

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive  
Westborough, Massachusetts 01581-1019  
(508) 898-9220 www.alphalab.com

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: L0404408  
Address: 399 Boylston Street  
6th Floor  
Boston, MA 02116 Date Received: 28-APR-2004  
Attn: Jeremy Picard Date Reported: 05-MAY-2004  
Project Number: 13606.06 Delivery Method: Alpha  
Site: RAYTHEON

---

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: James Todaro  
This document electronically signed

ALPHA ANALYTICAL LABORATORIES

Laboratory Job Number: L0404408  
Date Reported: 05-MAY-2004

---

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0404408-01	MW-203S	WAYLAND, MA
L0404408-02	MW-204S	WAYLAND, MA
L0404408-03	MW-204M	WAYLAND, MA
L0404408-04	MW-204D	WAYLAND, MA
L0404408-05	MW-202D	WAYLAND, MA
L0404408-06	MW-202M	WAYLAND, MA
L0404408-07	MW-202S	WAYLAND, MA
L0404408-08	DUP-5	WAYLAND, MA

ALPHA ANALYTICAL LABORATORIES  
NARRATIVE REPORT

Laboratory Job Number: L0404408

---

MCP Related Narratives

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.

Volatile Organics

L0404408-03 and -06 have elevated limits of detection due to the dilutions (4x and 2x) required by the elevated concentrations of target compounds in the samples.

L0404408-08 was re-analyzed on a 4x dilution in order to quantitate the sample within the range of the calibration. The result is reported as a greater than value for the compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compound which exceeded the range of the calibration.

In reference to question E, the LCS % recovery for Dichlorodifluoromethane associated with L0404408-01 through -08 is 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:	L0404408-01	Date Collected:	27-APR-2004 17:00
	MW-203S	Date Received :	28-APR-2004
Sample Matrix:	WATER	Date Reported :	05-MAY-2004
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				54 8260B	0504 16:25	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	2.4	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	0.68	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: L0404408-01  
MW-203S

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	0504 16:25 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	104.	%		70-130			
Toluene-d8	97.0	%		70-130			
4-Bromofluorobenzene	108.	%		70-130			
Dibromofluoromethane	108.	%		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> L0404408-02	<b>Date Collected:</b> 27-APR-2004 16:20
MW-204S	<b>Date Received :</b> 28-APR-2004
<b>Sample Matrix:</b> WATER	<b>Date Reported :</b> 05-MAY-2004
<b>Condition of Sample:</b> Satisfactory	<b>Field Prep:</b> None
<b>Number &amp; Type of Containers:</b> 2-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B				54 8260B	0504 17:01		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	8.2	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	2.0	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: L0404408-02  
MW-204S

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	ID ANAL
Volatile Organics by MCP 8260B continued				54 8260B	0504 17:01 RY	
Surrogate(s)	Recovery			QC Criteria		
1,2-Dichloroethane-d4	107.	%		70-130		
Toluene-d8	96.0	%		70-130		
4-Bromofluorobenzene	105.	%		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

Laboratory Sample Number:	L0404408-03	Date Collected:	27-APR-2004 16:15
	MW-204M	Date Received :	28-APR-2004
Sample Matrix:	WATER	Date Reported :	05-MAY-2004
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				54 8260B	0504 19:58	RY
Methylene chloride	ND	ug/l	20.			
1,1-Dichloroethane	ND	ug/l	3.0			
Chloroform	ND	ug/l	3.0			
Carbon tetrachloride	ND	ug/l	2.0			
1,2-Dichloropropane	ND	ug/l	7.0			
Dibromochloromethane	ND	ug/l	2.0			
1,1,2-Trichloroethane	ND	ug/l	3.0			
Tetrachloroethene	ND	ug/l	2.0			
Chlorobenzene	ND	ug/l	2.0			
1,2-Dichloroethane	ND	ug/l	2.0			
1,1,1-Trichloroethane	21.	ug/l	2.0			
Bromodichloromethane	ND	ug/l	2.0			
trans-1,3-Dichloropropene	ND	ug/l	2.0			
cis-1,3-Dichloropropene	ND	ug/l	2.0			
Bromoform	ND	ug/l	8.0			
1,1,2,2-Tetrachloroethane	ND	ug/l	2.0			
Benzene	ND	ug/l	2.0			
Chloromethane	ND	ug/l	10.			
Vinyl chloride	ND	ug/l	4.0			
Chloroethane	ND	ug/l	4.0			
1,1-Dichloroethene	3.5	ug/l	2.0			
trans-1,2-Dichloroethene	ND	ug/l	3.0			
Trichloroethene	130	ug/l	2.0			
1,2-Dichlorobenzene	ND	ug/l	10.			
1,3-Dichlorobenzene	ND	ug/l	10.			
1,4-Dichlorobenzene	ND	ug/l	10.			
Methyl tert butyl ether	69.	ug/l	4.0			
cis-1,2-Dichloroethene	ND	ug/l	2.0			
Dichlorodifluoromethane	ND	ug/l	20.			
1,2-Dibromoethane	ND	ug/l	8.0			
1,3-Dichloropropane	ND	ug/l	10.			
1,1,1,2-Tetrachloroethane	ND	ug/l	2.0			
o-Chlorotoluene	ND	ug/l	10.			
p-Chlorotoluene	ND	ug/l	10.			
Hexachlorobutadiene	ND	ug/l	4.0			
1,2,4-Trichlorobenzene	ND	ug/l	10.			

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



**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L0404408-03  
MW-204M

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	0504 19:58 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	109.	%		70-130			
Toluene-d8	102.	%		70-130			
4-Bromofluorobenzene	106.	%		70-130			
Dibromofluoromethane	104.	%		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

Laboratory Sample Number:	L0404408-04	Date Collected:	28-APR-2004 10:35
	MW-204D	Date Received :	28-APR-2004
Sample Matrix:	WATER	Date Reported :	05-MAY-2004
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				54 8260B	0504 17:36 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	30.	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	1.9	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: L0404408-04  
 MW-204D

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	0504 17:36 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	107.	%		70-130			
Toluene-d8	100.	%		70-130			
4-Bromofluorobenzene	109.	%		70-130			
Dibromofluoromethane	112.	%		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

Laboratory Sample Number: L0404408-05		Date Collected: 28-APR-2004 12:21
	MW-202D	Date Received : 28-APR-2004
Sample Matrix: WATER		Date Reported : 05-MAY-2004
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				54 8260B	0504 18:11	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	0.56	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: L0404408-05  
 MW-202D

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	0504 18:11		RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	107.	%		70-130			
Toluene-d8	99.0	%		70-130			
4-Bromofluorobenzene	109.	%		70-130			
Dibromofluoromethane	113.	%		70-130			

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



ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0404408-06  
 MW-202M

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	0504 20:34		RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	108.	%		70-130			
Toluene-d8	99.0	%		70-130			
4-Bromofluorobenzene	106.	%		70-130			
Dibromofluoromethane	100.	%		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> L0404408-07	<b>Date Collected:</b> 28-APR-2004 15:17
MW-202S	<b>Date Received :</b> 28-APR-2004
<b>Sample Matrix:</b> WATER	<b>Date Reported :</b> 05-MAY-2004
<b>Condition of Sample:</b> Satisfactory	<b>Field Prep:</b> None
<b>Number &amp; Type of Containers:</b> 2-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP ANAL	ID
Volatile Organics by MCP 8260B				54 8260B	0504 18:47 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	1.4	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	2.7	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: L0404408-07  
 MW-202S

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	0504 18:47		RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	109.	%		70-130			
Toluene-d8	98.0	%		70-130			
4-Bromofluorobenzene	106.	%		70-130			
Dibromofluoromethane	112.	%		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

Laboratory Sample Number:	L0404408-08	Date Collected:	28-APR-2004 00:00
	DUP-5	Date Received :	28-APR-2004
Sample Matrix:	WATER	Date Reported :	05-MAY-2004
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				54 8260B	0504 19:22	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	13.	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	1.4	ug/l	0.50			
trans-1,2-Dichloroethene	ND	ug/l	0.75			
Trichloroethene	63.	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	>100	ug/l	1			
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: L0404408-08  
DUP-5

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	0504 19:22 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	111.	%		70-130			
Toluene-d8	103.	%		70-130			
4-Bromofluorobenzene	108.	%		70-130			
Dibromofluoromethane	100.	%		70-130			
Volatile Organics by MCP 8260B				54 8260B	0505 10:43 RY		
Methyl tert butyl ether	150	ug/l		4.0			
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	107.	%		70-130			
Toluene-d8	99.0	%		70-130			
4-Bromofluorobenzene	107.	%		70-130			
Dibromofluoromethane	101.	%		70-130			

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

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0404408

Parameter	% Recovery	QC Criteria
Volatile Organics by MCP 8260B LCS for sample(s) 01-08 (WG169719)		
Methylene chloride	106	70-130
1,1-Dichloroethane	111	70-130
Chloroform	107	70-130
Carbon tetrachloride	114	70-130
1,2-Dichloropropane	105	70-130
Dibromochloromethane	100	70-130
1,1,2-Trichloroethane	105	70-130
Tetrachloroethene	109	70-130
Chlorobenzene	109	70-130
1,2-Dichloroethane	100	70-130
1,1,1-Trichloroethane	108	70-130
Bromodichloromethane	107	70-130
trans-1,3-Dichloropropene	93	70-130
cis-1,3-Dichloropropene	89	70-130
Bromoform	105	70-130
1,1,2,2-Tetrachloroethane	103	70-130
Benzene	111	70-130
Chloromethane	93	70-130
Vinyl chloride	101	70-130
Chloroethane	83	70-130
1,1-Dichloroethene	96	70-130
trans-1,2-Dichloroethene	103	70-130
Trichloroethene	101	70-130
1,2-Dichlorobenzene	104	70-130
1,3-Dichlorobenzene	109	70-130
1,4-Dichlorobenzene	105	70-130
Methyl tert butyl ether	89	70-130
cis-1,2-Dichloroethene	113	70-130
Dichlorodifluoromethane	145	70-130
1,2-Dibromoethane	95	70-130
1,3-Dichloropropane	100	70-130
1,1,1,2-Tetrachloroethane	110	70-130
o-Chlorotoluene	116	70-130
p-Chlorotoluene	112	70-130
Hexachlorobutadiene	96	70-130
1,2,4-Trichlorobenzene	73	70-130
Surrogate(s)		
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130
Dibromofluoromethane	105	70-130
Volatile Organics by MCP 8260B LCS for sample(s) 08 (WG169719)		
Methylene chloride	98	70-130
1,1-Dichloroethane	106	70-130
Chloroform	104	70-130
Carbon tetrachloride	110	70-130

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0404408

Continued

---

Parameter	% Recovery	QC Criteria
-----------	------------	-------------

---

Volatile Organics by MCP 8260B LCS for sample(s) 08 (WG169719)

1,2-Dichloropropane	102	70-130
Dibromochloromethane	101	70-130
1,1,2-Trichloroethane	104	70-130
Tetrachloroethene	104	70-130
Chlorobenzene	107	70-130
1,2-Dichloroethane	98	70-130
1,1,1-Trichloroethane	105	70-130
Bromodichloromethane	105	70-130
trans-1,3-Dichloropropene	93	70-130
cis-1,3-Dichloropropene	88	70-130
Bromoform	105	70-130
1,1,2,2-Tetrachloroethane	101	70-130
Benzene	108	70-130
Chloromethane	81	70-130
Vinyl chloride	92	70-130
Chloroethane	76	70-130
1,1-Dichloroethene	86	70-130
trans-1,2-Dichloroethene	98	70-130
Trichloroethene	97	70-130
1,2-Dichlorobenzene	101	70-130
1,3-Dichlorobenzene	107	70-130
1,4-Dichlorobenzene	102	70-130
Methyl tert butyl ether	83	70-130
cis-1,2-Dichloroethene	106	70-130
Dichlorodifluoromethane	124	70-130
1,2-Dibromoethane	94	70-130
1,3-Dichloropropane	99	70-130
1,1,1,2-Tetrachloroethane	108	70-130
o-Chlorotoluene	113	70-130
p-Chlorotoluene	109	70-130
Hexachlorobutadiene	92	70-130
1,2,4-Trichlorobenzene	72	70-130
Surrogate(s)		
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130
Dibromofluoromethane	105	70-130

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0404408

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01-08 (WG169719-2)							
Volatile Organics by MCP 8260B				54 8260B	0504 15:43 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	104.	%	70-130				
Toluene-d8	100.	%	70-130				
4-Bromofluorobenzene	106.	%	70-130				
Dibromofluoromethane	107.	%	70-130				
Blank Analysis for sample(s) 08 (WG169719-4)							
Volatile Organics by MCP 8260B				54 8260B	0505 09:31 RY		
Methylene chloride	ND	ug/l	5.0				
1,1-Dichloroethane	ND	ug/l	0.75				

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0404408

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 08 (WG169719-4)							
Volatile Organics by MCP 8260B continued				54 8260B	0505 09:31 RY		
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	103.	%	70-130				
Toluene-d8	97.0	%	70-130				
4-Bromofluorobenzene	106.	%	70-130				
Dibromofluoromethane	108.	%	70-130				

**ALPHA ANALYTICAL LABORATORIES**  
**ADDENDUM I**

---

**REFERENCES**

54. Compendium of Quality Assurance and Quality Control Requirements and Performance Standards for Selected Analytical Methods. MADEP BWSC. Final Methods. May 2003.

**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: L0404408

---

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
L0404408-01A	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404408-01B	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404408-02A	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404408-02B	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404408-03A	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404408-03B	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404408-04A	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404408-04B	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404408-05A	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404408-05B	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404408-06A	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404408-06B	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404408-07A	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404408-07B	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404408-08A	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404408-08B	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260

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 Baylston St.

Phone: FLC Boston MA 02116  
617-646-7800

Fax: 617-262-6444

Email: Theresa.Kennedy@erm.com

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

### Project Information

Project Name: Raytheon

Project Location: Weyland, MA

Project #: 13 GCE 06

Project Manager: J Pineda

ALPHA Quote #:

### Turn-Around Time

Standard

RUSH (only confirmed if pre-approved!)

Date Due: 5/5/04 Time:

Date Rec'd in Lab: 4/28/04

Report Information - Data Deliverables

FAX  EMAIL

ADEK  Add'l Deliverables

Regulatory Requirements/Report Limits

State / Fed Program

Criteria

ALPHA Job #: 10404408

Billing Information PO #:

### 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?

### SAMPLE HANDLING

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

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Quantity	Container Type	Date/Time	Relinquished By	Date/Time	Received By	Date/Time	Comments
		Date	Time										
04408, 1	MW-203S	4/27/04	1700	GW	NG	2	<input checked="" type="checkbox"/> A						
2	MW-204S	4/27/04	1620	GW	LR	2							
3	MW-204M	4/27/04	1615	GW	MH	2							
4	MW-204D	4/28/04	1035	GW	NG	2							
5	MW-202D	4/28/04	1221	GW	NG	2							
6	MW-202M	4/28/04	1400	GW	NG	2							
7	MW-202S	4/28/04	1517	GW	NG	2							
8	DUP5	4/28/04	2400	GW	NG	2							

QUESTIONS ABOVE MUST BE ANSWERED FOR PRESUMPTIVE CERTAINTY

IS YOUR

PROJECT

MCP?

Container Type  A  B Preservative

Date/Time

Date/Time

Date/Time

Relinquished By: [Signature]

Date/Time: 4/28/04 17:30

Received By: [Signature]

Date/Time: 4/28/04 17:30

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