

**Environmental
Resources
Management**

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

9 June 2009
Reference: 0095922

Mr. Robert Schelmerdeine
Wayland Meadows Development Inc.
2 Washington Street
Foxboro, MA 02035



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

Dear Mr. Schelmerdeine:

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

ERM collected groundwater samples from three wells on portions of the Site within the boundaries of your property on 13 and 17 April 2009. The samples were submitted for one or more of the following analyses; volatile organic compounds, total organic carbon, total phosphorus, dissolved iron, dissolved manganese, chloride, sulfate, nitrogen as nitrate, alkalinity, and dissolved ethane, ethene, and methane gases. Sample analyses were conducted by Alpha Analytical, Inc. of Westborough, Massachusetts and Microseeps, Inc. of Pittsburgh, Pennsylvania. 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 MCP 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 (username = raytheon, password = wayland).

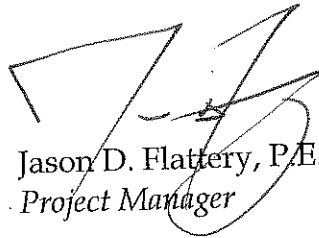
Mr. Schelmerdeine
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If you have any questions or comments, please contact the undersigned at (617) 646-7800 or Louis Burkhardt, Raytheon Company, at (978) 436-8238.

Sincerely,



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



Jason D. Flattery, P.E.
Project Manager

enclosures: BWSC-123 - Notice of Environmental Sampling

cc: 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 22408

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: Wayland Meadows Development Inc.
2. Street Address: 2 Washington Street
City/Town: Foxboro Zip Code: 02035

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:	L0905375
Client:	ERM Consulting & Engineering, Inc. 399 Boylston Street 6th Floor Boston, MA 02116
ATTN:	Jason Flattery
Project Name:	RAYTHEON WAYLAND
Project Number:	0095922
Report Date:	05/05/09

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.

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



Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0905375
Report Date: 05/05/09

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L0905375-01	MW-264M-20090413-01	WAYLAND, MA	04/13/09 16:25
L0905375-02	DUP-011-20090413-01	WAYLAND, MA	04/13/09 16:25

Project Name: RAYTHEON WAYLAND

Lab Number: L0905375

Project Number: 0095922

Report Date: 05/05/09

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, B, C & D is required for "Presumptive Certainty" status		
A	Were all samples received by the laboratory in a condition consistent with those described on their Chain-of-Custody documentation for the data set?	YES
B	Were all QA/QC procedures required for the specified analytical methods(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?	YES
C	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty", as described in section 2.0 of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	YES
D	VPH and EPH methods only: Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?	N/A
A response to questions E and F is required for "Presumptive Certainty" status		
E	Were all QC performance standards and recommendations for the specified method(s) achieved?	YES
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?	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: 0095922

Lab Number: L0905375
Report Date: 05/05/09

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.

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

Sample Receipt

The samples were Field Filtered for Dissolved Metals only.

Volatile Organics

In reference to question F:

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

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0905375
Report Date: 05/05/09

Case Narrative (continued)

Metals

In reference to question F:

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

Non-MCP Related Narratives

Nitrate

L0905375-01 and -02 have elevated detection limits due to the dilutions required by the sample matrix.

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

Authorized Signature:



Title: Technical Director/Representative

Date: 05/05/09

ORGANICS

VOLATILES

Project Name: RAYTHEON WAYLAND**Lab Number:** L0905375**Project Number:** 0095922**Report Date:** 05/05/09**SAMPLE RESULTS**

Lab ID: L0905375-01
Client ID: MW-264M-20090413-01
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 60,8260B
Analytical Date: 04/16/09 21:36
Analyst: GK

Date Collected: 04/13/09 16:25
Date Received: 04/13/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
MCP Volatile Organics - Westborough Lab					
Methylene chloride	ND		ug/l	5.0	1
1,1-Dichloroethane	ND		ug/l	0.75	1
Chloroform	ND		ug/l	0.75	1
Carbon tetrachloride	ND		ug/l	0.50	1
1,2-Dichloropropane	ND		ug/l	1.8	1
Dibromochloromethane	ND		ug/l	0.50	1
1,1,2-Trichloroethane	ND		ug/l	0.75	1
Tetrachloroethene	9.9		ug/l	0.50	1
Chlorobenzene	ND		ug/l	0.50	1
1,2-Dichloroethane	ND		ug/l	0.50	1
1,1,1-Trichloroethane	ND		ug/l	0.50	1
Bromodichloromethane	ND		ug/l	0.50	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	0.50	1
Chloromethane	ND		ug/l	2.5	1
Vinyl chloride	4.4		ug/l	1.0	1
Chloroethane	ND		ug/l	1.0	1
1,1-Dichloroethene	ND		ug/l	0.50	1
trans-1,2-Dichloroethene	0.80		ug/l	0.75	1
Trichloroethene	43		ug/l	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.5	1
1,3-Dichlorobenzene	ND		ug/l	2.5	1
1,4-Dichlorobenzene	ND		ug/l	2.5	1
cis-1,2-Dichloroethene	58		ug/l	0.50	1
Dichlorodifluoromethane	ND		ug/l	5.0	1
1,2-Dibromoethane	ND		ug/l	2.0	1
1,3-Dichloropropane	ND		ug/l	2.5	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	1

Project Name: RAYTHEON WAYLAND**Lab Number:** L0905375**Project Number:** 0095922**Report Date:** 05/05/09**SAMPLE RESULTS**

Lab ID: L0905375-01

Date Collected: 04/13/09 16:25

Client ID: MW-264M-20090413-01

Date Received: 04/13/09

Sample Location: WAYLAND, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
MCP Volatile Organics - Westborough Lab					
o-Chlorotoluene	ND		ug/l	2.5	1
p-Chlorotoluene	ND		ug/l	2.5	1
Hexachlorobutadiene	ND		ug/l	0.60	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	116		70-130

Project Name: RAYTHEON WAYLAND**Lab Number:** L0905375**Project Number:** 0095922**Report Date:** 05/05/09**SAMPLE RESULTS**

Lab ID: L0905375-02
Client ID: DUP-011-20090413-01
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 60,8260B
Analytical Date: 04/16/09 22:08
Analyst: GK

Date Collected: 04/13/09 16:25
Date Received: 04/13/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
MCP Volatile Organics - Westborough Lab					
Methylene chloride	ND		ug/l	5.0	1
1,1-Dichloroethane	ND		ug/l	0.75	1
Chloroform	ND		ug/l	0.75	1
Carbon tetrachloride	ND		ug/l	0.50	1
1,2-Dichloropropane	ND		ug/l	1.8	1
Dibromochloromethane	ND		ug/l	0.50	1
1,1,2-Trichloroethane	ND		ug/l	0.75	1
Tetrachloroethene	10		ug/l	0.50	1
Chlorobenzene	ND		ug/l	0.50	1
1,2-Dichloroethane	ND		ug/l	0.50	1
1,1,1-Trichloroethane	ND		ug/l	0.50	1
Bromodichloromethane	ND		ug/l	0.50	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	0.50	1
Chloromethane	ND		ug/l	2.5	1
Vinyl chloride	4.4		ug/l	1.0	1
Chloroethane	ND		ug/l	1.0	1
1,1-Dichloroethene	ND		ug/l	0.50	1
trans-1,2-Dichloroethene	0.76		ug/l	0.75	1
Trichloroethene	43		ug/l	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.5	1
1,3-Dichlorobenzene	ND		ug/l	2.5	1
1,4-Dichlorobenzene	ND		ug/l	2.5	1
cis-1,2-Dichloroethene	59		ug/l	0.50	1
Dichlorodifluoromethane	ND		ug/l	5.0	1
1,2-Dibromoethane	ND		ug/l	2.0	1
1,3-Dichloropropane	ND		ug/l	2.5	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	1

Project Name: RAYTHEON WAYLAND**Lab Number:** L0905375**Project Number:** 0095922**Report Date:** 05/05/09**SAMPLE RESULTS**

Lab ID: L0905375-02

Date Collected: 04/13/09 16:25

Client ID: DUP-011-20090413-01

Date Received: 04/13/09

Sample Location: WAYLAND, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
MCP Volatile Organics - Westborough Lab					
o-Chlorotoluene	ND		ug/l	2.5	1
p-Chlorotoluene	ND		ug/l	2.5	1
Hexachlorobutadiene	ND		ug/l	0.60	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	119		70-130

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0905375
Report Date: 05/05/09

Method Blank Analysis
Batch Quality Control

Analytical Method: 60,8260B
Analytical Date: 04/16/09 16:13
Analyst: GK

Parameter	Result	Qualifier	Units	RDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-02 Batch: WG360927-3				
Methylene chloride	ND		ug/l	5.0
1,1-Dichloroethane	ND		ug/l	0.75
Chloroform	ND		ug/l	0.75
Carbon tetrachloride	ND		ug/l	0.50
1,2-Dichloropropane	ND		ug/l	1.8
Dibromochloromethane	ND		ug/l	0.50
1,1,2-Trichloroethane	ND		ug/l	0.75
Tetrachloroethene	ND		ug/l	0.50
Chlorobenzene	ND		ug/l	0.50
1,2-Dichloroethane	ND		ug/l	0.50
1,1,1-Trichloroethane	ND		ug/l	0.50
Bromodichloromethane	ND		ug/l	0.50
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	0.50
Chloromethane	ND		ug/l	2.5
Vinyl chloride	ND		ug/l	1.0
Chloroethane	ND		ug/l	1.0
1,1-Dichloroethene	ND		ug/l	0.50
trans-1,2-Dichloroethene	ND		ug/l	0.75
Trichloroethene	ND		ug/l	0.50
1,2-Dichlorobenzene	ND		ug/l	2.5
1,3-Dichlorobenzene	ND		ug/l	2.5
1,4-Dichlorobenzene	ND		ug/l	2.5
cis-1,2-Dichloroethene	ND		ug/l	0.50
Dichlorodifluoromethane	ND		ug/l	5.0
1,2-Dibromoethane	ND		ug/l	2.0
1,3-Dichloropropane	ND		ug/l	2.5
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50
o-Chlorotoluene	ND		ug/l	2.5

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0905375
Report Date: 05/05/09

Method Blank Analysis
Batch Quality Control

Analytical Method: 60,8260B
Analytical Date: 04/16/09 16:13
Analyst: GK

Parameter	Result	Qualifier	Units	RDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-02 Batch: WG360927-3				
p-Chlorotoluene	ND		ug/l	2.5
Hexachlorobutadiene	ND		ug/l	0.60
1,2,4-Trichlorobenzene	ND		ug/l	2.5

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	117		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Lab Number: L0905375

Project Number: 0095922

Report Date: 05/05/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-02 Batch: WG360927-1 WG360927-2					
Methylene chloride	104	108	70-130	4	25
1,1-Dichloroethane	106	110	70-130	4	25
Chloroform	108	110	70-130	2	25
Carbon tetrachloride	102	107	70-130	5	25
1,2-Dichloropropane	102	102	70-130	0	25
Dibromochloromethane	104	101	70-130	3	25
1,1,2-Trichloroethane	100	97	70-130	3	25
Tetrachloroethene	119	120	70-130	1	25
Chlorobenzene	100	104	70-130	4	25
1,2-Dichloroethane	113	114	70-130	1	25
1,1,1-Trichloroethane	108	111	70-130	3	25
Bromodichloromethane	109	112	70-130	3	25
trans-1,3-Dichloropropene	91	91	70-130	0	25
cis-1,3-Dichloropropene	87	89	70-130	2	25
Bromoform	120	120	70-130	0	50
1,1,2,2-Tetrachloroethane	89	88	70-130	1	25
Chloromethane	87	86	70-130	1	50
Vinyl chloride	92	94	70-130	2	25
Chloroethane	103	107	70-130	4	25
1,1-Dichloroethene	110	110	70-130	0	25
trans-1,2-Dichloroethene	112	126	70-130	12	25

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Lab Number: L0905375

Project Number: 0095922

Report Date: 05/05/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-02 Batch: WG360927-1 WG360927-2					
Trichloroethene	108	109	70-130	1	25
1,2-Dichlorobenzene	97	99	70-130	2	25
1,3-Dichlorobenzene	98	101	70-130	3	25
1,4-Dichlorobenzene	98	101	70-130	3	25
cis-1,2-Dichloroethene	108	108	70-130	0	25
Dichlorodifluoromethane	88	95	70-130	8	50
1,2-Dibromoethane	101	103	70-130	2	25
1,3-Dichloropropane	99	101	70-130	2	25
1,1,1,2-Tetrachloroethane	100	100	70-130	0	25
o-Chlorotoluene	90	93	70-130	3	25
p-Chlorotoluene	94	97	70-130	3	25
Hexachlorobutadiene	114	124	70-130	8	25
1,2,4-Trichlorobenzene	107	110	70-130	3	25

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		110		70-130
Toluene-d8	101		102		70-130
4-Bromofluorobenzene	91		94		70-130
Dibromofluoromethane	115		114		70-130

METALS

Project Name: RAYTHEON WAYLAND**Lab Number:** L0905375**Project Number:** 0095922**Report Date:** 05/05/09**SAMPLE RESULTS**

Lab ID: L0905375-01

Date Collected: 04/13/09 16:25

Client ID: MW-264M-20090413-01

Date Received: 04/13/09

Sample Location: WAYLAND, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab										
Iron, Dissolved	15		mg/l	0.05	1	04/14/09 11:30	04/16/09 15:47	EPA 3005A	60,6010B	AI
Manganese, Dissolved	0.161		mg/l	0.010	1	04/14/09 11:30	04/16/09 15:47	EPA 3005A	60,6010B	AI



Project Name: RAYTHEON WAYLAND**Lab Number:** L0905375**Project Number:** 0095922**Report Date:** 05/05/09**SAMPLE RESULTS**

Lab ID: L0905375-02

Date Collected: 04/13/09 16:25

Client ID: DUP-011-20090413-01

Date Received: 04/13/09

Sample Location: WAYLAND, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab										
Iron, Dissolved	15		mg/l	0.05	1	04/14/09 11:30	04/16/09 15:50	EPA 3005A	60,6010B	AI
Manganese, Dissolved	0.161		mg/l	0.010	1	04/14/09 11:30	04/16/09 15:50	EPA 3005A	60,6010B	AI



Project Name: RAYTHEON WAYLAND

Lab Number: L0905375

Project Number: 0095922

Report Date: 05/05/09

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab for sample(s): 01-02 Batch: WG358828-1								
Iron, Dissolved	ND	mg/l	0.05	1	04/14/09 11:30	04/16/09 14:48	60,6010B	AI
Manganese, Dissolved	ND	mg/l	0.010	1	04/14/09 11:30	04/16/09 14:48	60,6010B	AI

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Project Number: 0095922

Lab Number: L0905375

Report Date: 05/05/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Dissolved Metals - Westborough Lab Associated sample(s): 01-02 Batch: WG358828-2 WG358828-3					
Iron, Dissolved	110	120	80-120	9	20
Manganese, Dissolved	104	106	80-120	2	20

INORGANICS & MISCELLANEOUS

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0905375
Report Date: 05/05/09

SAMPLE RESULTS

Lab ID: L0905375-01
Client ID: MW-264M-20090413-01
Sample Location: WAYLAND, MA
Matrix: Water

Date Collected: 04/13/09 16:25
Date Received: 04/13/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab									
Alkalinity, Total	76		mg CaCO3/L	2.0	1	-	04/14/09 10:00	30,2320B	SD
Chloride	19		mg/l	1.0	1	-	04/15/09 18:50	1,9251	DD
Nitrogen, Nitrate	ND		mg/l	0.50	5	-	04/15/09 00:34	30,4500NO3-F	DD
Phosphorus, Total	0.107		mg/l	0.010	1	-	04/15/09 17:37	30,4500P-E	NM
Sulfate	32		mg/l	10	1	04/15/09 10:30	04/15/09 10:30	1,9038	SD
Total Organic Carbon	1.1		mg/l	0.50	1	-	04/20/09 05:37	1,9060	DW



Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0905375
Report Date: 05/05/09

SAMPLE RESULTS

Lab ID: L0905375-02
Client ID: DUP-011-20090413-01
Sample Location: WAYLAND, MA
Matrix: Water

Date Collected: 04/13/09 16:25
Date Received: 04/13/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab									
Alkalinity, Total	78		mg CaCO3/L	2.0	1	-	04/14/09 10:00	30,2320B	SD
Chloride	19		mg/l	1.0	1	-	04/15/09 18:51	1,9251	DD
Nitrogen, Nitrate	ND		mg/l	0.50	5	-	04/15/09 00:35	30,4500NO3-F	DD
Phosphorus, Total	0.069		mg/l	0.010	1	-	04/15/09 17:38	30,4500P-E	NM
Sulfate	32		mg/l	10	1	04/15/09 10:30	04/15/09 10:30	1,9038	SD
Total Organic Carbon	1.1		mg/l	0.50	1	-	04/20/09 05:37	1,9060	DW



Project Name: RAYTHEON WAYLAND

Lab Number: L0905375

Project Number: 0095922

Report Date: 05/05/09

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): 01-02 Batch: WG360791-2								
Chloride	ND	mg/l	1.0	1	-	04/15/09 18:38	1,9251	DD
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG360945-2								
Nitrogen, Nitrate	ND	mg/l	0.10	1	-	04/14/09 23:37	30,4500NO3-F	DD
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG361011-1								
Phosphorus, Total	ND	mg/l	0.010	1	-	04/15/09 17:31	30,4500P-E	NM
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG361062-1								
Alkalinity, Total	ND	mg CaCO3/L	2.0	1	-	04/14/09 10:00	30,2320B	SD
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG361063-1								
Sulfate	ND	mg/l	10	1	04/15/09 10:30	04/15/09 10:30	1,9038	SD
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG361075-1								
Total Organic Carbon	ND	mg/l	0.50	1	-	04/20/09 05:37	1,9060	DW

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Project Number: 0095922

Lab Number: L0905375

Report Date: 05/05/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG360791-1					
Chloride	100	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG360945-1					
Nitrogen, Nitrate	98	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG361011-2					
Phosphorus, Total	107	-	85-115	-	
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG361062-2					
Alkalinity, Total	101	-	80-115	-	4
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG361063-2					
Sulfate	110	-	90-115	-	
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG361075-2					
Total Organic Carbon	101	-	90-110	-	

Matrix Spike Analysis Batch Quality Control

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0905375
Report Date: 05/05/09

Parameter	Native Sample	MS Added	MS Found	MS		MSD		Recovery Limits	RPD	RPD Limits
				%Recovery	MSD Found	%Recovery				
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG360791-3 QC Sample: L0904002-43 Client ID: MS Sample										
Chloride	17	20	36	95	-	-	58-140	-	7	
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG360945-3 QC Sample: L0905492-01 Client ID: MS Sample										
Nitrogen, Nitrate	4.7	4	8.7	100	-	-	83-120	-	6	
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG361011-3 QC Sample: L0905492-04 Client ID: MS Sample										
Phosphorus, Total	0.019	0.5	0.522	101	-	-	80-120	-	20	
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG361062-3 QC Sample: L0905492-08 Client ID: MS Sample										
Alkalinity, Total	6.2	100	110	100	-	-	86-116	-	4	
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG361063-3 QC Sample: L0905492-07 Client ID: MS Sample										
Sulfate	12	20	37	125	-	-	55-147	-	14	
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG361075-3 QC Sample: L0905492-09 Client ID: MS Sample										
Total Organic Carbon	31	40	69	96	-	-	80-120	-	20	

Lab Duplicate Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Project Number: 0095922

Lab Number: L0905375

Report Date: 05/05/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG360791-4 QC Sample: L0904002-43 Client ID: DUP Sample					
Chloride	17	16	mg/l	6	7
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG360945-4 QC Sample: L0905492-01 Client ID: DUP Sample					
Nitrogen, Nitrate	4.7	4.7	mg/l	0	6
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG361011-4 QC Sample: L0905492-04 Client ID: DUP Sample					
Phosphorus, Total	0.019	0.021	mg/l	10	20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG361062-4 QC Sample: L0905375-02 Client ID: DUP-011-20090413-01					
Alkalinity, Total	78	77	mg CaCO3/L	1	4
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG361063-4 QC Sample: L0905492-07 Client ID: DUP Sample					
Sulfate	12	12	mg/l	0	14
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG361075-4 QC Sample: L0905492-09 Client ID: DUP Sample					
Total Organic Carbon	31	31	mg/l	0	20

Project Name: RAYTHEON WAYLAND**Project Number:** 0095922**Lab Number:** L0905375**Report Date:** 05/05/09**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0905375-01A	Vial HCl preserved	A	N/A	2.9	Y	Absent	MCP-8260-04(14)
L0905375-01B	Vial HCl preserved	A	N/A	2.9	Y	Absent	MCP-8260-04(14)
L0905375-01C	Vial H2SO4 preserved	A	N/A	2.9	Y	Absent	TOC-9060(28)
L0905375-01D	Vial H2SO4 preserved	A	N/A	2.9	Y	Absent	TOC-9060(28)
L0905375-01E	Plastic 500ml unpreserved	A	7	2.9	Y	Absent	CL-9251(28),SO4-9038(28),NO3-4500(2)
L0905375-01F	Plastic 250ml H2SO4 preserved	A	<2	2.9	Y	Absent	TPHOS-4500(28)
L0905375-01G	Plastic 250ml HNO3 preserved	A	<2	2.9	Y	Absent	MCP-FE-6010S(180),MCP-MN-6010S(180)
L0905375-01H	Plastic 250ml unpreserved	A	7	2.9	Y	Absent	ALK-T-2320(14)
L0905375-02A	Vial HCl preserved	A	N/A	2.9	Y	Absent	MCP-8260-04(14)
L0905375-02B	Vial HCl preserved	A	N/A	2.9	Y	Absent	MCP-8260-04(14)
L0905375-02C	Vial H2SO4 preserved	A	N/A	2.9	Y	Absent	TOC-9060(28)
L0905375-02D	Vial H2SO4 preserved	A	N/A	2.9	Y	Absent	TOC-9060(28)
L0905375-02E	Plastic 500ml unpreserved	A	7	2.9	Y	Absent	CL-9251(28),SO4-9038(28),NO3-4500(2)
L0905375-02F	Plastic 250ml H2SO4 preserved	A	<2	2.9	Y	Absent	TPHOS-4500(28)
L0905375-02G	Plastic 250ml HNO3 preserved	A	<2	2.9	Y	Absent	MCP-FE-6010S(180),MCP-MN-6010S(180)
L0905375-02H	Plastic 250ml unpreserved	A	7	2.9	Y	Absent	ALK-T-2320(14)

*Hold days indicated by values in parentheses

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0905375
Report Date: 05/05/09

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.
- LCSD** - 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.
- 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.
- ND** - Not detected at the reported detection limit for the sample.
- 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

- *** - The batch duplicate RPD exceeds the acceptance criteria. This flag is not applicable when the sample concentrations are less than 5x the RDL. (Metals only.)
- 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.
- 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.
- N** - The matrix spike recovery exceeds the acceptance criteria. This flag is not applicable when the sample concentration is greater than 4x the spike added. (Metals only.)
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- 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).

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0905375
Report Date: 05/05/09

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 60 Quality Assurance and Quality Control Requirements and Performance Standards for SW-846 Methods. MADEP BWSC. WSC-CAM-IIA (Revision 4), WSC-CAM-V C (Revision 2), WSC-CAM-IIIA (Revision 5). May 2004.

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 February 18, 2009 - 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.

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.)

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), 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: MA0086.

Drinking Water (Inorganic Parameters: SM9215B, 9221E, 9222B, 9222D, 9223B, EPA 150.1, 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, Nitrite-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, EPA 150.1, SM4500H-B.

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

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), SM6251B, 314.0.

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, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Nitrate-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, 4500CN-CE, 2540D, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1

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

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCB-Water) 600/4-81-045-PCB-Oil

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.*Drinking Water*

Microbiology Parameters: SM9215B; MF-SM9222B; ENZ. SUB. SM9223; EC-SM9221E; MF-SM9222D; ENZ. SUB. SM9223;

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

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 110.2, 120.1, 150.1, 300.0, 325.2, 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, 150.1, 300.0, 305.1, 310.1, 325.2, 340.2, 350.1, 350.2, 351.1, 353.2, 354.1, 365.2, 375.4, 376.2, 405.1, 415.1, 420.1, 425.1, 1664A, SW-846 9010, 9030, 9040B, EPA 160.1, 160.2, 160.3, 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.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO₃-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, 331.0, 110.2, SM2120B, 2510B, 5310C, EPA 150.1, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.1, 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, EPA 350.2/1, 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.)

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, 3540C, 3545, 3550B, 3580A, 5035L, 5035H.)

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

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 8215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 331.0, SM2320B, EPA 300.0, 325.2, 110.2, SM2120B, 4500CN-E, 4500F-C, EPA 150.1, SM4500H-B, 4500NO₃-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, EPA 405.1, SM5210B, EPA 410.4, SM5220D, EPA 305.1, SM2310B-4a, EPA 310.1, SM2320B, EPA 200.7, 300.0, 325.2, LACHAT 10-117-07-1A or B, SM4500CI-E, EPA 340.2, SM4500F-C, EPA 375.4, SM15 426C, EPA 350.1, 350.2, 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-NO₃F, EPA 354.1, SM4500-NO₂-B, EPA 365.2, SM4500P-E, EPA 160.3, SM2540B, EPA 160.1, SM2540C, EPA 160.2, SM2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, 110.2, SM2120B, 335.2, LACHAT 10-204-00-1-A, EPA 150.1, 9040B, SM4500-HB, EPA 1664A, EPA 415.1, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, EPA 376.2, SM4500S-D, EPA 425.1, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, 8021B, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 3005A, 3050B, 3051, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 8021B, 3540C, 3545, 3580, 5030B, 5035.)

Analytical Services Protocol: CLP Volatile Organics, CLP Inorganics, CLP PCB/Pesticides.

Rhode Island Department of Health Certificate/Lab ID: LAO00065.

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

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

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. Registered Laboratory.



CHAIN OF CUSTODY

PAGE _____ OF _____

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

MANSFIELD, MA
TEL: 508-822-8300
FAX: 508-822-3298

Client Information

Client: **ERM**

Address:

Phone:

Fax:

Email:

Project Information

Project Name: **Raytheon Weyland**

Project Location: **Weyland, MA**

Project #: **0095922**

Project Manager: **J. Flaherty**

ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)

Date Due: **5/4/09** Time:

Other Project Specific Requirements/Comments/Detection Limits:
Relog at L090518-09, 10

Date Rec'd in Lab: **4/13/09**

ALPHA Job #: **L0905375**

Report Information - Data Deliverables

FAX EMAIL

ADEX Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: **MA MCP** Criteria: **Low**

MA MCP PRESUMPTIVE CERTAINTY ... CT REASONABLE CONFIDENCE PROTO-

Yes No Are MCP Analytical Methods Required?

Yes No Are CT RCP (Reasonable Confidence Protocol(s)) Required?

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Time	Sample Matrix	Sampler's Initials	ANALYSIS	Received By:	Date/Time	Sample Specific Comments
05375	1 MW-241A	20090413-01	4/13/09	Gas		8260 (BUTK only) 1,4-Dioxane TOL T. Phos Diss Fe+Mn NO3, SO4, CL Alkalinity	<i>[Signature]</i>	4/29/09	
	2 DUP-011-20090413-01						<i>[Signature]</i>		

PLEASE ANSWER QUESTIONS ABOVE!

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

Relinquished By:

Container Type
Preservative

Received By:

Date/Time

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



CHAIN OF CUSTODY

PAGE 1 of 1

WESTBORO, MA
 TEL: 508-898-8220
 FAX: 508-898-9183

NANSFIELD, MA
 TEL: 508-822-8300
 FAX: 508-822-3286

Client Information

Client: ERM

Address: 399 Boylston St.

City: Woburn Boston, MA

Phone: (617) 646-7800

Fax: (617) 267-6447

Email: barbar.frost@erm.com

Project Information

Project Name: Baytheon Weyland

Project Location: Weyland, MA

Project #: 0095922

Project Manager: Jason Flattery

ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)
 Date Due: 4/20/09 Time:

Other Project Specific Requirements/Comments/Detection Limits:

Report Information - Data Deliverables

FAX EMAIL

RADER RADER Deliverables

Regulatory Requirements/Report Limits

State/Fed Program MA MCP Criteria GW2

MA MCP PRESUMPTIVE CERTAINTY ... CT REASONABLE CONFIDENCE PROTO.

Are MCP Analytical Methods Required? Yes No

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

Billing Information

Same as Client info PO #:

ANALYSIS
 8021 B by 8260
 44 Dioxane
 TOC
 T Phos.
 Diss. Fe + Mn
 NO₃ / SO₄ / Cl
 Alkalinity

SAMPLE HANDLING
 Filtration Done for F&T/MA
 Not needed
 Lab to do
 Lab to do
 Lab to do
 (Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Container Type		Preservative		Date/Time	Date/Time	Sample Specific Comments
		Date	Time			Presservative	Presservative					
04518	MW-540-20090413-01	4/13/09	1510	GW	EW	2	2	1	1	1	1	8
	MW-269MA-20090413-01		1415	GW	CC	2	2	1	1	1	1	8
	DUP-310-20090413-01		1111	GW	EW	2	2	1	1	1	1	10
	MW-265M-20090413-01		1430	GW	PD	2	2	1	1	1	1	8
	TB-001-20090413-01	4/13/09	1300	-	DS	2	2	1	1	1	1	8
	MW-268D-20090413-01	4/13/09	1430	GW	HEA	2	2	1	1	1	1	8
	MW-553-20090413-01		1535		JN	2	2	1	1	1	1	8
	MW-261S-20090413-01		1340		JN	2	2	1	1	1	1	10
	MW-264M-20090413-01		1625		TPD	2	2	1	1	1	1	10
	DUP-011-20090413-01		1625		SPD	2	2	1	1	1	1	

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

Relinquished By: David A. Utter

Date/Time: 4/13/09 5:00

Received By: Jason Flattery

Date/Time: 4/13/09 5:00

FORM NO. 01-01 (rev. 11-00-07)

Please print clearly, legibly, and completely. Samples can not be logged in and returned if this check will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. Reverse side.



Client Name: ERM
Contact: Jason Flattery
Address: 399 Boylston Street
6th Floor
Boston, MA 02116

Page: Page 1 of 4
Lab Proj #: P0904237
Report Date: 04/23/09
Client Proj Name: Wayland
Client Proj #: Wayland

Laboratory Results

Total pages in data package: 5

<u>Lab Sample #</u>	<u>Client Sample ID</u>
P0904237-01	DEP-19M-20090416-0 4
P0904237-02	MW-264M-20090413- 04
P0904237-03	DUP-011-20090413-0 4

Microseeps test results meet all the requirements of the NELAC standards or provide reasons and/or justification if they do not.

Approved By: Heather Hauser **Date:** 4/27/09

Project Manager: Heather Hauser

The analytical results reported here are reliable and usable to the precision expressed in this report. As required by some regulating authorities, a full discussion of the uncertainty in our analytical results can be obtained at our web site or through customer service. Unless otherwise specified, all results are reported on a wet weight basis.

*As a valued client we would appreciate your comments on our service.
Please call customer service at (412)826-5245 or email customerservice@microseeps.com.*

Case Narrative:

Client Name: ERM
 Contact: Jason Flattery
 Address: 399 Boylston Street
 6th Floor
 Boston, MA 02116

Page: Page 2 of 4
 Lab Proj #: P0904237
 Report Date: 04/23/09
 Client Proj Name: Wayland
 Client Proj #: Wayland

<u>Sample Description</u>	<u>Matrix</u>	<u>Lab Sample #</u>	<u>Sampled Date/Time</u>	<u>Received</u>		
DEP-19M-20090416-04	Water	P0904237-01	16 Apr. 09 14:00	18 Apr. 09 10:52		
<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analysis Date</u>	<u>By</u>
<u>RiskAnalysis</u>						
N Ethane	0.080	0.025	ug/L	AM20GAX	4/22/09	rw
N Ethene	0.200	0.025	ug/L	AM20GAX	4/22/09	rw
N Methane	15.000	0.100	ug/L	AM20GAX	4/22/09	rw

Client Name: ERM
 Contact: Jason Flattery
 Address: 399 Boylston Street
 6th Floor
 Boston, MA 02116

Page: Page 3 of 4
 Lab Proj #: P0904237
 Report Date: 04/23/09
 Client Proj Name: Wayland
 Client Proj #: Wayland

<u>Sample Description</u>	<u>Matrix</u>	<u>Lab Sample #</u>	<u>Sampled Date/Time</u>	<u>Received</u>		
MW-264M-20090413-04	Water	P0904237-02	13 Apr. 09 16:25	18 Apr. 09 10:52		
<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analysis Date</u>	<u>By</u>
<u>RiskAnalysis</u>						
N Ethane	<0.025	0.025	ug/L	AM20GAX	4/22/09	rw
N Ethene	0.310	0.025	ug/L	AM20GAX	4/22/09	rw
N Methane	6.500	0.100	ug/L	AM20GAX	4/22/09	rw

Client Name: ERM
 Contact: Jason Flattery
 Address: 399 Boylston Street
 6th Floor
 Boston, MA 02116

Page: Page 4 of 4
 Lab Proj #: P0904237
 Report Date: 04/23/09
 Client Proj Name: Wayland
 Client Proj #: Wayland

<u>Sample Description</u>	<u>Matrix</u>	<u>Lab Sample #</u>	<u>Sampled Date/Time</u>	<u>Received</u>		
DUP-011-20090413-04	Water	P0904237-03	13 Apr. 09 16:25	18 Apr. 09 10:52		
<u>Analyte(s)</u>	<u>Result</u>	<u>PQL</u>	<u>Units</u>	<u>Method #</u>	<u>Analysis Date</u>	<u>By</u>
<u>RiskAnalysis</u>						
N Ethane	<0.025	0.025	ug/L	AM20GAX	4/22/09	rw
N Ethene	0.310	0.025	ug/L	AM20GAX	4/22/09	rw
N Methane	11.000	0.100	ug/L	AM20GAX	4/22/09	rw

B

Microscopes CHAIN OF CUSTODY

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

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

Client Information

Client: **ERM**

Address: **399 Boylston St.**

6th Floor Boston, MA

Phone: **(617) 444-7800**

Fax: **(617) 657-6447**

Email: **vaahar.frost@erm.com**

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

*Please send EDD of results to ermm.edd@erm.com
O = ~~not~~ RPO4*

Project Information

Project Name: **Raytheon Wayland**

Project Location: **Wayland, MA**

Project #: **00915922**

Project Manager: **Jason Flattery**

ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved!)

Date Due: Time:

Date Rec'd in Lab:

00915922

Report Information - Data Deliverables

FAX EMAIL

ADEX Add'l Deliverables

Regulatory Requirements/Report Limits

State/Fed Program

MA MCP

Criteria

GW 2

MAMCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

ALPHA Job #:

Billing Information

Same as Client Info

PO #:

Yes No Are MCP Analytical Methods Required?

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

ANALYSIS

Sample ID	Collection Date	Time	Sample Matrix	Sampler's Initials	ANALYSIS
DEP-19M-20090416-04	4/16/09	1400	GW	EW R	<i>Disagrees (shown in red)</i>
MW-264M-20090413-04	4/13/09	1625	GW	JPD R	
DUP-011-20090413-04	4/13/09	1625	GW	JPD R	
Sample Specific Comments					

SAMPLE HANDLING

- Filtration
 - Done
 - Not needed
 - Lab to do
 - Preservation
 - Lab to do
- (Please specify below)

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT
MA MCP or CT RCP?

Container Type
Preservative

V
0

Relinquished By:

Shirley Wilson

Date/Time

4/17/09 1430

Received By:

Marcus J. Davis

Date/Time

4/19/09

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. See reverse side.



ANALYTICAL REPORT

Lab Number:	L0905378
Client:	ERM Consulting & Engineering, Inc. 399 Boylston Street 6th Floor Boston, MA 02116
ATTN:	Jason Flattery
Project Name:	RAYTHEON WAYLAND
Project Number:	0095922
Report Date:	05/01/09

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.

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



Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0905378
Report Date: 05/01/09

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L0905378-01	MW-TP-3-20090414-01	WAYLAND, MA	04/14/09 17:00

Project Name: RAYTHEON WAYLAND

Lab Number: L0905378

Project Number: 0095922

Report Date: 05/01/09

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, B, C & D is required for "Presumptive Certainty" status		
A	Were all samples received by the laboratory in a condition consistent with those described on their Chain-of-Custody documentation for the data set?	YES
B	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?	YES
C	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty", as described in section 2.0 of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	YES
D	VPH and EPH methods only: Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?	N/A
A response to questions E and F is required for "Presumptive Certainty" status		
E	Were all QC performance standards and recommendations for the specified method(s) achieved?	YES
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?	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: 0095922

Lab Number: L0905378
Report Date: 05/01/09

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.

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 F:

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:



Title: Technical Director/Representative

Date: 05/01/09

ORGANICS

VOLATILES

Project Name: RAYTHEON WAYLAND**Lab Number:** L0905378**Project Number:** 0095922**Report Date:** 05/01/09**SAMPLE RESULTS**

Lab ID: L0905378-01
Client ID: MW-TP-3-20090414-01
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 60,8260B
Analytical Date: 04/17/09 20:35
Analyst: GK

Date Collected: 04/14/09 17:00
Date Received: 04/14/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
MCP Volatile Organics - Westborough Lab					
Methylene chloride	ND		ug/l	5.0	1
1,1-Dichloroethane	ND		ug/l	0.75	1
Chloroform	ND		ug/l	0.75	1
Carbon tetrachloride	ND		ug/l	0.50	1
1,2-Dichloropropane	ND		ug/l	1.8	1
Dibromochloromethane	ND		ug/l	0.50	1
1,1,2-Trichloroethane	ND		ug/l	0.75	1
Tetrachloroethene	ND		ug/l	0.50	1
Chlorobenzene	ND		ug/l	0.50	1
1,2-Dichloroethane	ND		ug/l	0.50	1
1,1,1-Trichloroethane	ND		ug/l	0.50	1
Bromodichloromethane	ND		ug/l	0.50	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	0.50	1
Chloromethane	ND		ug/l	2.5	1
Vinyl chloride	ND		ug/l	1.0	1
Chloroethane	ND		ug/l	1.0	1
1,1-Dichloroethene	ND		ug/l	0.50	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	1
Trichloroethene	ND		ug/l	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.5	1
1,3-Dichlorobenzene	ND		ug/l	2.5	1
1,4-Dichlorobenzene	ND		ug/l	2.5	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	1
Dichlorodifluoromethane	ND		ug/l	5.0	1
1,2-Dibromoethane	ND		ug/l	2.0	1
1,3-Dichloropropane	ND		ug/l	2.5	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	1

Project Name: RAYTHEON WAYLAND**Lab Number:** L0905378**Project Number:** 0095922**Report Date:** 05/01/09**SAMPLE RESULTS**

Lab ID: L0905378-01

Date Collected: 04/14/09 17:00

Client ID: MW-TP-3-20090414-01

Date Received: 04/14/09

Sample Location: WAYLAND, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
MCP Volatile Organics - Westborough Lab					
o-Chlorotoluene	ND		ug/l	2.5	1
p-Chlorotoluene	ND		ug/l	2.5	1
Hexachlorobutadiene	ND		ug/l	0.60	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	110		70-130

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0905378
Report Date: 05/01/09

Method Blank Analysis
Batch Quality Control

Analytical Method: 60,8260B
Analytical Date: 04/17/09 12:29
Analyst: GK

Parameter	Result	Qualifier	Units	RDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG359454-3				
Methylene chloride	ND		ug/l	5.0
1,1-Dichloroethane	ND		ug/l	0.75
Chloroform	ND		ug/l	0.75
Carbon tetrachloride	ND		ug/l	0.50
1,2-Dichloropropane	ND		ug/l	1.8
Dibromochloromethane	ND		ug/l	0.50
1,1,2-Trichloroethane	ND		ug/l	0.75
Tetrachloroethene	ND		ug/l	0.50
Chlorobenzene	ND		ug/l	0.50
Trichlorofluoromethane	ND		ug/l	2.5
1,2-Dichloroethane	ND		ug/l	0.50
1,1,1-Trichloroethane	ND		ug/l	0.50
Bromodichloromethane	ND		ug/l	0.50
trans-1,3-Dichloropropene	ND		ug/l	0.50
cis-1,3-Dichloropropene	ND		ug/l	0.50
1,1-Dichloropropene	ND		ug/l	2.5
Bromoform	ND		ug/l	2.0
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50
Benzene	ND		ug/l	0.50
Toluene	ND		ug/l	0.75
Ethylbenzene	ND		ug/l	0.50
Chloromethane	ND		ug/l	2.5
Bromomethane	ND		ug/l	1.0
Vinyl chloride	ND		ug/l	1.0
Chloroethane	ND		ug/l	1.0
1,1-Dichloroethene	ND		ug/l	0.50
trans-1,2-Dichloroethene	ND		ug/l	0.75
Trichloroethene	ND		ug/l	0.50
1,2-Dichlorobenzene	ND		ug/l	2.5
1,3-Dichlorobenzene	ND		ug/l	2.5
1,4-Dichlorobenzene	ND		ug/l	2.5

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0905378
Report Date: 05/01/09

Method Blank Analysis
Batch Quality Control

Analytical Method: 60,8260B
Analytical Date: 04/17/09 12:29
Analyst: GK

Parameter	Result	Qualifier	Units	RDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG359454-3				
Methyl tert butyl ether	ND		ug/l	1.0
p/m-Xylene	ND		ug/l	1.0
o-Xylene	ND		ug/l	1.0
cis-1,2-Dichloroethene	ND		ug/l	0.50
Dibromomethane	ND		ug/l	5.0
1,2,3-Trichloropropane	ND		ug/l	5.0
Styrene	ND		ug/l	1.0
Dichlorodifluoromethane	ND		ug/l	5.0
Acetone	ND		ug/l	5.0
Carbon disulfide	ND		ug/l	5.0
2-Butanone	ND		ug/l	5.0
4-Methyl-2-pentanone	ND		ug/l	5.0
2-Hexanone	ND		ug/l	5.0
Bromochloromethane	ND		ug/l	2.5
Tetrahydrofuran	ND		ug/l	10
2,2-Dichloropropane	ND		ug/l	2.5
1,2-Dibromoethane	ND		ug/l	2.0
1,3-Dichloropropane	ND		ug/l	2.5
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50
Bromobenzene	ND		ug/l	2.5
n-Butylbenzene	ND		ug/l	0.50
sec-Butylbenzene	ND		ug/l	0.50
tert-Butylbenzene	ND		ug/l	2.5
o-Chlorotoluene	ND		ug/l	2.5
p-Chlorotoluene	ND		ug/l	2.5
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5
Hexachlorobutadiene	ND		ug/l	0.60
Isopropylbenzene	ND		ug/l	0.50
p-Isopropyltoluene	ND		ug/l	0.50
Naphthalene	ND		ug/l	2.5
n-Propylbenzene	ND		ug/l	0.50

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0905378
Report Date: 05/01/09

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 60,8260B
Analytical Date: 04/17/09 12:29
Analyst: GK

Parameter	Result	Qualifier	Units	RDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG359454-3				
1,2,3-Trichlorobenzene	ND		ug/l	2.5
1,2,4-Trichlorobenzene	ND		ug/l	2.5
1,3,5-Trimethylbenzene	ND		ug/l	2.5
1,2,4-Trimethylbenzene	ND		ug/l	2.5
Ethyl ether	ND		ug/l	2.5
Isopropyl Ether	ND		ug/l	2.0
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0
1,4-Dioxane	ND		ug/l	250

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	107		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Lab Number: L0905378

Project Number: 0095922

Report Date: 05/01/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG359454-1 WG359454-2					
Methylene chloride	94	91	70-130	3	25
1,1-Dichloroethane	95	95	70-130	0	25
Chloroform	94	89	70-130	5	25
Carbon tetrachloride	101	100	70-130	1	25
1,2-Dichloropropane	91	88	70-130	3	25
Dibromochloromethane	104	101	70-130	3	25
1,1,2-Trichloroethane	99	93	70-130	6	25
Tetrachloroethene	113	114	70-130	1	25
Chlorobenzene	99	97	70-130	2	25
Trichlorofluoromethane	120	125	70-130	4	25
1,2-Dichloroethane	102	97	70-130	5	25
1,1,1-Trichloroethane	99	99	70-130	0	25
Bromodichloromethane	104	97	70-130	7	25
trans-1,3-Dichloropropene	89	86	70-130	3	25
cis-1,3-Dichloropropene	81	78	70-130	4	25
1,1-Dichloropropene	94	95	70-130	1	25
Bromoform	117	112	70-130	4	50
1,1,2,2-Tetrachloroethane	94	90	70-130	4	25
Benzene	92	91	70-130	1	25
Toluene	96	95	70-130	1	25
Ethylbenzene	102	99	70-130	3	25

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Lab Number: L0905378

Project Number: 0095922

Report Date: 05/01/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG359454-1 WG359454-2					
Chloromethane	78	86	70-130	10	50
Bromomethane	87	90	70-130	3	50
Vinyl chloride	83	90	70-130	8	25
Chloroethane	95	101	70-130	6	25
1,1-Dichloroethene	98	100	70-130	2	25
trans-1,2-Dichloroethene	98	100	70-130	2	25
Trichloroethene	99	94	70-130	5	25
1,2-Dichlorobenzene	103	100	70-130	3	25
1,3-Dichlorobenzene	102	103	70-130	1	25
1,4-Dichlorobenzene	102	101	70-130	1	25
Methyl tert butyl ether	91	103	70-130	12	25
p/m-Xylene	101	99	70-130	2	25
o-Xylene	103	106	70-130	3	25
cis-1,2-Dichloroethene	93	93	70-130	0	25
Dibromomethane	100	93	70-130	7	25
1,2,3-Trichloropropane	103	100	70-130	3	25
Styrene	102	105	70-130	3	25
Dichlorodifluoromethane	80	105	70-130	27	50
Acetone	119	116	70-130	3	50
Carbon disulfide	65	72	70-130	10	50
2-Butanone	85	89	70-130	5	50

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Lab Number: L0905378

Project Number: 0095922

Report Date: 05/01/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG359454-1 WG359454-2					
4-Methyl-2-pentanone	82	86	70-130	5	50
2-Hexanone	78	87	70-130	11	50
Bromochloromethane	103	97	70-130	6	25
Tetrahydrofuran	93	96	70-130	3	25
2,2-Dichloropropane	80	85	70-130	6	50
1,2-Dibromoethane	99	94	70-130	5	25
1,3-Dichloropropane	97	96	70-130	1	25
1,1,1,2-Tetrachloroethane	101	98	70-130	3	25
Bromobenzene	106	104	70-130	2	25
n-Butylbenzene	95	95	70-130	0	25
sec-Butylbenzene	96	97	70-130	1	25
tert-Butylbenzene	93	94	70-130	1	25
o-Chlorotoluene	96	94	70-130	2	25
p-Chlorotoluene	97	97	70-130	0	25
1,2-Dibromo-3-chloropropane	95	86	70-130	10	50
Hexachlorobutadiene	116	117	70-130	1	25
Isopropylbenzene	100	101	70-130	1	25
p-Isopropyltoluene	101	101	70-130	0	25
Naphthalene	84	82	70-130	2	25
n-Propylbenzene	95	95	70-130	0	25
1,2,3-Trichlorobenzene	119	117	70-130	2	25

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Lab Number: L0905378

Project Number: 0095922

Report Date: 05/01/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG359454-1 WG359454-2					
1,2,4-Trichlorobenzene	109	106	70-130	3	25
1,3,5-Trimethylbenzene	93	92	70-130	1	25
1,2,4-Trimethylbenzene	96	96	70-130	0	25
Ethyl ether	104	106	70-130	2	25
Isopropyl Ether	84	91	70-130	8	25
Ethyl-Tert-Butyl-Ether	89	94	70-130	5	25
Tertiary-Amyl Methyl Ether	82	85	70-130	4	25
1,4-Dioxane	118	108	70-130	9	50

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		111		70-130
Toluene-d8	106		111		70-130
4-Bromofluorobenzene	89		93		70-130
Dibromofluoromethane	108		107		70-130

Project Name: RAYTHEON WAYLAND**Lab Number:** L0905378**Project Number:** 0095922**Report Date:** 05/01/09**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0905378-01A	Vial HCl preserved	A	N/A	2	Y	Absent	MCP-8260-04(14)
L0905378-01B	Vial HCl preserved	A	N/A	2	Y	Absent	MCP-8260-04(14)

*Hold days indicated by values in parentheses

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0905378
Report Date: 05/01/09

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.
- LCSD** - 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.
- 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.
- ND** - Not detected at the reported detection limit for the sample.
- 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

- *** - The batch duplicate RPD exceeds the acceptance criteria. This flag is not applicable when the sample concentrations are less than 5x the RDL. (Metals only.)
- 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.
- 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.
- N** - The matrix spike recovery exceeds the acceptance criteria. This flag is not applicable when the sample concentration is greater than 4x the spike added. (Metals only.)
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- 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).

Report Format: Data Usability Report



Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0905378
Report Date: 05/01/09

REFERENCES

- 60 Quality Assurance and Quality Control Requirements and Performance Standards for SW-846 Methods. MADEP BWSC. WSC-CAM-IIA (Revision 4), WSC-CAM-V C (Revision 2), WSC-CAM-IIIA (Revision 5). May 2004.

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 February 18, 2009 - 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.

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.)

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), 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: MA0086.

Drinking Water (Inorganic Parameters: SM9215B, 9221E, 9222B, 9222D, 9223B, EPA 150.1, 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, Nitrite-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, EPA 150.1, SM4500H-B.

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

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), SM6251B, 314.0.

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,Ti,V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Nitrate-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, 4500CN-CE, 2540D, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1

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

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCB-Water) 600/4-81-045-PCB-Oil

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.*Drinking Water*

Microbiology Parameters: SM9215B; MF-SM9222B; ENZ. SUB. SM9223; EC-SM9221E; MF-SM9222D; ENZ. SUB. SM9223;

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

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 110.2, 120.1, 150.1, 300.0, 325.2, 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, 150.1, 300.0, 305.1, 310.1, 325.2, 340.2, 350.1, 350.2, 351.1, 353.2, 354.1, 365.2, 375.4, 376.2, 405.1, 415.1, 420.1, 425.1, 1664A, SW-846 9010, 9030, 9040B, EPA 160.1, 160.2, 160.3, 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.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO₃-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, 331.0, 110.2, SM2120B, 2510B, 5310C, EPA 150.1, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.1, 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, EPA 350.2/1, 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.)

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, 3540C, 3545, 3550B, 3580A, 5035L, 5035H.)

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

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 8215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 331.0, SM2320B, EPA 300.0, 325.2, 110.2, SM2120B, 4500CN-E, 4500F-C, EPA 150.1, SM4500H-B, 4500NO₃-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, EPA 405.1, SM5210B, EPA 410.4, SM5220D, EPA 305.1, SM2310B-4a, EPA 310.1, SM2320B, EPA 200.7, 300.0, 325.2, LACHAT 10-117-07-1A or B, SM4500CI-E, EPA 340.2, SM4500F-C, EPA 375.4, SM15 426C, EPA 350.1, 350.2, 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-NO₃F, EPA 354.1, SM4500-NO₂-B, EPA 365.2, SM4500P-E, EPA 160.3, SM2540B, EPA 160.1, SM2540C, EPA 160.2, SM2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, 110.2, SM2120B, 335.2, LACHAT 10-204-00-1-A, EPA 150.1, 9040B, SM4500-HB, EPA 1664A, EPA 415.1, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, EPA 376.2, SM4500S-D, EPA 425.1, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, 8021B, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 3005A, 3050B, 3051, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 8021B, 3540C, 3545, 3580, 5030B, 5035.)

Analytical Services Protocol: CLP Volatile Organics, CLP Inorganics, CLP PCB/Pesticides.

Rhode Island Department of Health Certificate/Lab ID: LAO00065.

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

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

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. Registered Laboratory.



CHAIN OF CUSTODY

PAGE _____ OF _____

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

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

Client Information

Client: **ELM**

Address:

Phone:

Fax:

Email:

Project Information

Project Name: **Raytheon Weyland**

Project Location: **Weyland, MA**

Project #: **0095922**

Project Manager: **S. Flaherty**

ALPHA Quote #:

Turn-Around Time

Standard

RUSH (only confirmed if pre-approved)

Date Due: **5/14/09**

Time:

These samples have been previously analyzed by Alpha
 Other Project Specific Requirements/Comments/Detection Limits:

Relay of L0904586-12

ALPHA Lab ID
 (Lab Use Only)

Sample ID

Collection
 Date Time

Sample
 Matrix

Sampler's
 Initials

05378.1 **MW-TR-3-20090414-01** **4/14/09** **NOV** **600**

Date Rec'd in Lab: **4/14/09**

ALPHA Job #: **L0905378**

Report Information - Data Deliverables

FAX EMAIL

ADEX Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State / Fed Program

Criteria

MCP **601**

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTO-

Yes No Are MCP Analytical Methods Required?

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

ANALYSIS
8021C by 8260

SAMPLE HANDLING

Done
 Not needed
 Lab to do
 Lab to do
 (Please specify below)
 Sample Specific Comments

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT
MANMCP or CT RCP?

Relinquished By:

Date/Time

Container Type
 Preservative

Received By:

Date/Time

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

CHAIN OF CUSTODY

PAGE 2 OF 2



WESTBORO, MA
 TEL: 508-898-9220
 FAX: 508-998-9193

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

Client Information

Client: ERM
 Address: 399 Baylston St.
6th Floor Boston MA
 Phone: (617) 646-7800
 Fax: (617) 267-6447
 Email: balwaar.frost@erm.com

Project Name: Raytheon Wayland
 Project Location: Wayland, MA
 Project #: 00959722
 Project Manager: Jason Flattery
 ALPHA Quote #:
 Turn-Around Time
 Standard RUSH (only confirmed if pre-approved)
 Date Due: 4/21/09 Time:
 These samples have been previously analyzed by Alpha
 Other Project Specific Requirements/Comments/Detection Limits:

Report Information - Data Deliverables
 FAX EMAIL
 XADEX PADDI Deliverables
 Regulatory Requirements/Report Limits

Billing Information
 Same as Client info
 PO #:

State/Fed Program: MA MCP Criteria: AWA
MA MCP PRESUMPTIVE CERTAINTY ... CT REASONABLE CONFIDENCE PROTO.
 Yes No Are MCP Analytical Methods Required?
 Yes No Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS
8021 B by 8260
1,4 Dioxane
Diss. Fct Mn (FE)
Total Phos.
TOC
Alkalinity
NO3, SO4, Cl

SAMPLE HANDLING
 Filtration: Done (w/ FC Vial) 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	Sampler's Initials	Date	Time	Container Type	Preservative	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
		Date	Time											
<u>01586.17</u>	<u>MW-266-M6-20090414-01</u>	<u>4/14/09</u>	<u>1440</u>	<u>GW</u>	<u>JPD</u>	<u>4/14/09</u>	<u>1515</u>	<u>V</u>	<u>A</u>	<u>4/14/09 1635</u>	<u>Don Sauber</u>	<u>4/14/09 1635</u>	<u>Don Sauber</u>	<u>4/14/09 1715</u>
<u>10</u>	<u>MW-266-M6-20090414-01-M5</u>		<u>1515</u>				<u>1515</u>	<u>A</u>	<u>P</u>					
<u>12</u>	<u>MW-TP-3-20090414-01</u>	<u>4/14/09</u>	<u>1700</u>		<u>HBA</u>	<u>4/14/09</u>	<u>1700</u>	<u>A</u>	<u>C</u>					
<u>13</u>	<u>MW-551-20090414-01</u>		<u>1400</u>		<u>HGA</u>		<u>1400</u>	<u>A</u>	<u>D</u>					

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT
 MA MCP or CT RCP?

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

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 Terms and Conditions. See reverse side.



ANALYTICAL REPORT

Lab Number:	L0904806
Client:	ERM Consulting & Engineering, Inc. 399 Boylston Street 6th Floor Boston, MA 02116
ATTN:	Jason Flattery
Project Name:	RAYTHEON WAYLAND
Project Number:	0095922
Report Date:	04/22/09

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.

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



Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0904806
Report Date: 04/22/09

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L0904806-01	DEP-19M-20090417-01	WAYLAND, MA	04/17/09 11:30

Project Name: RAYTHEON WAYLAND

Lab Number: L0904806

Project Number: 0095922

Report Date: 04/22/09

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, B, C & D is required for "Presumptive Certainty" status		
A	Were all samples received by the laboratory in a condition consistent with those described on their Chain-of-Custody documentation for the data set?	YES
B	Were all QA/QC procedures required for the specified analytical methods(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?	YES
C	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty", as described in section 2.0 of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	YES
D	VPH and EPH methods only: Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?	N/A
A response to questions E and F is required for "Presumptive Certainty" status		
E	Were all QC performance standards and recommendations for the specified method(s) achieved?	YES
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?	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: 0095922

Lab Number: L0904806
Report Date: 04/22/09

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.

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

Sample Receipt

The samples were Field Filtered for Dissolved Metals only.

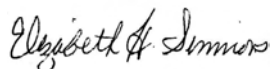
Metals

In reference to question F:

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:



Title: Technical Director/Representative

Date: 04/22/09

METALS

Project Name: RAYTHEON WAYLAND**Lab Number:** L0904806**Project Number:** 0095922**Report Date:** 04/22/09**SAMPLE RESULTS**

Lab ID: L0904806-01

Date Collected: 04/17/09 11:30

Client ID: DEP-19M-20090417-01

Date Received: 04/17/09

Sample Location: WAYLAND, MA

Field Prep: Field Filtered

Matrix: Water

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab										
Iron, Dissolved	3.4		mg/l	0.05	1	04/18/09 14:30	04/22/09 11:46	EPA 3005A	60,6010B	AI
Manganese, Dissolved	0.198		mg/l	0.010	1	04/18/09 14:30	04/22/09 11:46	EPA 3005A	60,6010B	AI

Project Name: RAYTHEON WAYLAND

Lab Number: L0904806

Project Number: 0095922

Report Date: 04/22/09

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab for sample(s): 01 Batch: WG359397-1								
Iron, Dissolved	ND	mg/l	0.05	1	04/18/09 14:30	04/22/09 10:48	60,6010B	AI
Manganese, Dissolved	ND	mg/l	0.010	1	04/18/09 14:30	04/22/09 10:48	60,6010B	AI

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Project Number: 0095922

Lab Number: L0904806

Report Date: 04/22/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Dissolved Metals - Westborough Lab Associated sample(s): 01 Batch: WG359397-2 WG359397-3					
Iron, Dissolved	110	110	80-120	0	20
Manganese, Dissolved	107	106	80-120	1	20

INORGANICS & MISCELLANEOUS

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0904806
Report Date: 04/22/09

SAMPLE RESULTS

Lab ID: L0904806-01
Client ID: DEP-19M-20090417-01
Sample Location: WAYLAND, MA
Matrix: Water

Date Collected: 04/17/09 11:30
Date Received: 04/17/09
Field Prep: Field Filtered

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab									
Alkalinity, Total	60		mg CaCO3/L	2.0	1	-	04/20/09 11:41	30,2320B	SD
Phosphorus, Total	0.101		mg/l	0.010	1	-	04/21/09 15:20	30,4500P-E	ST



Project Name: RAYTHEON WAYLAND

Lab Number: L0904806

Project Number: 0095922

Report Date: 04/22/09

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: WG359577-1								
Phosphorus, Total	ND	mg/l	0.010	1	-	04/21/09 15:10	30,4500P-E	ST
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG359586-1								
Alkalinity, Total	ND	mg CaCO3/L	2.0	1	-	04/20/09 11:41	30,2320B	SD

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Project Number: 0095922

Lab Number: L0904806

Report Date: 04/22/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG359577-2					
Phosphorus, Total	108	-	85-115	-	
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG359586-2					
Alkalinity, Total	101	-	80-115	-	4

Matrix Spike Analysis
Batch Quality Control

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0904806
Report Date: 04/22/09

Parameter	Native Sample	MS Added	MS Found	MS	MSD Found	MSD	Recovery	RPD	RPD Limits
				%Recovery		%Recovery	Limits		
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG359577-3 QC Sample: L0904722-01 Client ID: MS Sample									
Phosphorus, Total	0.059	0.5	0.552	99	-	-	80-120	-	20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG359586-3 QC Sample: L0904819-01 Client ID: MS Sample									
Alkalinity, Total	5.4	100	110	101	-	-	86-116	-	4

Lab Duplicate Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Project Number: 0095922

Lab Number: L0904806

Report Date: 04/22/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG359577-4 QC Sample: L0904722-01 Client ID: DUP Sample					
Phosphorus, Total	0.059	0.056	mg/l	5	20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG359586-4 QC Sample: L0904819-01 Client ID: DUP Sample					
Alkalinity, Total	5.4	5.3	mg CaCO3/L	2	4

Project Name: RAYTHEON WAYLAND**Lab Number:** L0904806**Project Number:** 0095922**Report Date:** 04/22/09**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0904806-01A	Plastic 250ml H2SO4 preserved	A	<2	2	Y	Absent	TPHOS-4500(28)
L0904806-01B	Plastic 250ml HNO3 preserved	A	<2	2	Y	Absent	MCP-FE-6010S(180),MCP-MN-6010S(180)
L0904806-01C	Plastic 250ml unpreserved	A	N/A	2	Y	Absent	ALK-T-2320(14)

*Hold days indicated by values in parentheses

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0904806
Report Date: 04/22/09

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.
- LCSD** - 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.
- 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.
- ND** - Not detected at the reported detection limit for the sample.
- 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

- *** - The batch duplicate RPD exceeds the acceptance criteria. This flag is not applicable when the sample concentrations are less than 5x the RDL. (Metals only.)
- 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.
- 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.
- N** - The matrix spike recovery exceeds the acceptance criteria. This flag is not applicable when the sample concentration is greater than 4x the spike added. (Metals only.)
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- 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).

Report Format: Data Usability Report



Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0904806
Report Date: 04/22/09

REFERENCES

- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 60 Quality Assurance and Quality Control Requirements and Performance Standards for SW-846 Methods. MADEP BWSC. WSC-CAM-IIA (Revision 4), WSC-CAM-V C (Revision 2), WSC-CAM-IIIA (Revision 5). May 2004.

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 February 18, 2009 - 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.

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.)

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), 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: MA0086.

Drinking Water (Inorganic Parameters: SM9215B, 9221E, 9222B, 9222D, 9223B, EPA 150.1, 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, Nitrite-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, EPA 150.1, SM4500H-B.

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

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), SM6251B, 314.0.

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, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Nitrate-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, 4500CN-CE, 2540D, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1

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

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCB-Water) 600/4-81-045-PCB-Oil

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.*Drinking Water*

Microbiology Parameters: SM9215B; MF-SM9222B; ENZ. SUB. SM9223; EC-SM9221E; MF-SM9222D; ENZ. SUB. SM9223;

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

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 110.2, 120.1, 150.1, 300.0, 325.2, 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, 150.1, 300.0, 305.1, 310.1, 325.2, 340.2, 350.1, 350.2, 351.1, 353.2, 354.1, 365.2, 375.4, 376.2, 405.1, 415.1, 420.1, 425.1, 1664A, SW-846 9010, 9030, 9040B, EPA 160.1, 160.2, 160.3, 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.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO₃-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, 331.0, 110.2, SM2120B, 2510B, 5310C, EPA 150.1, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.1, 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, EPA 350.2/1, 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.)

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, 3540C, 3545, 3550B, 3580A, 5035L, 5035H.)

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

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 8215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 331.0, SM2320B, EPA 300.0, 325.2, 110.2, SM2120B, 4500CN-E, 4500F-C, EPA 150.1, SM4500H-B, 4500NO₃-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, EPA 405.1, SM5210B, EPA 410.4, SM5220D, EPA 305.1, SM2310B-4a, EPA 310.1, SM2320B, EPA 200.7, 300.0, 325.2, LACHAT 10-117-07-1A or B, SM4500CI-E, EPA 340.2, SM4500F-C, EPA 375.4, SM15 426C, EPA 350.1, 350.2, 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-NO₃F, EPA 354.1, SM4500-NO₂-B, EPA 365.2, SM4500P-E, EPA 160.3, SM2540B, EPA 160.1, SM2540C, EPA 160.2, SM2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, 110.2, SM2120B, 335.2, LACHAT 10-204-00-1-A, EPA 150.1, 9040B, SM4500-HB, EPA 1664A, EPA 415.1, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, EPA 376.2, SM4500S-D, EPA 425.1, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, 8021B, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 3005A, 3050B, 3051, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 8021B, 3540C, 3545, 3580, 5030B, 5035.)

Analytical Services Protocol: CLP Volatile Organics, CLP Inorganics, CLP PCB/Pesticides.

Rhode Island Department of Health Certificate/Lab ID: LAO00065.

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

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

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. Registered Laboratory.



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

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

CHAIN OF CUSTODY

PAGE 1 OF 1

Client Information

Client: ERM
 Address: 399 Baylston St.
6th Floor Boston, MA
 Phone: (617) 646-7860
 Fax: (617) 267-6447
 Email: balvaar.frost@erm.com

Project Name: Roughneck Wayland
 Project Location: Wayland, MA
 Project #: 0095922
 Project Manager: Jason Flattery
 ALPHA Quote #:

Standard RUSH (only confirmed if pre-approved)
 Date Due: 4/24/09 Time:

Date Rec'd in Lab: 4/17/09
 Report Information - Data Deliverables
 FAX EMAIL
 INDEX Add'l Deliverables
 Regulatory Requirements/Report Limits
 State/Fed Program MA MCP Criteria GW2
MA MCP PRESUMPTIVE CERTAINTY ... CT REASONABLE CONFIDENCE PROTO.

Billing Information
 Same as Client info PO #:
 ANALYSIS
Total Phos.
Diss. Fe + Mn (FF)
Alkalinity

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
<u>D4806.1</u>	<u>DEP-19M-20090417-01</u>	<u>4/17/09</u>	<u>1136</u>	<u>GW</u>	<u>EW</u>

SAMPLE HANDLING
 Filtration Stone-Str Fe/Mn
 Not needed
 Lab to do
 Preservation
 Lab to do
 (Please specify below)
 Sample Specific Comments
3

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT
 MA MCP or CT RCP?

Relinquished By: [Signature]

Date/Time: 4/17/09 13:41

Received By: [Signature]

Date/Time: 4/17/09 12:30

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

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.



ANALYTICAL REPORT

Lab Number:	L0904770
Client:	ERM Consulting & Engineering, Inc. 399 Boylston Street 6th Floor Boston, MA 02116
ATTN:	Jason Flattery
Project Name:	RAYTHEON WAYLAND
Project Number:	0095922
Report Date:	04/23/09

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.

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



Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0904770
Report Date: 04/23/09

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L0904770-01	DEP-19M-20090416-01	WAYLAND, MA	04/16/09 14:00
L0904770-02	DEP-21-20090416-01	WAYLAND, MA	04/16/09 14:00
L0904770-03	MW-264M-20090413-01	WAYLAND, MA	04/13/09 16:35

Project Name: RAYTHEON WAYLAND

Lab Number: L0904770

Project Number: 0095922

Report Date: 04/23/09

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, B, C & D is required for "Presumptive Certainty" status		
A	Were all samples received by the laboratory in a condition consistent with those described on their Chain-of-Custody documentation for the data set?	YES
B	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?	YES
C	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty", as described in section 2.0 of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	YES
D	VPH and EPH methods only: Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?	N/A
A response to questions E and F is required for "Presumptive Certainty" status		
E	Were all QC performance standards and recommendations for the specified method(s) achieved?	YES
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?	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: 0095922

Lab Number: L0904770
Report Date: 04/23/09

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.

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 F:

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

Metals

In reference to question F:

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

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0904770
Report Date: 04/23/09

Case Narrative (continued)

Non-MCP Related Narratives

Nitrogen, Nitrate

L0904770-03 has an elevated detection limit due to the dilution required by the sample matrix.

Total Organic Carbon

WG359673: A matrix spike could not be performed due to insufficient sample volume available for analysis.

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:



Title: Technical Director/Representative

Date: 04/23/09

ORGANICS

VOLATILES

Project Name: RAYTHEON WAYLAND**Lab Number:** L0904770**Project Number:** 0095922**Report Date:** 04/23/09**SAMPLE RESULTS**

Lab ID: L0904770-01
Client ID: DEP-19M-20090416-01
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 60,8260B
Analytical Date: 04/23/09 14:17
Analyst: GK

Date Collected: 04/16/09 14:00
Date Received: 04/16/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
MCP Volatile Organics - Westborough Lab					
Methylene chloride	ND		ug/l	5.0	1
1,1-Dichloroethane	ND		ug/l	0.75	1
Chloroform	ND		ug/l	0.75	1
Carbon tetrachloride	ND		ug/l	0.50	1
1,2-Dichloropropane	ND		ug/l	1.8	1
Dibromochloromethane	ND		ug/l	0.50	1
1,1,2-Trichloroethane	ND		ug/l	0.75	1
Tetrachloroethene	ND		ug/l	0.50	1
Chlorobenzene	ND		ug/l	0.50	1
1,2-Dichloroethane	ND		ug/l	0.50	1
1,1,1-Trichloroethane	ND		ug/l	0.50	1
Bromodichloromethane	ND		ug/l	0.50	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	0.50	1
Chloromethane	ND		ug/l	2.5	1
Vinyl chloride	ND		ug/l	1.0	1
Chloroethane	ND		ug/l	1.0	1
1,1-Dichloroethene	ND		ug/l	0.50	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	1
Trichloroethene	1.0		ug/l	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.5	1
1,3-Dichlorobenzene	ND		ug/l	2.5	1
1,4-Dichlorobenzene	ND		ug/l	2.5	1
cis-1,2-Dichloroethene	8.5		ug/l	0.50	1
Dichlorodifluoromethane	ND		ug/l	5.0	1
1,2-Dibromoethane	ND		ug/l	2.0	1
1,3-Dichloropropane	ND		ug/l	2.5	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	1

Project Name: RAYTHEON WAYLAND**Lab Number:** L0904770**Project Number:** 0095922**Report Date:** 04/23/09**SAMPLE RESULTS**

Lab ID: L0904770-01

Date Collected: 04/16/09 14:00

Client ID: DEP-19M-20090416-01

Date Received: 04/16/09

Sample Location: WAYLAND, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
MCP Volatile Organics - Westborough Lab					
o-Chlorotoluene	ND		ug/l	2.5	1
p-Chlorotoluene	ND		ug/l	2.5	1
Hexachlorobutadiene	ND		ug/l	0.60	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	107		70-130

Project Name: RAYTHEON WAYLAND**Lab Number:** L0904770**Project Number:** 0095922**Report Date:** 04/23/09**SAMPLE RESULTS**

Lab ID: L0904770-03
Client ID: MW-264M-20090413-01
Sample Location: WAYLAND, MA
Matrix: Water
Analytical Method: 60,8260B
Analytical Date: 04/16/09 21:36
Analyst: GK

Date Collected: 04/13/09 16:35
Date Received: 04/13/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
MCP Volatile Organics - Westborough Lab					
Methylene chloride	ND		ug/l	5.0	1
1,1-Dichloroethane	ND		ug/l	0.75	1
Chloroform	ND		ug/l	0.75	1
Carbon tetrachloride	ND		ug/l	0.50	1
1,2-Dichloropropane	ND		ug/l	1.8	1
Dibromochloromethane	ND		ug/l	0.50	1
1,1,2-Trichloroethane	ND		ug/l	0.75	1
Tetrachloroethene	9.9		ug/l	0.50	1
Chlorobenzene	ND		ug/l	0.50	1
1,2-Dichloroethane	ND		ug/l	0.50	1
1,1,1-Trichloroethane	ND		ug/l	0.50	1
Bromodichloromethane	ND		ug/l	0.50	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	0.50	1
Chloromethane	ND		ug/l	2.5	1
Vinyl chloride	4.4		ug/l	1.0	1
Chloroethane	ND		ug/l	1.0	1
1,1-Dichloroethene	ND		ug/l	0.50	1
trans-1,2-Dichloroethene	0.80		ug/l	0.75	1
Trichloroethene	43		ug/l	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.5	1
1,3-Dichlorobenzene	ND		ug/l	2.5	1
1,4-Dichlorobenzene	ND		ug/l	2.5	1
cis-1,2-Dichloroethene	58		ug/l	0.50	1
Dichlorodifluoromethane	ND		ug/l	5.0	1
1,2-Dibromoethane	ND		ug/l	2.0	1
1,3-Dichloropropane	ND		ug/l	2.5	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	1

Project Name: RAYTHEON WAYLAND**Lab Number:** L0904770**Project Number:** 0095922**Report Date:** 04/23/09**SAMPLE RESULTS**

Lab ID: L0904770-03

Date Collected: 04/13/09 16:35

Client ID: MW-264M-20090413-01

Date Received: 04/13/09

Sample Location: WAYLAND, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
MCP Volatile Organics - Westborough Lab					
o-Chlorotoluene	ND		ug/l	2.5	1
p-Chlorotoluene	ND		ug/l	2.5	1
Hexachlorobutadiene	ND		ug/l	0.60	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	116		70-130

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0904770
Report Date: 04/23/09

Method Blank Analysis
Batch Quality Control

Analytical Method: 60,8260B
Analytical Date: 04/23/09 11:05
Analyst: GK

Parameter	Result	Qualifier	Units	RDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-02 Batch: WG359949-3				
Methylene chloride	ND		ug/l	5.0
1,1-Dichloroethane	ND		ug/l	0.75
Chloroform	ND		ug/l	0.75
Carbon tetrachloride	ND		ug/l	0.50
1,2-Dichloropropane	ND		ug/l	1.8
Dibromochloromethane	ND		ug/l	0.50
1,1,2-Trichloroethane	ND		ug/l	0.75
Tetrachloroethene	ND		ug/l	0.50
Chlorobenzene	ND		ug/l	0.50
Trichlorofluoromethane	ND		ug/l	2.5
1,2-Dichloroethane	ND		ug/l	0.50
1,1,1-Trichloroethane	ND		ug/l	0.50
Bromodichloromethane	ND		ug/l	0.50
trans-1,3-Dichloropropene	ND		ug/l	0.50
cis-1,3-Dichloropropene	ND		ug/l	0.50
1,1-Dichloropropene	ND		ug/l	2.5
Bromoform	ND		ug/l	2.0
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50
Benzene	ND		ug/l	0.50
Toluene	ND		ug/l	0.75
Ethylbenzene	ND		ug/l	0.50
Chloromethane	ND		ug/l	2.5
Bromomethane	ND		ug/l	1.0
Vinyl chloride	ND		ug/l	1.0
Chloroethane	ND		ug/l	1.0
1,1-Dichloroethene	ND		ug/l	0.50
trans-1,2-Dichloroethene	ND		ug/l	0.75
Trichloroethene	ND		ug/l	0.50
1,2-Dichlorobenzene	ND		ug/l	2.5
1,3-Dichlorobenzene	ND		ug/l	2.5
1,4-Dichlorobenzene	ND		ug/l	2.5

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0904770
Report Date: 04/23/09

Method Blank Analysis
Batch Quality Control

Analytical Method: 60,8260B
Analytical Date: 04/23/09 11:05
Analyst: GK

Parameter	Result	Qualifier	Units	RDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-02 Batch: WG359949-3				
Methyl tert butyl ether	ND		ug/l	1.0
p/m-Xylene	ND		ug/l	1.0
o-Xylene	ND		ug/l	1.0
cis-1,2-Dichloroethene	ND		ug/l	0.50
Dibromomethane	ND		ug/l	5.0
1,2,3-Trichloropropane	ND		ug/l	5.0
Styrene	ND		ug/l	1.0
Dichlorodifluoromethane	ND		ug/l	5.0
Acetone	ND		ug/l	5.0
Carbon disulfide	ND		ug/l	5.0
2-Butanone	ND		ug/l	5.0
4-Methyl-2-pentanone	ND		ug/l	5.0
2-Hexanone	ND		ug/l	5.0
Bromochloromethane	ND		ug/l	2.5
Tetrahydrofuran	ND		ug/l	10
2,2-Dichloropropane	ND		ug/l	2.5
1,2-Dibromoethane	ND		ug/l	2.0
1,3-Dichloropropane	ND		ug/l	2.5
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50
Bromobenzene	ND		ug/l	2.5
n-Butylbenzene	ND		ug/l	0.50
sec-Butylbenzene	ND		ug/l	0.50
tert-Butylbenzene	ND		ug/l	2.5
o-Chlorotoluene	ND		ug/l	2.5
p-Chlorotoluene	ND		ug/l	2.5
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5
Hexachlorobutadiene	ND		ug/l	0.60
Isopropylbenzene	ND		ug/l	0.50
p-Isopropyltoluene	ND		ug/l	0.50
Naphthalene	ND		ug/l	2.5
n-Propylbenzene	ND		ug/l	0.50

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0904770
Report Date: 04/23/09

Method Blank Analysis
Batch Quality Control

Analytical Method: 60,8260B
Analytical Date: 04/23/09 11:05
Analyst: GK

Parameter	Result	Qualifier	Units	RDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-02 Batch: WG359949-3				
1,2,3-Trichlorobenzene	ND		ug/l	2.5
1,2,4-Trichlorobenzene	ND		ug/l	2.5
1,3,5-Trimethylbenzene	ND		ug/l	2.5
1,2,4-Trimethylbenzene	ND		ug/l	2.5
Ethyl ether	ND		ug/l	2.5
Isopropyl Ether	ND		ug/l	2.0
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0
1,4-Dioxane	ND		ug/l	250

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	113		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	110		70-130

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0904770
Report Date: 04/23/09

Method Blank Analysis
Batch Quality Control

Analytical Method: 60,8260B
Analytical Date: 04/16/09 16:13
Analyst: GK

Parameter	Result	Qualifier	Units	RDL
MCP Volatile Organics - Westborough Lab for sample(s): 03 Batch: WG359949-6				
Methylene chloride	ND		ug/l	5.0
1,1-Dichloroethane	ND		ug/l	0.75
Chloroform	ND		ug/l	0.75
Carbon tetrachloride	ND		ug/l	0.50
1,2-Dichloropropane	ND		ug/l	1.8
Dibromochloromethane	ND		ug/l	0.50
1,1,2-Trichloroethane	ND		ug/l	0.75
Tetrachloroethene	ND		ug/l	0.50
Chlorobenzene	ND		ug/l	0.50
Trichlorofluoromethane	ND		ug/l	2.5
1,2-Dichloroethane	ND		ug/l	0.50
1,1,1-Trichloroethane	ND		ug/l	0.50
Bromodichloromethane	ND		ug/l	0.50
trans-1,3-Dichloropropene	ND		ug/l	0.50
cis-1,3-Dichloropropene	ND		ug/l	0.50
1,1-Dichloropropene	ND		ug/l	2.5
Bromoform	ND		ug/l	2.0
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50
Benzene	ND		ug/l	0.50
Toluene	ND		ug/l	0.75
Ethylbenzene	ND		ug/l	0.50
Chloromethane	ND		ug/l	2.5
Bromomethane	ND		ug/l	1.0
Vinyl chloride	ND		ug/l	1.0
Chloroethane	ND		ug/l	1.0
1,1-Dichloroethene	ND		ug/l	0.50
trans-1,2-Dichloroethene	ND		ug/l	0.75
Trichloroethene	ND		ug/l	0.50
1,2-Dichlorobenzene	ND		ug/l	2.5
1,3-Dichlorobenzene	ND		ug/l	2.5
1,4-Dichlorobenzene	ND		ug/l	2.5

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0904770
Report Date: 04/23/09

Method Blank Analysis
Batch Quality Control

Analytical Method: 60,8260B
Analytical Date: 04/16/09 16:13
Analyst: GK

Parameter	Result	Qualifier	Units	RDL
MCP Volatile Organics - Westborough Lab for sample(s): 03 Batch: WG359949-6				
Methyl tert butyl ether	ND		ug/l	1.0
p/m-Xylene	ND		ug/l	1.0
o-Xylene	ND		ug/l	1.0
cis-1,2-Dichloroethene	ND		ug/l	0.50
Dibromomethane	ND		ug/l	5.0
1,2,3-Trichloropropane	ND		ug/l	5.0
Styrene	ND		ug/l	1.0
Dichlorodifluoromethane	ND		ug/l	5.0
Acetone	ND		ug/l	5.0
Carbon disulfide	ND		ug/l	5.0
2-Butanone	ND		ug/l	5.0
4-Methyl-2-pentanone	ND		ug/l	5.0
2-Hexanone	ND		ug/l	5.0
Bromochloromethane	ND		ug/l	2.5
Tetrahydrofuran	ND		ug/l	10
2,2-Dichloropropane	ND		ug/l	2.5
1,2-Dibromoethane	ND		ug/l	2.0
1,3-Dichloropropane	ND		ug/l	2.5
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50
Bromobenzene	ND		ug/l	2.5
n-Butylbenzene	ND		ug/l	0.50
sec-Butylbenzene	ND		ug/l	0.50
tert-Butylbenzene	ND		ug/l	2.5
o-Chlorotoluene	ND		ug/l	2.5
p-Chlorotoluene	ND		ug/l	2.5
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5
Hexachlorobutadiene	ND		ug/l	0.60
Isopropylbenzene	ND		ug/l	0.50
p-Isopropyltoluene	ND		ug/l	0.50
Naphthalene	ND		ug/l	2.5
n-Propylbenzene	ND		ug/l	0.50

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0904770
Report Date: 04/23/09

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 60,8260B
Analytical Date: 04/16/09 16:13
Analyst: GK

Parameter	Result	Qualifier	Units	RDL
MCP Volatile Organics - Westborough Lab for sample(s): 03 Batch: WG359949-6				
1,2,3-Trichlorobenzene	ND		ug/l	2.5
1,2,4-Trichlorobenzene	ND		ug/l	2.5
1,3,5-Trimethylbenzene	ND		ug/l	2.5
1,2,4-Trimethylbenzene	ND		ug/l	2.5
Ethyl ether	ND		ug/l	2.5
Isopropyl Ether	ND		ug/l	2.0
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0
1,4-Dioxane	ND		ug/l	250

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	117		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Lab Number: L0904770

Project Number: 0095922

Report Date: 04/23/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-02 Batch: WG359949-1 WG359949-2					
Methylene chloride	96	94	70-130	2	25
1,1-Dichloroethane	96	90	70-130	6	25
Chloroform	98	92	70-130	6	25
Carbon tetrachloride	104	93	70-130	11	25
1,2-Dichloropropane	88	88	70-130	0	25
Dibromochloromethane	106	104	70-130	2	25
1,1,2-Trichloroethane	100	98	70-130	2	25
Tetrachloroethene	115	110	70-130	4	25
Chlorobenzene	97	95	70-130	2	25
Trichlorofluoromethane	127	115	70-130	10	25
1,2-Dichloroethane	105	101	70-130	4	25
1,1,1-Trichloroethane	99	90	70-130	10	25
Bromodichloromethane	100	98	70-130	2	25
trans-1,3-Dichloropropene	92	91	70-130	1	25
cis-1,3-Dichloropropene	80	77	70-130	4	25
1,1-Dichloropropene	96	90	70-130	6	25
Bromoform	125	123	70-130	2	50
1,1,2,2-Tetrachloroethane	93	91	70-130	2	25
Benzene	92	86	70-130	7	25
Toluene	95	92	70-130	3	25
Ethylbenzene	101	94	70-130	7	25

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Lab Number: L0904770

Project Number: 0095922

Report Date: 04/23/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-02 Batch: WG359949-1 WG359949-2					
Chloromethane	76	72	70-130	5	50
Bromomethane	101	93	70-130	8	50
Vinyl chloride	86	78	70-130	10	25
Chloroethane	97	90	70-130	7	25
1,1-Dichloroethene	97	89	70-130	9	25
trans-1,2-Dichloroethene	100	94	70-130	6	25
Trichloroethene	99	93	70-130	6	25
1,2-Dichlorobenzene	99	96	70-130	3	25
1,3-Dichlorobenzene	99	97	70-130	2	25
1,4-Dichlorobenzene	100	98	70-130	2	25
Methyl tert butyl ether	108	106	70-130	2	25
p/m-Xylene	97	95	70-130	2	25
o-Xylene	104	102	70-130	2	25
cis-1,2-Dichloroethene	95	89	70-130	7	25
Dibromomethane	98	97	70-130	1	25
1,2,3-Trichloropropane	102	100	70-130	2	25
Styrene	102	100	70-130	2	25
Dichlorodifluoromethane	88	80	70-130	10	50
Acetone	125	115	70-130	8	50
Carbon disulfide	93	86	70-130	8	50
2-Butanone	96	95	70-130	1	50

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Lab Number: L0904770

Project Number: 0095922

Report Date: 04/23/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-02 Batch: WG359949-1 WG359949-2					
4-Methyl-2-pentanone	95	94	70-130	1	50
2-Hexanone	88	90	70-130	2	50
Bromochloromethane	102	97	70-130	5	25
Tetrahydrofuran	108	100	70-130	8	25
2,2-Dichloropropane	83	77	70-130	8	50
1,2-Dibromoethane	104	104	70-130	0	25
1,3-Dichloropropane	102	99	70-130	3	25
1,1,1,2-Tetrachloroethane	99	95	70-130	4	25
Bromobenzene	103	99	70-130	4	25
n-Butylbenzene	97	92	70-130	5	25
sec-Butylbenzene	97	91	70-130	6	25
tert-Butylbenzene	94	89	70-130	5	25
o-Chlorotoluene	93	91	70-130	2	25
p-Chlorotoluene	94	90	70-130	4	25
1,2-Dibromo-3-chloropropane	89	95	70-130	7	50
Hexachlorobutadiene	120	118	70-130	2	25
Isopropylbenzene	98	94	70-130	4	25
p-Isopropyltoluene	100	94	70-130	6	25
Naphthalene	94	93	70-130	1	25
n-Propylbenzene	94	89	70-130	5	25
1,2,3-Trichlorobenzene	114	114	70-130	0	25

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Lab Number: L0904770

Project Number: 0095922

Report Date: 04/23/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-02 Batch: WG359949-1 WG359949-2					
1,2,4-Trichlorobenzene	104	105	70-130	1	25
1,3,5-Trimethylbenzene	92	89	70-130	3	25
1,2,4-Trimethylbenzene	93	90	70-130	3	25
Ethyl ether	117	118	70-130	1	25
Isopropyl Ether	94	90	70-130	4	25
Ethyl-Tert-Butyl-Ether	98	94	70-130	4	25
Tertiary-Amyl Methyl Ether	91	87	70-130	4	25
1,4-Dioxane	118	113	70-130	4	50

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		111		70-130
Toluene-d8	110		112		70-130
4-Bromofluorobenzene	91		91		70-130
Dibromofluoromethane	112		112		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Lab Number: L0904770

Project Number: 0095922

Report Date: 04/23/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03 Batch: WG359949-4 WG359949-5					
Methylene chloride	104	108	70-130	4	25
1,1-Dichloroethane	106	110	70-130	4	25
Chloroform	108	110	70-130	2	25
Carbon tetrachloride	102	107	70-130	5	25
1,2-Dichloropropane	102	102	70-130	0	25
Dibromochloromethane	104	101	70-130	3	25
1,1,2-Trichloroethane	100	97	70-130	3	25
Tetrachloroethene	119	120	70-130	1	25
Chlorobenzene	100	104	70-130	4	25
Trichlorofluoromethane	133	140	70-130	5	25
1,2-Dichloroethane	113	114	70-130	1	25
1,1,1-Trichloroethane	108	111	70-130	3	25
Bromodichloromethane	109	112	70-130	3	25
trans-1,3-Dichloropropene	91	91	70-130	0	25
cis-1,3-Dichloropropene	87	89	70-130	2	25
1,1-Dichloropropene	105	108	70-130	3	25
Bromoform	120	120	70-130	0	50
1,1,2,2-Tetrachloroethane	89	88	70-130	1	25
Benzene	100	103	70-130	3	25
Toluene	95	101	70-130	6	25
Ethylbenzene	103	106	70-130	3	25

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Lab Number: L0904770

Project Number: 0095922

Report Date: 04/23/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03 Batch: WG359949-4 WG359949-5					
Chloromethane	87	86	70-130	1	50
Bromomethane	103	104	70-130	1	50
Vinyl chloride	92	94	70-130	2	25
Chloroethane	103	107	70-130	4	25
1,1-Dichloroethene	110	110	70-130	0	25
trans-1,2-Dichloroethene	112	126	70-130	12	25
Trichloroethene	108	109	70-130	1	25
1,2-Dichlorobenzene	97	99	70-130	2	25
1,3-Dichlorobenzene	98	101	70-130	3	25
1,4-Dichlorobenzene	98	101	70-130	3	25
Methyl tert butyl ether	102	104	70-130	2	25
p/m-Xylene	101	105	70-130	4	25
o-Xylene	104	105	70-130	1	25
cis-1,2-Dichloroethene	108	108	70-130	0	25
Dibromomethane	107	108	70-130	1	25
1,2,3-Trichloropropane	95	98	70-130	3	25
Styrene	102	104	70-130	2	25
Dichlorodifluoromethane	88	95	70-130	8	50
Acetone	133	128	70-130	4	50
Carbon disulfide	78	79	70-130	1	50
2-Butanone	92	90	70-130	2	50

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Lab Number: L0904770

Project Number: 0095922

Report Date: 04/23/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03 Batch: WG359949-4 WG359949-5					
4-Methyl-2-pentanone	87	84	70-130	4	50
2-Hexanone	80	82	70-130	2	50
Bromochloromethane	111	114	70-130	3	25
Tetrahydrofuran	101	99	70-130	2	25
2,2-Dichloropropane	90	95	70-130	5	50
1,2-Dibromoethane	101	103	70-130	2	25
1,3-Dichloropropane	99	101	70-130	2	25
1,1,1,2-Tetrachloroethane	100	100	70-130	0	25
Bromobenzene	100	104	70-130	4	25
n-Butylbenzene	95	100	70-130	5	25
sec-Butylbenzene	92	97	70-130	5	25
tert-Butylbenzene	91	94	70-130	3	25
o-Chlorotoluene	90	93	70-130	3	25
p-Chlorotoluene	94	97	70-130	3	25
1,2-Dibromo-3-chloropropane	87	90	70-130	3	50
Hexachlorobutadiene	114	124	70-130	8	25
Isopropylbenzene	99	104	70-130	5	25
p-Isopropyltoluene	95	100	70-130	5	25
Naphthalene	92	93	70-130	1	25
n-Propylbenzene	90	95	70-130	5	25
1,2,3-Trichlorobenzene	114	115	70-130	1	25

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Lab Number: L0904770

Project Number: 0095922

Report Date: 04/23/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 03 Batch: WG359949-4 WG359949-5					
1,2,4-Trichlorobenzene	107	110	70-130	3	25
1,3,5-Trimethylbenzene	92	96	70-130	4	25
1,2,4-Trimethylbenzene	93	96	70-130	3	25
Ethyl ether	113	114	70-130	1	25
Isopropyl Ether	91	94	70-130	3	25
Ethyl-Tert-Butyl-Ether	94	97	70-130	3	25
Tertiary-Amyl Methyl Ether	91	90	70-130	1	25
1,4-Dioxane	114	113	70-130	1	50

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		110		70-130
Toluene-d8	101		102		70-130
4-Bromofluorobenzene	91		94		70-130
Dibromofluoromethane	115		114		70-130

METALS

Project Name: RAYTHEON WAYLAND**Lab Number:** L0904770**Project Number:** 0095922**Report Date:** 04/23/09**SAMPLE RESULTS**

Lab ID: L0904770-03

Date Collected: 04/13/09 16:35

Client ID: MW-264M-20090413-01

Date Received: 04/13/09

Sample Location: WAYLAND, MA

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab										
Iron, Dissolved	15		mg/l	0.05	1	04/14/09 11:30	04/16/09 15:47	EPA 3005A	60,6010B	AI
Manganese, Dissolved	0.161		mg/l	0.010	1	04/14/09 11:30	04/16/09 15:47	EPA 3005A	60,6010B	AI

Project Name: RAYTHEON WAYLAND

Lab Number: L0904770

Project Number: 0095922

Report Date: 04/23/09

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Dissolved Metals - Westborough Lab for sample(s): 03 Batch: WG359485-1								
Iron, Dissolved	ND	mg/l	0.05	1	04/14/09 11:30	04/16/09 14:48	60,6010B	AI
Manganese, Dissolved	ND	mg/l	0.010	1	04/14/09 11:30	04/16/09 14:48	60,6010B	AI

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Project Number: 0095922

Lab Number: L0904770

Report Date: 04/23/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
MCP Dissolved Metals - Westborough Lab Associated sample(s): 03 Batch: WG359485-2 WG359485-3					
Iron, Dissolved	110	120	80-120	9	20
Manganese, Dissolved	104	106	80-120	2	20

INORGANICS & MISCELLANEOUS

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0904770
Report Date: 04/23/09

SAMPLE RESULTS

Lab ID: L0904770-01
Client ID: DEP-19M-20090416-01
Sample Location: WAYLAND, MA
Matrix: Water

Date Collected: 04/16/09 14:00
Date Received: 04/16/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab									
Chloride	8.5		mg/l	1.0	1	-	04/17/09 19:23	1,9251	DD
Nitrogen, Nitrate	0.12		mg/l	0.10	1	-	04/18/09 00:17	30,4500NO3-F	DD
Sulfate	23		mg/l	10	1	04/21/09 14:15	04/21/09 14:15	1,9038	SD
Total Organic Carbon	1.6		mg/l	0.50	1	-	04/21/09 15:15	1,9060	DW



Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0904770
Report Date: 04/23/09

SAMPLE RESULTS

Lab ID: L0904770-03
Client ID: MW-264M-20090413-01
Sample Location: WAYLAND, MA
Matrix: Water

Date Collected: 04/13/09 16:35
Date Received: 04/13/09
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab									
Alkalinity, Total	76		mg CaCO3/L	2.0	1	-	04/14/09 10:00	30,2320B	SD
Chloride	19		mg/l	1.0	1	-	04/15/09 18:50	1,9251	DD
Nitrogen, Nitrate	ND		mg/l	0.50	5	-	04/15/09 00:34	30,4500NO3-F	DD
Phosphorus, Total	0.107		mg/l	0.010	1	-	04/15/09 17:37	30,4500P-E	NM
Sulfate	32		mg/l	10	1	04/15/09 10:30	04/15/09 10:30	1,9038	SD
Total Organic Carbon	1.1		mg/l	0.50	1	-	04/20/09 05:37	1,9060	DW



Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0904770
Report Date: 04/23/09

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: WG359322-2								
Chloride	ND	mg/l	1.0	1	-	04/17/09 19:11	1,9251	DD
General Chemistry - Westborough Lab for sample(s): 03 Batch: WG359325-2								
Chloride	ND	mg/l	1.0	1	-	04/15/09 18:38	1,9251	DD
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG359356-2								
Nitrogen, Nitrate	ND	mg/l	0.10	1	-	04/18/09 00:00	30,4500NO3-F	DD
General Chemistry - Westborough Lab for sample(s): 03 Batch: WG359367-2								
Nitrogen, Nitrate	ND	mg/l	0.10	1	-	04/14/09 23:37	30,4500NO3-F	DD
General Chemistry - Westborough Lab for sample(s): 03 Batch: WG359491-1								
Total Organic Carbon	ND	mg/l	0.50	1	-	04/20/09 05:37	1,9060	DW
General Chemistry - Westborough Lab for sample(s): 03 Batch: WG359574-1								
Phosphorus, Total	ND	mg/l	0.010	1	-	04/15/09 17:31	30,4500P-E	NM
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG359637-1								
Sulfate	ND	mg/l	10	1	04/21/09 14:15	04/21/09 14:15	1,9038	SD
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG359673-1								
Total Organic Carbon	ND	mg/l	0.50	1	-	04/21/09 15:15	1,9060	DW
General Chemistry - Westborough Lab for sample(s): 03 Batch: WG359737-1								
Alkalinity, Total	ND	mg CaCO3/L	2.0	1	-	04/14/09 10:00	30,2320B	SD
General Chemistry - Westborough Lab for sample(s): 03 Batch: WG359739-1								
Sulfate	ND	mg/l	10	1	04/15/09 10:30	04/15/09 10:30	1,9038	SD

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Project Number: 0095922

Lab Number: L0904770

Report Date: 04/23/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG359322-1					
Chloride	100	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 03 Batch: WG359325-1					
Chloride	100	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG359356-1					
Nitrogen, Nitrate	100	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 03 Batch: WG359367-1					
Nitrogen, Nitrate	98	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 03 Batch: WG359491-2					
Total Organic Carbon	101	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 03 Batch: WG359574-2					
Phosphorus, Total	107	-	85-115	-	
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG359637-2					
Sulfate	105	-	90-115	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Lab Number: L0904770

Project Number: 0095922

Report Date: 04/23/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG359673-2					
Total Organic Carbon	96	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 03 Batch: WG359737-2					
Alkalinity, Total	101	-	80-115	-	4
General Chemistry - Westborough Lab Associated sample(s): 03 Batch: WG359739-2					
Sulfate	110	-	90-115	-	

Matrix Spike Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Lab Number: L0904770

Project Number: 0095922

Report Date: 04/23/09

Parameter	Native Sample	MS Added	MS		MSD		Recovery Limits	RPD	RPD Limits
			MS Found	%Recovery	MSD Found	%Recovery			
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG359322-3 QC Sample: L0904724-02 Client ID: MS Sample									
Chloride	380	20	400	100	-	-	58-140	-	7
General Chemistry - Westborough Lab Associated sample(s): 03 QC Batch ID: WG359325-3 QC Sample: L0904002-22 Client ID: MS Sample									
Chloride	17	20	36	95	-	-	58-140	-	7
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG359356-3 QC Sample: L0904820-07 Client ID: MS Sample									
Nitrogen, Nitrate	1.0	4	4.9	98	-	-	83-120	-	6
General Chemistry - Westborough Lab Associated sample(s): 03 QC Batch ID: WG359367-3 QC Sample: L0904002-23 Client ID: MS Sample									
Nitrogen, Nitrate	4.7	4	8.7	100	-	-	83-120	-	6
General Chemistry - Westborough Lab Associated sample(s): 03 QC Batch ID: WG359491-3 QC Sample: L0904518-03 Client ID: MS Sample									
Total Organic Carbon	31	40	69	96	-	-	80-120	-	20
General Chemistry - Westborough Lab Associated sample(s): 03 QC Batch ID: WG359574-3 QC Sample: L0904002-26 Client ID: MS Sample									
Phosphorus, Total	0.019	0.5	0.522	101	-	-	80-120	-	20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG359637-3 QC Sample: L0904770-01 Client ID: DEP-19M-20090416-01									
Sulfate	23	40	70	118	-	-	55-147	-	14
General Chemistry - Westborough Lab Associated sample(s): 03 QC Batch ID: WG359737-3 QC Sample: L0904002-29 Client ID: MS Sample									
Alkalinity, Total	6.2	100	110	100	-	-	86-116	-	4
General Chemistry - Westborough Lab Associated sample(s): 03 QC Batch ID: WG359739-3 QC Sample: L0904002-30 Client ID: MS Sample									
Sulfate	12	20	37	125	-	-	55-147	-	14

Lab Duplicate Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Project Number: 0095922

Lab Number: L0904770

Report Date: 04/23/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG359322-4	QC Sample: L0904724-04	Client ID: DUP Sample	
Chloride	450	460	mg/l	2	7
General Chemistry - Westborough Lab	Associated sample(s): 03	QC Batch ID: WG359325-4	QC Sample: L0904002-22	Client ID: DUP Sample	
Chloride	17	16	mg/l	6	7
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG359356-4	QC Sample: L0904820-07	Client ID: DUP Sample	
Nitrogen, Nitrate	1.0	0.96	mg/l	4	6
General Chemistry - Westborough Lab	Associated sample(s): 03	QC Batch ID: WG359367-4	QC Sample: L0904002-23	Client ID: DUP Sample	
Nitrogen, Nitrate	4.7	4.7	mg/l	0	6
General Chemistry - Westborough Lab	Associated sample(s): 03	QC Batch ID: WG359491-4	QC Sample: L0904518-03	Client ID: DUP Sample	
Total Organic Carbon	31	31	mg/l	0	20
General Chemistry - Westborough Lab	Associated sample(s): 03	QC Batch ID: WG359574-4	QC Sample: L0904002-26	Client ID: DUP Sample	
Phosphorus, Total	0.019	0.021	mg/l	10	20
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG359637-4	QC Sample: L0904002-32	Client ID: DUP Sample	
Sulfate	ND	ND	mg/l	NC	14
General Chemistry - Westborough Lab	Associated sample(s): 01	QC Batch ID: WG359673-3	QC Sample: L0904770-01	Client ID: DEP-19M-20090416-01	
Total Organic Carbon	1.6	1.6	mg/l	0	20
General Chemistry - Westborough Lab	Associated sample(s): 03	QC Batch ID: WG359737-4	QC Sample: L0904002-28	Client ID: DUP Sample	
Alkalinity, Total	78	77	mg CaCO3/L	1	4

Lab Duplicate Analysis

Batch Quality Control

Project Name: RAYTHEON WAYLAND

Project Number: 0095922

Lab Number: L0904770

Report Date: 04/23/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 03 QC Batch ID: WG359739-4 QC Sample: L0904002-30 Client ID: DUP Sample					
Sulfate	12	12	mg/l	0	14

Project Name: RAYTHEON WAYLAND**Lab Number:** L0904770**Project Number:** 0095922**Report Date:** 04/23/09**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Cooler Information**Cooler Custody Seal**

A Absent

B Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0904770-01A	Vial HCl preserved	A	N/A	2	Y	Absent	MCP-8260-04(14)
L0904770-01B	Vial HCl preserved	A	N/A	2	Y	Absent	MCP-8260-04(14)
L0904770-01C	Vial H2SO4 preserved	A	N/A	2	Y	Absent	TOC-9060(28)
L0904770-01D	Vial H2SO4 preserved	A	N/A	2	Y	Absent	TOC-9060(28)
L0904770-01E	Plastic 500ml unpreserved	A	7	2	Y	Absent	CL-9251(28),SO4-9038(28),NO3-4500(2)
L0904770-02A	Vial HCl preserved	A	N/A	2	Y	Absent	MCP-8260-04(14)
L0904770-02B	Vial HCl preserved	A	N/A	2	Y	Absent	MCP-8260-04(14)

*Hold days indicated by values in parentheses

Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0904770
Report Date: 04/23/09

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.
- LCSD** - 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.
- 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.
- ND** - Not detected at the reported detection limit for the sample.
- 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

- *** - The batch duplicate RPD exceeds the acceptance criteria. This flag is not applicable when the sample concentrations are less than 5x the RDL. (Metals only.)
- 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.
- 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.
- N** - The matrix spike recovery exceeds the acceptance criteria. This flag is not applicable when the sample concentration is greater than 4x the spike added. (Metals only.)
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- 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).

Report Format: Data Usability Report



Project Name: RAYTHEON WAYLAND
Project Number: 0095922

Lab Number: L0904770
Report Date: 04/23/09

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 60 Quality Assurance and Quality Control Requirements and Performance Standards for SW-846 Methods. MADEP BWSC. WSC-CAM-IIA (Revision 4), WSC-CAM-V C (Revision 2), WSC-CAM-IIIA (Revision 5). May 2004.

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 February 18, 2009 - 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.

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.)

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), 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: MA0086.

Drinking Water (Inorganic Parameters: SM9215B, 9221E, 9222B, 9222D, 9223B, EPA 150.1, 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, Nitrite-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, EPA 150.1, SM4500H-B.

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

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), SM6251B, 314.0.

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, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Nitrate-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, 4500CN-CE, 2540D, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1

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

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCB-Water) 600/4-81-045-PCB-Oil

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.*Drinking Water*

Microbiology Parameters: SM9215B; MF-SM9222B; ENZ. SUB. SM9223; EC-SM9221E; MF-SM9222D; ENZ. SUB. SM9223;

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

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 110.2, 120.1, 150.1, 300.0, 325.2, 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, 150.1, 300.0, 305.1, 310.1, 325.2, 340.2, 350.1, 350.2, 351.1, 353.2, 354.1, 365.2, 375.4, 376.2, 405.1, 415.1, 420.1, 425.1, 1664A, SW-846 9010, 9030, 9040B, EPA 160.1, 160.2, 160.3, 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.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO₃-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, 331.0, 110.2, SM2120B, 2510B, 5310C, EPA 150.1, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.1, 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, EPA 350.2/1, 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.)

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, 3540C, 3545, 3550B, 3580A, 5035L, 5035H.)

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

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 8215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 331.0, SM2320B, EPA 300.0, 325.2, 110.2, SM2120B, 4500CN-E, 4500F-C, EPA 150.1, SM4500H-B, 4500NO₃-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, EPA 405.1, SM5210B, EPA 410.4, SM5220D, EPA 305.1, SM2310B-4a, EPA 310.1, SM2320B, EPA 200.7, 300.0, 325.2, LACHAT 10-117-07-1A or B, SM4500CI-E, EPA 340.2, SM4500F-C, EPA 375.4, SM15 426C, EPA 350.1, 350.2, 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-NO₃F, EPA 354.1, SM4500-NO₂-B, EPA 365.2, SM4500P-E, EPA 160.3, SM2540B, EPA 160.1, SM2540C, EPA 160.2, SM2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, 110.2, SM2120B, 335.2, LACHAT 10-204-00-1-A, EPA 150.1, 9040B, SM4500-HB, EPA 1664A, EPA 415.1, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, EPA 376.2, SM4500S-D, EPA 425.1, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, 8021B, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 3005A, 3050B, 3051, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 8021B, 3540C, 3545, 3580, 5030B, 5035.)

Analytical Services Protocol: CLP Volatile Organics, CLP Inorganics, CLP PCB/Pesticides.

Rhode Island Department of Health Certificate/Lab ID: LAO00065.

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

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

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. Registered Laboratory.



CHAIN OF CUSTODY

PAGE 1 OF 1

WESTBROOK, MA
TEL: 508-998-9220
FAX: 508-998-9193

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

Client Information

Client: ERM
Address: 399 Boylston St.
6th Floor Boston, MA
Phone: (617) 646-7800
Fax: (617) 267-6447
Email: barbar.frost@erm.com

Project Information

Project Name: Raytheon Wayland
Project Location: Wayland, MA
Project #: 8095922
Project Manager: Jason Flattery
ALPHA Quote #:
Turn-Around Time
Standard RUSH (only confirmed if pre-approved)
Date Due: 4/20/09 Time:

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab

4/13/09

ALPHA Job #:

60909518

Report Information - Data Deliverables

FAX EMAIL
 ADEX Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State / Fed Program MA MCP Criteria GW4
MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTO.

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

ANALYSIS
8021 B by 8260
44 Dioxane
TOC
T Phos.
Diss. Fe + Mn
NO₃, SO₄, Cl
Alkalinity

SAMPLE HANDLING
Filtration: Done for Fe+Mn
 Not needed
 Lab to do
Preservation Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS		Regulatory Requirements/Report Limits	State / Fed Program	Criteria
		Date	Time			Yes	No			
	1 MW-560-20090413-01	4/13/09	1510	GW	EW	2	2	1	1	1
	2 MW-269Ma-20090413-01		1415	GW	CC	2	2	1	1	1
	3 DVE-010-20090413-01		1111	GW	EW	2	2	1	1	1
	4 MW-265M-20090413-01		1430	GW	JRD	2	2	1	1	1
	5 TB-001-20090413-01	4/13/09	1700	-	DS	2	2	1	1	1
	6 MW-268D-20090413-01	4/13/09	1430	GW	HEA	2	2	1	1	1
	7 MW-553-20090413-01		1535		JN	2	2	1	1	1
	8 MW-2615-20090413-01		1340		JN	2	2	1	1	1
	9 MW-264M-20090413-01		1625		TPD	2	2	1	1	1
	10 DVP-011-20090413-01		1625		JPD	2	2	1	1	1

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT
MAMCP or CT RCP?

Relinquished By: Grandy Wright
Date/Time: 4/13/09 5:00

Container Type: V A V P P P P
Preservative: B A D D C A A
Received By: [Signature]
Date/Time: 4/13/09 5:00

Please print clearly, legibly, and completely. Samples can not be logged in and returned to the client until all samples submitted are resolved. All samples submitted are subject to the Terms and Conditions on the reverse side.