

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
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MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

CERTIFICATE OF ANALYSIS

Client: ERM-New England Laboratory Job Number: L0511504
Address: 399 Boylston Street
6th Floor
Boston, MA 02116 Date Received: 29-SEP-2005
Attn: Jeremy Picard Date Reported: 30-SEP-2005
Project Number: 0033366 Delivery Method: Client
Site: RAYTHEON WAYLAND

The following questions pertain only to MCP Analytical Methods

An affirmative response to questions A,B,C & D is required for "Presumptive Certainty" status

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

A response to questions E and F is required for "Presumptive Certainty" status

- E. Were all QC performance standards and recommendations for the specified method(s) achieved? NO
- F. Were results for all analyte-list compounds/elements for the specified method(s) reported? NO

Any answers of NO to the above questions are addressed in the case narrative.

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

Authorized by: 
Technical Director

ALPHA ANALYTICAL LABORATORIES

Laboratory Job Number: L0511504

Date Reported: 30-SEP-2005

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0511504-01	MW-220M-20050929-01	WAYLAND, MA

ALPHA ANALYTICAL LABORATORIES
NARRATIVE REPORT

Laboratory Job Number: L0511504

Report Submission

In reference to question F:

At the client's request, the submitted sample was not analyzed for the full MCP list of compounds specified for the method.

Volatile Organics

In reference to question E:

The WG215840-1/2 LCS/LCSD have low % recoveries for 2,2-dichloropropane, a difficult analyte, and the LCSD has a low % recovery for Tetrahydrofuran.

The LCS/LCSD % RPDs for 1,1-Dichloroethane, Tetrahydrofuran and 2,2-Dichloropropane are above the acceptance criteria for the method.

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number:	L0511504-01	Date Collected:	29-SEP-2005 13:50
	MW-220M-20050929-01	Date Received :	29-SEP-2005
Sample Matrix:	WATER	Date Reported :	30-SEP-2005
Condition of Sample:	Satisfactory	Field Prep:	None
Number & Type of Containers:	2-Vial		

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP ANAL	ID
Volatile Organics by MCP 8260B				60 8260B	0930 11:52	RY
Methylene chloride	ND	ug/l	5.0			
1,1-Dichloroethane	2.6	ug/l	0.75			
Chloroform	ND	ug/l	0.75			
Carbon tetrachloride	ND	ug/l	0.50			
1,2-Dichloropropane	ND	ug/l	1.8			
Dibromochloromethane	ND	ug/l	0.50			
1,1,2-Trichloroethane	ND	ug/l	0.75			
Tetrachloroethene	ND	ug/l	0.50			
Chlorobenzene	ND	ug/l	0.50			
1,2-Dichloroethane	ND	ug/l	0.50			
1,1,1-Trichloroethane	ND	ug/l	0.50			
Bromodichloromethane	ND	ug/l	0.50			
trans-1,3-Dichloropropene	ND	ug/l	0.50			
cis-1,3-Dichloropropene	ND	ug/l	0.50			
Bromoform	ND	ug/l	2.0			
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50			
Benzene	0.94	ug/l	0.50			
Chloromethane	ND	ug/l	2.5			
Vinyl chloride	ND	ug/l	1.0			
Chloroethane	ND	ug/l	1.0			
1,1-Dichloroethene	ND	ug/l	0.50			
trans-1,2-Dichloroethene	ND	ug/l	0.75			
Trichloroethene	0.52	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			
Methyl tert butyl ether	ND	ug/l	1.0			
cis-1,2-Dichloroethene	ND	ug/l	0.50			
Dichlorodifluoromethane	ND	ug/l	5.0			
1,2-Dibromoethane	ND	ug/l	2.0			
1,3-Dichloropropane	ND	ug/l	2.5			
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50			
o-Chlorotoluene	ND	ug/l	2.5			
p-Chlorotoluene	ND	ug/l	2.5			
Hexachlorobutadiene	ND	ug/l	1.0			
1,2,4-Trichlorobenzene	ND	ug/l	2.5			

Comments: Complete list of References and Glossary of Terms found in Addendum I

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L0511504-01
MW-220M-20050929-01

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B cont'd				60 8260B	0930 11:52 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	96.0	%		70-130			
Toluene-d8	99.0	%		70-130			
4-Bromofluorobenzene	98.0	%		70-130			
Dibromofluoromethane	105.	%		70-130			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH LCS/LCSD ANALYSIS

Laboratory Job Number: L0511504

Parameter	LCS %	LCSD %	RPD	RPD Limit	QC Limits
Volatile Organics by MCP 8260B for sample(s) 01 (WG215840-1, WG215840-2)					
Methylene chloride	91	94	3	25	70-130
1,1-Dichloroethane	106	80	28	25	70-130
Chloroform	93	88	6	25	70-130
Carbon tetrachloride	105	104	1	25	70-130
1,2-Dichloropropane	102	96	6	25	70-130
Dibromochloromethane	92	91	1	25	70-130
1,1,2-Trichloroethane	91	92	1	25	70-130
Tetrachloroethene	100	95	5	25	70-130
Chlorobenzene	102	98	4	25	70-130
Trichlorofluoromethane	91	96	5	25	70-130
1,2-Dichloroethane	100	100	0	25	70-130
1,1,1-Trichloroethane	100	97	3	25	70-130
Bromodichloromethane	98	100	2	25	70-130
trans-1,3-Dichloropropene	85	87	2	25	70-130
cis-1,3-Dichloropropene	92	91	1	25	70-130
1,1-Dichloropropene	99	96	3	25	70-130
Bromoform	91	90	1	50	70-130
1,1,2,2-Tetrachloroethane	92	92	0	25	70-130
Benzene	94	96	2	25	70-130
Toluene	95	92	3	25	70-130
Ethylbenzene	96	91	5	25	70-130
Chloromethane	110	108	2	50	70-130
Bromomethane	84	84	0	50	70-130
Vinyl chloride	103	106	3	25	70-130
Chloroethane	104	94	10	25	70-130
1,1-Dichloroethene	103	101	2	25	70-130
trans-1,2-Dichloroethene	97	98	1	25	70-130
Trichloroethene	98	100	2	25	70-130
1,2-Dichlorobenzene	92	93	1	25	70-130
1,3-Dichlorobenzene	94	96	2	25	70-130
1,4-Dichlorobenzene	92	95	3	25	70-130
Methyl tert butyl ether	92	77	18	25	70-130
p/m-Xylene	100	100	0	25	70-130
o-Xylene	98	98	0	25	70-130
cis-1,2-Dichloroethene	99	100	1	25	70-130
Dibromomethane	96	103	7	25	70-130
1,2,3-Trichloropropane	93	92	1	25	70-130
Styrene	95	95	0	25	70-130
Dichlorodifluoromethane	112	112	0	50	70-130
Acetone	98	101	3	50	70-130
Carbon disulfide	102	100	2	25	70-130
2-Butanone	74	70	6	50	70-130
4-Methyl-2-pentanone	88	80	10	50	70-130
2-Hexanone	72	70	3	50	70-130
Bromochloromethane	106	110	4	25	70-130
Tetrahydrofuran	86	66	26	25	70-130
2,2-Dichloropropane	59	32	59	25	70-130
1,2-Dibromoethane	90	91	1	25	70-130

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH LCS/LCSD ANALYSIS

Laboratory Job Number: L0511504

Continued

Parameter	LCS %	LCSD %	RPD	RPD Limit	QC Limits
Volatile Organics by MCP 8260B for sample(s) 01 (WG215840-1, WG215840-2)					
1,3-Dichloropropane	92	88	4	25	70-130
1,1,1,2-Tetrachloroethane	99	103	4	25	70-130
Bromobenzene	93	100	7	25	70-130
n-Butylbenzene	83	85	2	25	70-130
sec-Butylbenzene	93	95	2	25	70-130
tert-Butylbenzene	92	97	5	25	70-130
o-Chlorotoluene	93	98	5	25	70-130
p-Chlorotoluene	94	94	0	25	70-130
1,2-Dibromo-3-chloropropane	88	83	6	50	70-130
Hexachlorobutadiene	92	88	4	25	70-130
Isopropylbenzene	94	92	2	25	70-130
p-Isopropyltoluene	93	96	3	25	70-130
Naphthalene	99	93	6	25	70-130
n-Propylbenzene	94	97	3	25	70-130
1,2,3-Trichlorobenzene	98	90	9	25	70-130
1,2,4-Trichlorobenzene	84	78	7	25	70-130
1,3,5-Trimethylbenzene	94	98	4	25	70-130
1,2,4-Trimethylbenzene	92	92	0	25	70-130
Ethyl ether	87	84	4	25	70-130
Isopropyl Ether	88	85	3	25	70-130
Ethyl-Tert-Butyl-Ether	90	86	5	25	70-130
Tertiary-Amyl Methyl Ether	93	88	6	25	70-130
1,4-Dioxane	118	84	34	50	70-130
Surrogate(s)					
1,2-Dichloroethane-d4	102	102	0		70-130
Toluene-d8	97	96	1		70-130
4-Bromofluorobenzene	95	98	3		70-130
Dibromofluoromethane	116	110	5		70-130

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0511504

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG215840-3)							
Volatile Organics by MCP 8260B				60 8260B		0930 10:54	RY
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				
1,1,1,2,2-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				
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.				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0511504

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG215840-3)							
Volatile Organics by MCP 8260B cont'd				60 8260B		0930 10:54	RY
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	1.0				
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				
1,2,3-Trichlorobenzene	ND	ug/l	2.5				
1,2,4-Trichlorobenzene	ND	ug/l	2.5				
1,3,5-Trimethylbenzene	ND	ug/l	2.5				
1,2,4-Trimethylbenzene	ND	ug/l	2.5				
Ethyl ether	ND	ug/l	2.5				
Isopropyl Ether	ND	ug/l	2.0				
Ethyl-Tert-Butyl-Ether	ND	ug/l	2.0				
Tertiary-Amyl Methyl Ether	ND	ug/l	2.0				
1,4-Dioxane	ND	ug/l	250				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	96.0	%		70-130			
Toluene-d8	99.0	%		70-130			
4-Bromofluorobenzene	97.0	%		70-130			
Dibromofluoromethane	105.	%		70-130			

**ALPHA ANALYTICAL LABORATORIES
ADDENDUM I**

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.

GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.
METHOD Method number by which analysis was performed.
ID Initials of the analyst.
ND Not detected in comparison to the reported detection limit.
NI Not Ignitable.
ug/cart Micrograms per Cartridge.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

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

ALPHA ANALYTICAL LABORATORIES
LOGIN SPECIFIC INFORMATION

Laboratory Job Number: L0511504

Were project specific reporting limits specified? YES

Cooler Information

Cooler Custody Seal

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0511504-01A	Vial HCl preserved	A	NA	1.1 C	Y	Absent	MCP-8260-04
L0511504-01B	Vial HCl preserved	A	NA	1.1 C	Y	Absent	MCP-8260-04

Container Comments

Container ID Comments



CHAIN OF CUSTODY

PAGE 1 OF 1

Eight Walkup Drive Westborough, MA 01581
TEL: 508-898-9220 FAX: 508-898-9193

Client Information

Client: **ERM**

Address: **399 Boylston St**

Boston Ma 02116

Phone: **617-646-7800**

Fax:

Email: **eric.moore@erm.com**

jenney.premade@erm.com

Other Project Specific Requirements/Comments/Detection Limits:

Project Information

Project Name: **Ryan Wynland**

Project Location: **Wynland Mg**

Project #: **035366**

Project Manager: **Jerry Picard**

ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirm if pre-approved!)

Date Due: **10/3/05** Time:

Date Rec'd in Lab:

9/29/05

Report Information - Data Deliverables

FAX EMAIL Print

Add'l Deliverables

Regulatory Requirements/Report Limits

State /Fed Program

MA MCP GW-1

MCP PRESUMPTIVE CERTAINTY - THESE QUESTIONS MUST BE ANSWERED

Yes No Are MCP Analytical Methods Required?

Yes No Are Drinking Water Samples Submitted?

Yes No Have you met minimum field QC requirements?

ANALYSIS

8021 B

CVOC's

MTBE

Benzene

Alpha Job #:

10511504

Billing Information

Same as Client info

PO #:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS						Sample Specific Comments			
		Date	Time			8021 B	CVOC's	MTBE	Benzene	SAMPLER HANDLING					
11504.1	MW-220M-20050929	9/29/05	1350	GW	EDM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	48h Rush	

QUESTIONS ABOVE MUST BE ANSWERED FOR PRESUMPTIVE CERTAINTY

IS YOUR PROJECT MCP ?

Requested By: **[Signature]**

Date/Time: **9/29/05 1505**

Received By: **[Signature]**

Date/Time: **9/29/05 1805**

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