

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: L0503950  
Address: 399 Boylston Street  
6th Floor  
Boston, MA 02116 Date Received: 13-APR-2005  
Attn: Jeremy Picard Date Reported: 19-APR-2005  
Project Number: 28047 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: Ellen M. Collins  
This document electronically signed

ALPHA ANALYTICAL LABORATORIES

Laboratory Job Number: L0503950

Date Reported: 19-APR-2005

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ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0503950-01	MW-219M-20050412-01	WAYLAND, MA

ALPHA ANALYTICAL LABORATORIES  
NARRATIVE REPORT

Laboratory Job Number: L0503950

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MCP Related Narratives

Report Submission

In reference to question F, the samples were analyzed only for the compounds specified on the chain of custody.



**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L0503950-01  
MW-219M-20050412-01

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				60 8260B	0418 11:19		RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	108.	%		70-130			
Toluene-d8	97.0	%		70-130			
4-Bromofluorobenzene	104.	%		70-130			
Dibromofluoromethane	99.0	%		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: L0503950

Parameter	LCS %	LCSD %	RPD	RPD Limit	QC Limits
Volatile Organics by MCP 8260B for sample(s) 01 (WG199416-7, WG199416-8)					
Methylene chloride	91	95	4	25	70-130
1,1-Dichloroethane	89	87	2	25	70-130
Chloroform	101	98	3	25	70-130
Carbon tetrachloride	106	103	3	25	70-130
1,2-Dichloropropane	90	92	2	25	70-130
Dibromochloromethane	82	82	0	25	70-130
1,1,2-Trichloroethane	82	81	1	25	70-130
Tetrachloroethene	93	90	3	25	70-130
Chlorobenzene	86	87	1	25	70-130
1,2-Dichloroethane	100	99	1	25	70-130
1,1,1-Trichloroethane	104	100	4	25	70-130
Bromodichloromethane	89	90	1	25	70-130
trans-1,3-Dichloropropene	82	82	0	25	70-130
cis-1,3-Dichloropropene	86	90	5	25	70-130
Bromoform	84	80	5	50	70-130
1,1,2,2-Tetrachloroethane	76	79	4	25	70-130
Benzene	94	95	1	25	70-130
Chloromethane	83	87	5	50	70-130
Vinyl chloride	94	93	1	25	70-130
Chloroethane	88	90	2	25	70-130
1,1-Dichloroethene	102	98	4	25	70-130
trans-1,2-Dichloroethene	99	98	1	25	70-130
Trichloroethene	93	93	0	25	70-130
1,2-Dichlorobenzene	85	87	2	25	70-130
1,3-Dichlorobenzene	86	86	0	25	70-130
1,4-Dichlorobenzene	85	84	1	25	70-130
Methyl tert butyl ether	86	91	6	25	70-130
cis-1,2-Dichloroethene	96	94	2	25	70-130
Dichlorodifluoromethane	84	82	2	50	70-130
1,2-Dibromoethane	85	86	1	25	70-130
1,3-Dichloropropane	82	80	2	25	70-130
1,1,1,2-Tetrachloroethane	87	85	2	25	70-130
o-Chlorotoluene	88	86	2	25	70-130
p-Chlorotoluene	83	83	0	25	70-130
Hexachlorobutadiene	87	83	5	25	70-130
1,2,4-Trichlorobenzene	90	92	2	25	70-130
Surrogate(s)					
1,2-Dichloroethane-d4	110	110	0		70-130
Toluene-d8	97	97	0		70-130
4-Bromofluorobenzene	99	99	0		70-130
Dibromofluoromethane	111	107	4		70-130

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0503950

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG199416-9)							
Volatile Organics by MCP 8260B				60 8260B	0418 09:29 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	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				
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				
Surrogate(s)	Recovery		QC Criteria				
1,2-Dichloroethane-d4	99.0	%	70-130				
Toluene-d8	99.0	%	70-130				
4-Bromofluorobenzene	101.	%	70-130				
Dibromofluoromethane	97.0	%	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.  
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: L0503950

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Were project specific reporting limits specified? YES

**Cooler Information**

Cooler	Custody Seal
A	Absent

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**Container Information**

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0503950-01A	Vial HCl preserved	A	NA	2.7 C	Y	Absent	MCP-8260-04
L0503950-01B	Vial HCl preserved	A	NA	2.7 C	Y	Absent	MCP-8260-04

**Container Comments**

Container ID	Comments
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