

ALPHA ANALYTICAL LABORATORIES

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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: L0407880  
Address: 399 Boylston Street  
6th Floor  
Boston, MA 02116 Date Received: 20-JUL-2004  
Attn: Jeremy Picard Date Reported: 26-JUL-2004  
Project Number: 13606 Delivery Method: Alpha  
Site: RAYTHEON WAYLAND

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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? YES
- 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.

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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.

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Authorized by: Scott McLean  
This document electronically signed

ALPHA ANALYTICAL LABORATORIES

Laboratory Job Number: L0407880

Date Reported: 26-JUL-2004

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ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0407880-01	MW-217M	WAYLAND, MA
L0407880-02	MW-217D	WAYLAND, MA

ALPHA ANALYTICAL LABORATORIES  
NARRATIVE REPORT

Laboratory Job Number: L0407880

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Report Submission

In reference to question F, at the client's request, the samples were analyzed only for the compounds specified on the chain of custody.



**ALPHA ANALYTICAL LABORATORIES**  
**CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L0407880-01  
 MW-217M

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				60 8260B	0725 17:21		RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	120.	%		70-130			
Toluene-d8	99.0	%		70-130			
4-Bromofluorobenzene	108.	%		70-130			
Dibromofluoromethane	111.	%		70-130			

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

**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

<b>Laboratory Sample Number:</b> L0407880-02	<b>Date Collected:</b> 20-JUL-2004 15:10
MW-217D	<b>Date Received :</b> 20-JUL-2004
<b>Sample Matrix:</b> WATER	<b>Date Reported :</b> 26-JUL-2004
<b>Condition of Sample:</b> Satisfactory	<b>Field Prep:</b> None
<b>Number &amp; Type of Containers:</b> 1-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP ANAL	ID
Volatile Organics by MCP 8260B				60 8260B	0725 17:56 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			
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	ND	ug/l	0.50			
Chloromethane	ND	ug/l	2.5			
Vinyl chloride	ND	ug/l	1.0			
Chloroethane	ND	ug/l	1.0			
1,1-Dichloroethene	ND	ug/l	0.50			
trans-1,2-Dichloroethene	ND	ug/l	0.75			
Trichloroethene	4.2	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: L0407880-02  
MW-217D

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				60 8260B	0725 17:56 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	117.	%		70-130			
Toluene-d8	98.0	%		70-130			
4-Bromofluorobenzene	110.	%		70-130			
Dibromofluoromethane	112.	%		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: L0407880

Parameter	LCS %	LCSD %	RPD	RPD Limit	QC Limits
Volatile Organics by MCP 8260B for sample(s) 01-02 (WG176636-1, WG176636)					
Methylene chloride	103	103	0	25	70-130
1,1-Dichloroethane	106	109	3	25	70-130
Chloroform	109	110	1	25	70-130
Carbon tetrachloride	100	108	8	25	70-130
1,2-Dichloropropane	102	105	3	25	70-130
Dibromochloromethane	94	100	6	25	70-130
1,1,2-Trichloroethane	102	104	2	25	70-130
Tetrachloroethene	106	108	2	25	70-130
Chlorobenzene	103	105	2	25	70-130
Trichlorofluoromethane	117	112	4	25	70-130
1,2-Dichloroethane	117	118	1	25	70-130
1,1,1-Trichloroethane	108	112	4	25	70-130
Bromodichloromethane	106	108	2	25	70-130
trans-1,3-Dichloropropene	102	104	2	25	70-130
cis-1,3-Dichloropropene	101	103	2	25	70-130
1,1-Dichloropropene	103	109	6	25	70-130
Bromoform	95	101	6	50	70-130
1,1,2,2-Tetrachloroethane	99	99	0	25	70-130
Benzene	103	105	2	25	70-130
Toluene	101	104	3	25	70-130
Ethylbenzene	106	109	3	25	70-130
Chloromethane	90	100	11	50	70-130
Bromomethane	52	81	44	50	70-130
Vinyl chloride	116	116	0	25	70-130
Chloroethane	118	123	4	25	70-130
1,1-Dichloroethene	95	104	9	25	70-130
trans-1,2-Dichloroethene	102	107	5	25	70-130
Trichloroethene	106	108	2	25	70-130
1,2-Dichlorobenzene	101	103	2	25	70-130
1,3-Dichlorobenzene	102	104	2	25	70-130
1,4-Dichlorobenzene	100	102	2	25	70-130
Methyl tert butyl ether	92	95	3	25	70-130
p/m-Xylene	105	108	3	25	70-130
o-Xylene	108	110	2	25	70-130
cis-1,2-Dichloroethene	108	111	3	25	70-130
Dibromomethane	108	108	0	25	70-130
1,2,3-Trichloropropane	100	100	0	25	70-130
Styrene	109	110	1	25	70-130
Dichlorodifluoromethane	98	102	4	50	70-130
Acetone	122	104	16	50	70-130
Carbon disulfide	97	101	4	25	70-130
2-Butanone	98	96	2	50	70-130
4-Methyl-2-pentanone	90	91	1	50	70-130
2-Hexanone	103	102	1	50	70-130
Bromochloromethane	111	109	2	25	70-130
Tetrahydrofuran	128	121	6	25	70-130
2,2-Dichloropropane	108	111	3	25	70-130
1,2-Dibromoethane	99	100	1	25	70-130

ALPHA ANALYTICAL LABORATORIES  
 QUALITY ASSURANCE BATCH LCS/LCSD ANALYSIS

Laboratory Job Number: L0407880

Continued

Parameter	LCS %	LCSD %	RPD	RPD Limit	QC Limits
Volatile Organics by MCP 8260B for sample(s) 01-02 (WG176636-1, WG176636)					
1,3-Dichloropropane	100	101	1	25	70-130
1,1,1,2-Tetrachloroethane	105	109	4	25	70-130
Bromobenzene	103	104	1	25	70-130
n-Butylbenzene	90	92	2	25	70-130
sec-Butylbenzene	99	102	3	25	70-130
tert-Butylbenzene	99	103	4	25	70-130
o-Chlorotoluene	104	108	4	25	70-130
p-Chlorotoluene	102	103	1	25	70-130
1,2-Dibromo-3-chloropropane	94	97	3	50	70-130
Hexachlorobutadiene	102	104	2	25	70-130
Isopropylbenzene	106	109	3	25	70-130
p-Isopropyltoluene	95	98	3	25	70-130
Naphthalene	73	75	3	25	70-130
n-Propylbenzene	101	104	3	25	70-130
1,2,3-Trichlorobenzene	81	84	4	25	70-130
1,2,4-Trichlorobenzene	79	79	0	25	70-130
1,3,5-Trimethylbenzene	98	101	3	25	70-130
1,2,4-Trimethylbenzene	94	97	3	25	70-130
Ethyl ether	96	100	4	25	70-130
Isopropyl Ether	98	98	0	25	70-130
Ethyl-Tert-Butyl-Ether	93	96	3	25	70-130
Tertiary-Amyl Methyl Ether	92	94	2	25	70-130
1,4-Dioxane	101	106	5	50	70-130
Surrogate(s)					
1,2-Dichloroethane-d4	114	111	3		70-130
Toluene-d8	100	99	1		70-130
4-Bromofluorobenzene	101	101	0		70-130
Dibromofluoromethane	111	107	4		70-130

**ALPHA ANALYTICAL LABORATORIES  
ADDENDUM I**

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**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.

Please note that all solid samples are reported on dry weight basis unless noted otherwise.

**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: L0407880

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Were project specific reporting limits specified? NO

**Cooler Information**

Cooler	Custody Seal
A	Absent

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**Container Information**

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0407880-01A	Vial HCl preserved	A	N/A	0.8 C	Y	Absent	MCP-8260-04
L0407880-01B	Vial HCl preserved	A	N/A	0.8 C	Y	Absent	MCP-8260-04
L0407880-02A	Vial HCl preserved	A	N/A	0.8 C	Y	Absent	MCP-8260-04

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**Container Comments**

Container ID	Comments
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