Appendix C Analytical Laboratory Reports (Provided on CD) Appendix C Dioxane Sampling



ANALYTICAL REPORT

Lab Number:L0809877Client:ERM-New England 399 Boylston Street 6th Floor Boston, MA 02116ATTN:Jason FlatteryProject Name:RAYTHEONProject Number:0079387Report Date:07/15/08		
Client: ERM-New England 399 Boylston Street 6th Floor Boston, MA 02116 ATTN: Jason Flattery Project Name: RAYTHEON Project Number: 0079387	Lob Numbor:	1.000027
399 Boylston Street 6th Floor Boston, MA 02116ATTN:Jason FlatteryProject Name:RAYTHEONProject Number:0079387	Lab Number.	L0809877
Project Name: RAYTHEON Project Number: 0079387	Client:	399 Boylston Street 6th Floor
Project Number: 0079387	ATTN:	Jason Flattery
-	Project Name:	RAYTHEON
Report Date: 07/15/08	Project Number:	0079387
	Report Date:	07/15/08

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



Project Name:RAYTHEONProject Number:0079387

 Lab Number:
 L0809877

 Report Date:
 07/15/08

Alpha Sample ID	Client ID	Sample Location
L0809877-01	MW-554S-20080626-01	WAYLAND, MA
L0809877-02	MW-554MA-20080626-01	WAYLAND, MA
L0809877-03	MW-554MB-20080626-01	WAYLAND, MA
L0809877-04	MW-554D-20080626-01	WAYLAND, MA
L0809877-05	MW-555S-20080627-01	WAYLAND, MA
L0809877-06	MW-555MA-20080627-01	WAYLAND, MA
L0809877-07	MW-555MB-20080627-01	WAYLAND, MA
L0809877-08	MW-555D-20080627-01	WAYLAND, MA
L0809877-09	MW-556S-20080627-01	WAYLAND, MA
L0809877-10	MW-556M-20080627-01	WAYLAND, MA
L0809877-11	MW-556D-20080627-01	WAYLAND, MA



Project Name:RAYTHEONProject Number:0079387

 Lab Number:
 L0809877

 Report Date:
 07/15/08

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 a	ffirmative 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
В	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
С	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 res	sponse to questions E and F is required for "Presumptive Certainty" status	
Е	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?	YES

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:RAYTHEONProject Number:0079387

 Lab Number:
 L0809877

 Report Date:
 07/15/08

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.

Non-MCP Related Narratives

Report Submission

This report contains the results for the 1,4-Dioxane analysis. The results of all other analyses were issued under separate cover.

1,4-Dioxane

The analysis of 1,4-Dioxane by method 8270-SIM isotope dilution was performed at our Mansfield facility. The results are provided within this report and a copy of the laboratory report is included as an addendum.

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:

Ash M. M. Monig

Title: Technical Director/Representative

Date: 07/15/08



ORGANICS



SEMIVOLATILES



Project Name: RAYTHEON Lab Number: L0809877 **Project Number: Report Date:** 07/15/08 0079387 SAMPLE RESULTS Lab ID: L0809877-01 Date Collected: 06/26/08 12:00 Client ID: MW-554S-20080626-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 Analytical Date: 07/09/08 05:53 Analyst: ТW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	ND		ng/l	532	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria)	
1,4-Dioxane-d8	46		15-110		



Project Name: RAYTHEON Lab Number: L0809877 **Project Number: Report Date:** 07/15/08 0079387 SAMPLE RESULTS Lab ID: L0809877-02 Date Collected: 06/26/08 12:05 Client ID: MW-554MA-20080626-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 07/09/08 06:37 Analytical Date: Analyst: ΤW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	ND		ng/l	550	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria	9	
1,4-Dioxane-d8	46		15-110		

Project Name: RAYTHEON Lab Number: L0809877 **Project Number: Report Date:** 07/15/08 0079387 SAMPLE RESULTS Lab ID: L0809877-03 Date Collected: 06/26/08 10:25 Client ID: MW-554MB-20080626-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 Analytical Date: 07/09/08 07:21 Analyst: ΤW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	ND		ng/l	526	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria	9	
1,4-Dioxane-d8	42		15-110		

Project Name: RAYTHEON Lab Number: L0809877 **Project Number:** 0079387 **Report Date:** 07/15/08 SAMPLE RESULTS Lab ID: Date Collected: L0809877-04 06/26/08 10:30 Client ID: MW-554D-20080626-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 07/09/08 08:06 Analytical Date: Analyst: ΤW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	ND		ng/l	500	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria	;	
1,4-Dioxane-d8	41		15-110		



Project Name: RAYTHEON Lab Number: L0809877 **Project Number: Report Date:** 07/15/08 0079387 SAMPLE RESULTS Lab ID: L0809877-05 Date Collected: 06/27/08 11:10 Client ID: MW-555S-20080627-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 Analytical Date: 07/09/08 08:51 Analyst: ΤW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	ND		ng/l	532	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	46		15-110		

Project Name: RAYTHEON Lab Number: L0809877 **Project Number: Report Date:** 07/15/08 0079387 SAMPLE RESULTS Lab ID: Date Collected: 06/27/08 10:50 L0809877-06 Client ID: MW-555MA-20080627-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 07/09/08 09:36 Analytical Date: Analyst: ΤW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	ND		ng/l	521	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria)	
1,4-Dioxane-d8	45		15-110		

Project Name: RAYTHEON Lab Number: L0809877 **Project Number: Report Date:** 07/15/08 0079387 SAMPLE RESULTS Lab ID: L0809877-07 Date Collected: 06/27/08 09:30 Client ID: MW-555MB-20080627-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 Analytical Date: 07/09/08 10:21 Analyst: ΤW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	ND		ng/l	500	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria	•	
1,4-Dioxane-d8	51		15-110		

Project Name: RAYTHEON Lab Number: L0809877 **Project Number: Report Date:** 07/15/08 0079387 SAMPLE RESULTS Lab ID: L0809877-08 Date Collected: 06/27/08 09:00 Client ID: MW-555D-20080627-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 Analytical Date: 07/08/08 21:37 Analyst: ΤW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	2000		ng/l	500	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria)	
1,4-Dioxane-d8	31		15-110		

Project Name: RAYTHEON Lab Number: L0809877 **Project Number: Report Date:** 07/15/08 0079387 SAMPLE RESULTS Lab ID: L0809877-09 Date Collected: 06/27/08 13:25 Client ID: MW-556S-20080627-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 Analytical Date: 07/09/08 13:32 Analyst: ΤW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	ND		ng/l	532	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	29		15-110		



Project Name: RAYTHEON Lab Number: L0809877 **Project Number: Report Date:** 07/15/08 0079387 SAMPLE RESULTS Lab ID: L0809877-10 Date Collected: 06/27/08 13:25 Client ID: MW-556M-20080627-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 Analytical Date: 07/09/08 01:27 Analyst: ΤW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	ND		ng/l	521	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria	•	
1,4-Dioxane-d8	26		15-110		

Project Name: RAYTHEON Lab Number: L0809877 **Project Number: Report Date:** 07/15/08 0079387 SAMPLE RESULTS Lab ID: L0809877-11 Date Collected: 06/27/08 13:20 Client ID: MW-556D-20080627-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 Analytical Date: 07/09/08 02:11 Analyst: ΤW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	ND		ng/l	538	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	40		15-110		

Project Name:	RAYTHEON		Lab Number:	L0809877
Project Number:	0079387		Report Date:	07/15/08
		Method Blank Analysis		
		Batch Quality Control		

Analytical Method:	1,8270	Extraction Method:	3510C
Analytical Date:	07/08/08 17:06	Extraction Date:	07/02/08 00:00
Analyst:	TW		

Parameter	Result	Qua	lifier	Units	RDL
1,4-Dioxane by 8270 for sample(s):	01-11	Batch:	WG329	9193-1	
1,4-Dioxane	ND			ng/l	500

			Acceptance	
Surrogate	%Recovery	Qualifier	Criteria	
1,4-Dioxane-d8	42		15-110	



Lab Control Sample Analysis Batch Quality Control

Project Name: RAYTHEON
Project Number: 0079387

 Lab Number:
 L0809877

 Report Date:
 07/15/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
1,4-Dioxane by 8270 Associated sample(s):	01-11 Batch	WG329193-2 WG329193-3			
1,4-Dioxane	91	92	40-140	1	30

Surrogate	LCS	LCSD	Acceptance
	%Recovery Qualifier	%Recovery Qualifier	Criteria
1,4-Dioxane-d8	42	42	15-110



Project Name:RAYTHEONProject Number:0079387

Lab Number: L0809877 Report Date: 07/15/08

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information	
Cooler	Custody Seal
A	Absent
D	Absent
В	Absent
С	Absent

Container Information

Container ID	Container Type	Cooler	рΗ	Temp	Pres	Seal	Analysis
L0809877-01A	Amber 1000ml unpreserved	А	7	2.9C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-01B	Amber 1000ml unpreserved	А	7	2.9C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-02A	Amber 1000ml unpreserved	А	7	2.9C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-02B	Amber 1000ml unpreserved	А	7	2.9C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-03A	Amber 1000ml unpreserved	А	7	2.9C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-03B	Amber 1000ml unpreserved	А	7	2.9C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-04A	Amber 1000ml unpreserved	В	7	2.5C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-04B	Amber 1000ml unpreserved	В	7	2.5C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-05A	Amber 1000ml unpreserved	В	7	2.5C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-05B	Amber 1000ml unpreserved	В	7	2.5C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-06A	Amber 1000ml unpreserved	В	7	2.5C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-06B	Amber 1000ml unpreserved	В	7	2.5C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-07A	Amber 1000ml unpreserved	С	7	2C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-07B	Amber 1000ml unpreserved	С	7	2C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-08A	Amber 1000ml unpreserved	С	7	2C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-08B	Amber 1000ml unpreserved	С	7	2C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-09A	Amber 1000ml unpreserved	С	7	2C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-09B	Amber 1000ml unpreserved	С	7	2C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-10A	Amber 1000ml unpreserved	D	7	2.6C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-10B	Amber 1000ml unpreserved	D	7	2.6C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-11A	Amber 1000ml unpreserved	D	7	2.6C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809877-11B	Amber 1000ml unpreserved	D	7	2.6C	Y	Absent	SUB-MAN-1,4DIOXANE



Project Name: RAYTHEON

Project Number: 0079387

Lab Number: L0809877 Report Date: 07/15/08

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.



Project Name: RAYTHEON Project Number: 0079387

 Lab Number:
 L0809877

 Report Date:
 07/15/08

REFERENCES

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

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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FORM NO: 01-01 (rev. 30-JUL-07)	MA MCP or CT RCP?	IS YOUR PROJECT	PLEASE ANSWER QUESTIONS ABOVE						10-61908007-095C-MM 116-1-40	2	Sample ID			Outer Froject Specific Hequirements/Comments/Detection Limits:	Chock Direction to Constitution of the state	. 3	Fax: 617 - 267 - 6447	ē	6" FLOOR, BOSTON, MA OZ III	Address: JYY BOY(STON ST	Client: UZM	Caent adormation	FAX: 508-806-9193 FAX: 508-822-3288	WESTBORO, MA MANSFIELD, MA TEL: 508-838-9220 TEL: 508-822-8300	A CHAIN C		
	M) // Minquished By:								42		Coffection Sample		ŕ	nmente/Detection Limits:		Date Due:	D Standard D RI ISH	To the Allenda of the	ALEHA Quote #	Project Manager: JASON FUTTERY	Project #: 0079387	Project Location: WAWAND MA	Project Name: 1447400	Project Information			
		Preservative / B	Þ	Ge					W MS 22	Initials	Sampler's	P. 15/	100/ 82/	NE.								8	D FAX	, Report Information			
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0.14	Date/Time								4	Sample Specific Comments	(Prease spacing balow)	Preservation	LI Not needed	Filtration	SAMPLEHANDLING		MCP A Contract And the Product of Protocols) Required?								L3b0201 *****	(m) 80/1/2 2.732	nicod Car

Christensen,

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ANALYTICAL REPORT

<u>Prepared for:</u> Alpha Analytical - Westborough 8 Walkup Drive Westborough<u>, MA 01581</u>

Project: ETR: Report Date:

0806187 July 15, 2008

Certifications and Accreditations Massachusetts M-MA030 Connecticut PH-0141 New Hampshire 2206 Rhode Island LAO00289 New Jersey MA015 Maine MA0030 New York 11627 Louisiana 03090 Florida E87814 Pennsylvania 68-02089 Army Corps of Engineers Department of the Navy



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Sample ID Cross Reference



Alpha Analytical - Westborough L0809566 - ERM

Lab Code: MA00030 ETR: 0806187

Lab Sample ID

Client Sample ID

the second se	
0806187-08	MW-555D-20080627-01
0806187-09	MW-556S-20080627-01
0806187-10	MW-556M-20080627-01
0806187-11	MW-556D-20080627-01
e 	<u>22 M. (2120) - 21</u>
the second se	

0806187-16	MW-554S-20080626-01
0806187-17	MW-554Ma-20080626-01
0806187-18	MW-554Mb-20080626-01
0806187-19	MW-554D-20080626-01
0806187-20	MW-555S-20080627-01
0806187-21	MW-555Ma-20080627-01
0806187-22	MW-555Mb-20080627-01

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2 of 29

CASE NARRATIVE Alpha Analytical

ETR: 0806187 Project: ERM Raytheon, Wayland, MA

All analyses were performed according to Alpha Analytical quality assurance program and documented Standard Operating Procedures (SOPs). The analytical results contained in this report were performed within holding time, and with appropriate quality control measures, except where noted. All soil/sediment results are reported on a dry weight basis unless otherwise noted. A summary of all state and federal accreditations is provided within this report. Blank correction of results is not performed in the laboratory for any parameter. Alpha Analytical certifies that the test results within meet all of the requirements of NELAC, for all NELAC accredited parameters.

The enclosed results of analyses are representative of the samples as received by the laboratory. Alpha Analytical makes no representations or certifications as to the method of sample collection, sample identification, or transporting/handling procedures used prior to the receipt of samples by Alpha Analytical. To the best of my knowledge, the information contained in this report is accurate and complete. For any questions regarding this report, please contact the signatory below at 508-822-9300.

Approved by:	felle M. Jr	Title: Technical Representative	Date: _	7/15/08
· · · ·	Kathleen O'Brien			

O:\Report\NARRTEMP\2008\Alpha\0806187.doc

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1,4-Dioxane By 8270

Semi-Volatile Organics by 8270

	Clie Proj Clier Clier Case Matr	ect: at ID: MW-554 : N/A	Analytical - W 18-20080626-01 SDG: N	Vestborough N/A		Lab Code: MA ETR: 0806187 Lab ID: 08061 Associated Blar Concentration U	7 187-16 nk: SW070108B12	
Date Collected	Date Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst	
06/26/08	06/30/08	07/02/08	07/09/08	940	10	1	ALM	
L	Parame	eter	• <u></u>		Result			
	<u>1,4-Dio</u>	xane		532 U				

		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	46	15-110

N/A - Not Applicable U - The analyte was analyzed for but not detected at the sample specific level reported.

	Clie Proj Clier Clier Clier Case Matr	ect: L08095 at ID: : N/A	Analytical - V 66 - ERM SDG: N			Lab Code: MA ETR: 0806187 Lab ID: 08061 Associated Blar Concentration U	87-17 1k: SW070108B12
Date Collected	Data Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
06/26/08	06/30/08	07/02/08	07/09/08	910	10	1	ALM
	Parame 1,4-Dio		·		Result 550 U		

Surrogate	% Recovery	Acceptance Range (%)
1,4-Dioxane-d8	46	15-110

N/A - Not Applicable U - The analyte was analyzed for but not detected at the sample specific level reported.

07/10/08 07:59

	Clie Proj Clien Clien Clien Case Matr	ect: L08095 at ID:	Analytical - W 566 - ERM SDG: N	Vestborough NA		Lab Code: MA ETR: 0806187 Lab ID: 08061 Associated Blar Concentration U	87-18 1k: SW070108B12	
Date Collected	Date Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst	
06/26/08	06/30/08	07/02/08	07/09/08	950	10	1	ALM	
<u></u>	Parame	ter	•	Result				
	1,4-Dio:	xane		526_U				

Cumporto	% Recovery	Acceptance Range (%)
Surrogate 1,4-Dioxane-d8	42	15-110

N/A - Not Applicable

U - The analyte was analyzed for but not detected at the sample specific level reported.

	Clie Proj Clien Clien Case Matr	ect: L08095 at ID: : N/A	Analytical - W 66 - ERM SDG: N	Vestborough NA		Lab Code: MA ETR: 0806187 Lab ID: 08061 Associated Blar Concentration U	87-19 1k: SW070108B12
Date Collected	Dote Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
06/26/08	06/30/08	07/02/08	07/09/08	950	10	1	ALM
	Parame <u>1,4-Dio</u>		1	L	Result 486 J		

		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	41	15-110

N/A - Not Applicable J - Estimated value, below quantitation limit.

07/10/08 07:59

Date Collected	Date Received	Date Extracted	Date Analyzed 07/09/08	Sample Amount (ml) 940	Final Volume (ml) 10	Dilution Factor	Analyst ALM
	Clie Proj Clier Clier Case Matr	ect: L08095 at ID: : N/A	Analytical - W 66 - ERM SDG: N	8/A		Concentration U	87-20 k: SW070108B12

		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	46	15-110

N/A - Not Applicable

U - The analyte was analyzed for but not detected at the sample specific level reported.

and the second s	Clie Proj Clien Clien Clien Clien Case Matr	ect: L08095 it ID: : N/A	Analytical - W 566 - ERM SDG: N	Vestborough NA		Lab Code: MA ETR: 0806187 Lab ID: 08061 Associated Blan Concentration U	87-21 k: SW070108B12
Date Collected	Date Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
06/27/08	06/30/08	07/02/08	07/09/08	960	10	1	ALM
Parameter 1,4-Dioxane				<u></u>	Result		
				521 U			

		Acceptance	
Surrogate	% Recovery	Range (%)	
1,4-Dioxane-d8	45	15-110	

N/A - Not Applicable

U - The analyte was analyzed for but not detected at the sample specific level reported.

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	Proj	Client: Alpha Analytical - W Project: L0809566 - ERM Client ID:		/estborough		Lab Code: MA00030 ETR: 0806187 Lab ID: 0806187-22		
ANTON	TICAL Case Matri	: N/A	SDG:	N/A		Associated Blan Concentration U	k: SW070108B12	
Data Callastad		Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst	
06/27/08	06/30/08	07/02/08	07/09/08	1000	10	1	ALM	
	Parame <u>1,4-Dio</u>		1	·	Result 500_U	<u></u>		

		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	51	15-110

N/A - Not Applicable U - The analyte was analyzed for but not detected at the sample specific level reported.

07/10/08 08:00

6822

Date Collected 06/27/08	Date Received 06/30/08	Date Extracted 07/02/08	Date Analyzed 07/08/08	Sample Amount (ml) 1000	Final Volume (ml) 10	Dilution Factor 1	Analyst ALM
		nt ID: : N/A	66 - ERM SDG: N	V/A	Final	ETR: 0806187 Lab ID: 08061 Associated Blar Concentration U	87-08 nk: SW070108B12

Surrogate	% Recovery	Acceptance Range (%)	N/A
1,4-Dioxane-d8	31	15-110	

N/A - Not Applicable

	Clie Proj Clien Clien Case Matr	ect: L08095 at ID: : N/A	Analytical - V 566 - ERM SDG: M	Vestborough NA		Lab Code: MA ETR: 0806187 Lab ID: 08061 Associated Blar Concentration U	7 187-09 nk: SW070108B12
Date Collected	Date Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
06/27/08	06/30/08	07/02/08	07/09/08	940	10	1	ALM
	Parame	ter	•~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	L	Result		
	1,4-Dio	xane			532 U		

		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	29	15-110

N/A - Not Applicable U - The analyte was analyzed for but not detected at the sample specific level reported.

12225

	Clie Proj Clien Clien Case Matr	ect: L08095 at ID: : N/A	Analytical - V 566 - ERM SDG: M	Vestborough N/A		Lab Code: MA ETR: 0806187 Lab ID: 08061 Associated Blar Concentration U	87-10 1k: SW070108B12
Date Collected	Date Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
06/27/08	06/30/08	07/02/08	07/09/08	960	10	1	ALM
L	Parame	ter	• •••••	······································	Result		
	1,4-Dioxane				521 U		

		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	26	15-110

N/A - Not Applicable U - The analyte was analyzed for but not detected at the sample specific level reported.

07/10/08 07:57

		ect: L08095 at ID: : N/A	tak af di di	Vestborough N/A		Lab Code: MA ETR: 0806187 Lab ID: 08061 Associated Blar Concentration U	87-11 nk: SW070108B12
Date Collected	Date Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
06/27/08	06/30/08	07/02/08	07/09/08	930	10	1	ALM
<u> </u>	Parame 1,4-Dio		·		Result 402 J		

		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	40	15-110

N/A - Not Applicable J - Estimated value, below quantitation limit.

	Clie Proj Clier Clier Clier Clier Matr	ect: Blank at ID: Blank : N/A		Vestborough N/A		Lab Code: MA ETR: 0806187 Lab ID: SW07 Associated Blan Concentration U	0108B02 k: N/A
D-to Callested	Data Pagaiwad	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
N/A	N/A	07/02/08	07/08/08	1000	10	1	ALM
<u> </u>	Parame	eter	1		Result		
	1,4-Dio	xane		···	500 U		

6 4	% Recovery	Acceptance Range (%)		
Surrogate 1,4-Dioxane-d8	40	15-110		

N/A - Not Applicable

U - The analyte was analyzed for but not detected at the sample specific level reported.

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	Clie	ect:	Analytical - W	Vestborough		Lab Code: MA ETR: 0806187				
ANNIAN	TICAL Case Matr		SDG: N	I/A		Lab ID: SW07 Associated Blan Concentration U	k: N/A			
Date Collected	Date Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst			
N/A	N/A	07/02/08	07/08/08	1000	10	1	ALM			
	Parame 1,4-Dio	••-	Result 500 U							

		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	42	15-110

N/A - Not Applicable

U - The analyte was analyzed for but not detected at the sample specific level reported.

07/10/08 07:55

Laboratory Control Summary Semi-Volatile Organics by 8270

Client Project Client Client Client Client Case: Matrix	ct: ID: Laboratory N/A		Lab Code: MA00030 ETR: 0806187 Lab ID: See Below Associated Blank: SW070108B0 Concentration Units: ng/L								
Date Collected	Date Rece	ived		Date Ext	tracted		Analyst				
N/A	N/A			07/02	2/08		ALM				
Lab ID:	SW070108B02	SW070108	BLCS01	SW070	108LCSD01	····					
Parameter	Blank Conc.	LC Conc. %			LCSD % Recovery	% RPD	RPD % Limit	Recovery Limits			
1,4-Dioxane	500 U	4610	92	4680	94	2	30	40-140			

Surrogate 1,4-Dioxane-d8	<u>% Rec</u> 43	covery 34	Acceptance Range (%) 15-110	N/A - Not Applicable U - The analyte was analyzed for but not detected at the sample specific level reported.
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Concentrations reported as calculated values, which includes rounding for significant figures. Percent recoveries and RPD values are calculated from the unrounded result.

Laboratory Control Summary Semi-Volatile Organics by 8270

Clien Clien Clien Clien Clien Case: Matri	ect: t ID: Laboratory N/A	alytical - V Control Sar SDG: 1	Lab Code: MA00030 ETR: 0806187 Lab ID: See Below Associated Blank: SW070108B1 Concentration Units: ng/L								
Date Collected	Date Rece	eived	tracted		Analyst						
N/A	N/A		07/0	2/08	ALM						
Lab ID:	SW070108B12	SW070108	LCS05 SW07	0108LCSD05							
Parameter	Blank Conc.	LC: Conc. %1	S Recovery Conc.	LCSD % Recovery	% RPD	RPD % I	Limits				
1,4-Dioxane	500 U	4570	91 4620	92	1	30	40-140				

Surrogate	% Rec	overy	Acceptance Range (%)
1,4-Dioxane-d8	42	42	15-110

N/A - Not Applicable U - The analyte was analyzed for but not detected at the sample specific level reported.

Concentrations reported as calculated values, which includes rounding for significant figures. Percent recoveries and RPD values are calculated from the unrounded result.

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19 of 29

Matrix Spike Duplicate Semi-Volatile Organics by 8270

	ent: Alpha An ject:	alytical - V	Vestbor	ough		Lab Code: ETR: 080	MA0003()6187)
Clie Clie T C A LCas Mat	e: N/A	20080625-01 SDG: 1	N/A					W070108B12 ng/L
Date Collected 06/25/08	Date Reco 06/30/			Date Ext 07/02			Analyst ALM	
Lab ID:	0806187-06	080618	7-06	080)6187-06		······································	
Parameter	Sample Conc.	Matrix S Conc. % J			Spike Dup. % Recovery	% RPD	Limit	Recovery Limits
1,4-Dioxane	10900	15400	81	15100	75	2	30	40-140

Surrogate	% Rea	overy	Acceptance Range (%)	
1,4-Dioxane-d8	37	40	15-110	

N/A - Not Applicable

Concentrations reported as calculated values, which includes rounding for significant figures. Percent recoveries and RPD values are calculated from the unrounded result. 07/10/08 08:02

Chain of Custody Records

· ·	CHAIN OF CUSTODY C 1 ~ 2	1	5 586-9220 TEL: 606-922 8000 Project Name: ()W/M.CO N D FAX			Address: 309, BOY (S.R)N ST Project Manager: J.KON FATTREY NAX MED 1	(ILC APANana Article and	
	A THA	WESTBORO, MA	TEL: 508-898-9220 FAX: 50 8-608- 9193	Cheen Information	Cilent: EDM	dress: 399	M FLOOD .)- הקש איז איז

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5 Other Project Specific Requirements/Comments/Detection Limits: ٤,

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IS YOUR PROJECT			Relinquished	iished By:		Date	Date/Time			Received By:	By:		Dat	Date/Time	turnaround time clock will not start until any ambiguities are convived Au samples	All not es are
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Sample Receipt Checklist

		Page of
Client: AUPHA	Receipt Date:	6/30/09
Project:	Log-in Date:	
ETR#: 0806187	Inspection by:	Login by: 91
ALL SECTIONS BELOW MUST BE COMPLE	TED	Comments / Notes
Were samples shipped? Yes, FedEx / UPS / Other:		Sample storage refrigerator #: 03
No, Alpha Analytical Courier pick-up / 1	Hand delivered	
Is bill of lading retained? Yes, Tracking #:		Sample storage freezer #:
No, Unavailable / (NA)		
Number of coolers received for this project delivery:		
Indicate cooler temperature upon opening (if multiple coolers, record	all temps):	Cooler 2: $\frac{4}{4}$ Cooler 3: $\frac{4}{4}$
Note: If all coolers are 2-6°C, use one checklist, if NOT, use separate all samples received above 6°C.	checklists and note	Cooler 2: $\frac{4^{\circ}/4^{\circ}}{4^{\circ}}$ Cooler 3: $\frac{4^{\circ}/4^{\circ}}{4^{\circ}}$ Cooler 4: $\frac{4^{\circ}/4^{\circ}}{4^{\circ}}$ Cooler 5:
Cooler 1:		Cooler 6: Cooler 7:
Temperature(s) taken from: <i>H</i> ^o IR Gun, (Circle one) SN 46064 <i>H</i> ^o Temp. <u>Bl</u> ank, / NA	7143 or 94031	Mana
Were samples received on ice? (Yes) / No		More:
Chain-of-Custody present? (Yes) / No		
Complete? Yes / No	······································	
Custody seals present on Cooler? Yes / No		
on Bottles? Yes / No		
Intact? Yes / No / NA Note: Affix custody seals to back of this page.		
	f No, list samples: \rightarrow	
Did VOA/VPH waters contain headspace (>5mm)? Yes / No (NA)	f Yes, list samples: →	
Were 5035 VOA soils, or VPH soils, <i>covered</i> with MeOH? Yes	/ No / NA f No, list samples: \rightarrow	
Was a sufficient amount of sample received for each test indicated on	······	
If chemical preservation is appropriate - Were samples field preserved? Yes / No //	(NA)	Chemical preservation OK for ALL samples?
\Box C=HCl \Box M=MeOH \Box S=H ₂ SO4		Nor / No / MTM
$\square H=NaOH \square N=HNO_3 \square Other: \square U= Unka$	ıown	Yes / No / MTA
		If No, list samples below:
Preservation (pH) verified at lab for EVERY bottle? (Not: VOA / VP)		
YES: <2 or >12 (CN) or NC If No, why?:		
Were samples received within hold time? Yes No If	No, list samples: \rightarrow	
Discrepancy between samples rec'd & COC ? Yes (No) If	Yes, list samples: →	
	No / NA	
Project Manager Acknowledgement: Date:	· · ·	Please use back for any additional notes!



Sample Delivery Group Form

Laboratory Job number: L0809566 Client Account: ERM-New England		Received: 06/27/2008 17:10
Samples Delivered by: CLIENT Bill Of Laden N/A Coc Present Present	Trackingnum	
Container Status Integ	Sample IDs.	
All Containers Accounted For? No Missing MW-555S-20080627-01, MW-555W Also missing Amber for Dup-003-20080625 Were Extra Samples Received? Yes		4555 <u>5</u> -20080627-01.
Rec'd MW-556S-20080627-01; MW-556M-2 match above samples	0080627-01; MW35	56D-20080627=01 Willi date and time
Do Sample Labels and COC agree? Yes Are Samples in Appropriate Containers?		
Are Samples Received within Holding time	Yes	
pH of Samples upon Receipt Initial pH preserved in boose with Other Issues		iles Properly, Preserved? Yes Final pH
Chlorine Check M/A		
Are VOA/VPH Vials Present? No Aqueous: Do Vials Contain Head Space?		
Soils: Is McOHCovering the Soil? N/A	NZA	en e
Frozen by Client N/A		Delivered
ice Sooler Seal Present	rBlue Ice Present Tempe	Frozen Direct from

Absent



Sample Delivery Group Form

	Cooler	Seal		lce Present	Blue loe Present	Temperature	Frozen upon Receipt	Delivered Direct from Site
	A Second	Absent		Yes	No	29.c - Temp, Blank	No	No
	B	Absent		Yes	NB	2.5 c - Temp: Blank	Ňœ	No
	D	Absent		Mese .	No	2.6c - Temp. Blank	. No	No
							an a	
				er Disector				
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Certificate/Approval Program Summary



Method numbers assume the most recent EPA revisions. For a complete listing of analytes for the referenced methods please contact your Alpha Woods Hole Lab Project Manager or the Quality Assurance Manager.

Connecticut Department of Public Health Certificate/Lab ID : PH-0141 - Wastewater (General Chemistry: EPA 120.1, 150.1, 160.1, 160.2, 180.1, 300.0, 310.1, 335.2; Metals: 200.8, 245.1; Organics: 608-PCB, ETPH) Solid Waste/Soil (General Chemistry: 1010, 9010/9014, 9045, 9060; Metals: 6020, 7470, 7471; Organics: 8081, 8082, 8260, 8270, ETPH).

Florida Department of Health Certificate/Lab ID: E87814 - Primary NELAP Accreditation Authority for Air & Emissions. Secondary NELAP Accreditation for Wastwater and Solid & Hazardous Waste. Wastewater (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 335.2, SM2320B, SM2340B, SM2540G, SM4500NH3; Metals: 245.1; Organics: 608-PCB). Solid and Hazardous Waste (General Chemistry: 9010/9014, 9045, 9050, 9056, 9065, Reactivity 7.3; Metals: 6020, 7470, 7471; Organics: 8081, 8082, 8260, 8270). Air & Emissions (Organics: EPA TO-15).

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090 - Primary NELAP Accrediting Authority for Wastewater, Solid & Hazardous Waste. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 376.2, 9010/9014, 9056, SM2540G; Metals: 200.8, 245.1, 6020; Organics: 608-PCB, 8015-DRO, 8081, 8082, 8260, 8270). *Solid and Hazardous Waste* (General Chemistry: 1010, 1311, 9010/9014, 9040, 9045, 9056, 9060, Reactivity 7.3; Metals: 6020, 7196, 7470, 7471; Organics: 8015-DRO, 8081, 8082, 8260, 8270).

Maine Department of Human Services Certificate/Lab ID: MA0030 - Wastewater (General Chemistry: EPA 120.1/ SM2510B, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 335.2; Metals: EPA 245.1; Organics: 608-PCB).

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030 - Wastewater (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 335.2; Metals: EPA 245.1; Organics: EPA 608-PCB).

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206 - Secondary NELAP Accreditation. Wastewater (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 376.2, SM2540G; Metals: 200.8, 245.4; Organics: 608-PCB).

New Jersey Department of Environmental Protection <u>Certificate/Lab ID</u>: MA015 - Secondary NELAP Accreditation. Wastewater (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 376.2, 9010/9014, 9056, SM2540G; <u>Metals</u>: 200.8, 245.1 6020; <u>Organics</u>: 608-PCB, 8081, 8082, 8260, 8270). Solid & Hazardous Waste (General Chemistry: EPA 1010, 1311, 9010/9014, 9040, 9045, 9056, 9060; <u>Metals</u>: 6020, 7196, 7470, 7471; <u>Organics</u>: 8015-DRO, 8081, 8082, 8260, 8270). Air & Emissions (Organics: EPA TO-15).

New York Department of Health <u>Certificate/Lab ID</u>: 11627 - Secondary NELAP Accreditation. Wastewater (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 376.2; Metals: 200.8, 245.1; <u>Organics</u>: 608-PCB). Solid and Hazardous Waste (General Chemistry: EPA 1010, 1311; : 200.8; £030(;7041; <u>Organics</u>: 8081, 8082, 8260, 8270). Air & Emissions (<u>Organics</u>: EPA TO-15).

Rhode Island Department of Health <u>Certificate/Lab ID</u>: LAO00289 - Chemistry: Organic and Inorganic in Non-Poratable Water, Wastewater/Sewage and Soil (Refer to LADEQ and MADEP certificates for method numbers.)

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-02089 - Registered laboratory

U.S. Army Corps of Engineers

Department of the Navy



ANALYTICAL REPORT

Lab Number:	L0809876
Client:	ERM-New England 399 Boylston Street 6th Floor Boston, MA 02116
ATTN:	Jason Flattery
Project Name:	RAYTHEON
Project Number:	0079387
Report Date:	07/15/08

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



Project Name:RAYTHEONProject Number:0079387

 Lab Number:
 L0809876

 Report Date:
 07/15/08

Alpha Sample ID L0809876-01 Client ID MW-264M-20080625-01 Sample Location WAYLAND, MA



Project Name:RAYTHEONProject Number:0079387

 Lab Number:
 L0809876

 Report Date:
 07/15/08

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 a	ffirmative 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
В	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
С	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 re	sponse to questions E and F is required for "Presumptive Certainty" status	
Е	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?	YES

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:RAYTHEONProject Number:0079387

 Lab Number:
 L0809876

 Report Date:
 07/15/08

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.

Non-MCP Related Narratives

1,4-Dioxane

The analysis of 1,4-Dioxane by method 8270-SIM isotope dilution was performed at our Mansfield facility. The results are provided within this report and a copy of the laboratory report is included as an addendum.

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:

King & Witter

Title: Technical Director/Representative

Date: 07/15/08



ORGANICS



SEMIVOLATILES



Project Name: RAYTHEON Lab Number: L0809876 **Project Number: Report Date:** 07/15/08 0079387 SAMPLE RESULTS Lab ID: Date Collected: 06/25/08 12:05 L0809876-01 Client ID: MW-264M-20080625-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 Analytical Date: 07/08/08 13:18 Analyst: ТW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	ND		ng/l	500	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	30		15-110		

07150819:25

Project Name:	RAYTHEON		Lab Number:	L0809876
Project Number:	0079387		Report Date:	07/15/08
		Method Blank Analysis Batch Quality Control		
Analytical Method:	1,8270		Extraction Method:	3510C

Analytical Date:	07/08/08 03:31	Extraction Date:	07/02/08 00:00
Analyst:	TW		

Parameter	Result	Qualifier	Units	RDL	
1,4-Dioxane by 8270 for sample(s):	01 Batch	n: WG329190 [,]	-1		
1,4-Dioxane	ND		ng/l	500	
Surrogate	%Recove	ry Qualifier	Acceptane Criteria	ce	

1,4-Dioxane-d8	40	15-110



Lab Control Sample Analysis Batch Quality Control

Project Name:RAYTHEONProject Number:0079387

 Lab Number:
 L0809876

 Report Date:
 07/15/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
1,4-Dioxane by 8270 Associated sample(s):	01 Batch: WG329190-	2 WG329190-3			
1,4-Dioxane	92	94	40-140	2	30

Surrogate	LCS	LCSD	Acceptance
	%Recovery Qualifier	%Recovery Qualifier	Criteria
1,4-Dioxane-d8	43	34	15-110



Project Name:RAYTHEONProject Number:0079387

Lab Number: L0809876 Report Date: 07/15/08

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal			
А	Absent			
D	Absent			
В	Absent			
С	Absent			

Container Information

Container ID	Container Type	Cooler	рН	Temp	Pres	Seal	Analysis
L0809876-01A	Amber 1000ml unpreserved	А	7	2.9C	Y	Absent	SUB-MAN-1,4DIOXANE
L0809876-01B	Amber 1000ml unpreserved	А	7	2.9C	Y	Absent	SUB-MAN-1,4DIOXANE



Project Name: RAYTHEON

Project Number: 0079387

 Lab Number:
 L0809876

 Report Date:
 07/15/08

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.



Project Name: RAYTHEON Project Number: 0079387

 Lab Number:
 L0809876

 Report Date:
 07/15/08

REFERENCES

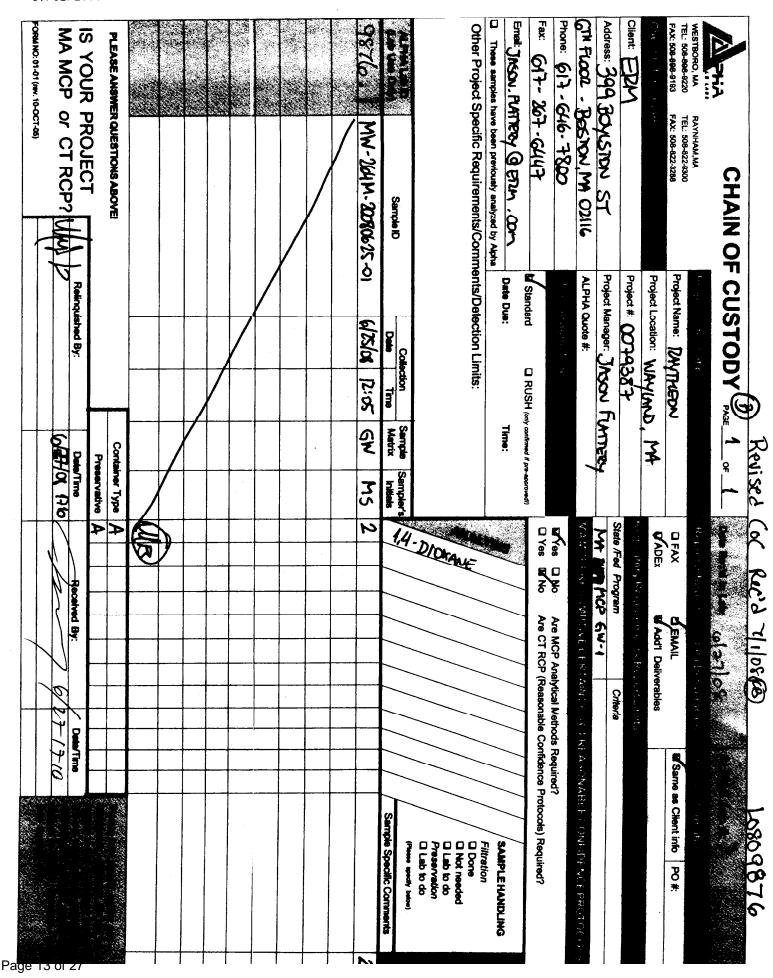
1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

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.





07/01/2008 12:12 FAX

07150819:25

Ø 003/005



ANALYTICAL REPORT

<u>Prepared for:</u> Alpha Analytical - Westborough 8 Walkup Drive Westborough<u>, MA 01581</u>

 Project:

 ETR:
 0806187

 Report Date:
 July 15, 2008

Certifications and Accreditations Massachusetts M-MA030 Connecticut PH-0141 New Hampshire 2206 Rhode Island LAO00289 New Jersey MA015 Maine MA0030 New York 11627 Louisiana 03090 Florida E87814 Pennsylvania 68-02089 Army Corps of Engineers Department of the Navy



This report shall not be reproduced except in full, without written approval from the laboratory.

i) i

Sample ID Cross Reference



Client: Project:

Alpha Analytical - Westborough

Lab Code: MA00030 ETR: 0806187

Lab Sample ID

Client Sample ID

0806187-01

MW-264M-20080625-01

320 Forbes Blvd, Mansfield, MA 02048, (508) 822-9300, Fax (508) 822-3288

- .

CASE NARRATIVE Alpha Analytical

ETR: 0806187 Project: ERM Raytheon, Wayland, MA

All analyses were performed according to Alpha Analytical quality assurance program and documented Standard Operating Procedures (SOPs). The analytical results contained in this report were performed within holding time, and with appropriate quality control measures, except where noted. All soil/sediment results are reported on a dry weight basis unless otherwise noted. A summary of all state and federal accreditations is provided within this report. Blank correction of results is not performed in the laboratory for any parameter. Alpha Analytical certifies that the test results within meet all of the requirements of NELAC, for all NELAC accredited parameters.

The enclosed results of analyses are representative of the samples as received by the laboratory. Alpha Analytical makes no representations or certifications as to the method of sample collection, sample identification, or transporting/handling procedures used prior to the receipt of samples by Alpha Analytical. To the best of my knowledge, the information contained in this report is accurate and complete. For any questions regarding this report, please contact the signatory below at 508-822-9300.

Approved by:	Juff he the	Title:	Technical Representative	Date:	1150r
	Kathleen O'Brien				

O:\Report\NARRTEMP\2008\Alpha\0806187.doc

i

1,4-Dioxane By 8270

Semi-Volatile Organics by 8270

	Clier Proj	ect:	Analytical - W M-20080625-01			Lab Code: MA ETR: 0806187 Lab ID: 08061	r
AMANDA	TICAL Case: Matr	: N/A		N/A			uk: SW070108B02
Date Collected	Date Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
06/25/08	06/30/08	07/02/08	07/08/08	1000	10	1	ALM
	Parame 1,4-Dio				Result 360 J		

		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	30	15-110

N/A - Not Applicable J - Estimated value, below quantitation limit.

07/10/08 07:54

1000553

Blank Semi-Volatile Organics by 8270

	Clier	-	Analytical - W	/estborough		Lab Code: MA ETR: 0806187	
	PHA Proj Clien TICALCase: Matr	t ID: Blank N/A	SDG: N	i/A		Lab ID: SW07 Associated Blan Concentration U	k: N/A
		Deta Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
Date Collected N/A	N/A	07/02/08	Date Analyzed 07/08/08	1000	10	1	ALM
	Paramo 1.4-Dio				Result 500 U		

		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	40	15-110

N/A - Not Applicable U - The analyte was analyzed for but not detected at the sample specific level reported.

Laboratory Control Summary Semi-Volatile Organics by 8270

Client Projec	•	alytical - V	Westbor	ough		Lab Code: ETR: 08 0	MA00030)6187	1
Client I Client I Case: Matrix:	D: Laboratory N/A		mple N/A					W070108B02 ng/L
Date Collected	Date Rece N/A	ived		Date Ex 07/02			Analyst ALM	
Lab ID:	SW070108B02	SW07010	8LCS01	SW070)108LCSD01			
Parameter	Blank Conc.	LC Conc. %	Recovery	Conc.	LCSD % Recovery	% RPD	Limit	Recovery Limits 40-140
1,4-Dioxane	500 Ų	4610	92	4680	94	2	30	40-140

Surrogate	% Rec	covery	Acceptance Range (%)
1,4-Dioxane-d8	43	34	15-110

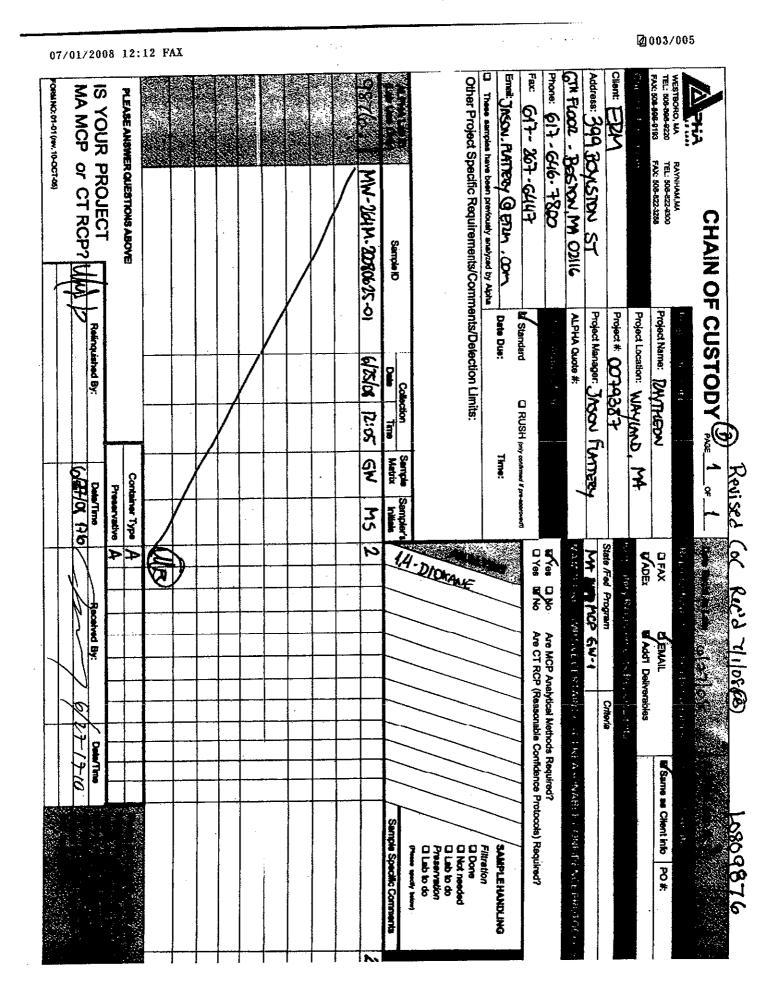
N/A - Not Applicable U - The analyte was analyzed for but not detected at the sample specific level reported.

Concentrations reported as calculated values, which includes rounding for significant figures. Percent recoveries and RPD values are calculated from the unrounded result.

320 Forbes Blvd, Mansfield, MA 02048, (508) 822-9300, Fax (508) 822-3288

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Chain of Custody Records



Page 22 of 27

Alpha's Paymest (orms.																1 (00)arned }	FORM NO: (J-01 Internal (rev. 12-April08)
submitted are subject to			+-												т-	MCP or CT RCP?	MAN
turnaround time clock will not start until any ambiguities are		Date/Time			d By:	Received By:	 		l"	Date/Time			Relinquished By:				IS YO
and completely. Semples can not he broad in and	'	•	· ·		Ĺ	Ľ	•	Ŀ	'	·	۰	Preservative]		
Binara and Fleady teathy	•	 .				'	ŀ		Ŀ	ŀ	ŀ	Container Type	0			PLEASE ANSWER QUESTIONS ABOVE!	PLEASE A
																	ن ن ب
Was 9566-01											\boxtimes		GW	5/08	06/25/08	C0809876-01	
Sample Specific Comments				 							1,4	Initiats	Time Matrix		Date	-	(Lab Use Only)
											Dio>	Sampler's	Sample	Collection		ALPHA Lab ID Sample ID	ALPHA L
											кале						
															·	Revised coc	Revis
Please specify								i 						Limits:	its/Detection	Other Project Specific Requirements/Comments/Detection Limits:	Other Pr
Preservation 9													Time:	07/14/08	Due Date: 07/14/08	These samples have been Previously analyzed by Alpha	🗌 These s
eeded			<u> </u>												I		Email:
Filtration												RE-APPROVED)	Rush (ONLY IF PRE-APPROVED)		🖾 Standard		Fax
SAMPLE HANDLING		-	_		_		_		0		AN			Turn-Around Time	Turn-Aro		Phone:
Are CT RCP (Reasonable Confidence Prolocols) Required?	Prolocols	Tidence	nable Cor	Reasor	RCP (Are C1		⊠ No	-	ŝ	🛛 Yes			iote #:	ALPHA Quote #:	Westboro, Ma 01581	Westboro
		Required	Are MCP Analytical Methods Required?	lytical k	3P Ana	Are M	<u> </u>	∎ ¥		fes	X Yes		Beaupre	Project Manager: Matt Beaupre	Project Ma	Address: 8 Waltup Dr.	Address:
ERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS	DNFIDE	BLECO	SONA	REA	Y-CT	TAINT	CER	TIVE	1MIUS:	MCP PRESUMPTIVE C	MC				Project #:	Client: Alpha Analytical Labs, Inc.	Client: Al
			Litena	╞					merido	Statered Program	State			ation: MA	Project Location: MA	Client Information	Client In
					ort Lin	nts/Report Limits		uirer	ry Req	Regulatory Requireme	Rec					FAX: 508-822-3288	FAX: 508-898-9193
				<u> </u>	<i>r</i> erable:	Add'l Deliverables	⊡ ≧			X ADEX	⊠		On	Project Name: Raytheon	Project Na	ugh, MA Raynham, MA Bedford, NH AGA.0000 TEL-508.800.0000 TEL-603.010.874	Westborough, MA
PO#:		Inform: as Client	Billing Information		rable	ata Deliverables EMAIL	Data ⊠ ≣v	tion	forma	Report Information Da	Report			Project Information	Project Ir		
		Job #:	ALPHA Job #:	-					ין ראף	Date Rec'd in Lab	Date	-	PAGE 1 OF 1	Y do	CUST	CHAIN OF CUSTODY	
				_													L'and L'

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Sample Receipt Checklist

Sumpto 1000	npr enrounde	Page of /
Client: AUPHA	Receipt Date:	6/30/09
Project:	Log-in Date:	· · · · · · · · · · · · · · · · · · ·
ETR#: 0806187	Inspection by:	Login by: 9
ALL SECTIONS BELOW MUST BE COMPLI	ETED	Comments / Notes
Were samples shipped? Yes, FedEx / UPS / Other:		
No, Alpha Analytical Courier pick-up /	Hand delivered	Sample storage refrigerator #: 03
Is bill of lading retained? Yes, Tracking #:		Sample storage freezer #:
No, Unavailable / NA		
Number of coolers received for this project delivery:		10/10 110/10
Indicate cooler temperature upon opening (if multiple coolers, record	d <u>all</u> temps):	Cooler 2: $\frac{7}{4}$ Cooler 3: $\frac{7}{4}$
<u>Note:</u> If <u>all</u> coolers are 2-6°C, use one checklist, if NOT, use separat <u>all</u> samples received <i>above</i> 6°C.	e checklists and note	Cooler 2: $\frac{4^{\circ}/4^{\circ}}{4^{\circ}/4^{\circ}}$ Cooler 3: $\frac{4^{\circ}/4^{\circ}}{4^{\circ}/4^{\circ}}$ Cooler 5:
Cooler 1:	(71 (A. D. (D.) 1	Cooler 6: Cooler 7:
Temperature(s) taken from: 4° IR Gun, (Circle one) SN 46064 4° Temp. Blank, / NA	1/143 or 94031	More:
Were samples received on ice? (Yes) / No	·····	
Chain-of-Custody present? Yes / No		
Complete? Yes / No		
Custody seals present on Cooler? Yes / No		
on Bottles? Yes / No		
Intact? Yes / No / NA		
Note: Affix custody seals to back of this page.		
Were sample containers intact? Kes No	If No, list samples: \rightarrow	
Did VOA/VPH waters contain headspace (>5mm)? Yes / No NA	If Yes, list samples: \rightarrow	
Were 5035 VOA soils, or VPH soils, covered with MeOH? Yes	/ No / NA If No, list samples: \rightarrow	
Was a sufficient amount of sample received for each test indicated o	n the COC? If No, list samples: \rightarrow	
If chemical preservation is appropriate - Were samples field preserved? Yes / No /	(NA)	Chemical preservation OK for ALL samples?
C=HCI M=MeOH S=H ₂ SO4		Yes / No / NTA
$\square H=NaOH \square N=HNO_3 \square Other: _ \square U=Un$	known	If No, list samples below:
Preservation (pH) verified at lab for EVERY bottle? (Not: VOA / VI	PH / Sulfide)	
YES: <2 or >12 (CN) or N		
If No, why?:	•	
Well's sumpres according to the second sec	If No, list samples: \rightarrow	
	f Yes, list samples: \rightarrow	
Was the Project Manager notified of any other problems? Yes /	No/ NA	
Project Manager Acknowledgement: Date:		Please use back for any additional notes!

Form No.: 101-04

04/17/2008



Sample Delivery Group Form

Laboratory Job number: _L0809566 Client Account: ERM-New England		Received: 06/27/2008 17:10	
Samples Delivered by: CLIENT Bill Of Laden N/A Coc Present - Present	Trackingnums		
Container Status Intact	Sample IDs		
All Containers Accounted For? No Missing MW-555S-20080627-01, MW-555M Also missing Amber for Dup-003-20080625 C Were Extra Samples Received? Yes Recid MW-556S-20080627-01, MW-556M-20 match above samples Do Sample Labels and COC agree? Yes Are Samples in Appropriate Containers?	91 		
Are Samples Received within Holding time?	Yes		
pH of Samples upon Receipt Initial pH preserved in house with Other Issues Chlorine Check N/A		Properly Preserved? Yes Final pH	
Soils: Is MeOHCovering the Soil? N/A	N/A N/A		
ice Sooler Seal Present	Blue ice Present Tempera	Frozên Dire	vered ct.from

Page 25 of 27



Sample Delivery Group Form

Gooler Seal	ice Present	Biue ice Present	Temperature	Frozen upon Receipt	Delivered Direct from Site
Á Ábsent	Yes	No	2.9.0 + Temp, Blank	Nð 产	No
B Absent	Yes	No	2.5 c - Temp: Blank	No	No
D Absent	• Yes	No	2:6:c - Temp. Blank	Nó	No
			a sana a Sana ang sana ang sa Sana ang sana ang san		
	Service (1995) Reference (1995)				
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Certificate/Approval Program Summary



Method numbers assume the most recent EPA revisions. For a complete listing of analytes for the referenced methods please contact your Alpha Woods Hole Lab Project Manager or the Quality Assurance Manager.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141 - Wastewater (General Chemistry: EPA 120.1, 150.1, 160.2, 180.1, 300.0, 310.1, 335.2; Metals: 200.8, 245.1; Organics: 608-PCB, ETPH) Solid Waste/Soil (General Chemistry: 1010, 9010/9014, 9045, 9060; Metals: 6020, 7470, 7471; Organics: 8081, 8082, 8260, 8270, ETPH).

Florida Department of Health Certificate/Lab ID: E87814 - Primary NELAP Accreditation Authority for Air & Emissions. Secondary NELAP Accreditation for Wastwater and Solid & Hazardous Waste. Wastewater (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 335.2, SM2320B, SM2340B, SM2540G, SM4500NH3; Metals: 245.1; Organics: 608-PCB). Solid and Hazardous Waste (General Chemistry: 9010/9014, 9045, 9050, 9056, 9065, Reactivity 7.3; Metals: 6020, 7470, 7471; Organics: 8081, 8082, 8260, 8270). Air & Emissions (Organics: EPA TO-15).

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090 - Primary NELAP Accrediting Authority for Wastewater, Solid & Hazardous Waste. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 376.2, 9010/9014, 9056, SM2540G; Metals: 200.8, 245.1, 6020; Organics: 608-PCB, 8015-DRO, 8081, 8082, 8260, 8270). *Solid and Hazardous Waste* (General Chemistry: 1010, 1311, 9010/9014, 9040, 9045, 9056, 9060, Reactivity 7.3; Metals: 6020, 7196, 7470, 7471; Organics: 8015-DRO, 8081, 8082, 8260, 8270).

Maine Department of Human Services <u>Certificate/Lab ID</u>: MA0030 - Wastewater (<u>General Chemistry</u>: EPA 120.1/ SM2510B, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 335.2; <u>Metals</u>: EPA 245.1; <u>Organics</u>: 608-PCB).

Massachusetts Department of Environmental Protection <u>Certificate/Lab ID</u>: M-MA030 - Wastewater (<u>General</u> <u>Chemistry</u>: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 335.2; <u>Metals</u>: EPA 245.1; Organics: EPA 608-PCB).

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206 - Secondary NELAP Accreditation. Wastewater (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 376.2, SM2540G; Metals: 200.8, 245.4; Organics: 608-PCB).

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015 - Secondary NELAP Accreditation. Wastewater (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 376.2, 9010/9014, 9056, SM2540G; Metals: 200.8, 245.1 6020; Organics: 608-PCB, 8081, 8082, 8260, 8270). Solid & Hazardous Waste (General Chemistry: EPA 1010, 1311, 9010/9014, 9040, 9045, 9056, 9060; Metals: 6020, 7196, 7470, 7471; Organics: 8015-DRO, 8081, 8082, 8260, 8270). Air & Emissions (Organics: EPA TO-15).

New York Department of Health Certificate/Lab ID: 11627 - Secondary NELAP Accreditation. Wastewater (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 376.2; Metals: 200.8, 245.1; Organics: 608-PCB). Solid and Hazardous Waste (General Chemistry: EPA 1010, 1311; : 200.8; 6630;7041; Organics: 8081, 8082, 8260, 8270). Air & Emissions (Organics: EPA TO-15).

Rhode Island Department of Health <u>Certificate/Lab ID</u>: LAO00289 - Chemistry: Organic and Inorganic in Non-Poratable Water, Wastewater/Sewage and Soil (Refer to LADEQ and MADEP certificates for method numbers.)

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-02089 - Registered laboratory

U.S. Army Corps of Engineers

Department of the Navy

320 Forbes Blvd, Mansfield, MA 02048, (508) 822-9300, Fax (508) 822-3288



ANALYTICAL REPORT

Lab Number:L0809866Client:ERM-New England 399 Boylston Street 6th Floor Boston, MA 02116ATTN:Jason FlatteryProject Name:RAYTHEONProject Number:0079387Report Date:07/08/08		
Client:ERM-New England 399 Boylston Street 6th Floor Boston, MA 02116ATTN:Jason FlatteryProject Name:RAYTHEONProject Number:0079387		
399 Boylston Street6th FloorBoston, MA 02116ATTN:Jason FlatteryProject Name:RAYTHEONProject Number:0079387	Lab Number:	L0809866
Project Name: RAYTHEON Project Number: 0079387	Client:	399 Boylston Street 6th Floor
Project Number: 0079387	ATTN:	Jason Flattery
-	Project Name:	RAYTHEON
Report Date: 07/08/08	Project Number:	0079387
	Report Date:	07/08/08

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



Project Name:RAYTHEONProject Number:0079387

 Lab Number:
 L0809866

 Report Date:
 07/08/08

Alpha Sample ID	Client ID	Sample Location
L0809866-01	MW-554D-20080626-01	WAYLAND, MA
L0809866-02	MW-555D-20080627-01	WAYLAND, MA
L0809866-03	MW-556D-20080627-01	WAYLAND, MA



Project Name:RAYTHEONProject Number:0079387

 Lab Number:
 L0809866

 Report Date:
 07/08/08

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 a	ffirmative 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
В	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
С	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 res	ponse 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?	YES

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:RAYTHEONProject Number:0079387

 Lab Number:
 L0809866

 Report Date:
 07/08/08

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.

MCP Related Narratives

Report Submission

This report contains the results for the Volatile Organics by MCP 8260B analysis. The results for all other analyses will be issued under separate cover.

Volatile Organics

In reference to question E:

The WG328133-1/-2 LCS/LCSD recoveries associated with L0809866-01 through -03 are outside the acceptance criteria for several compounds; 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 Bromomethane.

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:

King & Witter

Title: Technical Director/Representative

Date: 07/08/08



ORGANICS



VOLATILES



Project Name:	RAYTHEON
r roject Name.	101111201

Project Number: 0079387

Lab Number: Report Date: L0809866 07/08/08

Lab ID:	L0809866-01	Date Collected:	06/26/08 10:30
Client ID:	MW-554D-20080626-01	Date Received:	06/27/08
Sample Location:	WAYLAND, MA	Field Prep:	Not Specified
Matrix:	Water		
Anaytical Method:	60,8260B		
Analytical Date:	06/30/08 20:37		
Analyst:	GK		

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Volatile Organics by MCP 8260B					
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
Trichlorofluoromethane	ND		ug/l	2.5	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
1,1-Dichloropropene	ND		ug/l	2.5	1
Bromoform	ND		ug/l	2.0	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	1
Benzene	ND		ug/l	0.50	1
Toluene	ND		ug/l	0.75	1
Ethylbenzene	ND		ug/l	0.50	1
Chloromethane	ND		ug/l	2.5	1
Bromomethane	ND		ug/l	1.0	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



0079387

Project Number:

07080818:42

07/08/08

Lab Number: L0809866

Report Date:

Volatile Organics by MCP 8260B1,4-DichlorobenzeneNDug/l2Methyl tert butyl etherNDug/l1p/m-XyleneNDug/l1o-XyleneNDug/l1cis-1,2-Dichloroethene0.55ug/l0DibromomethaneNDug/l51,2,3-TrichloropropaneNDug/l5StyreneNDug/l5Carbon disulfideNDug/l52-ButanoneNDug/l52-HexanoneNDug/l5BromochloromethaneNDug/l52-DichloroetheneNDug/l52-ButanoneNDug/l52-DichloropropaneNDug/l52-DichloromethaneNDug/l52-DitomoneNDug/l52-DichloropropaneNDug/l53-DichloropropaneNDug/l21,2-DichloropropaneNDug/l21,2-DichloropropaneNDug/l21,2-DichloropropaneNDug/l21,3-DichloropropaneNDug/l21,1,1,2-TetrachloroethaneNDug/l01,1,1,2-TetrachloroethaneNDug/l0	eceived: 06/27/08
Parameter Result Qualifier Units R Volatile Organics by MCP 8260B ND ug/l 2 1,4-Dichlorobenzene ND ug/l 1 Methyl tert butyl ether ND ug/l 1 p/m-Xylene ND ug/l 1 o-Xylene ND ug/l 1 o-Xylene ND ug/l 1 olibromorethane 0.55 ug/l 0 Dibromorethane ND ug/l 5 Styrene ND ug/l 5 Orabon disulfide ND ug/l 5 2-Butanone ND ug/l 5 4-Methyl-2-pentanone ND ug/l 5 2-Hexanone ND ug/l 2 2-Dichloropropane ND ug/l 5 2-Hexanone ND ug/l 5 2-Butanone ND ug/l 5 2-Hexanone ND ug/l 5	Not One office
Volatile Organics by MCP 8260B1,4-DichlorobenzeneNDug/l2Methyl tert butyl etherNDug/l1p/m-XyleneNDug/l1o-XyleneNDug/l1cis-1,2-Dichloroethene0.55ug/l0.DibromomethaneNDug/l51,2,3-TrichloropropaneNDug/l5StyreneNDug/l5Carbon disulfideNDug/l52-ButanoneNDug/l52-HexanoneNDug/l5BromochloromethaneNDug/l52-IbiloroetheneNDug/l52-ButanoneNDug/l52-ButanoneNDug/l52-BoronchloromethaneNDug/l52,2-DichloropropaneNDug/l52,2-DichloropropaneNDug/l52,2-DichloropropaneNDug/l21,2-DichloropropaneNDug/l21,2-DichloropropaneNDug/l21,2-DichloropropaneNDug/l21,2-DichloropropaneNDug/l21,2-DichloropropaneNDug/l21,2-DichloropropaneNDug/l21,2-DichloropropaneNDug/l21,1,2-TetrachloroethaneNDug/l21,1,1,2-TetrachloroethaneNDug/l0	rep: Not Specified
1,4-Dichlorobenzene ND ug/l 2 Methyl tert butyl ether ND ug/l 1 p/m-Xylene ND ug/l 1 o-Xylene ND ug/l 1 o-Xylene ND ug/l 1 o-Xylene ND ug/l 1 cis-1,2-Dichloroethene 0.55 ug/l 0 Dibromomethane ND ug/l 5 1,2,3-Trichloropropane ND ug/l 5 Styrene ND ug/l 1 Dichlorodifluoromethane ND ug/l 5 Acetone ND ug/l 5 Carbon disulfide ND ug/l 5 2-Butanone ND ug/l 5 4-Methyl-2-pentanone ND ug/l 5 2-Hexanone ND ug/l 5 Bromochloromethane ND ug/l 2 1,2-Dichloropropane ND ug/l 2	RDL Dilution Factor
Methyl tert butyl ether ND ug/l 1 p/m-Xylene ND ug/l 1 o-Xylene ND ug/l 1 o-Xylene ND ug/l 1 cis-1,2-Dichloroethene 0.55 ug/l 0 Dibromomethane ND ug/l 5 1,2,3-Trichloropropane ND ug/l 5 Styrene ND ug/l 1 Dichlorodifluoromethane ND ug/l 5 Acetone ND ug/l 5 2-Butanone ND ug/l 5 2-Butanone ND ug/l 5 2-Hexanone ND ug/l 5 Bromochloromethane ND ug/l 5 Bromochloromethane ND ug/l 5 1,2-Dichloropropane ND ug/l 2 1,2-Dibromoethane ND ug/l 2 1,2-Dibromoethane ND ug/l 2	
ND ug/l 1 o-Xylene ND ug/l 1 o-Xylene ND ug/l 1 cis-1,2-Dichloroethene 0.55 ug/l 0. Dibromomethane ND ug/l 5 1,2,3-Trichloropropane ND ug/l 5 Styrene ND ug/l 1 Dichlorodifluoromethane ND ug/l 5 Acetone ND ug/l 5 Carbon disulfide ND ug/l 5 2-Butanone ND ug/l 5 4-Methyl-2-pentanone ND ug/l 5 2-Hexanone ND ug/l 5 Bromochloromethane ND ug/l 2 1,2-Dichloropropane ND ug/l 1 2,2-Dichloropropane ND ug/l 2 1,3-Dichloropropane ND ug/l 2 1,3-Dichloropropane ND ug/l 2 1,1,1,2-Tetra	2.5 1
ND ug/l 1 o-Xylene ND ug/l 1 cis-1,2-Dichloroethene 0.55 ug/l 0. Dibromomethane ND ug/l 5 1,2,3-Trichloropropane ND ug/l 5 Styrene ND ug/l 1 Dichlorodifluoromethane ND ug/l 1 Acetone ND ug/l 5 Carbon disulfide ND ug/l 5 2-Butanone ND ug/l 5 4-Methyl-2-pentanone ND ug/l 5 Bromochloromethane ND ug/l 5 Bromochloromethane ND ug/l 1 2,2-Dichloropropane ND ug/l 1 2,2-Dichloropropane ND ug/l 1 1,2-Dibromoethane ND ug/l 2 1,3-Dichloropropane ND ug/l 2	1.0 1
visit visit visit cis-1,2-Dichloroethene 0.55 ug/l 0. Dibromomethane ND ug/l 5 1,2,3-Trichloropropane ND ug/l 5 Styrene ND ug/l 1 Dichlorodifluoromethane ND ug/l 1 Acetone ND ug/l 5 Carbon disulfide ND ug/l 5 2-Butanone ND ug/l 5 4-Methyl-2-pentanone ND ug/l 5 2-Hexanone ND ug/l 5 Bromochloromethane ND ug/l 5 Bromochloromethane ND ug/l 1 2,2-Dichloropropane ND ug/l 1 1,2-Dibromoethane ND ug/l 2 1,3-Dichloropropane ND ug/l 2 1,1,1,2-Tetrachloroethane ND ug/l 0	1.0 1
Dibromomethane ND ug/l 5 1,2,3-Trichloropropane ND ug/l 5 Styrene ND ug/l 1 Dichlorodifluoromethane ND ug/l 5 Acetone ND ug/l 5 Carbon disulfide ND ug/l 5 2-Butanone ND ug/l 5 4-Methyl-2-pentanone ND ug/l 5 2-Hexanone ND ug/l 5 Bromochloromethane ND ug/l 5 2,2-Dichloropropane ND ug/l 2 1,2-Dibromoethane ND ug/l 2 1,3-Dichloropropane ND ug/l 2 1,1,1,2-Tetrachloroethane ND ug/l 2	1.0 1
1,2,3-Trichloropropane ND ug/l 5 Styrene ND ug/l 1 Dichlorodifluoromethane ND ug/l 5 Acetone ND ug/l 5 Carbon disulfide ND ug/l 5 2-Butanone ND ug/l 5 4-Methyl-2-pentanone ND ug/l 5 2-Hexanone ND ug/l 5 Bromochloromethane ND ug/l 5 Bromochloromethane ND ug/l 2 1,2-Dichloropropane ND ug/l 2 1,2-Dibromoethane ND ug/l 2 1,3-Dichloropropane ND ug/l 2 1,1,2-Tetrachloroethane ND ug/l 2	0.50 1
StyreneNDug/l1DichlorodifluoromethaneNDug/l5AcetoneNDug/l5Carbon disulfideNDug/l52-ButanoneNDug/l52-ButanoneNDug/l52-HexanoneNDug/l52-HexanoneNDug/l52-HexanoneNDug/l5BromochloromethaneNDug/l52,2-DichloropropaneNDug/l21,2-DibromoethaneNDug/l21,3-DichloropropaneNDug/l21,1,1,2-TetrachloroethaneNDug/l0	5.0 1
DichlorodifluoromethaneNDug/l5AcetoneNDug/l5Carbon disulfideNDug/l52-ButanoneNDug/l54-Methyl-2-pentanoneNDug/l52-HexanoneNDug/l5BromochloromethaneNDug/l52-LetrahydrofuranNDug/l21,2-DibromoethaneNDug/l21,3-DichloropropaneNDug/l21,1,1,2-TetrachloroethaneNDug/l2	5.0 1
AcetoneNDug/l5Carbon disulfideNDug/l52-ButanoneNDug/l54-Methyl-2-pentanoneNDug/l52-HexanoneNDug/l52-HexanoneNDug/l5BromochloromethaneNDug/l2TetrahydrofuranNDug/l12,2-DichloropropaneNDug/l21,2-DibromoethaneNDug/l21,3-DichloropropaneNDug/l21,1,1,2-TetrachloroethaneNDug/l0	1.0 1
Carbon disulfideNDug/l52-ButanoneNDug/l54-Methyl-2-pentanoneNDug/l52-HexanoneNDug/l5BromochloromethaneNDug/l2TetrahydrofuranNDug/l21,2-DichloropropaneNDug/l21,3-DichloropropaneNDug/l21,1,1,2-TetrachloroethaneNDug/l0	5.0 1
2-ButanoneNDug/l54-Methyl-2-pentanoneNDug/l52-HexanoneNDug/l5BromochloromethaneNDug/l2TetrahydrofuranNDug/l12,2-DichloropropaneNDug/l21,2-DibromoethaneNDug/l21,3-DichloropropaneNDug/l21,1,1,2-TetrachloroethaneNDug/l0	5.0 1
4-Methyl-2-pentanoneNDug/l52-HexanoneNDug/l5BromochloromethaneNDug/l2TetrahydrofuranNDug/l12,2-DichloropropaneNDug/l21,2-DibromoethaneNDug/l21,3-DichloropropaneNDug/l21,1,1,2-TetrachloroethaneNDug/l0	5.0 1
2-HexanoneNDug/l5BromochloromethaneNDug/l2TetrahydrofuranNDug/l12,2-DichloropropaneNDug/l21,2-DibromoethaneNDug/l21,3-DichloropropaneNDug/l21,1,1,2-TetrachloroethaneNDug/l0	5.0 1
BromochloromethaneNDug/l2TetrahydrofuranNDug/l12,2-DichloropropaneNDug/l21,2-DibromoethaneNDug/l21,3-DichloropropaneNDug/l21,1,1,2-TetrachloroethaneNDug/l0	5.0 1
TetrahydrofuranNDug/l12,2-DichloropropaneNDug/l21,2-DibromoethaneNDug/l21,3-DichloropropaneNDug/l21,1,1,2-TetrachloroethaneNDug/l0	5.0 1
2,2-DichloropropaneNDug/l21,2-DibromoethaneNDug/l21,3-DichloropropaneNDug/l21,1,1,2-TetrachloroethaneNDug/l0	2.5 1
1,2-DibromoethaneNDug/l21,3-DichloropropaneNDug/l21,1,1,2-TetrachloroethaneNDug/l0	10 1
1,3-DichloropropaneNDug/l21,1,1,2-TetrachloroethaneNDug/l0.	2.5 1
1,1,1,2-Tetrachloroethane ND ug/I 0.	2.0 1
	2.5 1
	0.50 1
Bromobenzene ND ug/l 2	2.5 1
n-Butylbenzene ND ug/l 0.	0.50 1
sec-Butylbenzene ND ug/l 0.	0.50 1
tert-Butylbenzene ND ug/l 2	2.5 1
o-Chlorotoluene ND ug/l 2	2.5 1
p-Chlorotoluene ND ug/l 2	2.5 1
1,2-Dibromo-3-chloropropane ND ug/l 2	2.5 1
Hexachlorobutadiene ND ug/I 0.	0.60 1
Isopropylbenzene ND ug/l 0.	0.50 1
p-Isopropyltoluene ND ug/I 0.	0.50 1
	2.5 1
n-Propylbenzene ND ug/l 0.	0.50 1
	2.5 1
1,2,4-Trichlorobenzene ND ug/l 2	2.5 1
	2.5 1
	2.5 1
	2.5 1



07080818:42

 Lab Number:
 L0809866

 Report Date:
 07/08/08

Project Number: 0079387

Lab ID: Client ID: Sample Location:	L0809866-01 MW-554D-20080626-01 WAYLAND, MA				Date Collected: Date Received: Field Prep:	06/26/08 10:30 06/27/08 Not Specified
Parameter		Result	Qualifier	Units	RDL	Dilution Factor
Volatile Organics by M	MCP 8260B					
Isopropyl Ether		ND		ug/l	2.0	1
Ethyl-Tert-Butyl-Ether		ND		ug/l	2.0	1
Tertiary-Amyl Methyl Ether		ND		ug/l	2.0	1
1,4-Dioxane		ND		ug/l	250	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	87		70-130	
Toluene-d8	97		70-130	
4-Bromofluorobenzene	95		70-130	
Dibromofluoromethane	97		70-130	



Project Name: RAYTHEON

Project Number: 0079387 Lab Number: L0809866 07/08/08

Report Date:

Lab ID:	L0809866-02	Date Collected:	06/27/08 09:50
Client ID:	MW-555D-20080627-01	Date Received:	06/27/08
Sample Location:	WAYLAND, MA	Field Prep:	Not Specified
Matrix:	Water		
Anaytical Method:	60,8260B		
Analytical Date:	06/30/08 19:30		
Analyst:	GK		

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Volatile Organics by MCP 8260B					
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
Trichlorofluoromethane	ND		ug/l	2.5	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
1,1-Dichloropropene	ND		ug/l	2.5	1
Bromoform	ND		ug/l	2.0	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	1
Benzene	ND		ug/l	0.50	1
Toluene	ND		ug/l	0.75	1
Ethylbenzene	ND		ug/l	0.50	1
Chloromethane	ND		ug/l	2.5	1
Bromomethane	ND		ug/l	1.0	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



0079387

Project Number:

07080818:42

07/08/08

Lab Number: L0809866

Report Date:

Lab ID: Client ID: Sample Location:	L0809866-02 MW-555D-20080627-01 WAYLAND, MA				Date Collected: Date Received: Field Prep:	06/27/08 09:50 06/27/08 Not Specified
Parameter		Result	Qualifier	Units	RDL	Dilution Factor
Volatile Organics by	MCP 8260B					
		ND			25	4
1,4-Dichlorobenzene		ND ND		ug/l	2.5	1
Methyl tert butyl ether p/m-Xylene		ND		ug/l	1.0	1
		ND		ug/l	1.0	1
o-Xylene		2.8		ug/l	0.50	1
cis-1,2-Dichloroethene		ND		ug/l		1
Dibromomethane		ND		ug/l	5.0	1
1,2,3-Trichloropropane		ND		ug/l	1.0	1
Styrene Dichlorodifluoromethane		ND		ug/l		1
		ND		ug/l	5.0	
Acetone Carbon disulfide		ND		ug/l	5.0	11
		ND		ug/l		1
2-Butanone		ND		ug/l	5.0	1
4-Methyl-2-pentanone		ND		ug/l	5.0	1
Bromochloromethane		ND		ug/l	2.5	1
		ND		ug/l	10	1
Tetrahydrofuran				ug/l		
2,2-Dichloropropane		ND		ug/l	2.5	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
Bromobenzene		ND		ug/l	2.5	1
n-Butylbenzene		ND		ug/l	0.50	1
sec-Butylbenzene		ND		ug/l	0.50	1
tert-Butylbenzene		ND		ug/l	2.5	1
o-Chlorotoluene		ND		ug/l	2.5	1
p-Chlorotoluene		ND		ug/l	2.5	1
1,2-Dibromo-3-chloropropa	ane	ND		ug/l	2.5	1
Hexachlorobutadiene		ND		ug/l	0.60	1
		ND		ug/l	0.50	1
p-Isopropyltoluene		ND		ug/l	0.50	1
Naphthalene		ND		ug/l	2.5	1
n-Propylbenzene		ND		ug/l	0.50	1
1,2,3-Trichlorobenzene		ND		ug/l	2.5	1
1,2,4-Trichlorobenzene		ND		ug/l	2.5	1
1,3,5-Trimethylbenzene		ND		ug/l	2.5	1
1,2,4-Trimethylbenzene		ND		ug/l	2.5	1
Ethyl ether		ND		ug/l	2.5	1



07080818:42

Report Date:

Lab Number:

L0809866 07/08/08

Project Number: 0079387

Lab ID: Client ID: Sample Location:	L0809866-02 MW-555D-20080627-01 WAYLAND, MA				Date Collected: Date Received: Field Prep:	06/27/08 09:5 06/27/08 Not Specified
Parameter		Result	Qualifier	Units	RDL	Dilution Factor
Volatile Organics b	y MCP 8260B					
Isopropyl Ether		ND		ug/l	2.0	1
Ethyl-Tert-Butyl-Ether		ND		ug/l	2.0	1
Tertiary-Amyl Methyl Eth	ner	ND		ug/l	2.0	1
1,4-Dioxane		ND		ug/l	250	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	86		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	101		70-130



Project Name: RAYTHEON

Project Number: 0079387 Lab Number: L0809866 07/08/08

Report Date:

SAN	IPL	ΕF	RES	UL	TS
			LO.		

Lab ID:	L0809866-03	Date Collected:	06/27/08 13:20
Client ID:	MW-556D-20080627-01	Date Received:	06/27/08
Sample Location:	WAYLAND, MA	Field Prep:	Not Specified
Matrix:	Water		
Anaytical Method:	60,8260B		
Analytical Date:	06/30/08 20:04		
Analyst:	GK		

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	Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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 0.50 1 1.2-Dichloropropane ND ug/l 0.50 1 Dibromochloromethane ND ug/l 0.50 1 Trichloroethane ND ug/l 0.50 1 Trichloroethane ND ug/l 0.50 1 Trichloroethane ND ug/l 0.50 1 1.2-Dichloroethane ND ug/l 0.50 1 1.2-Dichloropthane ND ug/l 0.50 1 1.2-Dichloropthane ND ug/l 0.50 1 1.1-Dichloropthane ND ug/l 0.50 1 1.1-Dichloroptropene ND ug/l 0.50 1 1.1-Dichloroptropene ND ug/l 0.50 1	Volatile Organics by MCP 8260B					
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 Tetrachloroethane ND ug/l 0.50 1 Chlorobenzene ND ug/l 0.50 1 Ticholorofluoromethane ND ug/l 0.50 1 1,1,1-Trichloroethane ND ug/l 0.50 1 1,1,1-Trichloroethane ND ug/l 0.50 1 1,1,1-Trichloroethane ND ug/l 0.50 1 1,1,1-Trichloropropene ND ug/l 0.50 1 1,1,1-Trichloropropene ND ug/l 0.50 1 1,1,1-Dichloropropene ND ug/l 0.50 1 1,1,2,2-Tetrachloroethane ND ug/l 0.50	Methylene chloride	ND		ug/l	5.0	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 Tetrachloroethane ND ug/l 0.50 1 Chlorobenzene ND ug/l 0.50 1 Trichloroethane ND ug/l 0.50 1 Trichloroethane ND ug/l 0.50 1 1,2-Dichloroethane ND ug/l 0.50 1 Bromodichloromethane ND ug/l 0.50 1 Trichloroethane ND ug/l 0.50 1 Smomodichloromethane ND ug/l 0.50 1 Trishloropropene ND ug/l 0.50 1 I,1,1-Trichloropropene ND ug/l 0.50 1 I,1,2,2-Tetrachloroethane ND ug/l 0.50 <td>1,1-Dichloroethane</td> <td>ND</td> <td></td> <td>ug/l</td> <td>0.75</td> <td>1</td>	1,1-Dichloroethane	ND		ug/l	0.75	1
J.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 Tetrachloroethane ND ug/l 0.50 1 Chlorobenzene ND ug/l 0.50 1 Trichloroethane ND ug/l 0.50 1 1,1-Dichloroethane ND ug/l 0.50 1 1,1-Trichloroethane ND ug/l 0.50 1 1,1-Trichloroethane ND ug/l 0.50 1 Itrans-1,3-Dichloropropene ND ug/l 0.50 1 Benzene ND ug/l 0.50 1 Itrobloroethane ND ug/l <	Chloroform	ND		ug/l	0.75	1
Dibromochloromethane ND ug/l 0.50 1 1,1,2-Trichloroethane ND ug/l 0.75 1 Tetrachloroethane ND ug/l 0.50 1 Chlorobenzene ND ug/l 0.50 1 Trichloroethane ND ug/l 0.50 1 1,1-2-Dichloroethane ND ug/l 0.50 1 1,1-1-Trichloroethane ND ug/l 0.50 1 1,1,1-Trichloroethane ND ug/l 0.50 1 1,1,1-Trichloroethane ND ug/l 0.50 1 1,1,1-Trichloropthane ND ug/l 0.50 1 Bromodichloromethane ND ug/l 0.50 1 Itrans-1,3-Dichloropropene ND ug/l 0.50 1 I,1,2,2-Tetrachloroethane ND ug/l 0.50 1 Benzene ND ug/l 0.50 1 Ehylbenzene ND ug/l 1.0<	Carbon tetrachloride	ND		ug/l	0.50	1
ND ug/l 0.75 1 Tetrachloroethane ND ug/l 0.50 1 Chlorobenzene ND ug/l 0.50 1 Trichlorofluoromethane 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 1.1.1-Trichloroethane 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 trans-1,3-Dichloropropene ND ug/l 0.50 1 Bromoform ND ug/l 0.50 1 1,1,2,2-Tetrachloroethane ND ug/l 0.50 1 Ethylbenzene ND ug/l 0.50 1 Chloromethane ND ug/l 1.0 1	1,2-Dichloropropane	ND		ug/l	1.8	1
Tetrachloroethene ND ug/l 0.50 1 Chlorobenzene ND ug/l 0.50 1 Trichloroftuoromethane ND ug/l 0.50 1 1,2-Dichloroethane ND ug/l 0.50 1 1,1-Trichloroethane ND ug/l 0.50 1 1,1,1-Trichloroethane ND ug/l 0.50 1 1,1,1-Trichloroethane ND ug/l 0.50 1 1,1,1-Trichloroethane ND ug/l 0.50 1 trans-1,3-Dichloropropene ND ug/l 0.50 1 trans-1,3-Dichloropropene ND ug/l 0.50 1 1,1,2,2-Tetrachloroethane ND ug/l 0.50 1 1,1,2,2-Tetrachloroethane ND ug/l 0.50 1 Ethylbenzene ND ug/l 0.50 1 Chloroethane ND ug/l 1.0 1 Vinyl chloride ND ug/l	Dibromochloromethane	ND		ug/l	0.50	1
ND ug/l 0.50 1 Trichlorofluoromethane ND ug/l 2.5 1 1,2-Dichloroethane ND ug/l 0.50 1 1,1,1-Trichloroethane ND ug/l 0.50 1 1,1,1-Trichloroethane 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 trans-1,3-Dichloropropene ND ug/l 0.50 1 1,1,2,2-Tetrachloroethane ND ug/l 0.50 1 1,1,2,2-Tetrachloroethane ND ug/l 0.50 1 Toluene ND ug/l 0.50 1 Ethylbenzene ND ug/l 0.50 1 Chloromethane ND ug/l 1.0 1 Vinyl chloride ND ug/l 1.0 1 </td <td>1,1,2-Trichloroethane</td> <td>ND</td> <td></td> <td>ug/l</td> <td>0.75</td> <td>1</td>	1,1,2-Trichloroethane	ND		ug/l	0.75	1
ND ug/ 2.5 1 1,2-Dichloroethane ND ug/l 0.50 1 1,1-Trichloroethane ND ug/l 0.50 1 Bromodichloromethane ND ug/l 0.50 1 Bromodichloromethane ND ug/l 0.50 1 Irtans-1,3-Dichloropropene ND ug/l 0.50 1 1,1-Dichloropropene ND ug/l 0.50 1 1,1-Dichloropropene ND ug/l 0.50 1 Bromodichloromethane ND ug/l 0.50 1 1,1-Dichloropropene ND ug/l 0.50 1 Bromoform ND ug/l 0.50 1 1,1,2,2-Tetrachloroethane ND ug/l 0.50 1 Ethylbenzene ND ug/l 0.50 1 Chloromethane ND ug/l 1.0 1 Vinyl chloride ND ug/l 1.0 1	Tetrachloroethene	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 Bromodichloropropene ND ug/l 0.50 1 1.1-Dichloropropene ND ug/l 0.50 1 1.1-Dichloropropene ND ug/l 0.50 1 Bromodichloromethane ND ug/l 0.50 1 1.1-Dichloropropene ND ug/l 0.50 1 Bromoform ND ug/l 0.50 1 1.1,2,2-Tetrachloroethane ND ug/l 0.50 1 Benzene ND ug/l 0.50 1 Toluene ND ug/l 0.50 1 Ethylbenzene ND ug/l 0.50 1 Chloroethane ND ug/l 1.0 1 Vinyl chloride ND ug/l 1.0 1 Chloroethane ND ug/l 0.50 1 1,1	Chlorobenzene	ND		ug/l	0.50	1
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 1,1-Dichloropropene ND ug/l 0.50 1 1,1-Dichloropropene ND ug/l 2.5 1 Bromoform ND ug/l 0.50 1 1,1,2,2-Tetrachloroethane ND ug/l 0.50 1 Benzene ND ug/l 0.50 1 Toluene ND ug/l 0.50 1 Ethylbenzene ND ug/l 0.50 1 Chloromethane ND ug/l 1.0 1 Vinyl chloride ND ug/l 1.0 1 Chloroethane ND ug/l 0.50 1 1,1-Dichloroethene	Trichlorofluoromethane	ND		ug/l	2.5	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 1,1-Dichloropropene ND ug/l 0.50 1 Bromodiform ND ug/l 2.5 1 Bromoform ND ug/l 0.50 1 1,1,2,2-Tetrachloroethane ND ug/l 0.50 1 Benzene ND ug/l 0.50 1 Toluene ND ug/l 0.50 1 Ethylbenzene ND ug/l 0.50 1 Chloromethane ND ug/l 0.50 1 Vinyl chloride ND ug/l 1.0 1 Chloromethane ND ug/l 1.0 1 Vinyl chloride ND ug/l 0.50 1 Chloroethane ND ug/l 0.50 1 tr	1,2-Dichloroethane	ND		ug/l	0.50	1
ND ug/l 0.50 1 cis-1,3-Dichloropropene ND ug/l 0.50 1 1,1-Dichloropropene ND ug/l 2.5 1 Bromoform ND ug/l 2.0 1 1,1,2,2-Tetrachloroethane ND ug/l 0.50 1 Benzene ND ug/l 0.50 1 Toluene ND ug/l 0.50 1 Ethylbenzene ND ug/l 0.50 1 Ochoromethane ND ug/l 0.50 1 Ochoromethane ND ug/l 0.50 1 Chloromethane ND ug/l 1.0 1 Vinyl chloride ND ug/l 1.0 1 Chloroethane ND ug/l 1.0 1 Unyl chloride ND ug/l 0.50 1 Tholoethane ND ug/l 0.50 1 Trichloroethene ND ug	1,1,1-Trichloroethane	ND		ug/l	0.50	1
ND ug/l 0.50 1 1,1-Dichloropropene ND ug/l 2.5 1 Bromoform ND ug/l 2.0 1 1,1,2,2-Tetrachloroethane ND ug/l 0.50 1 Benzene ND ug/l 0.50 1 Toluene ND ug/l 0.50 1 Ethylbenzene ND ug/l 0.50 1 Chloromethane ND ug/l 0.50 1 Bromorethane ND ug/l 0.50 1 Chloromethane ND ug/l 0.50 1 Unyl chloride ND ug/l 1.0 1 Vinyl chloride ND ug/l 1.0 1 Chloroethane ND ug/l 0.50 1 I,1-Dichloroethene ND ug/l	Bromodichloromethane	ND		ug/l	0.50	1
1,1-Dichloropropene ND ug/l 2.5 1 Bromoform ND ug/l 2.0 1 1,1,2,2-Tetrachloroethane ND ug/l 0.50 1 Benzene ND ug/l 0.50 1 Benzene ND ug/l 0.50 1 Toluene ND ug/l 0.75 1 Ethylbenzene ND ug/l 0.50 1 Chloromethane ND ug/l 1.0 1 Vinyl chloride ND ug/l 1.0 1 Chloroethane ND ug/l 1.0 1 1,1-Dichloroethene ND ug/l 1.0 1 1,1-Dichloroethene ND ug/l 0.50 1 1,1-Dichloroethene ND ug/l 0.50 1 1,2-Dichloroethene ND ug/l 0.50 1 1,2-Dichloroethene ND ug/l 0.50 1 1,2-Dichloroethene ND ug/l 0.50 1	trans-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 Benzene ND ug/l 0.50 1 Benzene ND ug/l 0.50 1 Toluene ND ug/l 0.75 1 Ethylbenzene ND ug/l 0.50 1 Chloromethane ND ug/l 2.5 1 Bromomethane ND ug/l 1.0 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 1,1-Dichloroethene ND ug/l 0.75 1 Trichloroethene ND ug/l 0.50 1 1,2-Dichloroethene ND ug/l 0.50 1 1,2-Dichloroethene ND ug/l 0.50 1 1,2-Dichloroethene	cis-1,3-Dichloropropene	ND		ug/l	0.50	1
1,1,2,2-Tetrachloroethane ND ug/l 0.50 1 Benzene ND ug/l 0.50 1 Toluene ND ug/l 0.75 1 Ethylbenzene ND ug/l 0.50 1 Chloromethane ND ug/l 0.50 1 Bromomethane ND ug/l 2.5 1 Vinyl chloride ND ug/l 1.0 1 Chloroethane ND ug/l 1.0 1 Vinyl chloride ND ug/l 1.0 1 Chloroethane ND ug/l 0.50 1 Trichloroethene ND ug/l 0.50 1 trans-1,2-Dichloroethene ND ug/l 0.50 1 Trichloroethene N	1,1-Dichloropropene	ND		ug/l	2.5	1
Benzene ND ug/l 0.50 1 Toluene ND ug/l 0.75 1 Ethylbenzene ND ug/l 0.50 1 Chloromethane ND ug/l 2.5 1 Bromomethane ND ug/l 1.0 1 Vinyl chloride ND ug/l 1.0 1 Chloromethane ND ug/l 1.0 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 0.50 1	Bromoform	ND		ug/l	2.0	1
Toluene ND ug/l 0.75 1 Ethylbenzene ND ug/l 0.50 1 Chloromethane ND ug/l 2.5 1 Bromomethane ND ug/l 1.0 1 Vinyl chloride ND ug/l 1.0 1 Chloroethane ND ug/l 1.0 1 Chloroethane ND ug/l 1.0 1 Chloroethane ND ug/l 0.50 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 0.50 1	1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	1
Ethylbenzene ND ug/l 0.50 1 Chloromethane ND ug/l 2.5 1 Bromomethane ND ug/l 1.0 1 Vinyl chloride ND ug/l 1.0 1 Chloroethane 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 0.50 1	Benzene	ND		ug/l	0.50	1
ND ug/l 2.5 1 Bromomethane ND ug/l 1.0 1 Vinyl chloride ND ug/l 1.0 1 Chloroethane 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	Toluene	ND		ug/l	0.75	1
ND ug/l 1.0 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-Dichloroethene ND ug/l 0.50 1	Ethylbenzene	ND		ug/l	0.50	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	Chloromethane	ND		ug/l	2.5	1
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 0.75 1 1,2-Dichlorobenzene ND ug/l 2.5 1	Bromomethane	ND		ug/l	1.0	1
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	Vinyl chloride	ND		ug/l	1.0	1
Itrans-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	Chloroethane	ND		ug/l	1.0	1
ND ug/l 0.50 1 1,2-Dichlorobenzene ND ug/l 2.5 1	1,1-Dichloroethene	ND		ug/l	0.50	1
1,2-Dichlorobenzene ND ug/l 2.5 1	trans-1,2-Dichloroethene	ND		ug/l	0.75	1
	Trichloroethene	ND		ug/l	0.50	1
1,3-Dichlorobenzene ND ug/l 2.5 1	1,2-Dichlorobenzene	ND		ug/l	2.5	1
	1,3-Dichlorobenzene	ND		ug/l	2.5	1



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Project Number:

07080818:42

07/08/08

Lab Number: L0809866

Report Date:

Client ID:MW-556D-20080627-01Date Received:06/27/08Sample Location:WAYLAND, MAField Prep:Not Spe	Lab ID:	L0809866-03				Date Collected:	06/27/08 13:2
ParameterResultQualifierUnitsRDLDilution FactorVolatile Organics by MCP 8260B							06/27/08
Volatile Organics by MCP 8260B 1.4-Dichloroberzene ND ug/l 2.5 1 Methyl tert buryl ether ND ug/l 1.0 1 p/m-Xylene ND ug/l 1.0 1 o-Xylene ND ug/l 1.0 1 o-Xylene ND ug/l 0.50 1 Dibromomethane ND ug/l 5.0 1 1.2.3-Trichloropropane ND ug/l 5.0 1 Styrene ND ug/l 5.0 1 Cathon disulfde ND ug/l 5.0 1 Actone ND ug/l 5.0 1 4-Methyl-2-pentanone ND ug/l 5.0 1 2-Hoxanone ND ug/l 5.0 1 2-Hoxanone ND ug/l 2.5 1 2-Hoxanone ND ug/l 2.5 1 2-Dichoropropane ND ug/l 2.5 1	Sample Location:	WAYLAND, MA				Field Prep:	Not Specified
I.4-Dichlorobenzene ND ug/l 2.5 1 1.4-Dichlorobenzene ND ug/l 1.0 1 p/m-Xylene ND ug/l 1.0 1 c-Xylene ND ug/l 1.0 1 cis-1,2-Dichloroethene ND ug/l 0.50 1 Dibromomethane ND ug/l 5.0 1 1,2,3-Trichloropropane ND ug/l 5.0 1 Styrene ND ug/l 5.0 1 Cathon disulfide ND ug/l 5.0 1 2-Butanone ND ug/l 5.0 1 2-Hexanone ND ug/l 5.0 1 2-Hexanone ND ug/l 2.5 1 1.2-Dichloropropane ND ug/l 2.5 1 2-Hexanone ND ug/l 2.5 1 1.2-Dichloropropane ND ug/l 2.5 1 1.2-Dichloropropane <td>Parameter</td> <td></td> <td>Result</td> <td>Qualifier</td> <td>Units</td> <td>RDL</td> <td>Dilution Factor</td>	Parameter		Result	Qualifier	Units	RDL	Dilution Factor
Methyl terb utyl ether ND ug/l 1.0 1 pm-Xylene ND ug/l 1.0 1 o-Xylene ND ug/l 1.0 1 cis-12-Dichloroethene ND ug/l 5.0 1 Dibromomethane ND ug/l 5.0 1 1,2,3-Trichloropropane ND ug/l 5.0 1 Styrene ND ug/l 5.0 1 Acetone ND ug/l 5.0 1 2-Butanone ND ug/l 5.0 1 2-Hexanone ND ug/l 5.0 1 2-Hexanone ND ug/l 5.0 1 2-Hexanone ND ug/l 2.5 1 1,2-Dichoropropane ND ug/l 2.5 1 1,2-Dichoropropane ND ug/l 2.5 1 1,1,1,2-Tetrachloroethane ND ug/l 2.5 1 1,1,1,2-Tetrachloroethane </td <td>Volatile Organics by M</td> <td>ICP 8260B</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Volatile Organics by M	ICP 8260B					
Methyl terb utyl ether ND ug/l 1.0 1 pm-Xylene ND ug/l 1.0 1 o-Xylene ND ug/l 1.0 1 o-Xylene ND ug/l 1.0 1 cis-1.2-Dichloroethene ND ug/l 5.0 1 Dichoromethane ND ug/l 5.0 1 Styrene ND ug/l 5.0 1 Carbon disulfide ND ug/l 5.0 1 2-Butanone ND ug/l 5.0 1 2-Hexanone ND ug/l 5.0 1 2-Hexanone ND ug/l 5.0 1 2-Hexanone ND ug/l 2.5 1 1.2-Dichoropropane ND ug/l 2.5 1 1.2-Dichoropropane ND ug/l 2.5 1 1.1.1,1_2-Tetrachloroethane ND ug/l 2.5 1 1.1.1,1_2-Tetrachloroethane </td <td>1.4-Dichlorobenzene</td> <td></td> <td>ND</td> <td></td> <td>ua/l</td> <td>2.5</td> <td>1</td>	1.4-Dichlorobenzene		ND		ua/l	2.5	1
pm ND ug1 1.0 1 o-Xylene ND ug1 1.0 1 o-Xylene ND ug1 0.50 1 Dibromomethane ND ug1 5.0 1 12.3-Trichloropropane ND ug1 5.0 1 Styrene ND ug1 5.0 1 Dichlorodifluoromethane ND ug1 5.0 1 Acetone ND ug1 5.0 1 Acetone ND ug1 5.0 1 4-Methyl-2-pentanone ND ug1 5.0 1 2-Butanone ND ug1 5.0 1 2-Hexanone ND ug1 5.0 1 2-Hexanone ND ug1 2.5 1 12-Dichloropropane ND ug1 2.5 1 12-Dichloropropane ND ug1 2.5 1 1.3-Dichloropropane ND ug1					-		
o-Xylene ND ug/l 1.0 1 cis-1,2-Dichloroethene ND ug/l 0.50 1 Dibromonethane ND ug/l 5.0 1 1,2,3-Trichloropropane ND ug/l 5.0 1 Styrene ND ug/l 5.0 1 Dibromothane ND ug/l 5.0 1 Acetone ND ug/l 5.0 1 Carbon disulfide ND ug/l 5.0 1 2-Butanone ND ug/l 5.0 1 2-Hexanone ND ug/l 5.0 1 2-Hexanone ND ug/l 5.0 1 2-Hexanone ND ug/l 2.5 1 Tetrahydrofuran ND ug/l 2.5 1 1,2-Dichloromethane ND ug/l 2.5 1 1,2-Dichloropropane ND ug/l 2.5 1 1,2-Dicromoethane N							1
ND ug/l 0.50 1 Dibromomethane ND ug/l 5.0 1 1.2.3-Trichloropropane ND ug/l 5.0 1 Styrene ND ug/l 5.0 1 Styrene ND ug/l 5.0 1 Dichlorodifluoromethane ND ug/l 5.0 1 Acetone ND ug/l 5.0 1 Carbon disulfide ND ug/l 5.0 1 2-Butanone ND ug/l 5.0 1 4-Methyl-2-pentanone ND ug/l 5.0 1 5-Dichloromethane ND ug/l 2.5 1 Tetrahydrofuran ND ug/l 2.5 1 1.3-Dichloromethane ND ug/l 2.5 1 1.3-Dichloropropane ND ug/l 2.5 1 1.3-Dichloropropane ND ug/l 2.5 1 Preabrythonzene ND							1
Dibromomethane ND ug/l 5.0 1 1,2,3-Trichloropropane ND ug/l 5.0 1 Styrene ND ug/l 1.0 1 Dichloropropane ND ug/l 5.0 1 Acetone ND ug/l 5.0 1 Acetone ND ug/l 5.0 1 Carbon disulfide ND ug/l 5.0 1 4-Methyl-2-pentanone ND ug/l 5.0 1 2-Hexanone ND ug/l 2.5 1 Bromochloromethane ND ug/l 2.5 1 1.2-Dichloropropane ND ug/l 2.5 1 1.3-Dichloropropane ND ug/l 2.5 1 1.1,1,2-Tetrachloroethane ND ug/l 2.5 1 1.1,1,2-Tetrachloroethane ND ug/l 2.5 1 p-Chlorotoluene ND ug/l 2.5 1 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td></td<>							1
ND ug/l 5.0 1 Styrene ND ug/l 1.0 1 Dichlorodifluoromethane ND ug/l 5.0 1 Acetone ND ug/l 5.0 1 Acetone ND ug/l 5.0 1 Carbon disulfide ND ug/l 5.0 1 2-Butanone ND ug/l 5.0 1 2-Hexanone ND ug/l 5.0 1 2-Hexanone ND ug/l 5.0 1 2-Hexanone ND ug/l 6.0 1 2-Hexanone ND ug/l 2.5 1 2-Hexanone ND ug/l 2.5 1 1.2-Dichoromethane ND ug/l 2.5 1 1.2-Dichoropropane ND ug/l 2.5 1 1.1,1,2-Tetrachloroethane ND ug/l 2.5 1 1.2-Dichoropropane ND ug/l <							
Styrene ND ug/l 1.0 1 Dichlorodifluoromethane ND ug/l 5.0 1 Acetone ND ug/l 5.0 1 Carbon disulfide ND ug/l 5.0 1 2-Butanone ND ug/l 5.0 1 2-Butanone ND ug/l 5.0 1 2-Hexanone ND ug/l 5.0 1 Bromochloromethane ND ug/l 5.0 1 2-Hexanone ND ug/l 2.5 1 Tetrahydrofuran ND ug/l 2.5 1 2.2-Dichloropropane ND ug/l 2.5 1 1.3-Dichloropropane ND ug/l 2.5 1 1.1_1.7_Ettrachloroethane ND ug/l 0.50 1 Bromobenzene ND ug/l 0.50 1 oc-Butylbenzene ND ug/l 0.50 1 oc-Chiorotoluene <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td>							1
ND ug1 5.0 1 Acetone ND ug1 5.0 1 Carbon disulfide ND ug1 5.0 1 Carbon disulfide ND ug1 5.0 1 2-Butanone ND ug1 5.0 1 2-Butanone ND ug1 5.0 1 2-Hexanone ND ug1 2.5 1 1 2-Dichoroptonethane ND ug1 2.5 1 1,2-Dibromoethane ND ug1 2.5 1 1 1,3-Dichloroptopane ND ug1 2.5 1 1 1,1,1,2-Tetrachloroethane ND ug1 2.5 1 1 1,1,1,2-Tetrachloroethane ND ug1 0.50 1							1
Acetone ND ug/l 5.0 1 Carbon disulfide ND ug/l 5.0 1 2-Butanone ND ug/l 5.0 1 2-Butanone ND ug/l 5.0 1 2-Hexanone ND ug/l 5.0 1 2-Hexanone ND ug/l 5.0 1 Bromochloromethane ND ug/l 5.0 1 2-Jekanone ND ug/l 2.5 1 Tetrahydrofuran ND ug/l 2.5 1 1,2-Dibromoethane ND ug/l 2.5 1 1,1,12-Tetrachloroethane ND ug/l 0.50 1 Bromobenzene ND ug/l 0.50 1 n-Butylbenzene ND ug/l 0.50 1 sec-Butylbenzene ND ug/l 2.5 1 o-Chlorotoluene ND ug/l 2.5 1 p-Chorotoluene <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td></td<>							1
Carbon disulfide ND ug/l 5.0 1 2-Butanone ND ug/l 5.0 1 4-Methyl-2-pentanone ND ug/l 5.0 1 2-Hexanone ND ug/l 5.0 1 2-Hexanone ND ug/l 5.0 1 Bromochloromethane ND ug/l 5.0 1 1 Tetrahydrofuran ND ug/l 2.5 1 1,2-Dibromoethane ND ug/l 2.5 1 1,2-Dibromoethane ND ug/l 2.5 1 1,1.2-Tetrachloroptane ND ug/l 2.5 1 1,1.1,2-Tetrachloroptane ND ug/l 0.50 1 Bromobenzene ND ug/l 0.50 1 n-Butylbenzene ND ug/l 0.50 1 ec-Butylbenzene ND ug/l 2.5 1 1,2-Dibromo-3-chloropropane ND ug/l 2.5 1							
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ND ug/l 2.5 1 1,2,3-Trichlorobenzene ND ug/l 2.5 1	•						
1,2,4-Trichlorobenzene ND ug/l 2.5 1							
1,2,4-Trimethylbenzene ND ug/l 2.5 1							
Instruction Instruction							



07080818:42

 Lab Number:
 L0809866

 Report Date:
 07/08/08

Project Number: 0079387

Lab ID: Client ID: Sample Location:	L0809866-03 MW-556D-20080627-01 WAYLAND, MA				Date Collected: Date Received: Field Prep:	06/27/08 13:20 06/27/08 Not Specified
Parameter		Result	Qualifier	Units	RDL	Dilution Factor
Volatile Organics by	MCP 8260B					
Isopropyl Ether		ND		ug/l	2.0	1
Ethyl-Tert-Butyl-Ether		ND		ug/l	2.0	1
Tertiary-Amyl Methyl Ethe	r	ND		ug/l	2.0	1
1,4-Dioxane		ND		ug/l	250	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	88		70-130	
Toluene-d8	98		70-130	
4-Bromofluorobenzene	95		70-130	
Dibromofluoromethane	98		70-130	



Project Number: 0079387

 Lab Number:
 L0809866

 Report Date:
 07/08/08

Method Blank Analysis Batch Quality Control

Analytical Method:	60,8260B
Analytical Date:	06/30/08 11:07
Analyst:	GK

arameter	Result	Qualifie	r U	Inits	RDL
platile Organics by MCP 8260B for	sample(s):	01-03	Batch:	W	3328133-3
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 Number: 0079387

Lab Number: L0809866 **Report Date:** 07/08/08

Method Blank Analysis Batch Quality Control

Analytical Method:	60,8260B
Analytical Date:	06/30/08 11:07
Analyst:	GK

arameter	Result	Qualifie	r U	nits	RDL
platile Organics by MCP 8260)B for sample(s):	01-03	Batch:	WG3	328133-3
Methyl tert butyl ether	ND		ι	Jg/I	1.0
p/m-Xylene	ND		ι	ug/l	1.0
o-Xylene	ND		ι	l/g	1.0
cis-1,2-Dichloroethene	ND		ι	ug/l	0.50
Dibromomethane	ND		ι	ug/l	5.0
1,2,3-Trichloropropane	ND		ι	l/g	5.0
Styrene	ND		ι	l/gu	1.0
Dichlorodifluoromethane	ND		ι	l/gu	5.0
Acetone	ND		ι	l/gu	5.0
Carbon disulfide	ND		ι	l/gu	5.0
2-Butanone	ND		ι	l/g	5.0
4-Methyl-2-pentanone	ND		ι	l/g	5.0
2-Hexanone	ND		ι	l/g	5.0
Bromochloromethane	ND		ι	l/g	2.5
Tetrahydrofuran	ND		ι	l/g	10
2,2-Dichloropropane	ND		ι	l/g	2.5
1,2-Dibromoethane	ND		ι	l/g	2.0
1,3-Dichloropropane	ND		ι	l/gu	2.5
1,1,1,2-Tetrachloroethane	ND		ι	l/gu	0.50
Bromobenzene	ND		ι	l/gu	2.5
n-Butylbenzene	ND		ι	l/gu	0.50
sec-Butylbenzene	ND		ι	ug/l	0.50
tert-Butylbenzene	ND		ι	ug/l	2.5
o-Chlorotoluene	ND		ι	ug/l	2.5
p-Chlorotoluene	ND		ι	ıg/l	2.5
1,2-Dibromo-3-chloropropane	ND		ι	ıg/l	2.5
Hexachlorobutadiene	ND		ι	l/gu	0.60
Isopropylbenzene	ND		ι	ug/l	0.50
p-Isopropyltoluene	ND		ι	ug/l	0.50
Naphthalene	ND		ι	ug/l	2.5
n-Propylbenzene	ND		ι	l/gu	0.50



Project Number: 0079387

 Lab Number:
 L0809866

 Report Date:
 07/08/08

Method Blank Analysis Batch Quality Control

Analytical Method:	60,8260B
Analytical Date:	06/30/08 11:07
Analyst:	GK

Parameter	Result	Qualifier	Units	RDL
Volatile Organics by MCP 8260B fo	or sample(s):	01-03 Ba	atch: WG32	28133-3
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
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	10

			Acceptance	
Surrogate	%Recovery	Qualifier	Criteria	
1,2-Dichloroethane-d4	87		70-130	
Toluene-d8	99		70-130	
4-Bromofluorobenzene	99		70-130	
Dibromofluoromethane	101		70-130	



Project Name: RAYTHEON Project Number: 0079387

Lab Number: L0809866 Report Date: 07/08/08

arameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits	
olatile Organics by MCP 8260B Asso	ciated sample(s): 01-03	Batch: WG328133-1	WG328133-2			
Methylene chloride	83	85	70-130	2	25	
1,1-Dichloroethane	88	88	70-130	0	25	
Chloroform	88	89	70-130	1	25	
Carbon tetrachloride	107	111	70-130	4	25	
1,2-Dichloropropane	89	90	70-130	1	25	
Dibromochloromethane	97	99	70-130	2	25	
1,1,2-Trichloroethane	89	93	70-130	4	25	
Tetrachloroethene	97	96	70-130	1	25	
Chlorobenzene	95	94	70-130	1	25	
Trichlorofluoromethane	88	93	70-130	6	25	
1,2-Dichloroethane	84	88	70-130	5	25	
1,1,1-Trichloroethane	91	95	70-130	4	25	
Bromodichloromethane	90	94	70-130	4	25	
trans-1,3-Dichloropropene	86	88	70-130	2	25	
cis-1,3-Dichloropropene	92	96	70-130	4	25	
1,1-Dichloropropene	86	88	70-130	2	25	
Bromoform	103	106	70-130	3	50	
1,1,2,2-Tetrachloroethane	96	100	70-130	4	25	
Benzene	92	93	70-130	1	25	
Toluene	94	93	70-130	1	25	
Ethylbenzene	94	94	70-130	0	25	



Project Name: RAYTHEON Project Number: 0079387

Lab Number: L0809866 Report Date: 07/08/08

arameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
olatile Organics by MCP 8260B Associat	ted sample(s): 01-03	Batch: WG328133-1	WG328133-2		
Chloromethane	92	96	70-130	4	50
Bromomethane	68	65	70-130	5	50
Vinyl chloride	80	81	70-130	1	25
Chloroethane	77	80	70-130	4	25
1,1-Dichloroethene	80	83	70-130	4	25
trans-1,2-Dichloroethene	94	95	70-130	1	25
Trichloroethene	91	91	70-130	0	25
1,2-Dichlorobenzene	100	101	70-130	1	25
1,3-Dichlorobenzene	99	98	70-130	1	25
1,4-Dichlorobenzene	100	99	70-130	1	25
Methyl tert butyl ether	97	104	70-130	7	25
p/m-Xylene	98	96	70-130	2	25
o-Xylene	101	100	70-130	1	25
cis-1,2-Dichloroethene	95	94	70-130	1	25
Dibromomethane	87	93	70-130	7	25
1,2,3-Trichloropropane	100	103	70-130	3	25
Styrene	100	98	70-130	2	25
Dichlorodifluoromethane	129	131	70-130	2	50
Acetone	71	74	70-130	4	50
Carbon disulfide	72	74	70-130	3	25
2-Butanone	82	88	70-130	7	50



RAYTHEON Project Number: 0079387

Lab Number: L0809866 Report Date: 07/08/08

arameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits	
olatile Organics by MCP 8260B Asso	ociated sample(s): 01-03	Batch: WG328133-1	WG328133-2			
4-Methyl-2-pentanone	89	93	70-130	4	50	
2-Hexanone	81	85	70-130	5	50	
Bromochloromethane	96	100	70-130	4	25	
Tetrahydrofuran	78	94	70-130	19	25	
2,2-Dichloropropane	118	121	70-130	3	50	
1,2-Dibromoethane	97	98	70-130	1	25	
1,3-Dichloropropane	86	91	70-130	6	25	
1,1,1,2-Tetrachloroethane	102	102	70-130	0	25	
Bromobenzene	99	98	70-130	1	25	
n-Butylbenzene	93	97	70-130	4	25	
sec-Butylbenzene	96	98	70-130	2	25	
tert-Butylbenzene	96	98	70-130	2	25	
o-Chlorotoluene	91	89	70-130	2	25	
p-Chlorotoluene	92	92	70-130	0	25	
1,2-Dibromo-3-chloropropane	97	95	70-130	2	50	
Hexachlorobutadiene	100	106	70-130	6	25	
Isopropylbenzene	114	114	70-130	0	25	
p-Isopropyltoluene	100	102	70-130	2	25	
Naphthalene	97	102	70-130	5	25	
n-Propylbenzene	94	93	70-130	1	25	
1,2,3-Trichlorobenzene	106	110	70-130	4	25	

ALPHA

Project Name:

RAYTHEON **Project Name:** Project Number: 0079387

Lab Number: L0809866 Report Date: 07/08/08

arameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
olatile Organics by MCP 8260B As	ssociated sample(s): 01-03	Batch: WG328133-1	WG328133-2		
1,2,4-Trichlorobenzene	100	103	70-130	3	25
1,3,5-Trimethylbenzene	94	94	70-130	0	25
1,2,4-Trimethylbenzene	94	93	70-130	1	25
Ethyl ether	80	83	70-130	4	25
Isopropyl Ether	89	92	70-130	3	25
Ethyl-Tert-Butyl-Ether	110	116	70-130	5	25
Tertiary-Amyl Methyl Ether	115	123	70-130	7	25
1,4-Dioxane	110	108	70-130	2	50
1,1,2-Trichloro-1,2,2-Trifluoroethane	88	88	70-130	0	50

Surrogate	LCS %Recovery Qualifier	LCSD %Recovery Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	85	85	70-130
Toluene-d8	100	98	70-130
4-Bromofluorobenzene	96	94	70-130
Dibromofluoromethane	97	98	70-130



Project Name: RAYTHEON Project Number: 0079387

Lab Number: L0809866 Report Date: 07/08/08

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
А	Absent
D	Absent
В	Absent
С	Absent

Container Information

Container ID	Container Type	Cooler	рΗ	Temp	Pres	Seal	Analysis
L0809866-01A	Vial HCI preserved	А	NA	2.9C	Y	Absent	MCP-8260-04
L0809866-01B	Vial HCI preserved	А	NA	2.9C	Y	Absent	MCP-8260-04
L0809866-02A	Vial HCI preserved	А	NA	2.9C	Y	Absent	MCP-8260-04
L0809866-02B	Vial HCI preserved	А	NA	2.9C	Y	Absent	MCP-8260-04
L0809866-03A	Vial HCI preserved	А	NA	2.9C	Y	Absent	MCP-8260-04
L0809866-03B	Vial HCI preserved	А	NA	2.9C	Y	Absent	MCP-8260-04



Project Number: 0079387

 Lab Number:
 L0809866

 Report Date:
 07/08/08

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.



Project Name: RAYTHEON Project Number: 0079387

 Lab Number:
 L0809866

 Report Date:
 07/08/08

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.



FORM NO: 01-01 (INV. 30-JUL-07)	9	MA MCP or CT BCP?		PLEASE ANSWER QUESTIONS ABOVE!	MN-556M-2003027-01	10-5365 - 2036-01	MN-555 D - 203,0027-01	10-45 208007-94 555 MM	MN-555 Ma- 20080677-04	MN-5555-2050671-91	2 6 MW-554 D-2008 026-01	MW-554Mb-2080606-0	MW-554 Ma. 2008 06 76 - 01	MW-554 S-2005,0026-04			Other Project Specific Requirements/Comments/Detection Limits:	These samples have been previously analyzed by Alpha	Email: JTOON, FUTTERY @ ERIM. COM	Fax: Q7 - 207 - 6447	Phone Chi Boshou MA ORING	Address: JUA BOYLSION ST	S S	Chent Information	TEL: 508-898-9220 TEL: 508-822-8300 FAX: 508-868-9183 FAX: 508-822-9288	MANSFIELD, M	
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ANALYTICAL REPORT

Lab Number:	L0809567
Client:	ERM-New England 399 Boylston Street 6th Floor Boston, MA 02116
ATTN:	Jason Flattery
Project Name:	RAYTHEON
Project Number:	0079387
Report Date:	07/09/08

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



Project Name:RAYTHEONProject Number:0079387

 Lab Number:
 L0809567

 Report Date:
 07/09/08

Alpha Sample ID	Client ID	Sample Location
L0809567-01	TB-01-20080627	WAYLAND, MA
L0809567-02	MW-267S-20080625-01	WAYLAND, MA
L0809567-03	DUP-003-20080625-01	WAYLAND, MA



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Project Name:RAYTHEONProject Number:0079387

Lab Number: L0809567 Report Date: 07/09/08

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 a	firmative 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
В	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
С	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 res	ponse 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?	YES

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:RAYTHEONProject Number:0079387

Lab Number: L0809567 Report Date: 07/09/08

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.

Report Submission

This report replaces the report issued June 3, 2008. The results for samples L0809567-04, -05, and -06 were removed and reported under Alpha Job L0809866.

The results of the 1,4-Dioxane analysis will be issued under separate cover.

MCP Related Narratives: Volatile Organics L0809567-02 and -03 have elevated detection limits due to the dilutions required by the elevated concentrations of target compounds in the samples. In reference to question E:



Project Name: RAYTHEON Project Number: 0079387 Lab Number: L0809567 Report Date: 07/09/08

Case Narrative (continued)

The WG327572-1/-2 LCS/LCSD recoveries associated with L0809567-01 and -02 are below the acceptance criteria for Bromomethane; however, it has been identified as a "difficult" analyte. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this compound. The WG327572-2 LCSD recovery associated with L0809567-01 and -02 is above the acceptance criteria for Dichlorodifluoromethane; however, it has been identified as a "difficult" analyte. The results of the associated samples are reported; however, all positive detects are considered to have a potentially high bias for this compound.

The WG327797-1/-2 LCS/LCSD recoveries associated with L0809567-03 are below the acceptance criteria for Acetone; however, it has been identified as a "difficult" analyte. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this compound.

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:

ATALORO M. Monia

Title: Technical Director/Representative

Date: 07/09/08



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ORGANICS



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VOLATILES



0079387

Project Number:

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L0809567

Lab Number: Report Date:

07/09/08

Lab ID:	L0809567-01	Date Collected:	06/22/08 17:00
Client ID:	TB-01-20080627	Date Received:	06/27/08
Sample Location:	WAYLAND, MA	Field Prep:	Not Specified
Matrix:	Water		
Anaytical Method:	60,8260B		
Analytical Date:	06/30/08 18:23		
Analyst:	GK		

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Volatile Organics by MCP 8260B					
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
Trichlorofluoromethane	ND		ug/l	2.5	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
1,1-Dichloropropene	ND		ug/l	2.5	1
Bromoform	ND		ug/l	2.0	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	1
Benzene	ND		ug/l	0.50	1
Toluene	ND		ug/l	0.75	1
Ethylbenzene	ND		ug/l	0.50	1
Chloromethane	ND		ug/l	2.5	1
Bromomethane	ND		ug/l	1.0	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



0079387

Project Number:

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07/09/08

Lab Number: L0809567

Report Date:

Lab ID: Client ID: Sample Location:	L0809567-01 TB-01-20080627 WAYLAND, MA				Date Collected: Date Received: Field Prep:	06/22/08 17 06/27/08 Not Specifie
Parameter		Result	Qualifier	Units	RDL	Dilution Factor
Volatile Organics by	MCP 8260B					
1,4-Dichlorobenzene		ND			2.5	4
		ND		ug/l	1.0	1
Methyl tert butyl ether p/m-Xylene		ND		ug/l ug/l	1.0	1
o-Xylene		ND		ug/l	1.0	1
cis-1,2-Dichloroethene		ND		ug/l	0.50	1
Dibromomethane		ND		ug/l	5.0	1
1,2,3-Trichloropropane		ND		ug/l	5.0	1
Styrene		ND		ug/l	1.0	1
Dichlorodifluoromethane		ND		ug/l	5.0	1
Acetone		ND		ug/l	5.0	1
Carbon disulfide		ND		ug/l	5.0	1
2-Butanone		ND		ug/l	5.0	1
4-Methyl-2-pentanone		ND		ug/l	5.0	1
2-Hexanone		ND		ug/l	5.0	1
Bromochloromethane		ND		ug/l	2.5	1
Tetrahydrofuran		ND		ug/l	10	1
2,2-Dichloropropane		ND		ug/l	2.5	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
Bromobenzene		ND		ug/l	2.5	1
n-Butylbenzene		ND		ug/l	0.50	1
sec-Butylbenzene		ND		ug/l	0.50	1
tert-Butylbenzene		ND		ug/l	2.5	1
o-Chlorotoluene		ND		ug/l	2.5	1
p-Chlorotoluene		ND		ug/l	2.5	1
1,2-Dibromo-3-chloropropa	ane	ND		ug/l	2.5	1
Hexachlorobutadiene		ND		ug/l	0.60	1
Isopropylbenzene		ND		ug/l	0.50	1
p-Isopropyltoluene		ND		ug/l	0.50	1
Naphthalene		ND		ug/l	2.5	1
n-Propylbenzene		ND		ug/l	0.50	1
1,2,3-Trichlorobenzene		ND		ug/l	2.5	1
1,2,4-Trichlorobenzene		ND		ug/l	2.5	1
1,3,5-Trimethylbenzene		ND		ug/l	2.5	1
1,2,4-Trimethylbenzene		ND		ug/l	2.5	1
Ethyl ether		ND		ug/l	2.5	1



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 Lab Number:
 L0809567

 Report Date:
 07/09/08

Project Number: 0079387

Lab ID: Client ID: Sample Location:	L0809567-01 TB-01-20080627 WAYLAND, MA				Date Collected: Date Received: Field Prep:	06/22/08 17:00 06/27/08 Not Specified
Parameter		Result	Qualifier	Units	RDL	Dilution Factor
Volatile Organics by	y MCP 8260B					
Isopropyl Ether		ND		ug/l	2.0	1
Ethyl-Tert-Butyl-Ether		ND		ug/l	2.0	1
Tertiary-Amyl Methyl Eth	ner	ND		ug/l	2.0	1
1,4-Dioxane		ND		ug/l	250	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	87		70-130	
Toluene-d8	98		70-130	
4-Bromofluorobenzene	99		70-130	
Dibromofluoromethane	98		70-130	



07090811:08

Project Name: RAYTHEON

Project Number: 0079387 Lab Number: L0809567 07/09/08

Report Date:

Lab ID:	L0809567-02	Date Collected:	06/27/08 15:45
Client ID:	MW-267S-20080625-01	Date Received:	06/27/08
Sample Location:	WAYLAND, MA	Field Prep:	Not Specified
Matrix:	Water		
Anaytical Method:	60,8260B		
Analytical Date:	06/30/08 18:57		
Analvst:	GK		

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Volatile Organics by MCP 8260B					
Methylene chloride	ND		ug/l	50	10
1,1-Dichloroethane	ND		ug/l	7.5	10
Chloroform	ND		ug/l	7.5	10
Carbon tetrachloride	ND		ug/l	5.0	10
1,2-Dichloropropane	ND		ug/l	18	10
Dibromochloromethane	ND		ug/l	5.0	10
1,1,2-Trichloroethane	ND		ug/l	7.5	10
Tetrachloroethene	17		ug/l	5.0	10
Chlorobenzene	ND		ug/l	5.0	10
Trichlorofluoromethane	ND		ug/l	25	10
1,2-Dichloroethane	ND		ug/l	5.0	10
1,1,1-Trichloroethane	ND		ug/l	5.0	10
Bromodichloromethane	ND		ug/l	5.0	10
trans-1,3-Dichloropropene	ND		ug/l	5.0	10
cis-1,3-Dichloropropene	ND		ug/l	5.0	10
1,1-Dichloropropene	ND		ug/l	25	10
Bromoform	ND		ug/l	20	10
1,1,2,2-Tetrachloroethane	ND		ug/l	5.0	10
Benzene	ND		ug/l	5.0	10
Toluene	ND		ug/l	7.5	10
Ethylbenzene	ND		ug/l	5.0	10
Chloromethane	ND		ug/l	25	10
Bromomethane	ND		ug/l	10	10
Vinyl chloride	ND		ug/l	10	10
Chloroethane	ND		ug/l	10	10
1,1-Dichloroethene	ND		ug/l	5.0	10
trans-1,2-Dichloroethene	ND		ug/l	7.5	10
Trichloroethene	610		ug/l	5.0	10
1,2-Dichlorobenzene	ND		ug/l	25	10
1,3-Dichlorobenzene	ND		ug/l	25	10



0079387

Project Number:

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07/09/08

Lab Number: L0809567

Report Date:

Lab ID: Client ID: Sample Location:	L0809567-02 MW-267S-20080625-01 WAYLAND, MA				Date Collected: Date Received: Field Prep:	06/27/08 15: 06/27/08 Not Specifier
Parameter		Result	Qualifier	Units	RDL	Dilution Factor
Volatile Organics by	MCP 8260B					
1,4-Dichlorobenzene		ND		ug/l	25	10
Methyl tert butyl ether		ND		ug/l	10	10
p/m-Xylene		ND		ug/l	10	10
o-Xylene		ND		ug/l	10	10
cis-1,2-Dichloroethene		89		ug/l	5.0	10
Dibromomethane		ND		ug/l	50	10
1,2,3-Trichloropropane		ND		ug/l	50	10
Styrene		ND		ug/l	10	10
Dichlorodifluoromethane		ND		ug/l	50	10
Acetone		ND		ug/l	50	10
Carbon disulfide		ND		ug/l	50	10
2-Butanone		ND		ug/l	50	10
4-Methyl-2-pentanone		ND		ug/l	50	10
2-Hexanone		ND		ug/l	50	10
Bromochloromethane		ND		ug/l	25	10
Tetrahydrofuran		ND		ug/l	100	10
2,2-Dichloropropane		ND		ug/l	25	10
1,2-Dibromoethane		ND		ug/l	20	10
1,3-Dichloropropane		ND		ug/l	25	10
1,1,1,2-Tetrachloroethane)	ND		ug/l	5.0	10
Bromobenzene		ND		ug/l	25	10
n-Butylbenzene		ND		ug/l	5.0	10
sec-Butylbenzene		ND		ug/l	5.0	10
tert-Butylbenzene		ND		ug/l	25	10
o-Chlorotoluene		ND		ug/l	25	10
p-Chlorotoluene		ND		ug/l	25	10
1,2-Dibromo-3-chloroprop	bane	ND		ug/l	25	10
Hexachlorobutadiene		ND		ug/l	6.0	10
lsopropylbenzene		ND		ug/l	5.0	10
o-Isopropyltoluene		ND		ug/l	5.0	10
Naphthalene		ND		ug/l	25	10
n-Propylbenzene		ND		ug/l	5.0	10
1,2,3-Trichlorobenzene		ND		ug/l	25	10
1,2,4-Trichlorobenzene		ND		ug/l	25	10
1,3,5-Trimethylbenzene		ND		ug/l	25	10
1,2,4-Trimethylbenzene		ND		ug/l	25	10
Ethyl ether		ND		ug/l	25	10



0079387

Project Number:

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L0809567

07/09/08

Lab Number: Report Date:

Lab ID: Client ID: Sample Location:	L0809567-02 MW-267S-20080625-01 WAYLAND, MA				Date Collected: Date Received: Field Prep:	06/27/08 15:45 06/27/08 Not Specified
Parameter		Result	Qualifier	Units	RDL	Dilution Factor
Volatile Organics by	MCP 8260B					
Isopropyl Ether		ND		ug/l	20	10
Ethyl-Tert-Butyl-Ether		ND		ug/l	20	10
Tertiary-Amyl Methyl Ethe	er	ND		ug/l	20	10
1,4-Dioxane		ND		ug/l	2500	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	85		70-130	
Toluene-d8	97		70-130	
4-Bromofluorobenzene	94		70-130	
Dibromofluoromethane	98		70-130	



Project Number: 0079387

Lab Number: Report Date: L0809567 07/09/08

07090811:08

Lab ID:	L0809567-03	Date Collected:	06/27/08 00:00
Client ID:	DUP-003-20080625-01	Date Received:	06/27/08
Sample Location:	WAYLAND, MA	Field Prep:	Not Specified
Matrix:	Water		
Anaytical Method:	60,8260B		
Analytical Date:	07/01/08 14:10		
Analyst:	BS		

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Volatile Organics by MCP 8260B					
Methylene chloride	ND		ug/l	50	10
1,1-Dichloroethane	ND		ug/l	7.5	10
Chloroform	ND		ug/l	7.5	10
Carbon tetrachloride	ND		ug/l	5.0	10
1,2-Dichloropropane	ND		ug/l	18	10
Dibromochloromethane	ND		ug/l	5.0	10
1,1,2-Trichloroethane	ND		ug/l	7.5	10
Tetrachloroethene	17		ug/l	5.0	10
Chlorobenzene	ND		ug/l	5.0	10
Trichlorofluoromethane	ND		ug/l	25	10
1,2-Dichloroethane	ND		ug/l	5.0	10
1,1,1-Trichloroethane	ND		ug/l	5.0	10
Bromodichloromethane	ND		ug/l	5.0	10
trans-1,3-Dichloropropene	ND		ug/l	5.0	10
cis-1,3-Dichloropropene	ND		ug/l	5.0	10
1,1-Dichloropropene	ND		ug/l	25	10
Bromoform	ND		ug/l	20	10
1,1,2,2-Tetrachloroethane	ND		ug/l	5.0	10
Benzene	ND		ug/l	5.0	10
Toluene	ND		ug/l	7.5	10
Ethylbenzene	ND		ug/l	5.0	10
Chloromethane	ND		ug/l	25	10
Bromomethane	ND		ug/l	10	10
Vinyl chloride	ND		ug/l	10	10
Chloroethane	ND		ug/l	10	10
1,1-Dichloroethene	ND		ug/l	5.0	10
trans-1,2-Dichloroethene	ND		ug/l	7.5	10
Trichloroethene	650		ug/l	5.0	10
1,2-Dichlorobenzene	ND		ug/l	25	10
1,3-Dichlorobenzene	ND		ug/l	25	10



0079387

Project Number:

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07/09/08

Lab Number: L0809567

Report Date:

Lab ID: Client ID: Sample Location:	L0809567-03 DUP-003-20080625-01 WAYLAND, MA				Date Collected: Date Received: Field Prep:	06/27/08 00:0 06/27/08 Not Specified
Parameter		Result	Qualifier	Units	RDL	Dilution Factor
Volatile Organics by N	/ICP 8260B					
1 4 Dichlorohonzono		ND			25	10
1,4-Dichlorobenzene		ND		ug/l	25 10	10
Methyl tert butyl ether p/m-Xylene		ND		ug/l ug/l	10	10
o-Xylene		ND		ug/l	10	10
cis-1,2-Dichloroethene		95		ug/l	5.0	10
Dibromomethane		93 ND		-	50	10
1,2,3-Trichloropropane		ND		ug/l	50	10
		ND		ug/l	10	
Styrene				ug/l		10
Dichlorodifluoromethane		ND		ug/l	50	10
Acetone Carbon disulfide		ND ND		ug/l	50	10
				ug/l	50	10
2-Butanone		ND		ug/l	50	10
4-Methyl-2-pentanone		ND		ug/l	50	10
2-Hexanone		ND		ug/l	50	10
Bromochloromethane		ND		ug/l	25	10
Tetrahydrofuran		ND		ug/l	100	10
2,2-Dichloropropane		ND		ug/l	25	10
1,2-Dibromoethane		ND		ug/l	20	10
1,3-Dichloropropane		ND		ug/l	25	10
1,1,1,2-Tetrachloroethane		ND		ug/l	5.0	10
Bromobenzene		ND		ug/l	25	10
n-Butylbenzene		ND		ug/l	5.0	10
sec-Butylbenzene		ND		ug/l	5.0	10
tert-Butylbenzene		ND		ug/l	25	10
o-Chlorotoluene		ND		ug/l	25	10
p-Chlorotoluene		ND		ug/l	25	10
1,2-Dibromo-3-chloropropa	ne	ND		ug/l	25	10
Hexachlorobutadiene		ND		ug/l	6.0	10
Isopropylbenzene		ND		ug/l	5.0	10
p-Isopropyltoluene		ND		ug/l	5.0	10
Naphthalene		ND		ug/l	25	10
n-Propylbenzene		ND		ug/l	5.0	10
1,2,3-Trichlorobenzene		ND		ug/l	25	10
1,2,4-Trichlorobenzene		ND		ug/l	25	10
1,3,5-Trimethylbenzene		ND		ug/l	25	10
1,2,4-Trimethylbenzene		ND		ug/l	25	10
Ethyl ether		ND		ug/l	25	10



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 Lab Number:
 L0809567

 Report Date:
 07/09/08

Project Number: 0079387

Lab ID: Client ID: Sample Location:	L0809567-03 DUP-003-20080625-01 WAYLAND, MA				Date Collected: Date Received: Field Prep:	06/27/08 00:00 06/27/08 Not Specified
Parameter		Result	Qualifier	Units	RDL	Dilution Factor
Volatile Organics by	MCP 8260B					
Isopropyl Ether		ND		ug/l	20	10
Ethyl-Tert-Butyl-Ether		ND		ug/l	20	10
Tertiary-Amyl Methyl Eth	er	ND		ug/l	20	10
1,4-Dioxane		ND		ug/l	2500	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	104		70-130	
Toluene-d8	100		70-130	
4-Bromofluorobenzene	101		70-130	
Dibromofluoromethane	109		70-130	



Project Number: 0079387

 Lab Number:
 L0809567

 Report Date:
 07/09/08

Analytical Method:	60,8260B
Analytical Date:	06/30/08 11:07
Analyst:	GK

arameter	Result	Qualifie	er Un	nits	RDL	
platile Organics by MCP	8260B for sample(s):	01-02	Batch:	WG3278	572-3	
Methylene chloride	ND		u	g/l	5.0	
1,1-Dichloroethane	ND		u	g/l	0.75	
Chloroform	ND		u	g/l	0.75	
Carbon tetrachloride	ND		u	g/l	0.50	
1,2-Dichloropropane	ND		u	g/l	1.8	
Dibromochloromethane	ND		u	g/l	0.50	
1,1,2-Trichloroethane	ND		u	g/l	0.75	
Tetrachloroethene	ND		u	g/l	0.50	
Chlorobenzene	ND		u	g/l	0.50	
Trichlorofluoromethane	ND		U	g/l	2.5	
1,2-Dichloroethane	ND		U	g/l	0.50	
1,1,1-Trichloroethane	ND		U	g/l	0.50	
Bromodichloromethane	ND		U	g/l	0.50	
trans-1,3-Dichloropropene	ND		U	g/l	0.50	
cis-1,3-Dichloropropene	ND		u	g/l	0.50	
1,1-Dichloropropene	ND		u	g/l	2.5	
Bromoform	ND		u	g/l	2.0	
1,1,2,2-Tetrachloroethane	ND		u	g/l	0.50	
Benzene	ND		u	g/l	0.50	
Toluene	ND		U)	g/l	0.75	
Ethylbenzene	ND		u	g/l	0.50	
Chloromethane	ND		U)	g/l	2.5	
Bromomethane	ND		U)	g/l	1.0	
Vinyl chloride	ND		U)	g/l	1.0	
Chloroethane	ND		U	g/l	1.0	
1,1-Dichloroethene	ND		U	g/l	0.50	
trans-1,2-Dichloroethene	ND		u	g/l	0.75	
Trichloroethene	ND		u	g/l	0.50	
1,2-Dichlorobenzene	ND		u	g/l	2.5	
1,3-Dichlorobenzene	ND		u	g/l	2.5	
1,4-Dichlorobenzene	ND		u	g/l	2.5	



Project Number: 0079387

 Lab Number:
 L0809567

 Report Date:
 07/09/08

Analytical Method:	60,8260B
Analytical Date:	06/30/08 11:07
Analyst:	GK

arameter	Result	Qualifier	Units	RDL
olatile Organics by MCP 8260	B for sample(s):	01-02 B	atch: WG32	27572-3
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 Number: 0079387

 Lab Number:
 L0809567

 Report Date:
 07/09/08

Method Blank Analysis Batch Quality Control

Analytical Method:	60,8260B
Analytical Date:	06/30/08 11:07
Analyst:	GK

Parameter	Result	Qualifie	r U	nits	RDL
olatile Organics by MCP 8260B for	sample(s):	01-02	Batch:	WG	327572-3
1,2,3-Trichlorobenzene	ND		ı	ug/l	2.5
1,2,4-Trichlorobenzene	ND		I	ug/l	2.5
1,3,5-Trimethylbenzene	ND		I	l/gu	2.5
1,2,4-Trimethylbenzene	ND		I	ug/l	2.5
Ethyl ether	ND		I	ug/l	2.5
Isopropyl Ether	ND		I	ug/l	2.0
Ethyl-Tert-Butyl-Ether	ND		I	ug/l	2.0
Tertiary-Amyl Methyl Ether	ND		I	ug/l	2.0
1,4-Dioxane	ND		I	ug/l	250
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		I	ug/l	10

Tentatively Identified Compounds

No Tentatively Identified Compounds	ND	ug/l
, , ,		0

Surrogate	%Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	87		70-130	
Toluene-d8	99		70-130	
4-Bromofluorobenzene	99		70-130	
Dibromofluoromethane	101		70-130	



Project Number: 0079387

 Lab Number:
 L0809567

 Report Date:
 07/09/08

Analytical Method:	60,8260B
Analytical Date:	07/01/08 10:52
Analyst:	BS

arameter	Result	Qua	itier	Units	RDL
platile Organics by MCP 8260	B for sample(s):	03	Batch:	WG3277	797-3
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 Number: 0079387

 Lab Number:
 L0809567

 Report Date:
 07/09/08

Analytical Method:	60,8260B
Analytical Date:	07/01/08 10:52
Analyst:	BS

arameter	Result	Qua	ifier	Units	RDL
olatile Organics by MCP 8260B fo	r sample(s):	03	Batch:	WG3277	97-3
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 Number: 0079387

 Lab Number:
 L0809567

 Report Date:
 07/09/08

Analytical Method:	60,8260B
Analytical Date:	07/01/08 10:52
Analyst:	BS

Parameter	Result	Quali	fier	Units	RDL	
Volatile Organics by MCP 8260B for	sample(s):	03	Batch:	WG327797	-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	

			Acceptance	
Surrogate	%Recovery	Qualifier	Criteria	
1,2-Dichloroethane-d4	98		70-130	
Toluene-d8	97		70-130	
4-Bromofluorobenzene	102		70-130	
Dibromofluoromethane	106		70-130	



Project Name: RAYTHEON Project Number: 0079387

	LCS	LCSD	%Recovery		
arameter	%Recovery	%Recovery	Limits	RPD	RPD Limits
olatile Organics by MCP 8260B A	Associated sample(s): 01-02	Batch: WG327572-1	WG327572-2		
Methylene chloride	83	85	70-130	2	25
1,1-Dichloroethane	88	88	70-130	0	25
Chloroform	88	89	70-130	1	25
Carbon tetrachloride	107	111	70-130	4	25
1,2-Dichloropropane	89	90	70-130	1	25
Dibromochloromethane	97	99	70-130	2	25
1,1,2-Trichloroethane	89	93	70-130	4	25
Tetrachloroethene	97	96	70-130	1	25
Chlorobenzene	95	94	70-130	1	25
Trichlorofluoromethane	88	93	70-130	6	25
1,2-Dichloroethane	84	88	70-130	5	25
1,1,1-Trichloroethane	91	95	70-130	4	25
Bromodichloromethane	90	94	70-130	4	25
trans-1,3-Dichloropropene	86	88	70-130	2	25
cis-1,3-Dichloropropene	92	96	70-130	4	25
1,1-Dichloropropene	86	88	70-130	2	25
Bromoform	103	106	70-130	3	50
1,1,2,2-Tetrachloroethane	96	100	70-130	4	25
Benzene	92	93	70-130	1	25
Toluene	94	93	70-130	1	25
Ethylbenzene	94	94	70-130	0	25



Lab Control Sample Analysis

Batch Quality Control

Project Name: RAYTHEON Project Number: 0079387 Lab Number: L0809567 Report Date: 07/09/08

LCS LCSD %Recovery %Recovery %Recovery Limits RPD **RPD Limits** Parameter Volatile Organics by MCP 8260B Associated sample(s): 01-02 Batch: WG327572-1 WG327572-2 70-130 Chloromethane 92 96 4 50 Bromomethane 68 65 70-130 50 5 Vinyl chloride 70-130 25 80 81 1 Chloroethane 77 80 70-130 4 25 1.1-Dichloroethene 70-130 25 80 83 4 70-130 25 trans-1.2-Dichloroethene 94 95 1 Trichloroethene 91 91 70-130 0 25 1.2-Dichlorobenzene 70-130 25 100 101 1 70-130 25 1.3-Dichlorobenzene 99 98 1 70-130 25 1.4-Dichlorobenzene 100 99 1 70-130 Methyl tert butyl ether 97 104 7 25 p/m-Xylene 98 96 70-130 2 25 o-Xylene 70-130 25 101 100 1 cis-1.2-Dichloroethene 70-130 95 94 1 25 70-130 Dibromomethane 87 93 7 25 1,2,3-Trichloropropane 70-130 25 100 103 3 Styrene 100 98 70-130 2 25 Dichlorodifluoromethane 129 131 70-130 2 50 70-130 50 Acetone 71 74 4 Carbon disulfide 70-130 25 72 74 3 2-Butanone 82 70-130 50 88 7

Project Name: RAYTHEON Project Number: 0079387

arameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
olatile Organics by MCP 8260B Associate	ed sample(s): 01-02	Batch: WG327572-1	WG327572-2		
4-Methyl-2-pentanone	89	93	70-130	4	50
2-Hexanone	81	85	70-130	5	50
Bromochloromethane	96	100	70-130	4	25
Tetrahydrofuran	78	94	70-130	19	25
2,2-Dichloropropane	118	121	70-130	3	50
1,2-Dibromoethane	97	98	70-130	1	25
1,3-Dichloropropane	86	91	70-130	6	25
1,1,1,2-Tetrachloroethane	102	102	70-130	0	25
Bromobenzene	99	98	70-130	1	25
n-Butylbenzene	93	97	70-130	4	25
sec-Butylbenzene	96	98	70-130	2	25
tert-Butylbenzene	96	98	70-130	2	25
o-Chlorotoluene	91	89	70-130	2	25
p-Chlorotoluene	92	92	70-130	0	25
1,2-Dibromo-3-chloropropane	97	95	70-130	2	50
Hexachlorobutadiene	100	106	70-130	6	25
Isopropylbenzene	114	114	70-130	0	25
p-Isopropyltoluene	100	102	70-130	2	25
Naphthalene	97	102	70-130	5	25
n-Propylbenzene	94	93	70-130	1	25
1,2,3-Trichlorobenzene	106	110	70-130	4	25

Project Name: RAYTHEON Project Number: 0079387

arameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
olatile Organics by MCP 8260B Associ	iated sample(s): 01-02	Batch: WG327572-1	WG327572-2		
1,2,4-Trichlorobenzene	100	103	70-130	3	25
1,3,5-Trimethylbenzene	94	94	70-130	0	25
1,2,4-Trimethylbenzene	94	93	70-130	1	25
Ethyl ether	80	83	70-130	4	25
Isopropyl Ether	89	92	70-130	3	25
Ethyl-Tert-Butyl-Ether	110	116	70-130	5	25
Tertiary-Amyl Methyl Ether	115	123	70-130	7	25
1,4-Dioxane	110	108	70-130	2	50
1,1,2-Trichloro-1,2,2-Trifluoroethane	88	88	70-130	0	50

Surrogate	LCS %Recovery Qualifier	LCSD %Recovery Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	85	85	70-130
Toluene-d8	100	98	70-130
4-Bromofluorobenzene	96	94	70-130
Dibromofluoromethane	97	98	70-130



Project Name: RAYTHEON Project Number: 0079387

	1.00			0/ D		
rameter	LCS %Recovery		LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
platile Organics by MCP 8260B Asso	ociated sample(s): 03	Batch: \	NG327797-1	WG327797-2		
Methylene chloride	105		105	70-130	0	25
1,1-Dichloroethane	100		98	70-130	2	25
Chloroform	100		98	70-130	2	25
Carbon tetrachloride	104		95	70-130	9	25
1,2-Dichloropropane	98		97	70-130	1	25
Dibromochloromethane	102		101	70-130	1	25
1,1,2-Trichloroethane	94		95	70-130	1	25
Tetrachloroethene	98		91	70-130	7	25
Chlorobenzene	98		97	70-130	1	25
Trichlorofluoromethane	110		103	70-130	7	25
1,2-Dichloroethane	95		95	70-130	0	25
1,1,1-Trichloroethane	101		93	70-130	8	25
Bromodichloromethane	102		99	70-130	3	25
trans-1,3-Dichloropropene	95		97	70-130	2	25
cis-1,3-Dichloropropene	96		96	70-130	0	25
1,1-Dichloropropene	95		88	70-130	8	25
Bromoform	107		109	70-130	2	50
1,1,2,2-Tetrachloroethane	99		103	70-130	4	25
Benzene	102		99	70-130	3	25
Toluene	100		99	70-130	1	25
Ethylbenzene	101		100	70-130	1	25

Project Name: RAYTHEON Project Number: 0079387

%Recovery Limits	RPD	RPD Limits
27797-2		
70-130	7	50
70-130	4	50
70-130	10	25
70-130	5	25
70-130	9	25
70-130	5	25
70-130	6	25
70-130	2	25
70-130	0	25
70-130	0	25
70-130	4	25
70-130	3	25
70-130	1	25
70-130	3	25
70-130	1	25
70-130	6	25
70-130	0	25
70-130	7	50
70-130	0	50
70-130	10	25
70-130	0	50
	70-130	70-130 10

Project Name: RAYTHEON Project Number: 0079387

	LCS		LCSD	%Recovery		
arameter	%Recovery		%Recovery	Limits	RPD	RPD Limits
/olatile Organics by MCP 8260B Associate	ed sample(s): 03	Batch:	WG327797-1	WG327797-2		
4-Methyl-2-pentanone	87		85	70-130	2	50
2-Hexanone	75		76	70-130	1	50
Bromochloromethane	107		108	70-130	1	25
Tetrahydrofuran	93		84	70-130	10	25
2,2-Dichloropropane	104		98	70-130	6	50
1,2-Dibromoethane	93		96	70-130	3	25
1,3-Dichloropropane	95		95	70-130	0	25
1,1,1,2-Tetrachloroethane	102		103	70-130	1	25
Bromobenzene	99		102	70-130	3	25
n-Butylbenzene	104		100	70-130	4	25
sec-Butylbenzene	104		100	70-130	4	25
tert-Butylbenzene	101		101	70-130	0	25
o-Chlorotoluene	102		102	70-130	0	25
p-Chlorotoluene	103		104	70-130	1	25
1,2-Dibromo-3-chloropropane	92		95	70-130	3	50
Hexachlorobutadiene	103		102	70-130	1	25
Isopropylbenzene	117		113	70-130	3	25
p-Isopropyltoluene	108		105	70-130	3	25
Naphthalene	81		84	70-130	4	25
n-Propylbenzene	104		101	70-130	3	25
1,2,3-Trichlorobenzene	90		91	70-130	1	25



Project Name: RAYTHEON Project Number: 0079387

arameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
olatile Organics by MCP 8260B Associate	d sample(s): 03 Ba	atch: WG327797-1	WG327797-2		
1,2,4-Trichlorobenzene	90	92	70-130	2	25
1,3,5-Trimethylbenzene	101	100	70-130	1	25
1,2,4-Trimethylbenzene	102	101	70-130	1	25
Ethyl ether	98	98	70-130	0	25
Isopropyl Ether	90	90	70-130	0	25
Ethyl-Tert-Butyl-Ether	92	93	70-130	1	25
Tertiary-Amyl Methyl Ether	86	87	70-130	1	25
1,4-Dioxane	99	98	70-130	1	50

Surrogate	LCS %Recovery Qualifier	LCSD %Recovery Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94	91	70-130
Toluene-d8	100	101	70-130
4-Bromofluorobenzene	94	97	70-130
Dibromofluoromethane	102	99	70-130



Project Name: RAYTHEON Project Number: 0079387

Lab Number: L0809567 Report Date: 07/09/08

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
А	Absent
D	Absent
В	Absent
С	Absent

Container Information

/sis
260-04
260-04
260-04
260-04
260-04
8 8 8



Project Number: 0079387

Lab Number: L0809567 Report Date: 07/09/08

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.



Project Name: RAYTHEON Project Number: 0079387

Lab Number: L0809567 Report Date: 07/09/08

REFERENCES

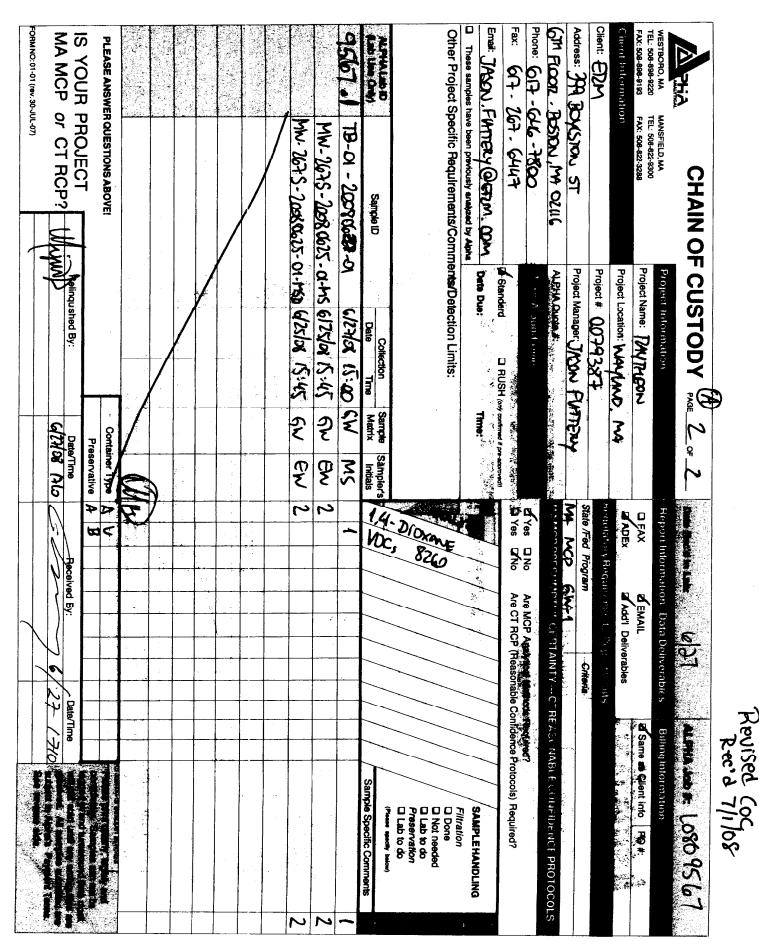
60 Quality Assurance and Quality Control Requirements and Performance Standards for SW-846 Methods. MADEP BWSC. WSC-CAM-IIA (Revision 4), WSC-CAM-V C (Revision 2), WSC-CAM-IIIA (Revision 5). May 2004.

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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Page 34 of 35

		Revised	(oc Rec'd 7/1	7/1/08	1030 03 ما
A PHA CHAIN OF				1	
WESTBORO, MA RAYNHAM,MA	1991 B1991		Report Interaction (1)	recommendation of the second s	
FAX: 506-822-3288	Project Name: CAYTHON	C	D FAX EMAIL	a	Same as Client info PO #:
19 store	Project Location: WAY UND	MA	_	Add'1 Deliverables	
	Project #: 0079387		Requiring Responses to	τ 1	
	Project Manager: JASON FUTTERY	UNTREY	State /Fed Program	Criteria	
02116	ALPHA Quote #:	-	2012 304	BLAC IV.	C TREASONABLE CONFIDENCE PROTOCOL
Phone: 617-646-7800	A BORD THE				
Fax: 617-267.6447	-	4	N	Are CT RCP (Reasonable Confidence Protocols) Required?	Protocols) Required?
Email JASON, FLATTERY @ ERM. COM		CUSH (only confirmed if pre-approved!)			
These samples have been previously analyzed by Alpha		-			SAMPLEHANDLING
Other Project Specific Requirements/Comments/Detection Limits:	Its/Detection Limits:				/ Filtration
			836 836		Li Not needed
ALTRA LAND Sample D	Callection	Sample Samplers	18.85		(Tenno spacily bullow)
MN-265M-20080625-01	disch rejsch		2		Service Specific Control 13
MW-246 Ma- 2008,0625-01			2		
MW-266 Mb-2029065-01	11 6/25/08 (3-40	EN EN	2		
4567. A. MW-2675 - 70-20025-01	6/25/29 15:45	SW BV	22		
MW-268 D - 2080625-01	1 4/25/02 16:10	GN MS	2		
MN-269 Ma-20080626-01	01 6/26/07 15.40	SW LR	2		
MN-269D-2008026-01			2		
DUP-001 - 2000015-01	6/25/08	GW MS	2		
Dr-02 - 207015-01		GN MS	2		
1. DUP-03-20080015-01	6/25/08 00:00	GW EW	2		
PLEASE ANSWER QUESTIONS ABOVE		Container Type	A v		
IS YOUR PROJECT		Preservative	AB		
D> 11/1.1.1	Relinquished By:	Date/Time	Received By:	/ Dete/Time	
1. Twin in the second s		011) 801FJM	1pm	041220	
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					Pa

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ANALYTICAL REPORT

Lab Number:	L0809566
Client:	ERM-New England 399 Boylston Street 6th Floor Boston, MA 02116
ATTN:	Jason Flattery
Project Name:	RAYTHEON
Project Number:	0079387
Report Date:	07/15/08

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



Project Name:RAYTHEONProject Number:0079387

 Lab Number:
 L0809566

 Report Date:
 07/15/08

Alpha Sample ID	Client ID	Sample Location
L0809566-01	MW-265M-20080625-01	WAYLAND, MA
L0809566-02	MW-266MA-20080625-01	WAYLAND, MA
L0809566-03	MW-266MB-20080625-01	WAYLAND, MA
L0809566-04	MW-267S-20080625-01	WAYLAND, MA
L0809566-05	MW-268D-20080625-01	WAYLAND, MA
L0809566-06	MW-269MA-20080626-01	WAYLAND, MA
L0809566-07	MW-269D-20080626-01	WAYLAND, MA
L0809566-08	DUP-001-20080625-01	WAYLAND, MA
L0809566-09	DUP-002-20080625-01	WAYLAND, MA



Project Name:RAYTHEONProject Number:0079387

Lab Number: L0809566 Report Date: 07/15/08

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 a	ffirmative 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
В	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
С	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 res	sponse to questions E and F is required for "Presumptive Certainty" status	
Е	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?	YES

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:RAYTHEONProject Number:0079387

 Lab Number:
 L0809566

 Report Date:
 07/15/08

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.

Non MCP-Related Narratives:

Report Submission

This report contains the results for the 1,4 Dioxane analysis. The results for all other analyses were issued under separate cover.

1,4-Dioxane

The analysis of 1,4-Dioxane by method 8270-SIM isotope dilution was performed at our Mansfield facility. The results are provided within this report and a copy of the laboratory report is included as an addendum.

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:

Ash M. M. Monig

Title: Technical Director/Representative

Date: 07/15/08



ORGANICS



SEMIVOLATILES



Project Name: RAYTHEON Lab Number: L0809566 **Project Number: Report Date:** 07/15/08 0079387 SAMPLE RESULTS Lab ID: Date Collected: L0809566-01 06/25/08 10:50 Client ID: MW-265M-20080625-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 Analytical Date: 07/08/08 14:03 Analyst: ТW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	2980		ng/l	500	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria	•	
1,4-Dioxane-d8	45		15-110		



Project Name: RAYTHEON Lab Number: L0809566 **Project Number:** 07/15/08 0079387 **Report Date:** SAMPLE RESULTS Lab ID: Date Collected: L0809566-02 06/25/08 13:50 Client ID: MW-266MA-20080625-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 07/08/08 15:35 Analytical Date: Analyst: ΤW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	4110		ng/l	500	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	34		15-110		

Project Name: RAYTHEON Lab Number: L0809566 **Project Number:** 07/15/08 0079387 **Report Date:** SAMPLE RESULTS Lab ID: L0809566-03 Date Collected: 06/25/08 13:50 Client ID: MW-266MB-20080625-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 07/08/08 16:21 Analytical Date: Analyst: ΤW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	ND		ng/l	500	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	41		15-110		



Project Name: RAYTHEON Lab Number: L0809566 **Project Number:** 07/15/08 0079387 **Report Date:** SAMPLE RESULTS Lab ID: Date Collected: L0809566-04 06/25/08 10:50 Client ID: MW-267S-20080625-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 07/08/08 19:22 Analytical Date: Analyst: ΤW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	10900		ng/l	500	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	38		15-110		



Project Name: RAYTHEON Lab Number: L0809566 **Project Number:** 07/15/08 0079387 **Report Date:** SAMPLE RESULTS Lab ID: L0809566-05 Date Collected: 06/25/08 10:50 Client ID: MW-268D-20080625-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 07/09/08 03:40 Analytical Date: Analyst: ΤW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	ND		ng/l	500	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	45		15-110		



Project Name: RAYTHEON Lab Number: L0809566 **Project Number:** 07/15/08 0079387 **Report Date:** SAMPLE RESULTS Lab ID: Date Collected: L0809566-06 06/25/08 10:50 Client ID: MW-269MA-20080626-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 07/09/08 05:08 Analytical Date: Analyst: ΤW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	2220		ng/l	500	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	47		15-110		



Project Name: RAYTHEON Lab Number: L0809566 **Project Number:** 07/15/08 0079387 **Report Date:** SAMPLE RESULTS Lab ID: L0809566-07 Date Collected: 06/25/08 10:50 Client ID: MW-269D-20080626-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 07/09/08 02:56 Analytical Date: Analyst: ΤW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	ND		ng/l	500	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria	•	
1,4-Dioxane-d8	45		15-110		

Project Name: RAYTHEON Lab Number: L0809566 **Project Number:** 07/15/08 0079387 **Report Date:** SAMPLE RESULTS Lab ID: Date Collected: L0809566-08 06/25/08 10:50 Client ID: DUP-001-20080625-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 07/08/08 14:49 Analytical Date: Analyst: ТW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	3230		ng/l	500	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	35		15-110		

Project Name: RAYTHEON Lab Number: L0809566 **Project Number:** 07/15/08 0079387 **Report Date:** SAMPLE RESULTS Lab ID: Date Collected: L0809566-09 06/25/08 10:50 Client ID: DUP-002-20080625-01 Date Received: 06/27/08 Sample Location: WAYLAND, MA Field Prep: Not Specified 3510C Matrix: Water Extraction Method: Anaytical Method: 1,8270 Extraction Date: 07/02/08 00:00 07/09/08 04:24 Analytical Date: Analyst: ΤW

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
1,4-Dioxane by 8270					
1,4-Dioxane	ND		ng/l	532	1
Surrogate	% Recovery	Qualifier	Acceptance Criteria	•	
1,4-Dioxane-d8	48		15-110		



Project Name:	RAYTHEON		Lab Number:	L0809566
Project Number:	0079387		Report Date:	07/15/08
		Method Blank Analysis Batch Quality Control		
		•		

Analytical Method:	1,8270	Extraction M
Analytical Date:	07/08/08 03:31	Extraction D
Analyst:	TW	

Extraction Method:	3510C
Extraction Date:	07/02/08 00:00

		Acceptance		
Surrogate	%Recovery	Qualifier	Criteria	
1,4-Dioxane-d8	40		15-110	



Project Name:	RAYTHEON		Lab Number:	L0809566
Project Number:	0079387		Report Date:	07/15/08
		Method Blank Analysis Batch Quality Control		

Analytical Method:	1,8270	Extraction Method:	3510C
Analytical Date:	07/08/08 17:06	Extraction Date:	07/02/08 00:00
Analyst:	TW		

Parameter	Result	Qualifie	er Ur	nits	RDL
1,4-Dioxane by 8270 for sample(s):	04-07,09	Batch:	WG3291	193-1	
1,4-Dioxane	ND		n	ng/l	500
			Δ	ccentan	ice

	Acceptance			
Surrogate	%Recovery	Qualifier	Criteria	
1,4-Dioxane-d8	42		15-110	



Lab Control Sample Analysis Batch Quality Control

Project Name:	RAYTHEON
Project Number:	0079387

 Lab Number:
 L0809566

 Report Date:
 07/15/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
1,4-Dioxane by 8270 Associated sample(s):	01-03,08 Batc	h: WG329190-2 WG329190-3			
1,4-Dioxane	92	94	40-140	2	30

Surrogate	LCS	LCSD	Acceptance
	%Recovery Qualifier	%Recovery Qualifier	Criteria
1,4-Dioxane-d8	43	34	15-110

1,4-Dioxane by 8270 Associated sample(s): 04-07,0	9 Batch: WG329193-2 WG3	329193-3		
1,4-Dioxane 94	92	40-140	1	30

Surrogate	LCS	LCSD	Acceptance
	%Recovery Qualifier	%Recovery Qualifier	Criteria
1,4-Dioxane-d8	42	42	15-110



Project Name:RAYTHEONProject Number:0079387

Lab Number: L0809566 Report Date: 07/15/08

Sample Receipt and Container Information

YES

Were project specific reporting limits specified?

Cooler Information

Cooler	Custody Seal
А	Absent
D	Absent
ABCD	Absent
В	Absent
С	Absent

Container Information

Container ID	Container Type	Cooler	рΗ	Temp	Pres	Seal	Analysis
L0809566-01A	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-01B	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-02A	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-02B	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-03A	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-03B	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-04A	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-04B	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-04C	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-04D	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-04E	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-04F	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-05A	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-05B	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-06A	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-06B	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-07A	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-07B	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE



Lab Number: L0809566 Report Date: 07/15/08

Project Name:RAYTHEONProject Number:0079387

Container Information

Container ID	Container Type	Cooler	рΗ	Temp	Pres	Seal	Analysis
L0809566-08A	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-08B	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-09A	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE
L0809566-09B	Amber 1000ml unpreserved	ABCD	7	2.9,2.5,2 ,2.6c	Y	Absent	SUB-MAN-1,4DIOXANE



Project Name: RAYTHEON

Project Number: 0079387

Lab Number: L0809566 Report Date: 07/15/08

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.



Project Name: RAYTHEON Project Number: 0079387
 Lab Number:
 L0809566

 Report Date:
 07/15/08

REFERENCES

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

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.

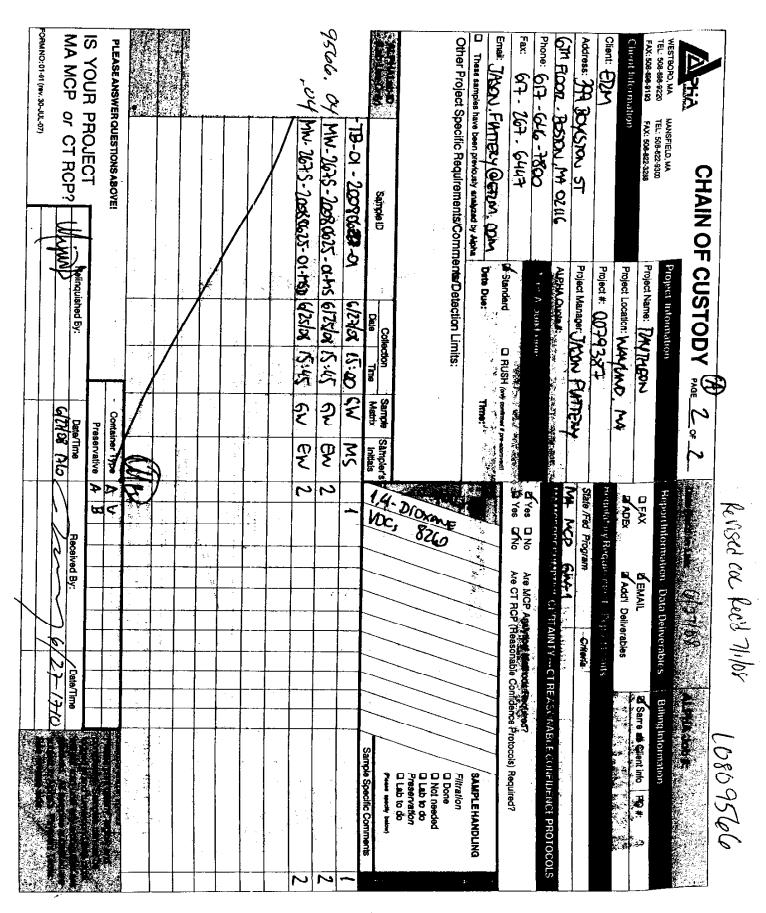
We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



ORM NO: 01-01 (wv. 10-0CT-08)	MA MCP or CT RCP?			PLEASE ANSWER QUESTIONS ABOVE!	DUP-003-20080615-01	05 Dup-002 - 20070615-01								4566, 01 MN-265M-20080625-01	1.			Unter Project Specific Requirements/Comments/Detection Limits:	These samples have been previously analyzed by Alpha	Email JASON, FUNTREY @ ERZM. COM	tho +90 - 419 : 2013	Phone: 67-646-7800	6TH FLOOR . BOSTON MA OZILG	Address: JOP BOXESTON ST				TEL SOMESHIZZE TEL CONJENSION	A THA
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	2 th Bdf219		Preservative	Container Type	- 01 0/25/08 OULO CAW EW	INTSD WISTOS ISTS CAN EN		01 4/25/08 1545 GW EW	5-01 6125/09 1340 GW EW	127/00 15:00 GW MS	5-01 4/25/48 13.50 GW MS	to 425/08 av as GW MS	or Wastes W.SD GW MS	1 425708 12:05 GW MS	me Matrix	0	-	ts/Detection Limits:	Date Due: $\mathcal{F}//\mathcal{V}$ time:			Tum-Around Time	ALPHA Quote #:	Project Manager: Jason Flattery	Project #: 0079387	Project Location: Way land, MA	Project Name: Kaytheron	Project Information	CUSTODY PAGE) OF S
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rotocols) Required?	CT RCP (Reasonable Confidence Protocols) Required?	Are	🛛 Yes		RUSH (only confirmed if are-approved!)			4440-476-210	Fax: 617-20
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FORMINO: 01-01 (rev 10-OCT-05)	MA MCP or CT RCP?			10- FED 2005. 4W. 555- WM V	V/ MN-555M4-20080627-01	WW-5355-20050427-0		-2201 Echardo 10- 700000000 MW-252-MW -31		(6 MW-5545-20020026-21	((MW-269 MA 2008: 626-01 6/2408 1540	14 DUP-002-20-56025-01 4/25708 0000	9 (66 13 MW-2480-20080625-01	(Lab Use Only) Sample ID	ALPHA1ah ID	Other Project Specific Requirements/Comments/Detection Limits:	These samples have been previously analyzed by Alpha	rm.com				Address: 399 BuyISTAN St. Pro		Client Information Pro	FAX 508-888-9193 FAX: 508-822-3288	RAYNHAM,MA	CHAIN OF C	
	Rejinquished By:	Preservative		1 6/27/08 0930 GW EW			or WIZUNG 1030 GW MS	OI W/2403 1025 GW LR	-01 412412812055 GW LR	1 424/08 1:200 GAN MS	-01 Wayog 1540 GW LR	-01 W25708 0000 GW MS	of 6/25/08 to 10 Grw MS	ime Matrix	Collection Sample Sampler's	s/Detection Limits:	-	Date Due: Y/IY Time:		Turn-AroundTime	ALPHA Quote #:	Project Manager: Jasim Flattery	Project #: 0029382	Project Location: Wayland, MA	Project Name: Kaythen	Project Information	CHAIN OF CUSTODY	
	BO Repreived By: Pate	\mathbf{R}^2					× ×	×>		<i>s</i>				\Box		4 Die Xal			D Yes D No Are CT RCP (Reasonable Co	BYes INO Are MCP Analytical Methods Required?	PRESUMPTI		State /Fed Program Criteria			Report Information - Data Deliverables	Date Rec'd in Lab: $6/27$	
	Date/Time will not start until any ambiguities are 7-/1/10 resolved. All samples submitted are subject to Alpha's Payment Terms. See reverse side.	completely. Samples can not be logged in and turnaround time clock	Please print clearly, legibly and	~) <u>s</u>			6.2	2	2			Sample Specific Comments S		eded do tion do	Filtration	SAMPLEHANDLING	CT RCP (Reasonable Confidance Protocols) Required?	Required?	VE CERTAINTY CT REASONABLE CONFIDENCE PROTOCOLS						ALPHA Job #: 60 70 7 575	



ANALYTICAL REPORT

<u>Prepared for:</u> Alpha Analytical - Westborough 8 Walkup Drive Westborough<u>, MA 01581</u>

Project: ETR: Report Date:

0806187 July 15, 2008

Certifications and Accreditations Massachusetts M-MA030 Connecticut PH-0141 New Hampshire 2206 Rhode Island LAO00289 New Jersey MA015 Maine MA0030 New York 11627 Louisiana 03090 Florida E87814 Pennsylvania 68-02089 Army Corps of Engineers Department of the Navy

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Sample ID Cross Reference

Alpha Analytical - Westborough L0809566 - ERM Lab Code: MA00030 ETR: 0806187



Lab Sample ID

· · · · · · · · · · · · · · · · · · ·	
	a a construction and a construction of the second
0806187-06	MW-267S-20080625-01
0806187-05	MW-266MB-20080625-01
0806187-04	MW-266Ma-20080625-01
0806187-03	DUP-001-20080625-01
0806187-02	MW-265M-20080625-01

Client Sample ID

	·
0806187-12	MW-269D-20080626-01
0806187-13	MW-268D-20080625-01
0806187-14	DUP-002-20080625-01
0806187-15	MW-269Ma-20080626-01

1855 C 7

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CASE NARRATIVE Alpha Analytical

ETR: 0806187 Project: ERM Raytheon, Wayland, MA

All analyses were performed according to Alpha Analytical quality assurance program and documented Standard Operating Procedures (SOPs). The analytical results contained in this report were performed within holding time, and with appropriate quality control measures, except where noted. All soil/sediment results are reported on a dry weight basis unless otherwise noted. A summary of all state and federal accreditations is provided within this report. Blank correction of results is not performed in the laboratory for any parameter. Alpha Analytical certifies that the test results within meet all of the requirements of NELAC, for all NELAC accredited parameters.

The enclosed results of analyses are representative of the samples as received by the laboratory. Alpha Analytical makes no representations or certifications as to the method of sample collection, sample identification, or transporting/handling procedures used prior to the receipt of samples by Alpha Analytical. To the best of my knowledge, the information contained in this report is accurate and complete. For any questions regarding this report, please contact the signatory below at 508-822-9300.

Approved by:	Jull M.a.	Title:	Technical Representative	Date:	7/15/18
	Kathleen O'Brien				

O:\Report\NARRTEMP\2008\Alpha\0806187.doc

1,4-Dioxane By 8270

		ect: tt ID: MW-265 : N/A	M-20080625-01			Lab Code: MA ETR: 0806187 Lab ID: 08061 Associated Blar Concentration U	87-02 .k: SW070108B02
Date Collected	Date Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
06/25/08	06/30/08	07/02/08	07/08/08	1000	10	1	ALM
L	Parame <u>1,4-Dio</u>		·		Result 2980		

		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	45	15-110

N/A - Not Applicable

2006 B		ect: nt ID: MW-266 : N/A	Analytical - V Ma-20080625-0 SDG: N			Lab Code: MA ETR: 0806187 Lab ID: 08061 Associated Blan Concentration U	87-04 k: SW070108B02
Date Collected	Date Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
06/25/08	06/30/08	07/02/08	07/08/08	1000	10	1	ALM
	Parame <u>1,4-Dio</u>				Result 4110		

Surrogate	% Recovery	Acceptance Range (%)	N/A - Not Applicable
1,4-Dioxane-d8	34	15-110	

07/10/08 07:55

	Clie Proj Clier Clier Case Matr	ect: at ID: MW-266 : N/A	Analytical - V MB-20080625-(SDG: N		· . •	Lab Code: MA ETR: 0806187 Lab ID: 08061 Associated Blar Concentration U	87-05 nk: SW070108B02
Date Collected	Date Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
06/25/08	06/30/08	07/02/08	07/08/08	1000	10	1	ALM
L	Parame	eter		<u> </u>	Result		
1,4-Dioxane				368 J			

		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	41	15-110

N/A - Not Applicable

J - Estimated value, below quantitation limit.

	Clie Proj Clien Clien Case Matr	ect: at ID: MW-267 : N/A	Analytical - W /S-20080625-01 SDG: N	Vestborough N/A		Lab Code: MA ETR: 0806187 Lab ID: 08061 Associated Blar Concentration U	87-06 ik: SW070108B12
Date Collected	Date Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
06/25/08	06/30/08	07/02/08	07/08/08	900	10	1	ALM
	Parame	ter		, , , , , , , , , , , , , , , , , , ,	Result		
1,4-Dioxane				10900			

Surrogate	% Recovery	Acceptance Range (%)	N/A - Not Applicable	•	
1,4-Dioxane-d8	38	15-110			
			10		_
			ta.	· ·· ··	

07/10/08 07:56

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	Clie Proj Clien Clien Clien Clien Case Matr	ect: at ID: MW-268 : N/A	Analytical - V 8D-20080625-01 SDG: 1	Vestborough N/A		Lab Code: MA ETR: 0806187 Lab ID: 080618 Associated Blan Concentration U	87-13 k: SW070108B1
Date Collected	Date Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
06/25/08	06/30/08	07/02/08	07/09/08	1000	10	1	ALM
	Parame	eter		·	Result		
	1,4-Dio:	xane			255 J		

		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	45	15-110

N/A - Not Applicable J - Estimated value, below quantitation limit.

07/10/08 07:58

0.682

Semi-Volatile Organics by 8270

All and a second second second second	Clie Proj Clier Clier Clier Case Matr	ect: at ID: MW-269 : N/A	Ma-20080626-0		 	Lab Code: MA ETR: 0806187 Lab ID: 080613 Associated Blan Concentration U	87-15 k: SW070108B12
Date Collected	Date Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
06/26/08	06/30/08	07/02/08	07/09/08	930	10	1	ALM
Parameter					Result		
	1,4-Dio:	xane			2220		

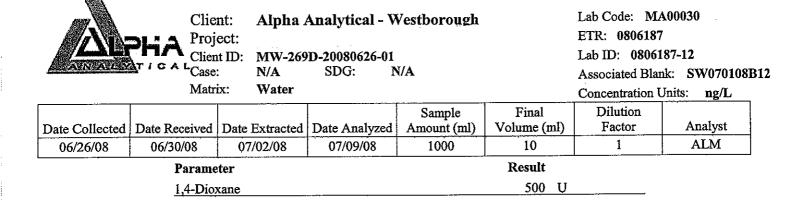
Surrogate	% Recovery	Acceptance Range (%)	N/A - Not Applicable
1,4-Dioxane-d8	47	15-110	

07/10/08 07:58

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07150819:16

Semi-Volatile Organics by 8270



· · · · · · · · · · · · · · · · · · ·		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	45	15-110

N/A - Not Applicable U - The analyte was analyzed for but not detected at the sample specific level reported.

Semi-Volatile Organics by 8270

	Clie Proj Clien TICALCase	ect:	Analytical - W 1-20080625-01	_	•••••••••••••••••••••••••••••••••••••••	Lab Code: MA ETR: 0806187 Lab ID: 08061	87-03
ARRENAL SECOND			SDG: N	I/A		Associated Blan	ik: SW070108B02
	Matr	ix: Water				Concentration U	Jnits: ng/L
Date Collected	Date Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
06/25/08	06/30/08	07/02/08	07/08/08	950	10	1	ALM
L	Parame	ter	· · · · · · · · · · · · · · · · · · ·		Result		
1,4-Dioxane					3230		

		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	35	15-110

N/A - Not Applicable

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07150819:16

Semi-Volatile Organics by 8270

Client: Project: Client ID: Client ID: Client ID: Matrix: Water				ETR: 0806187 Lab ID: 0806187-14 N/A Associated Blank: SW0702			7 187-14 nk: SW070108B12
Date Collected	Date Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
06/25/08	06/30/08	07/02/08	07/09/08	940	10	1	ALM
Parameter 1,4-Dioxane					Result 285 J		

		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	48	15-110
	and the second	

N/A - Not Applicable J - Estimated value, below quantitation limit.

Blank Semi-Volatile Organics by 8270

and the second s	Clie Proj Clien Clien Case Matr	ect: Blank ti ID: Blank : N/A		Vestborough N/A		Lab Code: MA ETR: 0806187 Lab ID: SW07 Associated Blan Concentration U	70108B02 nk: N/A
Date Collected	Date Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
N/A	N/A	07/02/08	07/08/08	1000	10	1	ALM
Parameter 1,4-Dioxane					Result 500 U		

		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	40	15-110

N/A - Not Applicable

U - The analyte was analyzed for but not detected at the sample specific level reported.

Blank Semi-Volatile Organics by 8270

		Client: Alpha Analytical - V Project:		Vestborough		Lab Code: MA00030 ETR: 0806187	
		nt ID: Blank : N/A	SDG: N	₹/Å		Lab ID: SW07 Associated Blan Concentration U	ık: N/A
Date Collected			Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
N/A	N/A	07/02/08	07/08/08	1000	10	1	ALM
Parameter 1,4-Dioxane					Result 500 <u>U</u>		

		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	42	15-110

N/A - Not Applicable U - The analyte was analyzed for but not detected at the sample specific level reported.

07/10/08 07:55

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Laboratory Control Summary Semi-Volatile Organics by 8270

Client: Alpha Analytical - Westborough Project: Client ID: Laboratory Control Sample N/A SDG: N/A Matrix: Water						Lab Code: MA00030 ETR: 0806187 Lab ID: See Below Associated Blank: SW070108B02 Concentration Units: ng/L		
Date Collected	Date Reco	eived	Dat	e Extracted	Analyst			
N/A	N/A		. (07/02/08	ALM			
Lab ID:	SW070108B02	SW070108	SLCS01 SV	V070108LCSD01				
Parameter	Blank Conc.	LC: Conc. %	1	LCSD onc. % Recovery	% RPD	RPD % Limit	Recovery Limits	
1,4-Dioxane	500 U	4610		580 <u>94</u>	2	30	40-140	

Surrogate	% Rec	overy	Acceptance Range (%)
1,4-Dioxane-d8	43	34	15-110

N/A - Not Applicable U - The analyte was analyzed for but not detected at the sample specific level reported.

Concentrations reported as calculated values, which includes rounding for significant figures. Percent recoveries and RPD values 07/10/08 08:01 are calculated from the unrounded result.

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Laboratory Control Summary Semi-Volatile Organics by 8270

Clien Proje Clien Clien Clien Clien Clien Clien Clien Clien Clien Clien Clien Clien Clien Clien	ect: t ID: Laborato N/A	ory Control Sa	Westborough mple N/A		ETR: 080 Lab ID: S	See Below I Blank: SV	v070108B12 ng/L
Date Collected	Date Ro	eceived	Date E	xtracted	- -	Analyst	
N/A	Ń/		07/0	2/08	ALM		
Lab ID:	SW070108B	12 SW07010	8LCS05 SW07	0108LCSD05	·		
Parameter	Blank Conc.	LC Conc. %	S Recovery Conc	LCSD % Recovery	% RPD	RPD % I Limit	Recovery Limits
1,4-Dioxane	500	U 4570	91 4620		1	30	40-140

Surrogate	% Rec	overy	Acceptance Range (%)
1,4-Dioxane-d8	42	42	15-110

N/A - Not Applicable U - The analyte was analyzed for but not detected at the sample specific level reported.

Concentrations reported as calculated values, which includes rounding for significant figures. Percent recoveries and RPD values are calculated from the unrounded result.

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Matrix Spike Duplicate Semi-Volatile Organics by 8270

	ject: nt ID: MW-267S- :: N/A	1alytical - V 20080625-01 SDG: 1	Vestbor N/A	ough		ETR: 080 Lab ID: 8	See Below i Blank: S	0 W070108B12
Date Collected	Date Rec	eived		Date Ex	tracted		Analyst	
06/25/08	06/30/	08		07/02	2/08		ALM	
Lab ID:	0806187-06	080618	7-06	080	06187-06			·
Parameter	Sample Conc.	Matrix S Conc. % I			CSpike Dup. % Recovery	% RPD_	RPD % Limit	Recovery Limits
1,4-Dioxane	10900	15400	81	15100	75	2	30	40-140

Surrogate	% Red	covery	Acceptance Range (%)	
1,4-Dioxane-d8	37	40	15-110	

N/A - Not Applicable

Concentrations reported as calculated values, which includes rounding for significant figures. Percent recoveries and RPD values are calculated from the unrounded result. 07/10/08 08:02

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Blank Semi-Volatile Organics by 8270

	Clie Proj Clier TICALCase Matr	ect: ht ID: Blank : N/A		Vestborough N/A		Lab Code: MA ETR: 0806187 Lab ID: SW07 Associated Blan Concentration U	70108B02 nk: N/A
Date Collected	Date Received	Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
N/A	N/A	07/02/08	07/08/08	1000	10	1	ALM
	Parame 1,4-Dio		· · · · · · · · · · · · · · · · · · ·	4	Result 500 U		

		Acceptance
Surrogate	% Recovery	Range (%)
1,4-Dioxane-d8	40	15-110

N/A - Not Applicable U - The analyte was analyzed for but not detected at the sample specific level reported.

Blank Semi-Volatile Organics by 8270

	Clie Proj Clier Clier Case Matr	ect: at ID: Blank : N/A	Analytical - V SDG: M	Vestborough N/A		Lab Code: MA ETR: 0806187 Lab ID: SW07 Associated Blar Concentration U	0108B12 k: N/A
Date Collected		Date Extracted	Date Analyzed	Sample Amount (ml)	Final Volume (ml)	Dilution Factor	Analyst
N/A	N/A	07/02/08	07/08/08	1000	10	1	ALM
	Parame 1,4-Dio		· · · · · · · · · · · · · · · · · · ·		Result 500 U	- 	

Acceptance Range (%) % Recovery Surrogate 42 1,4-Dioxane-d8

N/A - Not Applicable U - The analyte was analyzed for but not detected at the sample specific level reported.

07/10/08 07:55

15-110

Laboratory Control Summary Semi-Volatile Organics by 8270

	Project:	nalytical - Westb ry Control Sample SDG: N/A	orough	Lab Code: MA00030 ETR: 0806187 Lab ID: See Below Associated Blank: SW070108B02 Concentration Units: ng/L
Date Collected	Date Re	ceived	Date Extracted	Analyst
N/A.	N/.	A	07/02/08	ALM
Lab ID:	SW070108B0	2 SW070108LCS01	SW070108LCSD01	
	·····		T COD	

	Blank			LCS	LCSD			RPD %	-	
Parameter	Conc.		Conc.	% Recovery	Conc.	% Recovery	% RPD	Limit	Limits	
1,4-Dioxane	500	U	4610	. 92	4680	94	2	30	40-140	

Surrogate	% Rec	overy	Acceptance Range (%)
1,4-Dioxane-d8	43	34	15-110

N/A - Not Applicable U - The analyte was analyzed for but not detected at the sample specific level reported.

Concentrations reported as calculated values, which includes rounding for significant figures. Percent recoveries and RPD values are calculated from the unrounded result. 07/10/08 08:01

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Laboratory Control Summary Semi-Volatile Organics by 8270

	ent: oject: ent ID: e: trix:							Lab Code: MA00030 ETR: 0806187 Lab ID: See Below Associated Blank: SW070108B12 Concentration Units: ng/L			
Date Collected		Date 1	Date Received Date Extracted					Analyst			
N/A]	N/A			07/02	2/08	ALM			
Lab ID:	SV	V070108	B12	SW07	0108LCS05	SW07(0108LCSD05				
Parameter		Blank Conc.		Conc.	LCS % Recovery		LCSD % Recovery	% RPD	RPD % Limit	Recovery Limits	
1,4-Dioxane		500	U	4570	91	4620	92	1	30	40-140	

Surrogate	% Re	covery	Acceptance Range (%)
1,4-Dioxane-d8	42	42	15-110

N/A - Not Applicable U - The analyte was analyzed for but not detected at the sample specific level reported.

Concentrations reported as calculated values, which includes rounding for significant figures. Percent recoveries and RPD values are calculated from the unrounded result. 07/10/08 08:01

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Matrix Spike Duplicate Semi-Volatile Organics by 8270

Clien Clien Clien Clien Clien Clien Clien Clien Clien Clien Clien Clien Clien	ect: t ID: MW-267S- N/A	aalytical - V 20080625-01 SDG: 1	Vestbor N/A	ough		ETR: 080 Lab ID: 5 Associated	See Below	SW070108B12
Date Collected	Date Reco	eived		Date Ext	tracted		Analyst	
06/25/08	06/30/	08		07/02	2/08		ALM	
Lab ID:	0806187-06	080618	7-06	080	6187-06			
Parameter	Sample Conc.	Matrix S Conc. % I			Spike Dup. % Recovery	% RPD	RPD % Limit	Recovery Limits
1.4-Dioxane	10900	15400	81	15100	75	2	30	40-140

Surrogate	% Re	covery	Acceptance Range (%)
1,4-Dioxane-d8	37	40	15-110

N/A - Not Applicable

Concentrations reported as calculated values, which includes rounding for significant figures. Percent recoveries and RPD values 07/10/08 08:02 are calculated from the unrounded result.

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1,4-Dioxane

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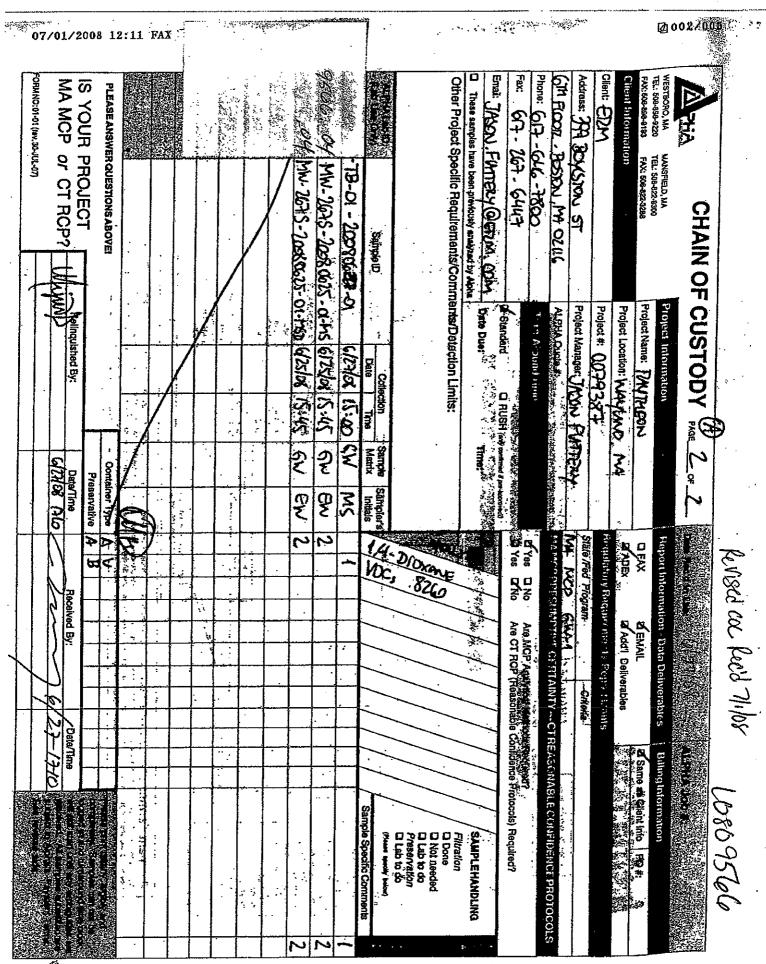
Chain of Custody Records

07/	′01 <i>/</i>	20	08	12		art girig	<u>.</u>	<u>1</u> 2 A.P	•							• •		1990) 1997 - S						•		20 0	170	05	ng y _{an}
FORM NO: 01-01 (rev. 10-OCT-08)	MA MCP	IS YOUR PROJECT	5 5 1	PLEASEANSWE	and a construction of the second second	.05	. 05	. 07	Ŕ	. 02	·· of	. 03	B	9566, OI	12 Martin Contract State			These samples h	Enal JASON, F	-+19 XI2	Phone: 67-646-7800	6TH FLOOR .	1 bbc ssenov	Cleant FDM		FAX:STE 305-9103		APHA	5
0CT-08)	or CT RCP?	PROJECT		PLEASE ANSWER QUESTIONS ABOVE!	WP-093-2008005-01	Dr-02 - 2007-01	WP-001 - 20080625-01	MN-2697-20080626-01	MN-269 Ma-20080626 -01	MN-2687 - 20080625-01	MW-2675 - 70-30625-01	MW-266Mb-20070625-01	MW-266Ma-20080625-01	MN-265M-20080625-01			Other Project Specific Requirements/Comments/Detection Limits:	These samples have been previously analyzed by Alpha	Enne JASON, FURTHEY (& FRA. COM	617-262-F10	26.7500	6TH FLOOR . BOSTON MA OZIG	Address: 399 BOXESTON ST			FAX: 638-822-3288	RAMANANA Tel 508-273-890	CHAIN OF CUSTODY	
9	T TURNINGUNAN DY.	- Dalimaniskad Bu			-01 6/25/08		-01 6125108]	80/92/9 10-9	-01 6/25/08		-01 6/25/08	-01 6/25/08	01 6/25/08) Date	0	nents/Detection		- Date Due:	W Standard	* , "n-Aroune l'inv	ALPHA Quote #	Project Manager;	-torbet a # polad	Project Location: WAYJAND	Project Name: 12AVTHEON	Professions subtraction	FCUSTO	
					8	8	8 8	5.50	15:40	16:40	12:42	13:40	3151	0.01	Data Tana M		Limits:			C RUSH (ask continued I are assumed)	in w		Project Manager: JASON FUTTERY	4367		ALIHON	ation		
1 4 9	UTA 60, 10		Preso/vative	Container Type	GW EN	GN MS	GN MS	6V LZ	SN LIR	GW MS	Ð	EN EN	SW	6W M5	Matrix Initials					firmed if ans-anamyed)					PM .			L_of_2_	. Kevised
			א א	AV	2	2	2	2	2	2	22	2	2	2		4.2	DIDKANE - 8260			U Yes Q No	MYRE DINA	52.25	State /Fed Program	Regulatory Rec	U ADEX	DFAX	Report Inform		202
	soalivad By:								· · · · · · · · · · · · · · · · · · ·											Are CT RCP (F	Am MCD Anal	REVISEDENTS		Manemeers Scients	W Add'i Deliverables	IF EMAIL	no de - Dieta Dietaverables	39/LET 10	IL PONS
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	0, 								· · ·	-					Sample					Are CT RCP (Reasonable Confidence Protocols) Required?	Chooline	SONABLE CON			•	Same as Client info	al Statistics and a statistical straight		201
	and a second second second			an in the state		-						-			Sample Specific Comments	(These startly being)	12 Done 12 Done 13 Not needed 14 Lab to do 14 Lab to do 15 Lab to do	SANPLEHANDLING Fillodon		lequired?		WARGPURE SUMPTIVE CERTAILTY CTREASONABLE CONFIDENCE PROTOCOLS				for PO#	and Anna and Anna an An An Anna an Anna		000000000000000000000000000000000000000
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MAMCP or CT RCP?	IS YOUR PROJECT		PLEASE ANSWER QUESTIONS ABOVE!		10809566-09	10809565-08	L0809566-07	10009566-06	10009566-05	10009563-04	L0809566-03	L0809566-02			AllPHAllability Sample ID			Other Project Specific Requirements/Comments/Detection Limits:	These samples have been Previously analyzed by Alpha Du	Email:	Fax	Phone: Tu	Westboro, Ma 01581 AL	Address: 8 Walkup Dr. Pro	Client: Alpha Analytical Labs, Inc. Pro	Client Information Provide Pro	FAX: 508-822-3288	Westborough, MA Raynham, MA Bedford, NH Pro	ANNUMBER OF LASS		CHAIN OF CUSTODY
JUMA COMPA	Relinqu				06/25/08	06/25/08	06/26/08	06/26/08					06/25/08	Date Time	Collection			ection Limits:	Due Date: 07/14/08 Time:		🛛 Standard 🛛 🔲 Rust	Turn-Around Time	ALPHA Quote #:	Project Manager: Matt Beaupre	Project #:	Project Location: MA	-	Project Name: Raytheon		Project Information	JSTODY
lla .	inquished By:	Preservative	Container Type	-	Ł	<u> </u>							GW	Matrix Initiats	Sample Sampler's						Rush (only if pre-Approved)			ľe							FAGE 1 OF 1
20/4/	,Date/Time	-	-											1,4	Diox	cane		I				ANALYSIS	U Yes	X Yes	MCP PRESUM	State/Fed Program	Regulatory F	ADEX	D FAX	Report Informa	Dale Reco It Lap
	R																								IMPTIVE CERT	127	Regulatory Requirements/Report Limits	∎ A	🛛 EMAIL	ation Da	
	Received By:	•	•															- 					Are CT RCP (Reas	Are MCP Analytical Methods Required?	AINTY-CT RE		Report Limits	🗍 Add'l Deliverables	AIL .	eliverables	
	Date/Time		•											<u>.</u>									onable Confidence	Methods Required	ASONABLE C	Criteria			Same as Client Info	Billing Information	ALBEA JOB
		- Paragetrik dea] 🗍 Ms/Msd				Sample Specific Comments			(Priease specify below)	Lab to do	Lab to do	Done Not Naerled	Filiation		Are CT RCP (Reasonable Confidence Protocols) Required?	d?	PTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS				ent info PO #	nation	
		Service con-					-			 				•											S1000						

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Sample Receipt Checklist

•	•	Page \underline{l} of \underline{l}
Client: AUPHA	Receipt Date:	6/30/08
Project:	Log-in Date:	
ETR #: 0806187	Inspection by:	Login by: 9
ALL SECTIONS BELOW MUST BE COMPLE	ETED	Comments / Notes
Were samples shipped? Yes, FedEx / UPS / Other: No, Alpha Analytical Courier pick-up /	Hand delivered	Sample storage refrigerator #: 03
Is bill of lading retained? Yes, Tracking #:		Sample storage freezer #:
No, Unavailable / NA		
Number of coolers received for this project delivery:		inter uption
Indicate cooler temperature upon opening (if multiple coolers, record	all temps):	Cooler 2: $\frac{4^{6}}{4^{6}}$ Cooler 3: $\frac{4^{6}}{4^{6}}$
<u>Note:</u> If <u>all</u> coolers are 2-6°C, use one checklist, if NOT, use separate <u>all</u> samples received <i>above</i> 6° C.	e checklists and note	Cooler 2: $\frac{4^{\circ}/4^{\circ}}{4^{\circ}}$ Cooler 3: $\frac{4^{\circ}/4^{\circ}}{4^{\circ}}$ Cooler 4: $\frac{4^{\circ}/4^{\circ}}{4^{\circ}}$ Cooler 5:
Cooler 1: Temperature(s) taken from: 4° IR Gun, (Circle one) SN 46064	<u> </u>	Cooler 6: Cooler 7:
Temperature(s) taken from:	/143 or 94031	More:
Chain-of-Custody present? (Yes) / No		
Complete? (Yes) / No		
Custody seals present on Cooler? Yes / No		
on Bottles? Yes / No		
Intact? Yes / No / NA Note: Affix custody seals to back of this page.		
	lf No, list samples: →	
Did VOA/VPH waters contain headspace (>5mm)? Yes / No (NA) I	f Yes, list samples: \rightarrow	n an
Were 5035 VOA soils, or VPH soils, <i>covered</i> with MeOH? Yes	/ No / NA If No, list samples: \rightarrow	
Was a sufficient amount of sample received for each test indicated on		
If chemical preservation is appropriate - Were samples field preserved? Yes / No /	(NA)	Chemical preservation OK for ALL samples?
C=HCI M=MeOH S=H ₂ SO4		Yes / No / NTA
H=NaOH N=HNO ₃ Other: U= Unk	nown	If No, list samples below:
Preservation (pH) verified at lab for EVERY bottle? (Not: VOA / VP)	H / Sulfide)	
YES: <2 or >12 (CN) or NC If No, why?:		
	No, list samples: \rightarrow	
Discrepancy between samples rec'd & COC? Yes (No) If	Yes, list samples: →	
	No/ NA	
Project Manager Acknowledgement: Date:		Please use back for any additional notes!



Sample Delivery Group Form

Laboratory Job number: _10809566 Client Account: ERM-New England		Received: 06/27/2008 17:10
Samples Delivered by: CLIENT Bill Of Laden N/A Coc Present Present	Trackingnums :	
Container Status Intag	Sample IDs	
All Containers Accounted For? No Missing MW-555S-20080627-01, MW-555N Also missing Amber for Dup-003-20080625 Were Extra Samples Received? Yes Rec'd MW-556S-20080627-01, MW-556M-2	01 Levenses Levenses	
match above samples. Do Sample Labels and GOC agree? Yes		
Are Samples in Appropriate Containers? Are Samples Received within Holding time?	Yes Yes	
pH of Samples upon Receipt Initial pH preserved in house with Other Issues Chlorine Check N/A		S.Properly Preserved? Yes Final off:
Are VOA/VPH Vials/Present? No Aqueous: Do Vials Contain Head Space? Soifs: Is MeOHCovering the Soil? N/A Reagent H2O Preserved vials Frozen on Frozen by Client N/A	NZA	
lce Sooler Seal Present	Blue ice Present Temper	Delivered Prozen Direct fron ture upon Receipt Sile

Absent

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Sample Delivery Group Form

	Çaqler	ŝ	eal			lce Present	Blue ice Present	Temp	erature	Frozen upon Receipt	Delivere Direct fr Site	d om
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	B	а С	bsent-			Yes	No.	2,5 c	Temp Blank	No	No	
	D	1 a A	bsent			ri Yes e J	No	2.6 c	Temp, Blank	Nð	No	
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Certificate/Approval Program Summary



Method numbers assume the most recent EPA revisions. For a complete listing of analytes for the referenced methods please contact your Alpha Woods Hole Lab Project Manager or the Quality Assurance Manager.

Connecticut Department of Public Health Certificate/Lab ID : PH-0141 - Wastewater (General Chemistry: EPA 120.1, 150.1, 160.1, 160.2, 180.1, 300.0, 310.1, 335.2; Metals: 200.8, 245.1; Organics: 608-PCB, ETPH) Solid Waste/Soil (General Chemistry: 1010, 9010/9014, 9045, 9060; Metals: 6020, 7470, 7471; Organics: 8081, 8082, 8260, 8270, ETPH).

Florida Department of Health Certificate/Lab ID: E87814 - Primary NELAP Accreditation Authority for Air & Emissions. Secondary NELAP Accreditation for Wastwater and Solid & Hazardous Waste. Wastewater (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 335.2, SM2320B, SM2340B, SM2540G, SM4500NH3; Metals: 245.1; Organics: 608-PCB). Solid and Hazardous Waste (General Chemistry: 9010/9014, 9045, 9050, 9056, 9065, Reactivity 7.3; Metals: 6020, 7470, 7471; Organics: 8081, 8082, 8260, 8270). Air & Emissions (Organics: EPA TO-15).

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090 - Primary NELAP Accrediting Authority for Wastewater, Solid & Hazardous Waste. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 376.2, 9010/9014, 9056, SM2540G; Metals: 200.8, 245.1, 6020; Organics: 608-PCB, 8015-DRO, 8081, 8082, 8260, 8270). *Solid and Hazardous Waste* (General Chemistry: 1010, 1311, 9010/9014, 9040, 9045, 9056, 9060, Reactivity 7.3; Metals: 6020, 7196, 7470, 7471; Organics: 8015-DRO, 8081, 8082, 8260, 8270).

Maine Department of Human Services Certificate/Lab ID: MA0030 - Wastewater (General Chemistry: EPA 120.1/ SM2510B, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 335.2; Metals: EPA 245.1; Organics: 608-PCB).

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030 - Wastewater (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 335.2; Metals: EPA 245.1; Organics: EPA 608-PCB).

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206 - Secondary NELAP Accreditation. Wastewater (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 376.2, SM2540G; Metals: 200.8, 245.4; Organics: 608-PCB).

New Jersey Department of Environmental Protection <u>Certificate/Lab ID</u>: MA015 - Secondary NELAP Accreditation. Wastewater (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 376.2, 9010/9014, 9056, SM2540G; <u>Metals</u>: 200.8, 245.1 6020; <u>Organics</u>: 608-PCB, 8081, 8082, 8260, 8270). Solid & Hazardous Waste (General Chemistry: EPA 1010, 1311, 9010/9014, 9040, 9045, 9056, 9060; <u>Metals</u>: 6020, 7196, 7470, 7471; <u>Organics</u>: 8015-DRO, 8081, 8082, 8260, 8270). Air & Emissions (<u>Organics</u>: EPA TO-15).

New York Department of Health Certificate/Lab ID: 11627 - Secondary NELAP Accreditation. Wastewater (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 376.2; Metals: 200.8, 245.1; Organics: 608-PCB). Solid and Hazardous Waste (General Chemistry: EPA 1010, 1311; : 200.8; 20301;7041; Organics: 8081, 8082, 8260, 8270). Air & Emissions (Organics: EPA TO-15).

Rhode Island Department of Health <u>Certificate/Lab ID</u>: LAO00289 - Chemistry: Organic and Inorganic in Non-Poratable Water, Wastewater/Sewage and Soil (Refer to LADEQ and MADEP certificates for method numbers.)

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-02089 - Registered laboratory

U.S. Army Corps of Engineers

Department of the Navy

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