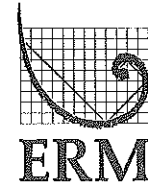


**Environmental  
Resources  
Management**

399 Boylston Street, 6th Floor  
Boston, MA 02116  
(617) 646-7800  
(617) 267-6447 (fax)

18 May 2010  
Reference: 0114119

Mr. Tim Skeeahan  
c/o Russell's Garden Center  
397 Boston Post Road  
Wayland, MA 01778



RE: Transmittal of Groundwater Analytical Data  
Former Raytheon Facility  
430 Boston Post Road, Wayland, Massachusetts

Dear Mr. Skeeahan:

On behalf of Raytheon Company (Raytheon), Environmental Resources Management (ERM) is submitting the results of groundwater sample analyses related to the Former Raytheon Facility located at 430 Boston Post Road in Wayland, Massachusetts (Site). These results are submitted pursuant to 310 CMR 40.1403(10) of the Massachusetts Contingency Plan (MCP).

ERM collected groundwater samples from two monitoring wells on portions of the Site within the boundaries of your property on 22 April 2010. The samples were submitted for laboratory analysis of volatile organic compounds by US EPA Method 8260B. The irrigation well within the boundaries of your property was sampled on 22 April 2010, and submitted for laboratory analysis of volatile organic compounds by US EPA Method 8260B and total chloride by US EPA Method 9251. Sample analysis was conducted by Alpha Analytical, Inc. of Westborough, Massachusetts. These analytical data will be provided to the Massachusetts Department of Environmental Protection in the next required MCP submittal.

Raytheon has implemented the Public Involvement Process in accordance with 310 CMR 40.1405. Documents pertaining to the Site can be found at the Board of Health, the Wayland Public Library Public Involvement Plan files, or at [www.ermne.com](http://www.ermne.com) (username = raytheon, password = wayland).

If you have any questions or comments, please contact the undersigned at (617) 646-7800 or Jonathan Hone, Raytheon Company, at (978) 436-8298.

Sincerely,



John C. Drobinski, P.G., LSP  
*Principal-in-Charge*



Jason D. Flattery, P.E.  
*Project Manager*

jdf

enclosures: BWSC-123 - Notice of Environmental Sampling  
Laboratory analytical reports

cc: Jonathan Hone, Raytheon Company  
Louis Burkhardt, Raytheon Company  
Ben Gould, CMG Environmental  
PIP Repositories



**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

3 13302

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

1. Street Address: 430 Boston Post Road  
City/Town: Wayland Zip Code: 01778

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

1. Name: Russell's Garden Center  
2. Street Address: 397 Boston Post Road  
City/Town: Wayland Zip Code: 02903

**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: 430 Boston Post Road  
City/Town: Wayland Zip Code: 01778

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 checked="" 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.

Collection of groundwater samples from existing monitoring wells.

**E. Contact information related to the party providing this notice:**

Contact Name: Louis J. Burkhardt  
Street Address: 880 Technology Park Drive, T-3033  
City/Town: Billerica Zip Code: 01821  
Telephone: (978) 436-8238 Email: louis\_j\_burkhardt@raytheon.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.



## ANALYTICAL REPORT

Lab Number:	L1005900
Client:	ERM Consulting & Engineering, Inc. 399 Boylston Street 6th Floor Boston, MA 02116
ATTN:	Jason Flattery
Phone:	(617) 646-7816
Project Name:	RAYTHEON WAYLAND
Project Number:	0114119
Report Date:	04/29/10

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

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



**Project Name:** RAYTHEON WAYLAND  
**Project Number:** 0114119

**Lab Number:** L1005900  
**Report Date:** 04/29/10

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>
L1005900-01	RUSSWELL-20100422-01	WAYLAND, MA	04/22/10 11:00
L1005900-02	MW-221D-20100422-01	WAYLAND, MA	04/22/10 12:45
L1005900-03	MW-217M-20100422-01	WAYLAND, MA	04/22/10 10:00

Project Name: RAYTHEON WAYLAND

Lab Number: L1005900

Project Number: 0114119

Report Date: 04/29/10

### MADEP MCP Response Action Analytical Report Certification

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

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

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



**Project Name:** RAYTHEON WAYLAND  
**Project Number:** 0114119

**Lab Number:** L1005900  
**Report Date:** 04/29/10

### 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. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

For additional information, please contact Client Services at 800-624-9220.

### MCP Related Narratives

#### Volatile Organics

In reference to question G:

One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

The continuing calibration standard, associated with L1005900-01, -02, -03 and the associated QC is outside the %D criteria for 1,1,1,2-Tetrachloroethane; however, it is within overall acceptance criteria.

The WG410373-7/-8 MS/MSD RPD associated with L1005900-03 is above the acceptance criteria for Chloroethane (21%). The results of the associated samples are reported.

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:

 Lisa Westerlind

Title: Technical Director/Representative

Date: 04/29/10



# ORGANICS

# VOLATILES

**Project Name:** RAYTHEON WAYLAND**Lab Number:** L1005900**Project Number:** 0114119**Report Date:** 04/29/10**SAMPLE RESULTS**

**Lab ID:** L1005900-01  
**Client ID:** RUSSWELL-20100422-01  
**Sample Location:** WAYLAND, MA  
**Matrix:** Water  
**Analytical Method:** 97,8260B  
**Analytical Date:** 04/28/10 14:22  
**Analyst:** PD

**Date Collected:** 04/22/10 11:00  
**Date Received:** 04/22/10  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>MCP Volatile Organics - Westborough Lab</b>					
Methylene chloride	ND		ug/l	5.0	1
1,1-Dichloroethane	ND		ug/l	1.0	1
Chloroform	8.9		ug/l	1.0	1
Carbon tetrachloride	ND		ug/l	1.0	1
1,2-Dichloropropane	ND		ug/l	1.0	1
Dibromochloromethane	4.7		ug/l	1.0	1
1,1,2-Trichloroethane	ND		ug/l	1.0	1
Tetrachloroethene	ND		ug/l	1.0	1
Chlorobenzene	ND		ug/l	1.0	1
1,2-Dichloroethane	ND		ug/l	1.0	1
1,1,1-Trichloroethane	ND		ug/l	1.0	1
Bromodichloromethane	6.3		ug/l	1.0	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	1
Bromoform	ND		ug/l	2.0	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	1
Chloromethane	ND		ug/l	2.0	1
Vinyl chloride	ND		ug/l	1.0	1
Chloroethane	ND		ug/l	2.0	1
1,1-Dichloroethene	ND		ug/l	1.0	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	1
Trichloroethene	ND		ug/l	1.0	1
1,2-Dichlorobenzene	ND		ug/l	1.0	1
1,3-Dichlorobenzene	ND		ug/l	1.0	1
1,4-Dichlorobenzene	ND		ug/l	1.0	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	1
Dichlorodifluoromethane	ND		ug/l	2.0	1
1,2-Dibromoethane	ND		ug/l	2.0	1
1,3-Dichloropropane	ND		ug/l	2.0	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	1

**Project Name:** RAYTHEON WAYLAND**Lab Number:** L1005900**Project Number:** 0114119**Report Date:** 04/29/10**SAMPLE RESULTS**

Lab ID: L1005900-01

Date Collected: 04/22/10 11:00

Client ID: RUSSWELL-20100422-01

Date Received: 04/22/10

Sample Location: WAYLAND, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>MCP Volatile Organics - Westborough Lab</b>					
o-Chlorotoluene	ND		ug/l	2.0	1
p-Chlorotoluene	ND		ug/l	2.0	1
Hexachlorobutadiene	ND		ug/l	0.60	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	109		70-130

**Project Name:** RAYTHEON WAYLAND**Lab Number:** L1005900**Project Number:** 0114119**Report Date:** 04/29/10**SAMPLE RESULTS**

**Lab ID:** L1005900-02  
**Client ID:** MW-221D-20100422-01  
**Sample Location:** WAYLAND, MA  
**Matrix:** Water  
**Analytical Method:** 97,8260B  
**Analytical Date:** 04/28/10 14:56  
**Analyst:** PD

**Date Collected:** 04/22/10 12:45  
**Date Received:** 04/22/10  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>MCP Volatile Organics - Westborough Lab</b>					
Methylene chloride	ND		ug/l	5.0	1
1,1-Dichloroethane	ND		ug/l	1.0	1
Chloroform	ND		ug/l	1.0	1
Carbon tetrachloride	ND		ug/l	1.0	1
1,2-Dichloropropane	ND		ug/l	1.0	1
Dibromochloromethane	ND		ug/l	1.0	1
1,1,2-Trichloroethane	ND		ug/l	1.0	1
Tetrachloroethene	ND		ug/l	1.0	1
Chlorobenzene	ND		ug/l	1.0	1
1,2-Dichloroethane	ND		ug/l	1.0	1
1,1,1-Trichloroethane	ND		ug/l	1.0	1
Bromodichloromethane	ND		ug/l	1.0	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	1
Bromoform	ND		ug/l	2.0	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	1
Chloromethane	ND		ug/l	2.0	1
Vinyl chloride	ND		ug/l	1.0	1
Chloroethane	ND		ug/l	2.0	1
1,1-Dichloroethene	ND		ug/l	1.0	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	1
Trichloroethene	1.6		ug/l	1.0	1
1,2-Dichlorobenzene	ND		ug/l	1.0	1
1,3-Dichlorobenzene	ND		ug/l	1.0	1
1,4-Dichlorobenzene	ND		ug/l	1.0	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	1
Dichlorodifluoromethane	ND		ug/l	2.0	1
1,2-Dibromoethane	ND		ug/l	2.0	1
1,3-Dichloropropane	ND		ug/l	2.0	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	1

**Project Name:** RAYTHEON WAYLAND**Lab Number:** L1005900**Project Number:** 0114119**Report Date:** 04/29/10**SAMPLE RESULTS**

Lab ID: L1005900-02

Date Collected: 04/22/10 12:45

Client ID: MW-221D-20100422-01

Date Received: 04/22/10

Sample Location: WAYLAND, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>MCP Volatile Organics - Westborough Lab</b>					
o-Chlorotoluene	ND		ug/l	2.0	1
p-Chlorotoluene	ND		ug/l	2.0	1
Hexachlorobutadiene	ND		ug/l	0.60	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	125		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	107		70-130

**Project Name:** RAYTHEON WAYLAND**Lab Number:** L1005900**Project Number:** 0114119**Report Date:** 04/29/10**SAMPLE RESULTS**

**Lab ID:** L1005900-03  
**Client ID:** MW-217M-20100422-01  
**Sample Location:** WAYLAND, MA  
**Matrix:** Water  
**Analytical Method:** 97,8260B  
**Analytical Date:** 04/28/10 15:30  
**Analyst:** PD

**Date Collected:** 04/22/10 10:00  
**Date Received:** 04/22/10  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>MCP Volatile Organics - Westborough Lab</b>					
Methylene chloride	ND		ug/l	5.0	1
1,1-Dichloroethane	1.7		ug/l	1.0	1
Chloroform	ND		ug/l	1.0	1
Carbon tetrachloride	ND		ug/l	1.0	1
1,2-Dichloropropane	ND		ug/l	1.0	1
Dibromochloromethane	ND		ug/l	1.0	1
1,1,2-Trichloroethane	ND		ug/l	1.0	1
Tetrachloroethene	ND		ug/l	1.0	1
Chlorobenzene	ND		ug/l	1.0	1
1,2-Dichloroethane	ND		ug/l	1.0	1
1,1,1-Trichloroethane	ND		ug/l	1.0	1
Bromodichloromethane	ND		ug/l	1.0	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	1
Bromoform	ND		ug/l	2.0	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	1
Chloromethane	ND		ug/l	2.0	1
Vinyl chloride	ND		ug/l	1.0	1
Chloroethane	ND		ug/l	2.0	1
1,1-Dichloroethene	ND		ug/l	1.0	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	1
Trichloroethene	5.3		ug/l	1.0	1
1,2-Dichlorobenzene	1.5		ug/l	1.0	1
1,3-Dichlorobenzene	ND		ug/l	1.0	1
1,4-Dichlorobenzene	ND		ug/l	1.0	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	1
Dichlorodifluoromethane	ND		ug/l	2.0	1
1,2-Dibromoethane	ND		ug/l	2.0	1
1,3-Dichloropropane	ND		ug/l	2.0	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	1

**Project Name:** RAYTHEON WAYLAND**Lab Number:** L1005900**Project Number:** 0114119**Report Date:** 04/29/10**SAMPLE RESULTS**

Lab ID: L1005900-03

Date Collected: 04/22/10 10:00

Client ID: MW-217M-20100422-01

Date Received: 04/22/10

Sample Location: WAYLAND, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>MCP Volatile Organics - Westborough Lab</b>					
o-Chlorotoluene	ND		ug/l	2.0	1
p-Chlorotoluene	ND		ug/l	2.0	1
Hexachlorobutadiene	ND		ug/l	0.60	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	119		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	97		70-130



**Project Name:** RAYTHEON WAYLAND  
**Project Number:** 0114119

**Lab Number:** L1005900  
**Report Date:** 04/29/10

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8260B  
Analytical Date: 04/28/10 13:48  
Analyst: PD

Parameter	Result	Qualifier	Units	RDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-03 Batch: WG410373-3				
Methylene chloride	ND		ug/l	5.0
1,1-Dichloroethane	ND		ug/l	1.0
Chloroform	ND		ug/l	1.0
Carbon tetrachloride	ND		ug/l	1.0
1,2-Dichloropropane	ND		ug/l	1.0
Dibromochloromethane	ND		ug/l	1.0
1,1,2-Trichloroethane	ND		ug/l	1.0
Tetrachloroethene	ND		ug/l	1.0
Chlorobenzene	ND		ug/l	1.0
1,2-Dichloroethane	ND		ug/l	1.0
1,1,1-Trichloroethane	ND		ug/l	1.0
Bromodichloromethane	ND		ug/l	1.0
trans-1,3-Dichloropropene	ND		ug/l	0.50
cis-1,3-Dichloropropene	ND		ug/l	0.50
Bromoform	ND		ug/l	2.0
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0
Chloromethane	ND		ug/l	2.0
Vinyl chloride	ND		ug/l	1.0
Chloroethane	ND		ug/l	2.0
1,1-Dichloroethene	ND		ug/l	1.0
trans-1,2-Dichloroethene	ND		ug/l	1.0
Trichloroethene	ND		ug/l	1.0
1,2-Dichlorobenzene	ND		ug/l	1.0
1,3-Dichlorobenzene	ND		ug/l	1.0
1,4-Dichlorobenzene	ND		ug/l	1.0
cis-1,2-Dichloroethene	ND		ug/l	1.0
Dichlorodifluoromethane	ND		ug/l	2.0
1,2-Dibromoethane	ND		ug/l	2.0
1,3-Dichloropropane	ND		ug/l	2.0
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0
o-Chlorotoluene	ND		ug/l	2.0

**Project Name:** RAYTHEON WAYLAND  
**Project Number:** 0114119

**Lab Number:** L1005900  
**Report Date:** 04/29/10

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8260B  
Analytical Date: 04/28/10 13:48  
Analyst: PD

Parameter	Result	Qualifier	Units	RDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-03 Batch: WG410373-3				
p-Chlorotoluene	ND		ug/l	2.0
Hexachlorobutadiene	ND		ug/l	0.60
1,2,4-Trichlorobenzene	ND		ug/l	2.0

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	101		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** RAYTHEON WAYLAND

**Lab Number:** L1005900

**Project Number:** 0114119

**Report Date:** 04/29/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-03 Batch: WG410373-1 WG410373-2								
Methylene chloride	95		94		70-130	1		20
1,1-Dichloroethane	103		103		70-130	0		20
Chloroform	105		104		70-130	1		20
Carbon tetrachloride	107		105		70-130	2		20
1,2-Dichloropropane	100		100		70-130	0		20
Dibromochloromethane	108		114		70-130	5		20
1,1,2-Trichloroethane	113		116		70-130	3		20
Tetrachloroethene	107		101		70-130	6		20
Chlorobenzene	105		101		70-130	4		20
1,2-Dichloroethane	111		112		70-130	1		20
1,1,1-Trichloroethane	105		103		70-130	2		20
Bromodichloromethane	112		113		70-130	1		20
trans-1,3-Dichloropropene	120		122		70-130	2		20
cis-1,3-Dichloropropene	97		98		70-130	1		20
Bromoform	96		103		70-130	7		20
1,1,2,2-Tetrachloroethane	106		105		70-130	1		20
Chloromethane	90		97		70-130	7		20
Vinyl chloride	102		106		70-130	4		20
Chloroethane	85		90		70-130	6		20
1,1-Dichloroethene	103		102		70-130	1		20
trans-1,2-Dichloroethene	99		98		70-130	1		20

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** RAYTHEON WAYLAND

**Lab Number:** L1005900

**Project Number:** 0114119

**Report Date:** 04/29/10

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-03 Batch: WG410373-1 WG410373-2								
Trichloroethene	97		98		70-130	1		20
1,2-Dichlorobenzene	106		106		70-130	0		20
1,3-Dichlorobenzene	110		107		70-130	3		20
1,4-Dichlorobenzene	107		109		70-130	2		20
cis-1,2-Dichloroethene	106		103		70-130	3		20
Dichlorodifluoromethane	89		90		70-130	1		20
1,2-Dibromoethane	104		108		70-130	4		20
1,3-Dichloropropane	114		115		70-130	1		20
1,1,1,2-Tetrachloroethane	124		119		70-130	4		20
o-Chlorotoluene	107		104		70-130	3		20
p-Chlorotoluene	107		106		70-130	1		20
Hexachlorobutadiene	114		110		70-130	4		20
1,2,4-Trichlorobenzene	109		114		70-130	4		20

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
1,2-Dichloroethane-d4	112		113		70-130
Toluene-d8	104		104		70-130
4-Bromofluorobenzene	94		97		70-130
Dibromofluoromethane	103		104		70-130

## Matrix Spike Analysis

Batch Quality Control

**Project Name:** RAYTHEON WAYLAND

**Lab Number:** L1005900

**Project Number:** 0114119

**Report Date:** 04/29/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG410373-7 WG410373-8 QC Sample: L1005900-03 Client ID: MW-217M-20100422-01												
Methylene chloride	ND	10	9.2	92		8.4	85		70-130	8		20
1,1-Dichloroethane	1.7	10	12	108		11	95		70-130	13		20
Chloroform	ND	10	10	106		9.4	94		70-130	12		20
Carbon tetrachloride	ND	10	12	117		10	100		70-130	16		20
1,2-Dichloropropane	ND	10	10	101		8.9	89		70-130	13		20
Dibromochloromethane	ND	10	11	109		10	100		70-130	9		20
1,1,2-Trichloroethane	ND	10	11	111		9.9	99		70-130	11		20
Tetrachloroethene	ND	10	11	107		9.4	94		70-130	13		20
Chlorobenzene	ND	10	10	101		9.3	94		70-130	7		20
1,2-Dichloroethane	ND	10	12	116		10	102		70-130	13		20
1,1,1-Trichloroethane	ND	10	11	114		10	100		70-130	13		20
Bromodichloromethane	ND	10	12	116		10	101		70-130	14		20
trans-1,3-Dichloropropene	ND	10	12	116		11	106		70-130	9		20
cis-1,3-Dichloropropene	ND	10	9.5	96		8.3	83		70-130	15		20
Bromoform	ND	10	9.5	95		9.2	92		70-130	3		20
1,1,2,2-Tetrachloroethane	ND	10	10	101		10	101		70-130	0		20
Chloromethane	ND	10	9.9	99		9.7	97		70-130	2		20
Vinyl chloride	ND	10	10	103		9.1	91		70-130	12		20
Chloroethane	ND	10	9.9	99		8.0	80		70-130	21	Q	20
1,1-Dichloroethene	ND	10	11	113		10	103		70-130	9		20
trans-1,2-Dichloroethene	ND	10	10	102		9.3	93		70-130	9		20

## Matrix Spike Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Lab Number: L1005900

Project Number: 0114119

Report Date: 04/29/10

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG410373-7 WG410373-8 QC Sample: L1005900-03 Client ID: MW-217M-20100422-01												
Trichloroethene	5.3	10	15	101		14	86		70-130	16		20
1,2-Dichlorobenzene	1.5	10	11	98		11	92		70-130	6		20
1,3-Dichlorobenzene	ND	10	10	100		9.2	92		70-130	8		20
1,4-Dichlorobenzene	ND	10	9.9	99		9.2	92		70-130	7		20
cis-1,2-Dichloroethene	ND	10	11	111		9.9	99		70-130	11		20
Dichlorodifluoromethane	ND	10	8.9	89		8.2	82		70-130	8		20
1,2-Dibromoethane	ND	10	10	104		9.8	98		70-130	6		20
1,3-Dichloropropane	ND	10	11	110		10	104		70-130	6		20
1,1,1,2-Tetrachloroethane	ND	10	12	116		10	101		70-130	14		20
o-Chlorotoluene	ND	10	9.6	97		9.0	90		70-130	7		20
p-Chlorotoluene	ND	10	9.8	99		9.2	92		70-130	7		20
Hexachlorobutadiene	ND	10	10	105		9.7	97		70-130	8		20
1,2,4-Trichlorobenzene	ND	10	9.9	99		9.3	93		70-130	6		20

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
1,2-Dichloroethane-d4	115		116		70-130
4-Bromofluorobenzene	94		95		70-130
Dibromofluoromethane	108		101		70-130
Toluene-d8	101		102		70-130

# **INORGANICS & MISCELLANEOUS**

**Project Name:** RAYTHEON WAYLAND**Lab Number:** L1005900**Project Number:** 0114119**Report Date:** 04/29/10**SAMPLE RESULTS**

**Lab ID:** L1005900-01  
**Client ID:** RUSSWELL-20100422-01  
**Sample Location:** WAYLAND, MA  
**Matrix:** Water

**Date Collected:** 04/22/10 11:00  
**Date Received:** 04/22/10  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab									
Chloride	61		mg/l	1.0	1	-	04/27/10 19:09	1,9251	LA





Project Name: RAYTHEON WAYLAND

Lab Number: L1005900

Project Number: 0114119

Report Date: 04/29/10

**Method Blank Analysis**  
**Batch Quality Control**

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG410029-2								
Chloride	ND	mg/l	1.0	1	-	04/27/10 18:59	1,9251	LA

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** RAYTHEON WAYLAND

**Lab Number:** L1005900

**Project Number:** 0114119

**Report Date:** 04/29/10

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG410029-1								
Chloride	97		-		90-110	-		

**Matrix Spike Analysis**  
Batch Quality Control

**Project Name:** RAYTHEON WAYLAND

**Lab Number:** L1005900

**Project Number:** 0114119

**Report Date:** 04/29/10

<b>Parameter</b>	<b>Native Sample</b>	<b>MS Added</b>	<b>MS Found</b>	<b>MS %Recovery</b>	<b>Qual</b>	<b>MSD Found</b>	<b>MSD %Recovery</b>	<b>Qual</b>	<b>Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG410029-3 QC Sample: L1006013-03 Client ID: MS Sample												
Chloride	82	20	99	85		-	-		58-140	-		7

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** RAYTHEON WAYLAND

**Project Number:** 0114119

**Lab Number:** L1005900

**Report Date:** 04/29/10

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG410029-4 QC Sample: L1006013-03 Client ID: DUP Sample						
Chloride	82	83	mg/l	1		7

Project Name: RAYTHEON WAYLAND

Lab Number: L1005900

Project Number: 0114119

Report Date: 04/29/10

## 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
L1005900-01A	Vial HCl preserved	A	N/A	2.2	Y	Absent	MCP-8260-10(14)
L1005900-01B	Vial HCl preserved	A	N/A	2.2	Y	Absent	MCP-8260-10(14)
L1005900-01C	Plastic 250ml unpreserved	A	7	2.2	Y	Absent	CL-9251(28)
L1005900-02A	Vial HCl preserved	A	N/A	2.2	Y	Absent	MCP-8260-10(14)
L1005900-02B	Vial HCl preserved	A	N/A	2.2	Y	Absent	MCP-8260-10(14)
L1005900-03A	Vial HCl preserved	A	N/A	2.2	Y	Absent	MCP-8260-10(14)
L1005900-03B	Vial HCl preserved	A	N/A	2.2	Y	Absent	MCP-8260-10(14)
L1005900-03C	Vial HCl preserved	A	N/A	2.2	Y	Absent	MCP-8260-10(14)
L1005900-03D	Vial HCl preserved	A	N/A	2.2	Y	Absent	MCP-8260-10(14)
L1005900-03E	Vial HCl preserved	A	N/A	2.2	Y	Absent	MCP-8260-10(14)
L1005900-03F	Vial HCl preserved	A	N/A	2.2	Y	Absent	MCP-8260-10(14)

\*Hold days indicated by values in parentheses

**Project Name:** RAYTHEON WAYLAND  
**Project Number:** 0114119

**Lab Number:** L1005900  
**Report Date:** 04/29/10

## GLOSSARY

### Acronyms

- EPA** - Environmental Protection Agency.
- LCS** - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
- LCS D** - Laboratory Control Sample Duplicate: Refer to LCS.
- MS** - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
- MS D** - Matrix Spike Sample Duplicate: Refer to MS.
- NA** - Not Applicable.
- NC** - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
- NI** - Not Ignitable.
- RDL** - Reported Detection Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RDL 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.

### Terms

**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 five times (5x) 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.
- 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.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- 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. 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 RDL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reported detection limit (RDL) for the sample.

Report Format: Data Usability Report



**Project Name:** RAYTHEON WAYLAND  
**Project Number:** 0114119

**Lab Number:** L1005900  
**Report Date:** 04/29/10

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 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 Woods Hole Labs 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 Woods Hole Labs.

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.



## Certificate/Approval Program Summary

Last revised March 16, 2010 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.  
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

### Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

*Drinking Water* (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Haloacetic Acids, Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB).)

*Wastewater/Non-Potable Water* (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Calcium Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP (Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH.)

*Solid Waste/Soil* (Inorganic Parameters: Lead in Paint, pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), Reactivity. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP (Silvex), Volatile Organics, Acid Extractables (Phenols), 3,3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

### Maine Department of Human Services Certificate/Lab ID: 2009024.

*Drinking Water* (Inorganic Parameters: SM9215B, 9221E, 9222B, 9222D, 9223B, EPA 180.1, 300.0, 353.2, SM2130B, 2320B, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1. Organic Parameters: 504.1, 524.2, SM 6251B.)

*Wastewater/Non-Potable Water* (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. Organic Parameters: 608, 624.)

### Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

*Drinking Water*

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), 314.0, 332.

Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; MF-SM9222D

*Non-Potable Water*

Inorganic Parameters: (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

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

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCBs-Water), EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables, 600/4-81-045-PCB-Oil



**New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. *NELAP Accredited.***

*Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 120.1, 300.0, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: 504.1, 524.2, SM6251B.)*

*Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 351.1, 353.2, 420.1, 1664A, SW-846 9010, 9030, 9040B, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-C, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)*

*Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)*

**New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. *NELAP Accredited.***

*Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, SM2120B, 2510B, 5310C, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)*

*Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330, NJ OQA-QAM-025 Rev.7.)*

*Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 1312, 3540C, 3545, 3550B, 3580A, 5035L, 5035H, NJ OQA-QAM-025 Rev.7.)*

**New York Department of Health Certificate/Lab ID: 11148. *NELAP Accredited.***

*Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)*

*Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, LACHAT 10-117-07-1A or B, SM4500CI-E, 4500F-C, SM15 426C, EPA 350.1, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, SM4500-CN-E LACHAT 10-204-00-1-A, EPA 9040B, SM4500-HB, EPA 1664A, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, EPA 3510C, 5030B, 9010B, 9030B.)*

*Solid & Hazardous Waste (Inorganic Parameters: 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 3540C, 3545, 3546, 3580, 5030B, 5035.)*

**North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. *Organic Parameters: MA-EPH, MA-VPH.*****Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. *NELAP Accredited.***

*Non-Potable Water (Organic Parameters: EPA 3510C, 5030B, 625, 624. 608, 8081A, 8082, 8151A, 8260B, 8270C, 8330)*

*Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, 1311, 3050B, 3051, 6010B, EPA 7.3.3.2, EPA 7.3.4.2, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065. Organic Parameters: 3540C, 3545, 3580A, 5035, 8021B, 8081A, 8082, 8151A, 8260B, 8270C, 8330)*

**Rhode Island Department of Health Certificate/Lab ID: LAO00065. *NELAP Accredited via NY-DOH.***

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NY-DOH Certificate for Potable and Non-Potable Water.

**Texas Commission on Environmental Quality** Certificate/Lab ID: T104704476-09-1. NELAP Accredited.

*Non-Potable Water* (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 376.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH3-H, 4500NO2B, 4500P-E, 4500 S<sup>2-</sup> D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

**Utah Department of Health** Certificate/Lab ID: AAMA. NELAP Accredited.

*Non-Potable Water* (Inorganic Parameters: Chloride EPA 300.0)

**Department of Defense** Certificate/Lab ID: L2217.

*Drinking Water* (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

*Non-Potable Water* (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6020, 245.1, 245.2, 7470A, 9040B, 300.0, 9251, 9038, 350.1, 353.2, 351.1, 314, 120.1, 9050A, 410.4, 9060, 1664, 420.1, LCHAT 10-107-06-1-B, SM 4500CN-E, 4500H-B, 4500CL-E, 4500F-BC, 4500SO4-E, 426C, 4500NH3-B, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500Norg-C, 4500PE, 2510B, 5540C, 5220D, 5310C, 2540B, 2540C, 2540D, 510C, 4500S2-AD, 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8330, 625, 8082, 8151A, 8081A, 3510C, 5030B.)

*Solid & Hazardous Waste* (Inorganic Parameters: EPA 200.7, 6010B, 7471A, 9040B, 9045C, 9065, 420.1, 9012A, 6860, 1311, 1312, 3050B, 9030B, 3051, 9010B, 3540C, SM 510ABC, 4500CN-CE, 2540G, SW-846 7.3, Organic Parameters: EPA 8260B, 8270C, 8330, 8082, 8081A, 8151A, 3545, 3546, 3580, 5035.)

**Analytes Not Accredited by NELAP**

Certification is not available by NELAP for the following analytes: **EPA 8260B**: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A**: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C**: Methyl naphthalene, Dimethyl naphthalene, Total Methyl naphthalenes, Total Dimethyl naphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625**: 4-Chloroaniline. **EPA 350.1** for Ammonia in a Soil matrix.



# CHAIN OF CUSTODY

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

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

### Client Information

Client: **ERM**  
Address: **399 Boston Street**  
**1st Floor Boston, MA 02116**  
Phone: **(617) 646-7800**  
Fax: **(617) 267-6447**  
Email: **jason.flattery@erm.com**

These samples have been previously analyzed by Alpha  
Other Project Specific Requirements/Comments/Detection Limits:  
Date Due: **4/29/10** Time:  
 Standard  RUSH (only confirmed if pre-approved)

### Project Information

Project Name: **Roughness Wayland**  
Project Location: **Wayland, MA**  
Project #: **0114119**  
Project Manager: **Jason Flattery**  
ALPHA Quote #:

### Turn-Around Time

Date Rec'd in Lab: **4/22/10**

ALPHA Job #: **21005900**

### Report Information - Data Deliverables

FAX  EMAIL  
 BADEX  Add'l Deliverables

### Billing Information

Same as Client info PO #:

### Regulatory Requirements/Report Limits

State/Fed Program: **MA MCP** Criteria: **GW-1**

**ANALYSIS**  
**Chloride (total)**  
**80216 by 8260**

**SAMPLE HANDLING**  
Filtration \_\_\_\_\_  
 Done  
 Not needed  
 Lab to do  
Preservation \_\_\_\_\_  
 Lab to do  
(Please specify below)  
Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Samplers Initials	Container Type	Preservative	Relinquished By:	Date/Time	Received By:	Date/Time
		Date	Time								
05900 . 1	RUSSELL-20100422-01	4/22/10	1150	GW	EW	P		<i>[Signature]</i>	4/22/10 1505	<i>[Signature]</i>	4/22/10 1740
2	MW-221D-20100422-01	4/22/10	1245	GW	EW	A		<i>[Signature]</i>	4/22/10 1505	<i>[Signature]</i>	4/22/10 1830
3	MW-217M-20100422-01	4/22/10	1000	GW	EW	B		<i>[Signature]</i>	4/22/10 1505	<i>[Signature]</i>	4/22/10 1830
3	MW-217M-20100422-01-MS	4/22/10	1000	GW	EW			<i>[Signature]</i>	4/22/10 1505	<i>[Signature]</i>	4/22/10 1830
3	MW-217M-20100422-01-MSD	4/22/10	1000	GW	EW			<i>[Signature]</i>	4/22/10 1505	<i>[Signature]</i>	4/22/10 1830

Relinquished By: *[Signature]* Date/Time: 4/22/10 1505  
 Received By: *[Signature]* Date/Time: 4/22/10 1740  
*[Signature]* Date/Time: 4/22/10 1830

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.