

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: L0309909
Address: 399 Boylston Street
6th Floor
Boston, MA 02116 Date Received: 02-OCT-2003
Attn: J. Picard Date Reported: 09-OCT-2003
Project Number: 1922.07.2 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: Ellen M. Collins
This document electronically signed

ALPHA ANALYTICAL LABORATORIES

Laboratory Job Number: L0309909
Date Reported: 09-OCT-2003

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0309909-01	MW-313S	WAYLAND, MA
L0309909-02	MW-313D	WAYLAND, MA
L0309909-03	MW-314S	WAYLAND, MA
L0309909-04	MW-314D	WAYLAND, MA
L0309909-05	MW-315S	WAYLAND, MA
L0309909-06	MW-315D	WAYLAND, MA
L0309909-07	DUP-9	WAYLAND, MA
L0309909-08	MW-307	WAYLAND, MA

ALPHA ANALYTICAL LABORATORIES
NARRATIVE REPORT

Laboratory Job Number: L0309909

MCP Related Narratives

Metals

In reference to question F, at the client's request, the samples submitted for metals analysis were analyzed only for Dissolved Arsenic.

Volatile Organics

In reference to question F, at the client's request, only those compounds specified on the chain of custody are reported.

In reference to question E:

The LCS % recovery for Bromoform (135%) associated with L0309909-01 through -06 and -08 is above the acceptance criteria for the method. All associated samples are non-detect for this compound.

The LCS % recovery for Bromoform (140%) associated with L0309909-07 is above the acceptance criteria for the method. All associated samples are non-detect for this compound.

The MS/MSD % recoveries for Chloromethane (61% and 60%) are below the acceptance criteria for the method. The LCS % recovery is acceptable.

**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: L0309909-01	Date Collected: 02-OCT-2003 10:00
MW-313S	Date Received : 02-OCT-2003
Sample Matrix: WATER	Date Reported : 09-OCT-2003
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						
Arsenic, Dissolved	0.069	mg/l	0.010	54 6010B	1003 11:00 1006 16:20	RW
Volatile Organics by MCP 8260B				54 8260B	1003 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	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	2.5			
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	2.5			
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: L0309909-01
MW-313S

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	1003 21:10 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	88.0	%		70-130			
Toluene-d8	97.0	%		70-130			
4-Bromofluorobenzene	112.	%		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: L0309909-02		Date Collected: 01-OCT-2003 17:50
	MW-313D	Date Received : 02-OCT-2003
Sample Matrix: WATER		Date Reported : 09-OCT-2003
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						
Arsenic, Dissolved	0.080	mg/l	0.010	54 6010B	1003 11:00 1006 16:25	RW
Volatile Organics by MCP 8260B				54 8260B	1003 21:44	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			
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	2.5			
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	2.5			
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: L0309909-02
 MW-313D

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	1003 21:44		RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	106.	%		70-130			
Toluene-d8	96.0	%		70-130			
4-Bromofluorobenzene	111.	%		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: L0309909-03	Date Collected: 01-OCT-2003 15:30
MW-314S	Date Received : 02-OCT-2003
Sample Matrix: WATER	Date Reported : 09-OCT-2003
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						
Arsenic, Dissolved	0.110	mg/l	0.010	54 6010B	1003 11:00 1006 16:30	RW
Volatile Organics by MCP 8260B				54 8260B	1003 22:19 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	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	2.5			
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	2.5			
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: L0309909-03
 MW-314S

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	1003 22:19 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	89.0	%		70-130			
Toluene-d8	97.0	%		70-130			
4-Bromofluorobenzene	111.	%		70-130			
Dibromofluoromethane	100.	%		70-130			

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

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L0309909-04
MW-314D

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	1003 22:53		RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	88.0	%		70-130			
Toluene-d8	96.0	%		70-130			
4-Bromofluorobenzene	115.	%		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: L0309909-05	Date Collected: 01-OCT-2003 15:48
MW-315S	Date Received : 02-OCT-2003
Sample Matrix: WATER	Date Reported : 09-OCT-2003
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						
Arsenic, Dissolved	0.239	mg/l	0.010	54 6010B	1003 11:00 1006 16:39	RW
Volatile Organics by MCP 8260B				54 8260B	1003 23:28 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			
Chloromethane	ND	ug/l	2.5			
Vinyl chloride	2.0	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	0.68	ug/l	0.50			
Dichlorodifluoromethane	ND	ug/l	5.0			
1,2-Dibromoethane	ND	ug/l	2.5			
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	2.5			
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: L0309909-05
MW-315S

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	1003 23:28 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	88.0	%		70-130			
Toluene-d8	96.0	%		70-130			
4-Bromofluorobenzene	115.	%		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: L0309909-06	Date Collected: 01-OCT-2003 15:15
MW-315D	Date Received : 02-OCT-2003
Sample Matrix: WATER	Date Reported : 09-OCT-2003
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						
Arsenic, Dissolved	0.119	mg/l	0.010	54 6010B	1003 11:00 1006 16:43	RW
Volatile Organics by MCP 8260B				54 8260B	1004 00:02 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			
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	2.5			
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	2.5			
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: L0309909-06
MW-315D

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	1004 00:02 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	89.0	%		70-130			
Toluene-d8	96.0	%		70-130			
4-Bromofluorobenzene	113.	%		70-130			
Dibromofluoromethane	100.	%		70-130			

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

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0309909-07		Date Collected: 02-OCT-2003 10:05
	DUP-9	Date Received : 02-OCT-2003
Sample Matrix: WATER		Date Reported : 09-OCT-2003
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						
Arsenic, Dissolved	0.072	mg/l	0.010	54 6010B	1003 11:00 1006 16:48	RW
Volatile Organics by MCP 8260B				54 8260B	1006 13:42 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			
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	2.5			
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	2.5			
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: L0309909-07
 DUP-9

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	1006 13:42 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	89.0	%		70-130			
Toluene-d8	91.0	%		70-130			
4-Bromofluorobenzene	112.	%		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

Laboratory Sample Number: L0309909-08
 MW-307

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	1004 00:37 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	90.0	%		70-130			
Toluene-d8	94.0	%		70-130			
4-Bromofluorobenzene	114.	%		70-130			
Dibromofluoromethane	100.	%		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: L0309909

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Dissolved Metals for sample(s) 01-08 (L0309909-08, WG152458)					
Arsenic, Dissolved	0.038	0.038	mg/l	0	20

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0309909

Parameter	% Recovery	QC Criteria
Dissolved Metals LCS for sample(s) 01-08 (WG152458)		
Arsenic, Dissolved	110	80-120
Volatile Organics by MCP 8260B LCS for sample(s) 01-06,08 (WG152485)		
Methylene chloride	94	70-130
1,1-Dichloroethane	101	70-130
Chloroform	99	70-130
Carbon tetrachloride	106	70-130
1,2-Dichloropropane	102	70-130
Dibromochloromethane	110	70-130
1,1,2-Trichloroethane	124	70-130
Tetrachloroethene	110	70-130
Chlorobenzene	117	70-130
1,2-Dichloroethane	91	70-130
1,1,1-Trichloroethane	101	70-130
Bromodichloromethane	103	70-130
trans-1,3-Dichloropropene	103	70-130
cis-1,3-Dichloropropene	101	70-130
Bromoform	135	70-130
1,1,2,2-Tetrachloroethane	129	70-130
Chloromethane	79	70-130
Vinyl chloride	111	70-130
Chloroethane	103	70-130
1,1-Dichloroethene	105	70-130
trans-1,2-Dichloroethene	104	70-130
Trichloroethene	102	70-130
1,2-Dichlorobenzene	115	70-130
1,3-Dichlorobenzene	114	70-130
1,4-Dichlorobenzene	115	70-130
cis-1,2-Dichloroethene	109	70-130
Dichlorodifluoromethane	123	70-130
1,2-Dibromoethane	113	70-130
1,3-Dichloropropane	115	70-130
1,1,1,2-Tetrachloroethane	114	70-130
o-Chlorotoluene	122	70-130
p-Chlorotoluene	123	70-130
Hexachlorobutadiene	116	70-130
1,2,4-Trichlorobenzene	100	70-130
Surrogate(s)		
1,2-Dichloroethane-d4	88	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130
Dibromofluoromethane	95	70-130
Volatile Organics by MCP 8260B LCS for sample(s) 07 (WG152485)		
Methylene chloride	102	70-130
1,1-Dichloroethane	115	70-130
Chloroform	118	70-130

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0309909

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by MCP 8260B LCS for sample(s) 07 (WG152485)		
Carbon tetrachloride	126	70-130
1,2-Dichloropropane	120	70-130
Dibromochloromethane	115	70-130
1,1,2-Trichloroethane	126	70-130
Tetrachloroethene	114	70-130
Chlorobenzene	115	70-130
1,2-Dichloroethane	108	70-130
1,1,1-Trichloroethane	118	70-130
Bromodichloromethane	122	70-130
trans-1,3-Dichloropropene	104	70-130
cis-1,3-Dichloropropene	113	70-130
Bromoform	140	70-130
1,1,2,2-Tetrachloroethane	123	70-130
Chloromethane	74	70-130
Vinyl chloride	115	70-130
Chloroethane	122	70-130
1,1-Dichloroethene	119	70-130
trans-1,2-Dichloroethene	119	70-130
Trichloroethene	117	70-130
1,2-Dichlorobenzene	105	70-130
1,3-Dichlorobenzene	106	70-130
1,4-Dichlorobenzene	107	70-130
cis-1,2-Dichloroethene	125	70-130
Dichlorodifluoromethane	126	70-130
1,2-Dibromoethane	112	70-130
1,3-Dichloropropane	115	70-130
1,1,1,2-Tetrachloroethane	112	70-130
o-Chlorotoluene	114	70-130
p-Chlorotoluene	114	70-130
Hexachlorobutadiene	108	70-130
1,2,4-Trichlorobenzene	93	70-130
Surrogate(s)		
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	102	70-130
Dibromofluoromethane	104	70-130
Dissolved Metals SPIKE for sample(s) 01-08 (L0309909-08, WG152458)		
Arsenic, Dissolved	109	75-125

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0309909

Parameter	MS %	MSD %	RPD	RPD Limit	MS/MSD Limits
Volatile Organics by MCP 8260B for sample(s) 01-08 (L0309909-08, WG152485)					
Methylene chloride	83	81	3	20	70-130
1,1-Dichloroethane	96	91	6	20	70-130
Chloroform	95	88	8	20	70-130
Carbon tetrachloride	105	96	9	20	70-130
1,2-Dichloropropane	98	95	3	20	70-130
Dibromochloromethane	92	83	11	20	70-130
1,1,2-Trichloroethane	104	99	5	20	70-130
Tetrachloroethene	95	87	9	20	70-130
Chlorobenzene	97	91	7	20	70-130
1,2-Dichloroethane	88	85	3	20	70-130
1,1,1-Trichloroethane	98	91	7	20	70-130
Bromodichloromethane	97	91	6	20	70-130
trans-1,3-Dichloropropene	82	78	6	20	70-130
cis-1,3-Dichloropropene	92	87	6	20	70-130
Bromoform	113	108	5	20	70-130
1,1,2,2-Tetrachloroethane	103	100	3	20	70-130
Chloromethane	61	60	2	20	70-130
Vinyl chloride	98	92	6	20	70-130
Chloroethane	102	92	10	20	70-130
1,1-Dichloroethene	101	95	6	20	70-130
trans-1,2-Dichloroethene	101	94	7	20	70-130
Trichloroethene	100	91	9	20	70-130
1,2-Dichlorobenzene	90	85	6	20	70-130
1,3-Dichlorobenzene	89	85	4	20	70-130
1,4-Dichlorobenzene	90	86	5	20	70-130
cis-1,2-Dichloroethene	111	104	7	20	70-130
Dichlorodifluoromethane	100	94	6	20	70-130
1,2-Dibromoethane	92	90	3	20	70-130
1,3-Dichloropropane	97	93	4	20	70-130
1,1,1,2-Tetrachloroethane	92	85	7	20	70-130
o-Chlorotoluene	98	92	7	20	70-130
p-Chlorotoluene	95	90	6	20	70-130
Hexachlorobutadiene	92	87	5	20	70-130
1,2,4-Trichlorobenzene	78	79	2	20	70-130
Surrogate(s)					
1,2-Dichloroethane-d4	89	86	3		70-130
Toluene-d8	94	94	0		70-130
4-Bromofluorobenzene	101	103	2		70-130
Dibromofluoromethane	101	101	0		70-130

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0309909

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID	
					PREP	ANAL		
Blank Analysis for sample(s) 01-08 (WG152458-3)								
Dissolved Metals								
Arsenic, Dissolved	ND	mg/l	0.010	54 6010B	1003 11:00	1006 16:10	RW	
Blank Analysis for sample(s) 01-06,08 (WG152485-4)								
Volatile Organics by MCP 8260B				54 8260B	1003 15:21			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					
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	2.5					
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	2.5					
1,2,4-Trichlorobenzene	ND	ug/l	2.5					
Surrogate(s)	Recovery		QC Criteria					
1,2-Dichloroethane-d4	86.0	%	70-130					
Toluene-d8	98.0	%	70-130					
4-Bromofluorobenzene	114.	%	70-130					
Dibromofluoromethane	97.0	%	70-130					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0309909

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 07 (WG152485-6)							
Volatile Organics by MCP 8260B				54 8260B	1006 10:18 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				
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	2.5				
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	2.5				
1,2,4-Trichlorobenzene	ND	ug/l	2.5				
Surrogate(s)	Recovery		QC Criteria				
1,2-Dichloroethane-d4	89.0	%	70-130				
Toluene-d8	91.0	%	70-130				
4-Bromofluorobenzene	111.	%	70-130				
Dibromofluoromethane	103.	%	70-130				

**ALPHA ANALYTICAL LABORATORIES
ADDENDUM I**

REFERENCES

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

GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.
METHOD Method number by which analysis was performed.
ID Initials of the analyst.
ND Not detected in comparison to the reported detection limit.

Please note that all solid samples are reported on dry weight basis unless noted otherwise.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

**ALPHA ANALYTICAL LABORATORIES
LOGIN SPECIFIC INFORMATION**

Laboratory Job Number: L0309909

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0309909-01A	Vial HCl preserved	A	NA	1.5 C	Y	Absent	MCP-8260
L0309909-01B	Vial HCl preserved	A	NA	1.5 C	Y	Absent	MCP-8260
L0309909-01C	Plastic 250ml HNO3 preserved	A	<2	1.5 C	Y	Absent	AS-SI
L0309909-02A	Vial HCl preserved	A	NA	1.5 C	Y	Absent	MCP-8260
L0309909-02B	Vial HCl preserved	A	NA	1.5 C	Y	Absent	MCP-8260
L0309909-02C	Plastic 250ml HNO3 preserved	A	<2	1.5 C	Y	Absent	AS-SI
L0309909-03A	Vial HCl preserved	A	NA	1.5 C	Y	Absent	MCP-8260
L0309909-03B	Vial HCl preserved	A	NA	1.5 C	Y	Absent	MCP-8260
L0309909-03C	Plastic 250ml HNO3 preserved	A	<2	1.5 C	Y	Absent	AS-SI
L0309909-04A	Vial HCl preserved	A	NA	1.5 C	Y	Absent	MCP-8260
L0309909-04B	Vial HCl preserved	A	NA	1.5 C	Y	Absent	MCP-8260
L0309909-04C	Plastic 250ml HNO3 preserved	A	<2	1.5 C	Y	Absent	AS-SI
L0309909-05A	Vial HCl preserved	A	NA	1.5 C	Y	Absent	MCP-8260
L0309909-05B	Vial HCl preserved	A	NA	1.5 C	Y	Absent	MCP-8260
L0309909-05C	Plastic 250ml HNO3 preserved	A	<2	1.5 C	Y	Absent	AS-SI
L0309909-06A	Vial HCl preserved	A	NA	1.5 C	Y	Absent	MCP-8260
L0309909-06B	Vial HCl preserved	A	NA	1.5 C	Y	Absent	MCP-8260
L0309909-06C	Plastic 250ml HNO3 preserved	A	<2	1.5 C	Y	Absent	AS-SI
L0309909-07A	Vial HCl preserved	A	NA	1.5 C	Y	Absent	MCP-8260
L0309909-07B	Vial HCl preserved	A	NA	1.5 C	Y	Absent	MCP-8260
L0309909-07C	Plastic 250ml HNO3 preserved	A	<2	1.5 C	Y	Absent	AS-SI
L0309909-08A	Vial HCl preserved	A	NA	1.5 C	Y	Absent	MCP-8260
L0309909-08B	Vial HCl preserved	A	NA	1.5 C	Y	Absent	MCP-8260
L0309909-08C	Plastic 250ml HNO3 preserved	A	<2	1.5 C	Y	Absent	AS-SI
L0309909-08D	Vial HCl preserved	A	NA	1.5 C	Y	Absent	MCP-8260
L0309909-08E	Vial HCl preserved	A	NA	1.5 C	Y	Absent	MCP-8260

Container Comments

Container ID Comments



CHAIN OF CUSTODY

PAGE 1 OF 1

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

Client Information

Client: **ERM**
Address: **399 Baylston St Flk Boston, MA 02116**
Phone: **617 267 8377**
Fax: **617 267 6447**
Email:

Project Information

Project Name: **Roughston**
Project Location: **Wayland, MA**
Project #: **1922-07.2**
Project Manager: **J. P. Ward**
ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)

Date Due: **10/9/03** Time:

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

ALPHA Job #: **L0309909**

Date Rec'd in Lab: **10/2/03**

Report Information - Data Deliverables

FAX EMAIL
 ADEX Add'l Deliverables **hard copy**

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?

ANALYSIS	8021C	DIS. HSE. 2
SAMPLE HANDLING		
Filtration		
<input type="checkbox"/> Done		
<input type="checkbox"/> Not needed		
<input type="checkbox"/> Lab to do		
Preservation		
<input type="checkbox"/> Lab to do		
(Please specify below)		
Sample Specific Comments		

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TOTAL # BOTTLES
09909	MW-313S	10/2/03	1000	MW	KRK	3
2	MW-313D	10/1/03	1750	MW	KRK	3
3	MW-314S	10/1/03	1530	MW	JF. R	3
4	MW-314D	10/1/03	1650	MW	JF. R	3
5	MW-315S	10/1/03	1548	MW	KRK	3
6	MW-315D	10/1/03	1515	MW	KRK	3
7	DUP-9	10/2/03	1005	MW	KRK	3
8	MW-307	10/2/03	1137	MW	KRK	3
8	MW-307-MS/D	10/2/03	1140	MW	KRK	2

held filtered using 0.45 micron filter

QUESTIONS ABOVE MUST BE ANSWERED FOR PRESUMPTIVE CERTAINTY

IS YOUR PROJECT MCP?

Relinquished By:

Viktor Z...
Date/Time: **10/1/03 1720**
10/1/03 1830

Container Type: **VP**

Preservative: **BC**

Date/Time

Date/Time

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.