

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: L0408096  
Address: 399 Boylston Street  
6th Floor  
Boston, MA 02116 Date Received: 23-JUL-2004  
Attn: Jeremy Picard Date Reported: 30-JUL-2004  
Project Number: 13606.03 Delivery Method: Alpha  
Site: RAYTHEON

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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? 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.

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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: L0408096  
Date Reported: 30-JUL-2004

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ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0408096-01	DEP-19S	WAYLAND, MA
L0408096-02	DEP-21	WAYLAND, MA
L0408096-03	DEP-19M	WAYLAND, MA
L0408096-04	MW-264D	WAYLAND, MA
L0408096-05	MW-264S	WAYLAND, MA
L0408096-06	FD-05	WAYLAND, MA
L0408096-07	MW-264M	WAYLAND, MA

ALPHA ANALYTICAL LABORATORIES  
NARRATIVE REPORT

Laboratory Job Number: L0408096

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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

In reference to question E, the Surrogate % Recovery for 4-bromofluorobenzene on -04 is above the acceptance criteria for the method. The sample is non-detect for all target compounds.

L0408096-07 was re-analyzed on a 10x 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 WG176974-4,5 LCS/LCSD has high recoveries for chloromethane 153/139%.



ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0408096-01  
 DEP-19S

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				60 8260B	0728 21:40		RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	105.	%		70-130			
Toluene-d8	101.	%		70-130			
4-Bromofluorobenzene	129.	%		70-130			
Dibromofluoromethane	101.	%		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:	L0408096-02	Date Collected:	23-JUL-2004 11:45
	DEP-21	Date Received :	23-JUL-2004
Sample Matrix:	WATER	Date Reported :	30-JUL-2004
Condition of Sample:	Satisfactory	Field Prep:	None
Number & Type of Containers:	2-Vial		

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B				60 8260B		0728 22:16 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	1.7	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				
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	4.4	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				
cis-1,2-Dichloroethene	18.	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: L0408096-02  
 DEP-21

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				60 8260B	0728 22:16 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	103.	%		70-130			
Toluene-d8	101.	%		70-130			
4-Bromofluorobenzene	126.	%		70-130			
Dibromofluoromethane	103.	%		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> L0408096-03	<b>Date Collected:</b> 23-JUL-2004 09:40
DEP-19M	<b>Date Received :</b> 23-JUL-2004
<b>Sample Matrix:</b> WATER	<b>Date Reported :</b> 30-JUL-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				60 8260B	0728 22:53		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	0.61	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				
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	5.3	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				
cis-1,2-Dichloroethene	25.	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: L0408096-03  
DEP-19M

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				60 8260B	0728 22:53		RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	103.	%		70-130			
Toluene-d8	102.	%		70-130			
4-Bromofluorobenzene	122.	%		70-130			
Dibromofluoromethane	102.	%		70-130			

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



ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0408096-04  
 MW-264D

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				60 8260B	0728 23:30		RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	110.	%		70-130			
Toluene-d8	104.	%		70-130			
4-Bromofluorobenzene	132.	%		70-130			
Dibromofluoromethane	106.	%		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> L0408096-05	<b>Date Collected:</b> 23-JUL-2004 16:30
MW-264S	<b>Date Received :</b> 23-JUL-2004
<b>Sample Matrix:</b> WATER	<b>Date Reported :</b> 30-JUL-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				60 8260B	0729 00:07 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	0.94	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				
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	1.2	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				
cis-1,2-Dichloroethene	1.4	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: L0408096-05  
MW-264S

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				60 8260B	0729 00:07		RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	109.	%		70-130			
Toluene-d8	103.	%		70-130			
4-Bromofluorobenzene	129.	%		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

Laboratory Sample Number: L0408096-06  
FD-05

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PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	ID ANAL
Volatile Organics by MCP 8260B continued				60 8260B	0729 00:44 RY	
Surrogate(s)	Recovery			QC Criteria		
1,2-Dichloroethane-d4	104.	%		70-130		
Toluene-d8	100.	%		70-130		
4-Bromofluorobenzene	128.	%		70-130		
Dibromofluoromethane	103.	%		70-130		

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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: L0408096-07	Date Collected: 23-JUL-2004 16:30
MW-264M	Date Received : 23-JUL-2004
Sample Matrix: WATER	Date Reported : 30-JUL-2004
Condition of Sample: Satisfactory	Field Prep: Field Filtered
Number & Type of Containers: 2-Plastic,2-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP    ANAL	ID
Alkalinity, Total	76.	mg CaCO3/L	2.0	30 2320B	0728 13:36	JT
Chloride	30.	mg/l	1.0	1 9251	0726 23:43	DD
Nitrogen, Nitrate	ND	mg/l	0.10	30 4500NO3-F	0723 22:33	DD
Sulfate	34.	mg/l	10.	1 9038	0730 14:15	0730 14:15 JT
Dissolved Metals by MCP 6000/7000 series						
Iron, Dissolved	15.5	mg/l	0.500	54 6020A	0726 10:30	0727 11:49 RW
Manganese, Dissolved	0.3360	mg/l	0.0005	54 6020A	0726 10:30	0727 11:49 RW
Volatile Organics by MCP 8260B						
Methylene chloride	ND	ug/l	10.	60 8260B	0729 01:21	RY
1,1-Dichloroethane	ND	ug/l	1.5			
Chloroform	ND	ug/l	1.5			
Carbon tetrachloride	ND	ug/l	1.0			
1,2-Dichloropropane	ND	ug/l	3.5			
Dibromochloromethane	ND	ug/l	1.0			
1,1,2-Trichloroethane	ND	ug/l	1.5			
Tetrachloroethene	10.	ug/l	1.0			
Chlorobenzene	ND	ug/l	1.0			
1,2-Dichloroethane	ND	ug/l	1.0			
1,1,1-Trichloroethane	ND	ug/l	1.0			
Bromodichloromethane	ND	ug/l	1.0			
trans-1,3-Dichloropropene	ND	ug/l	1.0			
cis-1,3-Dichloropropene	ND	ug/l	1.0			
Bromoform	ND	ug/l	4.0			
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0			
Chloromethane	ND	ug/l	5.0			
Vinyl chloride	34.	ug/l	2.0			
Chloroethane	ND	ug/l	2.0			
1,1-Dichloroethene	ND	ug/l	1.0			
trans-1,2-Dichloroethene	1.7	ug/l	1.5			
Trichloroethene	71.	ug/l	1.0			
1,2-Dichlorobenzene	ND	ug/l	5.0			
1,3-Dichlorobenzene	ND	ug/l	5.0			
1,4-Dichlorobenzene	ND	ug/l	5.0			

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



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

Laboratory Sample Number: L0408096-07  
 MW-264M

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				60 8260B	0729 01:21 RY		
cis-1,2-Dichloroethene	>200	ug/l	1				
Dichlorodifluoromethane	ND	ug/l	10.				
1,2-Dibromoethane	ND	ug/l	4.0				
1,3-Dichloropropane	ND	ug/l	5.0				
1,1,1,2-Tetrachloroethane	ND	ug/l	1.0				
o-Chlorotoluene	ND	ug/l	5.0				
p-Chlorotoluene	ND	ug/l	5.0				
Hexachlorobutadiene	ND	ug/l	2.0				
1,2,4-Trichlorobenzene	ND	ug/l	5.0				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	103.	%		70-130			
Toluene-d8	105.	%		70-130			
4-Bromofluorobenzene	130.	%		70-130			
Dibromofluoromethane	102.	%		70-130			
Volatile Organics by MCP 8260B				60 8260B	0730 02:05 RY		
cis-1,2-Dichloroethene	290	ug/l	5.0				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	105.	%		70-130			
Toluene-d8	102.	%		70-130			
4-Bromofluorobenzene	108.	%		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 DUPLICATE ANALYSIS

Laboratory Job Number: L0408096

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Alkalinity, Total for sample(s) 07 (L0407950-11, WG176941)					
Alkalinity, Total	92.	93.	mg CaCO3/L	1	4
Chloride for sample(s) 07 (L0407964-01, WG176724)					
Chloride	63.	62.	mg/l	2	7
Nitrogen, Nitrate for sample(s) 07 (L0408079-04, WG176568)					
Nitrogen, Nitrate	2.7	2.7	mg/l	0	6
Sulfate for sample(s) 07 (L0407950-11, WG177193)					
Sulfate	50.	48.	mg/l	4	14

ALPHA ANALYTICAL LABORATORIES  
 QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0408096

Parameter	% Recovery	QC Criteria
Alkalinity, Total LCS for sample(s) 07 (WG176941)		
Alkalinity, Total	104	85-115
Chloride LCS for sample(s) 07 (WG176724)		
Chloride	97	84-110
Nitrogen, Nitrate LCS for sample(s) 07 (WG176568)		
Nitrogen, Nitrate	96	88-105
Sulfate LCS for sample(s) 07 (WG177193)		
Sulfate	105	84-108
Alkalinity, Total SPIKE for sample(s) 07 (L0407950-12, WG176941)		
Alkalinity, Total	98	86-116
Chloride SPIKE for sample(s) 07 (L0407964-01, WG176724)		
Chloride	80	58-140
Nitrogen, Nitrate SPIKE for sample(s) 07 (L0408079-01, WG176568)		
Nitrogen, Nitrate	80	83-120
Sulfate SPIKE for sample(s) 07 (L0407950-07, WG177193)		
Sulfate	125	55-147

**ALPHA ANALYTICAL LABORATORIES**  
**QUALITY ASSURANCE BATCH LCS/LCSD ANALYSIS**

Laboratory Job Number: L0408096

Parameter	LCS %	LCSD %	RPD	RPD Limit	QC Limits
Dissolved Metals by MCP 6000/7000 series for sample(s) 07 (WG176680-2, WG176680)					
Iron, Dissolved	104	101	3		75-125
Manganese, Dissolved	102	102	0		75-125
Volatile Organics by MCP 8260B for sample(s) 01-07 (WG176974-1, WG176974)					
Methylene chloride	90	94	4	25	70-130
1,1-Dichloroethane	91	100	9	25	70-130
Chloroform	96	101	5	25	70-130
Carbon tetrachloride	92	98	6	25	70-130
1,2-Dichloropropane	91	96	5	25	70-130
Dibromochloromethane	88	95	8	25	70-130
1,1,2-Trichloroethane	89	98	10	25	70-130
Tetrachloroethene	91	100	9	25	70-130
Chlorobenzene	90	97	7	25	70-130
1,2-Dichloroethane	94	97	3	25	70-130
1,1,1-Trichloroethane	96	101	5	25	70-130
Bromodichloromethane	95	98	3	25	70-130
trans-1,3-Dichloropropene	86	92	7	25	70-130
cis-1,3-Dichloropropene	93	97	4	25	70-130
Bromoform	98	102	4	50	70-130
1,1,2,2-Tetrachloroethane	90	98	9	25	70-130
Benzene	91	97	6	25	70-130
Chloromethane	76	84	10	50	70-130
Vinyl chloride	78	82	5	25	70-130
Chloroethane	76	87	13	25	70-130
1,1-Dichloroethene	79	84	6	25	70-130
trans-1,2-Dichloroethene	85	92	8	25	70-130
Trichloroethene	90	95	5	25	70-130
1,2-Dichlorobenzene	91	100	9	25	70-130
1,3-Dichlorobenzene	93	104	11	25	70-130
1,4-Dichlorobenzene	90	98	9	25	70-130
Methyl tert butyl ether	93	98	5	25	70-130
cis-1,2-Dichloroethene	92	94	2	25	70-130
Dichlorodifluoromethane	79	93	16	50	70-130
1,2-Dibromoethane	89	96	8	25	70-130
1,3-Dichloropropane	89	94	5	25	70-130
1,1,1,2-Tetrachloroethane	93	96	3	25	70-130
o-Chlorotoluene	92	103	11	25	70-130
p-Chlorotoluene	91	102	11	25	70-130
Hexachlorobutadiene	83	93	11	25	70-130
1,2,4-Trichlorobenzene	92	100	8	25	70-130
Surrogate(s)					
1,2-Dichloroethane-d4	99	102	3		70-130
Toluene-d8	99	100	1		70-130
4-Bromofluorobenzene	101	100	1		70-130
Dibromofluoromethane	100	101	1		70-130

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH LCS/LCSD ANALYSIS

Laboratory Job Number: L0408096

Continued

Parameter	LCS %	LCSD %	RPD	RPD Limit	QC Limits
Volatile Organics by MCP 8260B for sample(s) 07 (WG176974-4, WG176974)					
Methylene chloride	94	93	1	25	70-130
1,1-Dichloroethane	94	92	2	25	70-130
Chloroform	94	91	3	25	70-130
Carbon tetrachloride	92	90	2	25	70-130
1,2-Dichloropropane	94	93	1	25	70-130
Dibromochloromethane	81	83	2	25	70-130
1,1,2-Trichloroethane	95	100	5	25	70-130
Tetrachloroethene	86	81	6	25	70-130
Chlorobenzene	93	92	1	25	70-130
Trichlorofluoromethane	95	93	2	25	70-130
1,2-Dichloroethane	91	93	2	25	70-130
1,1,1-Trichloroethane	94	90	4	25	70-130
Bromodichloromethane	84	84	0	25	70-130
trans-1,3-Dichloropropene	90	92	2	25	70-130
cis-1,3-Dichloropropene	91	92	1	25	70-130
1,1-Dichloropropene	89	85	5	25	70-130
Bromoform	76	76	0	50	70-130
1,1,2,2-Tetrachloroethane	93	96	3	25	70-130
Benzene	96	92	4	25	70-130
Toluene	96	95	1	25	70-130
Ethylbenzene	98	95	3	25	70-130
Chloromethane	152	139	9	50	70-130
Bromomethane	110	113	3	50	70-130
Vinyl chloride	97	94	3	25	70-130
Chloroethane	95	91	4	25	70-130
1,1-Dichloroethene	89	84	6	25	70-130
trans-1,2-Dichloroethene	90	87	3	25	70-130
Trichloroethene	90	86	5	25	70-130
1,2-Dichlorobenzene	92	89	3	25	70-130
1,3-Dichlorobenzene	92	89	3	25	70-130
1,4-Dichlorobenzene	93	89	4	25	70-130
Methyl tert butyl ether	107	112	5	25	70-130
p/m-Xylene	98	95	3	25	70-130
o-Xylene	97	95	2	25	70-130
cis-1,2-Dichloroethene	94	92	2	25	70-130
Dibromomethane	90	93	3	25	70-130
1,2,3-Trichloropropane	94	96	2	25	70-130
Styrene	98	98	0	25	70-130
Dichlorodifluoromethane	124	116	7	50	70-130
Acetone	96	97	1	50	70-130
Carbon disulfide	85	82	4	25	70-130
2-Butanone	97	104	7	50	70-130
4-Methyl-2-pentanone	94	92	2	50	70-130
2-Hexanone	96	100	4	50	70-130
Bromochloromethane	90	91	1	25	70-130
Tetrahydrofuran	99	102	3	25	70-130
2,2-Dichloropropane	101	96	5	25	70-130

ALPHA ANALYTICAL LABORATORIES  
 QUALITY ASSURANCE BATCH LCS/LCSD ANALYSIS

Laboratory Job Number: L0408096

Continued

Parameter	LCS %	LCSD %	RPD	RPD Limit	QC Limits
Volatile Organics by MCP 8260B for sample(s) 07 (WG176974-4, WG176974)					
1,2-Dibromoethane	90	96	6	25	70-130
1,3-Dichloropropane	93	95	2	25	70-130
1,1,1,2-Tetrachloroethane	92	94	2	25	70-130
Bromobenzene	96	94	2	25	70-130
n-Butylbenzene	98	90	9	25	70-130
sec-Butylbenzene	97	90	7	25	70-130
tert-Butylbenzene	98	92	6	25	70-130
o-Chlorotoluene	100	93	7	25	70-130
p-Chlorotoluene	100	93	7	25	70-130
1,2-Dibromo-3-chloropropane	83	88	6	50	70-130
Hexachlorobutadiene	97	88	10	25	70-130
Isopropylbenzene	97	90	7	25	70-130
p-Isopropyltoluene	98	93	5	25	70-130
Naphthalene	74	80	8	25	70-130
n-Propylbenzene	99	93	6	25	70-130
1,2,3-Trichlorobenzene	78	84	7	25	70-130
1,2,4-Trichlorobenzene	81	82	1	25	70-130
1,3,5-Trimethylbenzene	99	92	7	25	70-130
1,2,4-Trimethylbenzene	99	92	7	25	70-130
Ethyl ether	92	98	6	25	70-130
Isopropyl Ether	102	103	1	25	70-130
Ethyl-Tert-Butyl-Ether	96	100	4	25	70-130
Tertiary-Amyl Methyl Ether	99	103	4	25	70-130
1,4-Dioxane	93	106	13	50	70-130
Surrogate(s)					
1,2-Dichloroethane-d4	98	101	3		70-130
Toluene-d8	104	102	2		70-130
4-Bromofluorobenzene	108	107	1		70-130
Dibromofluoromethane	98	98	0		70-130

**ALPHA ANALYTICAL LABORATORIES**  
**QUALITY ASSURANCE BATCH BLANK ANALYSIS**

Laboratory Job Number: L0408096

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 07 (WG176941-1)							
Alkalinity, Total	ND	mg CaCO3/L2.0		30 2320B		0728 13:36	JT
Blank Analysis for sample(s) 07 (WG176724-2)							
Chloride	ND	mg/l	1.0	1 9251		0726 22:29	DD
Blank Analysis for sample(s) 07 (WG176568-2)							
Nitrogen, Nitrate	ND	mg/l	0.10	30 4500NO3-F		0723 22:13	DD
Blank Analysis for sample(s) 07 (WG177193-1)							
Sulfate	ND	mg/l	10.	1 9038		0730 14:15	0730 14:15 JT
Blank Analysis for sample(s) 07 (WG176680-1)							
Dissolved Metals by MCP 6000/7000 series							
Iron, Dissolved	ND	mg/l	0.500	54 6020A		0726 10:30	0727 10:42 RW
Manganese, Dissolved	ND	mg/l	0.0005	54 6020A		0726 10:30	0727 10:42 RW
Blank Analysis for sample(s) 01-07 (WG176974-3)							
Volatile Organics by MCP 8260B				60 8260B		0728 16:06	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				

**ALPHA ANALYTICAL LABORATORIES**  
**QUALITY ASSURANCE BATCH BLANK ANALYSIS**

Laboratory Job Number: L0408096

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01-07 (WG176974-3)							
Volatile Organics by MCP 8260B continued				60 8260B		0728 16:06 RY	
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	98.0	%	70-130				
Toluene-d8	100.	%	70-130				
4-Bromofluorobenzene	120.	%	70-130				
Dibromofluoromethane	98.0	%	70-130				
Blank Analysis for sample(s) 07 (WG176974-6)							
Volatile Organics by MCP 8260B				60 8260B		0729 17:27 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				
1,1,2,2-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				



ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0408096

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 07 (WG176974-6)							
Volatile Organics by MCP 8260B continued				60 8260B		0729 17:27	RY
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	0.50				
o-Xylene	ND	ug/l	0.50				
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	0.50				
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	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				

ALPHA ANALYTICAL LABORATORIES  
 QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0408096

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 07 (WG176974-6)							
Volatile Organics by MCP 8260B continued				60 8260B		0729 17:27	RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	102.	%		70-130			
Toluene-d8	101.	%		70-130			
4-Bromofluorobenzene	109.	%		70-130			
Dibromofluoromethane	98.0	%		70-130			

**ALPHA ANALYTICAL LABORATORIES  
ADDENDUM I**

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**REFERENCES**

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
54. Compendium of Quality Assurance and Quality Control Requirements and Performance Standards for Selected Analytical Methods. MADEP BWSC. Final Methods. May 2003.
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: L0408096**

Were project specific reporting limits specified? NO

**Cooler Information**

Cooler	Custody Seal
A	Absent

**Container Information**

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0408096-01A	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408096-01B	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408096-02A	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408096-02B	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408096-03A	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408096-03B	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408096-04A	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408096-04B	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408096-05A	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408096-05B	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408096-06A	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408096-06B	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408096-07A	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408096-07B	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408096-07C	Plastic 250ml HNO3 preserved	A	<2	1.6C	N	Absent	MCP-FE-6020S, MCP-MN-6020S
L0408096-07D	Plastic 500ml unpreserved	A	6	1.6C	Y	Absent	ALK-T-2320, CL-9251, NO3-4500, SO4-9038

**Container Comments**

Container ID	Comments
L0408096-07C	PH 6 Added Hno3



# CHAIN OF CUSTODY

PAGE 1 OF 1

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

### Client Information

Client: EZM

Address: 309 BOLSTON ST

Phone: 617 267 6447 3577

Fax: 617 267 6447

Email:

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

### Project Information

Project Name: *Regulation*

Project Location: *Woburn, MA*

Project #: *13606.03*

Project Manager: *S. Scott*

ALPHA Quote #:

Turn-Around Time

Standard

RUSH (only confirmed if pre-approved)

Date Due: *7-30-04* Time:

Date Rec'd in Lab:

*7-22-04*

ALPHA Job #: *10408096*

### Report Information - Data Deliverables

FAX  EMAIL

~~INDEX~~  Add'l Deliverables

### Billing Information

Same as Client Info

PO #:

### Regulatory Requirements/Report Limits

State / Fed Program

Criteria

### 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
- Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Time	Sample Matrix	Sampler's Initials
8090	1 DER-195	7-23-04	10:15	GW	BT
	2 DER-21	7-23-04	11:45	GW	BT
	3 DER-191M	7-23-04	09:40	GW	BT
	4 WWS-ZGAD	7-23-04	09:40	GW	BT
	5 WWS-ZGAS	7-23-04	10:30	GW	BT
	6 FD-05	7-23-04	12:00	GW	BT
	7 WWS-ZGAM	7-23-04	10:30	GW	WC

ANALYSIS	Criteria
<i>1200 BOD</i>	
<i>1200 Fe, Mn</i>	
<i>CL, AR, NO<sub>3</sub>-NO<sub>2</sub></i>	
<i>Dis. Harm. Fluor. Hg</i>	

Sample Specific Comments
<i>ANALYSIS SAMPLES</i>
<i>Get General info</i>
<i>OUS MICROB</i>

### QUESTIONS ABOVE MUST BE ANSWERED FOR PRESUMPTIVE CERTAINTY

IS YOUR PROJECT MCP ?

Relinquished By:

Date/Time

Container Type Preservative

Received By:

Date/Time

Y R R Y  
B C A B

PROJECT MCP ?

*[Signature]*

*7/23/04 11:30*

*223-091188*

*[Signature]*

*7/23/04 11:30*

*223-091188*

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.