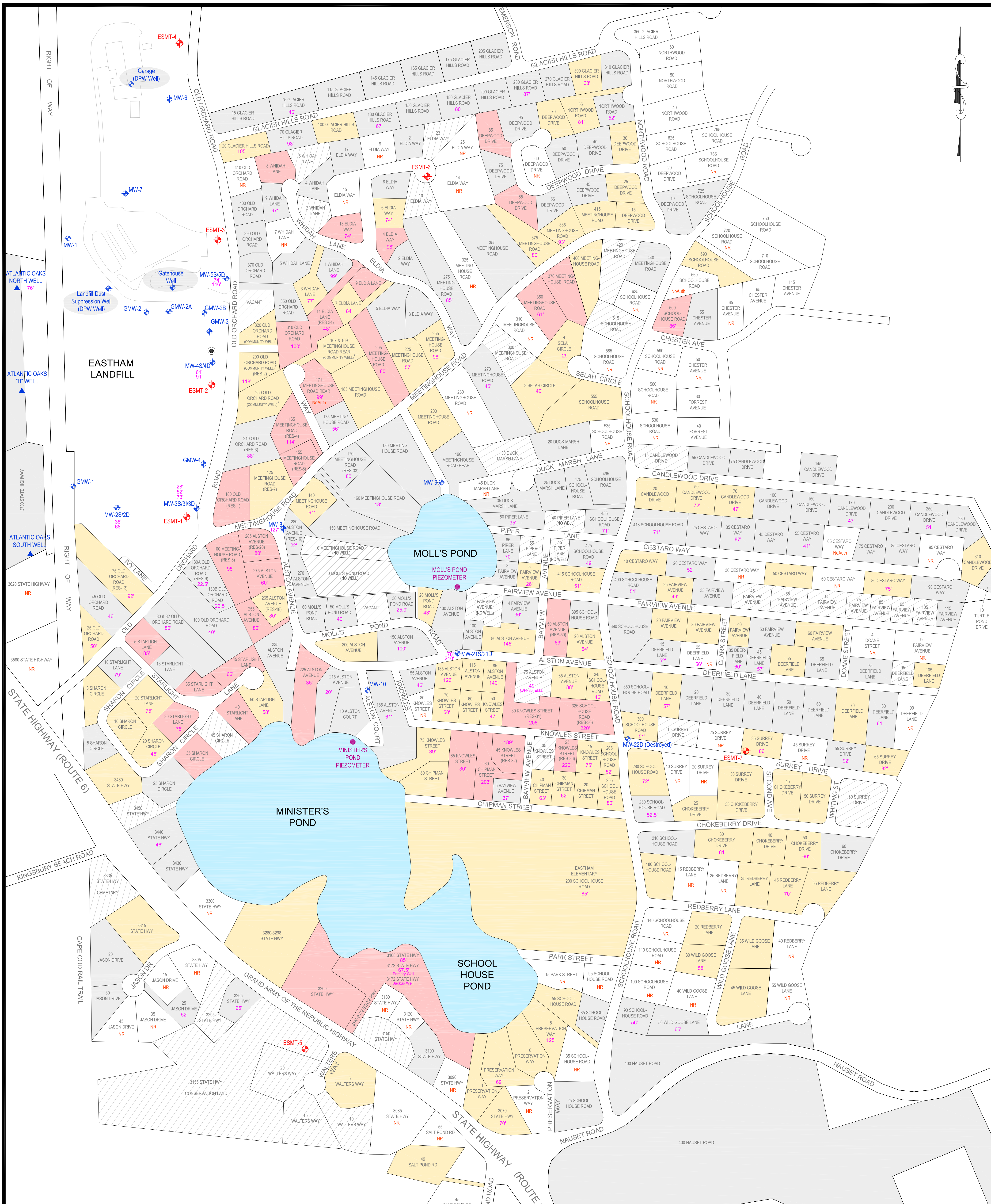
Availability of Reports

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

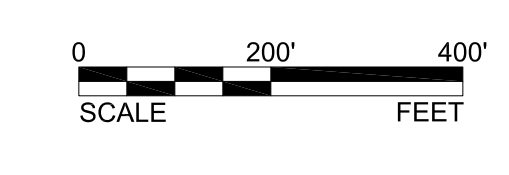
Questions on the ongoing work related to this matter may be directed to:

- 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 167/169 Meetinghouse Rd.
 - PIEZOMETER
 - TEMPORARY VERTICAL PROFILE WELL
 - ELECTRICAL CONDUCTIVITY BORING
 - 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:
	3/13/15	EASTHAM LANDFILL

SITE MAP

CLIENT:	TOWN OF EASTHAM	PM:	
LOCATION:	OLD ORCHARD ROAD EASTHAM, MASSACHUSETTS	LSP:	DH
RTN:	DWG:	PROJECT NO.:	FIGURE:
4-24301	DMR	2013-027	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	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	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
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

1Q2015

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	
255 ALSTON AVENUE	Inf	2/13/2015	2.14	1Q2015
	Inf	1/23/2015	2.13	1Q2015
	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		3/28/2014	<0.139
		12/18/2013	<0.20	
270 ALSTON AVENUE		3/14/2013	0.055J	
		8/4/2014	<0.142	
275 ALSTON AVENUE		2/11/2013	<0.20	
		7/17/2014	1.28	
280 ALSTON AVENUE		7/17/2014	Duplicate	1.35
		5/16/2013	1.3	
		5/16/2013	Duplicate	0.99
285 ALSTON AVENUE		12/17/2014	<0.142	1Q2015
		12/18/2013	<0.20	
		2/22/2013	<0.20	
10 ALSTON COURT		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	
ATLANTIC OAKS 'H' WELL		2/22/2013	Duplicate	0.33
ATLANTIC OAKS NORTH WELL		2/14/2013	<0.20	
ATLANTIC OAKS-SOUTH WELL		7/25/2013	<0.20	
5 BAYVIEW AVENUE		7/25/2013	<0.20	
		7/23/2013	<0.20	
		8/1/2014	<0.147	
		2/25/2013	<0.20	
20 CANDLEWOOD DRIVE		5/29/2013	0.056J	
50 CANDLEWOOD DRIVE		5/3/2013	0.092J	
55 CANDLEWOOD DRIVE		7/25/2013	<0.20	
70 CANDLEWOOD DRIVE		5/3/2013	0.073J	
75 CANDLEWOOD DRIVE		7/17/2014	<0.147	
100 CANDLEWOOD DRIVE		5/3/2013	<0.20	
145 CANDLEWOOD DRIVE		5/2/2013	<0.20	
150 CANDLEWOOD DRIVE		5/2/2013	<0.20	
170 CANDLEWOOD DRIVE		7/25/2013	<0.20	
200 CANDLEWOOD DRIVE		5/8/2013	<0.20	
250 CANDLEWOOD DRIVE		5/7/2013	<0.20	
280 CANDLEWOOD DRIVE		5/6/2013	<0.20	
310 CANDLEWOOD DRIVE		9/19/2014	<0.15	
		4/30/2013	0.060J	
10 CESTARO WAY		4/30/2013	0.11J	
20 CESTARO WAY		5/2/2013	<0.20	
25 CESTARO WAY		12/3/2013	<0.20	

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	
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	
55 CHESTER AVE	1/30/2015		<0.144	1Q2015
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	1Q2015
15 DEEPWOOD DRIVE	9/17/2013		0.051J	
25 DEEPWOOD DRIVE	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	1Q2015
	12/3/2013		<0.20	
55 DEEPWOOD DRIVE	8/25/2014		<0.139	
	7/25/2013		<0.20	
65 DEEPWOOD DRIVE	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	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	

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Property	Date	Duplicate	1,4 Dioxane
45 DEERFIELD LANE	5/2/2013		<0.20
50 DEERFIELD LANE	5/3/2013		<0.20
55 DEERFIELD LANE	4/29/2013		0.062J
60 DEERFIELD LANE	5/6/2013		<0.20
65 DEERFIELD LANE	5/6/2013		<0.20
70 DEERFIELD LANE	5/8/2013		0.048J
75 DEERFIELD LANE	7/25/2013		<0.20
80 DEERFIELD LANE	5/1/2013		<0.20
105 DEERFIELD LANE	5/8/2013		0.067J
DPW GARAGE	2/7/2014		<0.20
GATEHOUSE AT TRANSFER STATION	2/11/2014		<0.20
DPW NON-POTABLE WELL	2/25/2013		<0.20
20 DUCKMARSH LANE	4/30/2013		<0.20
25 DUCKMARSH LANE	5/2/2013		<0.20
35 DUCK MARSH LANE	12/6/2013		<0.20
2 ELDIA WAY	8/4/2014		<0.142
	8/2/2013		<0.20
3 ELDIA WAY	5/3/2013		<0.20
4 ELDIA WAY	8/4/2014		<0.144
	5/7/2014		0.451
	5/7/2014	Duplicate	0.449
	5/8/2013		0.089J
5 ELDIA WAY	1/23/2015		<0.163
	4/30/2013		<0.20
6 ELDIA WAY	5/9/2014		<0.144
	12/5/2013		0.15J
7 ELDIA WAY	3/24/2014		<0.150
	5/10/2013		0.045J
8 ELDIA WAY	12/5/2013		<0.20
9 ELDIA WAY	5/6/2014		0.309
	5/6/2014	Duplicate	0.284
	12/5/2013		0.31
	12/5/2013	Duplicate	0.27
	5/2/2013		0.25
11 ELDIA WAY	5/7/2014		3.58
	5/7/2014	Duplicate	3.61
	9/17/2013		3.7
	7/25/2013		3.0
	6/27/2013		4.3
	6/27/2013	Duplicate	3.4
	5/29/2013		4.3
	5/29/2013	Duplicate	3.9B
	4/29/2013		4.2
	4/29/2013	Duplicate	3.3
	3/14/2013		2.9
	3/14/2013	Duplicate	3.1
13 ELDIA WAY	5/9/2014		0.660
	5/9/2014	Duplicate	0.659
	7/24/2013		0.33
17 ELDIA WAY	5/6/2013		<0.20
21 ELDIA WAY	12/5/2013		<0.20
3 FAIRVIEW AVENUE	5/10/2013		<0.20

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4 FAIRVIEW AVENUE	8/15/2014		<0.147
	4/29/2013		<0.20
5 FAIRVIEW AVENUE	5/8/2014		<0.144
	2/14/2013		0.047J
20 FAIRVIEW AVENUE	5/7/2013		0.093J
25 FAIRVIEW AVENUE	5/7/2013		0.041J
30 FAIRVIEW AVENUE	12/3/2013		0.063J
35 FAIRVIEW AVENUE	5/2/2013		<0.20
40 FAIRVIEW AVENUE	5/16/2013		0.065J
50 FAIRVIEW AVENUE	5/2/2013		<0.20
60 FAIRVIEW AVENUE	5/1/2013		0.041J
115 FAIRVIEW AVENUE	7/22/2013		<0.20
15 GLACIER HILLS ROAD	3/13/2014		<0.139
20 GLACIER HILLS ROAD	5/6/2014		<0.144
	2/22/2013		0.071J
70 GLACIER HILLS ROAD	8/4/2014		<0.142
	7/22/2013		<0.20
75 GLACIER HILLS ROAD	6/17/2014		<0.142
100 GLACIER HILLS ROAD	5/8/2013		0.058J
115 GLACIER HILLS ROAD	4/14/2014		<0.144
130 GLACIER HILLS ROAD	7/23/2013		<0.20
145 GLACIER HILLS ROAD	4/14/2014		<0.144
150 GLACIER HILLS ROAD	7/24/2013		<0.20
165 GLACIER HILLS ROAD	3/13/2014		<0.139
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
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	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	

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Property	Date	Duplicate	1,4 Dioxane
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	
5/6/2014		Duplicate	2.38
8/28/2013			2.0
5/1/2013			2.3
50 KNOWLES STREET	5/1/2013	Duplicate	2.4
	2/16/2015		0.195
	6/19/2014		0.0910J
	4/14/2014		<0.144
	2/19/2013		0.26
60 KNOWLES STREET	2/19/2013	Duplicate	0.23
	12/4/2013		0.049J
65 KNOWLES STREET	2/21/2013		0.063J
	10/28/2014		0.102J
70 KNOWLES STREET	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
75 KNOWLES STREET	6/16/2014		<0.147
	2/20/2013		0.057J
100 MEETINGHOUSE ROAD	5/8/2014		<0.144
	4/30/2013		0.075J
125 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
140 MEETINGHOUSE ROAD	2/14/2013	Duplicate	1.5
	5/8/2013		0.15J
150 MEETINGHOUSE ROAD	3/24/2014		<0.150
	5/10/2013		0.11J
150 MEETINGHOUSE ROAD	2/22/2013		<0.20

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Property	Date	Duplicate	1,4 Dioxane
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	8/15/2014		<0.144
	2/15/2013		<0.20
171 MEETINGHOUSE ROAD REAR	5/1/2013		0.58
175 MEETINGHOUSE ROAD	9/19/2014		<0.156
	5/2/2013		<0.20
180 MEETINGHOUSE ROAD	5/1/2013		<0.20
185 MEETINGHOUSE ROAD	3/27/2014		<0.139
	4/30/2013		0.081J
190 MEETINGHOUSE ROAD REAR	5/9/2014		<0.142
200 MEETINGHOUSE ROAD	7/23/2014		<0.147
	5/3/2013		0.093J
205 MEETINGHOUSE ROAD	5/5/2014		0.310
	5/5/2014	Duplicate	0.319
	12/3/2013		0.30
	12/3/2013	Duplicate	0.26
225 MEETINGHOUSE ROAD	5/9/2014		0.196
	5/9/2014	Duplicate	0.178
	5/10/2013		0.13J
255 MEETINGHOUSE ROAD	4/26/2013		0.065J
270 MEETINGHOUSE ROAD	2/16/2015		<0.146
275 MEETINGHOUSE ROAD	8/1/2014		<0.144
	7/23/2013		<0.20
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	11/20/2014		0.212
	11/20/2014	Duplicate	0.187
	3/24/2014		0.175
	3/24/2014	Duplicate	0.156
	8/2/2013		0.19J
385 MEETINGHOUSE ROAD	8/1/2014		<0.142
	7/24/2013		0.040J
400 MEETINGHOUSE ROAD	7/24/2013		0.12J
415 MEETINGHOUSE ROAD	12/3/2013		0.14J
440 MEETINGHOUSE ROAD	7/31/2013		<0.20
20 MOLLS POND ROAD	2/19/2013		0.050J
30 MOLLS POND ROAD	2/15/2013		<0.20
50 MOLLS POND ROAD	2/11/2013		<0.20

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Property	Date	Duplicate	1,4 Dioxane	
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	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	12/17/2014		<0.142	1Q2015
	12/18/2013		<0.20	
	2/25/2013		<0.20	
130B OLD ORCHARD ROAD	12/17/2014		<0.142	1Q2015
	12/18/2013		<0.20	
	2/25/2013		<0.20	
180 OLD ORCHARD ROAD	9/18/2014		0.137J	
	5/6/2014		0.527	
	3/14/2014		0.0953J	
	11/20/2013		0.17J	
	8/28/2013		0.46	
	6/27/2013		0.45	
	5/8/2013		0.52	
	2/22/2013		0.045J	
210 OLD ORCHARD ROAD	12/18/2013		<0.20	
	2/15/2013		<0.20	
290 OLD ORCHARD ROAD	7/23/2014		<0.144	
	5/16/2013		0.068J	
	2/15/2013		<0.20	
310 OLD ORCHARD ROAD	5/6/2014		0.431	
	5/6/2014 Duplicate		0.433	
	4/29/2013		0.41	
350 OLD ORCHARD ROAD	8/1/2014		<0.142	
	5/3/2013		<0.20	
370 OLD ORCHARD ROAD	5/2/2013		<0.20	
390 OLD ORCHARD ROAD	5/7/2013		<0.20	
400 OLD ORCHARD ROAD	5/7/2013		<0.20	
50 PIPER LANE	2/20/2013		<0.20	
65 PIPER LANE	7/31/2013		<0.20	
1 PRESERVATION WAY	8/25/2014		0.174	
	8/25/2014 Duplicate		0.199	
	12/2/2013		0.19J	
4 PRESERVATION WAY	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	

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Property	Date	Duplicate	1,4 Dioxane
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
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	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
	POST (filter) 2/14/2014		0.094J
	PRE (filter) 2/14/2014		0.083J
	PRE (filter) 2/14/2014	Duplicate	0.076J
	POST (filter) 2/11/2014		0.096J
	PRE (filter) 2/11/2014		0.081J
	PRE (filter) 2/11/2014	Duplicate	0.086J
	2/12/2013		<0.20
210 SCHOOLHOUSE ROAD	5/6/2013		<0.20
230 SCHOOLHOUSE ROAD	5/8/2013		<0.20
255 SCHOOLHOUSE ROAD	7/22/2013		0.055J
265 SCHOOLHOUSE ROAD	7/23/2014		0.0945J
	2/21/2013		0.053J
280 SCHOOLHOUSE ROAD	2/22/2013		0.071J
300 SCHOOLHOUSE ROAD	5/7/2014		0.168
	5/7/2014	Duplicate	0.177
	2/19/2013		0.14J

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Property		Date	Duplicate	1,4 Dioxane
325 SCHOOLHOUSE ROAD	Effluent	9/19/2013		0.68
	Mid System	9/19/2013		0.095J
	Untreated	9/19/2013		10
	Effluent	8/27/2013		<0.20
	Untreated	8/27/2013		7.7
	Mid System	8/27/2013		<0.20
	Effluent	7/31/2013		<0.20
	Untreated	7/31/2013		9.4
	Mid System	7/31/2013		<0.20
	Untreated	7/31/2013	Duplicate	8.8
	Mid System	6/27/2013		0.041J
	Effluent	6/27/2013		<0.20
	Untreated	6/27/2013		8.2
	Untreated	6/27/2013	Duplicate	8.8
	Mid System	5/29/2013		<0.20
	Effluent	5/29/2013		<0.20
	Untreated	5/29/2013		7.8
	Untreated	5/29/2013	Duplicate	9.8B
	Untreated	4/29/2013		9.8
	Mid System	4/29/2013		<0.20
	Effluent	4/29/2013		<0.20
	Untreated	4/29/2013	Duplicate	8.3
	Effluent	3/21/2013		<0.20
	Mid System	3/21/2013		<0.20
	Mid System	3/14/2013		<0.20
	Effluent	3/14/2013		<0.20
	Mid System	3/8/2013		<0.20
	Effluent	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

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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	
725 SCHOOLHOUSE ROAD	2/16/2015		<0.146	1Q2015
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 STARLIGHT LANE	5/1/2013		0.34	
	5/5/2014		0.394	
	5/5/2014	Duplicate	0.362	
	2/21/2013		0.37	
10 STARLIGHT LANE	2/21/2013	Duplicate	0.37	
	8/4/2014		<0.144	
13 STARLIGHT LANE	5/10/2013		<0.20	
	8/1/2014		<0.142	
20 STARLIGHT LANE	5/10/2013		<0.20	
	1/30/2015		0.164	1Q2015
	1/30/2015	Duplicate	0.171	1Q2015
30 STARLIGHT LANE	5/7/2013		<0.20	
	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	
	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	
45 STARLIGHT LANE	7/23/2013		0.83	
	2/12/2013		1.1	
50 STARLIGHT LANE	2/12/2013	Duplicate	0.93	
	3/27/2014		<0.139	
3070 STATE HWY	7/31/2013		0.13J	
	12/6/2013		0.18J	
3100 A STATE HWY	10/28/2014		<0.150	
	3/13/2014		<0.139	

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Property	Date	Duplicate	1,4 Dioxane
3168 STATE HWY	5/5/2014		0.334
	5/5/2014	Duplicate	0.350
	12/6/2013		0.33
	12/6/2013	Duplicate	0.27
3172 STATE HWY BACKUP WELL	3/25/2014		0.335
	3/25/2014	Duplicate	0.338
3172 STATE HWY PRIMARY WELL	3/25/2014		0.326
	3/25/2014	Duplicate	0.306
	12/6/2013		0.20
3200 STATE HWY	12/6/2013	Duplicate	0.21
	5/8/2014		0.424
	5/8/2014	Duplicate	0.418
3265 STATE HWY	12/6/2013		0.31
	12/6/2013	Duplicate	0.32
	3/10/2014		<0.147
3280 STATE HWY	4/14/2014		0.248
	4/14/2014	Duplicate	0.198
3315 STATE HWY	3/12/2014		0.232
	3/12/2014	Duplicate	0.194
3430 STATE HWY	12/2/2013		<0.20
3440 STATE HWY	4/11/2014		<0.142
3460 STATE HWY	12/6/2013		0.14J
	4/30/2013		0.10J
30 SURREY DRIVE	9/17/2013		0.14J
35 SURREY DRIVE	7/31/2013		0.070J
50 SURREY DRIVE	4/30/2013		0.058J
55 SURREY DRIVE	5/1/2013		<0.20
65 SURREY DRIVE	7/22/2013		0.047J
10 TURTLE POND ROAD	5/10/2013		<0.20
5 WALTERS WAY	4/11/2014		0.147
	4/11/2014	Duplicate	<0.144
1 WHIDAH LANE	7/31/2014		<0.144
	4/29/2013		<0.20
3 WHIDAH LANE	5/5/2014		<0.144
	5/16/2013		0.071J
4 WHIDAH LANE	7/24/2013		<0.20
5 WHIDAH LANE	7/30/2013		<0.20
8 WHIDAH LANE	9/19/2013		0.57
9 WHIDAH LANE	7/31/2014		<0.144
	5/7/2013		<0.20
30 WILD GOOSE LANE	6/23/2014		0.109J
35 WILD GOOSE LANE	12/6/2013		0.081J
45 WILD GOOSE LANE	12/3/2013		0.058J
50 WILD GOOSE LANE	12/4/2013		<0.20

Notes: 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
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	Feb/May/Aug/Nov	x	x	x	
MW-21S			Yes	Semi-Annually	May/Nov	x			
MW-2S, 4S & 5S			Yes	Annually	December	x	x	x	
MW-8, DPW Well			Yes	Annually	December	x			
Landfill Gas Wells									
GMW-1, 2, 2A, 2B, 3 & 4			Yes	Semi-Annually	May/Nov				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		

2nd Quarter - March - May

TABLE 4.1
SECTION 1
SUMMARY OF LANDFILL MONITORING PLAN
GROUNDWATER ANALYTICAL RESULTS
Volatiles 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	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dichlorobenzene	
Standards																	
ORSG			0.3	NA	NA	NA	NA	70	NA	NA	NA	NA	NA	NA	NA	NA	
MMCL			NA	NA	200	NA	5	NA	7	NA	NA	NA	70	NA	0.2	600	
GW1			0.3*	5	200	2	5	70	7	NA	NA	NA	70	NA	NA	600	
Results																	
DPW Garage Well	Annual	2/7/2014	< 0.20	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
DPW WELL	Annual	12/16/2014	0.0793J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	
Landfill Non-potable Well		2/25/2013	<0.20	NS	NS	NS	NS	NS	NS	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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Gatehouse Well	Annual	2/11/2014	< 0.20	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
MW 10		10/27/2014	0.186	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
MW 21D		10/27/2014	0.215	NS	NS	NS	NS	NS	NS	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	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	
MW 21S	Semi-Annual	10/27/2014	2.93	NS	NS	NS	NS	NS	NS	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	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	
		12/7/2012	<2.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 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	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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW 2S	Annual	12/16/2014	0.337	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	
		12/18/2013	< 2.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 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	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	< 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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW 3D	Quarterly	11/10/2014	< 2.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 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	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
		10/27/2014	12.8	NS	NS	NS	NS	NS	NS	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	< 5.0	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0
		2/27/2014	12	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0
		11/25/2013	16	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
		MW 3I	Quarterly	12/16/2014	< 0.142	NS	NS	NS	NS	NS	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	< 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	< 5.0	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0
2/27/2014	< 1.0			< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0
11/25/2013	< 2.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 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	< 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	< 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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
2/14/2013	< 0.2			NS	NS	NS	NS	NS	NS	NS	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	< 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	< 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	< 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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW 3S				2/14/2013	< 0.2	NS	NS	NS	NS	NS	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	< 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	NS	NS	NS	NS	NS		

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
* 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	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-Chloropropane	1,2-Dichlorobenzene
MW 4D		2/14/2013	< 0.2	NS	NS	NS	NS	NS	NS	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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW 4S	Annual	12/16/2014	< 250	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0
		10/27/2014	0.652	NS	NS	NS	NS	NS	NS	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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
		2/14/2013	1.5	NS	NS	NS	NS	NS	NS	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	< 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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW 5D		10/27/2014	<0.153	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013	< 0.2	NS	NS	NS	NS	NS	NS	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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW 5S	Annual	12/16/2014	< 250	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0
		10/27/2014	1.65	NS	NS	NS	NS	NS	NS	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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
		2/14/2013	1.2	NS	NS	NS	NS	NS	NS	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	< 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	< 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	NS	NS	NS	NS	NS	NS	NS
MW 8	Annual	12/16/2014	0.283	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0
		12/18/2013	< 2.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 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	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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
265 ALSTON AVENUE	Annual	3/28/2014	<0.139	NS	NS	NS	NS	NS	NS	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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		3/14/2013	0.055J	NS	NS	NS	NS	NS	NS	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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		6/21/2012	NS	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
280 ALSTON AVENUE	Annual	12/17/2014	<0.142	NS	NS	NS	NS	NS	NS	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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		2/22/2013	< 0.20	NS	NS	NS	NS	NS	NS	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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		6/21/2012	NS	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		6/21/2012	NS	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
170 MEETINGHOUSE ROAD	Annual	8/15/2014	<0.144	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/15/2013	< 0.20	NS	NS	NS	NS	NS	NS	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	< 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	NS	NS	NS	NS	NS	NS
		2/21/2013	0.17J	NS	NS	NS	NS	NS	NS	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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		6/21/2012	NS	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		6/21/2012	NS	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
130A OLD ORCHARD ROAD	Annual	12/17/2014	<0.142	NS	NS	NS	NS	NS	NS	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	< 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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
130B OLD ORCHARD ROAD	Annual	12/17/2014	<0.142	NS	NS	NS	NS	NS	NS	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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		2/25/2013	< 0.20	NS	NS	NS	NS	NS	NS	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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		2/15/2013	< 0.20	NS	NS	NS	NS	NS	NS	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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		6/21/2012	NS	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
290 OLD ORCHARD ROAD	Annual	7/23/2014	<0.144	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/16/2013	0.068J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/9/2013	NS	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		2/15/2013	< 0.20	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		6/21/2012	NS	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

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
* Residential samples will be tested for all VOCs during 2nd quarter of the year.
3/12/2015 Page 2 of 2
Report: GW VOC Section 1
Database: 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-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone (MEK)	2-Chlorotoluene	4-Chlorotoluene	4-Isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane
Standards																		
ORSG			NA	NA	NA	NA	NA	NA	NA	4000	NA	NA	NA	350	6300	NA	NA	NA
MMCL			5	5	NA	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	5	NA	NA
GW1			5	5	NA	40	NA	5	NA	4000	NA	NA	NA	350	6300	5	NA	NA
Results																		
DPW Garage Well	Annual	2/7/2014	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	0.63 J	< 0.50	< 0.50	< 0.50
DPW WELL	Annual	12/16/2014	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 5.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 0.5	< 2.0	< 2.0
Landfill Non-potable Well		2/25/2013	NS	NS	NS	NS	NS	NS	NS	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	NS	< 0.5	< 0.5	< 0.5	NS	NS	< 0.5	< 0.5	< 0.5
Gatehouse Well	Annual	2/11/2014	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	0.58	< 0.50	< 0.50	< 0.50
MW 10		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW 21D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/25/2013	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.1J *	< 1.0	< 1.0	< 1.0	< 10	14J	< 1.0	< 1.0	< 1.0
MW 21S	Semi-Annual	10/27/2014	NS	NS	NS	NS	NS	NS	NS	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	< 10	< 1.0	< 1.0	< 1.0	< 10	< 50	< 1.0	< 1.0	< 1.0
		12/7/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	NS	< 0.5	< 0.5	< 0.5	NS	NS	< 0.5	< 0.5	< 0.5
MW 2D		2/14/2013	NS	NS	NS	NS	NS	NS	NS	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	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
MW 2S	Annual	12/16/2014	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 5.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 0.5	< 2.0	< 2.0
		12/18/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	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	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
		7/10/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
MW 3D	Quarterly	11/10/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
		11/10/2014	Duplicate	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	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	< 5.0	< 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	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	0.79	< 1.0	< 1.0
		2/27/2014	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 10	1.2	< 1.0	< 1.0
		11/25/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	0.96	< 0.5	< 0.5
		9/5/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	1.0	< 0.5	< 0.5
		5/8/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	0.91	< 0.5	< 0.5
		2/14/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	1.0	< 0.5	< 0.5
		12/6/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
		10/9/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	1.2	< 0.5	< 0.5
		7/10/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
		3/20/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
MW 3I	Quarterly	12/16/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		11/10/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 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	< 5.0	< 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	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0
		2/27/2014	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 10	< 1.0	< 1.0	< 1.0
		11/25/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
		9/5/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
		5/8/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
		2/14/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	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	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
		10/9/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
		7/10/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
		3/20/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
MW 3S		2/14/2013	NS	NS	NS	NS	NS	NS	NS	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	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
MW 4D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

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
 * Residential samples will be tested for all VOCs during 2nd quarter of the year.



Property	LMP Sample Frequency	Date	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone (MEK)	2-Chlorotoluene	4-Chlorotoluene	4-Isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene	Bromobenzene	Bromochloromethane
MW 4D		2/14/2013	NS	NS	NS	NS	NS	NS	NS	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	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5	< 0.5	< 0.5	< 0.5
MW 4S	Annual	12/16/2014	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 5.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 0.5	< 2.0	< 2.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	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	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	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	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
		7/10/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
MW 5D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
MW 5S	Annual	12/16/2014	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 5.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	0.20J	< 2.0	< 2.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	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	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	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	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
		7/10/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
MW 7		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW 8	Annual	12/16/2014	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 5.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 0.5	< 2.0	< 2.0
		12/18/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5
		3/14/2013	NS	NS	NS	NS	NS	NS	NS	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	NS	< 0.5	< 0.5	< 0.5	NS	NS	< 0.5	< 0.5	< 0.5
265 ALSTON AVENUE	Annual	3/28/2014	NS	NS	NS	NS	NS	NS	NS	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	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	0.75J	< 0.50	< 0.50	< 0.50
		3/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 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	NS	< 0.50	< 0.50	< 0.50	NS	NS	< 0.50	< 0.50	< 0.50
280 ALSTON AVENUE	Annual	12/17/2014	NS	NS	NS	NS	NS	NS	NS	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	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	< 2.5	< 0.50	< 0.50	< 0.50
		2/22/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 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	NS	< 0.50	< 0.50	< 0.50	NS	NS	< 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	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	< 2.5	< 0.50	< 0.50	< 0.50
		6/21/2012	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NS	< 0.50	< 0.50	< 0.50	NS	NS	< 0.50	< 0.50	< 0.50
170 MEETINGHOUSE ROAD	Annual	8/15/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/15/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	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	< 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	NS	NS	NS	NS	NS	NS	NS
		2/21/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 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	NS	< 0.50	< 0.50	< 0.50	NS	NS	< 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	< 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	NS	< 0.50	< 0.50	< 0.50	NS	NS	< 0.50	< 0.50	< 0.50
130A OLD ORCHARD ROAD	Annual	12/17/2014	NS	NS	NS	NS	NS	NS	NS	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	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	1.9J	< 0.50	< 0.50	< 0.50
		2/25/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	< 2.5	< 0.50	< 0.50	< 0.50
130B OLD ORCHARD ROAD	Annual	12/17/2014	NS	NS	NS	NS	NS	NS	NS	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	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	< 2.5	< 0.50	< 0.50	< 0.50
		2/25/2013	NS	NS	NS	NS	NS	NS	NS	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	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	< 2.5	< 0.50	< 0.50	< 0.50
		2/15/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 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	NS	< 0.50	< 0.50	< 0.50	NS	NS	< 0.50	< 0.50	< 0.50
290 OLD ORCHARD ROAD	Annual	7/23/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/16/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/9/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	< 2.5	< 0.50	< 0.50	< 0.50
		2/15/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	< 2.5	< 0.50	< 0.50	< 0.50
		6/21/2012	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NS	< 0.50	< 0.50	< 0.50	NS	NS	< 0.50	< 0.50	< 0.50

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
* Residential samples will be tested for all VOCs during 2nd quarter of the year.



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	Bromoform	Bromomethane	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromomethane	Dichlorobromomethane	Dichlorodifluoromethane	Ethylbenzene	
Standards																	
ORSG			NA	10	NA	NA	NA	NA	70	NA	NA	NA	NA	NA	1400	NA	
MMCL			NA	NA	5	100	NA	NA	NA	NA	70	NA	NA	NA	NA	700	
GW1			4	10	5	100	2	NA	70	NA	70	NA	NA	3	NA	700	
Results																	
DPW Garage Well	Annual	2/7/2014	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
DPW WELL	Annual	12/16/2014	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 0.5	< 2.0	< 1.0	< 2.0	< 1.0	
Landfill Non-potable Well		2/25/2013	NS	NS	NS	NS	NS	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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
Gatehouse Well	Annual	2/11/2014	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
MW 10		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
MW 21D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		2/25/2013	< 1.0	< 2.0	< 1.0	< 1.0	< 0.50	< 2.0	< 1.0	< 2.0	< 1.0	< 0.40	< 1.0	< 0.50	< 1.0	< 1.0	
MW 21S	Semi-Annual	10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		5/16/2013	< 1.0	< 2.0	< 1.0	< 1.0	< 0.50	< 2.0	< 1.0	< 2.0	< 1.0	< 0.40	< 1.0	< 0.50	< 1.0	< 1.0	
		12/7/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 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	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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
MW 2S	Annual	12/16/2014	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	0.20J	< 0.5	< 2.0	< 1.0	< 2.0	< 1.0	
		12/18/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 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	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	< 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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
MW 3D	Quarterly	11/10/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
		11/10/2014	Duplicate	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		9/3/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
		5/19/2014	< 1.0	< 1.0	< 1.0	1.3	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1	< 0.50	< 1.0	< 1.0	< 1.0	
		2/27/2014	< 1.0	< 1.0	< 1.0	1.6	< 5.0	< 1.0	< 1.0	< 1.0	2.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	
		11/25/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.3	< 0.5	1.4	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
		9/5/2013	< 0.5	< 0.5	< 0.5	1.6	< 0.5	< 0.5	< 0.5	< 0.5	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
		5/8/2013	< 0.5	< 0.5	< 0.5	1.4	< 0.5	< 0.5	< 0.5	< 0.5	1.1	< 0.5	< 0.5	< 0.5	< 0.5	0.60	
		2/14/2013	< 0.5	< 0.5	< 0.5	1.6	< 0.5	< 0.5	< 0.5	< 0.5	1.5	< 0.5	< 0.5	< 0.5	< 0.5	0.51	
		12/6/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 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	1.9	< 0.5	0.58	< 0.5	< 0.5	1.3	< 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	< 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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
		MW 3I	Quarterly	12/16/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
11/10/2014	< 5.0			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 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	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
5/19/2014	< 1.0			< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 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	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 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	< 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	< 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	< 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	0.84	< 0.5	< 0.5	< 0.5	< 0.5	
2/14/2013	NS			NS	NS	NS	NS	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	< 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	< 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	< 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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
MW 3S				2/14/2013	NS	NS	NS	NS	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	< 0.5	< 0.5	< 0.5	< 0.5		
MW 4D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

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
 * Residential samples will be tested for all VOCs during 2nd quarter of the year.



Property	LMP Sample Frequency	Date	Bromoform	Bromomethane	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromomethane	Dichlorobromomethane	Dichlorodifluoromethane	Ethylbenzene
MW 4D		12/6/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW 4S	Annual	12/16/2014	< 2.0	< 2.0	< 1.0	0.41J	< 1.0	< 1.0	0.26J	< 1.0	< 2.0	0.28J	< 0.5	< 2.0	< 1.0	< 2.0
		10/27/2014	NS	NS	NS	NS	NS	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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
		2/14/2013	NS	NS	NS	NS	NS	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	< 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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW 5D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/5/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW 5S	Annual	12/16/2014	< 2.0	< 2.0	< 1.0	0.29J	< 1.0	< 2.0	< 1.0	< 2.0	0.50J	< 0.5	< 2.0	< 1.0	< 2.0	< 1.0
		10/27/2014	NS	NS	NS	NS	NS	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	0.51	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
		2/14/2013	NS	NS	NS	NS	NS	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	0.51	< 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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW 7		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW 8	Annual	12/16/2014	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 2.0	0.22J	< 2.0	< 1.0	< 0.5	< 2.0	< 1.0	< 2.0	< 1.0
		12/18/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 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	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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
265 ALSTON AVENUE	Annual	3/28/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/18/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.18J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		3/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
280 ALSTON AVENUE	Annual	12/17/2014	NS	NS	NS	NS	NS	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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		2/22/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 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	< 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	< 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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
170 MEETINGHOUSE ROAD	Annual	8/15/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/15/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/8/2012	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
75 OLD ORCHARD ROAD	Annual	8/15/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/21/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 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	< 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	< 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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
130A OLD ORCHARD ROAD	Annual	12/17/2014	NS	NS	NS	NS	NS	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	< 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	0.13J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
130B OLD ORCHARD ROAD	Annual	12/17/2014	NS	NS	NS	NS	NS	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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		2/25/2013	NS	NS	NS	NS	NS	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	0.19J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		2/15/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
290 OLD ORCHARD ROAD	Annual	7/23/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/16/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/9/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.25J	< 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	0.38J	0.099J	< 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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

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

* Residential samples will be tested for all VOCs during 2nd quarter of the year.

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	Hexachlorobutadiene	Isopropylbenzene	Methyl tert-butyl ether	Methylene Chloride	Naphthalene	n-Butylbenzene	N-Propylbenzene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl chloride	Total Xylenes	
Standards																					
ORSG			NA	NA	70	NA	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
MMCL			NA	NA	NA	5	NA	NA	NA	NA	100	NA	5	1000	100	NA	5	NA	2	10000	
GW1			0.6	NA	70	5	140	NA	NA	NA	100	NA	5	1000	100	NA	5	NA	2	10000	
Results																					
DPW Garage Well	Annual	2/7/2014	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	
DPW WELL	Annual	12/16/2014	< 0.6	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 0.5	< 1.0	< 2.0	< 1.0	< 1.0	
Landfill Non-potable Well		2/25/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
Gatehouse Well	Annual	2/11/2014	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	
MW 10		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
MW 21D		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		2/25/2013	< 0.40	< 1.0	0.20J	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.40	< 1.0	< 1.0	< 0.50	< 2.0
MW 21S	Semi-Annual	10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		5/16/2013	< 0.40	< 1.0	0.16J	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.40	< 1.0	< 1.0	< 2.0	
		12/7/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 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	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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW 2S	Annual	12/16/2014	< 0.6	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 0.5	< 1.0	< 2.0	< 1.0	< 1.0	
		12/18/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 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	NS	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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW 3D	Quarterly	11/10/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
		11/10/2014	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
		10/27/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	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	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
		5/19/2014	< 0.50	< 1.0	0.95	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0
		2/27/2014	< 0.50	< 1.0	1.2	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0
		11/25/2013	< 0.5	< 0.5	< 0.5	0.92	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 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	0.95	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 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	1.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 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	1.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 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	< 0.5	< 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	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.58
		7/10/2012	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
		MW 3I	Quarterly	12/16/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
11/10/2014	< 5.0			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 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	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
5/19/2014	< 0.50			< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0
2/27/2014	< 0.50			< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 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	< 0.5	< 0.5	< 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	< 0.5	< 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	< 0.5	< 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	< 0.5	< 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	NS	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	< 0.5	< 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	< 0.5	< 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	< 0.5	< 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	< 0.5	< 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	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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	

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
* Residential samples will be tested for all VOCs during 2nd quarter of the year.

3/12/2015 Page 1 of 2
Report: GW VOC Section 4
Database: 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	
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	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	11/10/2014	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	11/10/2014	44	11	< 3.0	< 3.0	< 3.0	64000	< 3.0	1100	< 0.3	< 15	< 2.0
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	< 60	
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	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	

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
 * 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 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	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	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	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
130B OLD ORCHARD ROAD		12/18/2013	< 1.0	13B	< 0.50	0.074J	92B	NS	0.63J	NS	< 0.20	< 1.0	< 0.50	16B
130A OLD ORCHARD ROAD		12/18/2013	< 1.0	16B	< 0.50	0.21J	180B	NS	0.91J	NS	< 0.20	< 1.0	0.037J	13B
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
		6/21/2012	< 10	12	< 1.0	< 2.0	< 100	< 100	< 6.0	< 100	< 0.5	< 6.0	< 2.0	< 100
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	6/21/2012	< 10	25	< 1.0	< 2.0	160	< 100	< 6.0	< 100	< 0.5	< 6.0	< 2.0	< 100

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

* Residential samples will be tested for metals during 2nd quarter of the year.

3/12/2015 Page 2 of 2

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	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	11/10/2014	680	91	56	< 0.010	1.7	58	1,200
		11/10/2014	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	11/10/2014	110	23	15	< 0.010	1.1	25	260
		9/3/2014	200	20	16	< 0.010	< 0.10	30	300
		5/19/2014	200	19	20	< 0.010	< 0.10	29	300
		2/27/2014	110	17	22	< 0.010	0.60	36	300
		11/25/2013	200	16	9.0	< 0.010	1.4	46	260
		9/5/2013	190	12	13	< 0.010	< 0.10	39	240
		5/8/2013	160	13	7.0	< 0.010	0.32	49	260
		2/14/2013	180	14	15	< 0.010	0.14	70	250
		12/6/2012	190	10	17	NS	0.35	81	290
		10/9/2012	180	12	<3.0	< 0.010	< 0.10	79	270
		7/10/2012	180	19	18	< 0.010	0.19	66	320
		3/20/2012	180	19	15	< 0.010	0.42	63	290
MW 3S		12/6/2012	16	10	<3.0	NS	3.0	10	61
MW 4D		12/6/2012	16	50	<3.0	NS	2.3	18	140
MW 4S	Annual	12/16/2014	166	21	12 J	< 0.005	< 0.500	14	190

Notes:

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 4S	Annual	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	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
265 ALSTON AVENUE	Annual	6/21/2012	8.6	27	<3.0	< 0.010	2.2	16	100
280 ALSTON AVENUE	Annual	6/21/2012	23	66	<3.0	< 0.010	2.7	7.3	200
125 MEETINGHOUSE ROA	Annual	6/21/2012	80	21	<3.0	< 0.010	0.9	23	160
75 OLD ORCHARD ROAD	Annual	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
210 OLD ORCHARD ROAD	Annual	6/21/2012	42	42	<3.0	< 0.010	2.4	23	170
290 OLD ORCHARD ROAD	Annual	6/21/2012	17	32	<3.0	< 0.010	3.3	14	130

Notes:



**BARNSTABLE COUNTY
DEPARTMENT OF HEALTH AND ENVIRONMENT**

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

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

December 24, 2014

Lisa Flynn
Environmental Strategies and Management, Inc.
273 West Main Street
Norton, MA 02766

Dear Lisa:

Enclosed please find the field logs for the December 2014 round of groundwater testing for the Eastham Landfill.

All samples were sent to ALPHA laboratory and results will be forwarded to you directly from them.

If you have any questions feel free to contact me directly at 508-375-6676 or by e mail at lmulkeen@barnstablecounty.org

Sincerely,

Lynn K. Mulkeen
Senior Environmental Specialist



**BARNSTABLE COUNTY
DEPARTMENT OF HEALTH AND ENVIRONMENT**

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WATER SAMPLING LOG: EASTHAM LANDFILL

WELL NUMBER: mw 25 DATE: 12/16/14
WEATHER: cloudy 40 TIME: 1000

EVACUATION DATA

DESCRIPTION OF MEASURING POINT: Top of Casing
DEPTH TO BOTTOM OF WELL: 37.84 DIAMETER OF CASING: 2"
DEPTH TO WATER IN WELL: 20.92 MATERIAL OF WELL: PVC
FEET OF WATER IN WELL: 16.92 GALLONS PER FOOT: 0.16
GALLONS OF WATER IN WELL: 2.71 AMOUNT TO PURGE: 27 gal

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

SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: - APPEARANCE: -
PH: 5.76 TEMP: 12.08 COND: 280 DO: 0.56
OTHER: _____

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated watterra

CONSTITUENTS SAMPLED	CONTAINER DESCRIPTION	PRESERVATIVE
Nit/Alk	500 mL plastic	-
*All Metals	500 mL plastic	HNO3
COD	40 mL glass vial	H2SO4
VOC	40 mL glass vial	HCl
TCN	500 mL plastic	NaOH

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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WATER SAMPLING LOG: EASTHAM LANDFILL

WELL NUMBER: MW 3I DATE: 12/16/14
WEATHER: cloudy 40 TIME: 1030

EVACUATION DATA

DESCRIPTION OF MEASURING POINT: Top of Casing
DEPTH TO BOTTOM OF WELL: 52.38 DIAMETER OF CASING: 2"
DEPTH TO WATER IN WELL: 19.60 MATERIAL OF WELL: PVC
FEET OF WATER IN WELL: 32.78 GALLONS PER FOOT: 0.16
GALLONS OF WATER IN WELL: 5.24 AMOUNT TO PURGE: 30gal

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

SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: leachate APPEARANCE: -
PH: 6.21 TEMP: 12.54 COND: 337 DO: 0.39
OTHER: _____

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated watterra

CONSTITUENTS SAMPLED	CONTAINER DESCRIPTION	PRESERVATIVE
Nit/Aik	500 mL plastic	-
*All Metals	500 mL plastic	HNO3
COD	40 mL glass vial	H2SO4
VOC	40 mL glass vial	HCl
TCN	500 mL plastic	NaOH

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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WATER SAMPLING LOG: EASTHAM LANDFILL

WELL NUMBER: mw 4S DATE: 12/16/14
WEATHER: cloudy 40 TIME: 1115

EVACUATION DATA

DESCRIPTION OF MEASURING POINT: Top of Casing
DEPTH TO BOTTOM OF WELL: 61.34 DIAMETER OF CASING: 2"
DEPTH TO WATER IN WELL: 48.11 MATERIAL OF WELL: PVC
FEET OF WATER IN WELL: 13.23 GALLONS PER FOOT: 0.16
GALLONS OF WATER IN WELL: 2.12 AMOUNT TO PURGE: 15 gal

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

SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: - APPEARANCE: -
PH: 5.96 TEMP: 13.10 COND: 327 DO: 0.53
OTHER: _____

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated watterra

CONSTITUENTS SAMPLED	CONTAINER DESCRIPTION	PRESERVATIVE
Nit/Alk	500 mL plastic	-
*All Metals	500 mL plastic	HNO3
COD	40 mL glass vial	H2SO4
VOC	40 mL glass vial	HCl
TCN	500 mL plastic	NaOH

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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WATER SAMPLING LOG: EASTHAM LANDFILL

WELL NUMBER: mw 5s DATE: 12/16/14
WEATHER: cloudy 40 TIME: 1300

EVACUATION DATA

DESCRIPTION OF MEASURING POINT: Top of Casing
DEPTH TO BOTTOM OF WELL: 73.43 DIAMETER OF CASING: 2"
DEPTH TO WATER IN WELL: 45.10 MATERIAL OF WELL: PVC
FEET OF WATER IN WELL: 28.33 GALLONS PER FOOT: 0.16
GALLONS OF WATER IN WELL: 4.53 AMOUNT TO PURGE: 30gal

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

SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: - APPEARANCE: -
PH: 6.34 TEMP: 13.11 COND: 391 DO: 0.67
OTHER: _____

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated watterra

CONSTITUENTS SAMPLED	CONTAINER DESCRIPTION	PRESERVATIVE
Nit/Alk	500 mL plastic	-
*All Metals	500 mL plastic	HNO3
COD	40 mL glass vial	H2SO4
VOC	40 mL glass vial	HCl
TCN	500 mL plastic	NaOH

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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FAX (508) 362-2603
TDD (508) 362-5885

WATER SAMPLING LOG: EASTHAM LANDFILL

WELL NUMBER: DPW Well DATE: 12/16/14
WEATHER: cloudy 40 TIME: 1230

EVACUATION DATA

DESCRIPTION OF MEASURING POINT: Top of Casing
DEPTH TO BOTTOM OF WELL: _____ DIAMETER OF CASING: 2"
DEPTH TO WATER IN WELL: unknown 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

SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: _____ APPEARANCE: _____
PH: 6.07 TEMP: 12.86 COND: 284 DO: 4.58
OTHER: _____

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated watterra

CONSTITUENTS SAMPLED	CONTAINER DESCRIPTION	PRESERVATIVE
Nit/Alk	500 mL plastic	-
*All Metals	500 mL plastic	HNO3
COD	40 mL glass vial	H2SO4
VOC	40 mL glass vial	HCl
TCN	500 mL plastic	NaOH

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

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

WATER SAMPLING LOG: EASTHAM LANDFILL

WELL NUMBER: mw 8 DATE: 12/16/14
WEATHER: cloudy 40 TIME: 1345

EVACUATION DATA

DESCRIPTION OF MEASURING POINT: Top of Casing
DEPTH TO BOTTOM OF WELL: 127.15 DIAMETER OF CASING: 2"
DEPTH TO WATER IN WELL: 31.53 MATERIAL OF WELL: PVC
FEET OF WATER IN WELL: 95.62 GALLONS PER FOOT: 0.16
GALLONS OF WATER IN WELL: 15.30 AMOUNT TO PURGE: 95gal

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

SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: - APPEARANCE: -
PH: 5.98 TEMP: 12.07 COND: 314 DO: 0.83
OTHER: _____

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated watterra

CONSTITUENTS SAMPLED	CONTAINER DESCRIPTION	PRESERVATIVE
Nit/Alk	500 mL plastic	-
*All Metals	500 mL plastic	HNO3
COD	40 mL glass vial	H2SO4
VOC	40 mL glass vial	HCl
TCN	500 mL plastic	NaOH

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

Eastham Landfill
Private Well Sampling Log

Date: 12/17/14
Sampler: DB
Weather Conditions: 49's, overcast, light rain, 0-5 mph wind
Temperature: 40's
Location: old Orchard Rd. 130A
Property Owner: _____
Property Contact: _____
Phone: _____
Email: _____
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Kitchen sink
Describe water system unable to access
including treatment: _____
Water meter reading: _____

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

Purge Time: Start: 0935 Finish: 0950

Volume Purged: _____ gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Sample Collection time: 0950

Dup: 0955

Well Depth: Measured or Provided? Water meter unavailable

Summary of Sampling and Monitoring Activities: Two wells on property, one for each apartment. Property owner unable to identify which well supplies which apartment

Unable to access location where water line enters apartments due to concerns for "tenants privacy."

Complete sketch of treatment system, if applicable: Unable to access.



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: 12/17/14
Sampler: DB
Weather Conditions: 40's, overcast, light rain, 0.5 mph wind
Temperature: 40's
Location: Old Orchard Rd 130B
Property Owner: _____
Property Contact: _____
Phone: _____
Email: _____
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Bathroom sink - rear one-room apartment
Describe water system Unable to access
including treatment: _____
Water meter reading: _____

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

Purge Time: Start: 0940 Finish: 1000

Volume Purged: _____ gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Sample Collection time: 1000
Dup: 1005

Well Depth: Measured or Provided? Water meter unavailable

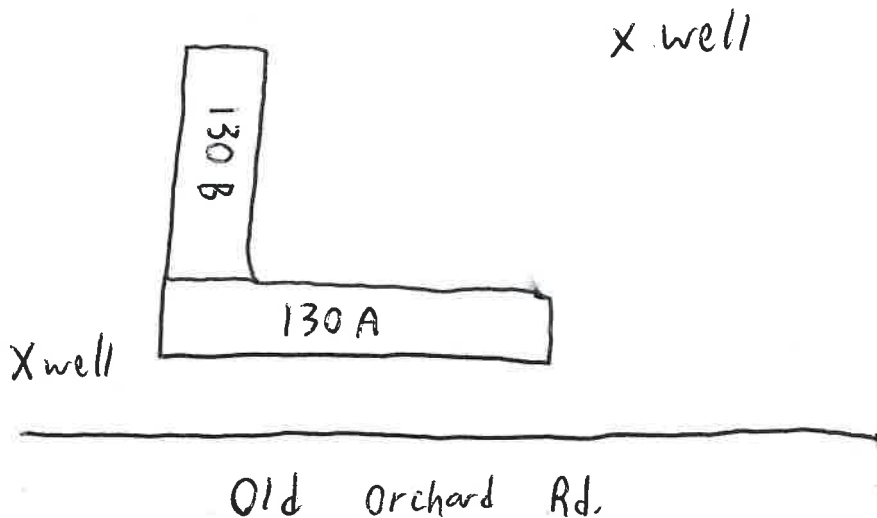
Summary of Sampling and Monitoring Activities: See summary for 130 A

Sample collected from bathroom sink in small one-room apartment @ the rear of larger 130B apartment. 130B appears to have tenants living in the larger, main portion of the house and someone else living in the smaller apartment on the ground floor at the back of the building.

Complete sketch of treatment system, if applicable:

Unable to access

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: 12/17/14
Sampler: DB
Weather Conditions: overcast, light rain, 0-5 mph wind
Temperature: 40's

Location: Alston Ave 280
Property Owner: Doug & Colleen Wallace
Property Contact: Doug Wallace
Phone: (508) 237-0716
Email: _____
Contact Log Attached: Yes: _____ No: _____

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

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: 1125 Finish: 1140

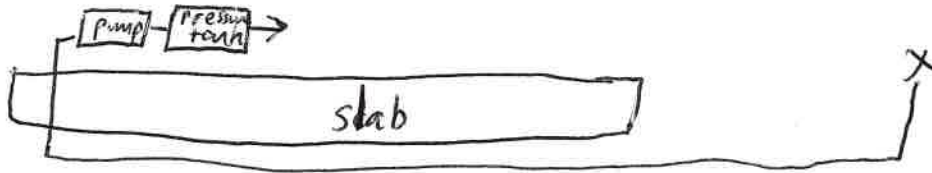
Volume Purged: _____ gallons
Equipment Utilized: _____
Attach Equipment Calibration Log: _____

Sample Collection time: 1140
Dup: 1145

Well Depth: Measured or Provided? Water Meter unavailable

Summary of Sampling and Monitoring Activities:

Complete sketch of treatment system, if applicable: No treatment



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 1/23/15

PERSONNEL EC OTHER PERSONNEL _____

ARRIVAL TIME 09:00 DEPARTURE TIME 15:30

WEATHER CONDITIONS 30'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) None
- Materials purchased

Description of activities and observations:

Tailgate safety review
Collect PTL-21 samples from system @ 255 Alston. Sample Effluent to Influent in order, changing gloves between samples.
255 Alston meter reading: 48,919
Collect DW samples at 50 Deepwood, 5 Eldia, and 415 Schoolhouse.
Could not collect sample from 395 Schoolhouse. Steven Jablonski says house has been closed up and winterized for 3-4 years.
Deliver samples to Alpha

Work Completed By: EC

Eastham Landfill
Private Well Sampling Log

Date: 11/23/15
Sampler: EL
Weather Conditions: 30's, clear, 0-5 mph wind
Temperature: 35° F

Location: 5 Eldia Way
Property Owner: Denny Teason
Property Contact: _____
Phone: 508-237-4764
Email: _____

Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Pressure tank valve, pre-treatment
Describe water system including treatment: Pressure tank and pH neutralizer
Water meter reading: none

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

Purge Time: Start: 09:25 Finish: 09:40

Volume Purged: 30 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Sealed cap

Summary of Sampling and Monitoring Activities: Purge approx 30 gallons from
Kitchen sink. Collect sample in basement pressure tank
valve prior to pH neutralizer. Attempted to gauge well,
but could not access due to sealed cap on
wellhead

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: 1/23/15
Sampler: EC
Weather Conditions: 30's, clear, 0-5 mph wind
Temperature: 35°F

Location: 50 Deepwood Drive
Property Owner: Nicholas Tritto - Kent Lakes Noniwee Trust
Property Contact: Jim McMaKin 774-722-2270
Phone: _____
Email: _____
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Kitchen sink
Describe water system including treatment: Pressure tank, no treatment or filtration
Water meter reading: none

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: 10:40 Finish: 11:00
Volume Purged: 28 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 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: 1/23/15
Sampler: EC
Weather Conditions: 30's, clear, 0-5 mph wind
Temperature: 35°F
Location: 415 Schoolhouse Road
Property Owner: Debra Palmer + Kim Tracy
Property Contact: Steven Jablonski
Phone: 508-237-1728
Email: _____
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Pressure tank, pre-filtration
Describe water system including treatment: Small in-line whole house carbon filter
Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: 15:00 Finish: 15:20
Volume Purged: 28 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 from kitchen sink
for approx 20 min + 28 gallons. Collect sample
from pressure tank, pre-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: 11/23/15
Sampler: EC
Weather Conditions: 30's, clear, 0-5 mph wind
Temperature: 35°F
Location: 395 Schoolhouse Road
Property Owner: James + Carol Wadsworth
Property Contact: Steven Jablonski
Phone: 508-237-1728
Email: _____
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: No Sample: House is closed
Describe water system up and winterized
including treatment: _____
Water meter reading: _____

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: 14:30 Finish: 14:55
Volume Purged: _____ gallons
Equipment Utilized: _____
Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Date: 1/30/15
Sampler: E. Cuccè
Weather Conditions: light rain, 0-5 mph wind
Temperature: 35°F

Location: 55 Chester Ave
Property Owner: Connie Cochran
Property Contact: _____
Phone: 508-255-1308
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 Water softener
including treatment: _____
Water meter reading: _____

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

Purge Time: Start: 08:10 Finish: 08:25

Volume Purged: 28 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

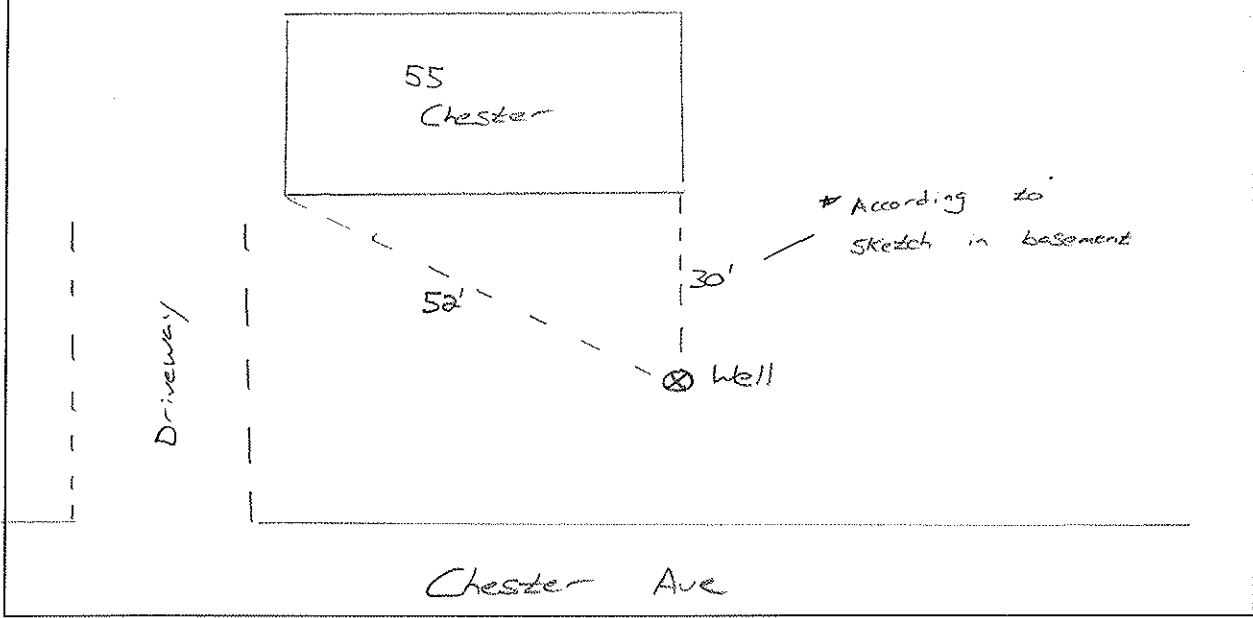
Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Wellhead is buried w/ above ground pump, cannot gauge

Summary of Sampling and Monitoring Activities: Purge from kitchen sink for approx. 15 minutes. Collect sample from valve on pressure tank, prior to water softener. No above-ground access to well.

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: 11/30/15
Sampler: E. Cuccè
Weather Conditions: light rain, 0-5 mph wind
Temperature: 35°F

Location: 10 Deepwood Drive
Property Owner: Barbara Casgrove
Property Contact: Sandy Elderling
Phone: 508-237-3717
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: 09:20 Finish: 09:40

Volume Purged: 36 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided?

Depth: 59'

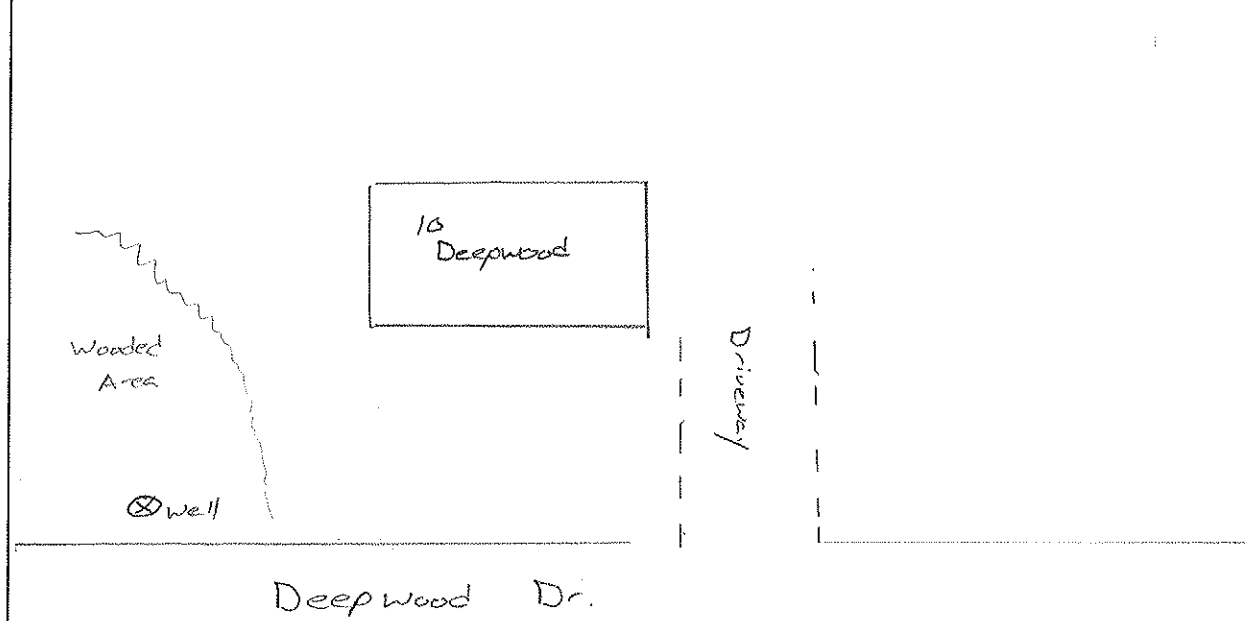
DTU: 50.89'

Summary of Sampling and Monitoring Activities:

Purge and sample from kitchen sink. Gauge well, located in wooded area to the front left 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: 1/30/15
Sampler: E. Cuce
Weather Conditions: light rain, 0-5 mph wind
Temperature: 35° F

Location: 20 Starlight Lane
Property Owner: Eben Fogg
Property Contact: _____
Phone: 774-722-7358
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: 10:15 Finish: 10:30

Volume Purged: 28 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Wellhead buried in backyard under
significant snow.

Summary of Sampling and Monitoring Activities: Purge and sample from
kitchen sink. System has 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:



Site Visit Form

PROJECT Eastham Landfill DATE 2/13/15

PERSONNEL EC, RDH OTHER PERSONNEL _____

ARRIVAL TIME 08:30 DEPARTURE TIME 12:45

WEATHER CONDITIONS Teens, mostly sunny, 10-15 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) None used
- Materials purchased

Description of activities and observations:

Tailgate safety review
Set up for carbon change at 255 Alston. Record meter reading: 51,105 gal.
Collect PTL-22 Eff, Mid, + Inf samples.
Remove and drain carbon adsorber from Influent position, move 2 nd adsorber into Influent position; and install adsorber w/ fresh carbon into 2 nd position. Purge water through system until it runs clear.
Collect PTL-23 Eff + Mid samples.
Collect samples from 85 Alston Ave + 200 Schoolhouse Rd (Elementary School).
Deliver samples to Alpha

Work Completed By: EC

Eastham Landfill
Private Well Sampling Log

Date: 2/16/15
Sampler: EC
Weather Conditions: mostly sunny, 10-15 mph wind
Temperature: 15° F

Location: 725 Schoolhouse Rd.
Property Owner: Meredith Morgan
Property Contact: _____
Phone: 774-353-9201
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: 11:05 Finish: 11:30

Volume Purged: ≈ 36 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Well pump is in basement. Well is buried underground and not accessible 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: 2/16/15
Sampler: EC
Weather Conditions: mostly sunny, 10-15 mph wind
Temperature: 15°F

Location: 50 Knowles St.

Property Owner: Leslie Milas

Property Contact: _____

Phone: 860-841-6237

Email: _____

Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)

Analytical Lab: Alpha

Sample Location: Pressure tank in basement

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: 12:00 Finish: 12:25

Volume Purged: ≈ 32 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Could not access due to snow

Summary of Sampling and Monitoring Activities: Purge from kitchen sink, collect sample from pressure tank prior to pH neutralizer

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: 2/16/15
Sampler: EC
Weather Conditions: mostly sunny, 10-15 mph wind
Temperature: 15°F

Location: 270 Meetinghouse Rd.
Property Owner: _____
Property Contact: Dee Sullivan (realtor)
Phone: 774-722-0731
Email: _____
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Kitchen sink, w/ iron filter by-passed
Describe water system Iron removal tank
including treatment: _____
Water meter reading: _____

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

Purge Time: Start: 13:10 Finish: 13:30

Volume Purged: ≈ 25 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Could not locate well due to deep spin cover.

Summary of Sampling and Monitoring Activities: Purge and sample from kitchen sink. Adjust valves to bypass iron filter for sampling. Put iron filter back online when finished.

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:

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	L1430246	12/16/2015	GW	Yes	Yes	No	Yes	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis	Sample ID	Date	Lab ID	Matrix	Analysis
MW-3I	12/16/2014	L1430246-1	GW	8270	MW-8	12/16/2014	L1430246-5	GW	8270, 8260
MW-2S	12/16/2014	L1430246-2	GW	8270, 8260, metals, nitrate, chloride, sulfate, TDS, COD, cyanide	DPW Well	12/16/2014	L1430246-6	GW	8270, 8260
MW-4S	12/16/2014	L1430246-3	GW	8260, metals, nitrate, sulfate, TDS, COD, cyanide	Trip Blank	12/16/2014	L1430246-7	GW	8270
MW-5S	12/16/2014	L1430246-4	GW	8260, metals, nitrate, sulfate, TDS, COD, cyanide					

8260 -The initial calibration, associated with L1430246-02 through -07, did not meet the method required minimum response factor on the lowest calibration standard for 2-butanone (0.07688), 4-methyl-2-pentanone (0.05758), and 1,4-dioxane (0.00097), as well as the average response factor for 2-butanone, 4-methyl-2-pentanone, and 1,4-dioxane. The initial calibration verification is outside acceptance criteria for dichlorodifluoromethane (162%), but within overall method criteria.

The continuing calibration standards, associated with L1430246-02 through -07, are outside the acceptance criteria for several compounds; however, they are within overall method allowances. Copies of the continuing calibration standards are included as an addendum to this report.

All QAQC data, including surrogate, trip blank, method blank, laboratory control sample (LCS), LCS duplicate, lab duplicate and matrix spike results were reviewed. This report was deemed usable by Angela Boyd on 1/5/15.



ANALYTICAL REPORT

Lab Number:	L1430246
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:	12/23/14

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

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), 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 LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1430246-01	MW-3I	WATER	EASTHAM, MA	12/16/14 10:30	12/16/14
L1430246-02	MW-2S	WATER	EASTHAM, MA	12/16/14 10:00	12/16/14
L1430246-03	MW-4S	WATER	EASTHAM, MA	12/16/14 11:15	12/16/14
L1430246-04	MW-5S	WATER	EASTHAM, MA	12/16/14 13:00	12/16/14
L1430246-05	MW-8	WATER	EASTHAM, MA	12/16/14 13:45	12/16/14
L1430246-06	DPW WELL	WATER	EASTHAM, MA	12/16/14 12:30	12/16/14
L1430246-07	TRIP BLANK	WATER	EASTHAM, MA	12/16/14 00:00	12/16/14

Project Name: EASTHAM LANDFILL

Lab Number: L1430246

Project Number: 2013-027

Report Date: 12/23/14

MADEP MCP Response Action Analytical Report Certification

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

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

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



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

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. 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: L1430246
Report Date: 12/23/14

Case Narrative (continued)

Report Submission

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

MCP Related Narratives

Sample Receipt

The samples were received without the containers for the Dissolved Metals analysis. An aliquot was taken from an unpreserved container, filtered, and preserved appropriately.

Volatile Organics

In reference to question H:

The initial calibration, associated with L1430246-02 through -07, did not meet the method required minimum response factor on the lowest calibration standard for 2-butanone (0.07688), 4-methyl-2-pentanone (0.05758), and 1,4-dioxane (0.00097), as well as the average response factor for 2-butanone, 4-methyl-2-pentanone, and 1,4-dioxane. The initial calibration verification is outside acceptance criteria for dichlorodifluoromethane (162%), but within overall method criteria.

The continuing calibration standards, associated with L1430246-02 through -07, are outside the acceptance criteria for several compounds; however, they are within overall method allowances. Copies of the continuing calibration standards are included as an addendum to this report.

Dissolved Metals

In reference to question I:

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

Non-MCP Related Narratives

Nitrogen, Nitrate

L1430246-03 and -04 have elevated detection limits due to the dilutions required by the sample matrix.

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:

 Lisa Westerlind

Title: Technical Director/Representative

Date: 12/23/14

ORGANICS

VOLATILES

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-02
 Client ID: MW-2S
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 97,8260C
 Analytical Date: 12/18/14 12:50
 Analyst: MM

Date Collected: 12/16/14 10:00
 Date Received: 12/16/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.29	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.16	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.17	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.16	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.18	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.14	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:** L1430246**Project Number:** 2013-027**Report Date:** 12/23/14**SAMPLE RESULTS**

Lab ID: L1430246-02
 Client ID: MW-2S
 Sample Location: EASTHAM, MA

Date Collected: 12/16/14 10:00
 Date Received: 12/16/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.16	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.33	1
Xylene (Total)	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	0.20	J	ug/l	1.0	0.19	1
1,2-Dichloroethene (total)	0.20	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: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-02
 Client ID: MW-2S
 Sample Location: EASTHAM, MA

Date Collected: 12/16/14 10:00
 Date Received: 12/16/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	0.82	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	130		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	114		70-130

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-03
 Client ID: MW-4S
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 97,8260C
 Analytical Date: 12/18/14 13:22
 Analyst: MM

Date Collected: 12/16/14 11:15
 Date Received: 12/16/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.29	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.16	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	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	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	0.14	1
Chloroethane	0.26	J	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:** L1430246**Project Number:** 2013-027**Report Date:** 12/23/14**SAMPLE RESULTS**

Lab ID: L1430246-03
 Client ID: MW-4S
 Sample Location: EASTHAM, MA

Date Collected: 12/16/14 11:15
 Date Received: 12/16/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	0.31	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	0.28	J	ug/l	1.0	0.19	1
1,2-Dichloroethene (total)	0.28	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: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-03
 Client ID: MW-4S
 Sample Location: EASTHAM, MA

Date Collected: 12/16/14 11:15
 Date Received: 12/16/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	1.9	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	129		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	113		70-130

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-04
 Client ID: MW-5S
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 97,8260C
 Analytical Date: 12/18/14 13:53
 Analyst: MM

Date Collected: 12/16/14 13:00
 Date Received: 12/16/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.29	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.16	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	0.29	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	0.20	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	0.14	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: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-04
Client ID: MW-5S
Sample Location: EASTHAM, MA

Date Collected: 12/16/14 13:00
Date Received: 12/16/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	0.32	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	0.50	J	ug/l	1.0	0.19	1
1,2-Dichloroethene (total)	0.50	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: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-04
 Client ID: MW-5S
 Sample Location: EASTHAM, MA

Date Collected: 12/16/14 13:00
 Date Received: 12/16/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	2.4		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	130		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	114		70-130

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-05
 Client ID: MW-8
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 97,8260C
 Analytical Date: 12/18/14 14:25
 Analyst: MM

Date Collected: 12/16/14 13:45
 Date Received: 12/16/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.29	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	0.22	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	0.14	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: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-05
Client ID: MW-8
Sample Location: EASTHAM, MA

Date Collected: 12/16/14 13:45
Date Received: 12/16/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.16	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.33	1
Xylene (Total)	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene (total)	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.14	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.18	1
o-Chlorotoluene	ND		ug/l	2.0	0.17	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.33	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	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: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-05
 Client ID: MW-8
 Sample Location: EASTHAM, MA

Date Collected: 12/16/14 13:45
 Date Received: 12/16/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	0.39	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	130		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	115		70-130

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-06
 Client ID: DPW WELL
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 97,8260C
 Analytical Date: 12/18/14 14:56
 Analyst: MM

Date Collected: 12/16/14 12:30
 Date Received: 12/16/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.29	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.16	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.17	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.16	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.18	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.14	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:** L1430246**Project Number:** 2013-027**Report Date:** 12/23/14**SAMPLE RESULTS**

Lab ID: L1430246-06
 Client ID: DPW WELL
 Sample Location: EASTHAM, MA

Date Collected: 12/16/14 12:30
 Date Received: 12/16/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.16	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.33	1
Xylene (Total)	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene (total)	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.14	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.18	1
o-Chlorotoluene	ND		ug/l	2.0	0.17	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.33	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	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: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-06
 Client ID: DPW WELL
 Sample Location: EASTHAM, MA

Date Collected: 12/16/14 12:30
 Date Received: 12/16/14
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	133	Q	70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	116		70-130

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-07
 Client ID: TRIP BLANK
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 97,8260C
 Analytical Date: 12/22/14 07:18
 Analyst: MM

Date Collected: 12/16/14 00:00
 Date Received: 12/16/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	0.29	1
1,1-Dichloroethane	ND		ug/l	1.0	0.21	1
Chloroform	ND		ug/l	1.0	0.16	1
Carbon tetrachloride	ND		ug/l	1.0	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.13	1
Dibromochloromethane	ND		ug/l	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.0	0.14	1
Tetrachloroethene	ND		ug/l	1.0	0.18	1
Chlorobenzene	ND		ug/l	1.0	0.18	1
Trichlorofluoromethane	ND		ug/l	2.0	0.16	1
1,2-Dichloroethane	ND		ug/l	1.0	0.13	1
1,1,1-Trichloroethane	ND		ug/l	1.0	0.16	1
Bromodichloromethane	ND		ug/l	1.0	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.0	0.17	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.14	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	1.0	0.16	1
Ethylbenzene	ND		ug/l	1.0	0.17	1
Chloromethane	ND		ug/l	2.0	0.18	1
Bromomethane	ND		ug/l	2.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.14	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: L1430246

Project Number: 2013-027

Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-07
 Client ID: TRIP BLANK
 Sample Location: EASTHAM, MA

Date Collected: 12/16/14 00:00
 Date Received: 12/16/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1.0	0.19	1
1,4-Dichlorobenzene	ND		ug/l	1.0	0.19	1
Methyl tert butyl ether	ND		ug/l	2.0	0.16	1
p/m-Xylene	ND		ug/l	2.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.33	1
Xylene (Total)	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.19	1
1,2-Dichloroethene (total)	ND		ug/l	1.0	0.16	1
Dibromomethane	ND		ug/l	2.0	0.36	1
1,2,3-Trichloropropane	ND		ug/l	2.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	2.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	2.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Bromochloromethane	ND		ug/l	2.0	0.14	1
Tetrahydrofuran	ND		ug/l	2.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.0	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.0	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16	1
Bromobenzene	ND		ug/l	2.0	0.15	1
n-Butylbenzene	ND		ug/l	2.0	0.19	1
sec-Butylbenzene	ND		ug/l	2.0	0.18	1
tert-Butylbenzene	ND		ug/l	2.0	0.18	1
o-Chlorotoluene	ND		ug/l	2.0	0.17	1
p-Chlorotoluene	ND		ug/l	2.0	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	0.33	1
Hexachlorobutadiene	ND		ug/l	0.60	0.22	1
Isopropylbenzene	ND		ug/l	2.0	0.19	1
p-Isopropyltoluene	ND		ug/l	2.0	0.19	1
Naphthalene	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: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-07
 Client ID: TRIP BLANK
 Sample Location: EASTHAM, MA

Date Collected: 12/16/14 00:00
 Date Received: 12/16/14
 Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	98		70-130

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 12/18/14 06:00
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02-06 Batch: WG749843-3					
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	0.14
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: L1430246
Report Date: 12/23/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 12/18/14 06:00
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02-06 Batch: WG749843-3					
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	ND		ug/l	2.0	0.30
2-Butanone	ND		ug/l	5.0	1.9
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.14
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.18
o-Chlorotoluene	ND		ug/l	2.0	0.17

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8260C
Analytical Date: 12/18/14 06:00
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02-06 Batch: WG749843-3					
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	ND		ug/l	250	41.
tert-Butyl Alcohol	ND		ug/l	10	0.90

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	116		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	104		70-130

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 12/22/14 06:46
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 07 Batch: WG750873-3					
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	0.14
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: L1430246
Report Date: 12/23/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
 Analytical Date: 12/22/14 06:46
 Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 07 Batch: WG750873-3					
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	ND		ug/l	2.0	0.30
2-Butanone	ND		ug/l	5.0	1.9
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Bromochloromethane	ND		ug/l	2.0	0.14
Tetrahydrofuran	ND		ug/l	2.0	0.52
2,2-Dichloropropane	ND		ug/l	2.0	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.0	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	0.16
Bromobenzene	ND		ug/l	2.0	0.15
n-Butylbenzene	ND		ug/l	2.0	0.19
sec-Butylbenzene	ND		ug/l	2.0	0.18
tert-Butylbenzene	ND		ug/l	2.0	0.18
o-Chlorotoluene	ND		ug/l	2.0	0.17

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 12/22/14 06:46
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 07 Batch: WG750873-3					
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	ND		ug/l	250	41.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	98		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Lab Number: L1430246

Project Number: 2013-027

Report Date: 12/23/14

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 02-06 Batch: WG749843-1 WG749843-2								
Methylene chloride	106		102		70-130	4		20
1,1-Dichloroethane	112		109		70-130	3		20
Chloroform	111		109		70-130	2		20
Carbon tetrachloride	101		105		70-130	4		20
1,2-Dichloropropane	107		106		70-130	1		20
Dibromochloromethane	97		96		70-130	1		20
1,1,2-Trichloroethane	105		103		70-130	2		20
Tetrachloroethene	110		104		70-130	6		20
Chlorobenzene	106		101		70-130	5		20
Trichlorofluoromethane	110		105		70-130	5		20
1,2-Dichloroethane	118		117		70-130	1		20
1,1,1-Trichloroethane	107		108		70-130	1		20
Bromodichloromethane	103		105		70-130	2		20
trans-1,3-Dichloropropene	100		100		70-130	0		20
cis-1,3-Dichloropropene	101		102		70-130	1		20
1,1-Dichloropropene	110		106		70-130	4		20
Bromoform	86		90		70-130	5		20
1,1,2,2-Tetrachloroethane	96		96		70-130	0		20
Benzene	108		105		70-130	3		20
Toluene	107		102		70-130	5		20
Ethylbenzene	111		106		70-130	5		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Lab Number: L1430246

Project Number: 2013-027

Report Date: 12/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02-06 Batch: WG749843-1 WG749843-2								
Chloromethane	95		93		70-130	2		20
Bromomethane	79		79		70-130	0		20
Vinyl chloride	102		99		70-130	3		20
Chloroethane	109		104		70-130	5		20
1,1-Dichloroethene	102		99		70-130	3		20
trans-1,2-Dichloroethene	106		103		70-130	3		20
Trichloroethene	108		104		70-130	4		20
1,2-Dichlorobenzene	104		100		70-130	4		20
1,3-Dichlorobenzene	103		99		70-130	4		20
1,4-Dichlorobenzene	104		99		70-130	5		20
Methyl tert butyl ether	102		103		70-130	1		20
p/m-Xylene	110		105		70-130	5		20
o-Xylene	110		105		70-130	5		20
cis-1,2-Dichloroethene	108		104		70-130	4		20
Dibromomethane	110		111		70-130	1		20
1,2,3-Trichloropropane	100		100		70-130	0		20
Styrene	110		106		70-130	4		20
Dichlorodifluoromethane	81		79		70-130	3		20
Acetone	134	Q	137	Q	70-130	2		20
Carbon disulfide	89		90		70-130	1		20
2-Butanone	120		128		70-130	6		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Lab Number: L1430246

Project Number: 2013-027

Report Date: 12/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02-06 Batch: WG749843-1 WG749843-2								
4-Methyl-2-pentanone	103		105		70-130	2		20
2-Hexanone	111		116		70-130	4		20
Bromochloromethane	110		108		70-130	2		20
Tetrahydrofuran	104		109		70-130	5		20
2,2-Dichloropropane	104		106		70-130	2		20
1,2-Dibromoethane	107		106		70-130	1		20
1,3-Dichloropropane	106		104		70-130	2		20
1,1,1,2-Tetrachloroethane	100		100		70-130	0		20
Bromobenzene	103		99		70-130	4		20
n-Butylbenzene	102		99		70-130	3		20
sec-Butylbenzene	103		100		70-130	3		20
tert-Butylbenzene	103		100		70-130	3		20
o-Chlorotoluene	104		100		70-130	4		20
p-Chlorotoluene	105		101		70-130	4		20
1,2-Dibromo-3-chloropropane	97		103		70-130	6		20
Hexachlorobutadiene	97		96		70-130	1		20
Isopropylbenzene	110		105		70-130	5		20
p-Isopropyltoluene	103		100		70-130	3		20
Naphthalene	99		99		70-130	0		20
n-Propylbenzene	107		103		70-130	4		20
1,2,3-Trichlorobenzene	100		100		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Project Number: 2013-027

Lab Number: L1430246

Report Date: 12/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02-06 Batch: WG749843-1 WG749843-2								
1,2,4-Trichlorobenzene	99		98		70-130	1		20
1,3,5-Trimethylbenzene	106		100		70-130	6		20
1,2,4-Trimethylbenzene	107		101		70-130	6		20
Ethyl ether	108		105		70-130	3		20
Isopropyl Ether	117		116		70-130	1		20
Ethyl-Tert-Butyl-Ether	106		106		70-130	0		20
Tertiary-Amyl Methyl Ether	97		97		70-130	0		20
1,4-Dioxane	93		115		70-130	21	Q	20
tert-Butyl Alcohol	109		127		70-130	15		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	110		112		70-130
Toluene-d8	102		100		70-130
4-Bromofluorobenzene	99		99		70-130
Dibromofluoromethane	103		106		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Lab Number: L1430246

Project Number: 2013-027

Report Date: 12/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 07 Batch: WG750873-1 WG750873-2								
Methylene chloride	110		104		70-130	6		20
1,1-Dichloroethane	114		108		70-130	5		20
Chloroform	110		106		70-130	4		20
Carbon tetrachloride	98		99		70-130	1		20
1,2-Dichloropropane	112		106		70-130	6		20
Dibromochloromethane	94		91		70-130	3		20
1,1,2-Trichloroethane	106		99		70-130	7		20
Tetrachloroethene	110		103		70-130	7		20
Chlorobenzene	109		101		70-130	8		20
Trichlorofluoromethane	104		96		70-130	8		20
1,2-Dichloroethane	112		107		70-130	5		20
1,1,1-Trichloroethane	106		105		70-130	1		20
Bromodichloromethane	103		101		70-130	2		20
trans-1,3-Dichloropropene	102		98		70-130	4		20
cis-1,3-Dichloropropene	106		102		70-130	4		20
1,1-Dichloropropene	112		106		70-130	6		20
Bromoform	86		88		70-130	2		20
1,1,2,2-Tetrachloroethane	101		97		70-130	4		20
Benzene	114		108		70-130	5		20
Toluene	113		104		70-130	8		20
Ethylbenzene	114		106		70-130	7		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Lab Number: L1430246

Project Number: 2013-027

Report Date: 12/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 07 Batch: WG750873-1 WG750873-2								
Chloromethane	98		94		70-130	4		20
Bromomethane	82		79		70-130	4		20
Vinyl chloride	108		98		70-130	10		20
Chloroethane	110		103		70-130	7		20
1,1-Dichloroethene	107		103		70-130	4		20
trans-1,2-Dichloroethene	113		106		70-130	6		20
Trichloroethene	112		106		70-130	6		20
1,2-Dichlorobenzene	106		100		70-130	6		20
1,3-Dichlorobenzene	106		100		70-130	6		20
1,4-Dichlorobenzene	106		101		70-130	5		20
Methyl tert butyl ether	114		105		70-130	8		20
p/m-Xylene	114		106		70-130	7		20
o-Xylene	114		105		70-130	8		20
cis-1,2-Dichloroethene	112		104		70-130	7		20
Dibromomethane	108		103		70-130	5		20
1,2,3-Trichloropropane	102		96		70-130	6		20
Styrene	113		105		70-130	7		20
Dichlorodifluoromethane	77		73		70-130	5		20
Acetone	127		120		70-130	6		20
Carbon disulfide	97		94		70-130	3		20
2-Butanone	124		118		70-130	5		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Lab Number: L1430246

Project Number: 2013-027

Report Date: 12/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 07 Batch: WG750873-1 WG750873-2								
4-Methyl-2-pentanone	114		106		70-130	7		20
2-Hexanone	120		114		70-130	5		20
Bromochloromethane	110		104		70-130	6		20
Tetrahydrofuran	114		109		70-130	4		20
2,2-Dichloropropane	115		110		70-130	4		20
1,2-Dibromoethane	108		100		70-130	8		20
1,3-Dichloropropane	108		101		70-130	7		20
1,1,1,2-Tetrachloroethane	100		96		70-130	4		20
Bromobenzene	104		99		70-130	5		20
n-Butylbenzene	109		100		70-130	9		20
sec-Butylbenzene	110		104		70-130	6		20
tert-Butylbenzene	109		104		70-130	5		20
o-Chlorotoluene	107		102		70-130	5		20
p-Chlorotoluene	107		103		70-130	4		20
1,2-Dibromo-3-chloropropane	97		95		70-130	2		20
Hexachlorobutadiene	100		97		70-130	3		20
Isopropylbenzene	112		105		70-130	6		20
p-Isopropyltoluene	109		102		70-130	7		20
Naphthalene	102		96		70-130	6		20
n-Propylbenzene	113		108		70-130	5		20
1,2,3-Trichlorobenzene	101		95		70-130	6		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Lab Number: L1430246

Project Number: 2013-027

Report Date: 12/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 07 Batch: WG750873-1 WG750873-2								
1,2,4-Trichlorobenzene	102		96		70-130	6		20
1,3,5-Trimethylbenzene	109		104		70-130	5		20
1,2,4-Trimethylbenzene	109		104		70-130	5		20
Ethyl ether	110		103		70-130	7		20
Isopropyl Ether	123		117		70-130	5		20
Ethyl-Tert-Butyl-Ether	118		111		70-130	6		20
Tertiary-Amyl Methyl Ether	113		104		70-130	8		20
1,4-Dioxane	133	Q	144	Q	70-130	8		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	100		99		70-130
Toluene-d8	100		100		70-130
4-Bromofluorobenzene	100		101		70-130
Dibromofluoromethane	98		99		70-130

SEMIVOLATILES

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-01
 Client ID: MW-3I
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 12/21/14 10:26
 Analyst: CM

Date Collected: 12/16/14 10:30
 Date Received: 12/16/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 12/19/14 10:00

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	35		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-02
 Client ID: MW-2S
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 12/21/14 11:11
 Analyst: CM

Date Collected: 12/16/14 10:00
 Date Received: 12/16/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 12/19/14 10:00

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

1,4-Dioxane	0.337		ug/l	0.142	0.0708	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	33		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-05
 Client ID: MW-8
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 12/21/14 11:56
 Analyst: CM

Date Collected: 12/16/14 13:45
 Date Received: 12/16/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 12/19/14 10:00

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

1,4-Dioxane	0.283		ug/l	0.150	0.0750	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	37		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-06
 Client ID: DPW WELL
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 12/21/14 12:41
 Analyst: CM

Date Collected: 12/16/14 12:30
 Date Received: 12/16/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 12/19/14 10:00

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

1,4-Dioxane	0.0793	J	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: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-07
 Client ID: TRIP BLANK
 Sample Location: EASTHAM, MA
 Matrix: Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 12/21/14 13:27
 Analyst: CM

Date Collected: 12/16/14 00:00
 Date Received: 12/16/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 12/19/14 10:00

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	0.144	0.0721	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	33		15-110

Project Name: EASTHAM LANDFILL

Lab Number: L1430246

Project Number: 2013-027

Report Date: 12/23/14

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 12/20/14 22:27

Extraction Date: 12/19/14 10:00

Analyst: CM

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-02,05-07 Batch: WG750315-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

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

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01-02,05-07 Batch: WG750315-2 WG750315-3								
1,4-Dioxane	114		113		40-140	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	33		28		15-110

METALS

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-02
 Client ID: MW-2S
 Sample Location: EASTHAM, MA
 Matrix: Water

Date Collected: 12/16/14 10:00
 Date Received: 12/16/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	0.0047	J	mg/l	0.0050	0.0020	1	12/16/14 22:16	12/23/14 10:02	NA	97,6010C	JH
Barium, Dissolved	0.009	J	mg/l	0.010	0.003	1	12/16/14 22:16	12/23/14 10:02	NA	97,6010C	JH
Cadmium, Dissolved	ND		mg/l	0.004	0.001	1	12/16/14 22:16	12/23/14 10:02	NA	97,6010C	JH
Calcium, Dissolved	16		mg/l	0.10	0.03	1	12/16/14 22:16	12/23/14 10:02	NA	97,6010C	JH
Chromium, Dissolved	ND		mg/l	0.01	0.002	1	12/16/14 22:16	12/23/14 10:02	NA	97,6010C	JH
Copper, Dissolved	ND		mg/l	0.010	0.002	1	12/16/14 22:16	12/23/14 10:02	NA	97,6010C	JH
Iron, Dissolved	0.43		mg/l	0.05	0.02	1	12/16/14 22:16	12/23/14 10:02	NA	97,6010C	JH
Lead, Dissolved	ND		mg/l	0.010	0.002	1	12/16/14 22:16	12/23/14 10:02	NA	97,6010C	JH
Manganese, Dissolved	0.311		mg/l	0.010	0.002	1	12/16/14 22:16	12/23/14 10:02	NA	97,6010C	JH
Mercury, Dissolved	ND		mg/l	0.0002	0.0002	1	12/17/14 13:53	12/17/14 19:41	EPA 7470A	97,7470A	AK
Selenium, Dissolved	ND		mg/l	0.010	0.003	1	12/16/14 22:16	12/23/14 10:02	NA	97,6010C	JH
Silver, Dissolved	ND		mg/l	0.007	0.002	1	12/16/14 22:16	12/23/14 10:02	NA	97,6010C	JH
Sodium, Dissolved	15		mg/l	2.0	0.30	1	12/16/14 22:16	12/23/14 10:02	NA	97,6010C	JH
Zinc, Dissolved	ND		mg/l	0.050	0.007	1	12/16/14 22:16	12/23/14 10:02	NA	97,6010C	JH



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-03
 Client ID: MW-4S
 Sample Location: EASTHAM, MA
 Matrix: Water

Date Collected: 12/16/14 11:15
 Date Received: 12/16/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab											
Arsenic, Dissolved	0.006		mg/l	0.005	0.002	1	12/16/14 22:16	12/23/14 10:06	NA	97,6010C	JH
Barium, Dissolved	0.035		mg/l	0.010	0.003	1	12/16/14 22:16	12/23/14 10:06	NA	97,6010C	JH
Cadmium, Dissolved	ND		mg/l	0.004	0.001	1	12/16/14 22:16	12/23/14 10:06	NA	97,6010C	JH
Calcium, Dissolved	33		mg/l	0.10	0.03	1	12/16/14 22:16	12/23/14 10:06	NA	97,6010C	JH
Chromium, Dissolved	ND		mg/l	0.01	0.002	1	12/16/14 22:16	12/23/14 10:06	NA	97,6010C	JH
Copper, Dissolved	ND		mg/l	0.010	0.002	1	12/16/14 22:16	12/23/14 10:06	NA	97,6010C	JH
Iron, Dissolved	8.7		mg/l	0.05	0.02	1	12/16/14 22:16	12/23/14 10:06	NA	97,6010C	JH
Lead, Dissolved	ND		mg/l	0.010	0.002	1	12/16/14 22:16	12/23/14 10:06	NA	97,6010C	JH
Manganese, Dissolved	2.69		mg/l	0.010	0.002	1	12/16/14 22:16	12/23/14 10:06	NA	97,6010C	JH
Mercury, Dissolved	ND		mg/l	0.0002	0.0002	1	12/17/14 13:53	12/17/14 19:43	EPA 7470A	97,7470A	AK
Selenium, Dissolved	ND		mg/l	0.010	0.003	1	12/16/14 22:16	12/23/14 10:06	NA	97,6010C	JH
Silver, Dissolved	ND		mg/l	0.007	0.002	1	12/16/14 22:16	12/23/14 10:06	NA	97,6010C	JH
Sodium, Dissolved	18		mg/l	2.0	0.30	1	12/16/14 22:16	12/23/14 10:06	NA	97,6010C	JH
Zinc, Dissolved	ND		mg/l	0.050	0.007	1	12/16/14 22:16	12/23/14 10:06	NA	97,6010C	JH



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-04
 Client ID: MW-5S
 Sample Location: EASTHAM, MA
 Matrix: Water

Date Collected: 12/16/14 13:00
 Date Received: 12/16/14
 Field Prep: Not Specified

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	12/16/14 22:16	12/23/14 10:10	NA	97,6010C	JH
Barium, Dissolved	0.022		mg/l	0.010	0.003	1	12/16/14 22:16	12/23/14 10:10	NA	97,6010C	JH
Cadmium, Dissolved	ND		mg/l	0.004	0.001	1	12/16/14 22:16	12/23/14 10:10	NA	97,6010C	JH
Calcium, Dissolved	31		mg/l	0.10	0.03	1	12/16/14 22:16	12/23/14 10:10	NA	97,6010C	JH
Chromium, Dissolved	ND		mg/l	0.01	0.002	1	12/16/14 22:16	12/23/14 10:10	NA	97,6010C	JH
Copper, Dissolved	ND		mg/l	0.010	0.002	1	12/16/14 22:16	12/23/14 10:10	NA	97,6010C	JH
Iron, Dissolved	2.0		mg/l	0.05	0.02	1	12/16/14 22:16	12/23/14 10:10	NA	97,6010C	JH
Lead, Dissolved	0.002	J	mg/l	0.010	0.002	1	12/16/14 22:16	12/23/14 10:10	NA	97,6010C	JH
Manganese, Dissolved	4.53		mg/l	0.010	0.002	1	12/16/14 22:16	12/23/14 10:10	NA	97,6010C	JH
Mercury, Dissolved	ND		mg/l	0.0002	0.0002	1	12/17/14 13:53	12/17/14 19:45	EPA 7470A	97,7470A	AK
Selenium, Dissolved	ND		mg/l	0.010	0.003	1	12/16/14 22:16	12/23/14 10:10	NA	97,6010C	JH
Silver, Dissolved	ND		mg/l	0.007	0.002	1	12/16/14 22:16	12/23/14 10:10	NA	97,6010C	JH
Sodium, Dissolved	12		mg/l	2.0	0.30	1	12/16/14 22:16	12/23/14 10:10	NA	97,6010C	JH
Zinc, Dissolved	ND		mg/l	0.050	0.007	1	12/16/14 22:16	12/23/14 10:10	NA	97,6010C	JH



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

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): 02-04 Batch: WG749497-1										
Mercury, Dissolved	ND		mg/l	0.0002	0.0002	1	12/17/14 13:53	12/17/14 19:36	97,7470A	AK

Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab for sample(s): 02-04 Batch: WG751274-1										
Arsenic, Dissolved	0.003	J	mg/l	0.005	0.002	1	12/16/14 22:16	12/23/14 09:50	97,6010C	JH
Barium, Dissolved	ND		mg/l	0.010	0.003	1	12/16/14 22:16	12/23/14 09:50	97,6010C	JH
Cadmium, Dissolved	ND		mg/l	0.004	0.001	1	12/16/14 22:16	12/23/14 09:50	97,6010C	JH
Calcium, Dissolved	ND		mg/l	0.10	0.03	1	12/16/14 22:16	12/23/14 09:50	97,6010C	JH
Chromium, Dissolved	ND		mg/l	0.01	0.002	1	12/16/14 22:16	12/23/14 09:50	97,6010C	JH
Copper, Dissolved	ND		mg/l	0.010	0.002	1	12/16/14 22:16	12/23/14 09:50	97,6010C	JH
Iron, Dissolved	ND		mg/l	0.05	0.02	1	12/16/14 22:16	12/23/14 09:50	97,6010C	JH
Lead, Dissolved	ND		mg/l	0.010	0.002	1	12/16/14 22:16	12/23/14 09:50	97,6010C	JH
Manganese, Dissolved	ND		mg/l	0.010	0.002	1	12/16/14 22:16	12/23/14 09:50	97,6010C	JH
Selenium, Dissolved	ND		mg/l	0.010	0.003	1	12/16/14 22:16	12/23/14 09:50	97,6010C	JH
Silver, Dissolved	ND		mg/l	0.007	0.002	1	12/16/14 22:16	12/23/14 09:50	97,6010C	JH
Sodium, Dissolved	ND		mg/l	2.0	0.30	1	12/16/14 22:16	12/23/14 09:50	97,6010C	JH
Zinc, Dissolved	ND		mg/l	0.050	0.007	1	12/16/14 22:16	12/23/14 09:50	97,6010C	JH

Prep Information

Digestion Method: NA

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Lab Number: L1430246

Project Number: 2013-027

Report Date: 12/23/14

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Dissolved Metals - Westborough Lab Associated sample(s): 02-04 Batch: WG749497-2 WG749497-3								
Mercury, Dissolved	97		102		80-120	5		20
MCP Dissolved Metals - Westborough Lab Associated sample(s): 02-04 Batch: WG751274-2 WG751274-3								
Arsenic, Dissolved	108		101		80-120	7		20
Barium, Dissolved	92		90		80-120	2		20
Cadmium, Dissolved	109		103		80-120	6		20
Calcium, Dissolved	100		100		80-120	0		20
Chromium, Dissolved	100		90		80-120	11		20
Copper, Dissolved	97		89		80-120	9		20
Iron, Dissolved	95		95		80-120	0		20
Lead, Dissolved	104		97		80-120	7		20
Manganese, Dissolved	92		90		80-120	2		20
Selenium, Dissolved	107		102		80-120	5		20
Silver, Dissolved	99		91		80-120	8		20
Sodium, Dissolved	100		100		80-120	0		20
Zinc, Dissolved	106		100		80-120	6		20

INORGANICS & MISCELLANEOUS

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-02
Client ID: MW-2S
Sample Location: EASTHAM, MA
Matrix: Water

Date Collected: 12/16/14 10:00
Date Received: 12/16/14
Field Prep: Not Specified

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	12/19/14 12:31	12/19/14 16:54	97,9014	ML
General Chemistry - Westborough Lab										
Alkalinity, Total	126.		mg CaCO3/L	2.00	NA	1	-	12/18/14 10:30	30,2320B	SG
Solids, Total Dissolved	160		mg/l	10	3.6	1	-	12/19/14 16:20	30,2540C	DW
Chloride	24.		mg/l	1.0	0.20	1	-	12/17/14 10:02	1,9251	LA
Nitrogen, Nitrate	ND		mg/l	0.100	0.015	1	-	12/17/14 01:59	30,4500NO3-F	DB
Sulfate	22.		mg/l	10	3.1	1	12/18/14 14:45	12/18/14 14:45	1,9038	MP
Chemical Oxygen Demand	5.2	J	mg/l	20	3.5	1	12/19/14 18:40	12/19/14 21:15	30,5220D	TL



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-03
Client ID: MW-4S
Sample Location: EASTHAM, MA
Matrix: Water

Date Collected: 12/16/14 11:15
Date Received: 12/16/14
Field Prep: Not Specified

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	12/19/14 12:31	12/19/14 16:54	97,9014	ML
General Chemistry - Westborough Lab										
Alkalinity, Total	166.		mg CaCO3/L	2.00	NA	1	-	12/18/14 10:30	30,2320B	SG
Solids, Total Dissolved	190		mg/l	10	3.6	1	-	12/19/14 16:20	30,2540C	DW
Chloride	21.		mg/l	1.0	0.20	1	-	12/17/14 09:39	1,9251	LA
Nitrogen, Nitrate	ND		mg/l	0.500	0.076	5	-	12/17/14 02:14	30,4500NO3-F	DB
Sulfate	14.		mg/l	10	3.1	1	12/18/14 14:45	12/18/14 14:45	1,9038	MP
Chemical Oxygen Demand	12.	J	mg/l	20	3.5	1	12/19/14 18:40	12/19/14 21:15	30,5220D	TL



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

SAMPLE RESULTS

Lab ID: L1430246-04
Client ID: MW-5S
Sample Location: EASTHAM, MA
Matrix: Water

Date Collected: 12/16/14 13:00
Date Received: 12/16/14
Field Prep: Not Specified

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	12/19/14 12:31	12/19/14 16:55	97,9014	ML
General Chemistry - Westborough Lab										
Alkalinity, Total	198.		mg CaCO3/L	2.00	NA	1	-	12/18/14 10:30	30,2320B	SG
Solids, Total Dissolved	220		mg/l	10	3.6	1	-	12/19/14 16:20	30,2540C	DW
Chloride	18.		mg/l	1.0	0.20	1	-	12/17/14 09:40	1,9251	LA
Nitrogen, Nitrate	ND		mg/l	0.500	0.076	5	-	12/17/14 02:18	30,4500NO3-F	DB
Sulfate	20.		mg/l	10	3.1	1	12/18/14 14:45	12/18/14 14:45	1,9038	MP
Chemical Oxygen Demand	26.		mg/l	20	3.5	1	12/19/14 18:40	12/19/14 21:16	30,5220D	TL



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 02-04 Batch: WG749211-1										
Nitrogen, Nitrate	ND		mg/l	0.100	0.015	1	-	12/17/14 00:53	30,4500NO3-F	DB
General Chemistry - Westborough Lab for sample(s): 02-04 Batch: WG749318-1										
Chloride	ND		mg/l	1.0	0.20	1	-	12/17/14 09:09	1,9251	LA
General Chemistry - Westborough Lab for sample(s): 02-04 Batch: WG749890-1										
Sulfate	ND		mg/l	10	3.1	1	12/18/14 14:45	12/18/14 14:45	1,9038	MP
General Chemistry - Westborough Lab for sample(s): 02-04 Batch: WG749925-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	12/18/14 10:30	30,2320B	SG
General Chemistry - Westborough Lab for sample(s): 02-04 Batch: WG750206-1										
Solids, Total Dissolved	ND		mg/l	10	3.6	1	-	12/19/14 16:20	30,2540C	DW
MCP General Chemistry - Westborough Lab for sample(s): 02-04 Batch: WG750320-1										
Cyanide, Total	ND		mg/l	0.005	0.005	1	12/19/14 12:31	12/19/14 16:43	97,9014	ML
General Chemistry - Westborough Lab for sample(s): 02-04 Batch: WG750459-1										
Chemical Oxygen Demand	ND		mg/l	20	3.5	1	12/19/14 18:40	12/19/14 21:10	30,5220D	TL

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Project Number: 2013-027

Lab Number: L1430246

Report Date: 12/23/14

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
General Chemistry - Westborough Lab Associated sample(s): 02-04 Batch: WG749211-2								
Nitrogen, Nitrate	94		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 02-04 Batch: WG749318-2								
Chloride	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 02-04 Batch: WG749890-2								
Sulfate	95		-		84-119	-		
General Chemistry - Westborough Lab Associated sample(s): 02-04 Batch: WG749925-3								
Alkalinity, Total	106		-		90-110	-		10
General Chemistry - Westborough Lab Associated sample(s): 02-04 Batch: WG750206-2								
Solids, Total Dissolved	84		-		80-120	-		
MCP General Chemistry - Westborough Lab Associated sample(s): 02-04 Batch: WG750320-2 WG750320-3								
Cyanide, Total	96		100		80-120	4		20
General Chemistry - Westborough Lab Associated sample(s): 02-04 Batch: WG750459-2								
Chemical Oxygen Demand	99		-		93-106	-		

Matrix Spike Analysis Batch Quality Control

Project Name: EASTHAM LANDFILL

Lab Number: L1430246

Project Number: 2013-027

Report Date: 12/23/14

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): 02-04 QC Batch ID: WG749211-4 QC Sample: L1430200-01 Client ID: MS Sample												
Nitrogen, Nitrate	0.039J	4	4.00	100	-	-	-	-	83-113	-	-	17
General Chemistry - Westborough Lab Associated sample(s): 02-04 QC Batch ID: WG749318-4 QC Sample: L1430200-02 Client ID: MS Sample												
Chloride	1.1	20	21	100	-	-	-	-	58-140	-	-	7
General Chemistry - Westborough Lab Associated sample(s): 02-04 QC Batch ID: WG749890-4 QC Sample: L1430200-02 Client ID: MS Sample												
Sulfate	8.1J	20	29	145	-	-	-	-	55-147	-	-	14
General Chemistry - Westborough Lab Associated sample(s): 02-04 QC Batch ID: WG749925-4 QC Sample: L1430248-06 Client ID: MS Sample												
Alkalinity, Total	9.30	100	113	104	-	-	-	-	86-116	-	-	10
General Chemistry - Westborough Lab Associated sample(s): 02-04 QC Batch ID: WG750459-3 QC Sample: L1430246-02 Client ID: MW-2S												
Chemical Oxygen Demand	5.2J	238	260	108	-	-	-	-	84-120	-	-	12

Lab Duplicate Analysis

Batch Quality Control

Project Name: EASTHAM LANDFILL

Project Number: 2013-027

Lab Number: L1430246

Report Date: 12/23/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02-04 QC Batch ID: WG749211-3 QC Sample: L1430200-01 Client ID: DUP Sample						
Nitrogen, Nitrate	0.039J	ND	mg/l	NC		17
General Chemistry - Westborough Lab Associated sample(s): 02-04 QC Batch ID: WG749318-3 QC Sample: L1430200-02 Client ID: DUP Sample						
Chloride	1.1	1.1	mg/l	0		7
General Chemistry - Westborough Lab Associated sample(s): 02-04 QC Batch ID: WG749890-3 QC Sample: L1430200-02 Client ID: DUP Sample						
Sulfate	8.1J	7.9J	mg/l	NC		14
General Chemistry - Westborough Lab Associated sample(s): 02-04 QC Batch ID: WG749925-2 QC Sample: L1430248-06 Client ID: DUP Sample						
Alkalinity, Total	9.30	8.60	mg CaCO3/L	8		10
General Chemistry - Westborough Lab Associated sample(s): 02-04 QC Batch ID: WG750206-3 QC Sample: L1430248-03 Client ID: DUP Sample						
Solids, Total Dissolved	530	530	mg/l	0		17
General Chemistry - Westborough Lab Associated sample(s): 02-04 QC Batch ID: WG750459-4 QC Sample: L1430246-02 Client ID: MW-2S						
Chemical Oxygen Demand	5.2J	12.J	mg/l	NC		12

Project Name: EASTHAM LANDFILL

Lab Number: L1430246

Project Number: 2013-027

Report Date: 12/23/14

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(*)
L1430246-01D	Amber 500ml unpreserved	A	7	5.6	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1430246-01E	Amber 500ml unpreserved	A	7	5.6	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1430246-02A	Vial HCl preserved	A	N/A	5.6	Y	Absent	MCP-8260-10(14)
L1430246-02B	Vial HCl preserved	A	N/A	5.6	Y	Absent	MCP-8260-10(14)
L1430246-02C	Vial HCl preserved	A	N/A	5.6	Y	Absent	MCP-8260-10(14)
L1430246-02D	Plastic 250ml unpreserved w/No H	A	N/A	5.6	Y	Absent	ALK-T-2320(14)
L1430246-02E	Plastic 500ml H2SO4 preserved	A	<2	5.6	Y	Absent	COD-5220(28)
L1430246-02F	Plastic 250ml NaOH preserved	A	>12	5.6	Y	Absent	MCP-TCN9014-10(14)
L1430246-02G	Plastic 250ml HNO3 preserved	A	<2	5.6	Y	Absent	HOLD-METAL(180)
L1430246-02H	Plastic 500ml unpreserved	A	7	5.6	Y	Absent	CL-9251(28),SO4-9038(28),NO3-4500(2),TDS-2540(7)
L1430246-02I	Amber 500ml unpreserved	A	7	5.6	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1430246-02J	Amber 500ml unpreserved	A	7	5.6	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1430246-02S	Plastic 250ml unpreserved split	A	7	5.6	Y	Absent	FILTER-MET(1)
L1430246-02X	Plastic 120ml HNO3 preserved spl	A	<2	5.6	Y	Absent	MCP-CD-6010S-10(180),MCP-FE-6010S-10(180),MCP-NA-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-CA-6010S-10(180),MCP-CU-6010S-10(180),MCP-SE-6010S-10(180)
L1430246-03A	Vial HCl preserved	A	N/A	5.6	Y	Absent	MCP-8260-10(14)
L1430246-03B	Vial HCl preserved	A	N/A	5.6	Y	Absent	MCP-8260-10(14)
L1430246-03C	Vial HCl preserved	A	N/A	5.6	Y	Absent	MCP-8260-10(14)
L1430246-03D	Plastic 250ml unpreserved w/No H	A	N/A	5.6	Y	Absent	ALK-T-2320(14)

*Values in parentheses indicate holding time in days

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1430246-03E	Plastic 500ml H2SO4 preserved	A	<2	5.6	Y	Absent	COD-5220(28)
L1430246-03F	Plastic 250ml NaOH preserved	A	>12	5.6	Y	Absent	MCP-TCN9014-10(14)
L1430246-03G	Plastic 250ml HNO3 preserved	A	<2	5.6	Y	Absent	HOLD-METAL(180)
L1430246-03H	Plastic 500ml unpreserved	A	7	5.6	Y	Absent	CL-9251(28),SO4-9038(28),NO3-4500(2),TDS-2540(7)
L1430246-03S	Plastic 250ml unpreserved split	A	7	5.6	Y	Absent	FILTER-MET(1)
L1430246-03X	Plastic 120ml HNO3 preserved spl	A	<2	5.6	Y	Absent	MCP-CD-6010S-10(180),MCP-FE-6010S-10(180),MCP-NA-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-CA-6010S-10(180),MCP-CU-6010S-10(180),MCP-SE-6010S-10(180)
L1430246-04A	Vial HCl preserved	A	N/A	5.6	Y	Absent	MCP-8260-10(14)
L1430246-04B	Vial HCl preserved	A	N/A	5.6	Y	Absent	MCP-8260-10(14)
L1430246-04C	Vial HCl preserved	A	N/A	5.6	Y	Absent	MCP-8260-10(14)
L1430246-04D	Plastic 250ml unpreserved w/No H	A	N/A	5.6	Y	Absent	ALK-T-2320(14)
L1430246-04E	Plastic 500ml H2SO4 preserved	A	<2	5.6	Y	Absent	COD-5220(28)
L1430246-04F	Plastic 250ml NaOH preserved	A	>12	5.6	Y	Absent	MCP-TCN9014-10(14)
L1430246-04G	Plastic 250ml HNO3 preserved	A	<2	5.6	Y	Absent	HOLD-METAL(180)
L1430246-04H	Plastic 500ml unpreserved	A	7	5.6	Y	Absent	CL-9251(28),SO4-9038(28),NO3-4500(2),TDS-2540(7)
L1430246-04S	Plastic 250ml unpreserved split	A	7	5.6	Y	Absent	FILTER-MET(1)
L1430246-04X	Plastic 120ml HNO3 preserved spl	A	<2	5.6	Y	Absent	MCP-CD-6010S-10(180),MCP-FE-6010S-10(180),MCP-NA-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-CA-6010S-10(180),MCP-CU-6010S-10(180),MCP-SE-6010S-10(180)
L1430246-05A	Vial HCl preserved	A	N/A	5.6	Y	Absent	MCP-8260-10(14)
L1430246-05B	Vial HCl preserved	A	N/A	5.6	Y	Absent	MCP-8260-10(14)
L1430246-05C	Vial HCl preserved	A	N/A	5.6	Y	Absent	MCP-8260-10(14)

*Values in parentheses indicate holding time in days



Project Name: EASTHAM LANDFILL**Project Number:** 2013-027**Lab Number:** L1430246**Report Date:** 12/23/14**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1430246-05D	Amber 500ml unpreserved	A	7	5.6	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1430246-05E	Amber 500ml unpreserved	A	7	5.6	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1430246-06A	Vial HCl preserved	A	N/A	5.6	Y	Absent	MCP-8260-10(14)
L1430246-06B	Vial HCl preserved	A	N/A	5.6	Y	Absent	MCP-8260-10(14)
L1430246-06C	Vial HCl preserved	A	N/A	5.6	Y	Absent	MCP-8260-10(14)
L1430246-06D	Amber 500ml unpreserved	A	7	5.6	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1430246-06E	Amber 500ml unpreserved	A	7	5.6	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1430246-07A	Amber 500ml unpreserved	A	7	5.6	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1430246-07B	Amber 500ml unpreserved	A	7	5.6	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1430246-07C	Vial HCl preserved	A	N/A	5.6	Y	Absent	MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

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.
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.

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.
- 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.

Report Format: DU Report with 'J' Qualifiers



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430246
Report Date: 12/23/14

Data Qualifiers

- 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: L1430246
Report Date: 12/23/14

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

Last revised December 16, 2014

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

Westborough Facility

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

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

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

EPA 625: 4-Chloroaniline, 4-Methylphenol.

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

EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

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

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

Drinking Water

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

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

EPA 332: Perchlorate.

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

Non-Potable Water

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

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

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

EPA 624: Volatile Halocarbons & Aromatics,

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

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

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

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



CHAIN OF CUSTODY

PAGE 1 OF 1

Project Information

Project Name: Eastham Landfill

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:

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:

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

Date Rec'd in Lab:

ALPHA Job #:

Report Information Data Deliverables

FAX EMAIL
 ADEx Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program

Criteria

8260 & 8270 & Metals - MCP

0.15 ug/l for 1,4 dioxane, GW-1

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

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

ANALYSIS

1,4 DIOXANE BY 8270	VOCS BY 8260	dissolved metals: As, Ba, Cd, Cr, Cu, Fe,	- Pb, Mn, Hg, Se, Ag, Zn	Nitrate as Nitrogen, Alkalinity	Chloride, Sulfate	Total dissolved solids	COD	Cyanide								
<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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<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 checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<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 checked="" type="checkbox"/>	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>
<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"/>	<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"/>	<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"/>	<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"/>

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

Sample Specific Comments

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
	MW-3I	12/16/14	1030	GW	LKM
	MW-2S	12/16/14	1000		LKM
	MW-4S	12/16/14	1115		LKM
	MW-5S	12/16/14	1300		LKM
	MW-8	12/16/14	1345		LKM
	DPW Well	12/16/14	1230		LKM
	trip blank				

PLEASE ANSWER QUESTIONS ABOVE!

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

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time

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(1)
(rev. 5-JAN-12)



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 Landfill

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

Project Location: Eastham MA

Project #: 2013-027

Project Manager: Lisa Flynn

ALPHA Quote #:

Turn-Around Time

Standard Rush (ONLY IF PRE-APPROVED)

These samples have been Previously analyzed by Alpha

Due Date: 12/23/14 Time:

Other Project Specific Requirements/Comments/Detection Limits:

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

Date Rec'd in Lab: 12/16/14 ALPHA Job #: L1430246

Report Information **Data Deliverables** **Billing Information**

FAX EMAIL Same as Client info PO #:
 ADEx Add'l Deliverables

Regulatory Requirements/Report Limits

State/Fed Program: 8260 & 8270 & Metals - 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													SAMPLE HANDLING	TOTAL # BOTTLES
1,4 DIOXANE BY 8270	VOCS BY 8260	dissolved metals: As, Ba, Cd, Cr, Cu, Fe, - Pb, Mn, Hg, Se, Ag, Zn	Nitrate as Nitrogen, Alkalinity	Chloride, Sulfate	Total dissolved solids	COD	Cyanide							
														<input type="checkbox"/> Done
														<input type="checkbox"/> Not Needed
														<input type="checkbox"/> Lab to do
														<input type="checkbox"/> Lab to do
														(Please specify below)
														Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
30246-01	MW-3I			GW	
02	MW-2S				
03	MW-4S				
04	MW-5S				
05	MW-8				
06	DPW Well				
07	trip blank				

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(0)
(rev. 5-JAN-12)

Container Type	-	-	-	-	-	-	-	-	-	-	-	-	-
Preservative	-	-	-	-	-	-	-	-	-	-	-	-	-
Relinquished By:	Date/Time			Received By:	Date/Time								
				<i>Walter M U</i>	<u>12/16/14 1:35</u>								

Please print clearly, legibly and completely. Samples can't 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 _____ OF _____

Date Rec'd in Lab: 12/16/14

ALPHA Job #: 21430246

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300**Project Information**

Project Name:

Report Information - Data Deliverables ADEx EMAIL**Billing Information** Same as Client info PO #:

Project Location:

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 _____

Project #:

Project Manager:

ALPHA Quote #:

Turn-Around Time Standard RUSH (only confirmed if pre-approved!)

Date Due:

Client InformationClient: *ENVIRONMENTAL STRATEGIES*Address: *(AT BCL)*

Phone:

Email:

Additional Project Information:

ANALYSIS		SAMPLE INFO	TOTAL # BOTTLES
VOC: <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> 524.2	SVOC: <input type="checkbox"/> ABN <input type="checkbox"/> PAH		
METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15	METALS: <input type="checkbox"/> RCRA5 <input type="checkbox"/> RCRA8 <input type="checkbox"/> PPT3	Filtration	
EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	<input type="checkbox"/> Field	
<input type="checkbox"/> PCB <input type="checkbox"/> PEST	TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint	Preservation	
		<input type="checkbox"/> Lab to do	
		<input type="checkbox"/> Lab to do	
Sample Comments			

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials	ANALYSIS	SVOC	METALS	METALS	EPH	VPH	PCB	TPH	SAMPLE INFO	TOTAL # BOTTLES
		Date	Time												
	30246-01-01														

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= HNO ₃ D= H ₂ SO ₄ E= NaOH F= MeOH G= NaHSO ₄ H= Na ₂ S ₂ O ₃ I= Ascorbic Acid J= NH ₄ Cl K= Zn Acetate O= Other	Container Type Preservative	Relinquished By: <i>[Signature]</i> Date/Time: 12/16/14 15:10	Received By: <i>[Signature]</i> Date/Time: 12/16/14 15:25	All samples submitted are subject to Alpha's Terms and Conditions. See reverse side. FORM NO: 01-01 (rev. 12-Mar-2012)
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7A
Volatile Organics CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1430246

Instrument ID: Quimby.i Calibration Date: 18-DEC-2014 Time: 04:26

Lab File ID: 1218A01 Init. Calib. Date(s): 16-OCT-2 25-NOV-2

Sample No: 8260 CCAL Init. Calib. Times : 10:21 23:56

Compound	RRF	RRF	MIN RRF	%D	MAX %D
dichlorodifluoromethane	.21946	.17781	.1	-19	20
chloromethane	.37022	.35117	.1	-5	20
vinyl chloride	.34662	.35408	.1	2	20
bromomethane	.22369	.17729	.1	-21	20
chloroethane	.28355	.31035	.1	9	20
trichlorofluoromethane	.52604	.57658	.1	10	20
ethyl ether	.14955	.16199	.05	8	20
acrolein	100	109	.05	9	20
freon-113	.33674	.35901	.1	7	20
acetone	100	134	.1	34	20
1,1,-dichloroethene	.31222	.3169	.1	2	20
tert-butyl alcohol	500	547	.05	9	20
iodomethane	.2644	.1359	.05	-49	20
methyl acetate	.14895	.16464	.01	11	20
methylene chloride	.36481	.38854	.1	7	20
carbon disulfide	.85039	.76051	.1	-11	20
acrylonitrile	.09897	.11598	.05	17	20
methyl tert butyl ether	.66219	.67553	.1	2	20
Halothane	.23972	.24893	.05	4	20
trans-1,2-dichloroethene	.35641	.37883	.1	6	20
Diisopropyl Ether	1.2775	1.4930	.05	17	20
vinyl acetate	.53582	.57983	.05	8	20
1,1-dichloroethane	.84151	.94495	.2	12	20
Ethyl-Tert-Butyl-Ether	1.1231	1.1891	.05	6	20
2-butanone	.0841	.10143	.1	21	20
2,2-dichloropropane	.4969	.51754	.05	4	20
ethyl acetate	.19332	.23598	.05	22	20
cis-1,2-dichloroethene	.40343	.43629	.1	8	20
chloroform	.73964	.82235	.2	11	20
bromochloromethane	.13757	.15066	.05	10	20
tetrahydrofuran	100	104	.05	4	20
1,1,1-trichloroethane	.63534	.67795	.1	7	20
cyclohexane	.87911	.98263	.01	12	30
1,1-dichloropropene	.58723	.64568	.05	10	20
carbontetrachloride	.47935	.48396	.1	1	20
Tertiary-Amyl Methyl Ether	.70958	.69042	.05	-3	20
1,2-dichloroethane	.55623	.65695	.1	18	20
benzene	1.5862	1.7199	.5	8	20

FORM VII MCP-8260-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1430246

Instrument ID: Quimby.i Calibration Date: 18-DEC-2014 Time: 04:26

Lab File ID: 1218A01 Init. Calib. Date(s): 16-OCT-2 25-NOV-2

Sample No: 8260 CCAL Init. Calib. Times : 10:21 23:56

Compound	RRF	RRF	MIN RRF	%D	MAX %D	
=====	=====	=====	=====	=====	=====	
trichloroethene	.42123	.45433	.2	8	20	
methyl cyclohexane	.72075	.759	.01	5	30	
1,2-dichloropropane	.46901	.50253	.1	7	20	
bromodichloromethane	.52421	.54177	.2	3	20	
1,4-dioxane	.00165	.00153	.05	-7	20	F
dibromomethane	.16953	.18711	.05	10	20	
2-chloroethylvinyl ether	.09224	.05841	.05	-37	20	F
4-methyl-2-pentanone	.09418	.09736	.1	3	20	F
cis-1,3-dichloropropene	.55065	.55881	.2	1	20	
toluene	1.4197	1.5174	.4	7	20	
ethyl-methacrylate	.100	.97044	.01	-3	0	F
trans-1,3-dichloropropene	.60023	.60176	.1	0	20	
2-hexanone	.17491	.19467	.1	11	20	
1,1,2-trichloroethane	.30441	.31976	.1	5	20	
1,3-dichloropropane	.66616	.7091	.05	6	20	
tetrachloroethene	.5358	.58796	.2	10	20	
chlorodibromomethane	.37633	.36567	.1	-3	20	
1,2-dibromoethane	.30606	.32887	.1	7	20	
chlorobenzene	1.4930	1.5864	.5	6	20	
1,1,1,2-tetrachloroethane	.46564	.46798	.05	1	20	
ethyl benzene	2.9619	3.2992	.1	11	20	
p/m xylene	1.0698	1.1788	.1	10	20	
o xylene	1.0010	1.1039	.3	10	20	
styrene	1.6242	1.7857	.31	10	20	
isopropylbenzene	2.9195	3.2049	.1	10	20	
bromoform	.34667	.2993	.1	-14	20	
1,4-dichlorobutane	1.5385	1.6364	.01	6	20	
1,1,2,2,-tetrachloroethane	.7656	.73765	.3	-4	20	
1,2,3-trichloropropane	.60071	.60346	.05	0	20	
trans-1,4-dichloro-2-butene	.25099	.26412	.05	5	20	
n-propylbenzene	6.2510	6.6777	.05	7	20	
bromobenzene	1.0673	1.1013	.05	3	20	
4-ethyltoluene	2.2510	2.4263	.05	8	20	
1,3,5-trimethylbenzene	4.5293	4.7848	.05	6	20	
2-chlorotoluene	4.5534	4.7540	.05	4	20	
4-chlorotoluene	4.1031	4.3058	.05	5	20	
tert-butylbenzene	3.6416	3.7526	.05	3	20	
1,2,4-trimethylbenzene	4.3335	4.6369	.05	7	20	

FORM VII MCP-8260-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1430246

Instrument ID: Quimby.i Calibration Date: 22-DEC-2014 Time: 05:12

Lab File ID: 1222A01 Init. Calib. Date(s): 16-OCT-2 25-NOV-2

Sample No: 8260 CCAL Init. Calib. Times : 10:21 23:56

Compound	RRF	RRF	MIN RRF	%D	MAX %D	
dichlorodifluoromethane	.21946	.16944	.1	-23	20	F
chloromethane	.37022	.36238	.1	-2	20	
vinyl chloride	.34662	.37367	.1	8	20	
bromomethane	.22369	.18332	.1	-18	20	
chloroethane	.28355	.3133	.1	10	20	
trichlorofluoromethane	.52604	.5456	.1	4	20	
ethyl ether	.14955	.16501	.05	10	20	
acrolein	100	109	.05	9	20	
freon-113	.33674	.3626	.1	8	20	
acetone	100	127	.1	27	20	F
1,1,-dichloroethene	.31222	.33497	.1	7	20	
tert-butyl alcohol	500	587	.05	17	20	
iodomethane	.2644	.16267	.05	-38	20	F
methyl acetate	.14895	.17692	.01	19	20	
methylene chloride	.36481	.40335	.1	11	20	
carbon disulfide	.85039	.82698	.1	-3	20	
acrylonitrile	.09897	.11641	.05	18	20	
methyl tert butyl ether	.66219	.75741	.1	14	20	
Halothane	.23972	.26099	.05	9	20	
trans-1,2-dichloroethene	.35641	.40432	.1	13	20	
Diisopropyl Ether	1.2775	1.5729	.05	23	20	F
vinyl acetate	.53582	.60091	.05	12	20	
1,1-dichloroethane	.84151	.95561	.2	14	20	
Ethyl-Tert-Butyl-Ether	1.1231	1.3240	.05	18	20	
2-butanone	.0841	.10388	.1	24	20	F
2,2-dichloropropane	.4969	.56982	.05	15	20	
ethyl acetate	.19332	.22321	.05	15	20	
cis-1,2-dichloroethene	.40343	.45181	.1	12	20	
chloroform	.73964	.8164	.2	10	20	
bromochloromethane	.13757	.15158	.05	10	20	
tetrahydrofuran	100	115	.05	15	20	
1,1,1-trichloroethane	.63534	.67417	.1	6	20	
cyclohexane	.87911	1.0446	.01	19	30	
1,1-dichloropropene	.58723	.65983	.05	12	20	
carbontetrachloride	.47935	.46758	.1	-2	20	
Tertiary-Amyl Methyl Ether	.70958	.79999	.05	13	20	
1,2-dichloroethane	.55623	.62358	.1	12	20	
benzene	1.5862	1.8097	.5	14	20	

FORM VII MCP-8260-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1430246

Instrument ID: Quimby.i Calibration Date: 22-DEC-2014 Time: 05:12

Lab File ID: 1222A01 Init. Calib. Date(s): 16-OCT-2 25-NOV-2

Sample No: 8260 CCAL Init. Calib. Times : 10:21 23:56

Compound	RRF	RRF	MIN RRF	%D	MAX %D
trichloroethene	.42123	.47089	.2	12	20
methyl cyclohexane	.72075	.82795	.01	15	30
1,2-dichloropropane	.46901	.5266	.1	12	20
bromodichloromethane	.52421	.53961	.2	3	20
1,4-dioxane	.00165	.00219	.05	33	20
dibromomethane	.16953	.18313	.05	8	20
2-chloroethylvinyl ether	.09224	.15614	.05	69	20
4-methyl-2-pentanone	.09418	.10705	.1	14	20
cis-1,3-dichloropropene	.55065	.58523	.2	6	20
toluene	1.4197	1.6029	.4	13	20
ethyl-methacrylate	.100	.103	.01	3	0
trans-1,3-dichloropropene	.60023	.61316	.1	2	20
2-hexanone	.17491	.20924	.1	20	20
1,1,2-trichloroethane	.30441	.32348	.1	6	20
1,3-dichloropropane	.66616	.71786	.05	8	20
tetrachloroethene	.5358	.58951	.2	10	20
chlorodibromomethane	.37633	.35354	.1	-6	20
1,2-dibromoethane	.30606	.33053	.1	8	20
chlorobenzene	1.4930	1.6305	.5	9	20
1,1,1,2-tetrachloroethane	.46564	.46613	.05	0	20
ethyl benzene	2.9619	3.3653	.1	14	20
p/m xylene	1.0698	1.2151	.1	14	20
o xylene	1.0010	1.1396	.3	14	20
styrene	1.6242	1.8370	.31	13	20
isopropylbenzene	2.9195	3.2818	.1	12	20
bromoform	.34667	.29896	.1	-14	20
1,4-dichlorobutane	1.5385	1.6797	.01	9	20
1,1,2,2,-tetrachloroethane	.7656	.77308	.3	1	20
1,2,3-trichloropropane	.60071	.61156	.05	2	20
trans-1,4-dichloro-2-butene	.25099	.2688	.05	7	20
n-propylbenzene	6.2510	7.0439	.05	13	20
bromobenzene	1.0673	1.1115	.05	4	20
4-ethyltoluene	2.2510	2.5042	.05	11	20
1,3,5-trimethylbenzene	4.5293	4.9286	.05	9	20
2-chlorotoluene	4.5534	4.8582	.05	7	20
4-chlorotoluene	4.1031	4.4043	.05	7	20
tert-butylbenzene	3.6416	3.9614	.05	9	20
1,2,4-trimethylbenzene	4.3335	4.7228	.05	9	20

F
F
F
F

FORM VII MCP-8260-10

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	L1430424	12/17/2015	DW	Yes	Yes	Yes	Yes	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis
Old Orchard Rd_130A	12/17/2014	L1430424-1	DW	8270
Old Orchard Rd_130A Dup	12/17/2014	L1430424-2	DW	Not Analyzed
Old Orchard Rd_130B	12/17/2014	L1430424-3	DW	8270
Old Orchard Rd_130B Dup	12/17/2014	L1430424-4	DW	Not Analyzed
Alston Ave_280	12/17/2014	L1430424-5	DW	8270
Alston Ave_280 Dup	12/17/2014	L1430424-6	DW	Not Analyzed
Trip Blank	12/17/2014	L1430424-7	DW	Not Analyzed - No hits in samples

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 1/5/15.



ANALYTICAL REPORT

Lab Number:	L1430424
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:	12/22/14

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), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), 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 LANDFILL
Project Number: 2013-027

Lab Number: L1430424
Report Date: 12/22/14

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1430424-01	OLD ORCHARD RD_130A	DRINKING WATER	EASTHAM, MA	12/17/14 09:50	12/17/14
L1430424-02	OLD ORCHARD RD_130A DUP	DRINKING WATER	EASTHAM, MA	12/17/14 09:55	12/17/14
L1430424-03	OLD ORCHARD RD_130B	DRINKING WATER	EASTHAM, MA	12/17/14 10:00	12/17/14
L1430424-04	OLD ORCHARD RD_130B DUP	DRINKING WATER	EASTHAM, MA	12/17/14 10:05	12/17/14
L1430424-05	ALSTON AVE_280	DRINKING WATER	EASTHAM, MA	12/17/14 11:40	12/17/14
L1430424-06	ALSTON AVE_280 DUP	DRINKING WATER	EASTHAM, MA	12/17/14 11:45	12/17/14
L1430424-07	TRIP BLANK	DRINKING WATER	EASTHAM, MA	12/17/14 00:00	12/17/14

Project Name: EASTHAM LANDFILL

Lab Number: L1430424

Project Number: 2013-027

Report Date: 12/22/14

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 LANDFILL
Project Number: 2013-027

Lab Number: L1430424
Report Date: 12/22/14

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. 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: L1430424
Report Date: 12/22/14

Case Narrative (continued)

MCP Related Narratives

In reference to question I:

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

Report Submission

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

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:  Christopher J. Anderson

Title: Technical Director/Representative

Date: 12/22/14

ORGANICS

SEMIVOLATILES

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430424
Report Date: 12/22/14

SAMPLE RESULTS

Lab ID: L1430424-01
 Client ID: OLD ORCHARD RD_130A
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 12/21/14 14:12
 Analyst: CM

Date Collected: 12/17/14 09:50
 Date Received: 12/17/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 12/19/14 10:00

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	37		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430424
Report Date: 12/22/14

SAMPLE RESULTS

Lab ID: L1430424-03
 Client ID: OLD ORCHARD RD_130B
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 12/21/14 14:57
 Analyst: CM

Date Collected: 12/17/14 10:00
 Date Received: 12/17/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 12/19/14 10:00

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
-------------	----	--	------	-------	--------	---

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

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430424
Report Date: 12/22/14

SAMPLE RESULTS

Lab ID: L1430424-05
 Client ID: ALSTON AVE_280
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 12/21/14 15:43
 Analyst: CM

Date Collected: 12/17/14 11:40
 Date Received: 12/17/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 12/19/14 10:00

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
-------------	----	--	------	-------	--------	---

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	37		15-110

Project Name: EASTHAM LANDFILL

Lab Number: L1430424

Project Number: 2013-027

Report Date: 12/22/14

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 12/20/14 22:27

Extraction Date: 12/19/14 10:00

Analyst: CM

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01,03,05 Batch: WG750315-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

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

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430424
Report Date: 12/22/14

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 Batch: WG750315-2 WG750315-3								
1,4-Dioxane	114		113		40-140	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	33		28		15-110

Project Name: EASTHAM LANDFILL

Lab Number: L1430424

Project Number: 2013-027

Report Date: 12/22/14

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(*)
L1430424-01A	Amber 500ml unpreserved	A	7	5.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1430424-01B	Amber 500ml unpreserved	A	7	5.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1430424-02A	Amber 500ml unpreserved	A	7	5.1	Y	Absent	HOLD(14)
L1430424-02B	Amber 500ml unpreserved	A	7	5.1	Y	Absent	HOLD(14)
L1430424-03A	Amber 500ml unpreserved	A	7	5.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1430424-03B	Amber 500ml unpreserved	A	7	5.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1430424-04A	Amber 500ml unpreserved	A	7	5.1	Y	Absent	HOLD(14)
L1430424-04B	Amber 500ml unpreserved	A	7	5.1	Y	Absent	HOLD(14)
L1430424-05A	Amber 500ml unpreserved	A	7	5.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1430424-05B	Amber 500ml unpreserved	A	7	5.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1430424-06A	Amber 500ml unpreserved	A	7	5.1	Y	Absent	HOLD(14)
L1430424-06B	Amber 500ml unpreserved	A	7	5.1	Y	Absent	HOLD(14)
L1430424-07A	Amber 500ml unpreserved	A	7	5.1	Y	Absent	HOLD(14)
L1430424-07B	Amber 500ml unpreserved	A	7	5.1	Y	Absent	HOLD(14)

*Values in parentheses indicate holding time in days

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430424
Report Date: 12/22/14

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.
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.

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.
- 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.

Report Format: DU Report with 'J' Qualifiers



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1430424
Report Date: 12/22/14

Data Qualifiers

- 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: L1430424
Report Date: 12/22/14

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

Last revised December 16, 2014

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

Westborough Facility

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

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

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

EPA 625: 4-Chloroaniline, 4-Methylphenol.

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

EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

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

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

Drinking Water

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

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

EPA 332: Perchlorate.

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

Non-Potable Water

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

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

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

EPA 624: Volatile Halocarbons & Aromatics,

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

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

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

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

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	L1501653	1/23/2015	DW	Yes	Yes	No	Yes	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis
Deepwood Dr_050	1/23/2015	L1501653-1	DW	8270
Deepwood Dr_050 Dup	1/23/2015	L1501653-2	DW	Not Analyzed
Eldia Way_005	1/23/2015	L1501653-3	DW	8270
Eldia Way_005 Dup	1/23/2015	L1501653-4	DW	Not Analyzed
Schoolhouse Rd_415	1/23/2015	L1501653-5	DW	8270
Schoolhouse Rd_415 Dup	1/23/2015	L1501653-6	DW	Not Analyzed
Trip Blank	1/23/2015	L1501653-7	DW	Not Analyzed

The surrogate recovery for the WG760282-3 LCS, associated with L1501653-06 and -07, is outside the acceptance criteria for 1,4-dioxane-d8 (13%). The LCS spike compounds are within overall method allowances; therefore, no further action was taken.

All QAQC data, including surrogate, trip blank, method blank, laboratory control sample (LCS) and LCS duplicate results were reviewed. This report was deemed usable by Angela Boyd on 2/9/15.



ANALYTICAL REPORT

Lab Number:	L1501653
Client:	Environmental Strategies & Mgmt. 273 West Main Street Norton, MA 02766
ATTN:	Angela Boyd
Phone:	(508) 226-1800
Project Name:	EASTHAM DW
Project Number:	Not Specified
Report Date:	02/03/15

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), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), 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: Not Specified

Lab Number: L1501653
Report Date: 02/03/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1501653-01	DEEPWOOD DR_050	DRINKING WATER	EASTHAM, MA	01/23/15 11:00	01/23/15
L1501653-02	DEEPWOOD DR_050 DUP	DRINKING WATER	EASTHAM, MA	01/23/15 11:05	01/23/15
L1501653-03	ELDIA WAY_005	DRINKING WATER	EASTHAM, MA	01/23/15 09:40	01/23/15
L1501653-04	ELDIA WAY_005 DUP	DRINKING WATER	EASTHAM, MA	01/23/15 09:45	01/23/15
L1501653-05	SCHOOLHOUSE RD_415	DRINKING WATER	EASTHAM, MA	01/23/15 15:20	01/23/15
L1501653-06	SCHOOLHOUSE RD_415 DUP	DRINKING WATER	EASTHAM, MA	01/23/15 15:25	01/23/15
L1501653-07	TRIP BLANK	DRINKING WATER	EASTHAM, MA	01/23/15 00:00	01/23/15

Project Name: EASTHAM DW
Project Number: Not Specified

Lab Number: L1501653
Report Date: 02/03/15

MADEP MCP Response Action Analytical Report Certification

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

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

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



Project Name: EASTHAM DW
Project Number: Not Specified

Lab Number: L1501653
Report Date: 02/03/15

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. 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: Not Specified

Lab Number: L1501653
Report Date: 02/03/15

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

Semivolatile Organics by SIM

In reference to question H:

The surrogate recovery for the WG760282-3 LCS, associated with L1501653-06 and -07, is outside the acceptance criteria for 1,4-dioxane-d8 (13%). The LCS spike compounds are within overall method allowances; therefore, no further action was taken.

In reference to question I:

All samples were analyzed for a subset of MCP compounds 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:  Cynthia McQueen

Title: Technical Director/Representative

Date: 02/03/15

ORGANICS

SEMIVOLATILES

Project Name: EASTHAM DW**Lab Number:** L1501653**Project Number:** Not Specified**Report Date:** 02/03/15**SAMPLE RESULTS**

Lab ID: L1501653-01
Client ID: DEEPWOOD DR_050
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 02/03/15 03:43
Analyst: CM

Date Collected: 01/23/15 11:00
Date Received: 01/23/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 01/29/15 05:42

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	18		15-110

Project Name: EASTHAM DW**Lab Number:** L1501653**Project Number:** Not Specified**Report Date:** 02/03/15**SAMPLE RESULTS**

Lab ID: L1501653-03
Client ID: ELDIA WAY_005
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 02/03/15 04:27
Analyst: CM

Date Collected: 01/23/15 09:40
Date Received: 01/23/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 01/29/15 05:42

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	0.163	0.0815	1
-------------	----	--	------	-------	--------	---

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

Project Name: EASTHAM DW**Lab Number:** L1501653**Project Number:** Not Specified**Report Date:** 02/03/15**SAMPLE RESULTS**

Lab ID: L1501653-05
Client ID: SCHOOLHOUSE RD_415
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 02/03/15 05:10
Analyst: CM

Date Collected: 01/23/15 15:20
Date Received: 01/23/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 01/29/15 05:42

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	16		15-110

Project Name: EASTHAM DW

Lab Number: L1501653

Project Number: Not Specified

Report Date: 02/03/15

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 02/03/15 09:35

Extraction Date: 01/29/15 05:42

Analyst: CM

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01,03,05 Batch: WG760282-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

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

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM DW
Project Number: Not Specified

Lab Number: L1501653
Report Date: 02/03/15

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 Batch: WG760282-2 WG760282-3								
1,4-Dioxane	108		110		40-140	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	17		13	Q	15-110

Project Name: EASTHAM DW

Lab Number: L1501653

Project Number: Not Specified

Report Date: 02/03/15

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
B Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1501653-01A	Amber 500ml unpreserved	A	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501653-01B	Amber 500ml unpreserved	A	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501653-02A	Amber 500ml unpreserved	A	7	5.4	Y	Absent	HOLD(14)
L1501653-02B	Amber 500ml unpreserved	A	7	5.4	Y	Absent	HOLD(14)
L1501653-03A	Amber 500ml unpreserved	A	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501653-03B	Amber 500ml unpreserved	A	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501653-04A	Amber 500ml unpreserved	A	7	5.4	Y	Absent	HOLD(14)
L1501653-04B	Amber 500ml unpreserved	A	7	5.4	Y	Absent	HOLD(14)
L1501653-05A	Amber 500ml unpreserved	A	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501653-05B	Amber 500ml unpreserved	A	7	5.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501653-06A	Amber 500ml unpreserved	A	7	5.4	Y	Absent	HOLD(14)
L1501653-06B	Amber 500ml unpreserved	A	7	5.4	Y	Absent	HOLD(14)
L1501653-07A	Amber 500ml unpreserved	B	7	3.7	Y	Absent	HOLD(14)
L1501653-07B	Amber 500ml unpreserved	B	7	3.7	Y	Absent	HOLD(14)
L1501653-08A	Amber 500ml unpreserved	B	7	3.7	Y	Absent	-
L1501653-08B	Amber 500ml unpreserved	B	7	3.7	Y	Absent	-
L1501653-09A	Amber 500ml unpreserved	B	7	3.7	Y	Absent	-
L1501653-09B	Amber 500ml unpreserved	B	7	3.7	Y	Absent	-
L1501653-10A	Amber 500ml unpreserved	B	7	3.7	Y	Absent	-
L1501653-10B	Amber 500ml unpreserved	B	7	3.7	Y	Absent	-
L1501653-10C	Amber 500ml unpreserved	A	7	5.4	Y	Absent	-
L1501653-10D	Amber 500ml unpreserved	A	7	5.4	Y	Absent	-

*Values in parentheses indicate holding time in days



Project Name: EASTHAM DW
Project Number: Not Specified

Lab Number: L1501653
Report Date: 02/03/15

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.
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.

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.
- 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.

Report Format: DU Report with 'J' Qualifiers



Project Name: EASTHAM DW
Project Number: Not Specified

Lab Number: L1501653
Report Date: 02/03/15

Data Qualifiers

- 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: Not Specified

Lab Number: L1501653
Report Date: 02/03/15

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

Last revised December 16, 2014

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

Westborough Facility

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

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

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

EPA 625: 4-Chloroaniline, 4-Methylphenol.

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

EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

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

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

Drinking Water

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

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

EPA 332: Perchlorate.

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

Non-Potable Water

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

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

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

EPA 624: Volatile Halocarbons & Aromatics,

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

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

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

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



CHAIN OF CUSTODY

PAGE 1 OF 1

Project Information

Project Name: Eastham DW

Project Location: Eastham, MA

Project #:

Project Manager: Angela Boyd

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 & Mgmt.

Address: 273 West Main Street

Norton, MA 02766

Phone: 508-226-1800

Fax:

Email: aboyd@esm-inc.com

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Also report to lflynn@esm-inc.com

Date Rec'd in Lab:

ALPHA Job #: 41501653

Report Information Data Deliverables

FAX EMAIL
 ADEx Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

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																						
-01	DEEPWOOD DR_050	1/23/15	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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
-02	DEEPWOOD DR_050 DUP	1/23/15	11:05	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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
-03	ELDIA WAY_005	1/23/15	09:40	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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
-04	ELDIA WAY_005 DUP	1/23/15	09:45	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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	SCHOOLHOUSE RD_395	1/23/15	14:55	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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	SCHOOLHOUSE RD_395 DUP	1/23/15	15:00	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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
-05	SCHOOLHOUSE RD_415	1/23/15	15:20	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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
-06	SCHOOLHOUSE RD_415 DUP	1/23/15	15:25	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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
				DW	I	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
				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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2

PLEASE ANSWER QUESTIONS ABOVE!

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

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
	1/23/15 16:45		1/23/15 16:45

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.

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	L1501707	1/23/2015	DW	Yes	Yes	Yes	Yes	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis
PTC-21 255 Alston Eff	1/23/2015	L1501707-1	DW	8270
PTC-21 255 Alston Mid	1/23/2015	L1501707-2	DW	8270
PTC-21 255 Alston Inf	1/23/2015	L1501707-3	DW	8270
Trip Blank	1/23/2015	L1501707-4	DW	8270

Sample L1501707-04 was extracted outside the 7 day hold time.

The surrogate recovery for the WG760282-3 LCSD, associated with L1501707-01, -02 and -03 is outside the acceptance criteria for 1,4-Dioxane-d8 (13%). The LCS spike compounds are within overall method allowances; therefore, no further action was taken.

All QAQC data, including surrogate, trip blank, method blank, laboratory control sample (LCS) and LCS duplicate results were reviewed. This report was deemed usable by Angela Boyd on 2/12/15.



ANALYTICAL REPORT

Lab Number:	L1501707
Client:	Environmental Strategies & Mgmt. 273 West Main Street Norton, MA 02766
ATTN:	Angela Boyd
Phone:	(508) 226-1800
Project Name:	EASTHAM LANDFILL
Project Number:	2013-027
Report Date:	02/12/15

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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 LANDFILL
Project Number: 2013-027

Lab Number: L1501707
Report Date: 02/12/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1501707-01	PTC-21 255 ALSTON EFF	DRINKING WATER	EASTHAM, MA	01/23/15 11:30	01/23/15
L1501707-02	PTC-21 255 ALSTON MID	DRINKING WATER	EASTHAM, MA	01/23/15 11:35	01/23/15
L1501707-03	PTC-21 255 ALSTON INF	DRINKING WATER	EASTHAM, MA	01/23/15 11:40	01/23/15
L1501707-04	TRIPBLANK	DRINKING WATER	EASTHAM, MA	01/23/15 00:00	01/23/15

Project Name: EASTHAM LANDFILL

Lab Number: L1501707

Project Number: 2013-027

Report Date: 02/12/15

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 LANDFILL
Project Number: 2013-027

Lab Number: L1501707
Report Date: 02/12/15

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. 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: L1501707
Report Date: 02/12/15

Case Narrative (continued)

Report Reissue

This report replaces the report issued on February 5, 2015. The sample IDs have been updated accordingly.

MCP Related Narratives

In reference to question I:

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

Report Submission

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


Semivolatile Organics by SIM

Sample L1501707-04 was extracted outside the 7 day hold time.

The surrogate recovery for the WG760282-3 LCSD, associated with L1501707-01, -02 and -03 is outside the acceptance criteria for 1,4-Dioxane-d8 (13%). The LCS spike compounds are within overall method allowances; therefore, no further action was taken.

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: 02/12/15

ORGANICS

SEMIVOLATILES

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501707
Report Date: 02/12/15

SAMPLE RESULTS

Lab ID: L1501707-01
 Client ID: PTC-21 255 ALSTON EFF
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 02/03/15 05:54
 Analyst: CM

Date Collected: 01/23/15 11:30
 Date Received: 01/23/15
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 01/29/15 05:42

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	20		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501707
Report Date: 02/12/15

SAMPLE RESULTS

Lab ID: L1501707-02
 Client ID: PTC-21 255 ALSTON MID
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 02/03/15 06:38
 Analyst: CM

Date Collected: 01/23/15 11:35
 Date Received: 01/23/15
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 01/29/15 05:42

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

1,4-Dioxane	0.296		ug/l	0.144	0.0721	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	15		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501707
Report Date: 02/12/15

SAMPLE RESULTS

Lab ID: L1501707-03
 Client ID: PTC-21 255 ALSTON INF
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 02/03/15 07:22
 Analyst: CM

Date Collected: 01/23/15 11:40
 Date Received: 01/23/15
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 01/29/15 05:42

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

1,4-Dioxane	2.13		ug/l	0.144	0.0721	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	19		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501707
Report Date: 02/12/15

SAMPLE RESULTS

Lab ID: L1501707-04
 Client ID: TRIPBLANK
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 02/05/15 15:06
 Analyst: CM

Date Collected: 01/23/15 00:00
 Date Received: 01/23/15
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 02/04/15 14:30

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	0.150	0.0750	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	20		15-110

Project Name: EASTHAM LANDFILL

Lab Number: L1501707

Project Number: 2013-027

Report Date: 02/12/15

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 02/03/15 09:35

Extraction Date: 01/29/15 05:42

Analyst: CM

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-03 Batch: WG760282-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

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

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501707
Report Date: 02/12/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 02/05/15 12:55
Analyst: CM

Extraction Method: EPA 3510C
Extraction Date: 02/04/15 14:30

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 04 Batch: WG760564-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

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

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501707
Report Date: 02/12/15

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 Batch: WG760282-2 WG760282-3								
1,4-Dioxane	108		110		40-140	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	17		13	Q	15-110

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501707
Report Date: 02/12/15

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): 04 Batch: WG760564-2 WG760564-3								
1,4-Dioxane	111		112		40-140	1		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	20		22		15-110

Project Name: EASTHAM LANDFILL

Lab Number: L1501707

Project Number: 2013-027

Report Date: 02/12/15

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(*)
L1501707-01A	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501707-01B	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501707-02A	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501707-02B	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501707-03A	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501707-03B	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501707-04A	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501707-04B	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501707
Report Date: 02/12/15

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.
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.

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.
- 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.

Report Format: DU Report with 'J' Qualifiers



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501707
Report Date: 02/12/15

Data Qualifiers

- 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: L1501707
Report Date: 02/12/15

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

Last revised December 16, 2014

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

Westborough Facility

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

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

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

EPA 625: 4-Chloroaniline, 4-Methylphenol.

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

EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

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

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

Drinking Water

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

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

EPA 332: Perchlorate.

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

Non-Potable Water

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

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

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

EPA 624: Volatile Halocarbons & Aromatics,

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

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

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

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

L1501707



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

Project Location: Eastham MA

Client: Environmental Strategies & Management

Project #: 2013-027

Address: 273 West Main Street

Project Manager: Lisa Flynn

Norton, MA 02703

ALPHA Quote #:

Phone: 508-226-1800

Turn-Around Time

Fax: 508-226-1811

Standard Rush (ONLY IF PRE-APPROVED)

Email: lflynn@esm-inc.com

These samples have been Previously analyzed by Alpha

Due Date: Time:

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

Please invoice Town of Eastham

Date Rec'd in Lab:

ALPHA Job #: L1501653

Report Information Data Deliverables

FAX EMAIL
 ADEx Add'l Deliverables

Billing Information

Same as Client Info PO #:

Regulatory Requirements/Report Limits

State/Fed Program

Criteria

8270 - MCP

0.15 ug/l for 1,4 dioxane, GW-1

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

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

ANALYSIS

1,4-Dioxane BY 8270																						

SAMPLE HANDLING
Filtration
 Done
 Not Needed
Preservation
 Lab to do
 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		
-01-02	PTC-21_255 ALSTON EFF	1/23/15	11:30	DW	EL
-02-02	PTC-21_255 ALSTON MID	1/23/15	11:35	DW	EL
-03-02	PTC-21_255 ALSTON INF	1/23/15	11:40	DW	EL
-04-02	TRIPBLANK			LW	

PLEASE ANSWER QUESTIONS ABOVE!

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

IS YOUR PROJECT MA MCP or CT RCP?

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

Relinquished By:	Date/Time	Received By:	Date/Time
	1/23/15 16:45		1/23/15/14

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.

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	L1501968	1/30/2015	DW	Yes	Yes	Yes	Yes	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis
Chester Ave_055	1/30/2015	L1501968-1	DW	8270
Chester Ave_055 Dup	1/30/2015	L1501968-2	DW	Not Analyzed
Deepwood Dr_010	1/30/2015	L1501968-3	DW	8270
Deepwood Dr_010 Dup	1/30/2015	L1501968-4	DW	Not Analyzed
Starlight Ln_020	1/30/2015	L1501968-5	DW	8270
Starlight Ln_020 Dup	1/30/2015	L1501968-6	DW	8270
Tripblank	1/30/2015	L1501968-7	DW	8270

Sample L1501968-06 was extracted beyond hold time.

The WG761128-1 Method Blank, associated with L1501968-07 has concentrations above the reporting limits for 1,4-Dioxane. The results of the analysis are reported and are qualified with a "B" for any associated sample concentrations that are less than 10x the blank concentration for this analyte. The sample was re-extracted with the method required holding time exceeded. Both the sample and method blank were non-detect for this target compound upon re-extraction. The results of both extractions are reported.

All QAQC data, including surrogate, trip blank, method blank, laboratory control sample (LCS) and LCS duplicate results were reviewed. This report was deemed usable by Angela Boyd on 2/13/15.

AB discussion - Starlight Lane sample had a detection of 1,4 dioxane. The primary sample was associated with a batch that had no data quality issues. The Starlight Lane duplicate was then run to confirm the detection. The results showed very good precision (deviation less than 5%); However, the duplicate sample was run several days beyond the method hold time. Sample results are considered confirmed due to precision, and good data quality of initial batch.

The trip blank associated with this data initially had a detection of 1,4 dioxane. The lab's method blank (in a batch associated solely with the trip blank) also had a detection, at twice the concentration detected in the method blank. Therefore, the trip blank was rerun. Although the trip blank was now out of hold, there were no data quality issues associated with the new batch, and 1,4 dioxane was not detected in the trip blank. Since the only analytical samples with detections of 1,4 dioxane were the Starlight Lane sample, and its duplicate, and those concentrations were double those in the initial run of the trip blank, this data is considered usable for all purposes.



ANALYTICAL REPORT

Lab Number:	L1501968
Client:	Environmental Strategies & Mgmt. 273 West Main Street Norton, MA 02766
ATTN:	Angela Boyd
Phone:	(508) 226-1800
Project Name:	EASTHAM LANDFILL
Project Number:	2013-027
Report Date:	02/12/15

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 LANDFILL
Project Number: 2013-027

Lab Number: L1501968
Report Date: 02/12/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1501968-01	CHESTER AVE_055	DRINKING WATER	EASTHAM, MA	01/30/15 08:25	01/30/15
L1501968-02	CHESTER AVE_055 DUP	DRINKING WATER	EASTHAM, MA	01/30/15 08:30	01/30/15
L1501968-03	DEEPWOOD DR_010	DRINKING WATER	EASTHAM, MA	01/30/15 09:40	01/30/15
L1501968-04	DEEPWOOD DR_010 DUP	DRINKING WATER	EASTHAM, MA	01/30/15 09:45	01/30/15
L1501968-05	STARLIGHT LN_020	DRINKING WATER	EASTHAM, MA	01/30/15 10:35	01/30/15
L1501968-06	STARLIGHT LN_020 DUP	DRINKING WATER	EASTHAM, MA	01/30/15 10:40	01/30/15
L1501968-07	TRIPBLANK	DRINKING WATER	EASTHAM, MA	01/30/15 00:00	01/30/15

Project Name: EASTHAM LANDFILL

Lab Number: L1501968

Project Number: 2013-027

Report Date: 02/12/15

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 LANDFILL
Project Number: 2013-027

Lab Number: L1501968
Report Date: 02/12/15

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. 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: L1501968
Report Date: 02/12/15

Case Narrative (continued)

MCP Related Narratives

In reference to question I:

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

Report Submission

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

Semivolatile Organics by SIM-1,4-Dioxane

Sample L1501968-06 was extracted beyond hold time.

The WG761128-1 Method Blank, associated with L1501968-07 has concentrations above the reporting limits for 1,4-Dioxane. The results of the analysis are reported and are qualified with a "B" for any associated sample concentrations that are less than 10x the blank concentration for this analyte. The sample was re-extracted with the method required holding time exceeded. Both the sample and method blank were non-detect for this target compound upon re-extraction. The results of both extractions are reported.

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: 02/12/15

ORGANICS

SEMIVOLATILES

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501968
Report Date: 02/12/15

SAMPLE RESULTS

Lab ID: L1501968-01
 Client ID: CHESTER AVE_055
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 02/04/15 19:21
 Analyst: CM

Date Collected: 01/30/15 08:25
 Date Received: 01/30/15
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 02/03/15 07:00

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	0.144	0.0721	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	20		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501968
Report Date: 02/12/15

SAMPLE RESULTS

Lab ID: L1501968-03
 Client ID: DEEPWOOD DR_010
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 02/04/15 20:05
 Analyst: CM

Date Collected: 01/30/15 09:40
 Date Received: 01/30/15
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 02/03/15 07:00

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	17		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501968
Report Date: 02/12/15

SAMPLE RESULTS

Lab ID: L1501968-05
 Client ID: STARLIGHT LN_020
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 02/04/15 20:48
 Analyst: CM

Date Collected: 01/30/15 10:35
 Date Received: 01/30/15
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 02/03/15 07:00

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

1,4-Dioxane	0.164		ug/l	0.144	0.0721	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	18		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501968
Report Date: 02/12/15

SAMPLE RESULTS

Lab ID: L1501968-06
 Client ID: STARLIGHT LN_020 DUP
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 02/11/15 16:13
 Analyst: CM

Date Collected: 01/30/15 10:40
 Date Received: 01/30/15
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 02/11/15 10:35

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

1,4-Dioxane	0.171		ug/l	0.144	0.0721	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	22		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501968
Report Date: 02/12/15

SAMPLE RESULTS

Lab ID: L1501968-07
 Client ID: TRIPBLANK
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 02/07/15 05:36
 Analyst: CM

Date Collected: 01/30/15 00:00
 Date Received: 01/30/15
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 02/06/15 14:14

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

1,4-Dioxane	0.0850	JB	ug/l	0.152	0.0758	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	21		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501968
Report Date: 02/12/15

SAMPLE RESULTS

Lab ID: L1501968-07 RE
 Client ID: TRIPBLANK
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 02/10/15 18:22
 Analyst: CM

Date Collected: 01/30/15 00:00
 Date Received: 01/30/15
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 02/10/15 11:15

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	0.155	0.0773	1
-------------	----	--	------	-------	--------	---

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

Project Name: EASTHAM LANDFILL

Lab Number: L1501968

Project Number: 2013-027

Report Date: 02/12/15

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 02/04/15 12:45

Extraction Date: 02/03/15 07:00

Analyst: CM

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01,03,05 Batch: WG760094-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

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

Project Name: EASTHAM LANDFILL

Lab Number: L1501968

Project Number: 2013-027

Report Date: 02/12/15

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 02/07/15 00:23

Extraction Date: 02/06/15 14:18

Analyst: CM

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 07 Batch: WG761128-1					
1,4-Dioxane	0.178		ug/l	0.150	0.0750

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

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501968
Report Date: 02/12/15

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 02/11/15 13:58
Analyst: CM

Extraction Method: EPA 3510C
Extraction Date: 02/11/15 10:35

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 06 Batch: WG761940-1					
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 LANDFILL
Project Number: 2013-027

Lab Number: L1501968
Report Date: 02/12/15

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 Batch: WG760094-2 WG760094-3								
1,4-Dioxane	108		111		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	21		19		15-110

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501968
Report Date: 02/12/15

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): 07 Batch: WG761128-2 WG761128-3								
1,4-Dioxane	111		116		40-140	4		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	30		29		15-110

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501968
Report Date: 02/12/15

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): 06 Batch: WG761940-2 WG761940-3								
1,4-Dioxane	103		106		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	27		32		15-110

Project Name: EASTHAM LANDFILL

Lab Number: L1501968

Project Number: 2013-027

Report Date: 02/12/15

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(*)
L1501968-01A	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501968-01B	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501968-02A	Amber 500ml unpreserved	A	7	3.0	Y	Absent	HOLD(14)
L1501968-02B	Amber 500ml unpreserved	A	7	3.0	Y	Absent	HOLD(14)
L1501968-03A	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501968-03B	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501968-04A	Amber 500ml unpreserved	A	7	3.0	Y	Absent	HOLD(14)
L1501968-04B	Amber 500ml unpreserved	A	7	3.0	Y	Absent	HOLD(14)
L1501968-05A	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501968-05B	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501968-06A	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501968-06B	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501968-07A	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1501968-07B	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501968
Report Date: 02/12/15

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.
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.

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.
- 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.

Report Format: DU Report with 'J' Qualifiers



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1501968
Report Date: 02/12/15

Data Qualifiers

- 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: L1501968
Report Date: 02/12/15

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

Last revised December 16, 2014

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

Westborough Facility

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

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

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

EPA 625: 4-Chloroaniline, 4-Methylphenol.

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

EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

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

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

Drinking Water

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

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

EPA 332: Perchlorate.

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

Non-Potable Water

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

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

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

EPA 624: Volatile Halocarbons & Aromatics,

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

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

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

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



CHAIN OF CUSTODY

PAGE 1 OF 1

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 & Mgmt.

Project Location: Eastham, MA

Address: 273 West Main Street

Project #: 2013-027

Norton, MA 02766

Project Manager: Angela Boyd

Phone: 508-226-1800

ALPHA Quote #:

Fax: Standard Rush (ONLY IF PRE-APPROVED)

Turn-Around Time

Email: aboyd@esm-inc.com

Due Date: Time:

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Also report to lflynn@esm-inc.com

Date Rec'd in Lab:

ALPHA Job #: 41501968

Report Information Data Deliverables

FAX EMAIL
 ADEx Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

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

ANALYSIS

ANALYSIS	SAMPLE HANDLING																TOTAL # BOTTLES	
	Filtration <input type="checkbox"/> Done <input type="checkbox"/> Not Needed <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please specify below)																	
1,4 Dioxane-8270	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS																Sample Specific Comments
		Date	Time			<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"/>	<input type="checkbox"/>	<input type="checkbox"/>		
-01	CHESTER AVE - 055	1/30/15	08:25	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"/>				
-02	CHESTER AVE - 055 DUP	1/30/15	08:30	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"/>				
-03	DEEPWOOD DR - 010	1/30/15	09:40	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"/>				
-04	DEEPWOOD DR - 010 DUP	1/30/15	09:45	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"/>				
-05	STARLIGHT LN - 020	1/30/15	10:35	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"/>				
-06	STARLIGHT LN - 020 DUP	1/30/15	10:40	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"/>				
-07	Tripblank			LW		<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"/>				

PLEASE ANSWER QUESTIONS ABOVE!

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

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
	1/30/15 12:10		1/30/15 12:10

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	L1502855	2/13/2015	DW	Yes	Yes	Yes	Yes	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis
Schoolhouse Rd_200	2/13/2015	L1502855-1	DW	8270
Schoolhouse Rd_200 Dup	2/13/2015	L1502855-2	DW	Not Analyzed
Alston Ave_085	2/13/2015	L1502855-3	DW	8270
Alston Ave_085 Dup	2/13/2015	L1502855-4	DW	Not Analyzed
Tripblank	2/13/2015	L1502855-5	DW	8270

All QAQC data, including surrogate, trip blank, method blank, laboratory control sample (LCS) and LCS duplicate results were reviewed. This report was deemed usable by Angela Boyd on 2/20/15.



ANALYTICAL REPORT

Lab Number:	L1502855
Client:	Environmental Strategies & Mgmt. 273 West Main Street Norton, MA 02766
ATTN:	Angela Boyd
Phone:	(508) 226-1800
Project Name:	EASTHAM DW
Project Number:	Not Specified
Report Date:	02/19/15

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: Not Specified

Lab Number: L1502855
Report Date: 02/19/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1502855-01	SCHOOLHOUSE RD_200	DRINKING WATER	EASTHAM, MA	02/13/15 11:30	02/13/15
L1502855-02	SCHOOLHOUSE RD_200 DUP	DRINKING WATER	EASTHAM, MA	02/13/15 11:35	02/13/15
L1502855-03	ALSTON AVE_085	DRINKING WATER	EASTHAM, MA	02/13/15 12:15	02/13/15
L1502855-04	ALSTON AVE_085 DUP	DRINKING WATER	EASTHAM, MA	02/13/15 12:20	02/13/15
L1502855-05	TRIPBLANK	DRINKING WATER	EASTHAM, MA	02/13/15 00:00	02/13/15

Project Name: EASTHAM DW
Project Number: Not Specified

Lab Number: L1502855
Report Date: 02/19/15

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: Not Specified

Lab Number: L1502855
Report Date: 02/19/15

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. 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: Not Specified

Lab Number: L1502855
Report Date: 02/19/15

Case Narrative (continued)

MCP Related Narratives

Report Submission

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

1,4-Dioxane by 8270-SIM

In reference to question I:

All samples were analyzed for a subset of MCP compounds 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:  Cynthia McQueen

Title: Technical Director/Representative

Date: 02/19/15

ORGANICS

SEMIVOLATILES

Project Name: EASTHAM DW**Lab Number:** L1502855**Project Number:** Not Specified**Report Date:** 02/19/15**SAMPLE RESULTS**

Lab ID: L1502855-01
Client ID: SCHOOLHOUSE RD_200
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 02/16/15 18:54
Analyst: JT

Date Collected: 02/13/15 11:30
Date Received: 02/13/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 02/16/15 12:04

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	0.0892	J	ug/l	0.150	0.0750	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	22		15-110

Project Name: EASTHAM DW**Lab Number:** L1502855**Project Number:** Not Specified**Report Date:** 02/19/15**SAMPLE RESULTS**

Lab ID: L1502855-03
Client ID: ALSTON AVE_085
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 02/16/15 19:38
Analyst: JT

Date Collected: 02/13/15 12:15
Date Received: 02/13/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 02/16/15 12:04

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	0.163		ug/l	0.150	0.0750	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	23		15-110

Project Name: EASTHAM DW
Project Number: Not Specified

Lab Number: L1502855
Report Date: 02/19/15

SAMPLE RESULTS

Lab ID: L1502855-05
 Client ID: TRIPBLANK
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 02/18/15 16:17
 Analyst: CM

Date Collected: 02/13/15 00:00
 Date Received: 02/13/15
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 02/18/15 10:27

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	0.150	0.0750	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	19		15-110

Project Name: EASTHAM DW

Lab Number: L1502855

Project Number: Not Specified

Report Date: 02/19/15

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 02/16/15 16:40

Extraction Date: 02/16/15 12:04

Analyst: JT

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01,03 Batch: WG762921-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	37		15-110

Project Name: EASTHAM DW

Lab Number: L1502855

Project Number: Not Specified

Report Date: 02/19/15

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 02/18/15 14:03

Extraction Date: 02/18/15 10:27

Analyst: CM

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 05 Batch: WG763380-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	37		15-110

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM DW
Project Number: Not Specified

Lab Number: L1502855
Report Date: 02/19/15

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 Batch: WG762921-2 WG762921-3								
1,4-Dioxane	107		109		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	37		36		15-110

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM DW
Project Number: Not Specified

Lab Number: L1502855
Report Date: 02/19/15

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): 05 Batch: WG763380-2 WG763380-3								
1,4-Dioxane	104		106		40-140	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	33		36		15-110

Project Name: EASTHAM DW

Lab Number: L1502855

Project Number: Not Specified

Report Date: 02/19/15

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(*)
L1502855-01A	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502855-01B	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502855-02A	Amber 500ml unpreserved	A	7	3.0	Y	Absent	HOLD(14)
L1502855-02B	Amber 500ml unpreserved	A	7	3.0	Y	Absent	HOLD(14)
L1502855-03A	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502855-03B	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502855-04A	Amber 500ml unpreserved	A	7	3.0	Y	Absent	HOLD(14)
L1502855-04B	Amber 500ml unpreserved	A	7	3.0	Y	Absent	HOLD(14)
L1502855-05A	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502855-05B	Amber 500ml unpreserved	A	7	3.0	Y	Absent	A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Project Name: EASTHAM DW
Project Number: Not Specified

Lab Number: L1502855
Report Date: 02/19/15

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.
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.
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.

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.
- 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.

Report Format: DU Report with 'J' Qualifiers



Project Name: EASTHAM DW
Project Number: Not Specified

Lab Number: L1502855
Report Date: 02/19/15

Data Qualifiers

- 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: Not Specified

Lab Number: L1502855
Report Date: 02/19/15

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

Last revised December 16, 2014

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

Westborough Facility

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

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

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

EPA 625: 4-Chloroaniline, 4-Methylphenol.

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

EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

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

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

Drinking Water

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

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

EPA 332: Perchlorate.

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

Non-Potable Water

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

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

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

EPA 624: Volatile Halocarbons & Aromatics,

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

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

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

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

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	L1502868	2/13/2015	DW	Yes	Yes	Yes	Yes	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis
PTC-22_255 Alston Eff	2/13/2015	L1502868-1	DW	8270
PTC-22_255 Alston Inf	2/13/2015	L1502868-2	DW	8270
PTC-22_255 Alston Mid	2/13/2015	L1502868-3	DW	8270
PTC-23_255 Alston Eff	2/13/2015	L1502868-4	DW	8270
PTC-23_255 Alston Mid	2/13/2015	L1502868-5	DW	8270
Tripblank	2/13/2015	L1502868-6	DW	8270

All QAQC data, including surrogate, trip blank, method blank, laboratory control sample (LCS) and LCS duplicate results were reviewed. This report was deemed usable by Angela Boyd on 2/20/15.



ANALYTICAL REPORT

Lab Number:	L1502868
Client:	Environmental Strategies & Mgmt. 273 West Main Street Norton, MA 02766
ATTN:	Angela Boyd
Phone:	(508) 226-1800
Project Name:	EASTHAM DW
Project Number:	2013-027
Report Date:	02/19/15

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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: L1502868
Report Date: 02/19/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1502868-01	PTC-22_255 ALSTON EFF	DRINKING WATER	EASTHAM, MA	02/13/15 09:00	02/13/15
L1502868-02	PTC-22_255 ALSTON INF	DRINKING WATER	EASTHAM, MA	02/13/15 09:10	02/13/15
L1502868-03	PTC-22_255 ALSTON MID	DRINKING WATER	EASTHAM, MA	02/13/15 09:05	02/13/15
L1502868-04	PTC-23_255 ALSTON EFF	DRINKING WATER	EASTHAM, MA	02/13/15 11:00	02/13/15
L1502868-05	PTC-23_255 ALSTON MID	DRINKING WATER	EASTHAM, MA	02/13/15 11:05	02/13/15
L1502868-06	TRIPBLANK	DRINKING WATER	EASTHAM, MA	02/13/15 00:00	02/13/15

Project Name: EASTHAM DW

Lab Number: L1502868

Project Number: 2013-027

Report Date: 02/19/15

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: L1502868
Report Date: 02/19/15

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. 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: L1502868
Report Date: 02/19/15

Case Narrative (continued)

MCP Related Narratives

Report Submission

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

1,4-Dioxane by 8270-SIM

In reference to question I:

All samples were analyzed for a subset of MCP compounds 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:  Cynthia McQueen

Title: Technical Director/Representative

Date: 02/19/15

ORGANICS

SEMIVOLATILES

Project Name: EASTHAM DW**Lab Number:** L1502868**Project Number:** 2013-027**Report Date:** 02/19/15**SAMPLE RESULTS**

Lab ID: L1502868-01
Client ID: PTC-22_255 ALSTON EFF
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 02/16/15 20:23
Analyst: JT

Date Collected: 02/13/15 09:00
Date Received: 02/13/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 02/16/15 12:04

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	0.146	0.0728	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	22		15-110

Project Name: EASTHAM DW**Lab Number:** L1502868**Project Number:** 2013-027**Report Date:** 02/19/15**SAMPLE RESULTS**

Lab ID: L1502868-02
Client ID: PTC-22_255 ALSTON INF
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 02/16/15 21:07
Analyst: JT

Date Collected: 02/13/15 09:10
Date Received: 02/13/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 02/16/15 12:04

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

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

1,4-Dioxane	2.14		ug/l	0.146	0.0728	1
-------------	------	--	------	-------	--------	---

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

Project Name: EASTHAM DW**Lab Number:** L1502868**Project Number:** 2013-027**Report Date:** 02/19/15**SAMPLE RESULTS**

Lab ID: L1502868-03
Client ID: PTC-22_255 ALSTON MID
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 02/16/15 21:52
Analyst: JT

Date Collected: 02/13/15 09:05
Date Received: 02/13/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 02/16/15 12:04

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

1,4-Dioxane	0.453		ug/l	0.146	0.0728	1
-------------	-------	--	------	-------	--------	---

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

Project Name: EASTHAM DW**Lab Number:** L1502868**Project Number:** 2013-027**Report Date:** 02/19/15**SAMPLE RESULTS**

Lab ID: L1502868-04
Client ID: PTC-23_255 ALSTON EFF
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 02/16/15 22:36
Analyst: JT

Date Collected: 02/13/15 11:00
Date Received: 02/13/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 02/16/15 12:04

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	0.146	0.0728	1
-------------	----	--	------	-------	--------	---

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

Project Name: EASTHAM DW**Lab Number:** L1502868**Project Number:** 2013-027**Report Date:** 02/19/15**SAMPLE RESULTS**

Lab ID: L1502868-05
Client ID: PTC-23_255 ALSTON MID
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 02/16/15 23:21
Analyst: JT

Date Collected: 02/13/15 11:05
Date Received: 02/13/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 02/16/15 12:04

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

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

1,4-Dioxane	ND		ug/l	0.146	0.0728	1
-------------	----	--	------	-------	--------	---

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

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1502868
Report Date: 02/19/15

SAMPLE RESULTS

Lab ID: L1502868-06
 Client ID: TRIPBLANK
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 02/18/15 17:02
 Analyst: CM

Date Collected: 02/13/15 00:00
 Date Received: 02/13/15
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 02/18/15 10:27

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	0.158	0.0789	1
-------------	----	--	------	-------	--------	---

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

Project Name: EASTHAM DW

Lab Number: L1502868

Project Number: 2013-027

Report Date: 02/19/15

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 02/16/15 16:40

Extraction Date: 02/16/15 12:04

Analyst: JT

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-05 Batch: WG762921-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	37		15-110

Project Name: EASTHAM DW

Lab Number: L1502868

Project Number: 2013-027

Report Date: 02/19/15

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 02/18/15 14:03

Extraction Date: 02/18/15 10:27

Analyst: CM

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 06 Batch: WG763380-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	37		15-110

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1502868
Report Date: 02/19/15

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): 01-05 Batch: WG762921-2 WG762921-3								
1,4-Dioxane	107		109		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	37		36		15-110

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1502868
Report Date: 02/19/15

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): 06 Batch: WG763380-2 WG763380-3								
1,4-Dioxane	104		106		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	33		36		15-110

Project Name: EASTHAM DW

Lab Number: L1502868

Project Number: 2013-027

Report Date: 02/19/15

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(*)
L1502868-01A	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502868-01B	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502868-02A	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502868-02B	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502868-03A	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502868-03B	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502868-04A	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502868-04B	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502868-05A	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502868-05B	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502868-06A	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502868-06B	Amber 500ml unpreserved	A	7	3.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1502868
Report Date: 02/19/15

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.
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.
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.

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.
- 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.

Report Format: DU Report with 'J' Qualifiers



Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1502868
Report Date: 02/19/15

Data Qualifiers

- 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: 2013-027

Lab Number: L1502868
Report Date: 02/19/15

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

Last revised December 16, 2014

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

Westborough Facility

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

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

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

EPA 625: 4-Chloroaniline, 4-Methylphenol.

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

EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

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

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

Drinking Water

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

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

EPA 332: Perchlorate.

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

Non-Potable Water

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

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

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

EPA 624: Volatile Halocarbons & Aromatics,

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

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

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

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



CHAIN OF CUSTODY

PAGE 1 OF 1

Project Information

Project Name: Eastham DW

Project Location: Eastham, MA

Project #:

Project Manager: Angela Boyd

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 & Mgmt.

Address: 273 West Main Street

Norton, MA 02766

Phone: 508-226-1800

Fax:

Email: aboyd@esm-inc.com

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Also report to lflynn@esm-inc.com

Date Rec'd in Lab:

ALPHA Job #: U1502868

Report Information Data Deliverables

FAX EMAIL
 ADEx Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

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-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																	
1	PTC-22_255 Alston EFF	2/13/15	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"/>	2
2	PTC-22_255 Alston EFF INF	2/13/15	09:10	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"/>	2
3	PTC-22_255 Alston MID	2/13/15	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"/>	2
4	PTC-23_255 Alston EFF	2/13/15	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"/>	2
5	PTC-23_255 Alston MID	2/13/15	11:05	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"/>	2
6	Tripblank			LW		<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"/>	2
						<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"/>	<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"/>	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

PLEASE ANSWER QUESTIONS ABOVE!

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

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
	2/13/15 14:05		2/13/15 14:05

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(1)
(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	L1502935	2/16/2015	DW	Yes	Yes	Yes	Yes	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis
Schoolhouse Rd_725	2/16/2015	L1502935-1	DW	8270
Schoolhouse Rd_725 dup	2/16/2015	L1502935-2	DW	Not Analyzed
Knowles St_050	2/16/2015	L1502935-3	DW	8270
Knowles St_050 dup	2/16/2015	L1502935-4	DW	Not Analyzed
Meetinghouse Rd_270	2/16/2015	L1502935-5	DW	8270
Meetinghouse Rd_270 dup	2/16/2015	L1502935-6	DW	Not Analyzed
Trip Blank	2/16/2015	L1502935-7	DW	8270

All QAQC data, including surrogate, trip blank, method blank, laboratory control sample (LCS) and LCS duplicate results were reviewed. This report was deemed usable by Angela Boyd on 2/24/15.



ANALYTICAL REPORT

Lab Number:	L1502935
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:	02/23/15

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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: L1502935
Report Date: 02/23/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1502935-01	SCHOOLHOUSE RD_725	DRINKING WATER	EASTHAM, MA	02/16/15 11:30	02/16/15
L1502935-02	SCHOOLHOUSE RD_725 DUP	DRINKING WATER	EASTHAM, MA	02/16/15 11:35	02/16/15
L1502935-03	KNOWLES ST_050	DRINKING WATER	EASTHAM, MA	02/16/15 12:25	02/16/15
L1502935-04	KNOWLES ST_050 DUP	DRINKING WATER	EASTHAM, MA	02/16/15 12:30	02/16/15
L1502935-05	MEETINGHOUSE RD_270	DRINKING WATER	EASTHAM, MA	02/16/15 13:30	02/16/15
L1502935-06	MEETINGHOUSE RD_270 DUP	DRINKING WATER	EASTHAM, MA	02/16/15 13:35	02/16/15
L1502935-07	TRIP BLANK	DRINKING WATER	EASTHAM, MA	02/16/15 00:00	02/16/15

Project Name: EASTHAM DW

Lab Number: L1502935

Project Number: 2013-027

Report Date: 02/23/15

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: 2013-027

Lab Number: L1502935
Report Date: 02/23/15

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. 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: L1502935
Report Date: 02/23/15

Case Narrative (continued)

MCP Related Narratives

Report Submission

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


1,4-Dioxane by 8270-SIM

In reference to question I:

All samples were analyzed for a subset of MCP compounds 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:

 Cynthia McQueen

Title: Technical Director/Representative

Date: 02/23/15

ORGANICS

SEMIVOLATILES

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1502935
Report Date: 02/23/15

SAMPLE RESULTS

Lab ID: L1502935-01
 Client ID: SCHOOLHOUSE RD_725
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 02/18/15 17:47
 Analyst: CM

Date Collected: 02/16/15 11:30
 Date Received: 02/16/15
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 02/18/15 10:27

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	0.146	0.0728	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	20		15-110

Project Name: EASTHAM DW**Lab Number:** L1502935**Project Number:** 2013-027**Report Date:** 02/23/15**SAMPLE RESULTS**

Lab ID: L1502935-03
Client ID: KNOWLES ST_050
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 02/18/15 18:32
Analyst: CM

Date Collected: 02/16/15 12:25
Date Received: 02/16/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 02/18/15 10:27

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	0.195		ug/l	0.146	0.0728	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	23		15-110

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1502935
Report Date: 02/23/15

SAMPLE RESULTS

Lab ID: L1502935-05
Client ID: MEETINGHOUSE RD_270
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 02/18/15 19:17
Analyst: CM

Date Collected: 02/16/15 13:30
Date Received: 02/16/15
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 02/18/15 10:27

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	0.146	0.0728	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	22		15-110

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1502935
Report Date: 02/23/15

SAMPLE RESULTS

Lab ID: L1502935-07
 Client ID: TRIP BLANK
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 02/20/15 18:42
 Analyst: JT

Date Collected: 02/16/15 00:00
 Date Received: 02/16/15
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 02/20/15 13:08

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	0.150	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: L1502935

Project Number: 2013-027

Report Date: 02/23/15

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 02/18/15 14:03

Extraction Date: 02/18/15 10:27

Analyst: CM

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01,03,05 Batch: WG763380-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	37		15-110

Project Name: EASTHAM DW

Lab Number: L1502935

Project Number: 2013-027

Report Date: 02/23/15

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 02/20/15 16:18

Extraction Date: 02/20/15 13:08

Analyst: JT

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 07 Batch: WG763898-1					
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: 2013-027

Lab Number: L1502935
Report Date: 02/23/15

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 Batch: WG763380-2 WG763380-3								
1,4-Dioxane	104		106		40-140	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	33		36		15-110

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1502935
Report Date: 02/23/15

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): 07 Batch: WG763898-2 WG763898-3								
1,4-Dioxane	108		108		40-140	0		20

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

Project Name: EASTHAM DW

Lab Number: L1502935

Project Number: 2013-027

Report Date: 02/23/15

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(*)
L1502935-01A	Amber 500ml unpreserved	A	7	5.9	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502935-01B	Amber 500ml unpreserved	A	7	5.9	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502935-02A	Amber 500ml unpreserved	A	7	5.9	Y	Absent	HOLD(14)
L1502935-02B	Amber 500ml unpreserved	A	7	5.9	Y	Absent	HOLD(14)
L1502935-03A	Amber 500ml unpreserved	A	7	5.9	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502935-03B	Amber 500ml unpreserved	A	7	5.9	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502935-04A	Amber 500ml unpreserved	A	7	5.9	Y	Absent	HOLD(14)
L1502935-04B	Amber 500ml unpreserved	A	7	5.9	Y	Absent	HOLD(14)
L1502935-05A	Amber 500ml unpreserved	A	7	5.9	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502935-05B	Amber 500ml unpreserved	A	7	5.9	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502935-06A	Amber 500ml unpreserved	A	7	5.9	Y	Absent	HOLD(14)
L1502935-06B	Amber 500ml unpreserved	A	7	5.9	Y	Absent	HOLD(14)
L1502935-07A	Amber 500ml unpreserved	A	7	5.9	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1502935-07B	Amber 500ml unpreserved	A	7	5.9	Y	Absent	A2-MCP-14DX-SIM-PPB(7)

*Values in parentheses indicate holding time in days



Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1502935
Report Date: 02/23/15

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.
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.
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.

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.
- 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.

Report Format: DU Report with 'J' Qualifiers



Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1502935
Report Date: 02/23/15

Data Qualifiers

- 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: L1502935
Report Date: 02/23/15

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

Last revised December 16, 2014

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

Westborough Facility

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

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

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

EPA 625: 4-Chloroaniline, 4-Methylphenol.

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

EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility

EPA 8270D: Biphenyl.

EPA 2540D: TSS

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

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

Drinking Water

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

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

EPA 332: Perchlorate.

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

Non-Potable Water

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

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

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

EPA 624: Volatile Halocarbons & Aromatics,

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

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

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

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

December 31, 2014

Mr. and Mrs. Wallace
PO Box 114
Eastham, MA 02642

**Subject: Environmental Sampling Results
280 Alston Avenue, Eastham, MA**

Dear Mr. and Mrs. Wallace

On behalf of the Town of Eastham, this letter transmits to you the testing results for the water samples collected from your 280 Alston Avenue property on December 17, 2014, for 1,4 dioxane laboratory analysis by Environmental Strategies & Management. This compound was not detected in the sample above the laboratory reporting limit.

Pages from the laboratory report with these results are attached for your review, along with MassDEP-required form BWSC-123, and a sample laboratory report diagram. Status reports describing activities related to the Eastham landfill are available at the Eastham Town Hall and library, and are also available on line at:

<http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=4-0024301>

Please call us at 508-226-1800 if you have any questions.

Sincerely,
Environmental Strategies & Management, Inc.



Douglas Heely, PG, LSP
Principal Geologist

Copy: Ms. Jane Crowley, Town of Eastham Board of Health
MassDEP, SERO



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: Douglas and Colleen Wallace
2. Street Address: PO Box 114
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: 280 Alston Avenue
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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the “disposal site”.)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/dep/cleanup/oview.htm>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://mass.gov/dep/about/region/schedule.htm> if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

December 31, 2014

Ms. Sarah Robin
PO Box 688
Wellfleet, MA 02667

**Subject: Environmental Sampling Results
130A and B Old Orchard Road, Eastham, MA**

Dear Ms. Robin

On behalf of the Town of Eastham, this letter transmits to you the testing results for the water samples collected from your 280 Alston Avenue property on December 17, 2014, for 1,4 dioxane laboratory analysis by Environmental Strategies & Management. This compound was not detected in the sample above the laboratory reporting limit.

Pages from the laboratory report with these results are attached for your review, along with MassDEP-required form BWSC-123, and a sample laboratory report diagram. Status reports describing activities related to the Eastham landfill are available at the Eastham Town Hall and library, and are also available on line at:

<http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=4-0024301>

Please call us at 508-226-1800 if you have any questions.

Sincerely,
Environmental Strategies & Management, Inc.



Douglas Heely, PG, LSP
Principal Geologist

Copy: Ms. Jane Crowley, Town of Eastham Board of Health
MassDEP, SERO



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: Sarah Robin
2. Street Address: PO Box 688
City/Town: Wellfleet Zip Code: 02667

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: 130A and B Old Orchard Road
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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the “disposal site”.)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/dep/cleanup/oview.htm>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://mass.gov/dep/about/region/schedule.htm> if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

March 6, 2015

Paul and Nancy Underhill
255 Alston Avenue
Eastham, MA 02642

**Subject: Environmental Sampling Results
255 Alston Avenue, Eastham, MA**

Dear Paul and Nancy;

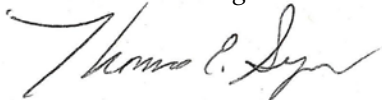
This letter transmits to you the laboratory results for the water samples collected from your property on February 13, 2015, for laboratory analysis of 1,4 dioxane. On this date, the carbon in the primary adsorber was moved to the secondary position and new carbon was placed in the primary adsorber. Prior to the carbon change, samples were collected from the three points: the influent, mid, and effluent points of the system. The influent (untreated) sample result had a 1,4 dioxane concentration of 2.14 µg/l (micrograms per liter or parts per billion), the mid-point sample had an estimated concentration of 0.453, and 1,4 dioxane was not detected in the effluent (treated) sample. Samples were collected from the mid-point and the effluent after the carbon change and 1,4 dioxane was not detected in either of these samples. The laboratory results continue to indicate the effectiveness of the carbon treatment system.

ES&M will continue to maintain the carbon system and the Board of Health recommends that you continue to rely on bottled water provided by the Town for drinking and food preparation. Pages from the laboratory report with the results for your water sample are attached for your review, along with MassDEP-required form BWSC-123, and a sample laboratory report diagram. Status reports describing activities related to the Eastham landfill are available at the Eastham Town Hall and library, and are also available on line at:

<http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=4-0024301>

Please call us at 508-226-1800 if you have any questions.

Sincerely,
Environmental Strategies & Management, Inc.



Thomas E. Sylvia
Principal Chemical Engineer

cc. Jane Crowley, Eastham Board of Health
MassDEP, SERO



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: Paul H & Nancy J Underhill
2. Street Address: 255 Alston Ave
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: 255 Alston Avenue
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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the “disposal site”.)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/dep/cleanup/oview.htm>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://mass.gov/dep/about/region/schedule.htm> if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

March 6, 2015

William P & Linda S Burt
PO Box 666
No Eastham, MA 02651

**Subject: Environmental Sampling Results
85 Alston Avenue, Eastham, Massachusetts**

Dear Mr. and Mrs. Burt,

On behalf of the Town of Eastham, this letter transmits to you the testing results for the water sample collected from your property on February 13, 2015, by Environmental Strategies & Management, for 1,4 dioxane laboratory analysis. The sample was submitted to Alpha Analytical for 1,4 dioxane laboratory analysis. This compound was detected at a concentration of 0.163 micrograms per liter or $\mu\text{g/L}$. This concentration is below the Massachusetts drinking water standard and the bottle water action limit of 0.3 $\mu\text{g/L}$.

Pages from the laboratory report with these results are attached for your review, along with MassDEP-required form BWSC-123. Status reports describing activities related to the Eastham landfill are available at the Eastham Town Hall and library, and are also available on line at:

<http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=4-0024301>

Please call us at 508-226-1800 if you have any questions.

Sincerely,
Environmental Strategies & Management, Inc.



Douglas Heely, PG, LSP
Principal Geologist

Copy: Ms. Jane Crowley, Town of Eastham Board of Health
MassDEP, SERO



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:

- | | |
|---|---|
| <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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the “disposal site”.)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/dep/cleanup/oview.htm>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://mass.gov/dep/about/region/schedule.htm> if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

March 6, 2015

Michele Burnat & Lesa Milas
396 Old Colchester Rd
Amston, CT 06231

**Subject: Environmental Sampling Results
50 Knowles Street**

Dear Ms Burnat & Ms Milas,

On behalf of the Town of Eastham, this letter transmits to you the testing results for the water sample collected from your property on February 16, 2015, by Environmental Strategies & Management, for 1,4 dioxane laboratory analysis. The sample was submitted to Alpha Analytical for 1,4 dioxane laboratory analysis. This compound was detected at a concentration of 0.195 micrograms per liter or $\mu\text{g/L}$. This concentration is below the Massachusetts drinking water standard and the bottle water action limit of 0.3 $\mu\text{g/L}$.

Pages from the laboratory report with these results are attached for your review, along with MassDEP-required form BWSC-123, and a sample laboratory report diagram. Status reports describing activities related to the Eastham landfill are available at the Eastham Town Hall and library, and are also available on line at:

<http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=4-0024301>

Please call us at 508-226-1800 if you have any questions.

Sincerely,
Environmental Strategies & Management, Inc.



Douglas Heely, PG, LSP
Principal Geologist

Copy: Ms. Jane Crowley, Town of Eastham Board of Health
MassDEP, SERO



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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the “disposal site”.)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/dep/cleanup/oview.htm>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://mass.gov/dep/about/region/schedule.htm> if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

March 6, 2015

Linda A Teter
8531 S. Louisville Ave
Tulsa, OK 74137

**Subject: Environmental Sampling Results
270 Meetinghouse Road, Eastham, Massachusetts**

Dear Ms Teter,

On behalf of the Town of Eastham, this letter transmits to you the testing results for the water sample collected from your property on February 16, 2015, by Environmental Strategies & Management, for 1,4 dioxane laboratory analysis. This compound was not detected above the laboratory reporting limit in the sample.

Pages from the laboratory report with these results are attached for your review, along with MassDEP-required form BWSC-123, and a sample laboratory report diagram. Status reports describing activities related to the Eastham landfill are available at the Eastham Town Hall and library, and are also available on line at:

<http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=4-0024301>

Please call us at 508-226-1800 if you have any questions.

Sincerely,
Environmental Strategies & Management, Inc.



Douglas Heely, PG, LSP
Principal Geologist

Copy: Ms. Jane Crowley, Town of Eastham Board of Health
MassDEP, SERO



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: Linda A Teter
2. Street Address: 8531 S. Louisville Ave
City/Town: Tulsa, OK Zip Code: 74137

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: 270 Meetinghouse Road
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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the “disposal site”.)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/dep/cleanup/oview.htm>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://mass.gov/dep/about/region/schedule.htm> if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

March 6, 2015

Linda Burt
Head Custodian
Eastham Elementary School
200 Schoolhouse Road
Eastham, MA 02642

**Subject: Environmental Sampling Results
200 Schoolhouse Road**

Dear Ms. Burt,

On behalf of the Town of Eastham, this letter transmits to you the testing results from the drinking water sample collected from the Eastham Elementary School at 200 Schoolhouse Road on February 13, 2015, for laboratory analysis of 1,4-dioxane, by Environmental Strategies & Management. This compound was detected at an estimated concentration of 0.0892 micrograms per liter or $\mu\text{g}/\text{L}$ in the sample. This estimated concentration is below the Massachusetts drinking water standard and the bottle water action limit of 0.3 $\mu\text{g}/\text{L}$.

A summary of all laboratory results from water samples collected at this property is attached. In addition, the MassDEP-required form BWSC-123 form, pages from the laboratory report with the results, and a sample laboratory report diagram are attached. Status reports describing activities related to the Eastham landfill are available at the Eastham Town Hall and library, and are also available on line at:

<http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=4-0024301>

Please call us at 508-226-1800 if you have any questions.

Sincerely,
Environmental Strategies & Management, Inc.



Douglas Heely, PG, LSP
Principal Geologist

Copy: Ms. Jane Crowley, Town of Eastham Board of Health
MassDEP, SERO

1,4 Dioxane Analytical Results

Eastham Elementary School 200 Schoolhouse Road

(reported in ug/L)

Sample Date	Sample Collection Point	Lab Report Sample ID Logged	Lab ID	1,4-Dioxane
02/13/2015	Influent Side (before) pH Treatment Vessels	SCHOOLHOUSE RD_200	L1502855-01	0.0892J
11/20/2014	Influent Side (before) pH Treatment Vessels	SCHOOLHOUSE RD_200	L1428102-03	0.0884J
11/20/2014	Duplicate	SCHOOLHOUSE RD_200 DUP	L1428102-04	0.0808J
08/04/2014	Influent Side (before) pH Treatment Vessels	SCHOOLHOUSE RD_200	L1417359-10	0.0822J
05/06/2014	Influent Side (before) pH Treatment Vessels	SCHOOLHOUSE RD_200	L1409598-05	0.105J
02/14/2014	Influent Side (before) pH Treatment Vessels	EES-PRE2	200-20946-1	0.083 J
	Duplicate (influent)	EES-151	200-20946-3	0.076 J
	Effluent Side (after) pH Treatment Vessels	EES-POST2	200-20946-2	0.094 J
02/11/2014	Influent Side (before) pH Treatment Vessels	ESS-PRE	200-20885-1	0.081 J
	Duplicate (influent)	ESS-150	200-20885-3	0.086 J
	Effluent Side (after) pH Treatment Vessels	ESS-POST	200-20885-2	0.096 J
02/12/2013	Raw Water Tap	200 Schoolhouse Rd.	480-32875-4	< 0.20

Current Drinking Water Standard

0.3

Notes:

- (a) Both primary and duplicate samples were collected by Environmental Strategies & Management (ES&M) on February 13, 2015, and submitted to Alpha Analytical for 1,4 dioxane analysis by MassDEP CAM-compliant EPA Method 8270. Since the concentration of 1,4 dioxane detected in the primary sample (0.0892 ug/L) was estimated to be below the laboratory Reporting Limit (RL) of 0.150 ug/L, analysis of the duplicate sample was not required.
- (b) The sample collected on November 20, 2014, by ES&M was analyzed by Alpha Analytical for 1,4 dioxane using MassDEP CAM-compliant EPA Method 8270. The Method Detection Limit (MDL) for the primary sample was 0.0750 ug/L and the RL was 0.150 ug/L. The MDL for the secondary sample was 0.0742 ug/L and the Reporting Limit RL was 0.148 ug/L. The analytical results were greater than the MDL, but less than the RL, and are therefore estimated and flagged with a "J" value.

The sample collected on August 4, 2014, by ES&M was analyzed by Alpha Analytical using MassDEP CAM-compliant EPA Method 8270. The MDL was 0.0708 ug/L and the RL was 0.142 ug/L. The analytical result was greater than the MDL, but less than the RL, and is therefore estimated and flagged as a "J" value.

The sample collected on May 6, 2014, also by Environmental Strategies & Management, was analyzed by Alpha Analytical using MassDEP CAM-compliant EPA Method 8270. The MDL was

0.0721 ug/L and the RL was 0.144 ug/L. The analytical result was greater than the MDL, but less than the RL, and is therefore estimated and flagged as a "J" value.

These samples were collected from the sample port located after the pressure tank and before the pH treatment vessel. This sample location is before any water lines leading to faucets and fountains. Prior to collecting each sample, 30 gallons of water was purged from the system over a period of approximately 25 minutes using the faucet nearest to the sample location.

- (c) Samples collected on February 11 and 14, 2014, by Environmental Partners Group, were analyzed by TestAmerica Laboratories using EPA Method 522 Mod. with an MDL of 0.040 ppb and a RL of 0.20 ppb. The analytical results were greater than the MDL, but less than the RL, and therefore were estimated and flagged as a "J" value.

At this time, samples were collected from the ports before and after treatment vessels that provide pH treatment to the water. The taps from which the samples were collected were allowed to run a minimum of 15 minutes before sample collection. There are no drinking water fountains or bathroom faucets ahead of these taps.

- (d) Samples collected on February 12, 2013, by Bennett Associates were analyzed using EPA Method 522 Mod by TestAmerica Laboratories. This sample was a raw water sample.



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:

- | | |
|---|---|
| <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.

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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the “disposal site”.)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/dep/cleanup/oview.htm>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://mass.gov/dep/about/region/schedule.htm> if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

March 6, 2015

Meredith J Morgan
725 Schoolhouse Rd
Eastham, MA 02642

**Subject: Environmental Sampling Results
725 Schoolhouse Road, Eastham, Massachusetts**

Dear Ms Morgan,

On behalf of the Town of Eastham, this letter transmits to you the testing results for the water sample collected from your property on February 16, 2015, by Environmental Strategies & Management, for 1,4 dioxane laboratory analysis. This compound was not detected above the laboratory reporting limit in the sample.

Pages from the laboratory report with these results are attached for your review, along with MassDEP-required form BWSC-123, and a sample laboratory report diagram. Status reports describing activities related to the Eastham landfill are available at the Eastham Town Hall and library, and are also available on line at:

<http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=4-0024301>

Please call us at 508-226-1800 if you have any questions.

Sincerely,
Environmental Strategies & Management, Inc.



Douglas Heely, PG, LSP
Principal Geologist

Copy: Ms. Jane Crowley, Town of Eastham Board of Health
MassDEP, SERO



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: Meredith J Morgan
2. Street Address: 725 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: 725 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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the “disposal site”.)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/dep/cleanup/oview.htm>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://mass.gov/dep/about/region/schedule.htm> if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

February 19, 2015

Paul and Nancy Underhill
255 Alston Avenue
Eastham, MA 02642

Subject: Environmental Sampling Results

Dear Paul and Nancy;

This letter transmits to you the laboratory results for the water samples collected from your property on January 23, 2015, for laboratory analysis of 1,4 dioxane.

The laboratory results continue to indicate the effectiveness of the carbon treatment system. The influent (untreated) sample result had a 1,4 dioxane concentration of 2.13 µg/l (micrograms per liter or parts per billion), the mid-point sample had an estimated concentration of 0.296, and 1,4 dioxane was not detected in the effluent (treated) sample.

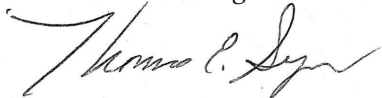
On February 13, 2015, the carbon in the primary adsorber was moved to the secondary position and new carbon was placed in the primary adsorber. Samples were collected from the three points and results will be transmitted to you when they become available.

ES&M will continue to maintain the carbon system and the Board of Health recommends that you continue to rely on bottled water provided by the Town for drinking and food preparation. Pages from the laboratory report with the results for your water sample are attached for your review, along with MassDEP-required form BWSC-123, a sample laboratory report diagram, and a 1,4-dioxane information sheet. Status reports describing activities related to the Eastham landfill are available at the Eastham Town Hall and library, and are also available on line at:

<http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=4-0024301>

Please call us at 508-226-1800 if you have any questions.

Sincerely,
Environmental Strategies & Management, Inc.



Thomas E. Sylvia
Principal Chemical Engineer

cc. Jane Crowley, Eastham Board of Health
MassDEP, SERO



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: Paul H & Nancy J Underhill
2. Street Address: 255 Alston Ave
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: 255 ALSTON 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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the “disposal site”.)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/dep/cleanup/oview.htm>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://mass.gov/dep/about/region/schedule.htm> if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

February 19, 2015

Connie E. Codner
PO Box 344
North Eastham, MA 02651

**Subject: Environmental Sampling Results
55 Chester Ave., Eastham, Massachusetts**

Dear Ms Codner,

On behalf of the Town of Eastham, this letter transmits to you the testing results for the water sample collected from your property on January 30, 2015, by Environmental Strategies & Management, for 1,4 dioxane laboratory analysis. This compound was not detected above the laboratory reporting limit in the sample.

Pages from the laboratory report with these results are attached for your review, along with MassDEP-required form BWSC-123, and a sample laboratory report diagram. Status reports describing activities related to the Eastham landfill are available at the Eastham Town Hall and library, and are also available on line at:

<http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=4-0024301>

Please call us at 508-226-1800 if you have any questions.

Sincerely,
Environmental Strategies & Management, Inc.



Douglas Heely, PG, LSP
Principal Geologist

Copy: Ms. Jane Crowley, Town of Eastham Board of Health
MassDEP, SERO



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: Connie E. Codner
2. Street Address: PO Box 344
City/Town: North 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: 55 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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the “disposal site”.)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/dep/cleanup/oview.htm>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://mass.gov/dep/about/region/schedule.htm> if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

February 19, 2015

Cosgrove Barbara M Trust & Cosgrove Thomas J Trust
C/O Barbara Cosgrove
PO Box 1849
North Eastham, MA 02651

**Subject: Environmental Sampling Results
10 Deepwood Dr., Eastham, Massachusetts**

Dear Ms Cosgrove,

On behalf of the Town of Eastham, this letter transmits to you the testing results for the water sample collected from your property on January 30, 2015, by Environmental Strategies & Management, for 1,4 dioxane laboratory analysis. This compound was not detected above the laboratory reporting limit in the sample.

Pages from the laboratory report with these results are attached for your review, along with MassDEP-required form BWSC-123, and a sample laboratory report diagram. Status reports describing activities related to the Eastham landfill are available at the Eastham Town Hall and library, and are also available on line at:

<http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=4-0024301>

Please call us at 508-226-1800 if you have any questions.

Sincerely,
Environmental Strategies & Management, Inc.



Douglas Heely, PG, LSP
Principal Geologist

Copy: Ms. Jane Crowley, Town of Eastham Board of Health
MassDEP, SERO



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 Cosgrove
2. Street Address: PO Box 1849
City/Town: North 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: 10 DEEPWOOD DR
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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the “disposal site”.)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/dep/cleanup/oview.htm>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://mass.gov/dep/about/region/schedule.htm> if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

February 19, 2015

Nicholas Tritto Jr.
Ttee Kent Lakes Nominee Trust
129 Chief Ninham Circle
Kent Lakes, NY 10512

**Subject: Environmental Sampling Results
50 Deepwood Dr., Eastham, Massachusetts**

Dear Mr. Tritto,

On behalf of the Town of Eastham, this letter transmits to you the testing results for the water sample collected from your property on January 23, 2015, by Environmental Strategies & Management, for 1,4 dioxane laboratory analysis. This compound was not detected above the laboratory reporting limit in the sample.

Pages from the laboratory report with these results are attached for your review, along with MassDEP-required form BWSC-123, and a sample laboratory report diagram. Status reports describing activities related to the Eastham landfill are available at the Eastham Town Hall and library, and are also available on line at:

<http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=4-0024301>

Please call us at 508-226-1800 if you have any questions.

Sincerely,
Environmental Strategies & Management, Inc.



Douglas Heely, PG, LSP
Principal Geologist

Copy: Ms. Jane Crowley, Town of Eastham Board of Health
MassDEP, SERO



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: Nicholas Tritto Jr
2. Street Address: 129 Chief Ninham Circle
City/Town: Kent Lakes, NY Zip Code: 10512

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 DEEPWOOD DR
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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the “disposal site”.)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/dep/cleanup/oview.htm>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://mass.gov/dep/about/region/schedule.htm> if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

February 19, 2015

Denny Teason
5 Eldia Way
Eastham, MA 02642

**Subject: Environmental Sampling Results
5 Eldia Way, Eastham, Massachusetts**

Dear Mr. Teason,

On behalf of the Town of Eastham, this letter transmits to you the testing results for the water sample collected from your property on January 23, 2015, by Environmental Strategies & Management, for 1,4 dioxane laboratory analysis. This compound was not detected above the laboratory reporting limit in the sample.

Pages from the laboratory report with these results are attached for your review, along with MassDEP-required form BWSC-123, and a sample laboratory report diagram. Status reports describing activities related to the Eastham landfill are available at the Eastham Town Hall and library, and are also available on line at:

<http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=4-0024301>

Please call us at 508-226-1800 if you have any questions.

Sincerely,
Environmental Strategies & Management, Inc.



Douglas Heely, PG, LSP
Principal Geologist

Copy: Ms. Jane Crowley, Town of Eastham Board of Health
MassDEP, SERO



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: Denny Teason
2. Street Address: 5 Eldia 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: 5 Eldia 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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the “disposal site”.)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/dep/cleanup/oview.htm>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://mass.gov/dep/about/region/schedule.htm> if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

February 19, 2015

Kim Tracy & Debra Palmer
C/O Kim Tracy
35 White Oak Dr
Harwinton CT 06791

**Subject: Environmental Sampling Results
415 Schoolhouse Rd., Eastham, Massachusetts**

Dear Ms Tracy & Ms. Palmer,

On behalf of the Town of Eastham, this letter transmits to you the testing results for the water sample collected from your property on January 23, 2015, by Environmental Strategies & Management, for 1,4 dioxane laboratory analysis. This compound was not detected above the laboratory reporting limit in the sample.

Pages from the laboratory report with these results are attached for your review, along with MassDEP-required form BWSC-123, and a sample laboratory report diagram. Status reports describing activities related to the Eastham landfill are available at the Eastham Town Hall and library, and are also available on line at:

<http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=4-0024301>

Please call us at 508-226-1800 if you have any questions.

Sincerely,
Environmental Strategies & Management, Inc.



Douglas Heely, PG, LSP
Principal Geologist

Copy: Ms. Jane Crowley, Town of Eastham Board of Health
MassDEP, SERO



NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to
Release Tracking Number

4

24301

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: EASTHAM LANDFILL, 255 OLD ORCHARD ROAD
City/Town: EASTHAM Zip Code: 02642

B. This notice is being provided to the following party:

1. Name: Kim Tracy & Debra Palmer C/O Kim Tracy
2. Street Address: 35 White Oak Dr
City/Town: Harwinton CT Zip Code: 06791

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: 415 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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the “disposal site”.)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/dep/cleanup/oview.htm>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://mass.gov/dep/about/region/schedule.htm> if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

February 19, 2015

Eben & Margaret Fogg
20 Starlight Ln
Eastham, MA 02642

**Subject: Environmental Sampling Results
20 Starlight Ln., Eastham, Massachusetts**

Dear Mr. and Mrs. Fogg

On behalf of the Town of Eastham, this letter transmits to you the testing results for the water samples collected from your property on January 30, 2015, by Environmental Strategies & Management, for 1,4 dioxane laboratory analysis. The samples were submitted to Alpha Analytical for 1,4 dioxane laboratory analysis. This compound was detected at a concentration of 0.164 micrograms per liter or $\mu\text{g/L}$ in the primary sample. Since the sampling protocol for this study includes the analysis of duplicate samples when 1,4 dioxane is detected above the laboratory detection limit (0.144 $\mu\text{g/L}$), the duplicate sample was also analyzed. The concentration detected in this sample was 0.171 $\mu\text{g/L}$. Both concentrations are below the Massachusetts drinking water standard and the bottle water action limit of 0.3 $\mu\text{g/L}$.

Pages from the laboratory report with these results are attached for your review, along with MassDEP-required form BWSC-123, and a sample laboratory report diagram. Status reports describing activities related to the Eastham landfill are available at the Eastham Town Hall and Public Library, and are also available on line at:

<http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=4-0024301>

Please call us at 508-226-1800 if you have any questions.

Sincerely,
Environmental Strategies & Management, Inc.



Douglas Heely, PG, LSP
Principal Geologist

Copy: Ms. Jane Crowley, Town of Eastham Board of Health
MassDEP, SERO



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: Eben & Margaret Fogg
2. Street Address: 20 Starlight Ln
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: 20 Starlight Ln
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

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the “disposal site”.)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/dep/cleanup/oview.htm>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://mass.gov/dep/about/region/schedule.htm> if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

March 16, 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
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 December 1, 2014, and February 28, 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

January 20, 2015

Mr. Mark Dakers
Division of Solid Waste Management
Massachusetts Department of Environmental Protection
20 Riverside Drive
Lakeville, MA 02347

Subject: Comprehensive Site Assessment Update - Phase 1 Summary
Eastham Landfill, Eastham, MA

Dear Mr. Dakers:

The purpose of this letter is to summarize the first phase (Phase 1) of the site assessment activities in and around the Eastham Landfill, conducted in October 2014 by Environmental Strategies & Management, Inc. (ES&M) on behalf of the Town of Eastham. The data collected during these assessment activities will be used to update the Comprehensive Site Assessment (CSA) to define the nature and extent of 1,4 dioxane in groundwater originating from the landfill. A detailed site map is included as Figure 1.

Comprehensive Site Assessment

The first phase of the CSA update was implemented in the fall of 2014 and included the completion of seven temporary vertical wells on the landfill property and surrounding residential neighborhood, with the collection of groundwater samples at multiple depth intervals. Phase 1 also included an elevation survey and groundwater sampling and water level gauging tasks.

Groundwater Profiling

In order to supplement groundwater quality data from existing monitoring wells and private drinking water wells located in and around the Eastham Landfill, ES&M advanced one electrical conductivity (EC) boring and seven temporary vertical profile wells. The locations of these wells are shown on Figure 1.

On October 14, 2014, Zebra Technical Services, under the supervision of ES&M personnel, advanced one EC boring to a depth of 185 feet below ground surface (bgs). In order to normalize drilling depths to a common elevation, approximate surface elevations were obtained from Google Earth. Using an approximate surface elevation of 60 feet, the EC boring extended to an elevation of -125'. A conductivity sensor continuously logged the subsurface to identify lower permeability confining layers. Two distinct confining layers were identified, from 40' to 45' bgs (20' to 15' elevation) and from 65' to 80' bgs (-5' to -20' elevation). The EC log is included as Appendix A. This conductivity data was used to determine suitable aquifer zones for the collection of groundwater samples from nearby temporary profile wells. Given that lithological

zones vary across the Site, the EC boring data was used only as a general indicator of where confining layers may be present near the eastern boundary of the landfill.

On October 15 through 21, 2014, seven temporary profile wells were advanced in and around the landfill property. Four profile wells (ESMT-1 through 4) were completed on the landfill property close to Old Orchard Road. ESMT-1 and ESMT-2 were completed in the southern portion of the landfill property where the highest concentrations of 1,4 dioxane have historically been detected. ESMT-3 was completed northeast of the transfer station, in the vicinity of MW-5S/D and downgradient of former septage lagoons. ESMT-4 was located in the northern portion of the landfill property, downgradient of a second former septage lagoon location.

Three profile wells were completed in residential areas outside of the landfill property to define the horizontal and vertical extent of 1,4 dioxane in groundwater from the landfill. ESMT-5 was completed on town conservation land northwest of Walters Way and south of Route 6. ESMT-6 was completed at the end of Eldia Way, to the northeast of the landfill, and ESMT-7 was completed on Surrey Drive, east of Schoolhouse Road.

A direct push drill rig was used to advance sampling screen to predetermined depth intervals in each profile well. Ground elevations were estimated using Google Earth to normalize sampling depths to a common elevation. Samples were collected using a Waterra Hydrolift pump and dedicated tubing with a check valve. Several gallons of water were allowed to purge from each depth interval prior to collecting samples. Samples were placed in laboratory supplied containers with aliquots of the appropriate preservative and submitted to Alpha Analytical laboratory (Alpha) in Mansfield, Massachusetts, for laboratory analysis of 1,4 dioxane by EPA Method 8270D-SIM. Samples collected from ESMT-3 and ESMT-4 (located downgradient of where septage lagoons were reported) were also analyzed for total nitrogen, total boron, and nitrate as possible indicators of septage impact.

Monitoring Well Sampling

On October 27, 2014, groundwater samples were collected from select monitoring wells in and around the landfill property. Samples were collected using a Waterra Hydrolift pump with dedicated tubing and a check valve. Several gallons of water were allowed to purge prior to sample collection. Samples were placed in laboratory supplied containers with aliquots of the appropriate preservatives and submitted to Alpha under chain of custody for analysis of 1,4 dioxane, total nitrogen, total boron, and nitrate.

Groundwater Sample Results

Analytical results for groundwater samples collected during Phase 1 of the CSA update project are included in Table 1. The data show that 1,4 dioxane was not detected above the MCP Method 1, GW-1 groundwater standard of 0.3 µg/l in any of the samples collected from the residential area profile wells (ESMT-5, -6 or -7). The highest concentrations of 1,4 dioxane were found in samples collected from ESMT-1 at elevation -60' and elevation -80'. These sampling results confirm previous results showing that 1,4

dioxane concentrations in groundwater are highest at the southern-most end of the landfill.

Water Level Gauging and Elevation Survey

An elevation survey was completed in concert with a water level gauging program to better define groundwater flow direction and gradient (horizontally and vertically) in the study area. Existing groundwater monitoring wells and select private drinking water supply wells were included in the survey. Surface water gauge points were also installed in Moll's Pond and Minister's Pond to relate water table elevation to surface water elevation. A complete water level gauging event was completed on October 29, 2014.

On November 4, 2014, Outermost Land Survey, Inc., under the supervision of ES&M personnel completed the elevation survey. Top of casing elevations of the monitoring wells and private drinking water wells used in the gauging program were normalized to NAVD 88 vertical control datum. While the Google Earth elevations used for the temporary wells were approximations to estimate ground elevations and sampling depths, the NAVD 88 survey provided elevation data to 0.01' accuracy. The well casing elevations were utilized with the water level gauging data to calculate water level elevations (Table 2) and to construct water table and piezometric surface elevation contours (Figure 2).

The contour map indicates a shallow groundwater flow direction from the landfill toward the south and east. Surface water appears to recharge to groundwater around both Moll's Pond and Minister's Pond, which influences shallow groundwater flow locally. Intermediate groundwater within elevation -20' to -40' generally flows in a southeasterly direction, but appears to have a northeasterly component of flow north of Moll's Pond. Figure 2 also outlines the approximate extent of 1,4 dioxane in groundwater that may be associated with the landfill. As discussed in several Immediate Response Action/Landfill Monitoring Plan status reports, the occurrence of 1,4 dioxane in groundwater may also be attributed to the numerous septic systems present in the study area.

Future Activities

Phase 2 of the CSA Update will include installation of additional permanent monitoring wells and additional groundwater sampling and monitoring tasks. A detailed scope of work for Phase 2 will be submitted prior to the start of this work, likely in the summer of 2015.

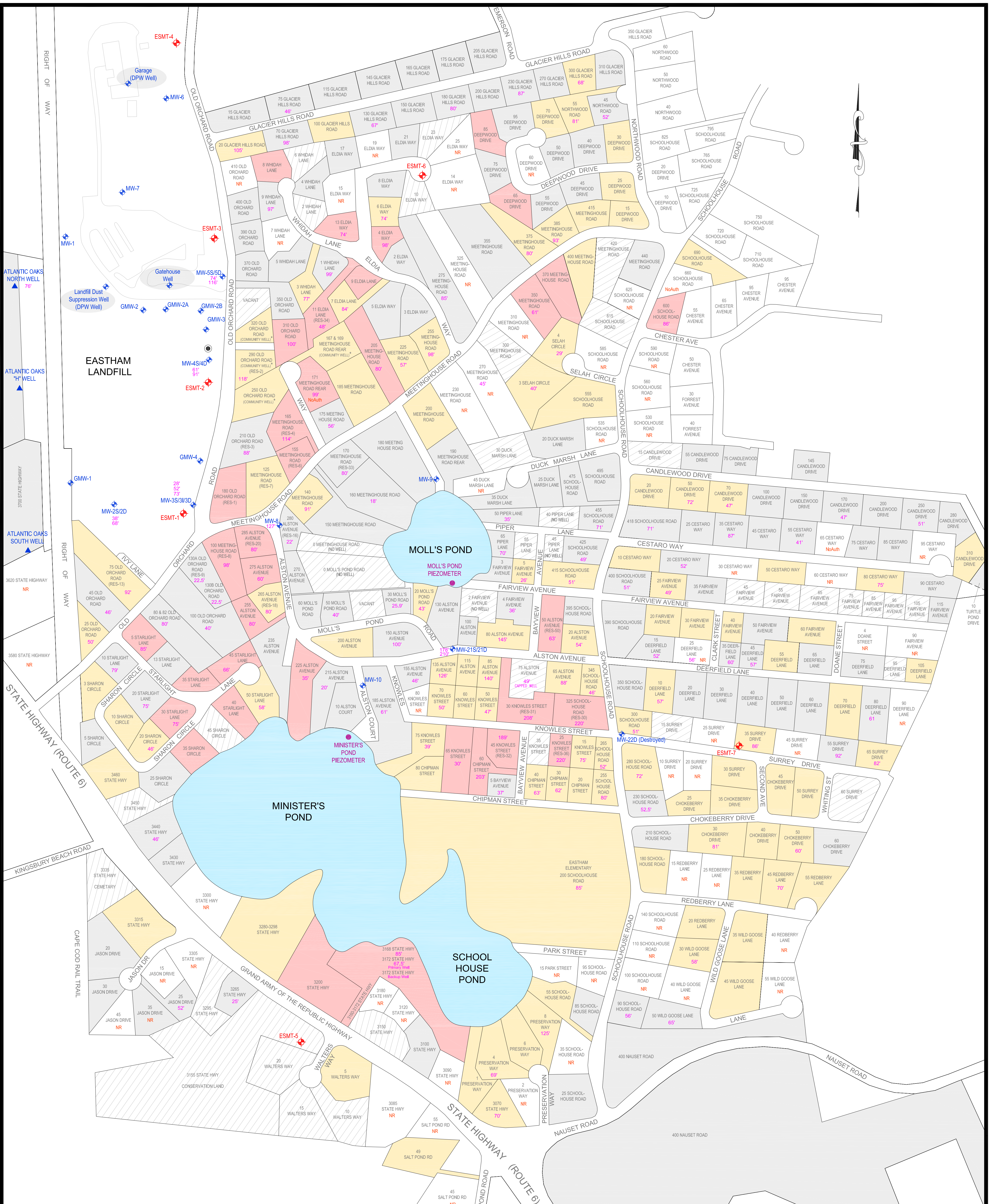
Please call us at 508-226-1800 if you have any questions.

Sincerely,
Environmental Strategies & Management, Inc.



Douglas Heely, PG, LSP
Principal Geologist

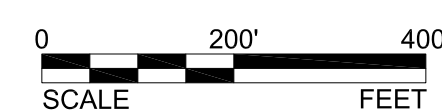
Copy: Jane Crowley, Eastham Board of Health
Sheila Vanderhoef, Eastham Town Manager



LEGEND

- MONITORING WELL
- WATER SUPPLY WELL
 - * Drinking water well located at 290 Old Orchard Rd is shared with 250 Old Orchard, 320 Old Orchard, and 167/169 Meetinghouse Rd.
- PIEZOMETER
- TEMPORARY VERTICAL PROFILE WELL
- ELECTRICAL CONDUCTIVITY BORING
- 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.



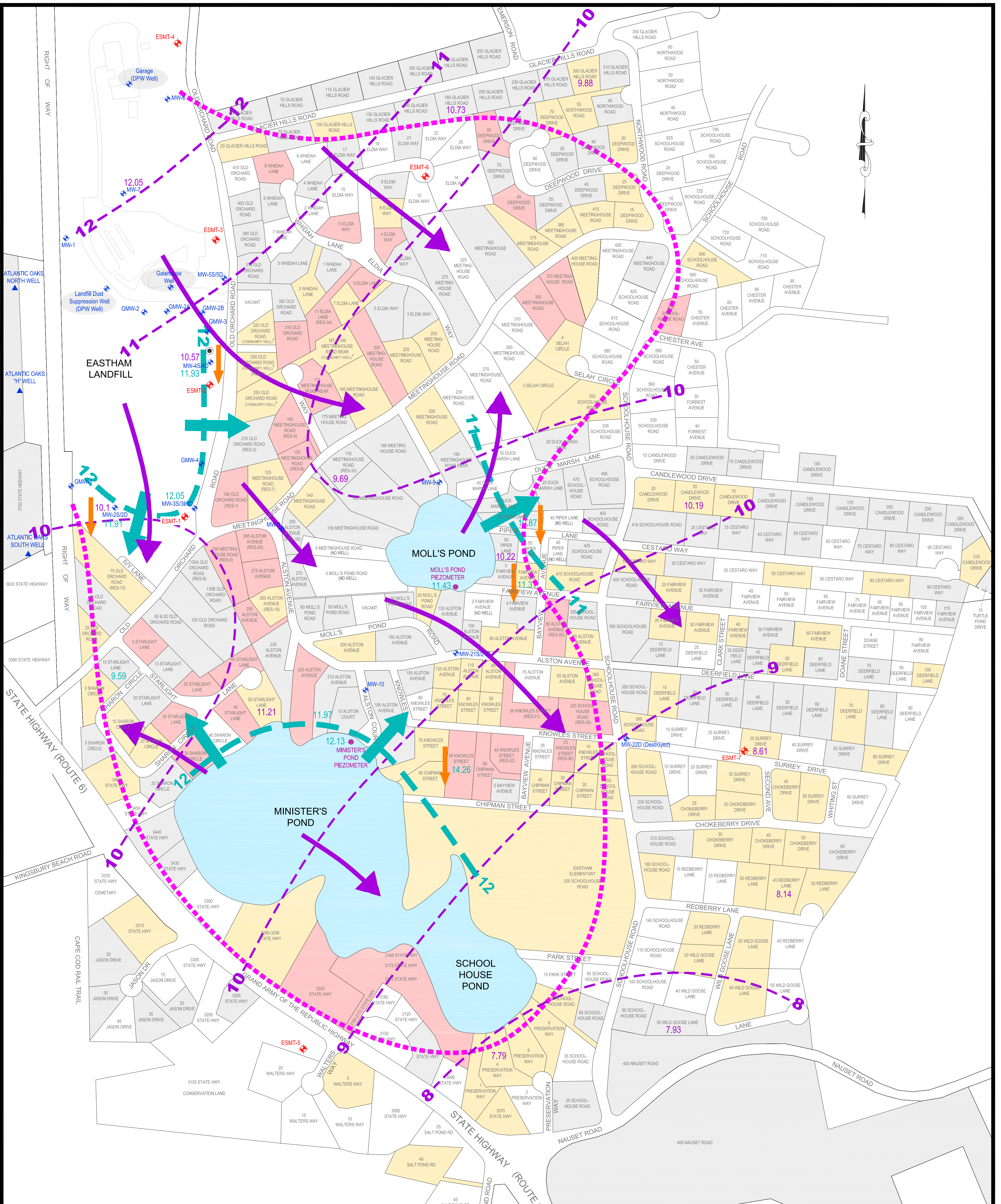
Environmental Strategies & Management

273 West Main Street
Norton, MA 02766
(508) 226-1800
(508) 226-1811 fax
info@esm-inc.com

GAUGING DATE:	DRAWING DATE:	ACAD FILE:
	01/16/15	EASTHAM LANDFILL

COMPREHENSIVE SITE ASSESSMENT

CLIENT:	TOWN OF EASTHAM	PM:	
LOCATION:	OLD ORCHARD ROAD EASTHAM, MASSACHUSETTS	LSP:	DH
RTN:	DWG:	PROJECT NO.:	FIGURE:
4-24301	DMR	2013-027	1



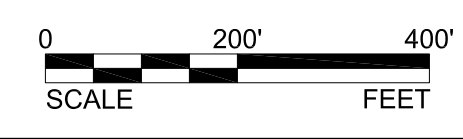
LEGEND

- MONITORING WELL
- WATER SUPPLY WELL
- Drinking water well located at 290 Old Orchard Rd is shared with 250 Old Orchard, 320 Old Orchard, and 167/169 Meetinghouse Rd.
- PIEZOMETER
- TEMPORARY VERTICAL PROFILE WELL
- ELECTRICAL CONDUCTIVITY BORING

- VACANT PROPERTY / NO WELL
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- 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.

- 12.05 PIEZOMETRIC SURFACE ELEVATION
- INFERRED PIEZOMETRIC SURFACE CONTOUR
- APPROXIMATE GROUNDWATER FLOW DIRECTION -20' TO -40' INTERVAL
- 12.13 WATER TABLE ELEVATION
- INFERRED WATER TABLE CONTOUR
- APPROXIMATE SHALLOW GROUNDWATER FLOW DIRECTION
- VERTICAL GROUNDWATER GRADIENT
- APPROXIMATE EXTENT OF 1,4 DIOXANE RELEASE



Environmental Strategies & Management

273 West Main Street
Norton, MA 02766
(508) 226-1800
(508) 226-1811 fax
info@esm-inc.com

GAUGING DATE:	DRAWING DATE:	ACAD FILE:
	01/16/15	EASTHAM LANDFILL

ESTIMATED GROUNDWATER FLOW PATTERNS VICINITY OF EASTHAM LANDFILL

CLIENT:	TOWN OF EASTHAM	PM:
LOCATION:	OLD ORCHARD ROAD EASTHAM, MASSACHUSETTS	LSP:
RTN:	DWG:	PROJECT NO.:
4-24301	DMR	2013-027
		FIGURE:
		2

**TABLE 1
SUMMARY OF
GROUNDWATER ANALYTICAL RESULTS
1,4 DIOXANE AND SEPTIC PARAMETERS**

**Eastham Landfill
Eastham, MA**

Well ID (Approx. Sample Elev.)	Date	1,4-Dioxane ug/L	Total Boron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrate/Nitrite mg/L	Nitrogen, Total Kjeldahl mg/L	Total Nitrogen mg/L
ESMT-1 (-60')	10/15/2014	46.3					
ESMT-1 (-80')	10/15/2014	14.9					
ESMT-1 (-100')	10/15/2014	<0.147					
ESMT-1 (-120')	10/15/2014	<0.147					
ESMT-2 (-15')	10/15/2014	0.72					
ESMT-2 (-60')	10/15/2014	<0.144					
ESMT-2 (-90')	10/15/2014	<0.144					
ESMT-2 (-120')	10/15/2014	<0.153					
ESMT-3 (-10')	10/16/2014	0.145	0.062	0.458	0.46	1.54	2.0
ESMT-3 (-25')	10/16/2014	<0.144	0.041	0.622	0.62	1.98	2.6
ESMT-3 (-45')	10/16/2014	<0.144	0.035	0.682	0.68	0.590J	0.68
ESMT-3 (-70')	10/16/2014	<0.144	0.044	0.843	0.84	0.423J	0.84
ESMT-3 (-95')	10/16/2014	<0.144	0.097	2.94	2.9	0.545J	2.9
ESMT-3 (-95') duplicate	10/16/2014	<0.144	0.097	2.94	2.9	0.545J	2.9
ESMT-4 (0')	10/21/2014	NS	0.040	2.20	2.5	<1.50	2.5
ESMT-4 (0')	10/21/2014	<0.147	NS	NS	NS	NS	NS
ESMT-4 (-15')	10/21/2014	<0.144	0.055	0.615	0.72	<1.50	<1.5
ESMT-4 (-40')	10/21/2014	<0.147	0.065	1.72	2.0	<1.50	2.0
ESMT-4 (-60')	10/21/2014	<0.147	0.050	<0.100	<0.10	<0.600	<0.60
ESMT-4 (-80')	10/21/2014	<0.150	0.299	<0.100	<0.10	<3.00	<3.0
ESMT-5 (-15')	10/16/2014	0.0840J					
ESMT-5 (-45')	10/16/2014	0.206					
ESMT-5 (-70')	10/16/2014	0.194					
ESMT-5 (-105')	10/16/2014	<0.142					
ESMT-5 (-135')	10/16/2014	<0.144					
ESMT-6 (0')	10/17/2014	0.129J					
ESMT-6 (-15')	10/17/2014	<0.144					
ESMT-6 (-30')	10/17/2014	<0.147					
ESMT-6 (-45')	10/17/2014	<0.144					
ESMT-6 (-60')	10/17/2014	<0.147					
ESMT-6 (-75')	10/17/2014	<0.144					
ESMT-7 (0')	10/21/2014	<0.150					
ESMT-7 (-20')	10/21/2014	<0.147					
ESMT-7 (-40')	10/21/2014	0.131J					
ESMT-7 (-60')	10/21/2014	<0.153					
ESMT-7 (-80')	10/21/2014	<0.144					
MW-3D	10/27/2014	12.8	0.982	<0.100	<0.10	80.5	80
MW-4D	10/27/2014	<0.150	0.039	3.52	3.3	0.707	4.0

Well ID (Approx. Sample Elev.)	Date	1,4-Dioxane ug/L	Total Boron mg/L	Nitrogen, Nitrate mg/L	Nitrogen, Nitrate/Nitrite mg/L	Nitrogen, Total Kjeldahl mg/L	Total Nitrogen mg/L
MW-4S	10/27/2014	0.652	0.065	0.091J	0.14	5.05	5.2
MW-5D	10/27/2014	<0.153	0.048	3.14	3.0	0.179J	3.0
MW-5S	10/27/2014	1.65	0.110	<0.100	<0.50	11.3	11
MW-7	10/27/2014	<0.150	0.044	<0.100	0.052J	0.968	0.97
MW-10	10/27/2014	0.186	0.043	1.12	1.0	0.959	2.0
MW-21D	10/27/2014	0.215	0.107	0.055J	0.025J	3.07	3.1
MW-21S	10/27/2014	2.93	0.269	1.08	1.0	7.77	8.8

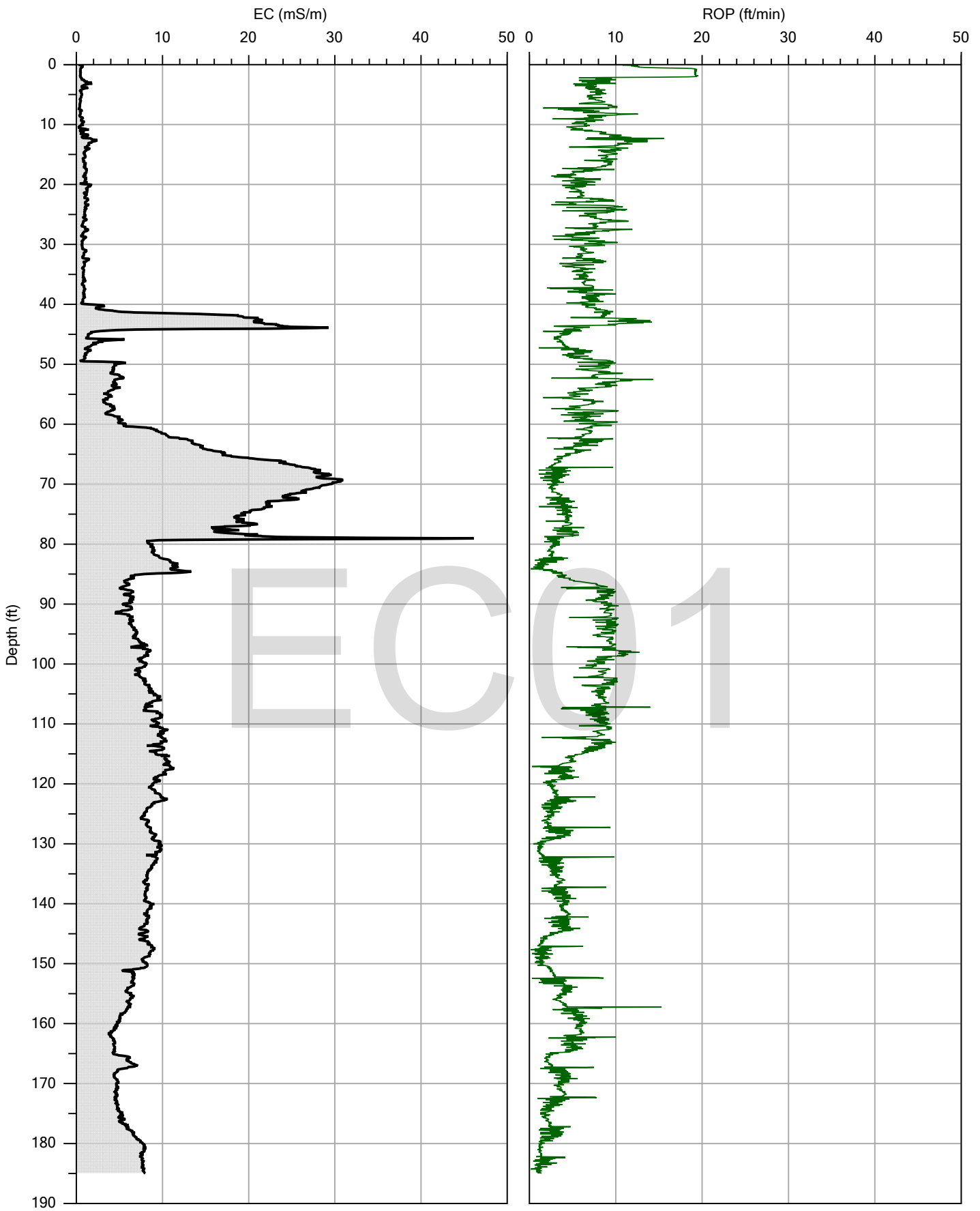
**TABLE 2
SUMMARY OF
WATER TABLE ELEVATION MEASUREMENTS
Eastham Landfill
Eastham, MA**

Well ID	Date	Casing Elevation (feet)	Depth to Water (feet)	Corrected Water Elevation (feet)
ALSTON AVE_215	10/29/2014	23.10	11.13	11.97
CANDLEWOOD DR_050	10/29/2014	49.58	39.39	10.19
CHIPMAN ST_060	10/29/2014	50.19	41.39	8.80
FAIRVIEW AVE_005	10/29/2014	28.58	17.27	11.31
GLACIER HILLS RD_180	10/29/2014	56.57	45.84	10.73
GLACIER HILLS RD_300	10/29/2014	39.05	29.17	9.88
KNOWLES ST_065	10/29/2014	38.89	24.63	14.26
MEETINGHOUSE RD_170	10/29/2014	46.18	36.49	9.69
Minister's Pond Piezometer	10/29/2014	15.29	3.16	12.13
Moll's Pond Piezometer	10/29/2014	13.70	2.27	11.43
MW-2D	10/29/2014	34.30	24.2	10.10
MW-2S	10/29/2014	33.92	22.01	11.91
MW-3D	10/29/2014	32.79	20.91	11.88
MW-3I	10/29/2014	33.10	20.03	13.07
MW-3S	10/29/2014	33.15	21.1	12.05
MW-4D	10/29/2014	60.93	50.37	10.56
MW-4S	10/29/2014	60.88	48.95	11.93
MW-5D	10/29/2014	57.12	45.83	11.29
MW-5S	10/29/2014	56.93	46.3	10.63
MW-7	10/29/2014	34.22	22.17	12.05
PIPER LN_050	10/29/2014	39.99	29.12	10.87
PIPER LN_065	10/29/2014	33.30	23.08	10.22
PRESERVATION WAY_004	10/29/2014	46.89	39.1	7.79
REDBERRY LN_045	10/29/2014	48.80	40.66	8.14
STARLIGHT LN_010	10/29/2014	59.31	49.72	9.59
STARLIGHT LN_050	10/29/2014	26.05	14.84	11.21
SURREY DR_035	10/29/2014	53.18	44.57	8.61
WILD GOOSE LN_050	10/29/2014	45.46	37.53	7.93

Notes: NM - Not Measured
NA - Not Applicable
ND - Not Detected

1/8/2015 EasthamLandfill
Table 2 Page 1 of 1
Report: CSA Gauging Table
Database: Eastham Gauging Entry





Company:	ZEBRA	Operator:	WM	File:	EC1.DAT
Project ID:	Eastham	Client:	ES&M	Date:	10/14/2014
				Location:	