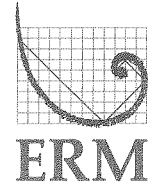


Environmental  
Resources  
Management

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

12 June 2008  
Reference: 0079387

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



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

Dear Mr. Skeehan:

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). These results are submitted pursuant to 310 CMR 40.1403(10) of the Massachusetts Contingency Plan (MCP).

ERM collected groundwater samples from two wells on portions of the Site within the boundaries of your property between 19 May and 22 May 2008. The samples were submitted for laboratory analysis of volatile organic compounds. Sample analysis was conducted by Alpha Woods Hole Laboratories of Westborough, Massachusetts. These analytical data will be provided to the Massachusetts Department of Environmental Protection in the next required MCP submittal.

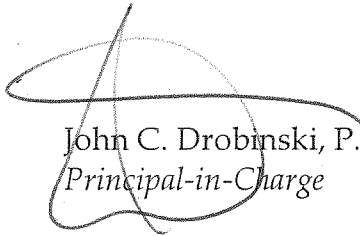
Raytheon has implemented the Public Involvement Process in accordance with 310 CMR 40.1405. Documents pertaining to the Site can be found at the Board of Health, the Wayland Public Library Public Involvement Plan files, or at [www.ermne.com](http://www.ermne.com) (username = raytheon, password = wayland).

Mr. Skeehan  
Reference: 0079387  
12 June 2008  
Page 2

Environmental  
Resources  
Management

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  
*Project Manager*

enclosures: BWSC-123 - Notice of Environmental Sampling

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



## ANALYTICAL REPORT

Lab Number:	L0807580
Client:	ERM-New England 399 Boylston Street 6th Floor Boston, MA 02116
ATTN:	Jason Flattery
Project Name:	RAYTHEON-WAYLAND
Project Number:	0079387
Report Date:	05/30/08

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](http://www.alphalab.com)



**Project Name:** RAYTHEON-WAYLAND  
**Project Number:** 0079387

**Lab Number:** L0807580  
**Report Date:** 05/30/08

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>
L0807580-01	MW-217M-2008521-01	WAYLAND, MA
L0807580-02	MW-221D-2008521-01	WAYLAND, MA
L0807580-03	TB-001-20080522-01	WAYLAND, MA

Project Name: RAYTHEON-WAYLAND

Lab Number: L0807580

Project Number: 0079387

Report Date: 05/30/08

### 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?	NO
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:** 0079387

**Lab Number:** L0807580  
**Report Date:** 05/30/08

### 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.

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.

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#### MCP Related Narratives

##### Volatile Organics

L0807580-01, -02, and -03 were processed against a calibration curve that utilized a quadratic fit for Chloroethane.

In reference to question E:

The WG323677-1/2 LCS/LCSD recoveries, associated with L0807580-01, -02, and -03, are outside the acceptance criteria for Dichlorodifluoromethane and Bromoform; however, they have been identified as "difficult" analytes. The results of the associated samples are reported; however, all results are considered to have a potentially high bias for Dichlorodifluoromethane and a potentially low bias for Bromoform.

The WG323677-1/2 LCS/LCSD recoveries, associated with L0807580-01, -02, and -03, were above the acceptance criteria for Methylene chloride and trans-1,2-Dichloroethene; however, the associated samples

**Project Name:** RAYTHEON-WAYLAND  
**Project Number:** 0079387

**Lab Number:** L0807580  
**Report Date:** 05/30/08

**Case Narrative (continued)**

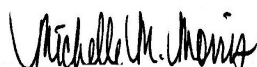
were non-detect for these target compounds. The results of the original analysis are reported.

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: 05/30/08

# ORGANICS



# VOLATILES

**Project Name:** RAYTHEON-WAYLAND**Lab Number:** L0807580**Project Number:** 0079387**Report Date:** 05/30/08**SAMPLE RESULTS**

Lab ID: L0807580-01  
 Client ID: MW-217M-2008521-01  
 Sample Location: WAYLAND, MA  
 Matrix: Water  
 Analytical Method: 60,8260B  
 Analytical Date: 05/29/08 15:56  
 Analyst: BS

Date Collected: 05/21/08 11:00  
 Date Received: 05/22/08  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Volatile Organics by MCP 8260B</b>					
Methylene chloride	ND		ug/l	5.0	1
1,1-Dichloroethane	2.2		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
1,1,1,2-Trichloroethane	ND		ug/l	0.75	1
Tetrachloroethene	ND		ug/l	0.50	1
Chlorobenzene	0.64		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
1,1,1,2,2-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	0.95		ug/l	0.50	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	1
Trichloroethene	6.3		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	0.63		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:** L0807580**Project Number:** 0079387**Report Date:** 05/30/08**SAMPLE RESULTS**

Lab ID: L0807580-01  
 Client ID: MW-217M-2008521-01  
 Sample Location: WAYLAND, MA

Date Collected: 05/21/08 11:00  
 Date Received: 05/22/08  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Volatile Organics by MCP 8260B</b>					
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	105		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	111		70-130

Project Name: RAYTHEON-WAYLAND

Lab Number: L0807580

Project Number: 0079387

Report Date: 05/30/08

## SAMPLE RESULTS

Lab ID: L0807580-02  
 Client ID: MW-221D-2008521-01  
 Sample Location: WAYLAND, MA  
 Matrix: Water  
 Analytical Method: 60,8260B  
 Analytical Date: 05/29/08 16:29  
 Analyst: BS

Date Collected: 05/21/08 09:35  
 Date Received: 05/22/08  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Volatile Organics by MCP 8260B</b>					
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	4.3		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	1.2		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:** L0807580**Project Number:** 0079387**Report Date:** 05/30/08**SAMPLE RESULTS**

Lab ID: L0807580-02  
 Client ID: MW-221D-2008521-01  
 Sample Location: WAYLAND, MA

Date Collected: 05/21/08 09:35  
 Date Received: 05/22/08  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Volatile Organics by MCP 8260B</b>					
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	92		70-130
4-Bromofluorobenzene	90		70-130
Dibromofluoromethane	110		70-130

Project Name: RAYTHEON-WAYLAND

Lab Number: L0807580

Project Number: 0079387

Report Date: 05/30/08

## SAMPLE RESULTS

Lab ID: L0807580-03  
 Client ID: TB-001-20080522-01  
 Sample Location: WAYLAND, MA  
 Matrix: Water  
 Analytical Method: 60,8260B  
 Analytical Date: 05/29/08 17:02  
 Analyst: BS

Date Collected: 05/20/08 19:00  
 Date Received: 05/22/08  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Volatile Organics by MCP 8260B</b>					
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:** L0807580**Project Number:** 0079387**Report Date:** 05/30/08**SAMPLE RESULTS**

Lab ID: L0807580-03  
 Client ID: TB-001-20080522-01  
 Sample Location: WAYLAND, MA

Date Collected: 05/20/08 19:00  
 Date Received: 05/22/08  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Volatile Organics by MCP 8260B</b>					
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	105		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	91		70-130
Dibromofluoromethane	114		70-130

**Project Name:** RAYTHEON-WAYLAND  
**Project Number:** 0079387

**Lab Number:** L0807580  
**Report Date:** 05/30/08

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

Analytical Method: 60,8260B  
Analytical Date: 05/29/08 10:57  
Analyst: BS

Parameter	Result	Qualifier	Units	RDL
Volatile Organics by MCP 8260B for sample(s): 01-03 Batch: WG323677-3				

Parameter	Result	Qualifier	Units	RDL
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:** 0079387

**Lab Number:** L0807580  
**Report Date:** 05/30/08

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

Analytical Method: 60,8260B  
Analytical Date: 05/29/08 10:57  
Analyst: BS

Parameter	Result	Qualifier	Units	RDL
Volatile Organics by MCP 8260B for sample(s): 01-03 Batch: WG323677-3				
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:** 0079387

**Lab Number:** L0807580  
**Report Date:** 05/30/08

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

Analytical Method: 60,8260B  
Analytical Date: 05/29/08 10:57  
Analyst: BS

Parameter	Result	Qualifier	Units	RDL
Volatile Organics by MCP 8260B for sample(s): 01-03 Batch: WG323677-3				

Parameter	Result	Qualifier	Units	RDL
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	104		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	112		70-130

## Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON-WAYLAND

Lab Number: L0807580

Project Number: 0079387

Report Date: 05/30/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics by MCP 8260B Associated sample(s): 01-03 Batch: WG323677-1 WG323677-2					
Methylene chloride	135	137	70-130	1	25
1,1-Dichloroethane	103	107	70-130	4	25
Chloroform	106	110	70-130	4	25
Carbon tetrachloride	81	77	70-130	5	25
1,2-Dichloropropane	98	100	70-130	2	25
Dibromochloromethane	76	70	70-130	8	25
1,1,2-Trichloroethane	89	90	70-130	1	25
Tetrachloroethene	102	104	70-130	2	25
Chlorobenzene	95	97	70-130	2	25
Trichlorofluoromethane	132	136	70-130	3	25
1,2-Dichloroethane	109	109	70-130	0	25
1,1,1-Trichloroethane	102	101	70-130	1	25
Bromodichloromethane	97	95	70-130	2	25
trans-1,3-Dichloropropene	71	70	70-130	1	25
cis-1,3-Dichloropropene	86	83	70-130	4	25
1,1-Dichloropropene	106	108	70-130	2	25
Bromoform	64	56	70-130	13	50
1,1,2,2-Tetrachloroethane	76	75	70-130	1	25
Benzene	104	106	70-130	2	25
Toluene	95	98	70-130	3	25
Ethylbenzene	97	99	70-130	2	25

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** RAYTHEON-WAYLAND

**Lab Number:** L0807580

**Project Number:** 0079387

**Report Date:** 05/30/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics by MCP 8260B Associated sample(s): 01-03 Batch: WG323677-1 WG323677-2					
Chloromethane	113	114	70-130	1	50
Bromomethane	101	104	70-130	3	50
Vinyl chloride	116	121	70-130	4	25
Chloroethane	113	116	70-130	3	25
1,1-Dichloroethene	102	103	70-130	1	25
trans-1,2-Dichloroethene	148	152	70-130	3	25
Trichloroethene	112	112	70-130	0	25
1,2-Dichlorobenzene	96	94	70-130	2	25
1,3-Dichlorobenzene	100	98	70-130	2	25
1,4-Dichlorobenzene	99	99	70-130	0	25
Methyl tert butyl ether	83	85	70-130	2	25
p/m-Xylene	97	100	70-130	3	25
o-Xylene	101	104	70-130	3	25
cis-1,2-Dichloroethene	105	107	70-130	2	25
Dibromomethane	101	100	70-130	1	25
1,2,3-Trichloropropane	88	85	70-130	3	25
Styrene	101	106	70-130	5	25
Dichlorodifluoromethane	166	174	70-130	5	50
Acetone	107	126	70-130	16	50
Carbon disulfide	78	99	70-130	24	25
2-Butanone	84	98	70-130	15	50

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** RAYTHEON-WAYLAND

**Lab Number:** L0807580

**Project Number:** 0079387

**Report Date:** 05/30/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics by MCP 8260B Associated sample(s): 01-03 Batch: WG323677-1 WG323677-2					
4-Methyl-2-pentanone	71	82	70-130	14	50
2-Hexanone	64	78	70-130	20	50
Bromochloromethane	104	107	70-130	3	25
Tetrahydrofuran	86	90	70-130	5	25
2,2-Dichloropropane	84	84	70-130	0	50
1,2-Dibromoethane	89	88	70-130	1	25
1,3-Dichloropropane	91	90	70-130	1	25
1,1,1,2-Tetrachloroethane	79	75	70-130	5	25
Bromobenzene	97	96	70-130	1	25
n-Butylbenzene	114	107	70-130	6	25
sec-Butylbenzene	94	92	70-130	2	25
tert-Butylbenzene	91	90	70-130	1	25
o-Chlorotoluene	97	84	70-130	14	25
p-Chlorotoluene	97	96	70-130	1	25
1,2-Dibromo-3-chloropropane	62	51	70-130	19	50
Hexachlorobutadiene	102	99	70-130	3	25
Isopropylbenzene	111	112	70-130	1	25
p-Isopropyltoluene	102	99	70-130	3	25
Naphthalene	129	119	70-130	8	25
n-Propylbenzene	96	94	70-130	2	25
1,2,3-Trichlorobenzene	129	123	70-130	5	25

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** RAYTHEON-WAYLAND

**Lab Number:** L0807580

**Project Number:** 0079387

**Report Date:** 05/30/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Volatile Organics by MCP 8260B Associated sample(s): 01-03 Batch: WG323677-1 WG323677-2					
1,2,4-Trichlorobenzene	126	118	70-130	7	25
1,3,5-Trimethylbenzene	98	98	70-130	0	25
1,2,4-Trimethylbenzene	106	106	70-130	0	25
Ethyl ether	84	87	70-130	4	25
Isopropyl Ether	88	93	70-130	6	25
Ethyl-Tert-Butyl-Ether	81	83	70-130	2	25
Tertiary-Amyl Methyl Ether	71	73	70-130	3	25
1,4-Dioxane	78	70	70-130	11	50

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		102		70-130
Toluene-d8	95		95		70-130
4-Bromofluorobenzene	95		91		70-130
Dibromofluoromethane	111		110		70-130

**Project Name:** RAYTHEON-WAYLAND**Lab Number:** L0807580**Project Number:** 0079387**Report Date:** 05/30/08**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
L0807580-01A	Vial HCl preserved	A	N/A	2C	Y	Absent	MCP-8260-04
L0807580-01B	Vial HCl preserved	A	N/A	2C	Y	Absent	MCP-8260-04
L0807580-02A	Vial HCl preserved	A	N/A	2C	Y	Absent	MCP-8260-04
L0807580-02B	Vial HCl preserved	A	N/A	2C	Y	Absent	MCP-8260-04
L0807580-03A	Vial HCl preserved	A	N/A	2C	Y	Absent	MCP-8260-04

**Project Name:** RAYTHEON-WAYLAND  
**Project Number:** 0079387

**Lab Number:** L0807580  
**Report Date:** 05/30/08

## 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.  
 NI - Not Ignitable.  
 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.  
 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 following data qualifiers have been identified for use under the CT DEP Reasonable Confidence Protocols.

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.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

J - Estimated value. The analyte was tentatively identified; the quantitation is an estimation. (Tentatively identified compounds only.)

### Standard Qualifiers

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

Report Format: Not Specified





**Project Name:** RAYTHEON-WAYLAND  
**Project Number:** 0079387

**Lab Number:** L0807580  
**Report Date:** 05/30/08

## 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 Woods Hole Labs 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 Woods Hole Labs 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.



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# CHAIN OF CUSTODY

PAGE 1 OF 1

WESTBORO, MA TEL: 508-898-9220  
RAYNHAM, MA TEL: 508-822-9300  
FAX: 508-898-9193 FAX: 508-822-3288

### Client Information

Client: ERM-BOSTON  
Address: 399 Baylston St. 6<sup>th</sup> Floor  
BOSTON, MA 02116  
Phone: 617-646-7800  
Fax: jason.flattery@erm.com  
Email: 617-267-6447  
 These samples have been previously analyzed by Alpha

### Project Information

Project Name: RANTHEON - WAYLAND  
Project Location: WAYLAND, MA  
Project #: 0079387  
Project Manager: JASON FLATTERY  
ALPHA Quote #:

### Turn-Around Time

Standard  RUSH (only confirmed if pre-approved!)  
Date Due: 5/30/08 Time:

Date Rec'd in Lab: 5/22/08 ALPHA Job #: L0807580

Report Information - Data Deliverables  
 FAX  EMAIL  
 ADEx  Add'l Deliverables

Billing Information  
 Same as Client info PO #:

### Regulatory Requirements/Report Limits

State /Fed Program: MCP/LW-2 Criteria:

### MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTOCOLS

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

Other Project Specific Requirements/Comments/Detection Limits:

*ANALYSIS*  
*8021C by 8260*

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

TOTAL = **BOTTLES**

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials					Sample Specific Comments	
		Date	Time								
7580 -01	MW-217M-20080521-01	5/21/08	11:00	GW	BM	2					2
-02	MW-221D-20080521-01	5/21/08	09:35	GW	BM	2					2
-03	TM-001-20080522-01	5/22/08	19:00	GW	KOZ	1					1

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Container Type V  
Preservative B

Relinquished By: [Signature] Date/Time: 5/22/08 14:30  
 Received By: [Signature] Date/Time: 5/22/08 14:30

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.