

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: L0408113
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

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: Scott McLean
This document electronically signed

ALPHA ANALYTICAL LABORATORIES

Laboratory Job Number: L0408113

Date Reported: 30-JUL-2004

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0408113-01	MW-269D	WAYLAND, MA
L0408113-02	MW-269S	WAYLAND, MA
L0408113-03	MW-269MB	WAYLAND, MA
L0408113-04	MW-269MA	WAYLAND, MA

ALPHA ANALYTICAL LABORATORIES
NARRATIVE REPORT

Laboratory Job Number: L0408113

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.

In reference to question E, the WG177130-1,2 LCS/LCSD have high recoveries for hexachlorobutadiene.

In reference to question E, the WG177130-4,5 LCS/LCSD have high recoveries for dichlorodifluoromethane and hexachlorobutadiene.

In reference to question E, the WG177130-7,8 MS/MSD have high recoveries for dichlorodifluoromethane in the MS, vinyl chloride in the MS, chloroethane in the MS and hexachlorobutadiene.

In reference to question E, the WG177146-1,2 LCS/LCSD has high recoveries for chloromethane.

In reference to question E, the WG177146-4 LCS has a high recovery for chloromethane.

In reference to question E, the WG1771541-1 LCS has high a recovery for chloromethane.

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L0408113-01
MW-269D

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				60 8260B	0730 00:45		BT
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	103.	%		70-130			
Toluene-d8	100.	%		70-130			
4-Bromofluorobenzene	108.	%		70-130			
Dibromofluoromethane	97.0	%		70-130			

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

ALPHA ANALYTICAL LABORATORIES
 CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0408113-02
 MW-269S

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				60 8260B	0730 13:06		BT
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	101.	%		70-130			
Toluene-d8	103.	%		70-130			
4-Bromofluorobenzene	110.	%		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

Laboratory Sample Number: L0408113-03	Date Collected: 22-JUL-2004 11:05
MW-269MB	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: 3-Plastic,6-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP ANAL	ID
Dissolved Metals by MCP 6000/7000 series						
Arsenic, Dissolved	0.008	mg/l	0.0010	54 6020A	0726 11:00 0727 14:25	RW
Volatile Organics by MCP 8260B						
Methylene chloride	ND	ug/l	5.0	60 8260B	0729 23:12	RY
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			
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			
cis-1,2-Dichloroethene	0.53	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: L0408113-03
MW-269MB

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				60 8260B	0729 23:12 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	109.	%		70-130			
Toluene-d8	98.0	%		70-130			
4-Bromofluorobenzene	102.	%		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

Laboratory Sample Number: L0408113-04	Date Collected: 22-JUL-2004 14:45
MW-269MA	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: 1-Plastic,2-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP ANAL	ID
Dissolved Metals by MCP 6000/7000 series						
Arsenic, Dissolved	0.0094	mg/l	0.0010	54 6020A	0726 11:00 0727 14:58	RW
Volatile Organics by MCP 8260B						
Methylene chloride	ND	ug/l	5.0	60 8260B	0729 23:47	RY
1,1-Dichloroethane	1.2	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			
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	0.57	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	1.5	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: L0408113-04
 MW-269MA

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				60 8260B	0729 23:47		RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	115.	%		70-130			
Toluene-d8	99.0	%		70-130			
4-Bromofluorobenzene	104.	%		70-130			
Dibromofluoromethane	108.	%		70-130			

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

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH LCS/LCSD ANALYSIS

Laboratory Job Number: L0408113

Parameter	LCS %	LCSD %	RPD	RPD Limit	QC Limits
Dissolved Metals by MCP 6000/7000 series for sample(s) 01-04 (WG176676-2, WG176676)					
Arsenic, Dissolved	86	86	0		75-125
Volatile Organics by MCP 8260B for sample(s) 03-04 (WG177130-1, WG177130)					
Methylene chloride	93	87	7	25	70-130
1,1-Dichloroethane	92	92	0	25	70-130
Chloroform	93	93	0	25	70-130
Carbon tetrachloride	88	92	4	25	70-130
1,2-Dichloropropane	88	90	2	25	70-130
Dibromochloromethane	80	83	4	25	70-130
1,1,2-Trichloroethane	88	92	4	25	70-130
Tetrachloroethene	100	106	6	25	70-130
Chlorobenzene	90	94	4	25	70-130
1,2-Dichloroethane	96	93	3	25	70-130
1,1,1-Trichloroethane	94	94	0	25	70-130
Bromodichloromethane	91	92	1	25	70-130
trans-1,3-Dichloropropene	78	81	4	25	70-130
cis-1,3-Dichloropropene	87	87	0	25	70-130
Bromoform	81	89	9	50	70-130
1,1,2,2-Tetrachloroethane	87	90	3	25	70-130
Chloromethane	104	107	3	50	70-130
Vinyl chloride	95	107	12	25	70-130
Chloroethane	97	110	13	25	70-130
1,1-Dichloroethene	86	86	0	25	70-130
trans-1,2-Dichloroethene	86	87	1	25	70-130
Trichloroethene	91	89	2	25	70-130
1,2-Dichlorobenzene	90	94	4	25	70-130
1,3-Dichlorobenzene	89	94	5	25	70-130
1,4-Dichlorobenzene	88	92	4	25	70-130
cis-1,2-Dichloroethene	91	90	1	25	70-130
Dichlorodifluoromethane	120	120	0	50	70-130
1,2-Dibromoethane	86	88	2	25	70-130
1,3-Dichloropropane	87	88	1	25	70-130
1,1,1,2-Tetrachloroethane	87	93	7	25	70-130
o-Chlorotoluene	94	98	4	25	70-130
p-Chlorotoluene	90	94	4	25	70-130
Hexachlorobutadiene	136	146	7	25	70-130
1,2,4-Trichlorobenzene	86	91	6	25	70-130
Surrogate(s)					
1,2-Dichloroethane-d4	106	99	7		70-130
Toluene-d8	100	99	1		70-130
4-Bromofluorobenzene	97	96	1		70-130
Dibromofluoromethane	104	102	2		70-130
Volatile Organics by MCP 8260B for sample(s) 01 (WG177146-1, WG177146)					
Methylene chloride	94	93	1	25	70-130
1,1-Dichloroethane	94	92	2	25	70-130
Chloroform	94	91	3	25	70-130

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH LCS/LCSD ANALYSIS

Laboratory Job Number: L0408113

Continued

Parameter	LCS %	LCSD %	RPD	RPD Limit	QC Limits
Volatile Organics by MCP 8260B for sample(s) 01 (WG177146-1, WG177146)					
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
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

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH LCS/LCSD ANALYSIS

Laboratory Job Number: L0408113

Continued

Parameter	LCS %	LCSD %	RPD	RPD Limit	QC Limits
Volatile Organics by MCP 8260B for sample(s) 01 (WG177146-1, WG177146)					
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
Volatile Organics by MCP 8260B for sample(s) 02 (WG177154-1, WG177154)					
Methylene chloride	89	86	3	25	70-130
1,1-Dichloroethane	91	86	6	25	70-130
Chloroform	87	86	1	25	70-130
Carbon tetrachloride	89	83	7	25	70-130
1,2-Dichloropropane	92	87	6	25	70-130
Dibromochloromethane	80	79	1	25	70-130
1,1,2-Trichloroethane	94	95	1	25	70-130
Tetrachloroethene	78	75	4	25	70-130
Chlorobenzene	90	87	3	25	70-130
Trichlorofluoromethane	91	87	4	25	70-130
1,2-Dichloroethane	92	88	4	25	70-130
1,1,1-Trichloroethane	89	83	7	25	70-130
Bromodichloromethane	82	81	1	25	70-130
trans-1,3-Dichloropropene	88	89	1	25	70-130
cis-1,3-Dichloropropene	92	88	4	25	70-130
1,1-Dichloropropene	84	78	7	25	70-130
Bromoform	75	75	0	50	70-130
1,1,2,2-Tetrachloroethane	96	99	3	25	70-130

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH LCS/LCSD ANALYSIS

Laboratory Job Number: L0408113

Continued

Parameter	LCS %	LCSD %	RPD	RPD Limit	QC Limits
Volatile Organics by MCP 8260B for sample(s) 02 (WG177154-1, WG177154)					
Benzene	91	88	3	25	70-130
Toluene	90	88	2	25	70-130
Ethylbenzene	94	90	4	25	70-130
Chloromethane	134	129	4	50	70-130
Bromomethane	112	109	3	50	70-130
Vinyl chloride	92	87	6	25	70-130
Chloroethane	88	84	5	25	70-130
1,1-Dichloroethene	82	78	5	25	70-130
trans-1,2-Dichloroethene	85	80	6	25	70-130
Trichloroethene	86	80	7	25	70-130
1,2-Dichlorobenzene	88	89	1	25	70-130
1,3-Dichlorobenzene	87	86	1	25	70-130
1,4-Dichlorobenzene	89	87	2	25	70-130
Methyl tert butyl ether	113	109	4	25	70-130
p/m-Xylene	92	90	2	25	70-130
o-Xylene	92	90	2	25	70-130
cis-1,2-Dichloroethene	90	89	1	25	70-130
Dibromomethane	90	89	1	25	70-130
1,2,3-Trichloropropane	101	98	3	25	70-130
Styrene	95	93	2	25	70-130
Dichlorodifluoromethane	111	104	7	50	70-130
Acetone	102	104	2	50	70-130
Carbon disulfide	80	75	6	25	70-130
2-Butanone	112	115	3	50	70-130
4-Methyl-2-pentanone	100	105	5	50	70-130
2-Hexanone	110	122	10	50	70-130
Bromochloromethane	90	86	5	25	70-130
Tetrahydrofuran	103	102	1	25	70-130
2,2-Dichloropropane	94	92	2	25	70-130
1,2-Dibromoethane	94	93	1	25	70-130
1,3-Dichloropropane	92	91	1	25	70-130
1,1,1,2-Tetrachloroethane	90	88	2	25	70-130
Bromobenzene	90	90	0	25	70-130
n-Butylbenzene	89	85	5	25	70-130
sec-Butylbenzene	88	84	5	25	70-130
tert-Butylbenzene	90	88	2	25	70-130
o-Chlorotoluene	92	91	1	25	70-130
p-Chlorotoluene	92	91	1	25	70-130
1,2-Dibromo-3-chloropropane	91	90	1	50	70-130
Hexachlorobutadiene	86	82	5	25	70-130
Isopropylbenzene	88	86	2	25	70-130
p-Isopropyltoluene	89	86	3	25	70-130
Naphthalene	82	79	4	25	70-130
n-Propylbenzene	92	88	4	25	70-130
1,2,3-Trichlorobenzene	85	81	5	25	70-130
1,2,4-Trichlorobenzene	81	77	5	25	70-130
1,3,5-Trimethylbenzene	91	88	3	25	70-130

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH LCS/LCSD ANALYSIS

Laboratory Job Number: L0408113

Continued

Parameter	LCS %	LCSD %	RPD	RPD Limit	QC Limits
Volatile Organics by MCP 8260B for sample(s) 02 (WG177154-1, WG177154)					
1,2,4-Trimethylbenzene	90	89	1	25	70-130
Ethyl ether	95	94	1	25	70-130
Isopropyl Ether	103	100	3	25	70-130
Ethyl-Tert-Butyl-Ether	100	98	2	25	70-130
Tertiary-Amyl Methyl Ether	103	103	0	25	70-130
1,4-Dioxane	98	94	4	50	70-130
Surrogate(s)					
1,2-Dichloroethane-d4	104	101	3		70-130
Toluene-d8	102	102	0		70-130
4-Bromofluorobenzene	107	106	1		70-130
Dibromofluoromethane	100	97	3		70-130

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0408113

Parameter	MS %	MSD %	RPD	RPD Limit	MS/MSD Limits
Dissolved Metals by MCP 6000/7000 series for sample(s) 01-04 (L0408113-03, WG176676)					
Arsenic, Dissolved	98	98	0	20	75-125
Volatile Organics by MCP 8260B for sample(s) 03-04 (L0408113-03, WG177130)					
Methylene chloride	106	86	21	30	70-130
1,1-Dichloroethane	113	97	15	30	70-130
Chloroform	112	88	24	30	70-130
Carbon tetrachloride	118	101	16	30	70-130
1,2-Dichloropropane	107	88	19	30	70-130
Dibromochloromethane	114	90	24	30	70-130
1,1,2-Trichloroethane	117	89	27	30	70-130
Tetrachloroethene	124	102	19	30	70-130
Chlorobenzene	113	94	18	30	70-130
1,2-Dichloroethane	121	97	22	30	70-130
1,1,1-Trichloroethane	114	102	11	30	70-130
Bromodichloromethane	117	96	20	30	70-130
trans-1,3-Dichloropropene	105	82	25	30	70-130
cis-1,3-Dichloropropene	110	90	20	30	70-130
Bromoform	121	95	24	30	70-130
1,1,2,2-Tetrachloroethane	117	87	29	30	70-130
Chloromethane	110	103	7	30	70-130
Vinyl chloride	140	120	15	30	70-130
Chloroethane	143	120	17	30	70-130
1,1-Dichloroethene	104	89	16	30	70-130
trans-1,2-Dichloroethene	103	87	17	30	70-130
Trichloroethene	116	96	19	30	70-130
1,2-Dichlorobenzene	114	91	22	30	70-130
1,3-Dichlorobenzene	112	92	20	30	70-130
1,4-Dichlorobenzene	112	92	20	30	70-130
cis-1,2-Dichloroethene	110	92	18	30	70-130
Dichlorodifluoromethane	154	124	22	30	70-130
1,2-Dibromoethane	115	90	24	30	70-130
1,3-Dichloropropane	112	89	23	30	70-130
1,1,1,2-Tetrachloroethane	116	96	19	30	70-130
o-Chlorotoluene	116	95	20	30	70-130
p-Chlorotoluene	111	91	20	30	70-130
Hexachlorobutadiene	173	139	22	30	70-130
1,2,4-Trichlorobenzene	103	86	18	30	70-130
Surrogate(s)					
1,2-Dichloroethane-d4	113	107	5		70-130
Toluene-d8	98	97	1		70-130
4-Bromofluorobenzene	99	95	4		70-130
Dibromofluoromethane	109	103	6		70-130

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

Laboratory Job Number: L0408113

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP ANAL	ID
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Blank Analysis for sample(s) 01-04 (WG176676-1)
Dissolved Metals by MCP 6000/7000 series

Arsenic, Dissolved	ND	mg/l	0.0010	54 6020A	0726 11:00 0727 13:30	RW
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Blank Analysis for sample(s) 03-04 (WG177130-3)
Volatile Organics by MCP 8260B

	60 8260B	0729 22:36	RY
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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
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
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	112. %	70-130
Toluene-d8	99.0 %	70-130
4-Bromofluorobenzene	104. %	70-130
Dibromofluoromethane	106. %	70-130

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0408113

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG177146-3)							
Volatile Organics by MCP 8260B				60 8260B	0729 17:27 BT		
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: L0408113

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG177146-3)							
Volatile Organics by MCP 8260B continued				60 8260B	0729 17:27		BT
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	102.	%	70-130				
Toluene-d8	101.	%	70-130				
4-Bromofluorobenzene	109.	%	70-130				
Dibromofluoromethane	98.0	%	70-130				
Blank Analysis for sample(s) 02 (WG177154-3)							
Volatile Organics by MCP 8260B				60 8260B	0730 08:01		BT
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				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0408113

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 02 (WG177154-3)							
Volatile Organics by MCP 8260B continued				60 8260B	0730 08:01 BT		
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				
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				

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0408113

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 02 (WG177154-3)							
Volatile Organics by MCP 8260B continued				60 8260B	0730 08:01 BT		
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	105.	%		70-130			
Toluene-d8	106.	%		70-130			
4-Bromofluorobenzene	115.	%		70-130			
Dibromofluoromethane	105.	%		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.
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: L0408113

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
L0408113-01A	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408113-01B	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408113-01C	Plastic 250ml HNO3 preserved	A	<2	1.6C	Y	Absent	MCP-AS-6020S
L0408113-02A	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408113-02B	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408113-02C	Plastic 250ml HNO3 preserved	A	<2	1.6C	Y	Absent	MCP-AS-6020S
L0408113-03A	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408113-03B	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408113-03C	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408113-03D	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408113-03E	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408113-03F	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408113-03G	Plastic 250ml HNO3 preserved	A	<2	1.6C	Y	Absent	MCP-AS-6020S
L0408113-03H	Plastic 250ml HNO3 preserved	A	<2	1.6C	Y	Absent	MCP-AS-6020S
L0408113-03I	Plastic 250ml HNO3 preserved	A	<2	1.6C	Y	Absent	MCP-AS-6020S
L0408113-04A	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408113-04B	Vial HCl preserved	A	N/A	1.6C	Y	Absent	MCP-8260-04
L0408113-04C	Plastic 250ml HNO3 preserved	A	<2	1.6C	Y	Absent	MCP-AS-6020S

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: ERIN
Address: 349 Boston St, Galk Flr
Boston MA 02116
Phone: 617 646 7800
Fax: 617 267 6447
Email:

Project Information

Project Name: Waytheon
Project Location: Waytheon
Project #: 1360603
Project Manager: J. Picard
ALPHA Quote #:
Turn-Around Time

Standard RUSH (only confirmed if pre-approved)
Date Due: 7-30-09 Time:

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

Date Rec'd In Lab: 7-23-09

ALPHA Job #: 20208113

Report Information - Data Deliverables

FAX EMAIL
 ADEX 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
(please specify below)

ANALYSIS
8021 CH/100
Diss. AS

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials				
		Date	Time						
8113	.1 MW-269D	7/22/04	1150	GRU EM		✓			
	.2 MW-269S		1330			✓			
	.3 MW-269MB		1105			✓			
	.3 MSMB-269MB		1105			✓			
	.3 MSDMB-269MB		1105			✓			
	.4 MW-269MA		1445			✓			

QUESTIONS ABOVE MUST BE ANSWERED FOR PRESUMPTIVE CERTAINTY

IS YOUR PROJECT MCP?

Relinquished By: [Signature]

Date/Time: 7/23/09 17:10

Received By: [Signature]

Date/Time: 7/23/09 17:30

FORM NO. 01-01

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.