

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: L0404317  
Address: 399 Boylston Street  
6th Floor  
Boston, MA 02116 Date Received: 27-APR-2004  
Attn: Jeremy Picard Date Reported: 04-MAY-2004  
Project Number: 13606.03.02 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? YES

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



# CHAIN OF CUSTODY

PAGE 1 OF 1

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

### Client Information

Client: GRU  
 Address: 399 Baylston St Fl 6  
Boston MA 02116  
 Phone: 617 646 7800  
 Fax: 617 267 6447

Email: theresa.kennedy@gru.com  
 These samples have been previously analyzed by Alpha  
 Other Project Specific Requirements/Comments/Detection Limits:

### Project Information

Project Name: Playtheon  
 Project Location: Weymouth, MA  
 Project #: 13606.03.02  
 Project Manager: JPCARD  
 ALPHA Quote #:  
 Turn-Around Time

### Report Information - Data Deliverables

Date Rec'd In Lab: 4/27/04  
 FAX  EMAIL  
 INDEX  Add'l Deliverables  
 Regulatory Requirements/Report Limits  
 State / Fed Program Criteria

### Billing Information

ALPHA Job #: LC404317  
 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 & benzene

**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	Date	Time	Container Type	Preservative	Date/Time	Relinquished By:	Date/Time	Reviewed By:	Date/Time	Sample Specific Comments
		Date	Time												
04317.1	MW-203D	4/27/04	1210	GM	VZ			V		4/27/04 1700	Stark	4/27/04 1810	Stark	4/27/04 1810	
	2 MW-203M	4/27/04	1330	GM	VZ			B		4/27/04 1700	Stark	4/27/04 1810	Stark	4/27/04 1810	
	3 DUP-4	4/27/04	2400	GM	VZ					4/27/04 1700	Stark	4/27/04 1810	Stark	4/27/04 1810	
	4 MW-205D	4/26/04	1345	GM	GM					4/27/04 1700	Stark	4/27/04 1810	Stark	4/27/04 1810	

QUESTIONS ABOVE MUST BE ANSWERED FOR PRESUMPTIVE CERTAINTY

IS YOUR PROJECT MCP ?

Relinquished By: Stark

Date/Time: 4/27/04 1810

Reviewed By: Stark

Date/Time: 4/27/04 1810

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.

ALPHA ANALYTICAL LABORATORIES

Laboratory Job Number: L0404317  
Date Reported: 04-MAY-2004

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ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0404317-01	MW-203D	WAYLAND, MA
L0404317-02	MW-203M	WAYLAND, MA
L0404317-03	DUP-4	WAYLAND, MA
L0404317-04	MW-205D	WAYLAND, MA

ALPHA ANALYTICAL LABORATORIES  
NARRATIVE REPORT

Laboratory Job Number: L0404317

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Volatile Organics

L0404317-01 has elevated limits of detection due to the 2x dilutions required by the elevated concentrations of target compounds in the sample.

L0404317-02 and -03 were re-analyzed on a 5x 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 associated with -01 through -04 has low recoveries for acetone, 2-butanone, 2-hexanone, and 4-methyl-2-pentanone. All these analytes are considered difficult.

In reference to question E, the LCS associated with -02 and -03 has a high recovery for dichlorodifluoromethane.

**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> L0404317-01	<b>Date Collected:</b> 27-APR-2004 12:10
MW-203D	<b>Date Received :</b> 27-APR-2004
<b>Sample Matrix:</b> WATER	<b>Date Reported :</b> 04-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	0503 19:58 RY	
Methylene chloride	ND	ug/l	10.			
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	2.5	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			
Benzene	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	92.	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			
Methyl tert butyl ether	ND	ug/l	2.0			
cis-1,2-Dichloroethene	4.6	ug/l	1.0			
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			

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

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0404317-01  
 MW-203D

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	0503 19:58 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	105.	%		70-130			
Toluene-d8	100.	%		70-130			
4-Bromofluorobenzene	104.	%		70-130			
Dibromofluoromethane	109.	%		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: L0404317-02	Date Collected: 27-APR-2004 13:30
MW-203M	Date Received : 27-APR-2004
Sample Matrix: WATER	Date Reported : 04-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	0503 20:34 RY	
Methylene chloride	ND	ug/l	5.0			
1,1-Dichloroethane	0.75	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	0.59	ug/l	0.50			
Chlorobenzene	ND	ug/l	0.50			
1,2-Dichloroethane	ND	ug/l	0.50			
1,1,1-Trichloroethane	37.	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	2.2	ug/l	0.50			
trans-1,2-Dichloroethene	ND	ug/l	0.75			
Trichloroethene	>100	ug/l	.5			
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	2.7	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: L0404317-02  
MW-203M

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	0503 20:34		RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	104.	%		70-130			
Toluene-d8	100.	%		70-130			
4-Bromofluorobenzene	108.	%		70-130			
Dibromofluoromethane	105.	%		70-130			
Volatile Organics by MCP 8260B				54 8260B	0504 10:04		RY
Trichloroethene	130	ug/l	2.5				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	103.	%		70-130			
Toluene-d8	99.0	%		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> L0404317-03	<b>Date Collected:</b> 27-APR-2004 00:00
DUP-4	<b>Date Received :</b> 27-APR-2004
<b>Sample Matrix:</b> WATER	<b>Date Reported :</b> 04-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	0503 21:10 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	0.60	ug/l	0.50			
Chlorobenzene	ND	ug/l	0.50			
1,2-Dichloroethane	ND	ug/l	0.50			
1,1,1-Trichloroethane	36.	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	2.2	ug/l	0.50			
trans-1,2-Dichloroethene	ND	ug/l	0.75			
Trichloroethene	>100	ug/l	.5			
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	2.8	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: L0404317-03  
DUP-4

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	0503 21:10		RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	105.	%		70-130			
Toluene-d8	100.	%		70-130			
4-Bromofluorobenzene	105.	%		70-130			
Dibromofluoromethane	105.	%		70-130			
Volatile Organics by MCP 8260B				54 8260B	0504 10:39		RY
Trichloroethene	150	ug/l	2.5				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	108.	%		70-130			
Toluene-d8	101.	%		70-130			
4-Bromofluorobenzene	105.	%		70-130			
Dibromofluoromethane	107.	%		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> L0404317-04	<b>Date Collected:</b> 27-APR-2004 13:45
MW-205D	<b>Date Received :</b> 27-APR-2004
<b>Sample Matrix:</b> WATER	<b>Date Reported :</b> 04-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	0503 21:45	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			
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	7.8	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	2.1	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: L0404317-04  
 MW-205D

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	0503 21:45 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	108.	%		70-130			
Toluene-d8	99.0	%		70-130			
4-Bromofluorobenzene	104.	%		70-130			
Dibromofluoromethane	110.	%		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: L0404317

Parameter	% Recovery	QC Criteria
Volatile Organics by MCP 8260B LCS for sample(s) 01-04 (WG169496)		
Methylene chloride	97	70-130
1,1-Dichloroethane	103	70-130
Chloroform	102	70-130
Carbon tetrachloride	105	70-130
1,2-Dichloropropane	97	70-130
Dibromochloromethane	88	70-130
1,1,2-Trichloroethane	87	70-130
Tetrachloroethene	103	70-130
Chlorobenzene	99	70-130
Trichlorofluoromethane	94	70-130
1,2-Dichloroethane	88	70-130
1,1,1-Trichloroethane	101	70-130
Bromodichloromethane	96	70-130
trans-1,3-Dichloropropene	80	70-130
cis-1,3-Dichloropropene	83	70-130
1,1-Dichloropropene	87	70-130
Bromoform	89	70-130
1,1,2,2-Tetrachloroethane	84	70-130
Benzene	101	70-130
Toluene	100	70-130
Ethylbenzene	91	70-130
Chloromethane	98	70-130
Bromomethane	89	70-130
Vinyl chloride	90	70-130
Chloroethane	93	70-130
1,1-Dichloroethene	93	70-130
trans-1,2-Dichloroethene	98	70-130
Trichloroethene	98	70-130
1,2-Dichlorobenzene	96	70-130
1,3-Dichlorobenzene	102	70-130
1,4-Dichlorobenzene	97	70-130
Methyl tert butyl ether	89	70-130
p/m-Xylene	96	70-130
o-Xylene	92	70-130
cis-1,2-Dichloroethene	105	70-130
Dibromomethane	89	70-130
1,2,3-Trichloropropane	82	70-130
Styrene	87	70-130
Dichlorodifluoromethane	82	70-130
Acetone	28	70-130
Carbon disulfide	88	70-130
2-Butanone	40	70-130
4-Methyl-2-pentanone	60	70-130
2-Hexanone	33	70-130
Bromochloromethane	95	70-130
Tetrahydrofuran	77	70-130
2,2-Dichloropropane	101	70-130
1,2-Dibromoethane	84	70-130

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0404317

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by MCP 8260B LCS for sample(s) 01-04 (WG169496)		
1,3-Dichloropropane	87	70-130
1,1,1,2-Tetrachloroethane	97	70-130
Bromobenzene	99	70-130
n-Butylbenzene	81	70-130
sec-Butylbenzene	91	70-130
tert-Butylbenzene	100	70-130
o-Chlorotoluene	110	70-130
p-Chlorotoluene	106	70-130
1,2-Dibromo-3-chloropropane	83	70-130
Hexachlorobutadiene	96	70-130
Isopropylbenzene	88	70-130
p-Isopropyltoluene	84	70-130
Naphthalene	71	70-130
n-Propylbenzene	97	70-130
1,2,3-Trichlorobenzene	78	70-130
1,2,4-Trichlorobenzene	77	70-130
1,3,5-Trimethylbenzene	93	70-130
1,2,4-Trimethylbenzene	92	70-130
Ethyl ether	89	70-130
Isopropyl Ether	90	70-130
Ethyl-Tert-Butyl-Ether	88	70-130
Tertiary-Amyl Methyl Ether	87	70-130
1,4-Dioxane	83	70-130
Surrogate(s)		
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	111	70-130
Dibromofluoromethane	104	70-130
Volatile Organics by MCP 8260B LCS for sample(s) 02-03 (WG169496)		
Methylene chloride	101	70-130
1,1-Dichloroethane	106	70-130
Chloroform	102	70-130
Carbon tetrachloride	107	70-130
1,2-Dichloropropane	99	70-130
Dibromochloromethane	97	70-130
1,1,2-Trichloroethane	99	70-130
Tetrachloroethene	104	70-130
Chlorobenzene	106	70-130
1,2-Dichloroethane	96	70-130
1,1,1-Trichloroethane	101	70-130
Bromodichloromethane	100	70-130
trans-1,3-Dichloropropene	88	70-130
cis-1,3-Dichloropropene	85	70-130
Bromoform	99	70-130
1,1,2,2-Tetrachloroethane	95	70-130
Benzene	106	70-130

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0404317

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by MCP 8260B LCS for sample(s) 02-03 (WG169496)		
Chloromethane	92	70-130
Vinyl chloride	97	70-130
Chloroethane	78	70-130
1,1-Dichloroethene	88	70-130
trans-1,2-Dichloroethene	98	70-130
Trichloroethene	95	70-130
1,2-Dichlorobenzene	100	70-130
1,3-Dichlorobenzene	105	70-130
1,4-Dichlorobenzene	103	70-130
Methyl tert butyl ether	80	70-130
cis-1,2-Dichloroethene	104	70-130
Dichlorodifluoromethane	142	70-130
1,2-Dibromoethane	88	70-130
1,3-Dichloropropane	95	70-130
1,1,1,2-Tetrachloroethane	104	70-130
o-Chlorotoluene	113	70-130
p-Chlorotoluene	108	70-130
Hexachlorobutadiene	96	70-130
1,2,4-Trichlorobenzene	70	70-130
Surrogate(s)		
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	100	70-130
Dibromofluoromethane	103	70-130

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0404317

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01-04 (WG169496-6)							
Volatile Organics by MCP 8260B				54 8260B		0503 16:26	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				
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				



ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0404317

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01-04 (WG169496-6)							
Volatile Organics by MCP 8260B continued				54 8260B	0503 16:26 RY		
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	100.	%	70-130				
Toluene-d8	100.	%	70-130				
4-Bromofluorobenzene	107.	%	70-130				
Dibromofluoromethane	102.	%	70-130				
Blank Analysis for sample(s) 02-03 (WG169496-8)							
Volatile Organics by MCP 8260B				54 8260B	0504 09:26 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				

ALPHA ANALYTICAL LABORATORIES  
 QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0404317

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 02-03 (WG169496-8)							
Volatile Organics by MCP 8260B continued				54 8260B	0504 09:26 RY		
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	101.	%		70-130			
4-Bromofluorobenzene	106.	%		70-130			
Dibromofluoromethane	108.	%		70-130			

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

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**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: L0404317

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Were project specific reporting limits specified? NO

**Cooler Information**

Cooler                      Custody Seal

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A                              Absent

**Container Information**

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0404317-01A	Vial HCl preserved	A	NA	2.0 C	Y	Absent	MCP-8260
L0404317-01B	Vial HCl preserved	A	NA	2.0 C	Y	Absent	MCP-8260
L0404317-02A	Vial HCl preserved	A	NA	2.0 C	Y	Absent	MCP-8260
L0404317-02B	Vial HCl preserved	A	NA	2.0 C	Y	Absent	MCP-8260
L0404317-03A	Vial HCl preserved	A	NA	2.0 C	Y	Absent	MCP-8260
L0404317-03B	Vial HCl preserved	A	NA	2.0 C	Y	Absent	MCP-8260
L0404317-04A	Vial HCl preserved	A	NA	2.0 C	Y	Absent	MCP-8260
L0404317-04B	Vial HCl preserved	A	NA	2.0 C	Y	Absent	MCP-8260

**Container Comments**

Container ID    Comments

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