

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

4th QUARTER 2014

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

DEP RTN 4-24301

December 31, 2014

Prepared for:

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

Prepared by:

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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 1st Quarter 2014 IRA Status Report (ES&M, 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 September 1 through November 30, 2014.

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

IRA sampling events were conducted during two days in September, one day in October, and two days in November 2014. Samples were collected from 14 properties within the study area and one property outside of the study area. 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 sampling 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, one new property (600 Schoolhouse Road) was added to the list of properties eligible for bottled water. The complete list of properties eligible for bottled water through this report period is presented in Table 1. Table 2 summarizes 1,4-dioxane analytical results of samples collected during this report period as well as all previous phases of the private well sampling program².

¹ This criteria was modified slightly during this report period 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.

All of the drinking well water samples collected during this report period were from wells previously tested. Four of the properties' results had concentrations of 1,4-dioxane that were slightly greater than previous results; three had concentrations slightly less than previous results, one had a concentration significantly less than previous results, and the remaining six properties had results that were generally consistent with previous results. Regarding the property whose result was significantly less than the previous results (180 Old Orchard Road), eight water samples have been collected from this residential well since February 2013. The results have been highly variable, ranging from 0.045 "J" to 0.52 µg/L. Review of data throughout the study area suggests that wells impacted by 1,4-dioxane emanating from the landfill exhibit relatively consistent concentrations. While there is insufficient information at this time to determine the origin of 1,4-dioxane in the well water from this residence, these variable sampling results suggest possible impact by one or more septic systems.

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. 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 detected, but at a concentration 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 detected 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. 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.

2.2 Activated Carbon Adsorption Test - 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 has 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 on November 19, 2014. 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 continue to indicate that a water treatment system utilizing virgin, coconut-based activated carbon is effective at removing 1,4-dioxane from drinking water.

Also on November 19th, 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 effluent and mid-point of the system after the carbon change. The laboratory test results show that 1,4-dioxane was not detected above the method detection limit in either sample. Laboratory reports containing the results from the carbon treatment system samples are included in Appendix B.

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.

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.

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 will be issued to the Solid Waste Management Section in January 2015 to summarize the findings. Permanent monitoring wells and additional groundwater sampling and monitoring work will be completed between July 2015 and June 2016. 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.

The LMP samples collected during this period (prior to the preparation of the Work Plan which revised the LMP requirements) included quarterly sampling of select landfill monitoring wells and private drinking water wells.

3.1 Landfill Monitoring Well Sample Collection

As prescribed by the LMP, quarterly groundwater samples were collected from landfill monitoring wells MW-3I and MW-3D on November 10, 2014. The locations of these wells within the limits of the landfill are shown on Figure 1. Samples were collected by Barnstable County Department of Health and Environment (BCDHE) personnel and submitted to the Barnstable County Health Laboratory for analysis of VOCs, metals and indicator parameters. The laboratory test 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 from Barnstable County is included in Appendix B.

3.2 Private Well Sample Collection

The LMP includes quarterly collection of water samples from private wells located at 100 Meetinghouse Road, 180 Old Orchard Road, and 285 Alston Avenue with analysis for 1,4-dioxane and arsenic. Samples were collected from these properties on September 18 and 19, 2014. Current and historic laboratory test results from these private drinking water wells are reported on Table 4.

4.0 FUTURE SCHEDULE OF IRA AND LMP ACTIVITIES

During the next reporting period from December 2014 through February 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, including residences near 600 Schoolhouse Road;
- 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 February 2015 for analysis of indicator parameters, metals and VOCs including 1,4-dioxane.
- Collection of annual samples from landfill monitoring wells MW-2S, MW-4S, MW-5S, MW-8 and the DPW well (landfill dust suppression well) in December 2014 for analysis of indicator parameters, metals and VOCs including 1,4-dioxane.
- Collection of annual samples from select residential properties not receiving bottled water.

5.0 PUBLIC OUTREACH

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

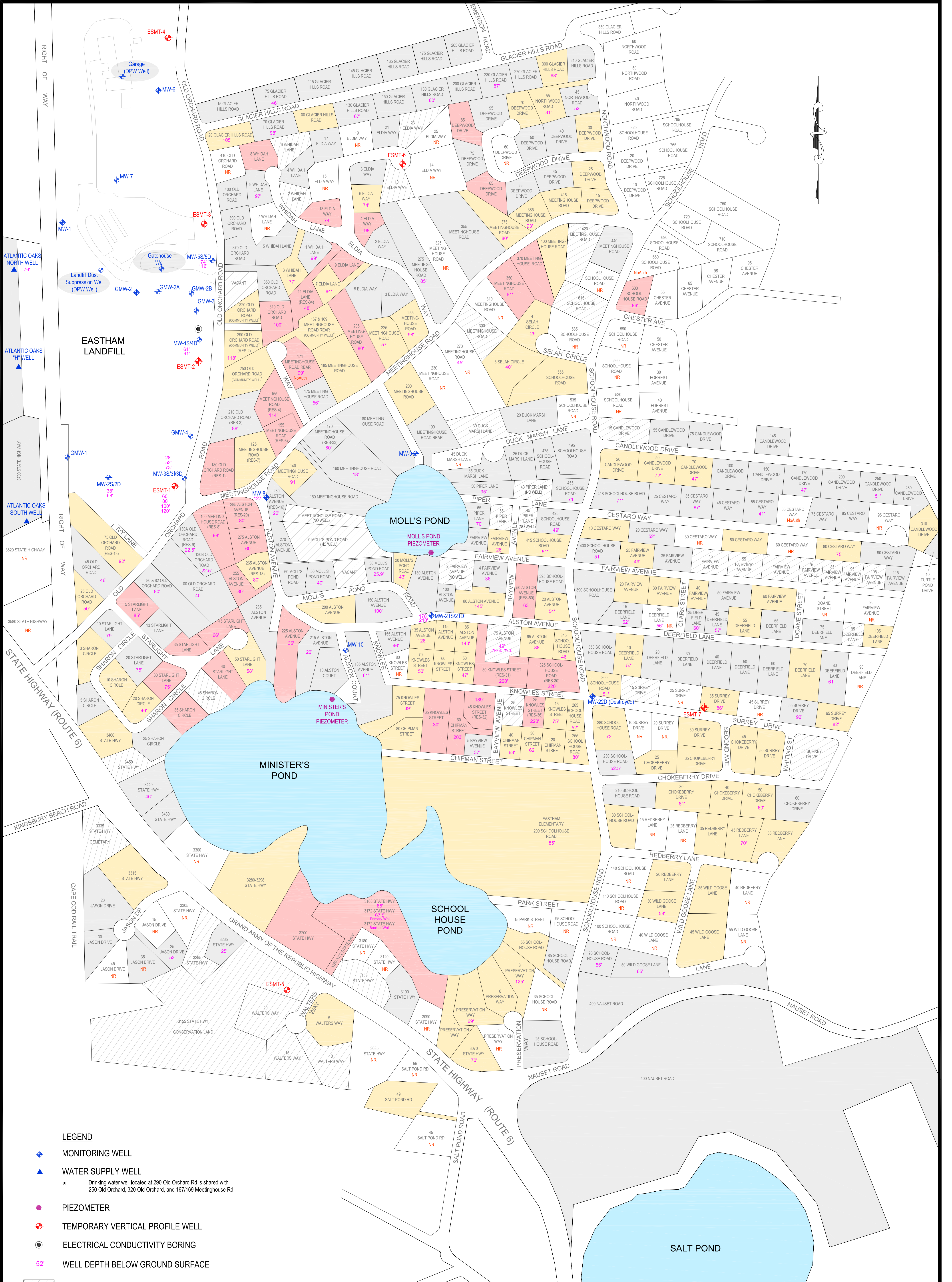
Availability of Reports

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.

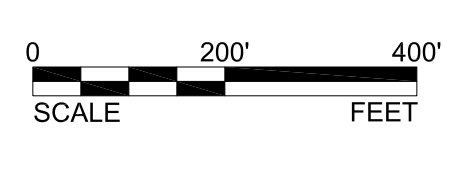
Direct Communications

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



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GAUGING DATE:	DRAWING DATE:	ACAD FILE:
	12/12/14	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 PRIMARY & BACKUP WELL
3200 STATE HWY
8 WHIDAH LANE

* Added during 4th Quarter 2014.

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

Property	Date	Duplicate	1,4 Dioxane
Study Area Samples			
Results			
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
<u>85 ALSTON AVENUE</u>	<u>11/20/2014</u>		<u>0.248</u>
	<u>11/20/2014</u>	Duplicate	<u>0.236</u>
	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
<u>255 ALSTON AVENUE</u>	Inf <u>11/19/2014</u>		<u>2.27</u>
	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
	3/14/2013		0.055J
270 ALSTON AVENUE	8/4/2014		<0.142
	2/11/2013		< 0.20
275 ALSTON AVENUE	7/17/2014		1.28
	7/17/2014	Duplicate	1.35
	5/16/2013		1.3
	5/16/2013	Duplicate	0.99

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
280 ALSTON AVENUE	12/18/2013		< 0.20
	2/22/2013		< 0.20
<u>285 ALSTON AVENUE</u>	<u>9/18/2014</u>		<u>0.416</u>
	3/14/2014		0.636
	11/20/2013		0.51
	5/8/2013		0.35
	2/22/2013		0.37
	2/22/2013	Duplicate	0.33
10 ALSTON COURT	2/14/2013		< 0.20
ATLANTIC OAKS 'H' WELL	7/25/2013		< 0.20
ATLANTIC OAKS NORTH WELL	7/25/2013		< 0.20
ATLANTIC OAKS-SOUTH WELL	7/23/2013		< 0.20
5 BAYVIEW AVENUE	8/1/2014		<0.147
	2/25/2013		< 0.20
20 CANDLEWOOD DRIVE	5/29/2013		0.056J
50 CANDLEWOOD DRIVE	5/3/2013		0.092J
55 CANDLEWOOD DRIVE	7/25/2013		< 0.20
70 CANDLEWOOD DRIVE	5/3/2013		0.073J
75 CANDLEWOOD DRIVE	7/17/2014		<0.147
100 CANDLEWOOD DRIVE	5/3/2013		< 0.20
145 CANDLEWOOD DRIVE	5/2/2013		< 0.20
150 CANDLEWOOD DRIVE	5/2/2013		< 0.20
170 CANDLEWOOD DRIVE	7/25/2013		< 0.20
200 CANDLEWOOD DRIVE	5/8/2013		< 0.20
250 CANDLEWOOD DRIVE	5/7/2013		< 0.20
280 CANDLEWOOD DRIVE	5/6/2013		< 0.20
<u>310 CANDLEWOOD DRIVE</u>	<u>9/19/2014</u>		<u><0.15</u>
	4/30/2013		0.060J
395 CANDLEWOOD DRIVE	5/8/2013		< 0.20
10 CESTARO WAY	4/30/2013		0.11J
20 CESTARO WAY	5/2/2013		< 0.20
25 CESTARO WAY	12/3/2013		< 0.20
35 CESTARO WAY	4/30/2013		< 0.20
45 CESTARO WAY	5/2/2013		< 0.20
50 CESTARO WAY	5/6/2013		0.077J
55 CESTARO WAY	5/2/2013		< 0.20
75 CESTARO WAY	5/6/2013		< 0.20
80 CESTARO WAY	2/21/2013		0.061J
85 CESTARO WAY	12/3/2013		< 0.20
90 CESTARO WAY	5/2/2013		< 0.20
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
	5/9/2013		NS
50 CHOKEBERRY DRIVE	5/10/2013		0.058J
60 CHOKEBERRY DRIVE	4/11/2014		<0.142
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	12/3/2013		< 0.20
55 DEEPWOOD DRIVE	8/25/2014		<0.139
	7/25/2013		< 0.20

4Q2014

4Q2014

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
65 DEEPWOOD DRIVE	3/28/2014		0.297
	3/28/2014	Duplicate	0.336
	7/30/2013		0.29
70 DEEPWOOD DRIVE	7/30/2013	Duplicate	0.24
	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
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	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	5/10/2013		NS
	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
	5/7/2014		3.58
11 ELDIA WAY	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
	5/9/2014		0.660
13 ELDIA WAY	5/9/2014	Duplicate	0.659
	7/24/2013		0.33
17 ELDIA WAY	5/6/2013		< 0.20
21 ELDIA WAY	12/5/2013		< 0.20
3 FAIRVIEW AVENUE	5/10/2013		< 0.20
4 FAIRVIEW AVENUE	8/15/2014		<0.147
	4/29/2013		< 0.20

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Property	Date	Duplicate	1,4 Dioxane
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
	5/9/2013		NS
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
30 KNOWLES STREET	5/6/2014		4.79
	5/6/2014 Duplicate		4.92
	9/17/2013		5.4
	8/28/2013		5.6
	7/30/2013		5.1
	7/30/2013 Duplicate		5.1
	6/27/2013		5.0
	6/27/2013 Duplicate		5.1
	5/29/2013		4.9
	5/29/2013 Duplicate		5.9B
	4/29/2013		6.0
	4/29/2013 Duplicate		5.2
	2/19/2013		6.9
	2/19/2013 Duplicate		6.4
45 KNOWLES STREET	5/6/2014		2.22
	5/6/2014 Duplicate		2.38
	8/28/2013		2.0
	5/1/2013		2.3
	5/1/2013 Duplicate		2.4

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Property	Date	Duplicate	1,4 Dioxane	
50 KNOWLES STREET	6/19/2014		0.0910J	
	4/14/2014		<0.144	
	2/19/2013		0.26	
	2/19/2013	Duplicate	0.23	
60 KNOWLES STREET	12/4/2013		0.049J	
	2/21/2013		0.063J	
<u>65 KNOWLES STREET</u>	<u>10/28/2014</u>		<u>0.102J</u>	<u>4Q2014</u>
	6/16/2014		0.209	
	6/16/2014	Duplicate	0.217	
	3/27/2014		5.03	
	3/27/2014	Duplicate	5.42	
	7/23/2013		0.11J	
70 KNOWLES STREET	6/16/2014		<0.147	
	2/20/2013		0.057J	
75 KNOWLES STREET	5/8/2014		<0.144	
	4/30/2013		0.075J	
<u>100 MEETINGHOUSE ROAD</u>	<u>9/19/2014</u>		<u>1.75</u>	<u>4Q2014</u>
	5/6/2014		1.90	
	3/14/2014		1.73	
	11/20/2013		1.3	
	8/27/2013		1.9	
	5/8/2013		1.8	
	5/8/2013	Duplicate	1.7	
	2/14/2013		1.6	
	2/14/2013	Duplicate	1.5	
125 MEETINGHOUSE ROAD	5/8/2013		0.15J	
140 MEETINGHOUSE ROAD	3/24/2014		<0.150	
	5/10/2013		0.11J	
150 MEETINGHOUSE ROAD	2/22/2013		< 0.20	
155 MEETINGHOUSE ROAD	8/15/2014		0.379	
	8/15/2014	Duplicate	0.36	
	7/31/2013		0.46	
	7/31/2013	Duplicate	0.35	
160 MEETINGHOUSE ROAD	2/12/2013		< 0.20	
165 MEETINGHOUSE ROAD	5/9/2014		0.746	
	5/9/2014	Duplicate	0.748	
	2/15/2013		0.75	
	2/15/2013	Duplicate	0.67	
170 MEETINGHOUSE ROAD	8/15/2014		<0.144	
	2/15/2013		< 0.20	
171 MEETINGHOUSE ROAD REAR	5/1/2013		0.58	
<u>175 MEETINGHOUSE ROAD</u>	<u>9/19/2014</u>		<u><0.156</u>	<u>4Q2014</u>
	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	
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	

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Property	Date	Duplicate	1,4 Dioxane	
<u>375 MEETINGHOUSE ROAD</u>	<u>11/20/2014</u>		<u>0.212</u>	<u>4Q2014</u>
	<u>11/20/2014</u>	Duplicate	<u>0.187</u>	<u>4Q2014</u>
	3/24/2014		0.175	
	3/24/2014	Duplicate	0.156	
	8/2/2013		0.19J	
385 MEETINGHOUSE ROAD	8/1/2014		<0.142	
	7/24/2013		0.040J	
400 MEETINGHOUSE ROAD	7/24/2013		0.12J	
415 MEETINGHOUSE ROAD	12/3/2013		0.14J	
440 MEETINGHOUSE ROAD	7/31/2013		< 0.20	
20 MOLLS POND ROAD	2/19/2013		0.050J	
30 MOLLS POND ROAD	2/15/2013		< 0.20	
50 MOLLS POND ROAD	2/11/2013		< 0.20	
60 MOLLS POND ROAD	2/11/2013		< 0.20	
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	12/18/2013		< 0.20	
	2/25/2013		< 0.20	
130B OLD ORCHARD ROAD	12/18/2013		< 0.20	
	2/25/2013		< 0.20	
<u>180 OLD ORCHARD ROAD</u>	<u>9/18/2014</u>		<u>0.137J</u>	<u>4Q2014</u>
	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	
	5/9/2013		NS	
	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	
<u>4 PRESERVATION WAY</u>	<u>10/28/2014</u>		<u>0.208</u>	<u>4Q2014</u>
	7/17/2014		0.192	
	7/17/2014	Duplicate	0.217	
	3/25/2014		0.208	
	3/25/2014	Duplicate	0.196	
	12/3/2013		0.18J	
	4/30/2013		0.21	
6 PRESERVATION WAY	12/2/2013		0.11J	
8 PRESERVATION WAY	12/2/2013		0.13J	
20 REDBERRY LANE	7/23/2013		0.046J	
35 REDBERRY LANE	12/2/2013		0.070J	
45 REDBERRY LANE	3/28/2014		0.105J	
55 REDBERRY LANE	7/22/2013		0.047J	

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Property	Date	Duplicate	1,4 Dioxane	
49 SALT POND ROAD	3/11/2014		0.177	
	3/11/2014	Duplicate	0.166	
25 SCHOOLHOUSE ROAD	3/10/2014		<0.150	
55 SCHOOLHOUSE ROAD	12/4/2013		0.044J	
85 SCHOOLHOUSE ROAD	12/5/2013		< 0.20	
90 SCHOOLHOUSE ROAD	6/23/2014		<0.139	
180 SCHOOLHOUSE ROAD	7/23/2013		0.093J	
<u>200 SCHOOLHOUSE ROAD</u>	<u>11/20/2014</u>		<u>0.0884J</u>	<u>4Q2014</u>
	<u>11/20/2014</u>	Duplicate	<u>0.0808J</u>	<u>4Q2014</u>
	8/4/2014		0.0822J	
PRE (filter)	5/6/2014		0.105J	
POST (filter)	2/14/2014		0.094 J	
PRE (filter)	2/14/2014		0.083 J	
PRE (filter)	2/14/2014	Duplicate	0.076 J	
PRE (filter)	2/11/2014		0.081 J	
POST (filter)	2/11/2014		0.096 J	
PRE (filter)	2/11/2014	Duplicate	0.086 J	
	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	
325 SCHOOLHOUSE ROAD	Mid System	9/19/2013	0.095J	
	Untreated	9/19/2013	10	
	Effluent	9/19/2013	0.68	
	Mid System	8/27/2013	< 0.20	
	Effluent	8/27/2013	< 0.20	
	Untreated	8/27/2013	7.7	
	Mid System	7/31/2013	< 0.20	
	Effluent	7/31/2013	< 0.20	
	Untreated	7/31/2013	9.4	
	Untreated	7/31/2013	8.8	
	Untreated	6/27/2013	8.2	
	Mid System	6/27/2013	0.041J	
	Effluent	6/27/2013	< 0.20	
	Untreated	6/27/2013	8.8	
	Untreated	5/29/2013	7.8	
	Mid System	5/29/2013	< 0.20	
	Effluent	5/29/2013	< 0.20	
	Untreated	5/29/2013	9.8B	
	Mid System	4/29/2013	< 0.20	
	Untreated	4/29/2013	9.8	
	Effluent	4/29/2013	< 0.20	
	Untreated	4/29/2013	8.3	
	Effluent	3/21/2013	< 0.20	
	Mid System	3/21/2013	< 0.20	
	Mid System	3/14/2013	< 0.20	
	Effluent	3/14/2013	< 0.20	
	Effluent	3/8/2013	< 0.20	
	Mid System	3/8/2013	< 0.20	
	Mid System	2/25/2013	< 0.20	
	Effluent	2/25/2013	< 0.20	
	Untreated	2/22/2013	10	
	Untreated	2/22/2013	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	

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400 SCHOOLHOUSE ROAD	5/16/2013		< 0.20	
	5/9/2013		NS	
415 SCHOOLHOUSE ROAD	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	
	5/9/2013		NS	
<u>600 SCHOOLHOUSE ROAD</u>	<u>10/28/2014</u>		<u>0.347</u>	<u>4Q2014</u>
	6/26/2014		0.226	
	6/26/2014	Duplicate	0.206	
690 SCHOOLHOUSE ROAD	3/11/2014		0.105J	
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	
	5/9/2013		NS	
20 SHARON CIRCLE	3/24/2014		0.104J	
	4/30/2013		0.10J	
<u>25 SHARON CIRCLE</u>	<u>9/19/2014</u>		<u><0.15</u>	<u>4Q2014</u>
	9/19/2013		< 0.20	
35 SHARON CIRCLE	6/19/2014		0.143	
	6/19/2014	Duplicate	0.154	
	5/1/2013		0.34	
5 STARLIGHT LANE	5/5/2014		0.394	
	5/5/2014	Duplicate	0.362	
	2/21/2013		0.37	
	2/21/2013	Duplicate	0.37	
10 STARLIGHT LANE	8/4/2014		<0.144	
	5/10/2013		< 0.20	
13 STARLIGHT LANE	8/1/2014		<0.142	
	5/10/2013		< 0.20	
20 STARLIGHT LANE	5/7/2013		< 0.20	
30 STARLIGHT LANE	6/26/2014		0.279	
	6/26/2014	Duplicate	0.302	
	3/25/2014		0.278	
	3/25/2014	Duplicate	0.249	
	12/4/2013		0.22	
	12/4/2013	Duplicate	0.17J	
	5/3/2013		0.21	
35 STARLIGHT LANE	12/4/2013		0.37	
	12/4/2013	Duplicate	0.30	
	2/15/2013		0.26	
40 STARLIGHT LANE	6/26/2014		0.874	
	6/26/2014	Duplicate	0.936	
	7/23/2013		0.83	
45 STARLIGHT LANE	2/12/2013		1.1	
	2/12/2013	Duplicate	0.93	
50 STARLIGHT LANE	3/27/2014		<0.139	
	7/31/2013		0.13J	
3070 STATE HWY	12/6/2013		0.18J	
<u>3100 A STATE HWY</u>	<u>10/28/2014</u>		<u><0.150</u>	<u>4Q2014</u>
	3/13/2014		<0.139	
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	
	12/6/2013	Duplicate	0.21	

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Property	Date	Duplicate	1,4 Dioxane
3200 STATE HWY	5/8/2014		0.424
	5/8/2014	Duplicate	0.418
	12/6/2013		0.31
	12/6/2013	Duplicate	0.32
3265 STATE HWY	3/10/2014		<0.147
3280 STATE HWY	4/14/2014		0.248
	4/14/2014	Duplicate	0.198
3315 STATE HWY	3/12/2014		0.232
	3/12/2014	Duplicate	0.194
3430 STATE HWY	12/2/2013		< 0.20
3440 STATE HWY	4/11/2014		<0.142
3460 STATE HWY	12/6/2013		0.14J
	4/30/2013		0.10J
30 SURREY DRIVE	9/17/2013		0.14J
35 SURREY DRIVE	7/31/2013		0.070J
50 SURREY DRIVE	4/30/2013		0.058J
55 SURREY DRIVE	5/1/2013		< 0.20
65 SURREY DRIVE	7/22/2013		0.047J
10 TURTLE POND ROAD	5/10/2013		< 0.20
5 WALTERS WAY	4/11/2014		0.147
	4/11/2014	Duplicate	<0.144
1 WHIDAH LANE	7/31/2014		<0.144
	4/29/2013		< 0.20
	5/5/2014		<0.144
3 WHIDAH LANE	5/16/2013		0.071J
	5/9/2013		NS
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			
Results			
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
<u>550 BRACKET ROAD</u>	<u>9/19/2014</u>		<u>0.119J</u>
1825 BRIDGE ROAD	3/11/2014		<0.150
60 BRIGGS FIELD ROAD	5/1/2013		< 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
21 SMITH LANE	5/9/2013		NS
10 SPINNAKER WAY	8/25/2014		<0.142
44 SQUIRREL RUN	7/17/2014		<0.142

4Q2014

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	Schedule	VOCs & 1,4- Dioxane	Inorganics	Arsenic Only	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				
Residential Wells										
285 Alston	RES-20	Yes	No							
100 Meetinghouse	RES-8	Yes	No							
180 Old Orchard	RES-1	Yes	No							
325 Schoolhouse	RES-30	Yes	No							
50 Alston	RES-35	Yes	No							
265 Alston	RES-18	No	Yes	Annually	February	x	x			
280 Alston	RES-16	No	Yes	Annually	February	x	x			
11 Eldia	RES-34	Yes	No							
25 Knowles	RES-36	Yes	No							
30 Knowles	RES-31	Yes	No							
45 Knowles	RES-32	Yes	No							
125 Meetinghouse	RES-7	No	Yes	Annually	February	x	x			
155 Meetinghouse	RES-6	Yes	No							
165 Meetinghouse	RES-4	Yes	No							
170 Meetinghouse	RES-33	No	Yes	Annually	February	x				
75 Old Orchard	RES-13	No	Yes	Annually	February	x	x			
130 Old Orchard	RES-9	No	Yes	Annually	February	x	x			
210 Old Orchard	RES-3	No	Yes	Annually	February	x	x			
290 Old Orchard	RES-2	No	Yes	Annually	February	x	x			
Landfill Gas Wells										
GMW-1, 2, 2A, 2B, 3 & 4			Yes	Semi-Annually	May/Nov					x

TABLE 4.1
SECTION 1
SUMMARY OF LANDFILL MONITORING PLAN
GROUNDWATER ANALYTICAL RESULTS
Volatile Organic Compounds
Eastham Landfill Monitoring Wells and Private Drinking Wells
Eastham, MA
(All results in ug/l)

Property	LMP Sample Frequency	Date	1,4-Dioxane	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	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	
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	
Landfill Non-potable Well	Annual	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	
MW 21D		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	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	
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	
MW 2S	Annual	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	
		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 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	
		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	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
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		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	12/18/2013	< 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	

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



Property	LMP Sample Frequency	Date	1,4-Dioxane	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,1,2-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 4S	Annual	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		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	12/18/2013	< 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 8	Annual	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			
50 ALSTON AVENUE	Annual	9/18/2013	0.37	< 0.50	< 0.50	< 0.50	< 0.50	0.17J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
		7/25/2013	0.18J	< 0.50	< 0.50	< 0.50	< 0.50	0.30J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
		6/27/2013	0.18J	< 0.50	< 0.50	< 0.50	< 0.50	0.24J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
		5/29/2013	0.20	< 0.50	< 0.50	< 0.50	< 0.50	0.25J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
		5/1/2013	0.18J	< 0.50	< 0.50	< 0.50	< 0.50	0.28J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
		3/14/2013	0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		
		3/4/2013	0.23	< 0.50	< 0.50	< 0.50	< 0.50	0.25J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
		3/4/2013	0.23	< 0.50	< 0.50	< 0.50	< 0.50	0.27J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
		2/14/2013	5.1	< 0.50	< 0.50	< 0.50	< 0.50	0.24J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
		2/14/2013	Duplicate	5.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		
		12/7/2012	<2.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
		265 ALSTON AVENUE	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
				3/14/2013	0.055J	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			
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				
275 ALSTON AVENUE		5/16/2013	1.3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50			
		5/16/2013	Duplicate	0.99	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50				
		12/6/2012	<2.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50					
280 ALSTON AVENUE	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			
		2/22/2013	< 0.20	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					
		6/21/2012	NS	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50					
285 ALSTON AVENUE	Quarterly	9/18/2014	0.416	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50			
		11/20/2013	0.51	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50					
		5/8/2013	0.35	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50					
		2/22/2013	0.37	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50					
		2/22/2013	Duplicate	0.33	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50					
		12/6/2012	<2.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50					
11 ELDIA WAY	Annual	9/17/2013	3.7	< 0.50	< 0.50	< 0.50	< 0.50	0.17J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50			
		7/25/2013	3.0	< 0.50	< 0.50	< 0.50	< 0.50	0.19J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50					
		6/27/2013	4.3	< 0.50	< 0.50	< 0.50	< 0.50	0.22J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50					
		6/27/2013	Duplicate	3.4	NS	NS	NS	NS	NS	NS	NS	NS	NS					
		5/29/2013	4.3	< 0.50	< 0.50	< 0.50	< 0.50	0.20J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50					
		5/29/2013	Duplicate	3.9B	< 0.50	< 0.50	< 0.50	< 0.50	0.20J	< 0.50	< 0.50	< 0.50	< 0.50					
		4/29/2013	4.2	< 0.50	< 0.50	< 0.50	< 0.50	0.20J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50					
		4/29/2013	Duplicate	3.3	< 0.50	< 0.50	< 0.50	< 0.50	0.19J	< 0.50	< 0.50	< 0.50	< 0.50					
		3/14/2013	2.9	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					
		3/14/2013	Duplicate	3.1	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					
25 KNOWLES STREET	Annual	9/18/2013	4.3	< 0.50	< 0.50	< 0.50	< 0.50	0.22J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50				
		8/27/2013	3.2	< 0.50	< 0.50	< 0.50	< 0.50	0.24J	< 0.50	< 0.50	< 0.50	< 0.50						
		7/25/2013	2.8	< 0.50	< 0.50	< 0.50	< 0.50	0.25J	< 0.50	< 0.50	< 0.50	< 0.50						
		6/27/2013	2.8	< 0.50	< 0.50	< 0.50	< 0.50	0.21J	< 0.50	< 0.50	< 0.50	< 0.50						
		6/27/2013	Duplicate	3.0	NS	NS	NS	NS	NS	NS	NS	NS						
		5/29/2013	2.7	< 0.50	< 0.50	< 0.50	< 0.50	0.20J	< 0.50	< 0.50	< 0.50	< 0.50						
		5/29/2013	Duplicate	2.8B	< 0.50	< 0.50	< 0.50	< 0.50	0.21J	< 0.50	< 0.50	< 0.50						
		4/26/2013	2.8	< 0.50	< 0.50	< 0.50	< 0.50	0.22J	< 0.50	< 0.50	< 0.50	< 0.50						
		4/26/2013	Duplicate	2.6	< 0.50	< 0.50	< 0.50	< 0.50	0.21J	< 0.50	< 0.50	< 0.50						
		2/21/2013	3.1	NS	NS	NS	NS	NS	NS	NS	NS	NS						
		2/21/2013	Duplicate	2.9	NS	NS	NS	NS	NS	NS	NS	NS						
30 KNOWLES STREET	Annual	9/17/2013	5.4	< 0.50	< 0.50	< 0.50	< 0.50	0.27J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50					
		8/28/2013	5.6	< 0.50	< 0.50	< 0.50	< 0.50	0.32J	< 0.50	< 0.50	< 0.50	< 0.50						
		7/30/2013	5.1	< 0.50	< 0.50	< 0.50	< 0.50	0.32J	< 0.50	< 0.50	< 0.50	< 0.50						
		7/30/2013	Duplicate	5.1	< 0.50	< 0.50	< 0.50	< 0.50	0.32J	< 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

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	
30 KNOWLES STREET	Annual	6/27/2013		5.0	< 0.50	< 0.50	< 0.50	< 0.50	0.35J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
		6/27/2013	Duplicate	5.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/29/2013		4.9	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.37J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		5/29/2013	Duplicate	5.9B	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.36J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		4/29/2013		6.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.36J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		4/29/2013	Duplicate	5.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.36J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		2/19/2013		6.9	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.41J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		2/19/2013	Duplicate	6.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.40J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
45 KNOWLES STREET	Annual	8/28/2013		2.0	< 0.50	< 0.50	< 0.50	< 0.50	0.19J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
		5/1/2013		2.3	< 0.50	< 0.50	< 0.50	< 0.50	0.23J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
		5/1/2013	Duplicate	2.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
100 MEETINGHOUSE ROAD	Quarterly	9/18/2014		1.75	< 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	
		5/6/2014		1.90	< 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	
		3/14/2014		1.73	< 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	
		11/20/2013		1.3	< 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	
		8/27/2013		1.9	< 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	
		5/8/2013		1.8	< 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	
		5/8/2013	Duplicate	1.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013		1.6	< 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	
		2/14/2013	Duplicate	1.5	NS	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	
		9/27/2012		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	
		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	
		3/23/2012		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		
		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		
155 MEETINGHOUSE ROAD	Annual	7/31/2013		0.46	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
		7/31/2013	Duplicate	0.35	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
165 MEETINGHOUSE ROAD	Annual	2/15/2013		0.75	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		
		2/15/2013	Duplicate	0.67	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		
170 MEETINGHOUSE ROAD	Annual	2/15/2013		< 0.20	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			
75 OLD ORCHARD ROAD	Annual	2/21/2013		0.17J	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			
		6/21/2012		NS	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50				
80 OLD ORCHARD ROAD		2/12/2013		< 0.20	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50			
		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				
100 OLD ORCHARD ROAD		2/12/2013		< 0.20	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50				
		12/6/2012		<2.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 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				
		6/21/2012		NS	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50					
130A 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				
		2/25/2013		< 0.20	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50					
130B 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				
		2/25/2013		< 0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS				
180 OLD ORCHARD ROAD	Quarterly	9/18/2014		0.137J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
		5/6/2014		0.527	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50			
		3/14/2014		0.0953J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50				
		11/20/2013		0.17J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50				
		8/28/2013		0.46	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50				
		6/27/2013		0.45	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50				
		5/8/2013		0.52	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50				
		2/22/2013		0.045J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50				
		12/6/2012		<2.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50				
		9/27/2012		NS	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50				
		6/21/2012		NS	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50				
		3/23/2012		NS	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50				
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				
		2/15/2013		< 0.20	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					
		6/21/2012		NS	< 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

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	
290 OLD ORCHARD ROAD	Annual	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	< 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	< 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	< 0.50
325 SCHOOLHOUSE ROAD	Semi-Annual	9/19/2013	Untreated	10	< 0.50	< 0.50	< 0.50	< 0.50	0.41J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
		9/19/2013	Mid System	0.095J	< 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
		9/19/2013	Effluent	0.68	< 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
		8/27/2013	Untreated	7.7	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.37J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		8/27/2013	Mid System	< 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	< 0.50
		8/27/2013	Effluent	< 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	< 0.50
		7/31/2013	Untreated	9.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.35J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		7/31/2013	Untreated	Duplicate	8.8	< 0.50	< 0.50	< 0.50	< 0.50	0.38J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		7/31/2013	Mid System	< 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	< 0.50
		7/31/2013	Effluent	< 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	< 0.50
		6/27/2013	Untreated	8.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.41J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		6/27/2013	Untreated	Duplicate	8.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		6/27/2013	Mid System	0.041J	< 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
		6/27/2013	Effluent	< 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	< 0.50
		5/29/2013	Untreated	7.8	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.44J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		5/29/2013	Untreated	Duplicate	9.8B	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.41J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		5/29/2013	Mid System	< 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	< 0.50
		5/29/2013	Effluent	< 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	< 0.50
		4/29/2013	Untreated	9.8	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.36J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		4/29/2013	Untreated	Duplicate	8.3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.37J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		4/29/2013	Mid System	< 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	< 0.50
		4/29/2013	Effluent	< 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	< 0.50
		3/21/2013	Mid System	< 0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		3/21/2013	Effluent	< 0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		3/14/2013	Mid System	< 0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		3/14/2013	Effluent	< 0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		3/8/2013	Mid System	< 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	< 0.50
		3/8/2013	Effluent	< 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	< 0.50
		2/25/2013	Mid System	< 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	< 0.50
2/25/2013	Effluent	< 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	< 0.50		
2/22/2013	Untreated	10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.49J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
2/22/2013	Untreated	Duplicate	9.7	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.49J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
12/7/2012	Untreated	<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	< 0.50		
285 ALSTON AVENUE	Quarterly	3/14/2014		0.636	< 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

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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	
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	
Landfill Non-potable Well	Annual	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	< 0.5	NS	< 0.5	< 0.5	< 0.5	NS	NS	< 0.5	< 0.5	
MW 21D		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	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	< 0.5	NS	< 0.5	< 0.5	< 0.5	NS	NS	< 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	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	
MW 2S	Annual	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	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	
		7/10/2012	< 0.5	< 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	
MW 3D	Quarterly	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	
		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	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	0.79	< 1.0	
		2/27/2014	< 1.0	< 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	
		11/25/2013	< 0.5	< 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	
		9/5/2013	< 0.5	< 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	
		5/8/2013	< 0.5	< 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	
		2/14/2013	< 0.5	< 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	
		12/6/2012	< 0.5	< 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	
		10/9/2012	< 0.5	< 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	
		7/10/2012	< 0.5	< 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	
		3/20/2012	< 0.5	< 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	
		MW 3I	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
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	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 1.0	< 1.0	
2/27/2014	< 1.0			< 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	
11/25/2013	< 0.5			< 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	
9/5/2013	< 0.5			< 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	
5/8/2013	< 0.5			< 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	
2/14/2013	< 0.5			< 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	
2/14/2013	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	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	
10/9/2012	< 0.5			< 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	
7/10/2012	< 0.5			< 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	
3/20/2012	< 0.5			< 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	
MW 3S				2/14/2013	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	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 0.5	< 0.5	
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	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5	< 5.0	< 5	< 0.5	< 0.5	
MW 4S	Annual	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		

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
 * Proposed GW1 Standard



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
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	< 0.50
		6/21/2012	< 0.50	< 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
290 OLD ORCHARD ROAD	Annual	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	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	< 2.5	< 0.50	< 0.50
		2/15/2013	< 0.50	< 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
		6/21/2012	< 0.50	< 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
325 SCHOOLHOUSE ROAD	Semi-Annual	9/19/2013	Untreated	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	< 2.5	0.57	< 0.50	< 0.50
		9/19/2013	Mid System	< 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
		9/19/2013	Effluent	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	1.5J	< 0.50	< 0.50
		8/27/2013	Untreated	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	1.4J	0.63	< 0.50
		8/27/2013	Mid System	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	0.57J	< 0.50	< 0.50
		8/27/2013	Effluent	< 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
		7/31/2013	Untreated	Duplicate	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	1.0J	0.60	< 0.50
		7/31/2013	Untreated		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	1.3J	0.59	< 0.50
		7/31/2013	Mid System		< 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
		7/31/2013	Effluent		< 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
		6/27/2013	Untreated		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	1.2J	0.54	< 0.50
		6/27/2013	Untreated	Duplicate	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		6/27/2013	Mid System		< 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
		6/27/2013	Effluent		< 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
		5/29/2013	Untreated	Duplicate	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	< 2.5	0.58	< 0.50
		5/29/2013	Untreated		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	0.68J	0.65	< 0.50
		5/29/2013	Mid System		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	1.6J	< 0.50	< 0.50
		5/29/2013	Effluent		< 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
		4/29/2013	Untreated		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	< 2.5	0.57	< 0.50
		4/29/2013	Untreated	Duplicate	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	< 2.5	0.54	< 0.50
		4/29/2013	Mid System		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	0.67J	< 0.50	< 0.50
		4/29/2013	Effluent		< 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
		3/21/2013	Mid System		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		3/21/2013	Effluent		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
3/14/2013	Mid System		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		
3/14/2013	Effluent		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		
3/8/2013	Mid System		< 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		
3/8/2013	Effluent		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	0.61J	< 0.50	< 0.50		
2/25/2013	Mid System		< 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		
2/25/2013	Effluent		< 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		
2/22/2013	Untreated	Duplicate	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	< 2.5	0.63	< 0.50		
2/22/2013	Untreated		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 2.5	< 2.5	0.66	< 0.50		
12/7/2012	Untreated		< 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		
285 ALSTON AVENUE	Quarterly	3/14/2014	< 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	

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
 * Proposed GW1 Standard



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		
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		
Landfill Non-potable Well	Annual	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		
MW 21D		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	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	12/18/2013	< 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			
		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	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		
		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	1.3	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1	< 0.50	< 1.0	< 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	< 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	< 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	< 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	< 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	< 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	< 0.5	
		10/9/2012	< 0.5	< 0.5	< 0.5	1.9	< 0.5	< 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	< 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	
		MW 3I	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
				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	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 4D		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 4S	Annual	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			
		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		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		

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
* Proposed GW1 Standard



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 5S	Annual	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	
		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	< 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
MW 8	Annual	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	
		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	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
50 ALSTON AVENUE	Annual	9/18/2013	< 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	< 0.50	
		7/25/2013	< 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	< 0.50	< 0.50
		6/27/2013	< 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	< 0.50	< 0.50
		5/29/2013	< 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	< 0.50	< 0.50
		5/1/2013	< 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	< 0.50	< 0.50
		3/14/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		3/4/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.33J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		3/4/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.37J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		2/14/2013	Duplicate	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.24J	0.17J	< 0.50	0.74	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		12/7/2012	< 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	< 0.50
265 ALSTON AVENUE	Annual	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	< 0.50	
		3/14/2013	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	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
275 ALSTON AVENUE	Duplicate	5/16/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.72	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
		5/16/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.75	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
		12/6/2012	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
280 ALSTON AVENUE	Annual	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		
285 ALSTON AVENUE	Quarterly	9/18/2014	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.66	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
		11/20/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.51	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
		5/8/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.47J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
		2/22/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.59	0.29J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
		2/22/2013	Duplicate	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.55	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
		12/6/2012	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50			
11 ELDIA WAY	Annual	9/17/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.22J	< 0.50	< 0.50	0.60	< 0.50	< 0.50	< 0.50	< 0.50		
		7/25/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.84	< 0.50	< 0.50	< 0.50	< 0.50		
		6/27/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.27J	< 0.50	< 0.50	0.86	< 0.50	< 0.50	< 0.50		
		6/27/2013	Duplicate	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		
		5/29/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.32J	< 0.50	< 0.50	0.79	< 0.50	< 0.50			
		5/29/2013	Duplicate	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.36J	< 0.50	< 0.50	0.85	< 0.50	< 0.50			
		4/29/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.30J	< 0.50	< 0.50	0.89	< 0.50	< 0.50			
		4/29/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.30J	< 0.50	< 0.50	0.89	< 0.50	< 0.50			
		3/14/2013	Duplicate	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS			
25 KNOWLES STREET	Annual	9/18/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.12J	0.39J	< 0.50	1.7	< 0.50	< 0.50	< 0.50	< 0.50		
		8/27/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.14J	0.43J	< 0.50	2.0	< 0.50	< 0.50			
		7/25/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.43J	0.078J	2.0	< 0.50	< 0.50				
		6/27/2013	Duplicate	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS				
		6/27/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.15J	0.36J	< 0.50	1.6	< 0.50				
		5/29/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.19J	0.37J	< 0.50	1.7	< 0.50				
		5/29/2013	Duplicate	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.15J	0.38J	< 0.50	1.7	< 0.50				
		4/26/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.34J	< 0.50	< 0.50	1.7	< 0.50				
		4/26/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.39J	< 0.50	< 0.50	1.8	< 0.50				
		2/21/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS				
30 KNOWLES STREET	Annual	9/17/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.28J	0.16J	< 0.50	1.2	< 0.50	< 0.50	< 0.50	< 0.50		
		8/28/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.28J	0.19J	< 0.50	1.4	< 0.50				
		7/30/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.27J	0.18J	0.25J	1.5	< 0.50				
		7/30/2013	Duplicate	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.26J	0.18J	< 0.50	1.5	< 0.50				
		6/27/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.32J	0.20J	0.16J	1.6	< 0.50				
		6/27/2013	Duplicate	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS				
		5/29/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.43J	0.20J	< 0.50	1.8	< 0.50				
		5/29/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.44J	0.21J	< 0.50	1.8	< 0.50				
		4/29/2013	Duplicate	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.34J	0.18J	< 0.50	1.7	< 0.50				
		4/29/2013	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.20J	0.080J	1.8	< 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
* Proposed GW1 Standard

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	
325 SCHOOLHOUSE ROAD	Semi-Annual	8/27/2013	Effluent		< 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	
		7/31/2013	Untreated	Duplicate	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.51	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		7/31/2013	Untreated		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.49J	< 0.50	0.11J	2.1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		7/31/2013	Mid System		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.084J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		7/31/2013	Effluent		< 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
		6/27/2013	Untreated		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.52	< 0.50	< 0.50	< 0.50	2.2	< 0.50	< 0.50	< 0.50	< 0.50
		6/27/2013	Untreated	Duplicate	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		6/27/2013	Mid System		< 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
		6/27/2013	Effluent		< 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
		5/29/2013	Untreated	Duplicate	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.64	< 0.50	< 0.50	< 0.50	2.3	< 0.50	< 0.50	< 0.50	< 0.50
		5/29/2013	Untreated		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.51	< 0.50	< 0.50	< 0.50	2.4	< 0.50	< 0.50	< 0.50	< 0.50
		5/29/2013	Mid System		< 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
		5/29/2013	Effluent		< 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
		4/29/2013	Untreated		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.51	< 0.50	< 0.50	< 0.50	1.9	< 0.50	< 0.50	< 0.50	< 0.50
		4/29/2013	Untreated	Duplicate	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.50	< 0.50	< 0.50	< 0.50	2.1	< 0.50	< 0.50	< 0.50	< 0.50
		4/29/2013	Mid System		< 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
		4/29/2013	Effluent		< 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
		3/21/2013	Mid System		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		3/21/2013	Effluent		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		3/14/2013	Mid System		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		3/14/2013	Effluent		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		3/8/2013	Mid System		< 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
		3/8/2013	Effluent		< 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
		2/25/2013	Mid System		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.23J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
		2/25/2013	Effluent		< 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
		2/22/2013	Untreated	Duplicate	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.59	< 0.50	< 0.50	< 0.50	2.7	< 0.50	< 0.50	< 0.50	< 0.50
		2/22/2013	Untreated		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.63	< 0.50	< 0.50	< 0.50	2.7	< 0.50	< 0.50	< 0.50	< 0.50
12/7/2012	Untreated		< 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		
285 ALSTON AVENUE	Quarterly	3/14/2014			< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.65	< 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
* Proposed GW1 Standard



**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				
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				
Landfill Non-potable Well	Annual	2/25/2013 12/7/2012	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5				
MW 21D		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	< 0.40	< 1.0	< 1.0	< 0.50	< 2.0				
MW 21S	Semi-Annual	5/16/2013 12/7/2012	< 0.40 < 0.5	< 1.0 < 0.5	0.16J < 0.5	< 1.0 < 0.5	< 5.0 < 0.5	< 1.0 < 0.5	< 1.0 < 0.5	< 1.0 < 0.5	< 1.0 < 0.5	< 1.0 < 0.5	< 1.0 < 0.5	< 1.0 < 0.5	< 1.0 < 0.5	< 0.40 < 0.5	< 1.0 < 0.5	< 1.0 < 0.5	< 1.0 < 0.5	< 2.0 < 0.5				
MW 2D		2/14/2013 12/6/2012	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5				
MW 2S	Annual	12/18/2013 2/14/2013 12/6/2012 7/10/2012	< 0.5 NS < 0.5 < 0.5	< 0.5 NS < 0.5 < 0.5	< 0.5 NS < 0.5 < 0.5	< 0.5 NS < 0.5 < 0.5	< 0.5 NS < 0.5 < 0.5	< 0.5 NS < 0.5 < 0.5	< 0.5 NS < 0.5 < 0.5	< 0.5 NS < 0.5 < 0.5	< 0.5 NS < 0.5 < 0.5	< 0.5 NS < 0.5 < 0.5	< 0.5 NS < 0.5 < 0.5	< 0.5 NS < 0.5 < 0.5	< 0.5 NS < 0.5 < 0.5	< 0.5 NS < 0.5 < 0.5	< 0.5 NS < 0.5 < 0.5	< 0.5 NS < 0.5 < 0.5	< 0.5 NS < 0.5 < 0.5	< 0.5 NS < 0.5 < 0.5				
MW 3D	Quarterly	11/10/2014 11/10/2014 9/3/2014 5/19/2014 2/27/2014 11/25/2013 9/5/2013 5/8/2013 2/14/2013 12/6/2012 10/9/2012 7/10/2012 3/20/2012	< 5.0 < 5.0 < 5.0 < 0.50 < 0.50 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 0.95 1.2 < 0.5 0.95 1.1 1.2 < 0.5 1.6 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 0.92 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	
MW 3I	Quarterly	11/10/2014 9/3/2014 5/19/2014 2/27/2014 11/25/2013 9/5/2013 5/8/2013 2/14/2013 2/14/2013 12/6/2012 10/9/2012 7/10/2012 3/20/2012	< 5.0 < 5.0 < 0.50 < 0.50 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5	< 5.0 < 5.0 < 1.0 < 1.0 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5
MW 3S		2/14/2013 12/6/2012	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5				
MW 4D		2/14/2013 12/6/2012	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 0.5	NS < 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
 * Proposed GW1 Standard



TABLE 4.2
SUMMARY OF LANDFILL MONITORING PLAN
GROUNDWATER ANALYTICAL RESULTS
Metals
Eastham Landfill
Eastham, MA
(All results in ug/l)

Property	Sample Frequency	Date	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Selenium	Silver	Zinc		
Standards																
GW-1			10	2000	5	100	NA	NA	15	NA	2.0	50	100	5000		
MMCL			10	2000	5	100	NA	NA	15	NA	2.0	50	NA	NA		
SMCL			NA	NA	NA	NA	1000	300	NA	50	NA	NA	100	5000		
Results																
MW 2D		12/6/2012	< 3.0	3.2	< 3.0	< 3.0	< 3.0	< 100	< 3.0	51	< 0.5	< 15	< 2.0	< 60		
MW 2S	Annual	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	< 60
9/3/2014	43			10	< 3.0	< 3.0	< 3.0	69000	< 3.0	1100	< 0.3	< 15	< 2.0	< 60		
5/19/2014	41			11	< 3.0	< 3.0	< 3.0	64000	< 3.0	1100	< 0.3	< 15	< 2.0	< 60		
2/27/2014	23			10	5.0	< 2.0	< 3.0	78000	< 6.0	1400	< 0.5	< 6.0	< 2.0	16		
11/25/2013	< 3.0			7.1	< 3.0	< 3.0	< 3.0	33000	< 3.0	1100	NS	< 15	< 3.0	< 60		
9/5/2013	38			10	< 3.0	< 3.0	< 3.0	68000	< 3.0	1100	< 0.3	< 15	< 3.0	< 60		
5/8/2013	37			9	< 3.0	< 3.0	< 3.0	64000	< 3.0	980	< 0.5	< 15	< 3.0	< 60		
2/14/2013	41			12	< 3.0	< 3.0	< 3.0	69000	< 3.0	1100	< 0.5	< 15	< 2.0	< 60		
12/6/2012	39			11	< 3.0	< 3.0	< 3.0	72000	< 3.0	1100	< 0.5	< 15	< 2.0	< 60		
10/9/2012	40			11	< 3.0	< 3.0	< 3.0	65000	< 3.0	1000	< 0.5	< 15	< 2.0	< 100		
7/10/2012	42			< 3.0	< 3.0	< 3.0	< 3.0	68000	< 3.0	1100	< 0.5	< 15	< 2.0	< 100		
3/20/2012	44			11	< 3.0	< 3.0	< 3.0	65000	< 3.0	1400	< 0.5	< 15	< 2.0	< 60		
MW 3S				12/6/2012	< 3.0	30	< 3.0	< 3.0	< 3.0	250	< 3.0	280	< 0.5	< 15	< 2.0	< 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

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



Property	Sample Frequency	Date	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Selenium	Silver	Zinc
MW 4S	Annual	12/18/2013	< 3.0	24	< 3.0	< 3.0	< 3.0	2100	< 3.0	4200	< 0.3	< 15	< 3.0	< 60
		12/6/2012	3.4	28	< 3.0	< 3.0	< 3.0	2400	< 3.0	5100	< 0.5	< 15	< 2.0	< 60
		7/10/2012	< 3.0	31	< 3.0	< 3.0	< 3.0	2400	< 3.0	4400	< 0.5	< 15	< 2.0	< 100
MW 5D		12/5/2012	< 3.0	64	< 3.0	< 3.0	< 3.0	< 150	< 3.0	51	< 0.5	< 15	< 2.0	< 60
MW 5S	Annual	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
285 ALSTON AVENUE	Quarterly	9/18/2014	< 1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		3/14/2014	0.43J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		11/20/2013	0.15J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/8/2013	< 3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/22/2013	< 3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	< 3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
100 MEETINGHOUSE ROAD	Quarterly	9/18/2014	< 1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/6/2014	< 1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		3/14/2014	0.32J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		11/20/2013	0.22J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		8/27/2013	< 3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/8/2013	< 3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/14/2013	< 3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	< 3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		9/27/2012	< 3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		6/21/2012	< 10	25	< 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
		8/15/2013	< 3.0	25	< 3.0	< 3.0	47	NS	< 3.0	NS	< 0.3	< 15	< 3.0	< 60
155 MEETINGHOUSE ROAD	Annual	7/31/2013	< 3.0	25	< 3.0	< 3.0	97	NS	17	NS	< 0.3	< 15	< 3.0	76
		12/6/2012	< 3.0	92	< 3.0	< 3.0	17	NS	< 3.0	NS	< 0.5	< 15	< 3.0	< 60
165 MEETINGHOUSE ROAD	Annual	12/6/2012	< 3.0	9	< 3.0	< 3.0	79	NS	< 3.0	NS	< 0.5	< 15	< 3.0	< 60
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
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
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
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
180 OLD ORCHARD ROAD	Quarterly	9/18/2014	< 1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		5/6/2014	0.34J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		3/14/2014	0.25J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		11/20/2013	0.10J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		8/28/2013	< 3.0	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

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Report: GW Metals

Datebase: Eastham Landfill Monitoring



Property	Sample Frequency	Date	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Selenium	Silver	Zinc
180 OLD ORCHARD ROAD	Quarterly	5/8/2013	< 3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		2/22/2013	< 3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		12/6/2012	< 3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		9/27/2012	< 3.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		6/21/2012	< 10	14	< 1.0	< 2.0	< 100	< 100	< 6.0	< 100	< 0.5	< 6.0	< 2.0	< 100
		3/23/2012	< 3.0	12	< 3.0	< 3.0	40	< 100	< 3.0	4.2	< 0.5	< 15	< 2.0	< 60
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



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

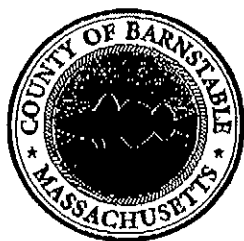
Eastham Landfill
Eastham, MA

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	12/18/2013	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	12/18/2013	170	20	6.0	< 0.010	< 0.05	14	300

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	12/6/2012	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	12/18/2013	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
100 MEETINGHOUSE ROA	Quarterly	6/21/2012	61	43	<3.0	< 0.010	0.2	18	180
		3/23/2012	NS	45	4.7	< 0.010	0.23	19	150
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
180 OLD ORCHARD ROAD	Quarterly	6/21/2012	11	32	<3.0	< 0.010	2.0	14	120
		3/23/2012	NS	35	<3.0	< 0.010	2.0	16	100
210 OLD ORCHARD ROAD	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

WATER SAMPLING LOG: EASTHAM LANDFILL

WELL NUMBER: mw 3I DATE: 9/3/14
WEATHER: sunny 80 TIME: 1130

EVACUATION DATA

DESCRIPTION OF MEASURING POINT: Top of Casing
DEPTH TO BOTTOM OF WELL: 52.35 DIAMETER OF CASING: 2"
DEPTH TO WATER IN WELL: 20.54 MATERIAL OF WELL: PVC
FEET OF WATER IN WELL: 31.79 GALLONS PER FOOT: 0.16
GALLONS OF WATER IN WELL: 5.09 AMOUNT TO PURGE: 35gal

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

SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: slight APPEARANCE: hachate
PH: 7.23 TEMP: 12.87 COND: 375 DO: 1.64
OTHER: _____

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated watterra

CONSTITUENTS SAMPLED	CONTAINER DESCRIPTION	PRESERVATIVE
Nit/Alk 200	500 mL plastic	-
*Metals 201, 207	250 mL plastic	HNO3
COD 202	40 mL glass vial	H2SO4
VOC 203, 204, 205	40 mL glass vial	HCl
TCN 206	500 mL plastic	NaOH

REMARKS: * Field Filtered

SAMPLING PERSONNEL: Lynn Mulkeen -BCDHE

WELL CASING VOLUMES:

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



**BARNSTABLE COUNTY
DEPARTMENT OF HEALTH AND ENVIRONMENT**

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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 3D (BCH#13) DATE: 9/3/14
WEATHER: sunny 80 TIME: 1130

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: 20.37 MATERIAL OF WELL: PVC
FEET OF WATER IN WELL: 53.06 GALLONS PER FOOT: 0.16
GALLONS OF WATER IN WELL: 8.49 AMOUNT TO PURGE: 55gal

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

SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: slight leachate APPEARANCE: -
PH: 8.05 TEMP: 13.25 COND: 1423 DO: 2.01
OTHER: _____

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated watterra

BCH#13

CONSTITUENTS SAMPLED	CONTAINER DESCRIPTION	PRESERVATIVE
216 Nit/Alk 208	500 mL plastic	-
223, 217 *Metals 209, 215	250 mL plastic	HNO3
218 COD 210	40 mL glass vial	H2SO4
219, 220, 221 VOC 211, 212, 213	40 mL glass vial	HCl
222 TCN 214	500 mL plastic	NaOH

REMARKS: * Field Filtered

SAMPLING PERSONNEL: Lynn Mulkeen -BCDHE

WELL CASING VOLUMES:

1 1/4"=0.06 1 1/2"=0.09 2"=0.16 2 1/2"=0.26 3"=0.37 3 1/2"=0.50
4"=0.65 6"=1.47

FACSIMILE TRANSMITTAL SHEET

TO:	FROM:
Lisa Flynn	Lynn Mulkeen
COMPANY:	DATE:
ESM	9/24/2014
FAX NUMBER:	TOTAL NO. OF PAGES, INCLUDING COVER:
508-226-1811	3
PHONE NUMBER:	SENDER'S REFERENCE NUMBER:
	n/a
RE:	YOUR REFERENCE NUMBER:
Eastham Field Logs	n/a

- URGENT
 FOR REVIEW
 PLEASE COMMENT
 PLEASE REPLY
 PLEASE RECYCLE

NOTES/COMMENTS:

Please find attached the field logs for the Eastham Landfill. Please contact me at 508-375-6676 or lmulkeen@barnstablecounty.org with any questions.

Thanks

Lynn



Site Visit Form

PROJECT Eastham DATE 9/8/2014

PERSONNEL EC OTHER PERSONNEL _____

ARRIVAL TIME 09:00 DEPARTURE TIME 14:00

WEATHER CONDITIONS 70's, clear, 5-10 mph wind

Check all that apply for this site visit:

- Samples taken (include location description and copy of COC)
- Rental equipment used (include rental form for ES&M rentals)
- Materials purchased

Description of activities and observations:

SOW: Locate + Gauge Monitoring Wells
Meet w/ Marty of Eastham DPW to unlock gate
to landfill and get key for standpipes.
Gauge monitoring wells at landfill. Could not gauge
gas monitoring wells as they were constructed
w/ a glued PVC cap w/ small ball valve
for gas monitoring.
Return well key to DPW office
Gauge wells in neighborhood. Could not locate
MW-9.

Work Completed By: _____

Project: Eastham

Date: 9/8/2014

Operator: Evan Cuce

Well ID	Depth to Water (ft)	Depth to Product (ft)	Well Depth	Comments
<u>Landfill:</u>				
MW-1	-	-	-	Could not locate
MW-2S	20.64	ND	38.81	
MW-2D	23.98	ND	67.62	
MW-3S	18.99	ND	29.44	
MW-3i	19.76	ND	52.27	
MW-3D	20.45	ND	74.61	
MW-4S	48.42	ND	62.11	
MW-4D	50.08	ND	93.83	
MW-5S	44.31	ND	74.61	
MW-5D	45.92	ND	117.60	
MW-6				Could not locate
MW-7	-	-	-	Large Hornet nest in standpipe
GMW-1				Could not gauge
GMW-2				glued PVC cap w/ small ball valve for gas monitoring ↓
GMW-2A				
GMW-2B				
GMW-3				
GMW-4				
<u>Neighborhood:</u>				
MW-8	32.13	ND	129.95	
MW-9				Could not locate
MW-10	21.49	ND	111.10	
MW-21S	39.43	ND	179.60	3/4" well
MW-21D	39.68	ND	211.10	3/4" well



Environmental
Strategies
& Management

Site Visit Form

PROJECT Eastham Landfill DATE 9/18/14

PERSONNEL EL OTHER PERSONNEL _____

ARRIVAL TIME 0800 DEPARTURE TIME 1300

WEATHER CONDITIONS Sunny, mid-60's, 5-10 mph wind

Check all that apply for this site visit:

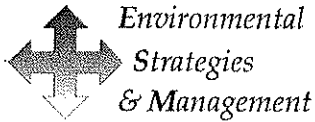
- Samples taken (include location description and copy of COC)
- Rental equipment used (include rental form for ES&M rentals)
- Materials purchased

Description of activities and observations:

Collect LMP samples at 180 Old Orchard Rd. and
285 Alston Ave. Attempted to collect samples at
100 Meetinghouse Rd. but was told by homeowner
that pipe had burst and water is shut off. Will
return on 9/19/14.
180 Old Orchard has been sold, previous owner is
moving items out. Was told new homeowners
will likely be seasonal residents.
Begin well gauging in areas NE of landfill.

Work Completed By: _____

WA



Site Visit Form

PROJECT Eastham Landfill DATE 9/19/14

PERSONNEL EC OTHER PERSONNEL _____

ARRIVAL TIME 0745 DEPARTURE TIME 1400

WEATHER CONDITIONS 60's, mostly sunny, 5-10 mph wind

Check all that apply for this site visit:

- Samples taken (include location description and copy of COC)
- Rental equipment used (include rental form for ES&M rentals)
- Materials purchased

Description of activities and observations:

Collect samples from 25 Sharon Circle, 550 Brackett Rd,
310 Candlewood Dr, + 175 Meetinghouse Rd.
Return to 100 Meetinghouse to collect LMP sample.
Water was back on. Allowed over 50 gals to
purge before collecting sample.
Mark out borehole and well locations for Dig Safe
Complete gauging to NE of landfill. A few wells
could not be gauged due to a Paulus Plastics
water tight seal installed on well head.
Pick up old reports from Jane Crowley at
Town Hall
Return samples to lab

Work Completed By: _____

Eastham Landfill
Private Well Sampling Log

Date: 9/19/14
Sampler: EC
Weather Conditions: Sunny, 5-10 mph wind
Temperature: 50°F

Location: 25 Sharon Circle
Property Owner: Roger + Barbara Pettis
Property Contact: _____
Phone: 508-528-9134
Email: _____
Contact Log Attached: Yes: _____ No: _____

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

Purge Process - purge well minimum 20 gallons, then wait for stabilized parameters
Purge Time: Start: 0810 Finish: 0840

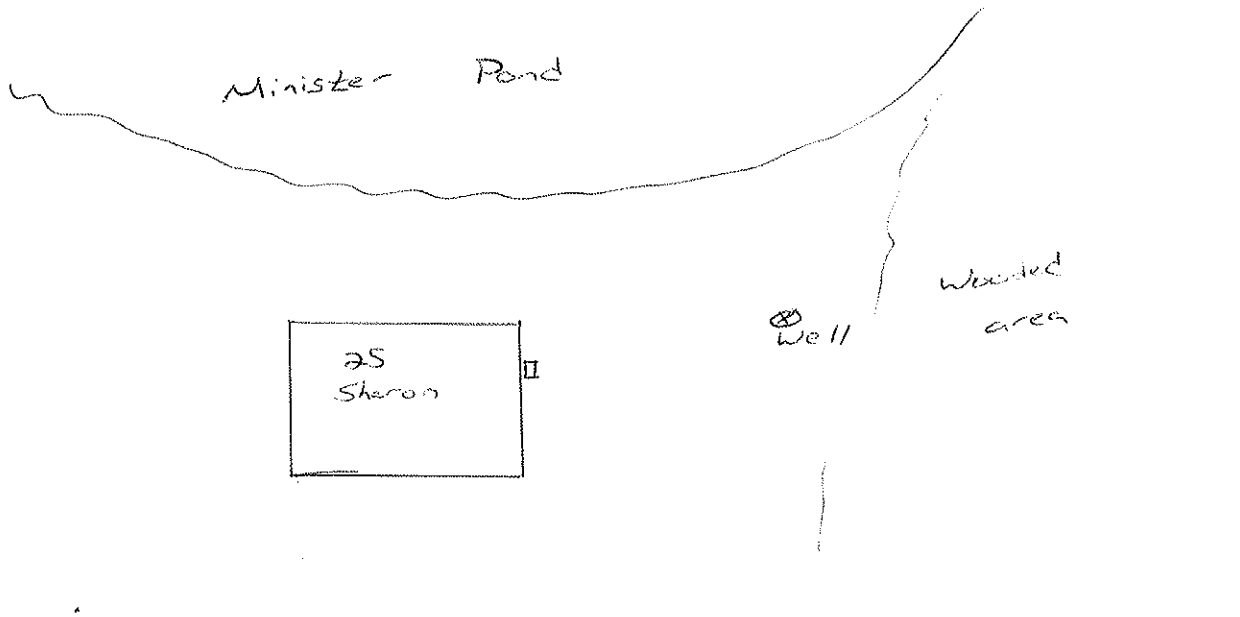
Volume Purged: 22 gallons
Equipment Utilized: _____
Attach Equipment Calibration Log: _____

Well Depth: Measured or Provided? Previously measured

Summary of Sampling and Monitoring Activities: Purge and sample from
Kitchen sink. System contains no treatment or
filtration. Well is located on right side of
house near wooded area.

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: 9/19/14
Sampler: EC
Weather Conditions: sunny, 5-10 mph wind
Temperature: 55°F

Location: 550 Brackett Rd.
Property Owner: Barbara + Robert Elliot
Property Contact: _____
Phone: 508-247-9056
Email: _____
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: ~~Marlo~~ Pressure tank, pre-treatment
Describe water system including treatment: Marlo conditioning tank + sediment filter
Water meter reading: _____

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

Purge Time: Start: 0935 Finish: 1000

Volume Purged: 29 gallons

Equipment Utilized: _____

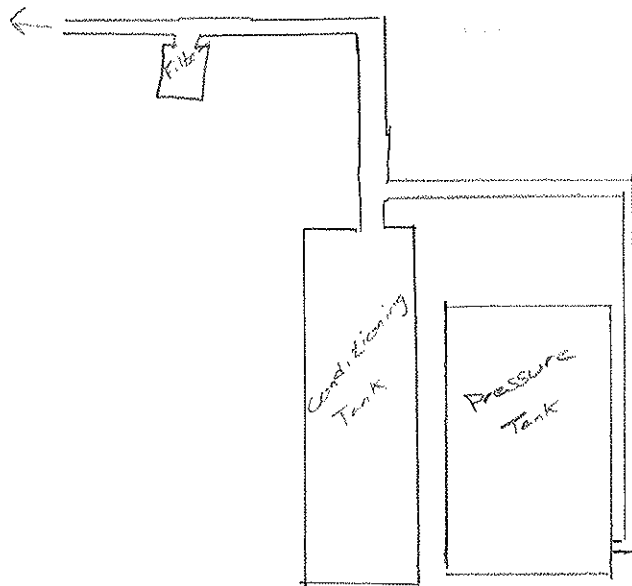
Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

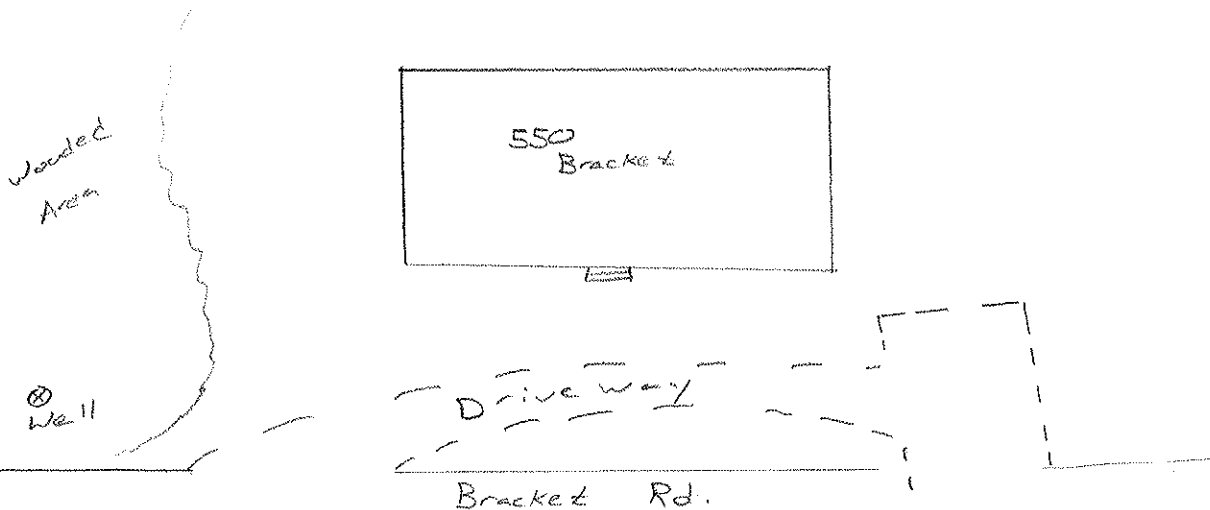
Well Depth: Measured or Provided? Measured Depth: 54'
DTW: 41.98'

Summary of Sampling and Monitoring Activities: Purge from basement bathroom
sink, sample from pressure tank, pre-treatment.
System contains Marlo conditioning tank and sediment
filter. Gauge well depth.

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: 9/19/14
Sampler: EC
Weather Conditions: mostly sunny, 5-10 mph wind
Temperature: 60°F

Location: 310 Candlewood Dr.
Property Owner: Loral Felice
Property Contact: _____
Phone: 508-395-3750
Email: _____
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Outside spigot, front of house
Describe water system including treatment: Filter in home, but outdoor spigot is bypassed
Water meter reading: _____

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

Purge Time: Start: 1110 Finish: 1140

Volume Purged: 42 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Well Depth: Measured or Provided?

Summary of Sampling and Monitoring Activities: Purge and sample from
outdoor spigot on front 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: 9/19/14
Sampler: EC
Weather Conditions: mostly sunny, 5-10 mph wind
Temperature: 60°F

Location: 175 Meetinghouse Rd.

Property Owner: _____

Property Contact: Carole

Phone: 794-316-0675

Email: _____

Contact Log Attached: Yes: _____ No: _____

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

Analytical Lab: Alpha

Sample Location: Outdoor spigot, front of house

Describe water system No treatment or filtration

including treatment: _____

Water meter reading: _____

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

Purge Time: Start: 1305 Finish: 1335

Volume Purged: 36 gallons

Equipment Utilized: _____

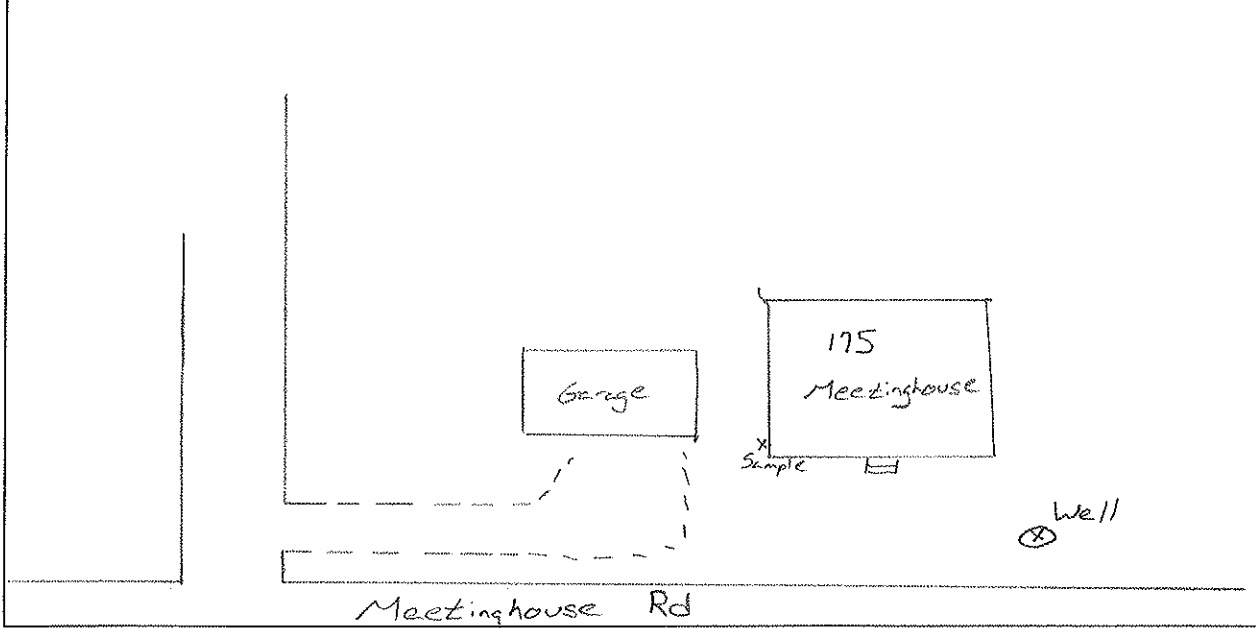
Attach Equipment Calibration Log: _____

Well Depth: Measured or Provided? *Measured* : *Depth: 53'*
DTW 27.5'

Summary of Sampling and Monitoring Activities: *Purge and sample from outdoor*
spigot on front of house. System contains no
treatment or filtration. Gauge well depth.

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:





CHAIN OF CUSTODY

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

Mansfield, MA
 TEL: 508-822-9900
 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

Project Name: Eastham DW

Project # 2013-027

Project Manager: Lisa Flynn

ALPHA Quote #:

Turn-Around Time

Standard

Rush (ONLY IF PRE-APPROVED)

Due Date: _____

Time: _____

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

please invoice Eastham

1,4 dioxane by 8270

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

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

Are MCP Analytical Methods Required? Yes No

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

ANALYSIS

State/Fed Program
 8270 - MCP

Report Information Data Deliverables

FAX EMAIL Add'l Deliverables

PO #:

ALPHA Job #:

Date Rec'd in Lab:

Billing Information

Same as Client info

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	T	O	T	A	L	#	B	O	T	T	L	E	S	
		Date	Time																
	SHARON CIRCLE_025	9/19/14	0840	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"/>	2
	SHARON CIRCLE_025 DUP	9/19/14	0845	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"/>	2
	BRACKET ROAD_550	9/19/14	1000	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"/>	2
	BRACKET ROAD_550 DUP	9/19/14	1005	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"/>	2
	CANDLEWOOD DR_310	9/19/14	1140	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"/>	2
	CANDLEWOOD DR_310 DUP	9/19/14	1145	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"/>	2
	MEETINGHOUSE RD_175	9/19/14	1335	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"/>	2
	MEETINGHOUSE RD_175 DUP	9/19/14	1340	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"/>	2
2	Trip/blank					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<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

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

Relinquished By: _____

Date/Time: 9/19/14 15:15

Received By: _____

Date/Time: 9/19/14 15:15

Sample Specific Comments

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

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT
 MA MCP or CT RCP?

Eastham Landfill
Private Well Sampling Log

Date: 9/19/14
Sampler: EC
Weather Conditions: mostly sunny, 5-10 mph wind
Temperature: 60° F

Location: 100 Meetinghouse Rd.

Property Owner: Jeff Carlson

Property Contact: _____

Phone: _____

Email: _____

Contact Log Attached: Yes: _____ No: _____

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

Analytical Lab: Alpha

Sample Location: Outside spigot, back of house

Describe water system _____

including treatment: _____

Water meter reading: _____

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

Purge Time: Start: 1140 Finish: 1215

Volume Purged: 50 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? _____

Summary of Sampling and Monitoring Activities: Attempted to sample on 9/18,
but was told pipe had burst and water was
shut off. Returned on 9/19, allowed 50 gals to
purge before collecting sample.

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

44
2/27

Date: 9/18/14
Sampler: EC
Weather Conditions: Sunny, 5-10 mph wind
Temperature: 68°F

Location: 285 Alston Ave.

Property Owner: Mark + Mary Manvalsen

Property Contact: _____

Phone: _____

Email: _____

Contact Log Attached: Yes: _____ No: _____

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

Analytical Lab: Alpha

Sample Location: Outdoor spigot

Describe water system _____

including treatment: _____

Water meter reading: _____

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

Purge Time: Start: 1015 Finish: 1035

Volume Purged: 36 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

✓

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided?

Summary of Sampling and Monitoring Activities: Enter basement to turn on well pump. Purge and collect sample from outdoor spigot on front of house. Shut off well pump 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:

Eastham Landfill
Private Well Sampling Log

Date: 9/18/14
Sampler: EC
Weather Conditions: sunny, 5-10 mph wind
Temperature: 65°F

Location: 180 Old Orchard Rd.

Property Owner: Mark Okane

Property Contact: _____

Phone: _____

Email: _____

Contact Log Attached: Yes: _____ No: _____

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

Analytical Lab: Alpha

Sample Location: Outdoor spigot

Describe water system _____

including treatment: _____

Water meter reading: _____

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

Purge Time: Start: 1100 Finish: 1115

Volume Purged: 27 gallons

Equipment Utilized: _____

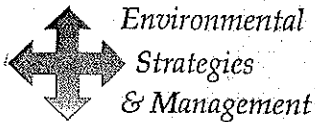
Attach Equipment Calibration Log: _____

Well Depth: Measured or Provided?

Summary of Sampling and Monitoring Activities: Purge and sample from outdoor spigot on front of house. Home is in process of being sold, owner currently moving items out. Was told new owners will likely be seasonal residents.

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 Eastern Landfill DATE 10/28/14

PERSONNEL EC, MD OTHER PERSONNEL _____

ARRIVAL TIME 0745 DEPARTURE TIME 1330

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

Check all that apply for this site visit:

- Samples taken (include location description and copy of COC)
- Rental equipment used (include rental form for ES&M rentals)
- Materials purchased

Description of activities and observations:

Tailgate safety review
Collect drinking water samples at 65 Knowles St,
4 Preservation, State Hwy 3100A, + 600 Schoolhouse Rd.
Private well sampling logs are attached
Install piezometers in Moll's Pond at the end of
Fairview Ave between the 2 Fairview Ave and 130
Alston Ave property. And in Minister's Pond at the
end of Alston Court near the 10 Alston Ct. property
Put samples on ice and deliver to lab. Chain of custody
attached

Work Completed By: _____



CHAIN OF CUSTODY

PAGE 1 OF 1

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

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

Client Information

Client: ES-M

Address: 273 W. Main St

Norton, MA 02766

Phone: 508-226-1805

Fax:

Email: flynn@es-m.com

Project Information

Project Name: Eastern Landfill

Project Location: Eastern, MA

Project #: 2013-027

Project Manager:

ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)
Date Due: _____ Time: _____

Other Project Specific Requirements/Comments/Detection Limits:

If MS is required, indicate in Sample Specific Comments which samples and what tests MS to be performed.
(Note: All CAM methods for inorganic analyses require MS every 20 soil samples)

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

KNOWLES ST - 065 10/28/14 0910 DW MD X

PRESERVATION WAY - 004 10/28/14 1015 DW EC X

STATE HWY - 3100 A 10/28/14 1445 DW MD X

SCHOOLHOUSE RD - 600 10/28/14 1330 DW EC X

Date Rec'd in Lab:

Report Information - Data Deliverables

FAX EMAIL

ADEX Add'l Deliverables

Regulatory Requirements/Report Limits

State / Fed Program _____ Criteria _____

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO

Yes No Are MCP Analytical Methods Required?
 Yes No Is Matrix Spike (MS) Required on this SDG? (If yes see note in Comments)
 Yes No Are CT RCP (Reasonable Confidence Protocols) Required?

ALPHA Job #:

Billing Information

Same as Client info PO #:

SAMPLE HANDLING

- Filtration _____
- Done
- Not needed
- Lab to do
- Preservation
- Lab to do

Sample Specific Comments

1,4-Dioxane

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Container Type	Preservative
<u>A</u>	<u>A</u>
<u>A</u>	<u>A</u>

Relinquished By: _____

Date/Time: 10/28/14 140

Received By: _____

Date/Time: 10/28/14 140

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 Terms and Conditions. See reverse side.

Instructions

Where to send the report
Enter phone, fax and
email to info here

Enter Project Information and
especially Alpha Quote #

Indicate additional report
requirements other than
standard mail

Indicate where bill is to be
sent and include PO
number.

CHAIN OF CUSTODY

Client Information Project Name: _____ Project Location: _____ Project #E: _____ Project Manager: _____ Alpha Quote #: _____ Contract #: _____ City/State: _____	Project Information Project Name: _____ Project Location: _____ Project #E: _____ Project Manager: _____ Alpha Quote #: _____ Contract #: _____ City/State: _____	Regulatory Information State: _____ County: _____ Municipality: _____ Permit #: _____ Permit Expiration Date: _____ Permit Issued By: _____	Regulatory Requirements MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____	Regulatory Requirements MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____	Regulatory Requirements MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____	Regulatory Requirements MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____	Regulatory Requirements MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____	Regulatory Requirements MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____	Regulatory Requirements MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____ MCP or RCP Project: _____
--	---	--	---	---	---	---	---	---	---

Indicate if Standard or Rush Request. Indicate
the Date and Time Due!

Enter Special Instructions such as
specific Detection Limits here!

Indicate Sample ID for
each sample, date and
time collected, matrix
type, sampler and
check off for each
analysis requested.

Matrix/Source Codes:
I= Influent
E= Effluent
DW = Drinking Water
GW = Ground Water
SW = Surface Water
RW = Monitoring Well
RO= Run-off
L= Lake/Pond River
B= Bottom Sediment
S= Soil
SG= Sludge
O= Oil
W=Wipe
SE=Sediment
T=Tissue
X1(Other)

PLEASE ANSWER QUESTIONS ABOVE:
IS YOUR PROJECT
MA MCP or CT RCP?

Container Type and Preservation Code

Indicate if Filtration/Preservation is done
or needed or if MS is required and tests
needed below for each sample

Enter Container Type and Preservation Code

PLEASE ANSWER QUESTIONS ABOVE:
IS YOUR PROJECT
MA MCP or CT RCP?

Container Type and Preservation Code

Indicate if Filtration/Preservation is done
or needed or if MS is required and tests
needed below for each sample

Enter Container Type and Preservation Code

PLEASE ANSWER QUESTIONS ABOVE:
IS YOUR PROJECT
MA MCP or CT RCP?

Container Type and Preservation Code

Indicate if Filtration/Preservation is done
or needed or if MS is required and tests
needed below for each sample

Enter Container Type and Preservation Code

PLEASE ANSWER QUESTIONS ABOVE:
IS YOUR PROJECT
MA MCP or CT RCP?

Container Type and Preservation Code

Indicate if Filtration/Preservation is done
or needed or if MS is required and tests
needed below for each sample

Terms & Conditions: In the absence of a written agreement to the contrary, this order constitutes an acceptance by the Client of Alpha Analytical, Inc. (ALPHA)'s offer to do business under these Terms and Conditions, and agrees to be bound by these conditions. Any terms and conditions from Client's that do not conform to the terms and conditions contained herein shall be deemed invalid and unenforceable, unless accepted in writing by ALPHA. This order shall not be valid unless it contains sufficient specifications to enable ALPHEA to carry out the Client's requirements. Samples must be accompanied by: a) adequate instruction as to the quantity and type of analysis requested, and b) reporting and billing address information. Upon timely delivery of samples, ALPHA will use its best efforts to meet mutually agreed turnaround times, calculated from the point in time when ALPHA has determined that it can proceed with the defined work to be done (Sample Delivery Acceptance). ALPHA reserves the right to refuse or revoke Sample Delivery Acceptance for any sample which in the sole judgment of ALPHA: a) is unsuitable volume; b) may pose a risk or become unsuitable for handling, transport or processing for any health, safety, environmental or any other reason; c) holding times cannot be met.

Client agrees to pay for all applicable charges to process this order. Payment in advance is required for all Clients except those whose credit has been established with ALPHA. For Clients with approved credit, payment terms are Net 30 days from the date of the invoice by ALPHA. All overdue payments are subject to an interest and service charge of one and one half percent (1.5%) (Or the maximum rate permissible by law, whichever is lesser) per month or portion thereof from the due date until the date of payment. ALPHA may suspend work and withhold delivery of data under this order at any time in the event that the Client fails to make timely payment of its invoices. Client shall be responsible for all costs and expenses of collection including reasonable attorney's fees. Data or information provided to ALPHA or generated by services performed under this agreement shall only become the property of the Client upon receipt in full by ALPHA of payment for the entire Order.

In no event shall ALPHA have any responsibility or liability to the Client for any failure or delay in performance by ALPHA which results, directly or indirectly in whole or in part, from any cause or circumstance beyond the reasonable control of ALPHA.

ALPHA shall dispose of the Client's samples 30 days after the analytical report is issued, unless instructed to store them for an alternate period of time or return such samples to the Client. The return of samples will be at the Client's own expense.

Eastham Landfill
Private Well Sampling Log

Date: 10/28/14
Sampler: EC
Weather Conditions: Sunny, 0-5 mph wind
Temperature: 58° F

Location: 65 Knowles St.

Property Owner: _____

Property Contact: _____

Phone: _____

Email: _____

Contact Log Attached: Yes: _____ No: _____

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

Analytical Lab: Alpha

Sample Location: outside spigot

Describe water system including treatment: no treatment

Water meter reading: _____

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

Purge Time: Start: 0835 Finish: 0910

Volume Purged: 35 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Previously measured: 30'

Summary of Sampling and Monitoring Activities: Purge + sample from outdoor
spigot on side of house near driveway. Well
is located near side spigot just to left
of driveway.

Complete sketch of treatment system, if applicable:

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

Eastham Landfill
Private Well Sampling Log

Date: 10/28/14
Sampler: EC
Weather Conditions: Sunny, 0-5 mph wind
Temperature: 60°F
Location: 4 Preservation Way
Property Owner: Nancy Fuller
Property Contact: _____
Phone: 508-240-7030
Email: _____
Contact Log Attached: Yes: _____ No: _____

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

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

Purge Time: Start: 0940 Finish: 1015

Volume Purged: 33 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Previously submitted: 69'

Summary of Sampling and Monitoring Activities: Purge from bathroom sink in basement and sample from valve on pressure tank. Well is located in grass to left side of driveway.

Complete sketch of treatment system, if applicable:

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

Eastham Landfill
Private Well Sampling Log

Date: 10/28/14
Sampler: EC
Weather Conditions: Sunny, 0-5 mph wind
Temperature: 60°F
Location: 3100 A State Hwy
Property Owner: Chip Lund + Matt Mayer
Property Contact: _____
Phone: 774-810-5464
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: 1115 Finish: 1145

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 + sample from
kitchen sink. System contains no treatment
or filtration. Water is shared w/ 3100 B
State Hwy. Well is located on hill in
backyard behind 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: 10/28/14
Sampler: EC
Weather Conditions: Sunny, 0-5 mph wind
Temperature: 60° F

Location: 600 Schoolhouse Rd.

Property Owner: Barbara Hayes

Property Contact: _____

Phone: 860-379-6219

Email: _____

Contact Log Attached: Yes: _____ No: _____

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

Analytical Lab: Alpha

Sample Location: Outside spigot

Describe water system including treatment: No treatment or filtration

Water meter reading: _____

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

Purge Time: Start: 1215 Finish: 1230

Volume Purged: 32 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Well Depth: Measured or Provided? Could not gauge. Sealed cap

Summary of Sampling and Monitoring Activities: Purge and sample from outdoor spigot on back of house. Well is located in right front corner of property, partially hidden by ground cover.

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 10/29/14

PERSONNEL EL, MD OTHER PERSONNEL _____

ARRIVAL TIME 0800 DEPARTURE TIME 1430

WEATHER CONDITIONS 70's, clear, 5-10 mph wind

Check all that apply for this site visit:

- Samples taken (include location description and copy of COC)
- Rental equipment used (include rental form for ES&M rentals)
- Materials purchased

Description of activities and observations:

Tailgate safety review
Gauge select private wells and monitoring wells for depth to water
Could not locate wells at 280 Alston Ave and 3265 State Hwy.
Could not gauge wells at 275 Alston Ave, 5 Bayview Ave, 350 Meetinghouse Rd, 600 Schoolhouse Rd, and 3070 State Hwy due to sealed caps in well head.
Gauging sheet attached

Work Completed By: _____



**BARNSTABLE COUNTY
DEPARTMENT OF HEALTH AND ENVIRONMENT**

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

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

WATER SAMPLING LOG: EASTHAM LANDFILL

WELL NUMBER: MW 3a DATE: 11/10/14
WEATHER: sunny 55 TIME: 1045

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: 21.00 MATERIAL OF WELL: PVC
FEET OF WATER IN WELL: 31.38 GALLONS PER FOOT: 0.16
GALLONS OF WATER IN WELL: 5.02 AMOUNT TO PURGE: 30 gal

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

SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: - APPEARANCE: -
PH: 5.94 TEMP: 12.35 COND: 350 DO: 0.13
OTHER: _____

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated watterra

CONSTITUENTS SAMPLED	CONTAINER DESCRIPTION	PRESERVATIVE
Nit/Alk 400	500 mL plastic	-
*All Metals 401, 409	500 mL plastic	HNO3
COD 402	40 mL glass vial	H2SO4
VOC 403, 404, 405, 406, 407	40 mL glass vial	HCl
TCN 408	500 mL plastic	NaOH

REMARKS: * Field Filtered

SAMPLING PERSONNEL: Lynn K. Mulkeen-BCDHE

WELL CASING VOLUMES:

1 1/4"=0.06 1 1/2"=0.09 2"=0.16 2 1/2"=0.26 3"=0.37 3 1/2"=0.50
4"=0.65 6"=1.47



**BARNSTABLE COUNTY
DEPARTMENT OF HEALTH AND ENVIRONMENT**

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

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

WATER SAMPLING LOG: EASTHAM LANDFILL

WELL NUMBER: mw 3D (BCU#13) DATE: 11/10/14
WEATHER: sunny 55 TIME: 1045

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: 20.92 MATERIAL OF WELL: PVC
FEET OF WATER IN WELL: 52.51 GALLONS PER FOOT: 0.16
GALLONS OF WATER IN WELL: 8.40 AMOUNT TO PURGE: 55 gal

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

SAMPLING DATA/FIELD PARAMETERS

COLOR: clear ODOR: slight waichate APPEARANCE: very slight suds
PH: 6.28 TEMP: 12.73 COND: 1372 DO: 0.14
OTHER: _____

SAMPLING METHOD AND MATERIAL: dedicated bailer/dedicated waterra

CONSTITUENTS SAMPLED	CONTAINER DESCRIPTION	PRESERVATIVE
420 Nit/Aik 410	500 mL plastic	-
429, 421 *All Metals 411, 419	500 mL plastic	HNO3
422 COD 412	40 mL glass vial	H2SO4
123, 424, 425, 426, 427 VOC 413, 414, 415, 416, 417	40 mL glass vial	HCl
428 TCN 418	500 mL plastic	NaOH

REMARKS: * Field Filtered

SAMPLING PERSONNEL: Lynn K. Mulkeen-BCDHE

WELL CASING VOLUMES:

1 1/4"=0.06 1 1/2"=0.09 2"=0.16 2 1/2"=0.26 3"=0.37 3 1/2"=0.50
4"=0.65 6"=1.47



Site Visit Form

PROJECT Eastham Landfill DATE 11/20/14

PERSONNEL E. Lucé OTHER PERSONNEL _____

ARRIVAL TIME 08:45 DEPARTURE TIME 13:30

WEATHER CONDITIONS 40's, mostly sunny, 5-10 mph wind

Check all that apply for this site visit:

- Samples taken (include location description and copy of COC)
- Rental equipment used (include rental form for ES&M rentals)
- Materials purchased

Description of activities and observations:

Meet plumber from Dugan Plumbing + J. Crowley at		
375 Meetinghouse Rd. to collect samples. Plumber had		
turned on system and purged for several		
well cycles. Plumber shut down system + drained house		
when done.		
Sample 200 Meetinghouse and 85 Alston. Sampling logs		
attached.		
Went to 560 Schoolhouse but nobody home, did not collect		
samples.		
Gauge depth to water + depth to bottom at		
	DTW	Well Depth
15 Deepwood	49.33	62
25 Deepwood	50.68	67
65 Deepwood	28.13	44
35 Sharon Cir	32.69	59
Drop off samples @ Alpha		

Work Completed By: _____

Eastham Landfill
Private Well Sampling Log

Date: 11/20/14
Sampler: E. Lucē
Weather Conditions: mostly sunny, 5-10 mph wind
Temperature: 40° F

Location: 375 Meetinghouse Rd.
Property Owner: Dave Alexander
Property Contact: _____
Phone: _____
Email: _____
Contact Log Attached: Yes: _____ No: _____

Analysis Required: 1,4-Dioxane (8270 SIM)
Analytical Lab: Alpha
Sample Location: Pressure tank
Describe water system including treatment: Conditioning tank + Aqua Pure whole house filter
Water meter reading: _____

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

Purge Time: Start: 8 Finish: 0925

Volume Purged: Several well cycles gallons
Equipment Utilized: _____
Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Date: 11/20/14
Sampler: E. Cuccè
Weather Conditions: partly cloudy, 5-10 mph wind
Temperature: 45°F

Location: 200 Schoolhouse Rd.
Property Owner: _____
Property Contact: Linda Burtz
Phone: _____
Email: _____
Contact Log Attached: Yes: _____ No: _____

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

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

Purge Time: Start: 1005 Finish: 1030

Volume Purged: 25 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____

Eastham Landfill
Private Well Sampling Log

Date: 11/20/14
Sampler: E. Cuccè
Weather Conditions: partly cloudy, 5-10 mph wind
Temperature: 45°F

Location: 85 Alston Ave.
Property Owner: Linda Burt
Property Contact: _____
Phone: _____
Email: _____
Contact Log Attached: Yes: _____ No: _____

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

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

Purge Time: Start: 1100 Finish: 1120

Volume Purged: 22 gallons

Equipment Utilized: _____

Attach Equipment Calibration Log: _____



CHAIN OF CUSTODY

Date Rec'd in Lab:

ALPHA Job #:

Project Information

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

Project Name: Eastham DW
 Project Location: Eastham MA

Report Information Data Deliverables

FAX EMAIL
 ADEX Add'l Deliverables

Billing Information

Same as Client Info
 PO #:

Client Information

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

Project #: 2013-027
 Project Manager: Lisa Flynn
 ALPHA Quote #:

Regulatory Requirements/Report Limits

State/Fed Program: 8270 - MCP
 Criteria: 0.15 ug/l for 1,4 dioxane, GM-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 ID	Collection Date	Sample Matrix	Sampler's Initials	1,4-Dioxane BY 8270	Other	Other	Other	Other	Other	Other
Meetinghouse Rd - 375	0925	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meetinghouse Rd - 305 DUP	0930	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schoolhouse Rd - 200	1030	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schoolhouse Rd - 200 DUP	1035	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alston Ave - 085	1120	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alston Ave - 085 DUP	1125	DW	EC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		DW		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		DW		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TRIPBLANK		DW		<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

These samples have been previously analyzed by Alpha
 Other Project Specific Requirements/Comments/Detection Limits:
 email results to iflynn@esm-inc.com and aboyd@esm-inc.com
 Please invoice Town of Eastham

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO. 01-0110
 (rev. 2-24-13)

Relinquished By:	Date/Time	Received By:	Date/Time
	11/20/14 1545		11/20/14 1545

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.



Barnstable County Health Laboratory

ANALYTICAL REPORT FOR

Environmental Strategies & Manage, Inc. (Landf

Report Prepared for:

Environmental Strategies & Management, Inc.
Lisa Flynn, Re: Eastham Landfill
273 West Main Street
Norton, MA 02766

Order #: G1483246
No. of Samples: 4
Date Received: 09/03/2014



CERTIFICATE OF ANALYSIS

Barnstable County Health Laboratory (M-MA009)

Report Prepared For: Lisa Flynn, Re: Eastham Landfill
 Environmental Strategies & Management, Inc.
 273 West Main Street
 Norton, MA 02766

Report Dated: 09/22/2014

Order No.: G1483246

Laboratory ID #: 1483246-01 **Description:** Water - Monitoring Well
Sample #: **Sample Location:** MW 3I **Collected:** 09/03/2014
Collected by: LKM **Received:** 09/03/2014

Test Parameters

<u>ITEM</u>	<u>RESULT</u>	<u>UNITS</u>	<u>RL</u>	<u>MCL</u>	<u>METHOD #</u>	<u>ANALYST</u>	<u>TESTED</u>	<u>NOTE</u>
COD	16	mg/L	5.0		HACH 8000	LAP	09/08/2014	
Cyanide, Total	ND	mg/L	0.010		SM4500-CN-E	LAP	09/09/2014	

Landfill Metals_Dissolved

<u>ITEM</u>	<u>RESULT</u>	<u>UNITS</u>	<u>RL</u>	<u>MCL</u>	<u>METHOD #</u>	<u>ANALYST</u>	<u>TESTED</u>	<u>NOTE</u>
Arsenic	0.043	mg/L	0.0030	0.01	EPA 6020A	KK	09/16/2014	
Barium	0.010	mg/L	0.0030	2.0	EPA 6020A	KK	09/16/2014	
Cadmium	ND	mg/L	0.0030	0.005	EPA 6020A	KK	09/16/2014	
Chromium	ND	mg/L	0.0030	0.1	EPA 6020A	KK	09/16/2014	
Copper	ND	mg/L	0.0030		EPA 6020A	KK	09/16/2014	
Iron	69	mg/L	0.10		EPA 6020A	KK	09/16/2014	
Lead	ND	mg/L	0.0030	0.015	EPA 6020A	KK	09/16/2014	
Manganese	1.1	mg/L	0.0030		EPA 6020A	KK	09/16/2014	
Mercury	ND	mg/L	0.00030	0.002	EPA 6020A	KK	09/16/2014	
Selenium	ND	mg/L	0.015	0.05	EPA 6020A	KK	09/16/2014	
Silver	ND	mg/L	0.002		EPA 200.7	LAP	09/09/2014	
Zinc	ND	mg/L	0.060		EPA 6020A	KK	09/16/2014	

Landfill Inorganics_01

<u>ITEM</u>	<u>RESULT</u>	<u>UNITS</u>	<u>RL</u>	<u>MCL</u>	<u>METHOD #</u>	<u>ANALYST</u>	<u>TESTED</u>	<u>NOTE</u>
Nitrate as Nitrogen	ND	mg/L	0.10	10	EPA 300.0	DCB	09/03/2014	
Alkalinity	200	mg/L as CaCO	2.0		SM 2320B	DCB	09/03/2014	
Chloride	20	mg/L	1.0		EPA 300.0	DCB	09/03/2014	
Sulfate	30	mg/L	1.0		EPA 300.0	DCB	09/03/2014	
Total Dissolved Solids	300	mg/L	7.0		SM 2540C	DCB	09/03/2014	

ND = None Detected

RL = Reporting Limit

MCL = Maximum Contaminant Level



CERTIFICATE OF ANALYSIS

Barnstable County Health Laboratory (M-MA009)

Report Prepared For:

Report Dated: 09/22/2014

Lisa Flynn, Re: Eastham Landfill
 Environmental Strategies & Management, Inc.
 273 West Main Street
 Norton, MA 02766

Order No.: G1483246

Laboratory ID #: 1483246-02

Description: Water - Monitoring Well

Sample #:

Sample Location: MW 3D

Collected: 09/03/2014

Collected by: LKM

Received: 09/03/2014

Test Parameters

<u>ITEM</u>	<u>RESULT</u>	<u>UNITS</u>	<u>RL</u>	<u>MCL</u>	<u>METHOD #</u>	<u>ANALYST</u>	<u>TESTED</u>	<u>NOTE</u>
COD	50	mg/L	5.0		HACH 8000	LAP	09/08/2014	
Cyanide, Total	ND	mg/L	0.010		SM4500-CN-E	LAP	09/09/2014	

Landfill Metals_Dissolved

<u>ITEM</u>	<u>RESULT</u>	<u>UNITS</u>	<u>RL</u>	<u>MCL</u>	<u>METHOD #</u>	<u>ANALYST</u>	<u>TESTED</u>	<u>NOTE</u>
Arsenic	0.073	mg/L	0.0030	0.01	EPA 6020A	KK	09/16/2014	
Barium	0.086	mg/L	0.0030	2.0	EPA 6020A	KK	09/16/2014	
Cadmium	ND	mg/L	0.0030	0.005	EPA 6020A	KK	09/16/2014	
Chromium	0.0060	mg/L	0.0030	0.1	EPA 6020A	KK	09/16/2014	
Copper	ND	mg/L	0.0030		EPA 6020A	KK	09/16/2014	
Iron	35	mg/L	0.10		EPA 6020A	KK	09/16/2014	
Lead	ND	mg/L	0.0030	0.015	EPA 6020A	KK	09/16/2014	
Manganese	1.4	mg/L	0.0030		EPA 6020A	KK	09/16/2014	
Mercury	ND	mg/L	0.00030	0.002	EPA 6020A	KK	09/16/2014	
Selenium	Nd	mg/L	0.015	0.05	EPA 6020A	KK	09/16/2014	
Silver	ND	mg/L	0.002		EPA 200.7	LAP	09/09/2014	
Zinc	ND	mg/L	0.060		EPA 6020A	KK	09/16/2014	

Landfill Inorganics_01

<u>ITEM</u>	<u>RESULT</u>	<u>UNITS</u>	<u>RL</u>	<u>MCL</u>	<u>METHOD #</u>	<u>ANALYST</u>	<u>TESTED</u>	<u>NOTE</u>
Nitrate as Nitrogen	ND	mg/L	0.10	10	EPA 300.0	DCB	09/03/2014	
Alkalinity	780	mg/L as CaCO	2.0		SM 2320B	DCB	09/03/2014	
Chloride	85	mg/L	1.0		EPA 300.0	DCB	09/03/2014	
Sulfate	54	mg/L	1.0		EPA 300.0	DCB	09/03/2014	
Total Dissolved Solids	1,200	mg/L	7.0		SM 2540C	DCB	09/03/2014	

ND = None Detected

RL = Reporting Limit

MCL = Maximum Contaminant Level



CERTIFICATE OF ANALYSIS

Barnstable County Health Laboratory (M-MA009)

Report Prepared For:

Report Dated: 09/22/2014

Lisa Flynn, Re: Eastham Landfill
 Environmental Strategies & Management, Inc.
 273 West Main Street
 Norton, MA 02766

Order No.: G1483246

Laboratory ID #: 1483246-03

Description: Water - Monitoring Well

Sample #:

Sample Location: BCH #13

Collected: 09/03/2014

Collected by: LKM

Received: 09/03/2014

Test Parameters

ITEM	RESULT	UNITS	RL	MCL	METHOD #	ANALYST	TESTED	NOTE
COD	51	mg/L	5.0		HACH 8000	LAP	09/08/2014	
Cyanide, Total	ND	mg/L	0.010		SM4500-CN-E	LAP	09/09/2014	

Landfill Metals_Dissolved

ITEM	RESULT	UNITS	RL	MCL	METHOD #	ANALYST	TESTED	NOTE
Arsenic	0.067	mg/L	0.0030	0.01	EPA 6020A	KK	09/16/2014	
Barium	0.082	mg/L	0.0030	2.0	EPA 6020A	KK	09/16/2014	
Cadmium	ND	mg/L	0.0030	0.005	EPA 6020A	KK	09/16/2014	
Chromium	0.0050	mg/L	0.0030	0.1	EPA 6020A	KK	09/16/2014	
Copper	ND	mg/L	0.0030		EPA 6020A	KK	09/16/2014	
Iron	35	mg/L	0.10		EPA 6020A	KK	09/16/2014	
Lead	ND	mg/L	0.0030	0.015	EPA 6020A	KK	09/16/2014	
Manganese	1.4	mg/L	0.0030		EPA 6020A	KK	09/16/2014	
Mercury	ND	mg/L	0.00030	0.002	EPA 6020A	KK	09/16/2014	
Selenium	ND	mg/L	0.015	0.05	EPA 6020A	KK	09/16/2014	
Silver	ND	mg/L	0.002		EPA 200.7	LAP	09/09/2014	
Zinc	ND	mg/L	0.060		EPA 6020A	KK	09/16/2014	

Landfill Inorganics_01

ITEM	RESULT	UNITS	RL	MCL	METHOD #	ANALYST	TESTED	NOTE
Nitrate as Nitrogen	ND	mg/L	0.10	10	EPA 300.0	DCB	09/03/2014	
Alkalinity	780	mg/L as CaCO	2.0		SM 2320B	DCB	09/03/2014	
Chloride	85	mg/L	1.0		EPA 300.0	DCB	09/03/2014	
Sulfate	53	mg/L	1.0		EPA 300.0	DCB	09/03/2014	
Total Dissolved Solids	1,200	mg/L	7.0		SM 2540C	DCB	09/03/2014	

Attached please find the laboratory certified parameter list.

Approved By: *Jongmin Lei*
 (Lab Manager)
 9/22/2014

ND = None Detected

RL = Reporting Limit

MCL = Maximum Contaminant Level



CERTIFICATE OF ANALYSIS

Barnstable County Health Laboratory (M-MA009)

Recipient: Lisa Flynn, Re: Eastham Landfill Environmental Strategies & Management, Inc. 273 West Main Street Norton, MA 02766 Order#: G1483246 Lab ID: 1483246-01 Sample #: Method: 8260B Comment:	Matrix: Water - Monitoring Well Sampled: 09/03/2014 11:30 Received: 09/03/2014 13:50 Collection Address: MW 3I Sample Location: Description: Landfill Date Analyzed: 09/08/2014 @ 15:20 Analyst: yn Dilution Factor: 1
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EPA 8260 - Volatile Organics by GC/MS + Ketones +

Parameter	Result ug/L	MCL ug/L	MDL ug/L	Parameter	Result ug/L	MCL ug/L	MDL ug/L
1,1,1,2-Tetrachloroethane	ND		5.0	Chlorobenzene	ND		5.0
1,1,1-Trichloroethane	ND		5.0	Chloroethane	ND		5.0
1,1,2,2-Tetrachloroethane	ND		5.0	Chloroform	ND		5.0
1,1,2-Trichloroethane	ND		5.0	Chloromethane	ND		5.0
1,1-Dichloroethane	ND		5.0	cis-1,2-Dichloroethene	ND		5.0
1,1-Dichloroethene	ND		5.0	cis-1,3-Dichloropropene	ND		5.0
1,1-Dichloropropene	ND		5.0	Dibromochloromethane	ND		5.0
1,2,3-Trichlorobenzene	ND		5.0	Dibromomethane	ND		5.0
1,2,3-Trichloropropene	ND		5.0	Dichlorodifluoromethane	ND		5.0
1,2,4-Trichlorobenzene	ND		5.0	Ethylbenzene	ND		5.0
1,2,4-Trimethylbenzene	ND		5.0	Hexachlorobutadiene	ND		5.0
1,2-Dibromo-3-chloropropane	ND		5.0	Isopropylbenzene	ND		5.0
1,2-Dibromoethane (EDB)	ND		5.0	Methylene chloride	ND		5.0
1,2-Dichlorobenzene	ND		5.0	Methyl-tert-butyl ether	ND		5.0
1,2-Dichloroethane	ND		5.0	Naphthalene	ND		5.0
1,2-Dichloropropane	ND		5.0	n-Butylbenzene	ND		5.0
1,3,5-Trimethylbenzene	ND		5.0	n-Propylbenzene	ND		5.0
1,3-Dichlorobenzene	ND		5.0	p-Isopropyltoluene	ND		5.0
1,3-Dichloropropane	ND		5.0	sec-Butylbenzene	ND		5.0
1,4-Dichlorobenzene	ND		5.0	Styrene	ND		5.0
1,4-Dioxane	ND		500	tert-Butylbenzene	ND		5.0
2,2-Dichloropropane	ND		5.0	Tetrachloroethene	ND		5.0
2-Butanone	ND		5.0	Toluene	ND		5.0
2-Chlorotoluene	ND		5.0	Total xylenes	ND		5.0
2-Hexanone	ND		5.0	trans-1,2-Dichloroethene	ND		5.0
4-Chlorotoluene	ND		5.0	trans-1,3-Dichloropropene	ND		5.0
4-Methyl-2-pentanone	ND		5.0	Trichloroethene	ND		5.0
Acetone	ND		5.0	Trichlorofluoromethane	ND		5.0
Benzene	ND		5.0	Vinyl chloride	ND		5.0
Bromobenzene	ND		5.0				
Bromochloromethane	ND		5.0				
Bromodichloromethane	ND		5.0				
Bromoform	ND		5.0				
Bromomethane	ND		5.0				
Carbon tetrachloride	ND		5.0				

Attached please find the laboratory certified parameter list.

Approved By: *Jacqueline Sei*
 (Lab Director) 9/22/14

ND = None Detected

RL = Reporting Limit

MCL = Maximum Contaminant Level



CERTIFICATE OF ANALYSIS

Barnstable County Health Laboratory (M-MA009)

Recipient: Lisa Flynn, Re: Eastham Landfill Environmental Strategies & Management, Inc. 273 West Main Street Norton, MA 02766 Order#: G1483246 Lab ID: 1483246-02 Sample #: Method: 8260B Comment:	Matrix: Water - Monitoring Well Sampled: 09/03/2014 11:30 Received: 09/03/2014 13:50 Collection Address: MW 3D Sample Location: Description: Landfill Date Analyzed: 09/09/2014 @ 15:20 Analyst: yn Dilution Factor: 1
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EPA 8260 - Volatile Organics by GC/MS + Ketones +

Parameter	Result ug/L	MCL ug/L	MDL ug/L	Parameter	Result ug/L	MCL ug/L	MDL ug/L
1,1,1,2-Tetrachloroethane	ND		5.0	Chlorobenzene	ND		5.0
1,1,1-Trichloroethane	ND		5.0	Chloroethane	ND		5.0
1,1,2,2-Tetrachloroethane	ND		5.0	Chloroform	ND		5.0
1,1,2-Trichloroethane	ND		5.0	Chloromethane	ND		5.0
1,1-Dichloroethane	ND		5.0	cis-1,2-Dichloroethene	ND		5.0
1,1-Dichloroethene	ND		5.0	cis-1,3-Dichloropropene	ND		5.0
1,1-Dichloropropene	ND		5.0	Dibromochloromethane	ND		5.0
1,2,3-Trichlorobenzene	ND		5.0	Dibromomethane	ND		5.0
1,2,3-Trichloropropane	ND		5.0	Dichlorodifluoromethane	ND		5.0
1,2,4-Trichlorobenzene	ND		5.0	Ethylbenzene	ND		5.0
1,2,4-Trimethylbenzene	ND		5.0	Hexachlorobutadiene	ND		5.0
1,2-Dibromo-3-chloropropane	ND		5.0	Isopropylbenzene	ND		5.0
1,2-Dibromoethane (EDB)	ND		5.0	Methylene chloride	ND		5.0
1,2-Dichlorobenzene	ND		5.0	Methyl-tert-butyl ether	ND		5.0
1,2-Dichloroethane	ND		5.0	Naphthalene	ND		5.0
1,2-Dichloropropane	ND		5.0	n-Butylbenzene	ND		5.0
1,3,5-Trimethylbenzene	ND		5.0	n-Propylbenzene	ND		5.0
1,3-Dichlorobenzene	ND		5.0	p-Isopropyltoluene	ND		5.0
1,3-Dichloropropane	ND		5.0	sec-Butylbenzene	ND		5.0
1,4-Dichlorobenzene	ND		5.0	Styrene	ND		5.0
1,4-Dioxane	ND		500	tert-Butylbenzene	ND		5.0
2,2-Dichloropropane	ND		5.0	Tetrachloroethene	ND		5.0
2-Butanone	ND		5.0	Toluene	ND		5.0
2-Chlorotoluene	ND		5.0	Total xylenes	ND		5.0
2-Hexanone	ND		5.0	trans-1,2-Dichloroethene	ND		5.0
4-Chlorotoluene	ND		5.0	trans-1,3-Dichloropropene	ND		5.0
4-Methyl-2-pentanone	ND		5.0	Trichloroethene	ND		5.0
Acetone	ND		5.0	Trichlorofluoromethane	ND		5.0
Benzene	ND		5.0	Vinyl chloride	ND		5.0
Bromobenzene	ND		5.0				
Bromochloromethane	ND		5.0				
Bromodichloromethane	ND		5.0				
Bromoform	ND		5.0				
Bromomethane	ND		5.0				
Carbon tetrachloride	ND		5.0				

Attached please find the laboratory certified parameter list.

Approved By: *Gonquins Sei*
(Lab Director) 9/22/2014

ND = None Detected

RL = Reporting Limit

MCL = Maximum Contaminant Level



CERTIFICATE OF ANALYSIS

Barnstable County Health Laboratory (M-MA009)

Recipient: Lisa Flynn, Re: Eastham Landfil Environmental Strategies & Management, Inc. 273 West Main Street Norton, MA 02766 Order#: G1483246 Lab ID: 1483246-03 Sample #: Method: 8260B Comment:	Matrix: Water - Monitoring Well Sampled: 09/03/2014 11:30 Received: 09/03/2014 13:50 Collection Address: BCH #13 Sample Location: Description: Landfill Date Analyzed: 09/09/2014 @ 15:20 Analyst: yn Dilution Factor: 1
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EPA 8260 - Volatile Organics by GC/MS + Ketones +

Parameter	Result ug/L	MCL ug/L	MDL ug/L	Parameter	Result ug/L	MCL ug/L	MDL ug/L
1,1,1,2-Tetrachloroethane	ND		5.0	Chlorobenzene	ND		5.0
1,1,1-Trichloroethane	ND		5.0	Chloroethane	ND		5.0
1,1,2,2-Tetrachloroethane	ND		5.0	Chloroform	ND		5.0
1,1,2-Trichloroethane	ND		5.0	Chloromethane	ND		5.0
1,1-Dichloroethane	ND		5.0	cis-1,2-Dichloroethene	ND		5.0
1,1-Dichloroethene	ND		5.0	cis-1,3-Dichloropropene	ND		5.0
1,1-Dichloropropene	ND		5.0	Dibromochloromethane	ND		5.0
1,2,3-Trichlorobenzene	ND		5.0	Dibromomethane	ND		5.0
1,2,3-Trichloropropane	ND		5.0	Dichlorodifluoromethane	ND		5.0
1,2,4-Trichlorobenzene	ND		5.0	Ethylbenzene	ND		5.0
1,2,4-Trimethylbenzene	ND		5.0	Hexachlorobutadiene	ND		5.0
1,2-Dibromo-3-chloropropane	ND		5.0	Isopropylbenzene	ND		5.0
1,2-Dibromoethane (EDB)	ND		5.0	Methylene chloride	ND		5.0
1,2-Dichlorobenzene	ND		5.0	Methyl-tert-butyl ether	ND		5.0
1,2-Dichloroethane	ND		5.0	Naphthalene	ND		5.0
1,2-Dichloropropane	ND		5.0	n-Butylbenzene	ND		5.0
1,3,5-Trimethylbenzene	ND		5.0	n-Propylbenzene	ND		5.0
1,3-Dichlorobenzene	ND		5.0	p-Isopropyltoluene	ND		5.0
1,3-Dichloropropane	ND		5.0	sec-Butylbenzene	ND		5.0
1,4-Dichlorobenzene	ND		5.0	Styrene	ND		5.0
1,4-Dioxane	ND		500	tert-Butylbenzene	ND		5.0
2,2-Dichloropropane	ND		5.0	Tetrachloroethene	ND		5.0
2-Butanone	ND		5.0	Toluene	ND		5.0
2-Chlorotoluene	ND		5.0	Total xylenes	ND		5.0
2-Hexanone	ND		5.0	trans-1,2-Dichloroethene	ND		5.0
4-Chlorotoluene	ND		5.0	trans-1,3-Dichloropropene	ND		5.0
4-Methyl-2-pentanone	ND		5.0	Trichloroethene	ND		5.0
Acetone	ND		5.0	Trichlorofluoromethane	ND		5.0
Benzene	ND		5.0	Vinyl chloride	ND		5.0
Bromobenzene	ND		5.0				
Bromochloromethane	ND		5.0				
Bromodichloromethane	ND		5.0				
Bromoform	ND		5.0				
Bromomethane	ND		5.0				
Carbon tetrachloride	ND		5.0				

Attached please find the laboratory certified parameter list.

Approved By: *Benjamin Sei*
 (Lab Director) 9/22/2014
 MCL = Maximum Contaminant Level

ND = None Detected

RL = Reporting Limit



CERTIFICATE OF ANALYSIS

Barnstable County Health Laboratory (M-MA009)

Recipient: Lisa Flynn, Re: Eastham Landfill Environmental Strategies & Management, Inc. 273 West Main Street Norton, MA 02766 Order#: G1483246 Lab ID: 1483246-04 Sample #: Method: 8260B Comment:	Matrix: Water - Monitoring Well Sampled: 09/03/2014 9:00 Received: 09/03/2014 13:50 Collection Address: TRIP BLANK Sample Location: Description: Landfill Date Analyzed: 09/09/2014 @ 15:20 Analyst: yn Dilution Factor: 1
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EPA 8260 - Volatile Organics by GC/MS + Ketones +

Parameter	Result ug/L	MCL ug/L	MDL ug/L	Parameter	Result ug/L	MCL ug/L	MDL ug/L
1,1,1,2-Tetrachloroethane	ND		5.0	Chlorobenzene	ND		5.0
1,1,1-Trichloroethane	ND		5.0	Chloroethane	ND		5.0
1,1,2,2-Tetrachloroethane	ND		5.0	Chloroform	ND		5.0
1,1,2-Trichloroethane	ND		5.0	Chloromethane	ND		5.0
1,1-Dichloroethane	ND		5.0	cis-1,2-Dichloroethene	ND		5.0
1,1-Dichloroethene	ND		5.0	cis-1,3-Dichloropropene	ND		5.0
1,1-Dichloropropene	ND		5.0	Dibromochloromethane	ND		5.0
1,2,3-Trichlorobenzene	ND		5.0	Dibromomethane	ND		5.0
1,2,3-Trichloropropane	ND		5.0	Dichlorodifluoromethane	ND		5.0
1,2,4-Trichlorobenzene	ND		5.0	Ethylbenzene	ND		5.0
1,2,4-Trimethylbenzene	ND		5.0	Hexachlorobutadiene	ND		5.0
1,2-Dibromo-3-chloropropane	ND		5.0	Isopropylbenzene	ND		5.0
1,2-Dibromoethane (EDB)	ND		5.0	Methylene chloride	ND		5.0
1,2-Dichlorobenzene	ND		5.0	Methyl-tert-butyl ether	ND		5.0
1,2-Dichloroethane	ND		5.0	Naphthalene	ND		5.0
1,2-Dichloropropane	ND		5.0	n-Butylbenzene	ND		5.0
1,3,5-Trimethylbenzene	ND		5.0	n-Propylbenzene	ND		5.0
1,3-Dichlorobenzene	ND		5.0	p-Isopropyltoluene	ND		5.0
1,3-Dichloropropane	ND		5.0	sec-Butylbenzene	ND		5.0
1,4-Dichlorobenzene	ND		5.0	Styrene	ND		5.0
1,4-Dioxane	ND		500	tert-Butylbenzene	ND		5.0
2,2-Dichloropropane	ND		5.0	Tetrachloroethene	ND		5.0
2-Butanone	ND		5.0	Toluene	ND		5.0
2-Chlorotoluene	ND		5.0	Total xylenes	ND		5.0
2-Hexanone	ND		5.0	trans-1,2-Dichloroethene	ND		5.0
4-Chlorotoluene	ND		5.0	trans-1,3-Dichloropropene	ND		5.0
4-Methyl-2-pentanone	ND		5.0	Trichloroethene	ND		5.0
Acetone	ND		5.0	Trichlorofluoromethane	ND		5.0
Benzene	ND		5.0	Vinyl chloride	ND		5.0
Bromobenzene	ND		5.0				
Bromochloromethane	ND		5.0				
Bromodichloromethane	ND		5.0				
Bromoform	ND		5.0				
Bromomethane	ND		5.0				
Carbon tetrachloride	ND		5.0				

Attached please find the laboratory certified parameter list.

Approved By: *Benjamin Lei*
 (Lab Director) 9/22/2014
 MCL = Maximum Contaminant Level

ND = None Detected

RL = Reporting Limit

83246(0102)

Barnstable County Department of Health and the Environment

Superior Court House
P. O. Box 427
Barnstable, MA 02630
(508) 375-6605;6612

CHAIN OF CUSTODY

pg 1 of 2

CLIENT NAME: Eastham UF

ADDRESS: _____

PROJECT NAME: _____ PROJECT NUMBER: _____

PROJECT SITE: _____ SAMPLER: LK Mulkeen

DATE/ TIME:	SAMPLE NUMBER	SAMPLE LOCATION	NO. OF SAMPLES	ANALYSES REQUIRED	COMMENTS
1) 9/3/14 1130	200 ✓	mw 3I	1	NITRATE TDS SO4 CL-	
	201 ✓	↓	↓	Fe Mn Cu Pb Zn Cd Cr As Ag Se Ba	FFLT
	202 ✓	↓	↓	COD	E
	203, 204, 205	↓	3	8260+ Ketones (1, 4-Dioxane)	
	206 ✓	↓	1	TEN	TO PGM
	207 ✓	↓	1	Hg	FFLT
	208 ✓	mw 3D	1	NITRATE TDS SO4 CL-	
	209 ✓	↓	↓	Fe Mn Cu Pb Zn Cd Cr As Ag Se Ba	FFLT
	210 ✓	↓	↓	COD	E
	211, 212, 213	↓	3	8260+ Ketones (1, 4-Dioxane)	
	214 ✓	↓	1	TEN	TO PGM
	215 ✓	↓	↓	Hg	FFLT

RELINGUISHED BY: LK Mulkeen DATE/TIME: 9/3/14 RECEIVED BY: W. T. ... DATE/TIME: 9/3/14 1350

RELINGUISHED BY: _____ DATE/TIME: _____ RECEIVED BY: _____ DATE/TIME: _____

9-3-14 per GML all (Ag) Silver to ENV Hg stays here
 all cyanide to Premier (per LKM 9/4/14 only 3 vials for
 all COD'S to ENV * } 1-4 Dioxane and 8260 ketones +
 Shewants both done

No bottles for 1-4 Dioxane - EZH called LKM 9-3-14 left message @ 15:35

EZH called 9-17-14 @ 1540 - left voice mail
 -14 Dioxane Low Level 2 only 3 vials each sample

83246 (03-04)

Barnstable County Department of Health and the Environment

Superior Court House
P. O. Box 427
Barnstable, MA 02630
(508) 375-6605;6612

CHAIN OF CUSTODY

pg 2 of 2

CLIENT NAME: Eastham UF

ADDRESS: _____

PROJECT NAME: _____ PROJECT NUMBER: _____

PROJECT SITE: _____ SAMPLER: LK Mulhern

DATE/TIME:	SAMPLE NUMBER	SAMPLE LOCATION	NO. OF SAMPLES	ANALYSES REQUIRED	COMMENTS
3 9/3/14 1130	216 ✓	BCH #13	1	Ni Pb Cu Zn Cd SO ₄ U-	
↓	217 ✓	↓	↓	Fem Mn Cu Pb Zn Cd Cr As Ag Se Ba	FFH
↓	218 ✓	↓	↓	COD	E
↓	219, 220, 221 ✓	↓	3	8260+ Ketones (1,4-Dioxane)	
↓	222 ✓	↓	1	TW	TOPPRM
↓	223 ✓	↓	↓	Hg	FFH
4 ↓ 900	Sent 1, 2, 3	TRIP BLANK	3	8260+ Ketones (1,4-Dioxane)	

RELINQUISHED BY: _____ DATE/TIME: _____ RECEIVED BY: _____ DATE/TIME: _____

LK Mulhern 9/3/14 V. James 9/3/14 1350

RELINQUISHED BY: _____ DATE/TIME: _____ RECEIVED BY: _____ DATE/TIME: _____

EAH called 9/17/14 @ 1540 - w/ voice mail
- 14 Dioxane low level 17 only 3 vials each sample

per LKM 9/4/14 only 3 vials for
1-4 Dioxane and 8260 Ketones
* Shewants both done

No bottles for 1-4 Dioxane - EAH called LKM 9-3-14 left message @ 15:35

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	L1421990	9/19/2014	drinking water	Yes	Yes	Yes	Yes	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis	Sample ID	Date	Lab ID	Matrix	Analysis
Sharon Circle_025	9/19/2014	L1421990-01	DW	8270	Candlewood Dr_310 Dup	9/19/2014	L1421990-06	DW	Not Analyzed
Sharon Circle_025 Dup	9/19/2014	L1421990-02	DW	Not Analyzed	Meetinghouse Rd_175	9/19/2014	L1421990-07	DW	8270
Bracket Road_550	9/19/2014	L1421990-03	DW	8270	Meetinghouse Rd_175 Dup	9/19/2014	L1421990-08	DW	Not Analyzed
Bracket Road_550 Dup	9/19/2014	L1421990-04	DW	Not Analyzed	Tripblank	9/19/2014	L1421990-09	W	8270
Candlewood Dr_310	9/19/2014	L1421990-05	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 10/2/14.



ANALYTICAL REPORT

Lab Number:	L1421990
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:	09/29/14

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 DW
Project Number: 2013-027

Lab Number: L1421990
Report Date: 09/29/14

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1421990-01	SHARON CIRCLE_025	WATER	EASTHAM MA	09/19/14 08:40	09/19/14
L1421990-02	SHARON CIRCLE_025 DUP	WATER	EASTHAM MA	09/19/14 08:45	09/19/14
L1421990-03	BRACKET ROAD_550	WATER	EASTHAM MA	09/19/14 10:00	09/19/14
L1421990-04	BRACKET ROAD_550 DUP	WATER	EASTHAM MA	09/19/14 10:05	09/19/14
L1421990-05	CANDLEWOOD DR_310	WATER	EASTHAM MA	09/19/14 11:40	09/19/14
L1421990-06	CANDLEWOOD DR_310 DUP	WATER	EASTHAM MA	09/19/14 11:45	09/19/14
L1421990-07	MEETINGHOUSE RD_175	WATER	EASTHAM MA	09/19/14 13:35	09/19/14
L1421990-08	MEETINGHOUSE RD_175 DUP	WATER	EASTHAM MA	09/19/14 13:40	09/19/14
L1421990-09	TRIPBLANK	WATER	EASTHAM MA	09/19/14 00:00	09/19/14

Project Name: EASTHAM DW

Lab Number: L1421990

Project Number: 2013-027

Report Date: 09/29/14

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 DW
Project Number: 2013-027

Lab Number: L1421990
Report Date: 09/29/14

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 DW
Project Number: 2013-027

Lab Number: L1421990
Report Date: 09/29/14

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:



Elizabeth Porta

Title: Technical Director/Representative

Date: 09/29/14

ORGANICS

SEMIVOLATILES

Project Name: EASTHAM DW**Lab Number:** L1421990**Project Number:** 2013-027**Report Date:** 09/29/14**SAMPLE RESULTS**

Lab ID: L1421990-01
Client ID: SHARON CIRCLE_025
Sample Location: EASTHAM MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 09/26/14 17:36
Analyst: JT

Date Collected: 09/19/14 08:40
Date Received: 09/19/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/25/14 13:12

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	25		15-110

Project Name: EASTHAM DW**Lab Number:** L1421990**Project Number:** 2013-027**Report Date:** 09/29/14**SAMPLE RESULTS**

Lab ID: L1421990-03
Client ID: BRACKET ROAD_550
Sample Location: EASTHAM MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 09/26/14 18:21
Analyst: JT

Date Collected: 09/19/14 10:00
Date Received: 09/19/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/25/14 13:12

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

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

1,4-Dioxane	0.119	J	ug/l	0.153	0.0765	1
-------------	-------	---	------	-------	--------	---

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

Project Name: EASTHAM DW**Lab Number:** L1421990**Project Number:** 2013-027**Report Date:** 09/29/14**SAMPLE RESULTS**

Lab ID: L1421990-05
Client ID: CANDLEWOOD DR_310
Sample Location: EASTHAM MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 09/26/14 19:06
Analyst: JT

Date Collected: 09/19/14 11:40
Date Received: 09/19/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/25/14 13:12

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	26		15-110

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1421990
Report Date: 09/29/14

SAMPLE RESULTS

Lab ID: L1421990-07
 Client ID: MEETINGHOUSE RD_175
 Sample Location: EASTHAM MA
 Matrix: Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 09/26/14 19:51
 Analyst: JT

Date Collected: 09/19/14 13:35
 Date Received: 09/19/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 09/25/14 13:12

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

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

1,4-Dioxane	ND		ug/l	0.156	0.0781	1
-------------	----	--	------	-------	--------	---

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

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1421990
Report Date: 09/29/14

SAMPLE RESULTS

Lab ID: L1421990-09
Client ID: TRIPBLANK
Sample Location: EASTHAM MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 09/26/14 20:37
Analyst: JT

Date Collected: 09/19/14 00:00
Date Received: 09/19/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/25/14 13:12

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

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

1,4-Dioxane	ND		ug/l	0.153	0.0765	1
-------------	----	--	------	-------	--------	---

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	17		15-110

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1421990
Report Date: 09/29/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 09/26/14 15:20
Analyst: JT

Extraction Method: EPA 3510C
Extraction Date: 09/25/14 13:12

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01,03,05,07,09 Batch: WG725266-1					
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 DW
Project Number: 2013-027

Lab Number: L1421990
Report Date: 09/29/14

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): 01,03,05,07,09 Batch: WG725266-2 WG725266-3								
1,4-Dioxane	102		103		40-140	1		20

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

Project Name: EASTHAM DW

Lab Number: L1421990

Project Number: 2013-027

Report Date: 09/29/14

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(*)
L1421990-01A	Amber 500ml unpreserved	A	7	5.2	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1421990-01B	Amber 500ml unpreserved	A	7	5.2	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1421990-02A	Amber 500ml unpreserved	A	7	5.2	Y	Absent	HOLD(14)
L1421990-02B	Amber 500ml unpreserved	A	7	5.2	Y	Absent	HOLD(14)
L1421990-03A	Amber 500ml unpreserved	A	7	5.2	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1421990-03B	Amber 500ml unpreserved	A	7	5.2	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1421990-04A	Amber 500ml unpreserved	A	7	5.2	Y	Absent	HOLD(14)
L1421990-04B	Amber 500ml unpreserved	A	7	5.2	Y	Absent	HOLD(14)
L1421990-05A	Amber 500ml unpreserved	A	7	5.2	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1421990-05B	Amber 500ml unpreserved	A	7	5.2	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1421990-06A	Amber 500ml unpreserved	A	7	5.2	Y	Absent	HOLD(14)
L1421990-06B	Amber 500ml unpreserved	A	7	5.2	Y	Absent	HOLD(14)
L1421990-07A	Amber 500ml unpreserved	A	7	5.2	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1421990-07B	Amber 500ml unpreserved	A	7	5.2	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1421990-08A	Amber 500ml unpreserved	A	7	5.2	Y	Absent	HOLD(14)
L1421990-08B	Amber 500ml unpreserved	A	7	5.2	Y	Absent	HOLD(14)
L1421990-09A	Amber 500ml unpreserved	A	7	5.2	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1421990-09B	Amber 500ml unpreserved	A	7	5.2	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: L1421990
Report Date: 09/29/14

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 DW
Project Number: 2013-027

Lab Number: L1421990
Report Date: 09/29/14

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 DW
Project Number: 2013-027

Lab Number: L1421990
Report Date: 09/29/14

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 April 15, 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 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

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	L1421991	9/18 - 9/19/2014	drinking water	Yes	No	Yes	Yes	No	Usable

Sample ID	Date	Lab ID	Matrix	Analysis
Old Orchard Rd_180	9/18/2014	L1421991-01	DW	8270, 524.2, 3200.8
Alston Ave_285	9/18/2014	L1421991-02	DW	8270, 524.2, 3200.8
Meetinghouse Rd_100	9/19/2014	L1421991-03	DW	8270, 524.2, 3200.8
Trip Blank	9/18/2014	L1421991-04	DW	8270, 524.2

Lab presumptive certainty was not achieved because the analytical methods specified in the CAM protocol were not followed for volatile organics and metals (524.2 and 3200.8 are non-CAM methods). Drinking water methodology was used instead.

All QAQC data, including surrogate, trip blank, method blank, laboratory control sample (LCS), LCS duplicate, sample duplicate, and matrix spike results were reviewed.

This report was deemed usable by Angela Boyd on 10/3/14.



ANALYTICAL REPORT

Lab Number:	L1421991
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:	10/02/14

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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: 2013-027

Lab Number: L1421991
Report Date: 10/02/14

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1421991-01	OLD ORCHARD RD_180	DRINKING WATER	EASTHAM, MA	09/18/14 11:15	09/19/14
L1421991-02	ALSTON AVE_285	DRINKING WATER	EASTHAM, MA	09/18/14 10:35	09/19/14
L1421991-03	MEETINGHOUSE RD_100	DRINKING WATER	EASTHAM, MA	09/19/14 12:15	09/19/14
L1421991-04	TRIP BLANK	DRINKING WATER	EASTHAM, MA	09/18/14 00:00	09/19/14

Project Name: EASTHAM DW

Lab Number: L1421991

Project Number: 2013-027

Report Date: 10/02/14

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?	NO
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
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: L1421991
Report Date: 10/02/14

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 DW
Project Number: 2013-027

Lab Number: L1421991
Report Date: 10/02/14

Case Narrative (continued)

Report Submission

This report replaces the report issued on September 29, 2014. The collection date for L1421991-03 has been corrected.

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

MCP Related Narratives

Volatile Organics by Method 524.2

In reference to question B:

At the client's request, the analytical method specified in the CAM protocol was not followed.

In reference to question I:

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

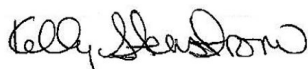
Metals

In reference to question I:

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

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

Authorized Signature:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 10/02/14

ORGANICS

VOLATILES

Project Name: EASTHAM DW

Lab Number: L1421991

Project Number: 2013-027

Report Date: 10/02/14

SAMPLE RESULTS

Lab ID: L1421991-01
 Client ID: OLD ORCHARD RD_180
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 16,524.2
 Analytical Date: 09/22/14 18:42
 Analyst: GT

Date Collected: 09/18/14 11:15
 Date Received: 09/19/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	0.50	0.15	1
1,1-Dichloroethane	ND		ug/l	0.50	0.09	1
Chloroform	0.71		ug/l	0.50	0.05	1
Carbon tetrachloride	ND		ug/l	0.50	0.10	1
1,2-Dichloropropane	ND		ug/l	0.50	0.09	1
Dibromochloromethane	ND		ug/l	0.50	0.08	1
1,1,2-Trichloroethane	ND		ug/l	0.50	0.12	1
Tetrachloroethene	ND		ug/l	0.50	0.09	1
Chlorobenzene	ND		ug/l	0.50	0.08	1
Trichlorofluoromethane	ND		ug/l	0.50	0.11	1
1,2-Dichloroethane	ND		ug/l	0.50	0.08	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.08	1
Bromodichloromethane	ND		ug/l	0.50	0.05	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.09	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.10	1
Bromoform	ND		ug/l	0.50	0.09	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.09	1
Benzene	ND		ug/l	0.50	0.09	1
Toluene	ND		ug/l	0.50	0.12	1
Ethylbenzene	ND		ug/l	0.50	0.06	1
p/m-Xylene	ND		ug/l	0.50	0.12	1
Chloromethane	ND		ug/l	0.50	0.15	1
Bromomethane	ND		ug/l	0.50	0.13	1
Vinyl chloride	ND		ug/l	0.50	0.08	1
Chloroethane	ND		ug/l	0.50	0.12	1
1,1-Dichloroethene	ND		ug/l	0.50	0.06	1
trans-1,2-Dichloroethene	ND		ug/l	0.50	0.09	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.11	1
Trichloroethene	ND		ug/l	0.50	0.09	1
1,2-Dichlorobenzene	ND		ug/l	0.50	0.07	1

Project Name: EASTHAM DW

Lab Number: L1421991

Project Number: 2013-027

Report Date: 10/02/14

SAMPLE RESULTS

Lab ID: L1421991-01

Date Collected: 09/18/14 11:15

Client ID: OLD ORCHARD RD_180

Date Received: 09/19/14

Sample Location: EASTHAM, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	0.50	0.05	1
1,4-Dichlorobenzene	ND		ug/l	0.50	0.05	1
Styrene	ND		ug/l	0.50	0.06	1
o-Xylene	ND		ug/l	0.50	0.09	1
1,1-Dichloropropene	ND		ug/l	0.50	0.11	1
2,2-Dichloropropane	ND		ug/l	0.50	0.11	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.09	1
1,2,3-Trichloropropane	ND		ug/l	0.50	0.11	1
Bromochloromethane	ND		ug/l	0.50	0.10	1
n-Butylbenzene	ND		ug/l	0.50	0.06	1
Dichlorodifluoromethane	ND		ug/l	0.50	0.10	1
Hexachlorobutadiene	ND		ug/l	0.50	0.11	1
Isopropylbenzene	ND		ug/l	0.50	0.08	1
p-Isopropyltoluene	ND		ug/l	0.50	0.07	1
Naphthalene	ND		ug/l	0.50	0.06	1
n-Propylbenzene	ND		ug/l	0.50	0.08	1
sec-Butylbenzene	ND		ug/l	0.50	0.06	1
tert-Butylbenzene	ND		ug/l	0.50	0.09	1
1,2,3-Trichlorobenzene	ND		ug/l	0.50	0.06	1
1,2,4-Trichlorobenzene	ND		ug/l	0.50	0.07	1
1,2,4-Trimethylbenzene	ND		ug/l	0.50	0.08	1
1,3,5-Trimethylbenzene	ND		ug/l	0.50	0.10	1
Bromobenzene	ND		ug/l	0.50	0.09	1
o-Chlorotoluene	ND		ug/l	0.50	0.10	1
p-Chlorotoluene	ND		ug/l	0.50	0.08	1
Dibromomethane	ND		ug/l	0.50	0.09	1
1,2-Dibromoethane	ND		ug/l	0.50	0.06	1
1,2-Dibromo-3-chloropropane	ND		ug/l	0.50	0.16	1
1,3-Dichloropropane	ND		ug/l	0.50	0.11	1
Methyl tert butyl ether	ND		ug/l	0.50	0.06	1
Xylenes, Total ¹	ND		ug/l	0.50	0.09	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	107		80-120
4-Bromofluorobenzene	90		80-120

Project Name: EASTHAM DW

Lab Number: L1421991

Project Number: 2013-027

Report Date: 10/02/14

SAMPLE RESULTS

Lab ID: L1421991-02
 Client ID: ALSTON AVE_285
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 16,524.2
 Analytical Date: 09/22/14 19:18
 Analyst: GT

Date Collected: 09/18/14 10:35
 Date Received: 09/19/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	0.50	0.15	1
1,1-Dichloroethane	ND		ug/l	0.50	0.09	1
Chloroform	0.66		ug/l	0.50	0.05	1
Carbon tetrachloride	ND		ug/l	0.50	0.10	1
1,2-Dichloropropane	ND		ug/l	0.50	0.09	1
Dibromochloromethane	ND		ug/l	0.50	0.08	1
1,1,2-Trichloroethane	ND		ug/l	0.50	0.12	1
Tetrachloroethene	ND		ug/l	0.50	0.09	1
Chlorobenzene	ND		ug/l	0.50	0.08	1
Trichlorofluoromethane	ND		ug/l	0.50	0.11	1
1,2-Dichloroethane	ND		ug/l	0.50	0.08	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.08	1
Bromodichloromethane	ND		ug/l	0.50	0.05	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.09	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.10	1
Bromoform	ND		ug/l	0.50	0.09	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.09	1
Benzene	ND		ug/l	0.50	0.09	1
Toluene	ND		ug/l	0.50	0.12	1
Ethylbenzene	ND		ug/l	0.50	0.06	1
p/m-Xylene	ND		ug/l	0.50	0.12	1
Chloromethane	ND		ug/l	0.50	0.15	1
Bromomethane	ND		ug/l	0.50	0.13	1
Vinyl chloride	ND		ug/l	0.50	0.08	1
Chloroethane	ND		ug/l	0.50	0.12	1
1,1-Dichloroethene	ND		ug/l	0.50	0.06	1
trans-1,2-Dichloroethene	ND		ug/l	0.50	0.09	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.11	1
Trichloroethene	ND		ug/l	0.50	0.09	1
1,2-Dichlorobenzene	ND		ug/l	0.50	0.07	1

Project Name: EASTHAM DW

Lab Number: L1421991

Project Number: 2013-027

Report Date: 10/02/14

SAMPLE RESULTS

Lab ID: L1421991-02
 Client ID: ALSTON AVE_285
 Sample Location: EASTHAM, MA

Date Collected: 09/18/14 10:35
 Date Received: 09/19/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	0.50	0.05	1
1,4-Dichlorobenzene	ND		ug/l	0.50	0.05	1
Styrene	ND		ug/l	0.50	0.06	1
o-Xylene	ND		ug/l	0.50	0.09	1
1,1-Dichloropropene	ND		ug/l	0.50	0.11	1
2,2-Dichloropropane	ND		ug/l	0.50	0.11	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.09	1
1,2,3-Trichloropropane	ND		ug/l	0.50	0.11	1
Bromochloromethane	ND		ug/l	0.50	0.10	1
n-Butylbenzene	ND		ug/l	0.50	0.06	1
Dichlorodifluoromethane	ND		ug/l	0.50	0.10	1
Hexachlorobutadiene	ND		ug/l	0.50	0.11	1
Isopropylbenzene	ND		ug/l	0.50	0.08	1
p-Isopropyltoluene	ND		ug/l	0.50	0.07	1
Naphthalene	ND		ug/l	0.50	0.06	1
n-Propylbenzene	ND		ug/l	0.50	0.08	1
sec-Butylbenzene	ND		ug/l	0.50	0.06	1
tert-Butylbenzene	ND		ug/l	0.50	0.09	1
1,2,3-Trichlorobenzene	ND		ug/l	0.50	0.06	1
1,2,4-Trichlorobenzene	ND		ug/l	0.50	0.07	1
1,2,4-Trimethylbenzene	ND		ug/l	0.50	0.08	1
1,3,5-Trimethylbenzene	ND		ug/l	0.50	0.10	1
Bromobenzene	ND		ug/l	0.50	0.09	1
o-Chlorotoluene	ND		ug/l	0.50	0.10	1
p-Chlorotoluene	ND		ug/l	0.50	0.08	1
Dibromomethane	ND		ug/l	0.50	0.09	1
1,2-Dibromoethane	ND		ug/l	0.50	0.06	1
1,2-Dibromo-3-chloropropane	ND		ug/l	0.50	0.16	1
1,3-Dichloropropane	ND		ug/l	0.50	0.11	1
Methyl tert butyl ether	ND		ug/l	0.50	0.06	1
Xylenes, Total ¹	ND		ug/l	0.50	0.09	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	109		80-120
4-Bromofluorobenzene	88		80-120

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1421991
Report Date: 10/02/14

SAMPLE RESULTS

Lab ID: L1421991-03
 Client ID: MEETINGHOUSE RD_100
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 16,524.2
 Analytical Date: 09/22/14 19:51
 Analyst: GT

Date Collected: 09/19/14 12:15
 Date Received: 09/19/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	0.50	0.15	1
1,1-Dichloroethane	ND		ug/l	0.50	0.09	1
Chloroform	0.65		ug/l	0.50	0.05	1
Carbon tetrachloride	ND		ug/l	0.50	0.10	1
1,2-Dichloropropane	ND		ug/l	0.50	0.09	1
Dibromochloromethane	ND		ug/l	0.50	0.08	1
1,1,2-Trichloroethane	ND		ug/l	0.50	0.12	1
Tetrachloroethene	ND		ug/l	0.50	0.09	1
Chlorobenzene	ND		ug/l	0.50	0.08	1
Trichlorofluoromethane	ND		ug/l	0.50	0.11	1
1,2-Dichloroethane	ND		ug/l	0.50	0.08	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.08	1
Bromodichloromethane	ND		ug/l	0.50	0.05	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.09	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.10	1
Bromoform	ND		ug/l	0.50	0.09	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.09	1
Benzene	ND		ug/l	0.50	0.09	1
Toluene	ND		ug/l	0.50	0.12	1
Ethylbenzene	ND		ug/l	0.50	0.06	1
p/m-Xylene	ND		ug/l	0.50	0.12	1
Chloromethane	ND		ug/l	0.50	0.15	1
Bromomethane	ND		ug/l	0.50	0.13	1
Vinyl chloride	ND		ug/l	0.50	0.08	1
Chloroethane	ND		ug/l	0.50	0.12	1
1,1-Dichloroethene	ND		ug/l	0.50	0.06	1
trans-1,2-Dichloroethene	ND		ug/l	0.50	0.09	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.11	1
Trichloroethene	ND		ug/l	0.50	0.09	1
1,2-Dichlorobenzene	ND		ug/l	0.50	0.07	1

Project Name: EASTHAM DW

Lab Number: L1421991

Project Number: 2013-027

Report Date: 10/02/14

SAMPLE RESULTS

Lab ID: L1421991-03
 Client ID: MEETINGHOUSE RD_100
 Sample Location: EASTHAM, MA

Date Collected: 09/19/14 12:15
 Date Received: 09/19/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	0.50	0.05	1
1,4-Dichlorobenzene	ND		ug/l	0.50	0.05	1
Styrene	ND		ug/l	0.50	0.06	1
o-Xylene	ND		ug/l	0.50	0.09	1
1,1-Dichloropropene	ND		ug/l	0.50	0.11	1
2,2-Dichloropropane	ND		ug/l	0.50	0.11	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.09	1
1,2,3-Trichloropropane	ND		ug/l	0.50	0.11	1
Bromochloromethane	ND		ug/l	0.50	0.10	1
n-Butylbenzene	ND		ug/l	0.50	0.06	1
Dichlorodifluoromethane	ND		ug/l	0.50	0.10	1
Hexachlorobutadiene	ND		ug/l	0.50	0.11	1
Isopropylbenzene	ND		ug/l	0.50	0.08	1
p-Isopropyltoluene	ND		ug/l	0.50	0.07	1
Naphthalene	ND		ug/l	0.50	0.06	1
n-Propylbenzene	ND		ug/l	0.50	0.08	1
sec-Butylbenzene	ND		ug/l	0.50	0.06	1
tert-Butylbenzene	ND		ug/l	0.50	0.09	1
1,2,3-Trichlorobenzene	ND		ug/l	0.50	0.06	1
1,2,4-Trichlorobenzene	ND		ug/l	0.50	0.07	1
1,2,4-Trimethylbenzene	ND		ug/l	0.50	0.08	1
1,3,5-Trimethylbenzene	ND		ug/l	0.50	0.10	1
Bromobenzene	ND		ug/l	0.50	0.09	1
o-Chlorotoluene	ND		ug/l	0.50	0.10	1
p-Chlorotoluene	ND		ug/l	0.50	0.08	1
Dibromomethane	ND		ug/l	0.50	0.09	1
1,2-Dibromoethane	ND		ug/l	0.50	0.06	1
1,2-Dibromo-3-chloropropane	ND		ug/l	0.50	0.16	1
1,3-Dichloropropane	ND		ug/l	0.50	0.11	1
Methyl tert butyl ether	0.20	J	ug/l	0.50	0.06	1
Xylenes, Total ¹	ND		ug/l	0.50	0.09	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	111		80-120
4-Bromofluorobenzene	93		80-120

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1421991
Report Date: 10/02/14

SAMPLE RESULTS

Lab ID: L1421991-04
 Client ID: TRIP BLANK
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 16,524.2
 Analytical Date: 09/22/14 20:25
 Analyst: GT

Date Collected: 09/18/14 00:00
 Date Received: 09/19/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	0.50	0.15	1
1,1-Dichloroethane	ND		ug/l	0.50	0.09	1
Chloroform	ND		ug/l	0.50	0.05	1
Carbon tetrachloride	ND		ug/l	0.50	0.10	1
1,2-Dichloropropane	ND		ug/l	0.50	0.09	1
Dibromochloromethane	ND		ug/l	0.50	0.08	1
1,1,2-Trichloroethane	ND		ug/l	0.50	0.12	1
Tetrachloroethene	ND		ug/l	0.50	0.09	1
Chlorobenzene	ND		ug/l	0.50	0.08	1
Trichlorofluoromethane	ND		ug/l	0.50	0.11	1
1,2-Dichloroethane	ND		ug/l	0.50	0.08	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.08	1
Bromodichloromethane	ND		ug/l	0.50	0.05	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.09	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.10	1
Bromoform	ND		ug/l	0.50	0.09	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.09	1
Benzene	ND		ug/l	0.50	0.09	1
Toluene	ND		ug/l	0.50	0.12	1
Ethylbenzene	ND		ug/l	0.50	0.06	1
p/m-Xylene	ND		ug/l	0.50	0.12	1
Chloromethane	ND		ug/l	0.50	0.15	1
Bromomethane	ND		ug/l	0.50	0.13	1
Vinyl chloride	ND		ug/l	0.50	0.08	1
Chloroethane	ND		ug/l	0.50	0.12	1
1,1-Dichloroethene	ND		ug/l	0.50	0.06	1
trans-1,2-Dichloroethene	ND		ug/l	0.50	0.09	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.11	1
Trichloroethene	ND		ug/l	0.50	0.09	1
1,2-Dichlorobenzene	ND		ug/l	0.50	0.07	1

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1421991
Report Date: 10/02/14

SAMPLE RESULTS

Lab ID: L1421991-04
Client ID: TRIP BLANK
Sample Location: EASTHAM, MA

Date Collected: 09/18/14 00:00
Date Received: 09/19/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	0.50	0.05	1
1,4-Dichlorobenzene	ND		ug/l	0.50	0.05	1
Styrene	ND		ug/l	0.50	0.06	1
o-Xylene	ND		ug/l	0.50	0.09	1
1,1-Dichloropropene	ND		ug/l	0.50	0.11	1
2,2-Dichloropropane	ND		ug/l	0.50	0.11	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.09	1
1,2,3-Trichloropropane	ND		ug/l	0.50	0.11	1
Bromochloromethane	ND		ug/l	0.50	0.10	1
n-Butylbenzene	ND		ug/l	0.50	0.06	1
Dichlorodifluoromethane	ND		ug/l	0.50	0.10	1
Hexachlorobutadiene	ND		ug/l	0.50	0.11	1
Isopropylbenzene	ND		ug/l	0.50	0.08	1
p-Isopropyltoluene	ND		ug/l	0.50	0.07	1
Naphthalene	ND		ug/l	0.50	0.06	1
n-Propylbenzene	ND		ug/l	0.50	0.08	1
sec-Butylbenzene	ND		ug/l	0.50	0.06	1
tert-Butylbenzene	ND		ug/l	0.50	0.09	1
1,2,3-Trichlorobenzene	ND		ug/l	0.50	0.06	1
1,2,4-Trichlorobenzene	ND		ug/l	0.50	0.07	1
1,2,4-Trimethylbenzene	ND		ug/l	0.50	0.08	1
1,3,5-Trimethylbenzene	ND		ug/l	0.50	0.10	1
Bromobenzene	ND		ug/l	0.50	0.09	1
o-Chlorotoluene	ND		ug/l	0.50	0.10	1
p-Chlorotoluene	ND		ug/l	0.50	0.08	1
Dibromomethane	ND		ug/l	0.50	0.09	1
1,2-Dibromoethane	ND		ug/l	0.50	0.06	1
1,2-Dibromo-3-chloropropane	ND		ug/l	0.50	0.16	1
1,3-Dichloropropane	ND		ug/l	0.50	0.11	1
Methyl tert butyl ether	ND		ug/l	0.50	0.06	1
Xylenes, Total ¹	ND		ug/l	0.50	0.09	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	107		80-120
4-Bromofluorobenzene	85		80-120

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1421991
Report Date: 10/02/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 16,524.2
Analytical Date: 09/22/14 12:05
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG724195-2					
Methylene chloride	ND		ug/l	0.50	0.15
1,1-Dichloroethane	ND		ug/l	0.50	0.09
Chloroform	ND		ug/l	0.50	0.05
Carbon tetrachloride	ND		ug/l	0.50	0.10
1,2-Dichloropropane	ND		ug/l	0.50	0.09
Dibromochloromethane	ND		ug/l	0.50	0.08
1,1,2-Trichloroethane	ND		ug/l	0.50	0.12
Tetrachloroethene	ND		ug/l	0.50	0.09
Chlorobenzene	ND		ug/l	0.50	0.08
Trichlorofluoromethane	ND		ug/l	0.50	0.11
1,2-Dichloroethane	ND		ug/l	0.50	0.08
1,1,1-Trichloroethane	ND		ug/l	0.50	0.08
Bromodichloromethane	ND		ug/l	0.50	0.05
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.09
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.10
Bromoform	ND		ug/l	0.50	0.09
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.09
Benzene	ND		ug/l	0.50	0.09
Toluene	ND		ug/l	0.50	0.12
Ethylbenzene	ND		ug/l	0.50	0.06
p/m-Xylene	ND		ug/l	0.50	0.12
Chloromethane	ND		ug/l	0.50	0.15
Bromomethane	ND		ug/l	0.50	0.13
Vinyl chloride	ND		ug/l	0.50	0.08
Chloroethane	ND		ug/l	0.50	0.12
1,1-Dichloroethene	ND		ug/l	0.50	0.06
trans-1,2-Dichloroethene	ND		ug/l	0.50	0.09
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.11
Trichloroethene	ND		ug/l	0.50	0.09

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1421991
Report Date: 10/02/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 16,524.2
Analytical Date: 09/22/14 12:05
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG724195-2					
1,2-Dichlorobenzene	ND		ug/l	0.50	0.07
1,3-Dichlorobenzene	ND		ug/l	0.50	0.05
1,4-Dichlorobenzene	ND		ug/l	0.50	0.05
Styrene	ND		ug/l	0.50	0.06
o-Xylene	ND		ug/l	0.50	0.09
1,1-Dichloropropene	ND		ug/l	0.50	0.11
2,2-Dichloropropane	ND		ug/l	0.50	0.11
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.09
1,2,3-Trichloropropane	ND		ug/l	0.50	0.11
Bromochloromethane	ND		ug/l	0.50	0.10
n-Butylbenzene	ND		ug/l	0.50	0.06
Dichlorodifluoromethane	ND		ug/l	0.50	0.10
Hexachlorobutadiene	ND		ug/l	0.50	0.11
Isopropylbenzene	ND		ug/l	0.50	0.08
p-Isopropyltoluene	ND		ug/l	0.50	0.07
Naphthalene	ND		ug/l	0.50	0.06
n-Propylbenzene	ND		ug/l	0.50	0.08
sec-Butylbenzene	ND		ug/l	0.50	0.06
tert-Butylbenzene	ND		ug/l	0.50	0.09
1,2,3-Trichlorobenzene	ND		ug/l	0.50	0.06
1,2,4-Trichlorobenzene	ND		ug/l	0.50	0.07
1,2,4-Trimethylbenzene	ND		ug/l	0.50	0.08
1,3,5-Trimethylbenzene	ND		ug/l	0.50	0.10
Bromobenzene	ND		ug/l	0.50	0.09
o-Chlorotoluene	ND		ug/l	0.50	0.10
p-Chlorotoluene	ND		ug/l	0.50	0.08
Dibromomethane	ND		ug/l	0.50	0.09
1,2-Dibromoethane	ND		ug/l	0.50	0.06
1,2-Dibromo-3-chloropropane	ND		ug/l	0.50	0.16

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1421991
Report Date: 10/02/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 16,524.2
Analytical Date: 09/22/14 12:05
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG724195-2					
1,3-Dichloropropane	ND		ug/l	0.50	0.11
Methyl tert butyl ether	ND		ug/l	0.50	0.06
Xylenes, Total ¹	ND		ug/l	0.50	0.09

No Tentatively Identified Compounds ND ug/l

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	105		80-120
4-Bromofluorobenzene	91		80-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM DW

Project Number: 2013-027

Lab Number: L1421991

Report Date: 10/02/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG724195-1								
Methylene chloride	97		-		70-130	-		20
1,1-Dichloroethane	100		-		70-130	-		20
Chloroform	103		-		70-130	-		20
Carbon tetrachloride	104		-		70-130	-		20
1,2-Dichloropropane	107		-		70-130	-		20
Dibromochloromethane	119		-		70-130	-		20
1,1,2-Trichloroethane	122		-		70-130	-		20
Tetrachloroethene	109		-		70-130	-		20
Chlorobenzene	92		-		70-130	-		20
Trichlorofluoromethane	95		-		70-130	-		20
1,2-Dichloroethane	104		-		70-130	-		20
1,1,1-Trichloroethane	104		-		70-130	-		20
Bromodichloromethane	110		-		70-130	-		20
trans-1,3-Dichloropropene	113		-		70-130	-		20
cis-1,3-Dichloropropene	109		-		70-130	-		20
Bromoform	104		-		70-130	-		20
1,1,2,2-Tetrachloroethane	112		-		70-130	-		20
Benzene	108		-		70-130	-		20
Toluene	107		-		70-130	-		20
Ethylbenzene	90		-		70-130	-		20
p/m-Xylene	95		-		70-130	-		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM DW

Project Number: 2013-027

Lab Number: L1421991

Report Date: 10/02/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG724195-1								
Chloromethane	90		-		70-130	-		20
Bromomethane	74		-		70-130	-		20
Vinyl chloride	96		-		70-130	-		20
Chloroethane	98		-		70-130	-		20
1,1-Dichloroethene	98		-		70-130	-		20
trans-1,2-Dichloroethene	101		-		70-130	-		20
cis-1,2-Dichloroethene	97		-		70-130	-		20
Trichloroethene	108		-		70-130	-		20
1,2-Dichlorobenzene	101		-		70-130	-		20
1,3-Dichlorobenzene	100		-		70-130	-		20
1,4-Dichlorobenzene	98		-		70-130	-		20
Styrene	90		-		70-130	-		20
o-Xylene	92		-		70-130	-		20
1,1-Dichloropropene	99		-		70-130	-		20
2,2-Dichloropropane	102		-		70-130	-		20
1,1,1,2-Tetrachloroethane	97		-		70-130	-		20
1,2,3-Trichloropropane	116		-		70-130	-		20
Bromochloromethane	106		-		70-130	-		20
n-Butylbenzene	96		-		70-130	-		20
Dichlorodifluoromethane	98		-		70-130	-		20
Hexachlorobutadiene	101		-		70-130	-		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM DW

Project Number: 2013-027

Lab Number: L1421991

Report Date: 10/02/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG724195-1								
Isopropylbenzene	90		-		70-130	-		20
p-Isopropyltoluene	96		-		70-130	-		20
Naphthalene	102		-		70-130	-		20
n-Propylbenzene	93		-		70-130	-		20
sec-Butylbenzene	97		-		70-130	-		20
tert-Butylbenzene	93		-		70-130	-		20
1,2,3-Trichlorobenzene	103		-		70-130	-		20
1,2,4-Trichlorobenzene	103		-		70-130	-		20
1,2,4-Trimethylbenzene	98		-		70-130	-		20
1,3,5-Trimethylbenzene	92		-		70-130	-		20
Bromobenzene	97		-		70-130	-		20
o-Chlorotoluene	98		-		70-130	-		20
p-Chlorotoluene	98		-		70-130	-		20
Dibromomethane	112		-		70-130	-		20
1,2-Dibromoethane	98		-		70-130	-		20
1,2-Dibromo-3-chloropropane	120		-		70-130	-		20
1,3-Dichloropropane	116		-		70-130	-		20
Methyl tert butyl ether	108		-		70-130	-		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1421991
Report Date: 10/02/14

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
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG724195-1

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> Criteria
1,2-Dichlorobenzene-d4	103				80-120
4-Bromofluorobenzene	99				80-120

Matrix Spike Analysis

Batch Quality Control

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1421991
Report Date: 10/02/14

<i>Parameter</i>	<i>Native Sample</i>	<i>MS Added</i>	<i>MS Found</i>	<i>MS %Recovery</i>	<i>Qual</i>	<i>MSD Found</i>	<i>MSD %Recovery</i>	<i>Qual</i>	<i>Recovery Limits</i>	<i>RPD</i>	<i>Qual</i>	<i>RPD Limits</i>
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG724195-4 QC Sample: L1421156-02 Client ID: MS Sample												
Chloroform	0.77	4	5.1	109		-	-		70-130	-		20
Dibromochloromethane	2.8	4	7.9	128		-	-		70-130	-		20
Bromodichloromethane	1.5	4	6.4	123		-	-		70-130	-		20
Bromoform	1.9	4	7.1	129		-	-		70-130	-		20

<i>Surrogate</i>	<i>MS % Recovery</i>	<i>Qualifier</i>	<i>MSD % Recovery</i>	<i>Qualifier</i>	<i>Acceptance Criteria</i>
1,2-Dichlorobenzene-d4	100				80-120
4-Bromofluorobenzene	104				80-120

Lab Duplicate Analysis

Batch Quality Control

Project Name: EASTHAM DW

Project Number: 2013-027

Lab Number: L1421991

Report Date: 10/02/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG724195-3 QC Sample: L1421156-01 Client ID: DUP Sample						
Chloroform	0.60	0.64	ug/l	6		20
Dibromochloromethane	2.6	2.5	ug/l	4		20
Bromodichloromethane	1.2	1.3	ug/l	8		20
Bromoform	1.8	1.8	ug/l	0		20

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	108		111		80-120
4-Bromofluorobenzene	93		91		80-120

SEMIVOLATILES

Project Name: EASTHAM DW**Lab Number:** L1421991**Project Number:** 2013-027**Report Date:** 10/02/14**SAMPLE RESULTS**

Lab ID: L1421991-01

Date Collected: 09/18/14 11:15

Client ID: OLD ORCHARD RD_180

Date Received: 09/19/14

Sample Location: EASTHAM, MA

Field Prep: Not Specified

Matrix: Drinking Water

Extraction Method: EPA 3510C

Analytical Method: 97,8270D-SIM

Extraction Date: 09/25/14 13:12

Analytical Date: 09/26/14 22:48

Analyst: JT

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

1,4-Dioxane	0.137	J	ug/l	0.150	0.0750	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	24		15-110

Project Name: EASTHAM DW**Lab Number:** L1421991**Project Number:** 2013-027**Report Date:** 10/02/14**SAMPLE RESULTS**

Lab ID: L1421991-02
Client ID: ALSTON AVE_285
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 09/26/14 23:33
Analyst: JT

Date Collected: 09/18/14 10:35
Date Received: 09/19/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/25/14 13:12

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

Project Name: EASTHAM DW**Lab Number:** L1421991**Project Number:** 2013-027**Report Date:** 10/02/14**SAMPLE RESULTS**

Lab ID: L1421991-03
Client ID: MEETINGHOUSE RD_100
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 09/27/14 00:18
Analyst: JT

Date Collected: 09/19/14 12:15
Date Received: 09/19/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 09/25/14 13:12

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

1,4-Dioxane	1.75		ug/l	0.150	0.0750	1
-------------	------	--	------	-------	--------	---

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

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1421991
Report Date: 10/02/14

SAMPLE RESULTS

Lab ID: L1421991-04
 Client ID: TRIP BLANK
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 09/27/14 01:03
 Analyst: JT

Date Collected: 09/18/14 00:00
 Date Received: 09/19/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 09/25/14 13:12

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

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

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1421991
Report Date: 10/02/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 09/26/14 15:20
Analyst: JT

Extraction Method: EPA 3510C
Extraction Date: 09/25/14 13:12

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-04 Batch: WG725266-1					
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 DW
Project Number: 2013-027

Lab Number: L1421991
Report Date: 10/02/14

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): 01-04 Batch: WG725266-2 WG725266-3								
1,4-Dioxane	102		103		40-140	1		20

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

METALS

Project Name: EASTHAM DW

Lab Number: L1421991

Project Number: 2013-027

Report Date: 10/02/14

SAMPLE RESULTS

Lab ID: L1421991-01
 Client ID: OLD ORCHARD RD_180
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water

Date Collected: 09/18/14 11:15
 Date Received: 09/19/14
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	ND		mg/l	0.00100	0.00020	1	09/24/14 07:22	09/25/14 17:53	EPA 3005A	3,200.8	KL



Project Name: EASTHAM DW

Lab Number: L1421991

Project Number: 2013-027

Report Date: 10/02/14

SAMPLE RESULTS

Lab ID: L1421991-02

Date Collected: 09/18/14 10:35

Client ID: ALSTON AVE_285

Date Received: 09/19/14

Sample Location: EASTHAM, MA

Field Prep: Not Specified

Matrix: Drinking Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	ND		mg/l	0.00100	0.00020	1	09/24/14 07:22	09/25/14 17:59	EPA 3005A	3,200.8	KL



Project Name: EASTHAM DW

Lab Number: L1421991

Project Number: 2013-027

Report Date: 10/02/14

SAMPLE RESULTS

Lab ID: L1421991-03

Date Collected: 09/19/14 12:15

Client ID: MEETINGHOUSE RD_100

Date Received: 09/19/14

Sample Location: EASTHAM, MA

Field Prep: Not Specified

Matrix: Drinking Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Westborough Lab											
Arsenic, Total	ND		mg/l	0.00100	0.00020	1	09/24/14 07:22	09/25/14 18:11	EPA 3005A	3,200.8	KL



Project Name: EASTHAM DW

Lab Number: L1421991

Project Number: 2013-027

Report Date: 10/02/14

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Westborough Lab for sample(s): 01-03 Batch: WG724579-1									
Arsenic, Total	ND	mg/l	0.0010	0.0002	1	09/24/14 07:22	09/25/14 17:33	3,200.8	KL

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1421991
Report Date: 10/02/14

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 Batch: WG724579-2								
Arsenic, Total	108		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: EASTHAM DW

Lab Number: L1421991

Project Number: 2013-027

Report Date: 10/02/14

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG724579-4 QC Sample: L1421991-01 Client ID: OLD ORCHARD RD_180												
Arsenic, Total	ND	0.12	0.132	110		-	-		70-130	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: EASTHAM DW

Project Number: 2013-027

Lab Number: L1421991

Report Date: 10/02/14

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG724579-3 QC Sample: L1421991-01 Client ID: OLD ORCHARD RD_180						
Arsenic, Total	ND	ND	mg/l	NC		20

Project Name: EASTHAM DW

Lab Number: L1421991

Project Number: 2013-027

Report Date: 10/02/14

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(*)
L1421991-01A	Vial Ascorbic Acid/HCl preserved	A	N/A	4.4	Y	Absent	524.2(14)
L1421991-01B	Vial Ascorbic Acid/HCl preserved	A	N/A	4.4	Y	Absent	524.2(14)
L1421991-01C	Plastic 500ml HNO3 preserved	A	<2	4.4	Y	Absent	AS-2008T(180)
L1421991-01D	Amber 500ml unpreserved	A	7	4.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1421991-01E	Amber 500ml unpreserved	A	7	4.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1421991-02A	Vial Ascorbic Acid/HCl preserved	A	N/A	4.4	Y	Absent	524.2(14)
L1421991-02B	Vial Ascorbic Acid/HCl preserved	A	N/A	4.4	Y	Absent	524.2(14)
L1421991-02C	Plastic 500ml HNO3 preserved	A	<2	4.4	Y	Absent	AS-2008T(180)
L1421991-02D	Amber 500ml unpreserved	A	7	4.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1421991-02E	Amber 500ml unpreserved	A	7	4.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1421991-03A	Vial Ascorbic Acid/HCl preserved	A	N/A	4.4	Y	Absent	524.2(14)
L1421991-03B	Vial Ascorbic Acid/HCl preserved	A	N/A	4.4	Y	Absent	524.2(14)
L1421991-03C	Plastic 500ml HNO3 preserved	A	<2	4.4	Y	Absent	AS-2008T(180)
L1421991-03D	Amber 500ml unpreserved	A	7	4.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1421991-03E	Amber 500ml unpreserved	A	7	4.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1421991-04A	Vial Ascorbic Acid/HCl preserved	A	N/A	4.4	Y	Absent	524.2(14)
L1421991-04B	Vial Ascorbic Acid/HCl preserved	A	N/A	4.4	Y	Absent	524.2(14)
L1421991-04C	Amber 500ml unpreserved	A	7	4.4	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1421991-04D	Amber 500ml unpreserved	A	7	4.4	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: L1421991
Report Date: 10/02/14

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 DW
Project Number: 2013-027

Lab Number: L1421991
Report Date: 10/02/14

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.

Report Format: DU Report with 'J' Qualifiers



Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1421991
Report Date: 10/02/14

REFERENCES

- 3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
- 16 Methods for the Determination of Organic Compounds in Drinking Water - Supplement II. EPA/600/R-92/129, August 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 April 15, 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 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

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 #: 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 & Managemen

Address: 273 West Main Street

Norton, MA 02703

Phone: 508-226-1800

Fax: 508-226-1811

Email: lflynn@esm-inc.com

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

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

BILL EASTHAM BOH

Date Rec'd in Lab:

ALPHA Job #: **L1421991**

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	524.2 VOC	TOTAL AS																
<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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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		
21991.01	OLD ORCHARD RD_180	9/18/14	1115	W	EC
02	ALSTON AVE_285	9/18/14	1035	W	EC
03	MEETINGHOUSE RD_100	9/19/14	1215	W	EC
04	TRIP BLANK			W	
				W	
				W	
				W	
				W	
				W	

PLEASE ANSWER QUESTIONS ABOVE!

Container Type

Preservative

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

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

Relinquished By:

Date/Time

Received By:

Date/Time

[Signature]

9/19/14 15:15

[Signature]

9/19/14 15:15

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



CHAIN OF CUSTODY

PAGE 1 OF 1

Project Information

Project Name: Eastham DW

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 & Managemen

Address: 273 West Main Street

Norton, MA 02703

Phone: 508-226-1800

Fax: 508-226-1811

Email: lflynn@esm-inc.com

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

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

BILL EASTHAM BOH

Date Rec'd in Lab:

ALPHA Job #: **L1421991**

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	524.2 VOC	TOTAL AS																
<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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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SAMPLE HANDLING
Filtration
 Done
 Not Needed
 Lab to do
Preservation
 Lab to do
(Please specify below)

TOTAL # BOTTLES

Sample Specific Comments

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02	ALSTON AVE_285	9/18/14	1035	W	EC
03	MEETINGHOUSE RD_100	9/19/14	1215	W	EC
04	TRIP BLANK			W	
				W	
				W	
				W	
				W	
				W	

PLEASE ANSWER QUESTIONS ABOVE!

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

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
<i>[Signature]</i>	9/17/14 15:15	<i>[Signature]</i>	9/19/14 15:15

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

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

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	L1424783	10/16/2014	DW	Yes	Yes	Yes	Yes	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis
PTC-18_255 Alston Eff	10/16/2014	L1424783-1	DW	8270
PTC-18_255 Alston Mid	10/16/2014	L1424783-2	DW	8270
PTC-18_255 Alston Inf	10/16/2014	L1424783-3	DW	8270
Tripblank	10/16/2014	L1424783-4	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 11/11/14.



ANALYTICAL REPORT

Lab Number:	L1424783
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:	10/24/14

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 DW
Project Number: 2013-027

Lab Number: L1424783
Report Date: 10/24/14

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1424783-01	PTC-18_255 ALSTON EFF	DRINKING WATER	EASTHAM,MA	10/16/14 08:25	10/16/14
L1424783-02	PTC-18_255 ALSTON MID	DRINKING WATER	EASTHAM,MA	10/16/14 08:30	10/16/14
L1424783-03	PTC-18_255 ALSTON INF	DRINKING WATER	EASTHAM,MA	10/16/14 08:35	10/16/14
L1424783-04	TRIPBLANK	DRINKING WATER	EASTHAM,MA	10/16/14 00:00	10/16/14

Project Name: EASTHAM DW

Lab Number: L1424783

Project Number: 2013-027

Report Date: 10/24/14

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 DW
Project Number: 2013-027

Lab Number: L1424783
Report Date: 10/24/14

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 DW
Project Number: 2013-027

Lab Number: L1424783
Report Date: 10/24/14

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

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:



Elizabeth Porta

Title: Technical Director/Representative

Date: 10/24/14

ORGANICS

SEMIVOLATILES

Project Name: EASTHAM DW**Lab Number:** L1424783**Project Number:** 2013-027**Report Date:** 10/24/14**SAMPLE RESULTS**

Lab ID: L1424783-01
Client ID: PTC-18_255 ALSTON EFF
Sample Location: EASTHAM,MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 10/23/14 17:16
Analyst: CM

Date Collected: 10/16/14 08:25
Date Received: 10/16/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/22/14 14:28

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

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1424783
Report Date: 10/24/14

SAMPLE RESULTS

Lab ID: L1424783-02
 Client ID: PTC-18_255 ALSTON MID
 Sample Location: EASTHAM,MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 10/23/14 18:05
 Analyst: CM

Date Collected: 10/16/14 08:30
 Date Received: 10/16/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 10/22/14 14:28

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

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

1,4-Dioxane	ND		ug/l	0.147	0.0735	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	35		15-110

Project Name: EASTHAM DW**Lab Number:** L1424783**Project Number:** 2013-027**Report Date:** 10/24/14**SAMPLE RESULTS**

Lab ID: L1424783-03
Client ID: PTC-18_255 ALSTON INF
Sample Location: EASTHAM,MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 10/23/14 18:54
Analyst: CM

Date Collected: 10/16/14 08:35
Date Received: 10/16/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 10/22/14 14:28

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

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

1,4-Dioxane	2.09		ug/l	0.142	0.0708	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	25		15-110

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1424783
Report Date: 10/24/14

SAMPLE RESULTS

Lab ID: L1424783-04
 Client ID: TRIPBLANK
 Sample Location: EASTHAM,MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 10/23/14 19:43
 Analyst: CM

Date Collected: 10/16/14 00:00
 Date Received: 10/16/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 10/22/14 14:28

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	43		15-110

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1424783
Report Date: 10/24/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 10/23/14 14:01
Analyst: CM

Extraction Method: EPA 3510C
Extraction Date: 10/22/14 14:28

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-04 Batch: WG733450-1					
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 DW
Project Number: 2013-027

Lab Number: L1424783
Report Date: 10/24/14

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): 01-04 Batch: WG733450-2 WG733450-3								
1,4-Dioxane	105		107		40-140	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	21		23		15-110

Project Name: EASTHAM DW

Lab Number: L1424783

Project Number: 2013-027

Report Date: 10/24/14

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(*)
L1424783-01A	Amber 500ml unpreserved	A	7	4.3	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1424783-01B	Amber 500ml unpreserved	A	7	4.3	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1424783-02A	Amber 500ml unpreserved	A	7	4.3	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1424783-02B	Amber 500ml unpreserved	A	7	4.3	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1424783-03A	Amber 500ml unpreserved	A	7	4.3	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1424783-03B	Amber 500ml unpreserved	A	7	4.3	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1424783-04A	Amber 500ml unpreserved	A	7	4.3	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1424783-04B	Amber 500ml unpreserved	A	7	4.3	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: L1424783
Report Date: 10/24/14

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 DW
Project Number: 2013-027

Lab Number: L1424783
Report Date: 10/24/14

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.

Report Format: DU Report with 'J' Qualifiers



Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1424783
Report Date: 10/24/14

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 April 15, 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 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

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 & Management

Project Location: Eastham MA

Address: 273 West Main Street

Project #: 2013-027

Norton, MA 02703

Project Manager: Lisa Flynn

Phone: 508-226-1800

ALPHA Quote #:

Fax: 508-226-1811

Turn-Around Time

Standard Rush (ONLY IF PRE-APPROVED)

Email: lflynn@esm-inc.com

Due Date: Time:

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

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

Please invoice Town of Eastham

Date Rec'd in Lab:

ALPHA Job #: **L1424783**

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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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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		
24783.01	PTC-18_255 ALSTON EFF	10/16/14	0825	DW	EC
02	PTC-18_255 ALSTON MID	10/16/14	0830	DW	EC
03	PTC-18_255 ALSTON INF	10/16/14	0835	DW	EC
04	Tripblank				

PLEASE ANSWER QUESTIONS ABOVE!

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

IS YOUR PROJECT MA MCP or CT RCP?

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

Relinquished By:	Date/Time	Received By:	Date/Time
	10/16/14 1740		10/16/14 17:40

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	L1425667	10/28/2014	DW	Yes	Yes	Yes	Yes	No	Usable - CAM Compliant

Sample ID	Date	Lab ID	Matrix	Analysis
Knowles St_065	10/28/2014	L1425667-1	DW	8270
Preservation Way_004	10/28/2014	L1425667-2	DW	8270
State Hwy_3100A	10/28/2014	L1425667-3	DW	8270
Schoolhouse Rd_600	10/28/2014	L1425667-4	DW	8270
Trip Blank	10/28/2014	L1425667-5	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 11/11/14.



ANALYTICAL REPORT

Lab Number:	L1425667
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:	11/05/14

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: L1425667
Report Date: 11/05/14

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1425667-01	KNOWLES ST_065	DRINKING WATER	EASTHAM,MA	10/28/14 09:10	10/28/14
L1425667-02	PRESERVATION WAY_004	DRINKING WATER	EASTHAM,MA	10/28/14 10:15	10/28/14
L1425667-03	STATE HWY_3100A	DRINKING WATER	EASTHAM,MA	10/28/14 11:45	10/28/14
L1425667-04	SCHOOLHOUSE RD_600	DRINKING WATER	EASTHAM,MA	10/28/14 12:30	10/28/14
L1425667-05	TRIP BLANK	DRINKING WATER	EASTHAM,MA	10/28/14 00:00	10/28/14

Project Name: EASTHAM LANDFILL

Lab Number: L1425667

Project Number: 2013-027

Report Date: 11/05/14

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: L1425667
Report Date: 11/05/14

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: L1425667
Report Date: 11/05/14

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.

1,4-Dioxanes

In reference to question I:

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

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

Authorized Signature:



Elizabeth Porta

Title: Technical Director/Representative

Date: 11/05/14

ORGANICS

SEMIVOLATILES

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1425667
Report Date: 11/05/14

SAMPLE RESULTS

Lab ID: L1425667-01
 Client ID: KNOWLES ST_065
 Sample Location: EASTHAM,MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 11/05/14 04:32
 Analyst: CM

Date Collected: 10/28/14 09:10
 Date Received: 10/28/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 11/03/14 12:30

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

1,4-Dioxane	0.102	J	ug/l	0.153	0.0765	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	25		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1425667
Report Date: 11/05/14

SAMPLE RESULTS

Lab ID: L1425667-02
 Client ID: PRESERVATION WAY_004
 Sample Location: EASTHAM,MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 11/05/14 05:16
 Analyst: CM

Date Collected: 10/28/14 10:15
 Date Received: 10/28/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 11/03/14 12:30

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

1,4-Dioxane	0.208		ug/l	0.150	0.0750	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	29		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1425667
Report Date: 11/05/14

SAMPLE RESULTS

Lab ID: L1425667-03
 Client ID: STATE HWY_3100A
 Sample Location: EASTHAM,MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 11/05/14 06:00
 Analyst: CM

Date Collected: 10/28/14 11:45
 Date Received: 10/28/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 11/03/14 12:30

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	23		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1425667
Report Date: 11/05/14

SAMPLE RESULTS

Lab ID: L1425667-04
 Client ID: SCHOOLHOUSE RD_600
 Sample Location: EASTHAM,MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 11/05/14 06:44
 Analyst: CM

Date Collected: 10/28/14 12:30
 Date Received: 10/28/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 11/03/14 12:30

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

1,4-Dioxane	0.347		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 LANDFILL
Project Number: 2013-027

Lab Number: L1425667
Report Date: 11/05/14

SAMPLE RESULTS

Lab ID: L1425667-05
 Client ID: TRIP BLANK
 Sample Location: EASTHAM,MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 11/05/14 07:27
 Analyst: CM

Date Collected: 10/28/14 00:00
 Date Received: 10/28/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 11/03/14 12:30

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	0.153	0.0765	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	30		15-110

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1425667
Report Date: 11/05/14

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 11/04/14 17:27
Analyst: CM

Extraction Method: EPA 3510C
Extraction Date: 11/03/14 12:30

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-05 Batch: WG736900-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

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

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1425667
Report Date: 11/05/14

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: WG736900-2 WG736900-3								
1,4-Dioxane	106		108		40-140	2		20

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
1,4-Dioxane-d8	32		30		15-110

Project Name: EASTHAM LANDFILL

Lab Number: L1425667

Project Number: 2013-027

Report Date: 11/05/14

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(*)
L1425667-01A	Amber 500ml unpreserved	A	7	4.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1425667-01B	Amber 500ml unpreserved	A	7	4.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1425667-02A	Amber 500ml unpreserved	A	7	4.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1425667-02B	Amber 500ml unpreserved	A	7	4.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1425667-03A	Amber 500ml unpreserved	A	7	4.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1425667-03B	Amber 500ml unpreserved	A	7	4.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1425667-04A	Amber 500ml unpreserved	A	7	4.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1425667-04B	Amber 500ml unpreserved	A	7	4.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1425667-05A	Amber 500ml unpreserved	A	7	4.7	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1425667-05B	Amber 500ml unpreserved	A	7	4.7	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: L1425667
Report Date: 11/05/14

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: L1425667
Report Date: 11/05/14

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.

Report Format: DU Report with 'J' Qualifiers



Project Name: EASTHAM LANDFILL
Project Number: 2013-027

Lab Number: L1425667
Report Date: 11/05/14

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 April 15, 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 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

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.



Barnstable County Health Laboratory

ANALYTICAL REPORT FOR

Environmental Strategies & Manage, Inc. (Landf

Report Prepared for:

Environmental Strategies & Management, Inc.
Lisa Flynn, Re: Eastham Landfill
273 West Main Street
Norton, MA 02766

Order #: G1484369
No. of Samples: 4
Date Received: 11/10/2014



CERTIFICATE OF ANALYSIS

Barnstable County Health Laboratory (M-MA009)

Report Prepared For: Lisa Flynn, Re: Eastham Landfil
Report Dated: 11/28/2014
 Environmental Strategies & Management, Inc.
 273 West Main Street
 Norton, MA 02766

Order No.: G1484369

Laboratory ID #: 1484369-01

Description: Water - Monitoring Well

Sample #:

Sample Location: MW 3I

Collected: 11/10/2014

Collected by: LKM

Received: 11/10/2014

Test Parameters

<u>ITEM</u>	<u>RESULT</u>	<u>UNITS</u>	<u>RL</u>	<u>MCL</u>	<u>METHOD #</u>	<u>TESTED</u>
COD	15	mg/L	3.0		HACH 8000	11/19/2014
Cyanide, Total	ND	mg/L	0.010		SM4500-CN-E	11/18/2014

Landfill Metals_Dissolved

<u>ITEM</u>	<u>RESULT</u>	<u>UNITS</u>	<u>RL</u>	<u>MCL</u>	<u>METHOD #</u>	<u>TESTED</u>
Arsenic	0.044	mg/L	0.0030	0.01	EPA 6020A	11/24/2014
Barium	0.011	mg/L	0.0030	2.0	EPA 6020A	11/24/2014
Cadmium	ND	mg/L	0.0030	0.005	EPA 6020A	11/24/2014
Chromium	ND	mg/L	0.0030	0.1	EPA 6020A	11/24/2014
Copper	ND	mg/L	0.0030		EPA 6020A	11/24/2014
Iron	64	mg/L	0.10		EPA 6020A	11/28/2014
Lead	ND	mg/L	0.0030	0.015	EPA 6020A	11/24/2014
Manganese	1.1	mg/L	0.0030		EPA 6020A	11/24/2014
Mercury	ND	mg/L	0.00030	0.002	EPA 6020A	11/24/2014
Selenium	ND	mg/L	0.015	0.05	EPA 6020A	11/24/2014
Silver	ND	mg/L	0.002		EPA 200.7	11/11/2014
Zinc	ND	mg/L	0.060		EPA 6020A	11/24/2014

Landfill Inorganics_01

<u>ITEM</u>	<u>RESULT</u>	<u>UNITS</u>	<u>RL</u>	<u>MCL</u>	<u>METHOD #</u>	<u>TESTED</u>
Nitrate as Nitrogen	1.1	mg/L	0.10		EPA 300.0	11/10/2014
Alkalinity	110	mg/L as CaCO	2.0		SM 2320B	11/12/2014
Chloride	23	mg/L	1.0		EPA 300.0	11/10/2014
Sulfate	25	mg/L	1.0		EPA 300.0	11/10/2014
Total Dissolved Solids	260	mg/L	7.0		SM 2540C	11/12/2014

ND = None Detected

RL = Reporting Limit

MCL = Maximum Contaminant Level



CERTIFICATE OF ANALYSIS

Barnstable County Health Laboratory (M-MA009)

Report Prepared For:

Report Dated: 11/28/2014

Lisa Flynn, Re: Eastham Landfill
 Environmental Strategies & Management, Inc.
 273 West Main Street
 Norton, MA 02766

Order No.: G1484369

Laboratory ID #: 1484369-02

Description: Water - Monitoring Well

Sample #:

Sample Location: MW 3D

Collected: 11/10/2014

Collected by: LKM

Received: 11/10/2014

Test Parameters

<u>ITEM</u>	<u>RESULT</u>	<u>UNITS</u>	<u>RL</u>	<u>MCL</u>	<u>METHOD #</u>	<u>TESTED</u>
COD	56	mg/L	2.0		HACH 8000	11/19/2014
Cyanide, Total	ND	mg/L	0.010		SM4500-CN-E	11/18/2014

Landfill Metals_Dissolved

<u>ITEM</u>	<u>RESULT</u>	<u>UNITS</u>	<u>RL</u>	<u>MCL</u>	<u>METHOD #</u>	<u>TESTED</u>
Arsenic	0.070	mg/L	0.0030	0.01	EPA 6020A	11/24/2014
Barium	0.081	mg/L	0.0030	2.0	EPA 6020A	11/24/2014
Cadmium	ND	mg/L	0.0030	0.005	EPA 6020A	11/24/2014
Chromium	0.0050	mg/L	0.0030	0.1	EPA 6020A	11/24/2014
Copper	ND	mg/L	0.0030		EPA 6020A	11/24/2014
Iron	33	mg/L	0.10		EPA 6020A	11/24/2014
Lead	ND	mg/L	0.0030	0.015	EPA 6020A	11/24/2014
Manganese	1.4	mg/L	0.0030		EPA 6020A	11/24/2014
Mercury	ND	mg/L	0.00030	0.002	EPA 6020A	11/24/2014
Selenium	ND	mg/L	0.015	0.05	EPA 6020A	11/24/2014
Silver	ND	mg/L	0.002		EPA 200.7	11/11/2014
Zinc	ND	mg/L	0.060		EPA 6020A	11/24/2014

Landfill Inorganics_01

<u>ITEM</u>	<u>RESULT</u>	<u>UNITS</u>	<u>RL</u>	<u>MCL</u>	<u>METHOD #</u>	<u>TESTED</u>
Nitrate as Nitrogen	1.7	mg/L	0.10		EPA 300.0	11/10/2014
Alkalinity	680	mg/L as CaCO	2.0		SM 2320B	11/12/2014
Chloride	91	mg/L	1.0		EPA 300.0	11/10/2014
Sulfate	58	mg/L	1.0		EPA 300.0	11/10/2014
Total Dissolved Solids	1,200	mg/L	7.0		SM 2540C	11/12/2014

ND = None Detected

RL = Reporting Limit

MCL = Maximum Contaminant Level



CERTIFICATE OF ANALYSIS

Barnstable County Health Laboratory (M-MA009)

Report Prepared For:

Report Dated: 11/28/2014

Lisa Flynn, Re: Eastham Landfil
 Environmental Strategies & Management, Inc.
 273 West Main Street
 Norton, MA 02766

Order No.: G1484369

Laboratory ID #: 1484369-03

Description: Water - Monitoring Well

Sample #:

Sample Location: BCH #13

Collected: 11/10/2014

Collected by: LKM

Received: 11/10/2014

Test Parameters

<u>ITEM</u>	<u>RESULT</u>	<u>UNITS</u>	<u>RL</u>	<u>MCL</u>	<u>METHOD #</u>	<u>TESTED</u>
COD	54	mg/L	2.0		HACH 8000	11/19/2014
Cyanide, Total	ND	mg/L	0.010		SM4500-CN-E	11/18/2014

Landfill Metals_Dissolved

<u>ITEM</u>	<u>RESULT</u>	<u>UNITS</u>	<u>RL</u>	<u>MCL</u>	<u>METHOD #</u>	<u>TESTED</u>
Arsenic	0.071	mg/L	0.0030	0.01	EPA 6020A	11/24/2014
Barium	0.082	mg/L	0.0030	2.0	EPA 6020A	11/24/2014
Cadmium	ND	mg/L	0.0030	0.005	EPA 6020A	11/24/2014
Chromium	0.0052	mg/L	0.0030	0.1	EPA 6020A	11/24/2014
Copper	ND	mg/L	0.0030		EPA 6020A	11/24/2014
Iron	32	mg/L	0.10		EPA 6020A	11/24/2014
Lead	ND	mg/L	0.0030	0.015	EPA 6020A	11/24/2014
Manganese	1.4	mg/L	0.0030		EPA 6020A	11/24/2014
Mercury	ND	mg/L	0.00030	0.002	EPA 6020A	11/24/2014
Selenium	ND	mg/L	0.015	0.05	EPA 6020A	11/24/2014
Silver	ND	mg/L	0.002		EPA 200.7	11/11/2014
Zinc	ND	mg/L	0.060		EPA 6020A	11/24/2014

Landfill Inorganics_01

<u>ITEM</u>	<u>RESULT</u>	<u>UNITS</u>	<u>RL</u>	<u>MCL</u>	<u>METHOD #</u>	<u>TESTED</u>
Nitrate as Nitrogen	1.7	mg/L	0.10		EPA 300.0	11/10/2014
Alkalinity	670	mg/L as CaCO	2.0		SM 2320B	11/12/2014
Chloride	91	mg/L	1.0		EPA 300.0	11/10/2014
Sulfate	57	mg/L	1.0		EPA 300.0	11/10/2014
Total Dissolved Solids	1,200	mg/L	7.0		SM 2540C	11/12/2014

Attached please find the laboratory certified parameter list.

Approved By: *[Signature]*
 (Lab Director)

12/1/2014

ND = None Detected

RL = Reporting Limit

MCL = Maximum Contaminant Level



CERTIFICATE OF ANALYSIS

Barnstable County Health Laboratory (M-MA009)

Recipient: Lisa Flynn, Re: Eastham Landfil Environmental Strategies & Management, Inc. 273 West Main Street Norton, MA 02766 Order#: G1484369 Lab ID: 1484369-01 Sample #: Method: 8260B Comment:	Matrix: Water - Monitoring Well Sampled: 11/10/2014 10:45 Received: 11/10/2014 12:50 Collection Address: MW 3I Sample Location: Description: Landfill Date Analyzed: 11/20/2014 @ 14:48 Analyst: yn Dilution Factor: 1
---	---

EPA 8260 - 1,4-Dioxan by GC/SIM MS

Parameter	<u>Result</u> ug/L	<u>MCL</u> ug/L	<u>MDL</u> ug/L	Parameter	<u>Result</u> ug/L	<u>MCL</u> ug/L	<u>MDL</u> ug/L
1,4-Dioxane	ND		2.5				

Attached please find the laboratory certified parameter list.

Approved By: *[Signature]*
 (Lab Director) 12/11/2014
 MCL = Maximum Contaminant Level

ND = None Detected

RL = Reporting Limit



CERTIFICATE OF ANALYSIS

Barnstable County Health Laboratory (M-MA009)

Recipient: Lisa Flynn, Re: Eastham Landfil
 Environmental Strategies & Management, Inc.
 273 West Main Street
 Norton, MA 02766

Order#: G1484369
Lab ID: 1484369-01
Sample #:
Method: 8260B
Comment:

Matrix: Water - Monitoring Well
Sampled: 11/10/2014 10:45
Received: 11/10/2014 12:50
Collection Address: MW 3I
Sample Location:
Description: Landfill
Date Analyzed: 11/17/2014 @ 10:37
Analyst: yn
Dilution Factor: 1

EPA 8260 - Volatile Organics by GC/MS + Ketones +

Parameter	Result ug/L	MCL ug/L	MDL ug/L	Parameter	Result ug/L	MCL ug/L	MDL ug/L
1,1,1,2-Tetrachloroethane	ND		5.0	Chlorobenzene	ND		5.0
1,1,1-Trichloroethane	ND		5.0	Chloroethane	ND		5.0
1,1,2,2-Tetrachloroethane	ND		5.0	Chloroform	ND		5.0
1,1,2-Trichloroethane	ND		5.0	Chloromethane	ND		5.0
1,1-Dichloroethane	ND		5.0	cis-1,2-Dichloroethene	ND		5.0
1,1-Dichloroethene	ND		5.0	cis-1,3-Dichloropropene	ND		5.0
1,1-Dichloropropene	ND		5.0	Dibromochloromethane	ND		5.0
1,2,3-Trichlorobenzene	ND		5.0	Dibromomethane	ND		5.0
1,2,3-Trichloropropane	ND		5.0	Dichlorodifluoromethane	ND		5.0
1,2,4-Trichlorobenzene	ND		5.0	Ethylbenzene	ND		5.0
1,2,4-Trimethylbenzene	ND		5.0	Hexachlorobutadiene	ND		5.0
1,2-Dibromo-3-chloropropane	ND		5.0	Isopropylbenzene	ND		5.0
1,2-Dibromoethane (EDB)	ND		5.0	Methylene chloride	ND		5.0
1,2-Dichlorobenzene	ND		5.0	Methyl-tert-butyl ether	ND		5.0
1,2-Dichloroethane	ND		5.0	Naphthalene	ND		5.0
1,2-Dichloropropane	ND		5.0	n-Butylbenzene	ND		5.0
1,3,5-Trimethylbenzene	ND		5.0	n-Propylbenzene	ND		5.0
1,3-Dichlorobenzene	ND		5.0	p-Isopropyltoluene	ND		5.0
1,3-Dichloropropane	ND		5.0	sec-Butylbenzene	ND		5.0
1,4-Dichlorobenzene	ND		5.0	Styrene	ND		5.0
1,4-Dioxane	ND		500	tert-Butylbenzene	ND		5.0
2,2-Dichloropropane	ND		5.0	Tetrachloroethene	ND		5.0
2-Butanone	ND		5.0	Toluene	ND		5.0
2-Chlorotoluene	ND		5.0	Total xylenes	ND		5.0
2-Hexanone	ND		5.0	trans-1,2-Dichloroethene	ND		5.0
4-Chlorotoluene	ND		5.0	trans-1,3-Dichloropropene	ND		5.0
4-Methyl-2-pentanone	ND		5.0	Trichloroethene	ND		5.0
Acetone	ND		5.0	Trichlorofluoromethane	ND		5.0
Benzene	ND		5.0	Vinyl chloride	ND		5.0
Bromobenzene	ND		5.0				
Bromochloromethane	ND		5.0				
Bromodichloromethane	ND		5.0				
Bromoform	ND		5.0				
Bromomethane	ND		5.0				
Carbon tetrachloride	ND		5.0				

Attached please find the laboratory certified parameter list.

Approved By: *Gongmin He*
 (Lab Director) 12/1/2014

ND = None Detected

RL = Reporting Limit

MCL = Maximum Contaminant Level



CERTIFICATE OF ANALYSIS

Barnstable County Health Laboratory (M-MA009)

Recipient: Lisa Flynn, Re: Eastham Landfil
 Environmental Strategies & Management, Inc.
 273 West Main Street
 Norton, MA 02766

Order#: G1484369

Lab ID: 1484369-02

Sample #:

Method: 8260B

Comment:

Matrix: Water - Monitoring Well

Sampled: 11/10/2014 10:45

Received: 11/10/2014 12:50

Collection Address: MW 3D

Sample Location:

Description: Landfill

Date Analyzed: 11/20/2014 @ 14:48

Analyst: yn

Dilution Factor: 1

EPA 8260 - 1,4-Dioxan by GC/SIM MS

Parameter	<u>Result</u> ug/L	<u>MCL</u> ug/L	<u>MDL</u> ug/L	Parameter	<u>Result</u> ug/L	<u>MCL</u> ug/L	<u>MDL</u> ug/L
1,4-Dioxane	ND		2.5				

Attached please find the laboratory certified parameter list.

Approved By: *Jongmin Lee*
 (Lab Director) 12/11/2014
 MCL = Maximum Contaminant Level

ND = None Detected

RL = Reporting Limit



CERTIFICATE OF ANALYSIS

Barnstable County Health Laboratory (M-MA009)

Recipient: Lisa Flynn, Re: Eastham Landfil
 Environmental Strategies & Management, Inc.
 273 West Main Street
 Norton, MA 02766

Order#: G1484369
Lab ID: 1484369-02
Sample #:
Method: 8260B
Comment:

Matrix: Water - Monitoring Well
Sampled: 11/10/2014 10:45
Received: 11/10/2014 12:50
Collection Address: MW 3D
Sample Location:
Description: Landfill
Date Analyzed: 11/17/2014 @ 10:37
Analyst: yn
Dilution Factor: 1

EPA 8260 - Volatile Organics by GC/MS + Ketones +

Parameter	Result ug/L	MCL ug/L	MDL ug/L	Parameter	Result ug/L	MCL ug/L	MDL ug/L
1,1,1,2-Tetrachloroethane	ND		5.0	Chlorobenzene	ND		5.0
1,1,1-Trichloroethane	ND		5.0	Chloroethane	ND		5.0
1,1,2,2-Tetrachloroethane	ND		5.0	Chloroform	ND		5.0
1,1,2-Trichloroethane	ND		5.0	Chloromethane	ND		5.0
1,1-Dichloroethane	ND		5.0	cis-1,2-Dichloroethene	ND		5.0
1,1-Dichloroethene	ND		5.0	cis-1,3-Dichloropropene	ND		5.0
1,1-Dichloropropene	ND		5.0	Dibromochloromethane	ND		5.0
1,2,3-Trichlorobenzene	ND		5.0	Dibromomethane	ND		5.0
1,2,3-Trichloropropane	ND		5.0	Dichlorodifluoromethane	ND		5.0
1,2,4-Trichlorobenzene	ND		5.0	Ethylbenzene	ND		5.0
1,2,4-Trimethylbenzene	ND		5.0	Hexachlorobutadiene	ND		5.0
1,2-Dibromo-3-chloropropane	ND		5.0	Isopropylbenzene	ND		5.0
1,2-Dibromoethane (EDB)	ND		5.0	Methylene chloride	ND		5.0
1,2-Dichlorobenzene	ND		5.0	Methyl-tert-butyl ether	ND		5.0
1,2-Dichloroethane	ND		5.0	Naphthalene	ND		5.0
1,2-Dichloropropane	ND		5.0	n-Butylbenzene	ND		5.0
1,3,5-Trimethylbenzene	ND		5.0	n-Propylbenzene	ND		5.0
1,3-Dichlorobenzene	ND		5.0	p-Isopropyltoluene	ND		5.0
1,3-Dichloropropane	ND		5.0	sec-Butylbenzene	ND		5.0
1,4-Dichlorobenzene	ND		5.0	Styrene	ND		5.0
1,4-Dioxane	ND		500	tert-Butylbenzene	ND		5.0
2,2-Dichloropropane	ND		5.0	Tetrachloroethene	ND		5.0
2-Butanone	ND		5.0	Toluene	ND		5.0
2-Chlorotoluene	ND		5.0	Total xylenes	ND		5.0
2-Hexanone	ND		5.0	trans-1,2-Dichloroethene	ND		5.0
4-Chlorotoluene	ND		5.0	trans-1,3-Dichloropropene	ND		5.0
4-Methyl-2-pentanone	ND		5.0	Trichloroethene	ND		5.0
Acetone	ND		5.0	Trichlorofluoromethane	ND		5.0
Benzene	ND		5.0	Vinyl chloride	ND		5.0
Bromobenzene	ND		5.0				
Bromochloromethane	ND		5.0				
Bromodichloromethane	ND		5.0				
Bromoform	ND		5.0				
Bromomethane	ND		5.0				
Carbon tetrachloride	ND		5.0				

Attached please find the laboratory certified parameter list.

Approved By: *[Signature]*
 (Lab Director) 12/11/2014

ND = None Detected

RL = Reporting Limit

MCL = Maximum Contaminant Level



CERTIFICATE OF ANALYSIS

Barnstable County Health Laboratory (M-MA009)

Recipient: Lisa Flynn, Re: Eastham Landfil
 Environmental Strategies & Management, Inc.
 273 West Main Street
 Norton, MA 02766

Order#: G1484369
Lab ID: 1484369-03
Sample #:
Method: 8260B
Comment:

Matrix: Water - Monitoring Well
Sampled: 11/10/2014 10:45
Received: 11/10/2014 12:50
Collection Address: BCH #13
Sample Location:
Description: Landfill
Date Analyzed: 11/20/2014 @ 14:48
Analyst: yn
Dilution Factor: 1

EPA 8260 - 1,4-Dioxan by GC/SIM MS

Parameter	<u>Result</u> ug/L	<u>MCL</u> ug/L	<u>MDL</u> ug/L	Parameter	<u>Result</u> ug/L	<u>MCL</u> ug/L	<u>MDL</u> ug/L
1,4-Dioxane	ND		2.5				

Attached please find the laboratory certified parameter list.

Approved By: *[Signature]*
 (Lab Director) 12/11/2014

ND = None Detected

RL = Reporting Limit

MCL = Maximum Contaminant Level



CERTIFICATE OF ANALYSIS

Barnstable County Health Laboratory (M-MA009)

Recipient: Lisa Flynn, Re: Eastham Landfill
 Environmental Strategies & Management, Inc.
 273 West Main Street
 Norton, MA 02766

Order#: G1484369
Lab ID: 1484369-03
Sample #:
Method: 8260B
Comment:

Matrix: Water - Monitoring Well
Sampled: 11/10/2014 10:45
Received: 11/10/2014 12:50
Collection Address: BCH #13
Sample Location:
Description: Landfill
Date Analyzed: 11/17/2014 @ 10:37
Analyst: yn
Dilution Factor: 1

EPA 8260 - Volatile Organics by GC/MS + Ketones +

Parameter	Result ug/L	MCL ug/L	MDL ug/L	Parameter	Result ug/L	MCL ug/L	MDL ug/L
1,1,1,2-Tetrachloroethane	ND		5.0	Chlorobenzene	ND		5.0
1,1,1-Trichloroethane	ND		5.0	Chloroethane	ND		5.0
1,1,2,2-Tetrachloroethane	ND		5.0	Chloroform	ND		5.0
1,1,2-Trichloroethane	ND		5.0	Chloromethane	ND		5.0
1,1-Dichloroethane	ND		5.0	cis-1,2-Dichloroethene	ND		5.0
1,1-Dichloroethene	ND		5.0	cis-1,3-Dichloropropene	ND		5.0
1,1-Dichloropropene	ND		5.0	Dibromochloromethane	ND		5.0
1,2,3-Trichlorobenzene	ND		5.0	Dibromomethane	ND		5.0
1,2,3-Trichloropropane	ND		5.0	Dichlorodifluoromethane	ND		5.0
1,2,4-Trichlorobenzene	ND		5.0	Ethylbenzene	ND		5.0
1,2,4-Trimethylbenzene	ND		5.0	Hexachlorobutadiene	ND		5.0
1,2-Dibromo-3-chloropropane	ND		5.0	Isopropylbenzene	ND		5.0
1,2-Dibromoethane (EDB)	ND		5.0	Methylene chloride	ND		5.0
1,2-Dichlorobenzene	ND		5.0	Methyl-tert-butyl ether	ND		5.0
1,2-Dichloroethane	ND		5.0	Naphthalene	ND		5.0
1,2-Dichloropropane	ND		5.0	n-Butylbenzene	ND		5.0
1,3,5-Trimethylbenzene	ND		5.0	n-Propylbenzene	ND		5.0
1,3-Dichlorobenzene	ND		5.0	p-Isopropyltoluene	ND		5.0
1,3-Dichloropropane	ND		5.0	sec-Butylbenzene	ND		5.0
1,4-Dichlorobenzene	ND		5.0	Styrene	ND		5.0
1,4-Dioxane	ND		500	tert-Butylbenzene	ND		5.0
2,2-Dichloropropane	ND		5.0	Tetrachloroethene	ND		5.0
2-Butanone	ND		5.0	Toluene	ND		5.0
2-Chlorotoluene	ND		5.0	Total xylenes	ND		5.0
2-Hexanone	ND		5.0	trans-1,2-Dichloroethene	ND		5.0
4-Chlorotoluene	ND		5.0	trans-1,3-Dichloropropene	ND		5.0
4-Methyl-2-pentanone	ND		5.0	Trichloroethene	ND		5.0
Acetone	ND		5.0	Trichlorofluoromethane	ND		5.0
Benzene	ND		5.0	Vinyl chloride	ND		5.0
Bromobenzene	ND		5.0				
Bromochloromethane	ND		5.0				
Bromodichloromethane	ND		5.0				
Bromoform	ND		5.0				
Bromomethane	ND		5.0				
Carbon tetrachloride	ND		5.0				

Attached please find the laboratory certified parameter list.

Approved By: *Gongmin He*
 (Lab Director) 12/1/2014

ND = None Detected

RL = Reporting Limit

MCL = Maximum Contaminant Level



CERTIFICATE OF ANALYSIS

Barnstable County Health Laboratory (M-MA009)

Recipient: Lisa Flynn, Re: Eastham Landfil
 Environmental Strategies & Management, Inc.
 273 West Main Street
 Norton, MA 02766

Order#: G1484369

Lab ID: 1484369-04

Sample #:

Method: 8260B

Comment:

Matrix: Water - Monitoring Well

Sampled: 11/10/2014 9:15

Received: 11/10/2014 12:50

Collection Address: TRIP BLANKS

Sample Location:

Description: Landfill

Date Analyzed: 11/20/2014 @ 14:48

Analyst: yn

Dilution Factor: 1

EPA 8260 - 1,4-Dioxan by GC/SIM MS

Parameter	<u>Result</u> ug/L	<u>MCL</u> ug/L	<u>MDL</u> ug/L	Parameter	<u>Result</u> ug/L	<u>MCL</u> ug/L	<u>MDL</u> ug/L
1,4-Dioxane	ND		2.5				

Attached please find the laboratory certified parameter list.

Approved By: *Gonzalez*
 (Lab Director) 12/11/2014

ND = None Detected

RL = Reporting Limit

MCL = Maximum Contaminant Level



CERTIFICATE OF ANALYSIS

Barnstable County Health Laboratory (M-MA009)

Recipient: Lisa Flynn, Re: Eastham Landfil
 Environmental Strategies & Management, Inc.
 273 West Main Street
 Norton, MA 02766

Order#: G1484369
Lab ID: 1484369-04
Sample #:
Method: 8260B
Comment:

Matrix: Water - Monitoring Well
Sampled: 11/10/2014 9:15
Received: 11/10/2014 12:50
Collection Address: TRIP BLANKS
Sample Location:
Description: Landfill
Date Analyzed: 11/17/2014 @ 10:37
Analyst: yn
Dilution Factor: 1

EPA 8260 - Volatile Organics by GC/MS + Ketones +

Parameter	Result ug/L	MCL ug/L	MDL ug/L	Parameter	Result ug/L	MCL ug/L	MDL ug/L
1,1,1,2-Tetrachloroethane	ND		5.0	Chlorobenzene	ND		5.0
1,1,1-Trichloroethane	ND		5.0	Chloroethane	ND		5.0
1,1,2,2-Tetrachloroethane	ND		5.0	Chloroform	ND		5.0
1,1,2-Trichloroethane	ND		5.0	Chloromethane	ND		5.0
1,1-Dichloroethane	ND		5.0	cis-1,2-Dichloroethene	ND		5.0
1,1-Dichloroethene	ND		5.0	cis-1,3-Dichloropropene	ND		5.0
1,1-Dichloropropene	ND		5.0	Dibromochloromethane	ND		5.0
1,2,3-Trichlorobenzene	ND		5.0	Dibromomethane	ND		5.0
1,2,3-Trichloropropane	ND		5.0	Dichlorodifluoromethane	ND		5.0
1,2,4-Trichlorobenzene	ND		5.0	Ethylbenzene	ND		5.0
1,2,4-Trimethylbenzene	ND		5.0	Hexachlorobutadiene	ND		5.0
1,2-Dibromo-3-chloropropane	ND		5.0	Isopropylbenzene	ND		5.0
1,2-Dibromoethane (EDB)	ND		5.0	Methylene chloride	ND		5.0
1,2-Dichlorobenzene	ND		5.0	Methyl-tert-butyl ether	ND		5.0
1,2-Dichloroethane	ND		5.0	Naphthalene	ND		5.0
1,2-Dichloropropane	ND		5.0	n-Butylbenzene	ND		5.0
1,3,5-Trimethylbenzene	ND		5.0	n-Propylbenzene	ND		5.0
1,3-Dichlorobenzene	ND		5.0	p-Isopropyltoluene	ND		5.0
1,3-Dichloropropane	ND		5.0	sec-Butylbenzene	ND		5.0
1,4-Dichlorobenzene	ND		5.0	Styrene	ND		5.0
1,4-Dioxane	ND		500	tert-Butylbenzene	ND		5.0
2,2-Dichloropropane	ND		5.0	Tetrachloroethene	ND		5.0
2-Butanone	ND		5.0	Toluene	ND		5.0
2-Chlorotoluene	ND		5.0	Total xylenes	ND		5.0
2-Hexanone	ND		5.0	trans-1,2-Dichloroethene	ND		5.0
4-Chlorotoluene	ND		5.0	trans-1,3-Dichloropropene	ND		5.0
4-Methyl-2-pentanone	ND		5.0	Trichloroethene	ND		5.0
Acetone	ND		5.0	Trichlorofluoromethane	ND		5.0
Benzene	ND		5.0	Vinyl chloride	ND		5.0
Bromobenzene	ND		5.0				
Bromochloromethane	ND		5.0				
Bromodichloromethane	ND		5.0				
Bromoform	ND		5.0				
Bromomethane	ND		5.0				
Carbon tetrachloride	ND		5.0				

Attached please find the laboratory certified parameter list.

Approved By: *Gary Miller*
 (Lab Director) 12/11/2014

ND = None Detected

RL = Reporting Limit

MCL = Maximum Contaminant Level

Barnstable County Department of Health and the Environment

Superior Court House
P. O. Box 427
Barnstable, MA 02630
(508) 375-6605;6612

pg 1072

CHAIN OF CUSTODY

CLIENT NAME: Eastham UF

ADDRESS: _____

PROJECT NAME: _____ PROJECT NUMBER: _____

PROJECT SITE: _____ SAMPLER: LK Mulkeen

DATE/TIME:	SAMPLE NUMBER	SAMPLE LOCATION	NO. OF SAMPLES	ANALYSES REQUIRED	COMMENTS		
1	400 ✓	mw 3i	1	NITRATE TDS SO ₄ CL-			
	401 ✓		↓	Fe Mn Cu Pb Zn Cd Cr As Se Ba Ag	FRUIT		
	402 ✓		↓	COD			
	403, 404, 405 406, 407 ✓		↓	5	8260+ Ketones, 1,4-Dioxane	LOW R.L. Ⓟ	
	408 ✓		↓	1	TEN	TO PRM	
	409 ✓		↓	↓	Ag	FRUIT Ⓝ	
	2		410 ✓	mw 3D	↓	NITRATE TDS SO ₄ CL-	
			411 ✓		↓	Fe Mn Cu Pb Zn Cd Cr As Se Ba Ag	FRUIT
			412 ✓		↓	COD	
			413, 414, 415 416, 417 ✓		↓	5	8260+ Ketones, 1,4-Dioxane
418 ✓		↓	1		TEN	TO PRM	
	419 ✓	↓	↓	Ag	FRUIT Ⓝ		

RELINQUISHED BY: <u>LK Mulkeen</u>	DATE/TIME: <u>11/10/14</u>	RECEIVED BY: <u>[Signature]</u>	DATE/TIME: <u>11/10/2014 1250</u>
RELINQUISHED BY: _____	DATE/TIME: _____	RECEIVED BY: _____	DATE/TIME: _____

all Ag to ENV

all 1-4 Dioxane in 40ml Amber vials

E&H called LK m 11-10-14 @ 1315 left voice mail to confirm we are doing - (Ken's Lab)

84369 (03-04)

Barnstable County Department of Health and the Environment

Superior Court House
P. O. Box 427
Barnstable, MA 02630
(508) 375-6605;6612

pg 2 of 2

CHAIN OF CUSTODY

CLIENT NAME: Eastham LF

ADDRESS: _____

PROJECT NAME: _____ PROJECT NUMBER: _____

PROJECT SITE: _____ SAMPLER: LKM

DATE/ TIME:	SAMPLE NUMBER	SAMPLE LOCATION	NO. OF SAMPLES	ANALYSES REQUIRED	COMMENTS
3 11/10/14 1045	420 ✓	B4 #13	1	NITRATE TDS SO4 CL	
↓	421 ✓	↓	↓	Fe Mn Cu Pb Zn Cd Cr As Se Ba Hg	FFLT
↓	422 ✓	↓	↓	COD	
↓	423, 424, 425 426, 427 ✓	↓	5	8200+ketones/1	4-Dioxane low P.L. R
↓	428 ✓	↓	1	TAN	TO PRG4
↓	429 ✓	↓	↓	Ag	FFLT E
4 ↓ 915	8200+ketones/1 8200+ketones/1	TRIP BLANKS	5	8200+ketones/1	4-Dioxane low P.L.

RELINGUISHED BY: [Signature] DATE/TIME: 11/10/14 RECEIVED BY: [Signature] DATE/TIME: 11/10/2014 1250

RELINGUISHED BY: _____ DATE/TIME: _____ RECEIVED BY: _____ DATE/TIME: _____



ANALYTICAL REPORT

Lab Number:	L1427998
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:	12/01/14

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 DW
Project Number: 2013-027

Lab Number: L1427998
Report Date: 12/01/14

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1427998-01	PTC-19_255 ALSTON EFF	DRINKING WATER	EASTHAM, MA	11/19/14 09:30	11/20/14
L1427998-02	PTC-19_255 ALSTON MID	DRINKING WATER	EASTHAM, MA	11/19/14 09:38	11/20/14
L1427998-03	PTC-19_255 ALSTON INF	DRINKING WATER	EASTHAM, MA	11/19/14 09:43	11/20/14
L1427998-04	PTC-20_255 ALSTON MID	DRINKING WATER	EASTHAM, MA	11/19/14 12:00	11/20/14
L1427998-05	PTC-20_255 ALSTON EFF	DRINKING WATER	EASTHAM, MA	11/19/14 11:55	11/20/14
L1427998-06	TRIPBLANK	DRINKING WATER	EASTHAM, MA	11/19/14 00:00	11/20/14

Project Name: EASTHAM DW

Lab Number: L1427998

Project Number: 2013-027

Report Date: 12/01/14

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 DW
Project Number: 2013-027

Lab Number: L1427998
Report Date: 12/01/14

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 DW
Project Number: 2013-027

Lab Number: L1427998
Report Date: 12/01/14

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

In reference to question I:

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

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

Authorized Signature:  Elizabeth Porta

Title: Technical Director/Representative

Date: 12/01/14

ORGANICS

SEMIVOLATILES

Project Name: EASTHAM DW**Lab Number:** L1427998**Project Number:** 2013-027**Report Date:** 12/01/14**SAMPLE RESULTS**

Lab ID: L1427998-01
Client ID: PTC-19_255 ALSTON EFF
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 11/30/14 19:01
Analyst: CM

Date Collected: 11/19/14 09:30
Date Received: 11/20/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 11/26/14 10:45

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

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1427998
Report Date: 12/01/14

SAMPLE RESULTS

Lab ID: L1427998-02
Client ID: PTC-19_255 ALSTON MID
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 11/30/14 19:45
Analyst: CM

Date Collected: 11/19/14 09:38
Date Received: 11/20/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 11/26/14 10:45

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

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

1,4-Dioxane	0.231		ug/l	0.147	0.0735	1
-------------	-------	--	------	-------	--------	---

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

Project Name: EASTHAM DW**Lab Number:** L1427998**Project Number:** 2013-027**Report Date:** 12/01/14**SAMPLE RESULTS**

Lab ID: L1427998-03
Client ID: PTC-19_255 ALSTON INF
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 11/30/14 20:28
Analyst: CM

Date Collected: 11/19/14 09:43
Date Received: 11/20/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 11/26/14 10:45

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

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

1,4-Dioxane	2.27		ug/l	0.147	0.0735	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	29		15-110

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1427998
Report Date: 12/01/14

SAMPLE RESULTS

Lab ID: L1427998-04
 Client ID: PTC-20_255 ALSTON MID
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 11/30/14 21:12
 Analyst: CM

Date Collected: 11/19/14 12:00
 Date Received: 11/20/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 11/26/14 10:45

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

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

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

Project Name: EASTHAM DW**Lab Number:** L1427998**Project Number:** 2013-027**Report Date:** 12/01/14**SAMPLE RESULTS**

Lab ID: L1427998-05
Client ID: PTC-20_255 ALSTON EFF
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 11/30/14 21:55
Analyst: CM

Date Collected: 11/19/14 11:55
Date Received: 11/20/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 11/26/14 10:45

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

MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab						
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1,4-Dioxane	ND		ug/l	0.144	0.0721	1
-------------	----	--	------	-------	--------	---

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

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1427998
Report Date: 12/01/14

SAMPLE RESULTS

Lab ID: L1427998-06
 Client ID: TRIPBLANK
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 11/30/14 22:39
 Analyst: CM

Date Collected: 11/19/14 00:00
 Date Received: 11/20/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 11/26/14 10:45

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	0.156	0.0781	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	32		15-110

Project Name: EASTHAM DW

Lab Number: L1427998

Project Number: 2013-027

Report Date: 12/01/14

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 11/30/14 16:07

Extraction Date: 11/26/14 10:45

Analyst: CM

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-06 Batch: WG744064-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

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

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1427998
Report Date: 12/01/14

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): 01-06 Batch: WG744064-2 WG744064-3								
1,4-Dioxane	109		110		40-140	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	33		34		15-110

Project Name: EASTHAM DW

Lab Number: L1427998

Project Number: 2013-027

Report Date: 12/01/14

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(*)
L1427998-01A	Amber 500ml unpreserved	A	7	3.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1427998-01B	Amber 500ml unpreserved	A	7	3.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1427998-02A	Amber 500ml unpreserved	A	7	3.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1427998-02B	Amber 500ml unpreserved	A	7	3.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1427998-03A	Amber 500ml unpreserved	A	7	3.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1427998-03B	Amber 500ml unpreserved	A	7	3.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1427998-04A	Amber 500ml unpreserved	A	7	3.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1427998-04B	Amber 500ml unpreserved	A	7	3.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1427998-05A	Amber 500ml unpreserved	A	7	3.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1427998-05B	Amber 500ml unpreserved	A	7	3.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1427998-06A	Amber 500ml unpreserved	A	8	3.1	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1427998-06B	Amber 500ml unpreserved	A	8	3.1	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: L1427998
Report Date: 12/01/14

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 DW
Project Number: 2013-027

Lab Number: L1427998
Report Date: 12/01/14

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 DW
Project Number: 2013-027

Lab Number: L1427998
Report Date: 12/01/14

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 April 15, 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 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

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.



ANALYTICAL REPORT

Lab Number:	L1428102
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:	12/05/14

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 DW
Project Number: 2013-027

Lab Number: L1428102
Report Date: 12/05/14

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1428102-01	MEETINGHOUSE RD_375	DRINKING WATER	EASTHAM, MA	11/20/14 09:25	11/20/14
L1428102-02	MEETINGHOUSE RD_375 DUP	DRINKING WATER	EASTHAM, MA	11/20/14 09:30	11/20/14
L1428102-03	SCHOOLHOUSE RD_200	DRINKING WATER	EASTHAM, MA	11/20/14 10:30	11/20/14
L1428102-04	SCHOOLHOUSE RD_200 DUP	DRINKING WATER	EASTHAM, MA	11/20/14 10:35	11/20/14
L1428102-05	ALSTON AVE_085	DRINKING WATER	EASTHAM, MA	11/20/14 11:20	11/20/14
L1428102-06	ALSTON AVE_085 DUP	DRINKING WATER	EASTHAM, MA	11/20/14 11:25	11/20/14
L1428102-07	TRIP BLANK	DRINKING WATER	EASTHAM, MA	11/20/14 00:00	11/20/14

Project Name: EASTHAM DW

Lab Number: L1428102

Project Number: 2013-027

Report Date: 12/05/14

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 DW
Project Number: 2013-027

Lab Number: L1428102
Report Date: 12/05/14

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 DW
Project Number: 2013-027

Lab Number: L1428102
Report Date: 12/05/14

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.

In reference to question I:

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

Semivolatile Organics by SIM

Samples L1428102-02 , -04 and -06 were extracted outside hold time.

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: 12/05/14

ORGANICS

SEMIVOLATILES

Project Name: EASTHAM DW**Lab Number:** L1428102**Project Number:** 2013-027**Report Date:** 12/05/14**SAMPLE RESULTS**

Lab ID: L1428102-01
Client ID: MEETINGHOUSE RD_375
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 12/01/14 00:58
Analyst: CM

Date Collected: 11/20/14 09:25
Date Received: 11/20/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 11/26/14 10:45

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

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

1,4-Dioxane	0.212		ug/l	0.150	0.0750	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	33		15-110

Project Name: EASTHAM DW**Lab Number:** L1428102**Project Number:** 2013-027**Report Date:** 12/05/14**SAMPLE RESULTS**

Lab ID: L1428102-02
Client ID: MEETINGHOUSE RD_375 DUP
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 12/04/14 15:22
Analyst: CM

Date Collected: 11/20/14 09:30
Date Received: 11/20/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 12/03/14 15:58

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

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

1,4-Dioxane	0.187		ug/l	0.148	0.0742	1
-------------	-------	--	------	-------	--------	---

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

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1428102
Report Date: 12/05/14

SAMPLE RESULTS

Lab ID: L1428102-03
 Client ID: SCHOOLHOUSE RD_200
 Sample Location: EASTHAM, MA
 Matrix: Drinking Water
 Analytical Method: 97,8270D-SIM
 Analytical Date: 12/01/14 01:42
 Analyst: CM

Date Collected: 11/20/14 10:30
 Date Received: 11/20/14
 Field Prep: Not Specified
 Extraction Method: EPA 3510C
 Extraction Date: 11/26/14 10:45

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

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

1,4-Dioxane	0.0884	J	ug/l	0.150	0.0750	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	34		15-110

Project Name: EASTHAM DW**Lab Number:** L1428102**Project Number:** 2013-027**Report Date:** 12/05/14**SAMPLE RESULTS**

Lab ID: L1428102-04
Client ID: SCHOOLHOUSE RD_200 DUP
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 12/04/14 16:06
Analyst: CM

Date Collected: 11/20/14 10:35
Date Received: 11/20/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 12/03/14 15:58

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

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

1,4-Dioxane	0.0808	J	ug/l	0.148	0.0742	1
-------------	--------	---	------	-------	--------	---

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

Project Name: EASTHAM DW**Lab Number:** L1428102**Project Number:** 2013-027**Report Date:** 12/05/14**SAMPLE RESULTS**

Lab ID: L1428102-05
Client ID: ALSTON AVE_085
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 12/01/14 02:25
Analyst: CM

Date Collected: 11/20/14 11:20
Date Received: 11/20/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 11/26/14 10:45

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

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

1,4-Dioxane	0.248		ug/l	0.150	0.0750	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	35		15-110

Project Name: EASTHAM DW**Lab Number:** L1428102**Project Number:** 2013-027**Report Date:** 12/05/14**SAMPLE RESULTS**

Lab ID: L1428102-06
Client ID: ALSTON AVE_085 DUP
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 12/04/14 16:50
Analyst: CM

Date Collected: 11/20/14 11:25
Date Received: 11/20/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 12/03/14 15:58

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

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

1,4-Dioxane	0.236		ug/l	0.147	0.0735	1
-------------	-------	--	------	-------	--------	---

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

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1428102
Report Date: 12/05/14

SAMPLE RESULTS

Lab ID: L1428102-07
Client ID: TRIP BLANK
Sample Location: EASTHAM, MA
Matrix: Drinking Water
Analytical Method: 97,8270D-SIM
Analytical Date: 12/01/14 03:09
Analyst: CM

Date Collected: 11/20/14 00:00
Date Received: 11/20/14
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 11/26/14 10:45

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	0.160	0.0798	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	33		15-110

Project Name: EASTHAM DW

Lab Number: L1428102

Project Number: 2013-027

Report Date: 12/05/14

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 11/30/14 16:07

Extraction Date: 11/26/14 10:45

Analyst: CM

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01,03,05,07 Batch: WG744064-1					
1,4-Dioxane	ND		ug/l	0.150	0.0750

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

Project Name: EASTHAM DW

Lab Number: L1428102

Project Number: 2013-027

Report Date: 12/05/14

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 97,8270D-SIM

Extraction Method: EPA 3510C

Analytical Date: 12/04/14 11:41

Extraction Date: 12/03/14 15:58

Analyst: CM

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 02,04,06 Batch: WG745363-1					
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: L1428102
Report Date: 12/05/14

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): 01,03,05,07 Batch: WG744064-2 WG744064-3								
1,4-Dioxane	109		110		40-140	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	33		34		15-110

Lab Control Sample Analysis Batch Quality Control

Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1428102
Report Date: 12/05/14

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): 02,04,06 Batch: WG745363-2 WG745363-3								
1,4-Dioxane	108		111		40-140	3		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	30		31		15-110

Project Name: EASTHAM DW

Lab Number: L1428102

Project Number: 2013-027

Report Date: 12/05/14

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(*)
L1428102-01A	Amber 500ml unpreserved	A	7	4.2	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1428102-01B	Amber 500ml unpreserved	A	7	4.2	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1428102-02A	Amber 500ml unpreserved	A	7	4.2	Y	Absent	-
L1428102-02B	Amber 500ml unpreserved	A	7	4.2	Y	Absent	-
L1428102-03A	Amber 500ml unpreserved	A	7	4.2	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1428102-03B	Amber 500ml unpreserved	A	7	4.2	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1428102-04A	Amber 500ml unpreserved	A	7	4.2	Y	Absent	-
L1428102-04B	Amber 500ml unpreserved	A	7	4.2	Y	Absent	-
L1428102-05A	Amber 500ml unpreserved	A	7	4.2	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1428102-05B	Amber 500ml unpreserved	A	7	4.2	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1428102-06A	Amber 500ml unpreserved	A	7	4.2	Y	Absent	-
L1428102-06B	Amber 500ml unpreserved	A	7	4.2	Y	Absent	-
L1428102-07A	Amber 500ml unpreserved	A	7	4.2	Y	Absent	A2-MCP-14DX-SIM-PPB(7)
L1428102-07B	Amber 500ml unpreserved	A	7	4.2	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: L1428102
Report Date: 12/05/14

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 DW
Project Number: 2013-027

Lab Number: L1428102
Report Date: 12/05/14

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.

Report Format: DU Report with 'J' Qualifiers



Project Name: EASTHAM DW
Project Number: 2013-027

Lab Number: L1428102
Report Date: 12/05/14

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 April 15, 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 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

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 #: 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 & Managemen

Address: 273 West Main Street

Norton, MA 02703

Phone: 508-226-1800

Fax: 508-226-1811

Email: lflynn@esm-inc.com

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

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

Please invoice Town of Eastham

Date Rec'd in Lab:

ALPHA Job #: L1428102

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
 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															TOTAL # BOTTLES	
		Date	Time																		
-01	Meetinghouse Rd - 375	11/20/14	0925	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"/>	2
-02	Meetinghouse Rd - 375 DUP		0930	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"/>	2
-03	Schoolhouse Rd - 200		1030	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"/>	2
-04	Schoolhouse Rd - 200 DUP		1035	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"/>	2
-05	Alston Ave - 085		1120	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"/>	2
-06	Alston Ave - 085 DUP		1125	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"/>	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"/>	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"/>	2
-07	TRIPBLANK					<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"/>	2

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
	11/20/14 1545		11/20/14 1545

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

October 15, 2014

Mark and Mary Manuelsan
23 School Street
Westborough MA 01581

**Subject: Environmental Sampling Results
285 Alston Avenue, Eastham, MA**

Dear Mr. and Mrs. Manuelsan;

On behalf of the Town of Eastham, this letter transmits to you the results of water samples collected from your 285 Alston Avenue property on September 18, 2014. The water samples were submitted for laboratory analysis of volatile organic compounds (VOCs), 1,4 dioxane, and arsenic. The concentration of 1,4 dioxane detected in the sample (0.416 micrograms per liter or $\mu\text{g/L}$) is above the bottled water action limit; therefore, you should continue using bottled water. The volatile organic compound, chloroform was detected at a concentration of 0.66 $\mu\text{g/L}$, well below the Massachusetts drinking water standard. Arsenic was not detected. Pages from the laboratory report with these results are attached for your review, along with the MassDEP-required form BWSC-123 and a listing of MassDEP's drinking water standards.

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



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: Mark and Mary Manuelsan
2. Street Address: 23 School Street
City/Town: Westborough MA Zip Code: 01581

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: 285 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.

October 15, 2014

Robert & Barbara Elliot
Po Box 1342
N. Eastham, Ma 02651

**Subject: Environmental Sampling Results
550 Bracket Road, Eastham MA**

Dear Mr. and Mrs. Elliot,

This letter transmits to you the testing results of a water sample collected from your **550 Bracket Road** property on September 19, 2014. The water sample was submitted to Alpha Analytical for laboratory analysis of 1,4-dioxane. 1,4 dioxane was detected in the sample at an estimated concentration of 0.119 (J) micrograms per liter or $\mu\text{g/L}$, which is below the Massachusetts "GW-1" drinking water standard of 0.3 $\mu\text{g/L}$.

Pages from the laboratory report with these results are attached for your review, along with 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.



Douglas Heely, PG, LSP
Principal Geologist



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: Felice Coral
2. Street Address: Box 724
City/Town: Sudbury, Ma Zip Code: 01776

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: 310 CANDLEWOOD 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.

October 15, 2014

Felice Coral
Box 724
Sudbury, Ma 01776

**Subject: Environmental Sampling Results
310 Candlewood Drive, Eastham MA**

Dear Ms. Coral,

This letter transmits to you the testing results of a water sample collected from your **310 Candlewood Drive** property on September 19, 2014. The water sample was submitted to Alpha Analytical for laboratory analysis of 1,4-dioxane. 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 the 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.



Douglas Heely, PG, LSP
Principal Geologist

October 15, 2014

Jeri Lynne Cronin, Ttee
November Rose Irrev Trust
245 Midline Rd
Amsterdam, NY 12010

**Subject: Environmental Sampling Results
175 Meetinghouse Road, Eastham MA**

Dear Ms. Cronin,

This letter transmits to you the testing results of a water sample collected from your **175 Meetinghouse Road** property on September 19, 2014. The water sample was submitted to Alpha Analytical for laboratory analysis of 1,4-dioxane. 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 the 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.



Douglas Heely, PG, LSP
Principal Geologist



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: Jeri Lynne Cronin, Ttee, November Rose Irrev Trust
2. Street Address: 245 Midline Rd
City/Town: Amsterdam, NY Zip Code: 12010

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: 175 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.

October 15, 2014

Jeffrey L Carlson
Box 284
Eastham, MA 02642

**Subject: Environmental Sampling Results
100 Meetinghouse Road, Eastham, MA**

Dear Mr. Carlson;

On behalf of the Town of Eastham, this letter transmits to you the results of water samples collected from your 100 Meetinghouse Road property on September 19, 2014. The water samples were submitted for laboratory analysis of volatile organic compounds (VOCs), 1,4 dioxane, and arsenic. The concentration of 1,4 dioxane detected in the sample (1.75 micrograms per liter or $\mu\text{g/L}$) is still above the bottled water action limit; therefore, you should continue using bottled water for consumptive purposes. Very low concentrations of chloroform (0.65 $\mu\text{g/L}$) and methyl tert butyl ether (estimated 0.20 $\mu\text{g/L}$) were also detected in the sample. Both concentrations are well below the Massachusetts drinking water standards.

Pages from the laboratory report with these results are attached for your review, along with the MassDEP-required form BWSC-123 and a listing of MassDEP's drinking water standards.

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



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: Jeffrey L Carlson
2. Street Address: Box 284
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: 100 Meetinghouse 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.

October 15, 2014

Douglas Okane and Mark Okane
619 South Pearl Street
Denver, CO 80209

**Subject: Environmental Sampling Results
180 Old Orchard Road, Eastham, MA**

Dear Douglas Okane and Mark Okane;

On behalf of the Town of Eastham, this letter transmits to you the results of water samples collected from your 180 Old Orchard Road property on September 18, 2014. The water samples were submitted for laboratory analysis of volatile organic compounds (VOCs), 1,4 dioxane, and arsenic. 1,4 dioxane was detected in the sample at an estimated concentration of 0.137 (J) micrograms per liter or $\mu\text{g/L}$, below the Massachusetts "GW-1" drinking water standard of 0.3 $\mu\text{g/L}$. Even though the concentration detected in your drinking water sample is below 0.3 $\mu\text{g/L}$, it is advised that you continue to use bottled water for consumptive purposes. Chloroform was detected in the sample at a very low concentration (0.71 $\mu\text{g/L}$), well below the Massachusetts drinking water standard. Arsenic was not detected in the sample. Pages from the laboratory report with these results are attached for your review, along with the MassDEP-required form BWSC-123 and a listing of MassDEP's drinking water standards.

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



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 Okane and Mark Okane
2. Street Address: 619 South Pearl Street
City/Town: Denver, CO Zip Code: 80209

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: 180 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.

October 15, 2014

Roger & Barbara Pettis
7 Glenn Dr
Franklin, Ma 02038

**Subject: Environmental Sampling Results
25 Sharon Circle, Eastham MA**

Dear Mr. and Mrs. Pettis,

This letter transmits to you the testing results of a water sample collected from your **25 Sharon Circle** property on September 19, 2014. The water sample was submitted to Alpha Analytical for laboratory analysis of 1,4-dioxane. 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 the 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.



Douglas Heely, PG, LSP
Principal Geologist



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: Roger H. & Barbara Pettis
2. Street Address: 7 Glenn Drive
City/Town: Franklin Zip Code: 02038

C. This notice is being given to inform its recipient (the party listed in Section B):

- 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
- 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
- 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 25 Sharon Circle
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.

November 14, 2014

Jacquelin & Devon R O'Rourke
P.O. Box 863
No. Eastham, MA 02651
devon.orourke@gmail.com

**Subject: Environmental Sampling Results
65 Knowles St, Eastham, MA**

Dear Mr. and Mrs. O'Rourke,

On behalf of the Town of Eastham, this letter transmits to you the testing results of a drinking water sample collected from your 65 Knowles Street property on October 28, 2014. The water sample was submitted for laboratory analysis of 1,4-dioxane. This compound was detected at an estimated concentration of 0.102 micrograms per liter or $\mu\text{g/L}$. The detected concentration is below the Massachusetts drinking water guideline and the bottle water action limit of $0.3 \mu\text{g/L}$, and is consistent with the results of the initial sample collected from your well in July 2013.

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: Jacquelin & Devon R O'Rourke
2. Street Address: P.O. Box 863
City/Town: No Eastham, MA Zip Code: 02651

C. This notice is being given to inform its recipient (the party listed in Section B):

- 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
- 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
- 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 65 Knowles Street
City/Town: Eastham Zip Code: 02642

2. MCP phase of work during which the sampling will be/has been conducted:

- Immediate Response Action
- Release Abatement Measure
- Utility-related Abatement Measure
- Phase I Initial Site Investigation
- Phase II Comprehensive Site Assessment
- Phase III Feasibility Evaluation
- Phase IV Remedy Implementation Plan
- Phase V/Remedy Operation Status
- Post-Class C Operation, Maintenance and Monitoring
- Other _____ (specify)

3. Description of property where sampling will be/has been conducted:

- residential
- 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.

November 14, 2014

Erich Weyerich & Barbara Hayes
175 Tarringford St
Winsted, CT 06098

**Subject: Environmental Sampling Results
600 Schoolhouse Road, Eastham, MA**

Dear Mr. Weyerich and Ms. Hayes,

On behalf of the Town of Eastham, this letter transmits to you the testing results of water samples collected from your 600 Schoolhouse Road property on October 28, 2014, for laboratory analysis of 1,4-dioxane. This compound was detected at a concentration of 0.347 micrograms per liter or $\mu\text{g}/\text{L}$. The detected concentration is above Massachusetts drinking water guideline and the bottle water action limit of 0.3 $\mu\text{g}/\text{L}$; therefore, we have informed the Town that bottled water should be made available to you for consumptive purposes.

Pages from the laboratory report with these results 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.



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: Erich Weyerich & Barbara Hayes
2. Street Address: 175 Tarringford St
City/Town: Winsted, CT Zip Code: 06098

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: 600 Schoolhouse 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.

November 14, 2014

Nancy Fuller
4 Preservation Way
Eastham, MA 02642

Subject: 4 Preservation Way, Eastham, MA

Dear Ms. Fuller:

On behalf of the Town of Eastham, this letter transmits to you the laboratory results for the water samples collected from your property on October 28, 2014, for 1,4 dioxane laboratory analysis by Environmental Strategies & Management. This compound was detected at a concentration of 0.208 micrograms per liter or $\mu\text{g}/\text{L}$. This concentration is below the Massachusetts drinking water standard and the bottle water action limit of $0.3 \mu\text{g}/\text{L}$.

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 the Massachusetts drinking water standards.

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, Southeast Regional Office



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: NANCY FULLER
2. Street Address: 4 PRESERVATION WAY
City/Town: EASTHAM, MA Zip Code: 02642

C. This notice is being given to inform its recipient (the party listed in Section B):

- 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
- 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
- 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/has been conducted:

1. Street Address: 4 PRESERVATION WAY
City/Town: Eastham 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.

November 14, 2014

Anthony & Sophia & Michelina & Ennino Martino
245 Washington Ave
St James, NY 11780

**Subject: Environmental Sampling Results
3100A State Hwy**

On behalf of the Town of Eastham, this letter transmits to you the laboratory results for a water sample collected from your property on October 28, 2014, by Environmental Strategies & Management. The water sample was submitted for 1,4 dioxane laboratory analysis. This compound was not detected above the laboratory reporting limits. 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.

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, Southeast Regional Office



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: Anthony & Sophia & Michelina & Ennino Martino
2. Street Address: 245 Washington Ave
City/Town: St James, NY Zip Code: 11780

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: 3100A State Hwy
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 8, 2014

William P & Linda S Burt
PO Box 666
No Eastham, MA 02651

**Subject: Environmental Sampling Results
85 Alston Avenue**

Dear Mr. and Mrs. Burt,

On behalf of the Town of Eastham, this letter transmits to you the testing results for the water samples collected from your 85 Alston Avenue property on November 20, 2014, for 1,4 dioxane laboratory analysis by Environmental Strategies & Management. This compound was detected at a concentration of 0.248 micrograms per liter or $\mu\text{g}/\text{L}$ in the primary sample and at a concentration of 0.236 $\mu\text{g}/\text{L}$ in the duplicate sample. Both concentrations are below the Massachusetts drinking water standard and the bottle water action limit of 0.3 $\mu\text{g}/\text{L}$.

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: William P & Linda S Burt
2. Street Address: PO Box 666
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: 85 Alston Ave
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 8, 2014

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 November 19, 2014 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 2.27 µg/l (micrograms per liter or parts per billion), the mid-point sample had an estimated concentration of 0.231, and 1,4 dioxane was not detected in the effluent (treated) sample. The carbon in the primary adsorber was moved to the secondary position and new carbon was placed in the primary adsorber. 1,4 dioxane was not detected in samples collected from the mid-point and effluent after the carbon change.

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, 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 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.

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.

December 8, 2014

David L Alexander
375 Meetinghouse Rd
Eastham, MA 02642

Subject: 375 Meetinghouse Rd, Eastham, MA

Dear Mr. Alexander:

On behalf of the Town of Eastham, this letter transmits to you the laboratory results for the water samples collected from your property on November 20, 2014, for 1,4 dioxane laboratory analysis by Environmental Strategies & Management. This compound was detected at a concentration of 0.212 micrograms per liter or $\mu\text{g}/\text{L}$ 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 ($0.15 \mu\text{g}/\text{L}$), the duplicate sample was also analyzed. The concentration detected in this sample was $0.187 \mu\text{g}/\text{L}$. Both concentrations are below the Massachusetts drinking water standard and the bottle water action limit of $0.3 \mu\text{g}/\text{L}$.

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 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, Southeast Regional Office



NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

BWSC 123

This Notice is Related to
Release Tracking Number

4

24301

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: Eastham Landfill, 255 Old Orchard Road
City/Town: Eastham Zip Code: 02642

B. This notice is being provided to the following party:

1. Name: David L Alexander
2. Street Address: 375 Meetinghouse Rd
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: 375 Meetinghouse Rd
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 8, 2014

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 samples collected from the Eastham Elementary School at 200 Schoolhouse Road on November 20, 2014, for laboratory analysis of 1,4-dioxane, by Environmental Strategies & Management. This compound was detected at an estimated concentration of 0.0884 micrograms per liter or $\mu\text{g}/\text{L}$ in the primary sample and at an estimated concentration of 0.0808 $\mu\text{g}/\text{L}$ in the duplicate sample. Both concentrations are 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 November 20th 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
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) The sample collected on November 20, 2014, by Environmental Strategies & Management, was analyzed by Alpha Analytical using MassDEP CAM-compliant EPA Method 8270. The Method Detection Limit (MDL) for the primary sample was 0.0750 ug/L and the Reporting Limit (RL) was 0.150 ug/L. The Method Detection Limit (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 Environmental Strategies & Management, was analyzed by Alpha Analytical using MassDEP CAM-compliant EPA Method 8270. The Method Detection Limit (MDL) was 0.0708 ug/L and the Reporting Limit (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 Method Detection Limit (MDL) was 0.0721 ug/L and the Reporting Limit (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.

- (b) Samples collected on February 11 and 14, 2014, by Environmental Partners Group, were analyzed by TestAmerica Laboratories using EPA Method 522 Mod. with a Method Detection Limit (MDL) of 0.040 ppb and a Reporting Limit (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.

- (c) 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.

December 31, 2014

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 during the between September 1 and November 31, 2014).

The submitted documents can be viewed on line 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