

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: L0404380  
Address: 399 Boylston Street  
6th Floor  
Boston, MA 02116 Date Received: 28-APR-2004  
Attn: Jeremy Picard Date Reported: 05-MAY-2004  
Project Number: 0013606.06 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? 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: L0404380

Date Reported: 05-MAY-2004

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ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0404380-01	MW-201S	WAYLAND, MA
L0404380-02	MW-201S	WAYLAND, MA
L0404380-03	MW-201M	WAYLAND, MA
L0404380-04	MW-201D	WAYLAND, MA
L0404380-05	MW-201D	WAYLAND, MA
L0404380-06	MW-47S	WAYLAND, MA
L0404380-07	MW-47M	WAYLAND, MA
L0404380-08	MW-47D	WAYLAND, MA

ALPHA ANALYTICAL LABORATORIES  
NARRATIVE REPORT

Laboratory Job Number: L0404380

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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

L0404380-03 and -04 have elevated limits of detection due to the 2x dilutions required by the elevated concentrations of target compounds in the sample.

In reference to question E, the LCS has a low recovery for Bromomethane, a difficult analyte.

Metals

L0404380-02 required a 10x dilution . Dilution was necessary due to the concentration of sodium in the sample.

L0404380-03, -07, and -08 required a 2x dilution. Dilution was necessary due to the concentration of sodium in the sample.

L0404380-05 required a 5x dilution. Dilution was necessary due to the concentration of sodium in the sample.

Non-MCP Related Narratives

Chloride

L0404380-02,-03,-05,-07 have an elevated limit of detection due to the 10x dilution required for the samples to fall within the calibration curve.

The MS % recovery is invalid because the sample concentration of 190mg/l is greater than four times the spike amount added (20mg/l).

**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: L0404380-01	Date Collected: 28-APR-2004 09:50
MW-201S	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 02:19 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	3.6	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	22.	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	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: L0404380-01  
 MW-201S

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	0504 02:19 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	98.0	%		70-130			
Toluene-d8	98.0	%		70-130			
4-Bromofluorobenzene	123.	%		70-130			
Dibromofluoromethane	98.0	%		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: L0404380-02	Date Collected: 28-APR-2004 10:50
MW-201S	Date Received : 28-APR-2004
Sample Matrix: WATER	Date Reported : 05-MAY-2004
Condition of Sample: Satisfactory	Field Prep: Field Filtered
Number & Type of Containers: 2-Plastic	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP      ANAL	ID
Chloride	270	mg/l	10.	1 9251		0429 22:05 DD
Hexavalent Chromium by MCP 7196A						
Chromium, Hexavalent	ND	mg/l	0.02	55 7196A		0428 21:50 0428 21:50 JT
Dissolved Metals						
Chromium, Dissolved	ND	mg/l	0.01	54 6010B		0503 15:15 RW
Manganese, Dissolved	ND	mg/l	0.01	54 6010B		0503 15:15 RW
Sodium, Dissolved	73.	mg/l	20.	54 6010B		0505 09:37 RW

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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: L0404380-03 Date Collected: 28-APR-2004 11:15  
MW-201M Date Received : 28-APR-2004  
Sample Matrix: WATER Date Reported : 05-MAY-2004  
Condition of Sample: Satisfactory Field Prep: Field Filtered  
Number & Type of Containers: 2-Plastic,2-Vial

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	150	mg/l	10.	1 9251		0429 22:06	DD
Hexavalent Chromium by MCP 7196A							
Chromium, Hexavalent	ND	mg/l	0.02	55 7196A	0428 21:50	0428 21:50	JT
Dissolved Metals							
Chromium, Dissolved	ND	mg/l	0.01	54 6010B		0503 15:17	RW
Manganese, Dissolved	0.78	mg/l	0.01	54 6010B		0503 15:17	RW
Sodium, Dissolved	22.	mg/l	4.0	54 6010B		0504 11:53	RW
Volatile Organics by MCP 8260B							
Methylene chloride	ND	ug/l	10.	54 8260B		0504 02:55	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	ND	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	ND	ug/l	2.0				
Chloroethane	ND	ug/l	2.0				
1,1-Dichloroethene	ND	ug/l	1.0				
trans-1,2-Dichloroethene	ND	ug/l	1.5				
Trichloroethene	28.	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				
cis-1,2-Dichloroethene	2.7	ug/l	1.0				

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L0404380-03  
MW-201M

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	0504 02:55 RY		
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	99.0	%		70-130			
Toluene-d8	99.0	%		70-130			
4-Bromofluorobenzene	123.	%		70-130			
Dibromofluoromethane	98.0	%		70-130			

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





**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L0404380-04  
MW-201D

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	0504 03:32 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	96.0	%		70-130			
Toluene-d8	99.0	%		70-130			
4-Bromofluorobenzene	127.	%		70-130			
Dibromofluoromethane	99.0	%		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> L0404380-05	<b>Date Collected:</b> 28-APR-2004 15:50
MW-201D	<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> Field Filtered
<b>Number &amp; Type of Containers:</b> 2-Plastic	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	190	mg/l	10.	1 9251		0429 22:08	DD
Hexavalent Chromium by MCP 7196A							
Chromium, Hexavalent	ND	mg/l	0.02	55 7196A		0428 21:50	0428 21:50 JT
Dissolved Metals							
Chromium, Dissolved	ND	mg/l	0.01	54 6010B		0503 15:20	RW
Manganese, Dissolved	0.08	mg/l	0.01	54 6010B		0503 15:20	RW
Sodium, Dissolved	39.	mg/l	10.	54 6010B		0504 11:56	RW

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: L0404380-06 Date Collected: 28-APR-2004 14:40  
MW-47S Date Received : 28-APR-2004  
Sample Matrix: WATER Date Reported : 05-MAY-2004  
Condition of Sample: Satisfactory Field Prep: Field Filtered  
Number & Type of Containers: 2-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	17.	mg/l	1.0	1 9251		0429 23:47	DD
Hexavalent Chromium by MCP 7196A							
Chromium, Hexavalent	ND	mg/l	0.02	55 7196A	0428 21:50	0428 21:50	JT
Dissolved Metals							
Chromium, Dissolved	ND	mg/l	0.01	54 6010B		0503 15:23	RW
Manganese, Dissolved	0.16	mg/l	0.01	54 6010B		0503 15:23	RW
Sodium, Dissolved	5.3	mg/l	2.0	54 6010B		0503 15:23	RW

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: L0404380-07	Date Collected: 28-APR-2004 12:30
MW-47M	Date Received : 28-APR-2004
Sample Matrix: WATER	Date Reported : 05-MAY-2004
Condition of Sample: Satisfactory	Field Prep: Field Filtered
Number & Type of Containers: 2-Plastic	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP     ANAL	ID
Chloride	120	mg/l	10.	1 9251	0429 22:09	DD
Hexavalent Chromium by MCP 7196A						
Chromium, Hexavalent	ND	mg/l	0.02	55 7196A	0428 21:50	0428 21:50 JT
Dissolved Metals						
Chromium, Dissolved	ND	mg/l	0.01	54 6010B	0503 15:26	RW
Manganese, Dissolved	1.4	mg/l	0.01	54 6010B	0503 15:26	RW
Sodium, Dissolved	27.	mg/l	4.0	54 6010B	0504 12:09	RW

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



ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0404380

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Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Chloride for sample(s) 02-03,05-08 (L0404382-13, WG169289)					
Chloride	190	180	mg/l	5	7
Hexavalent Chromium by MCP 7196A for sample(s) 02-03,05-08 (L0404380-06, WG169149)					
Chromium, Hexavalent	ND	ND	mg/l	NC	20

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**ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH SPIKE ANALYSES**

Laboratory Job Number: L0404380

Parameter	% Recovery	QC Criteria
Chloride LCS for sample(s) 02-03,05-08 (WG169289)		
Chloride	93	84-110
Hexavalent Chromium by MCP 7196A LCS for sample(s) 02-03,05-08 (WG169149)		
Chromium, Hexavalent	103	80-120
Dissolved Metals LCS for sample(s) 02-03,05-08 (WG169493)		
Chromium, Dissolved	100	80-120
Manganese, Dissolved	102	80-120
Sodium, Dissolved	100	80-120
Volatile Organics by MCP 8260B LCS for sample(s) 01,03-04 (WG169644)		
Methylene chloride	92	70-130
1,1-Dichloroethane	104	70-130
Chloroform	92	70-130
Carbon tetrachloride	102	70-130
1,2-Dichloropropane	98	70-130
Dibromochloromethane	83	70-130
1,1,2-Trichloroethane	81	70-130
Tetrachloroethene	90	70-130
Chlorobenzene	93	70-130
Trichlorofluoromethane	94	70-130
1,2-Dichloroethane	92	70-130
1,1,1-Trichloroethane	100	70-130
Bromodichloromethane	94	70-130
trans-1,3-Dichloropropene	78	70-130
cis-1,3-Dichloropropene	93	70-130
1,1-Dichloropropene	93	70-130
Bromoform	87	70-130
1,1,2,2-Tetrachloroethane	93	70-130
Benzene	95	70-130
Toluene	90	70-130
Ethylbenzene	91	70-130
Chloromethane	107	70-130
Bromomethane	67	70-130
Vinyl chloride	104	70-130
Chloroethane	105	70-130
1,1-Dichloroethene	91	70-130
trans-1,2-Dichloroethene	94	70-130
Trichloroethene	96	70-130
1,2-Dichlorobenzene	91	70-130
1,3-Dichlorobenzene	93	70-130
1,4-Dichlorobenzene	92	70-130
Methyl tert butyl ether	99	70-130
p/m-Xylene	95	70-130
o-Xylene	90	70-130
cis-1,2-Dichloroethene	99	70-130
Dibromomethane	95	70-130
1,2,3-Trichloropropane	89	70-130



ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0404380

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by MCP 8260B LCS for sample(s) 01,03-04 (WG169644)		
Styrene	91	70-130
Dichlorodifluoromethane	109	70-130
Acetone	86	70-130
Carbon disulfide	91	70-130
2-Butanone	90	70-130
4-Methyl-2-pentanone	88	70-130
2-Hexanone	89	70-130
Bromochloromethane	97	70-130
Tetrahydrofuran	124	70-130
2,2-Dichloropropane	112	70-130
1,2-Dibromoethane	93	70-130
1,3-Dichloropropane	85	70-130
1,1,1,2-Tetrachloroethane	87	70-130
Bromobenzene	86	70-130
n-Butylbenzene	100	70-130
sec-Butylbenzene	105	70-130
tert-Butylbenzene	101	70-130
o-Chlorotoluene	93	70-130
p-Chlorotoluene	90	70-130
1,2-Dibromo-3-chloropropane	84	70-130
Hexachlorobutadiene	114	70-130
Isopropylbenzene	95	70-130
p-Isopropyltoluene	101	70-130
Naphthalene	96	70-130
n-Propylbenzene	99	70-130
1,2,3-Trichlorobenzene	103	70-130
1,2,4-Trichlorobenzene	107	70-130
1,3,5-Trimethylbenzene	96	70-130
1,2,4-Trimethylbenzene	100	70-130
Ethyl ether	94	70-130
Isopropyl Ether	110	70-130
Ethyl-Tert-Butyl-Ether	97	70-130
Tertiary-Amyl Methyl Ether	95	70-130
1,4-Dioxane	106	70-130
Surrogate(s)		
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	98	70-130
Dibromofluoromethane	99	70-130
Chloride SPIKE for sample(s) 02-03,05-08 (L0404382-13, WG169289)		
Chloride	50	58-140
Hexavalent Chromium by MCP 7196A SPIKE for sample(s) 02-03,05-08 (L0404380-05, WG169149)		
Chromium, Hexavalent	110	75-125

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0404380

Continued

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Parameter	% Recovery	QC Criteria
Dissolved Metals SPIKE for sample(s) 02-03,05-08 (L0404382-13, WG169493)		
Chromium, Dissolved	98	75-125
Manganese, Dissolved	100	75-125
Sodium, Dissolved	100	75-125

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ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0404380

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 02-03,05-08 (WG169289-2)							
Chloride	ND	mg/l	1.0	1 9251		0429 21:06	DD
Blank Analysis for sample(s) 02-03,05-08 (WG169149-1)							
Hexavalent Chromium by MCP 7196A							
Chromium, Hexavalent	ND	mg/l	0.02	55 7196A		0428 21:50	0428 21:50 JT
Blank Analysis for sample(s) 02-03,05-08 (WG169493-1)							
Dissolved Metals							
Chromium, Dissolved	ND	mg/l	0.01	54 6010B		0503 13:58	RW
Manganese, Dissolved	ND	mg/l	0.01	54 6010B		0503 13:58	RW
Sodium, Dissolved	ND	mg/l	2.0	54 6010B		0503 13:58	RW
Blank Analysis for sample(s) 01,03-04 (WG169644-2)							
Volatile Organics by MCP 8260B							
				54 8260B		0503 17:45	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				
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				

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0404380

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01,03-04 (WG169644-2)							
Volatile Organics by MCP 8260B continued				54 8260B	0503 17:45 RY		
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				
Surrogate(s)	Recovery		QC Criteria				
1,2-Dichloroethane-d4	94.0	%	70-130				
Toluene-d8	101.	%	70-130				
4-Bromofluorobenzene	121.	%	70-130				
Dibromofluoromethane	99.0	%	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.
54. Compendium of Quality Assurance and Quality Control Requirements and Performance Standards for Selected Analytical Methods. MADEP BWSC. Final Methods. May 2003.
55. Compendium of Quality Assurance and Quality Control Requirements and Performance Standards for Selected Analytical Methods. MADEP BWSC. Final Methods. 30 July 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: L0404380**

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
L0404380-01A	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404380-01B	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404380-02A	Plastic 250ml unpreserved	A	7	1.7 C	Y	Absent	CL-9251, MCP-HEXCR-7196
L0404380-02B	Plastic 120ml HNO3 preserved	A	<2	1.7 C	Y	Absent	CR-SI, MN-SI, NA-SI
L0404380-03A	Plastic 250ml unpreserved	A	7	1.7 C	Y	Absent	CL-9251, MCP-HEXCR-7196
L0404380-03B	Plastic 120ml HNO3 preserved	A	<2	1.7 C	Y	Absent	CR-SI, MN-SI, NA-SI
L0404380-03C	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404380-03D	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404380-04A	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404380-04B	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0404380-05A	Plastic 250ml unpreserved	A	7	1.7 C	Y	Absent	CL-9251, MCP-HEXCR-7196
L0404380-05B	Plastic 120ml HNO3 preserved	A	<2	1.7 C	Y	Absent	CR-SI, MN-SI, NA-SI
L0404380-06A	Plastic 250ml unpreserved	A	7	1.7 C	Y	Absent	CL-9251, MCP-HEXCR-7196
L0404380-06B	Plastic 120ml HNO3 preserved	A	<2	1.7 C	Y	Absent	CR-SI, MN-SI, NA-SI
L0404380-07A	Plastic 250ml unpreserved	A	7	1.7 C	Y	Absent	CL-9251, MCP-HEXCR-7196
L0404380-07B	Plastic 120ml HNO3 preserved	A	<2	1.7 C	Y	Absent	CR-SI, MN-SI, NA-SI
L0404380-08A	Plastic 250ml unpreserved	A	7	1.7 C	Y	Absent	CL-9251, MCP-HEXCR-7196
L0404380-08B	Plastic 120ml HNO3 preserved	A	<2	1.7 C	Y	Absent	CR-SI, MN-SI, NA-SI

**Container Comments**

Container ID    Comments



# CHAIN OF CUSTODY

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

### Client Information

Client: ERM

Address: 399 Baylston St. 6th Floor  
Boston, MA 02116

Phone: 617-646-7522

Fax: 617-267-6447

Email: Theresa.Kinard@erm.com

These samples have been previously analyzed by Alpha  
Other Project Specific Requirements/Comments/Detection Limits:

### Project Information

Project Name: Raytheon - Maryland

Project Location: Maryland, MD

Project #: 0013606.06

Project Manager: Jeremy Picard

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

XDEX  Add'l Deliverables

### Regulatory Requirements/Report Limits

State/Fed Program Criteria

ALPHA Job #: 00101380

### Billing Information

Same as Client info 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?

ANALYSIS  
80218:Chlorinated  
CL, Hex Co  
Diss. Cr, Mn, Na  
(filtered)

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Container Type Preservative	V P P P	B A C	Date/Time	Date/Time	Sample Specific Comments
		Date	Time								
013801	MW-2015	4/28/04	0950	GW	MH 2	V P P P	B A C		4/28/04	0950	
2	MW-2015	4/28/04	1050	GW	MH 1	V P P P	B A C		4/28/04	1050	
3	MW-2014	4/28/04	1115	GW	MH 2	V P P P	B A C		4/28/04	1115	
4	MW-2010	4/28/04	0930	GW	MH 2	V P P P	B A C		4/28/04	0930	
5	MW-2010	4/28/04	1552	GW	MH 1	V P P P	B A C		4/28/04	1552	
6	475	4/28/04	1440	GW	VZ 1	V P P P	B A C		4/28/04	1440	
7	47M	4/28/04	1230	GW	VZ 1	V P P P	B A C		4/28/04	1230	
8	47D	4/28/04	1040	GW	VZ 1	V P P P	B A C		4/28/04	1040	

### QUESTIONS ABOVE MUST BE ANSWERED FOR PRESUMPTIVE CERTAINTY

IS YOUR PROJECT MCP?

Requested By: [Signature] Date/Time: 4/28/04 1735

Received By: [Signature] Date/Time: 4/28/04 1735

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.