

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:** L0211525  
**Address:** 399 Boylston Street  
6th Floor  
Boston, MA 02116 **Date Received:** 12-NOV-2002  
**Attn:** Mr. Joe Fiacco **Date Reported:** 19-NOV-2002  
**Project Number:** 143 **Delivery Method:** Alpha  
**Site:** RAYTHEON

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ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0211525-01	MW-106M	WAYLAND, MA
L0211525-02	MW-105	WAYLAND, MA
L0211525-03	MW-105M	WAYLAND, MA
L0211525-04	MW-106	WAYLAND, MA
L0211525-05	MW-104	WAYLAND, MA
L0211525-06	MW-43S	WAYLAND, MA
L0211525-07	MW-43D	WAYLAND, MA
L0211525-08	MW-210	WAYLAND, MA
L0211525-09	MW-103	WAYLAND, MA
L0211525-10	MW-213	WAYLAND, MA
L0211525-11	MW-209	WAYLAND, MA
L0211525-12	MW-211	WAYLAND, MA
L0211525-13	MW-212M	WAYLAND, MA
L0211525-14	MW-102	WAYLAND, MA
L0211525-15	MW-107	WAYLAND, MA
L0211525-16	MW-108	WAYLAND, MA
L0211525-17	MW-214	WAYLAND, MA
L0211525-18	MW-101	WAYLAND, MA

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

Scott McLean - Technical Director  
This document electronically signed

ALPHA ANALYTICAL LABORATORIES  
NARRATIVE REPORT

Laboratory Job Number: L0211525

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Alpha Report L0211525:

Volatile Organics

The requested analysis of Volatile Organics by method 8021C could not be performed due to laboratory instrument failure. The analysis was performed by method 8260B with the client's authorization, however, 2-Chloroethylvinyl ether cannot be reported by this method.

Alpha Samples L0211525-01, -02, -04, -08, -14 and -15 have elevated limits of detection due to the dilutions required by the elevated concentrations of target compounds in the samples.

Alpha Samples L0211525-05 and -06 were re-analyzed on dilution in order to quantitate the samples within the range of the calibration. The results are reported as greater than values for any compound that exceeded the calibration on the initial analysis. The re-analyses were performed only for those compounds which exceeded the range of the calibration.

Dissolved Metals

The matrix spike percent recovery for the analysis of Sodium is invalid because the sample concentration is greater than four times the spike amount added.

**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

<b>Laboratory Sample Number:</b> L0211525-01	<b>Date Collected:</b> 11-NOV-2002 10:30
MW-106M	<b>Date Received :</b> 12-NOV-2002
<b>Sample Matrix:</b> WATER	<b>Date Reported :</b> 19-NOV-2002
<b>Condition of Sample:</b> Satisfactory	<b>Field Prep:</b> Field Filtered
<b>Number &amp; Type of Containers:</b> 2-Plastic,2-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	130	mg/l	10.	1 9251		1119 10:26	ED
<b>Dissolved Metals</b>							
Chromium, Dissolved	ND	mg/l	0.01	1 6010B		1118 09:57	RW
Manganese, Dissolved	0.19	mg/l	0.01	1 6010B		1118 09:57	RW
Sodium, Dissolved	250	mg/l	100	1 6010B		1118 16:46	RW
<b>Volatile Organics by GC/MS 8260</b>							
Methylene chloride	ND	ug/l	10.	1 8260B		1118 12:54	RY
1,1-Dichloroethane	ND	ug/l	1.5				
Chloroform	ND	ug/l	1.5				
Carbon tetrachloride	ND	ug/l	1.0				
1,2-Dichloropropane	ND	ug/l	3.5				
Dibromochloromethane	ND	ug/l	1.0				
1,1,2-Trichloroethane	ND	ug/l	1.5				
Tetrachloroethene	3.1	ug/l	1.0				
Chlorobenzene	ND	ug/l	1.0				
Trichlorofluoromethane	ND	ug/l	5.0				
1,2-Dichloroethane	ND	ug/l	1.0				
1,1,1-Trichloroethane	ND	ug/l	1.0				
Bromodichloromethane	ND	ug/l	1.0				
trans-1,3-Dichloropropene	ND	ug/l	1.0				
cis-1,3-Dichloropropene	ND	ug/l	1.0				
Bromoform	ND	ug/l	4.0				
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0				
Chloromethane	ND	ug/l	5.0				
Bromomethane	ND	ug/l	2.0				
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	130	ug/l	1.0				
1,2-Dichlorobenzene	ND	ug/l	5.0				
1,3-Dichlorobenzene	ND	ug/l	5.0				
1,4-Dichlorobenzene	ND	ug/l	5.0				
cis-1,2-Dichloroethene	3.8	ug/l	1.0				
Dichlorodifluoromethane	ND	ug/l	10.				

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L0211525-01  
MW-106M

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1 8260B	1118 12:54		RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	94.0	%					
Toluene-d8	99.0	%					
4-Bromofluorobenzene	97.0	%					
Dibromofluoromethane	96.0	%					

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: L0211525-02	Date Collected: 11-NOV-2002 12:30
MW-105	Date Received : 12-NOV-2002
Sample Matrix: WATER	Date Reported : 19-NOV-2002

Condition of Sample: Satisfactory	Field Prep: Field Filtered
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Number & Type of Containers: 2-Plastic,2-Vial

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP ANAL	ID
Chloride	88.	mg/l	1.0	1 9251	1119 11:17	ED
Dissolved Metals						
Chromium, Dissolved	0.01	mg/l	0.01	1 6010B	1118 10:04	RW
Manganese, Dissolved	ND	mg/l	0.01	1 6010B	1118 10:04	RW
Sodium, Dissolved	220	mg/l	100	1 6010B	1118 16:54	RW
Volatile Organics by GC/MS 8260						
Methylene chloride	ND	ug/l	25.	1 8260B	1118 13:33	RY
1,1-Dichloroethane	ND	ug/l	3.8			
Chloroform	ND	ug/l	3.8			
Carbon tetrachloride	ND	ug/l	2.5			
1,2-Dichloropropane	ND	ug/l	8.8			
Dibromochloromethane	ND	ug/l	2.5			
1,1,2-Trichloroethane	ND	ug/l	3.8			
Tetrachloroethene	3.9	ug/l	2.5			
Chlorobenzene	ND	ug/l	2.5			
Trichlorofluoromethane	ND	ug/l	12.			
1,2-Dichloroethane	ND	ug/l	2.5			
1,1,1-Trichloroethane	ND	ug/l	2.5			
Bromodichloromethane	ND	ug/l	2.5			
trans-1,3-Dichloropropene	ND	ug/l	2.5			
cis-1,3-Dichloropropene	ND	ug/l	2.5			
Bromoform	ND	ug/l	10.			
1,1,2,2-Tetrachloroethane	ND	ug/l	2.5			
Chloromethane	ND	ug/l	12.			
Bromomethane	ND	ug/l	5.0			
Vinyl chloride	ND	ug/l	5.0			
Chloroethane	ND	ug/l	5.0			
1,1-Dichloroethene	ND	ug/l	2.5			
trans-1,2-Dichloroethene	ND	ug/l	3.8			
Trichloroethene	190	ug/l	2.5			
1,2-Dichlorobenzene	ND	ug/l	12.			
1,3-Dichlorobenzene	ND	ug/l	12.			
1,4-Dichlorobenzene	ND	ug/l	12.			
cis-1,2-Dichloroethene	ND	ug/l	2.5			
Dichlorodifluoromethane	ND	ug/l	25.			

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L0211525-02  
MW-105

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	13:33 RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	93.0	%					
Toluene-d8	101.	%					
4-Bromofluorobenzene	97.0	%					
Dibromofluoromethane	100.	%					

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

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

<b>Laboratory Sample Number:</b> L0211525-03	<b>Date Collected:</b> 11-NOV-2002 13:50
MW-105M	<b>Date Received :</b> 12-NOV-2002
<b>Sample Matrix:</b> WATER	<b>Date Reported :</b> 19-NOV-2002
<b>Condition of Sample:</b> Satisfactory	<b>Field Prep:</b> None
<b>Number &amp; Type of Containers:</b> 2-Plastic,2-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP    ANAL	ID
Chloride	84.	mg/l	1.0	1 9251		1119 09:58 ED
Dissolved Metals						
Chromium, Dissolved	ND	mg/l	0.01	1 6010B		1118 10:12 RW
Manganese, Dissolved	0.09	mg/l	0.01	1 6010B		1118 10:12 RW
Sodium, Dissolved	46.	mg/l	20.	1 6010B		1118 17:02 RW
Volatile Organics by GC/MS 8260						
Methylene chloride	ND	ug/l	5.0			
1,1-Dichloroethane	ND	ug/l	0.75			
Chloroform	ND	ug/l	0.75			
Carbon tetrachloride	ND	ug/l	0.50			
1,2-Dichloropropane	ND	ug/l	1.8			
Dibromochloromethane	ND	ug/l	0.50			
1,1,2-Trichloroethane	ND	ug/l	0.75			
Tetrachloroethene	1.0	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			
Bromoform	ND	ug/l	2.0			
1,1,2,2-Tetrachloroethane	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	37.	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	7.8	ug/l	0.50			
Dichlorodifluoromethane	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: L0211525-03  
 MW-105M

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	10:34 RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	107.	%					
Toluene-d8	105.	%					
4-Bromofluorobenzene	108.	%					
Dibromofluoromethane	105.	%					

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



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

Laboratory Sample Number: L0211525-04

Date Collected: 11-NOV-2002 15:20

MW-106

Date Received : 12-NOV-2002

Sample Matrix: WATER

Date Reported : 19-NOV-2002

Condition of Sample: Satisfactory

Field Prep: Field Filtered

Number & Type of Containers: 1-Plastic,2-Vial

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	180	mg/l	10.	1 9251		1119 10:27	ED
Volatile Organics by GC/MS 8260				1 8260B		1118 14:09	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	3.1	ug/l	1.0				
Chlorobenzene	ND	ug/l	1.0				
Trichlorofluoromethane	ND	ug/l	5.0				
1,2-Dichloroethane	ND	ug/l	1.0				
1,1,1-Trichloroethane	ND	ug/l	1.0				
Bromodichloromethane	ND	ug/l	1.0				
trans-1,3-Dichloropropene	ND	ug/l	1.0				
cis-1,3-Dichloropropene	ND	ug/l	1.0				
Bromoform	ND	ug/l	4.0				
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0				
Chloromethane	ND	ug/l	5.0				
Bromomethane	ND	ug/l	2.0				
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	120	ug/l	1.0				
1,2-Dichlorobenzene	ND	ug/l	5.0				
1,3-Dichlorobenzene	ND	ug/l	5.0				
1,4-Dichlorobenzene	ND	ug/l	5.0				
cis-1,2-Dichloroethene	4.1	ug/l	1.0				
Dichlorodifluoromethane	ND	ug/l	10.				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	107.	%					
Toluene-d8	106.	%					
4-Bromofluorobenzene	108.	%					
Dibromofluoromethane	106.	%					

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> L0211525-05	<b>Date Collected:</b> 11-NOV-2002 14:45
MW-104	<b>Date Received :</b> 12-NOV-2002
<b>Sample Matrix:</b> WATER	<b>Date Reported :</b> 19-NOV-2002
<b>Condition of Sample:</b> Satisfactory	<b>Field Prep:</b> Field Filtered
<b>Number &amp; Type of Containers:</b> 2-Plastic,2-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	200	mg/l	10.	1 9251		1119 10:29	ED
<b>Dissolved Metals</b>							
Chromium, Dissolved	0.56	mg/l	0.01	1 6010B		1118 10:27	RW
Manganese, Dissolved	ND	mg/l	0.01	1 6010B		1118 10:27	RW
Sodium, Dissolved	290	mg/l	100	1 6010B		1118 17:05	RW
<b>Volatile Organics by GC/MS 8260</b>							
Methylene chloride	ND	ug/l	5.0	1 8260B		1118 11:10	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	3.1	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				
Bromoform	ND	ug/l	2.0				
1,1,2,2-Tetrachloroethane	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	>100	ug/l	0.5				
1,2-Dichlorobenzene	ND	ug/l	2.5				
1,3-Dichlorobenzene	ND	ug/l	2.5				
1,4-Dichlorobenzene	ND	ug/l	2.5				
cis-1,2-Dichloroethene	1.6	ug/l	0.50				
Dichlorodifluoromethane	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: L0211525-05  
MW-104

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	11:10 RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	111.	%					
Toluene-d8	103.	%					
4-Bromofluorobenzene	106.	%					
Dibromofluoromethane	105.	%					
Volatile Organics by GC/MS 8260				1	8260B	1118	21:58 RY
Trichloroethene	130	ug/l	2.5				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	116.	%					
Toluene-d8	106.	%					
4-Bromofluorobenzene	112.	%					
Dibromofluoromethane	108.	%					

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:	L0211525-06	Date Collected:	11-NOV-2002 13:50
	MW-43S	Date Received :	12-NOV-2002
Sample Matrix:	WATER	Date Reported :	19-NOV-2002
Condition of Sample:	Satisfactory	Field Prep:	Field Filtered
Number & Type of Containers: 2-Plastic,2-Vial			

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	340	mg/l	10.	1 9251		1119 10:30	ED
<b>Dissolved Metals</b>							
Chromium, Dissolved	0.08	mg/l	0.01	1 6010B		1118 10:31	RW
Manganese, Dissolved	ND	mg/l	0.01	1 6010B		1118 10:31	RW
Sodium, Dissolved	330	mg/l	100	1 6010B		1118 17:09	RW
<b>Volatile Organics by GC/MS 8260</b>							
Methylene chloride	ND	ug/l	5.0	1 8260B		1118 11:45	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	2.5	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				
Bromoform	ND	ug/l	2.0				
1,1,2,2-Tetrachloroethane	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	>100	ug/l	0.5				
1,2-Dichlorobenzene	ND	ug/l	2.5				
1,3-Dichlorobenzene	ND	ug/l	2.5				
1,4-Dichlorobenzene	ND	ug/l	2.5				
cis-1,2-Dichloroethene	2.6	ug/l	0.50				
Dichlorodifluoromethane	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: L0211525-06  
MW-43S

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	11:45 RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	110.	%					
Toluene-d8	102.	%					
4-Bromofluorobenzene	104.	%					
Dibromofluoromethane	108.	%					
Volatile Organics by GC/MS 8260				1	8260B	1118	22:33 RY
Trichloroethene	150	ug/l	2.5				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	110.	%					
Toluene-d8	104.	%					
4-Bromofluorobenzene	108.	%					
Dibromofluoromethane	107.	%					

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:** L0211525-07 **Date Collected:** 11-NOV-2002 15:35  
MW-43D **Date Received :** 12-NOV-2002  
**Sample Matrix:** WATER **Date Reported :** 19-NOV-2002

**Condition of Sample:** Satisfactory **Field Prep:** Field Filtered

**Number & Type of Containers:** 2-Plastic,2-Vial

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	61.	mg/l	1.0	1 9251		1119 11:17	ED
Dissolved Metals							
Chromium, Dissolved	ND	mg/l	0.01	1 6010B		1118 10:35	RW
Manganese, Dissolved	ND	mg/l	0.01	1 6010B		1118 10:35	RW
Sodium, Dissolved	17.	mg/l	2.0	1 6010B		1118 10:35	RW
Volatile Organics by GC/MS 8260				1 8260B		1118 14:46	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				
Bromoform	ND	ug/l	2.0				
1,1,2,2-Tetrachloroethane	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				
cis-1,2-Dichloroethene	ND	ug/l	0.50				
Dichlorodifluoromethane	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: L0211525-07  
 MW-43D

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	14:46 RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	109.	%					
Toluene-d8	105.	%					
4-Bromofluorobenzene	108.	%					
Dibromofluoromethane	105.	%					

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>	L0211525-08	<b>Date Collected:</b>	11-NOV-2002 10:50
	MW-210	<b>Date Received :</b>	12-NOV-2002
<b>Sample Matrix:</b>	WATER	<b>Date Reported :</b>	19-NOV-2002
<b>Condition of Sample:</b>	Satisfactory	<b>Field Prep:</b>	Field Filtered
<b>Number &amp; Type of Containers:</b>	2-Plastic,2-Vial		

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	180	mg/l	10.	1 9251		1119 10:32	ED
Dissolved Metals							
Chromium, Dissolved	ND	mg/l	0.01	1 6010B		1118 10:38	RW
Manganese, Dissolved	0.09	mg/l	0.01	1 6010B		1118 10:38	RW
Sodium, Dissolved	290	mg/l	100	1 6010B		1118 17:13	RW
Volatile Organics by GC/MS 8260							
Methylene chloride	ND	ug/l	10.	1 8260B		1118 14:59	AR
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	3.3	ug/l	1.0				
Chlorobenzene	ND	ug/l	1.0				
Trichlorofluoromethane	ND	ug/l	5.0				
1,2-Dichloroethane	ND	ug/l	1.0				
1,1,1-Trichloroethane	ND	ug/l	1.0				
Bromodichloromethane	ND	ug/l	1.0				
trans-1,3-Dichloropropene	ND	ug/l	1.0				
cis-1,3-Dichloropropene	ND	ug/l	1.0				
Bromoform	ND	ug/l	4.0				
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0				
Chloromethane	ND	ug/l	5.0				
Bromomethane	ND	ug/l	2.0				
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	160	ug/l	1.0				
1,2-Dichlorobenzene	ND	ug/l	5.0				
1,3-Dichlorobenzene	ND	ug/l	5.0				
1,4-Dichlorobenzene	ND	ug/l	5.0				
cis-1,2-Dichloroethene	6.1	ug/l	1.0				
Dichlorodifluoromethane	ND	ug/l	10.				

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



**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L0211525-08  
MW-210

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	14:59 AR
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	103.	%					
Toluene-d8	102.	%					
4-Bromofluorobenzene	103.	%					
Dibromofluoromethane	104.	%					

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: L0211525-09      Date Collected: 11-NOV-2002 16:45  
MW-103      Date Received : 12-NOV-2002  
Sample Matrix: WATER      Date Reported : 19-NOV-2002  
Condition of Sample: Satisfactory      Field Prep: Field Filtered  
Number & Type of Containers: 2-Plastic,2-Vial

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	310	mg/l	10.	1 9251		1119 10:35	ED
Dissolved Metals							
Chromium, Dissolved	ND	mg/l	0.01	1 6010B		1118 10:42	RW
Manganese, Dissolved	ND	mg/l	0.01	1 6010B		1118 10:42	RW
Sodium, Dissolved	300	mg/l	100	1 6010B		1118 17:17	RW
Volatile Organics by GC/MS 8260							
Methylene chloride	ND	ug/l	5.0	1 8260B		1118 17:01	AR
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	0.63	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				
Bromoform	ND	ug/l	2.0				
1,1,2,2-Tetrachloroethane	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	5.4	ug/l	0.50				
1,2-Dichlorobenzene	ND	ug/l	2.5				
1,3-Dichlorobenzene	ND	ug/l	2.5				
1,4-Dichlorobenzene	ND	ug/l	2.5				
cis-1,2-Dichloroethene	ND	ug/l	0.50				
Dichlorodifluoromethane	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: L0211525-09  
MW-103

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	17:01 AR
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	114.	%					
Toluene-d8	99.0	%					
4-Bromofluorobenzene	99.0	%					
Dibromofluoromethane	108.	%					

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> L0211525-10	<b>Date Collected:</b> 11-NOV-2002 16:25
MW-213	<b>Date Received :</b> 12-NOV-2002
<b>Sample Matrix:</b> WATER	<b>Date Reported :</b> 19-NOV-2002
<b>Condition of Sample:</b> Satisfactory	<b>Field Prep:</b> Field Filtered
<b>Number &amp; Type of Containers:</b> 2-Plastic,2-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	490	mg/l	10.	1 9251		1119 10:37	ED
<b>Dissolved Metals</b>							
Chromium, Dissolved	ND	mg/l	0.01	1 6010B		1118 10:46	RW
Manganese, Dissolved	0.01	mg/l	0.01	1 6010B		1118 10:46	RW
Sodium, Dissolved	230	mg/l	100	1 6010B		1118 17:21	RW
<b>Volatile Organics by GC/MS 8260</b>							
Methylene chloride	ND	ug/l	5.0	1 8260B		1118 11:51	AR
1,1-Dichloroethane	ND	ug/l	0.75				
Chloroform	ND	ug/l	0.75				
Carbon tetrachloride	ND	ug/l	0.50				
1,2-Dichloropropane	ND	ug/l	1.8				
Dibromochloromethane	ND	ug/l	0.50				
1,1,2-Trichloroethane	ND	ug/l	0.75				
Tetrachloroethene	1.6	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				
Bromoform	ND	ug/l	2.0				
1,1,2,2-Tetrachloroethane	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	14.	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				

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

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0211525-10  
 MW-213

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	11:51 AR
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	107.	%					
Toluene-d8	102.	%					
4-Bromofluorobenzene	100.	%					
Dibromofluoromethane	104.	%					

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: L0211525-11 Date Collected: 11-NOV-2002 15:45  
 MW-209 Date Received : 12-NOV-2002  
 Sample Matrix: WATER Date Reported : 19-NOV-2002  
 Condition of Sample: Satisfactory Field Prep: Field Filtered  
 Number & Type of Containers: 2-Plastic,2-Vial

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	150	mg/l	10.	1 9251		1119 10:38	ED
<b>Dissolved Metals</b>							
Chromium, Dissolved	ND	mg/l	0.01	1 6010B		1118 10:50	RW
Manganese, Dissolved	0.01	mg/l	0.01	1 6010B		1118 10:50	RW
Sodium, Dissolved	190	mg/l	100	1 6010B		1118 17:36	RW
<b>Volatile Organics by GC/MS 8260</b>							
Methylene chloride	ND	ug/l	5.0	1 8260B		1118 12:30	AR
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	0.88	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				
Bromoform	ND	ug/l	2.0				
1,1,2,2-Tetrachloroethane	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	11.	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				

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

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0211525-11  
 MW-209

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	12:30 AR
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	110.	%					
Toluene-d8	100.	%					
4-Bromofluorobenzene	99.0	%					
Dibromofluoromethane	105.	%					

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> L0211525-12	<b>Date Collected:</b> 11-NOV-2002 13:00
MW-211	<b>Date Received :</b> 12-NOV-2002
<b>Sample Matrix:</b> WATER	<b>Date Reported :</b> 19-NOV-2002
<b>Condition of Sample:</b> Satisfactory	<b>Field Prep:</b> Field Filtered
<b>Number &amp; Type of Containers:</b> 2-Plastic,2-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	340	mg/l	10.	1 9251		1119 10:40	ED
<b>Dissolved Metals</b>							
Chromium, Dissolved	ND	mg/l	0.01	1 6010B		1118 10:54	RW
Manganese, Dissolved	0.32	mg/l	0.01	1 6010B		1118 10:54	RW
Sodium, Dissolved	450	mg/l	100	1 6010B		1118 17:40	RW
<b>Volatile Organics by GC/MS 8260</b>							
Methylene chloride	ND	ug/l	5.0	1 8260B		1118 13:09	AR
1,1-Dichloroethane	ND	ug/l	0.75				
Chloroform	ND	ug/l	0.75				
Carbon tetrachloride	ND	ug/l	0.50				
1,2-Dichloropropane	ND	ug/l	1.8				
Dibromochloromethane	ND	ug/l	0.50				
1,1,2-Trichloroethane	ND	ug/l	0.75				
Tetrachloroethene	1.1	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				
Bromoform	ND	ug/l	2.0				
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50				
Chloromethane	ND	ug/l	2.5				
Bromomethane	ND	ug/l	1.0				
Vinyl chloride	4.1	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	9.1	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	22.	ug/l	0.50				
Dichlorodifluoromethane	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: L0211525-12  
 MW-211

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	13:09 AR
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	108.	%					
Toluene-d8	101.	%					
4-Bromofluorobenzene	102.	%					
Dibromofluoromethane	104.	%					

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:	L0211525-13	Date Collected:	11-NOV-2002 11:00
	MW-212M	Date Received :	12-NOV-2002
Sample Matrix:	WATER	Date Reported :	19-NOV-2002
Condition of Sample:	Satisfactory	Field Prep:	Field Filtered
Number & Type of Containers: 2-Plastic,2-Vial			

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	88.	mg/l	1.0	1 9251		1119 11:18	ED
Dissolved Metals							
Chromium, Dissolved	ND	mg/l	0.01	1 6010B		1118 10:57	RW
Manganese, Dissolved	3.5	mg/l	0.01	1 6010B		1118 10:57	RW
Sodium, Dissolved	64.	mg/l	20.	1 6010B		1118 17:43	RW
Volatile Organics by GC/MS 8260							
Methylene chloride	ND	ug/l	5.0		1 8260B	1118 13:48	AR
1,1-Dichloroethane	ND	ug/l	0.75				
Chloroform	ND	ug/l	0.75				
Carbon tetrachloride	ND	ug/l	0.50				
1,2-Dichloropropane	ND	ug/l	1.8				
Dibromochloromethane	ND	ug/l	0.50				
1,1,2-Trichloroethane	ND	ug/l	0.75				
Tetrachloroethene	1.8	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				
Bromoform	ND	ug/l	2.0				
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50				
Chloromethane	ND	ug/l	2.5				
Bromomethane	ND	ug/l	1.0				
Vinyl chloride	2.6	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	17.	ug/l	0.50				
1,2-Dichlorobenzene	ND	ug/l	2.5				
1,3-Dichlorobenzene	ND	ug/l	2.5				
1,4-Dichlorobenzene	ND	ug/l	2.5				
cis-1,2-Dichloroethene	25.	ug/l	0.50				
Dichlorodifluoromethane	ND	ug/l	5.0				

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

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0211525-13  
 MW-212M

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	13:48 AR
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	107.	%					
Toluene-d8	101.	%					
4-Bromofluorobenzene	103.	%					
Dibromofluoromethane	103.	%					

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: L0211525-14 Date Collected: 11-NOV-2002 16:45  
MW-102 Date Received : 12-NOV-2002  
Sample Matrix: WATER Date Reported : 19-NOV-2002  
Condition of Sample: Satisfactory Field Prep: Field Filtered  
Number & Type of Containers: 2-Plastic,2-Vial

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	350	mg/l	10.	1 9251		1119 10:41	ED
Dissolved Metals							
Chromium, Dissolved	ND	mg/l	0.01	1 6010B		1118 11:01	RW
Manganese, Dissolved	0.07	mg/l	0.01	1 6010B		1118 11:01	RW
Sodium, Dissolved	54.	mg/l	20.	1 6010B		1118 17:47	RW
Volatile Organics by GC/MS 8260							
Methylene chloride	ND	ug/l	100		1 8260B	1118 20:49	RY
1,1-Dichloroethane	ND	ug/l	15.				
Chloroform	ND	ug/l	15.				
Carbon tetrachloride	ND	ug/l	10.				
1,2-Dichloropropane	ND	ug/l	35.				
Dibromochloromethane	ND	ug/l	10.				
1,1,2-Trichloroethane	ND	ug/l	15.				
Tetrachloroethene	ND	ug/l	10.				
Chlorobenzene	ND	ug/l	10.				
Trichlorofluoromethane	ND	ug/l	50.				
1,2-Dichloroethane	ND	ug/l	10.				
1,1,1-Trichloroethane	ND	ug/l	10.				
Bromodichloromethane	ND	ug/l	10.				
trans-1,3-Dichloropropene	ND	ug/l	10.				
cis-1,3-Dichloropropene	ND	ug/l	10.				
Bromoform	ND	ug/l	40.				
1,1,2,2-Tetrachloroethane	ND	ug/l	10.				
Chloromethane	ND	ug/l	50.				
Bromomethane	ND	ug/l	20.				
Vinyl chloride	ND	ug/l	20.				
Chloroethane	ND	ug/l	20.				
1,1-Dichloroethene	ND	ug/l	10.				
trans-1,2-Dichloroethene	ND	ug/l	15.				
Trichloroethene	640	ug/l	10.				
1,2-Dichlorobenzene	ND	ug/l	50.				
1,3-Dichlorobenzene	ND	ug/l	50.				
1,4-Dichlorobenzene	ND	ug/l	50.				
cis-1,2-Dichloroethene	15.	ug/l	10.				
Dichlorodifluoromethane	ND	ug/l	100				

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L0211525-14  
MW-102

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	20:49 RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	111.	%					
Toluene-d8	103.	%					
4-Bromofluorobenzene	111.	%					
Dibromofluoromethane	104.	%					

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: L0211525-15	Date Collected: 12-NOV-2002 09:35
MW-107	Date Received : 12-NOV-2002
Sample Matrix: WATER	Date Reported : 19-NOV-2002
Condition of Sample: Satisfactory	Field Prep: Field Filtered
Number & Type of Containers: 2-Plastic,2-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	250	mg/l	10.	1 9251		1119 10:43	ED
Dissolved Metals							
Chromium, Dissolved	ND	mg/l	0.01	1 6010B		1118 11:17	RW
Manganese, Dissolved	4.6	mg/l	0.01	1 6010B		1118 11:17	RW
Sodium, Dissolved	37.	mg/l	10.	1 6010B		1118 17:51	RW
Volatile Organics by GC/MS 8260							
Methylene chloride	ND	ug/l	10.		1 8260B	1118 21:24	RY
1,1-Dichloroethane	ND	ug/l	1.5				
Chloroform	ND	ug/l	1.5				
Carbon tetrachloride	ND	ug/l	1.0				
1,2-Dichloropropane	ND	ug/l	3.5				
Dibromochloromethane	ND	ug/l	1.0				
1,1,2-Trichloroethane	ND	ug/l	1.5				
Tetrachloroethene	ND	ug/l	1.0				
Chlorobenzene	ND	ug/l	1.0				
Trichlorofluoromethane	ND	ug/l	5.0				
1,2-Dichloroethane	ND	ug/l	1.0				
1,1,1-Trichloroethane	ND	ug/l	1.0				
Bromodichloromethane	ND	ug/l	1.0				
trans-1,3-Dichloropropene	ND	ug/l	1.0				
cis-1,3-Dichloropropene	ND	ug/l	1.0				
Bromoform	ND	ug/l	4.0				
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0				
Chloromethane	ND	ug/l	5.0				
Bromomethane	ND	ug/l	2.0				
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	72.	ug/l	1.0				
1,2-Dichlorobenzene	ND	ug/l	5.0				
1,3-Dichlorobenzene	ND	ug/l	5.0				
1,4-Dichlorobenzene	ND	ug/l	5.0				
cis-1,2-Dichloroethene	2.8	ug/l	1.0				
Dichlorodifluoromethane	ND	ug/l	10.				

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

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0211525-15  
 MW-107

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	21:24 RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	108.	%					
Toluene-d8	105.	%					
4-Bromofluorobenzene	108.	%					
Dibromofluoromethane	105.	%					

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> L0211525-16	<b>Date Collected:</b> 12-NOV-2002 09:35
MW-108	<b>Date Received :</b> 12-NOV-2002
<b>Sample Matrix:</b> WATER	<b>Date Reported :</b> 19-NOV-2002
<b>Condition of Sample:</b> Satisfactory	<b>Field Prep:</b> Field Filtered
<b>Number &amp; Type of Containers:</b> 2-Plastic,2-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	100	mg/l	5.0	1 9251		1119 11:19	ED
<b>Dissolved Metals</b>							
Chromium, Dissolved	ND	mg/l	0.01	1 6010B		1118 11:21	RW
Manganese, Dissolved	0.64	mg/l	0.01	1 6010B		1118 11:21	RW
Sodium, Dissolved	65.	mg/l	20.	1 6010B		1118 17:55	RW
<b>Volatile Organics by GC/MS 8260</b>							
				1 8260B		1118 19:05	RY
Methylene chloride	ND	ug/l	5.0				
1,1-Dichloroethane	ND	ug/l	0.75				
Chloroform	ND	ug/l	0.75				
Carbon tetrachloride	ND	ug/l	0.50				
1,2-Dichloropropane	ND	ug/l	1.8				
Dibromochloromethane	ND	ug/l	0.50				
1,1,2-Trichloroethane	ND	ug/l	0.75				
Tetrachloroethene	1.2	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				
Bromoform	ND	ug/l	2.0				
1,1,2,2-Tetrachloroethane	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	6.4	ug/l	0.50				
1,2-Dichlorobenzene	ND	ug/l	2.5				
1,3-Dichlorobenzene	ND	ug/l	2.5				
1,4-Dichlorobenzene	ND	ug/l	2.5				
cis-1,2-Dichloroethene	ND	ug/l	0.50				
Dichlorodifluoromethane	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: L0211525-16  
MW-108

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	19:05 RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	113.	%					
Toluene-d8	104.	%					
4-Bromofluorobenzene	104.	%					
Dibromofluoromethane	112.	%					

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: L0211525-17 Date Collected: 12-NOV-2002 09:25  
 MW-214 Date Received : 12-NOV-2002  
 Sample Matrix: WATER Date Reported : 19-NOV-2002  
 Condition of Sample: Satisfactory Field Prep: Field Filtered  
 Number & Type of Containers: 2-Plastic,2-Vial

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	150	mg/l	10.	1 9251		1119 10:44	ED
<b>Dissolved Metals</b>							
Chromium, Dissolved	ND	mg/l	0.01	1 6010B		1118 11:25	RW
Manganese, Dissolved	1.0	mg/l	0.01	1 6010B		1118 11:25	RW
Sodium, Dissolved	48.	mg/l	20.	1 6010B		1118 17:59	RW
<b>Volatile Organics by GC/MS 8260</b>							
Methylene chloride	ND	ug/l	5.0	1 8260B		1118 19:40	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	1.4	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				
Bromoform	ND	ug/l	2.0				
1,1,2,2-Tetrachloroethane	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	3.0	ug/l	0.50				
trans-1,2-Dichloroethene	ND	ug/l	0.75				
Trichloroethene	83.	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	3.6	ug/l	0.50				
Dichlorodifluoromethane	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: L0211525-17  
 MW-214

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	19:40 RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	112.	%					
Toluene-d8	104.	%					
4-Bromofluorobenzene	108.	%					
Dibromofluoromethane	103.	%					

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> L0211525-18	<b>Date Collected:</b> 12-NOV-2002 10:20
MW-101	<b>Date Received :</b> 12-NOV-2002
<b>Sample Matrix:</b> WATER	<b>Date Reported :</b> 19-NOV-2002
<b>Condition of Sample:</b> Satisfactory	<b>Field Prep:</b> Field Filtered
<b>Number &amp; Type of Containers:</b> 2-Plastic,2-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	37.	mg/l	1.0	1 9251		1119 11:20	ED
<b>Dissolved Metals</b>							
Chromium, Dissolved	ND	mg/l	0.01	1 6010B		1118 11:29	RW
Manganese, Dissolved	0.20	mg/l	0.01	1 6010B		1118 11:29	RW
Sodium, Dissolved	29.	mg/l	10.	1 6010B		1118 18:02	RW
<b>Volatile Organics by GC/MS 8260</b>							
Methylene chloride	ND	ug/l	5.0	1 8260B		1119 10:31	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				
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				
Bromoform	ND	ug/l	2.0				
1,1,2,2-Tetrachloroethane	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	0.83	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				

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

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0211525-18  
 MW-101

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1119	10:31 RY
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	112.	%					
Toluene-d8	104.	%					
4-Bromofluorobenzene	107.	%					
Dibromofluoromethane	108.	%					

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

ALPHA ANALYTICAL LABORATORIES  
 QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0211525

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Chloride for sample(s) 01-18 (L0211525-18, WG127850)					
Chloride	37.	36.	mg/l	3	
Dissolved Metals for sample(s) 01-03,05-18 (L0211525-01, WG127654)					
Chromium, Dissolved	ND	ND	mg/l	NC	20
Manganese, Dissolved	0.19	0.19	mg/l	0	20
Sodium, Dissolved	250	230	mg/l	8	20

ALPHA ANALYTICAL LABORATORIES  
 QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0211525

Parameter	% Recovery	QC Criteria
Chloride LCS for sample(s) 01-18 (WG127850)		
Chloride	100	
Volatile Organics by GC/MS 8260 LCS for sample(s) 08,10-13 (WG127635)		
Chlorobenzene	96	
Benzene	104	
Toluene	95	
1,1-Dichloroethene	109	
Trichloroethene	101	
Surrogate(s)		
1,2-Dichloroethane-d4	107	
Toluene-d8	100	
4-Bromofluorobenzene	100	
Dibromofluoromethane	105	
Volatile Organics by GC/MS 8260 LCS for sample(s) 09 (WG127635)		
Chlorobenzene	101	
Benzene	108	
Toluene	99	
1,1-Dichloroethene	109	
Trichloroethene	106	
Surrogate(s)		
1,2-Dichloroethane-d4	110	
Toluene-d8	100	
4-Bromofluorobenzene	97	
Dibromofluoromethane	107	
Volatile Organics by GC/MS 8260 LCS for sample(s) 18 (WG127892)		
Chlorobenzene	103	
Benzene	106	
Toluene	107	
1,1-Dichloroethene	102	
Trichloroethene	101	
Surrogate(s)		
1,2-Dichloroethane-d4	110	
Toluene-d8	102	
4-Bromofluorobenzene	99	
Dibromofluoromethane	107	
Volatile Organics by GC/MS 8260 LCS for sample(s) 14-17 (WG127892)		
Chlorobenzene	106	
Benzene	103	
Toluene	105	
1,1-Dichloroethene	97	
Trichloroethene	101	

ALPHA ANALYTICAL LABORATORIES  
 QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0211525

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 8260 LCS for sample(s) 14-17 (WG127892)		
Surrogate(s)		
1,2-Dichloroethane-d4	111	
Toluene-d8	106	
4-Bromofluorobenzene	103	
Dibromofluoromethane	107	
Volatile Organics by GC/MS 8260 LCS for sample(s) 01-07 (WG127653)		
Chlorobenzene	102	
Benzene	105	
Toluene	103	
1,1-Dichloroethene	99	
Trichloroethene	102	
Surrogate(s)		
1,2-Dichloroethane-d4	109	
Toluene-d8	104	
4-Bromofluorobenzene	99	
Dibromofluoromethane	108	
Volatile Organics by GC/MS 8260 LCS for sample(s) 05-06 (WG127653)		
Chlorobenzene	106	
Benzene	103	
Toluene	105	
1,1-Dichloroethene	97	
Trichloroethene	101	
Surrogate(s)		
1,2-Dichloroethane-d4	111	
Toluene-d8	106	
4-Bromofluorobenzene	103	
Dibromofluoromethane	107	
Chloride SPIKE for sample(s) 01-18 (L0211525-18, WG127850)		
Chloride	95	
Dissolved Metals SPIKE for sample(s) 01-03,05-18 (L0211525-02, WG127654)		
Chromium, Dissolved	98	75-125
Manganese, Dissolved	98	75-125
Sodium, Dissolved	0	75-125



ALPHA ANALYTICAL LABORATORIES  
 QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0211525

Parameter	MS %	MSD %	RPD	RPD Limit	MS/MSD Limits
Volatile Organics by GC/MS 8260 for sample(s) 08-13 (L0211611-03, WG127635)					
Chlorobenzene	104	89	16		
Benzene	108	92	17		
Toluene	101	83	20		
1,1-Dichloroethene	111	91	19		
Trichloroethene	103	86	18		
Surrogate(s)					
1,2-Dichloroethane-d4	112	111	1		
Toluene-d8	102	101	1		
4-Bromofluorobenzene	95	95	0		
Dibromofluoromethane	107	107	0		
Volatile Organics by GC/MS 8260 for sample(s) 01-07 (L0211549-10, WG127653)					
Chlorobenzene	90	96	7		
Benzene	92	96	4		
Toluene	91	94	3		
1,1-Dichloroethene	99	105	6		
Trichloroethene	97	102	5		
Surrogate(s)					
1,2-Dichloroethane-d4	95	102	7		
Toluene-d8	95	96	1		
4-Bromofluorobenzene	87	92	6		
Dibromofluoromethane	96	101	5		
Volatile Organics by GC/MS 8260 for sample(s) 14-18 (L0211525-18, WG127892)					
Chlorobenzene	98	103	5		
Benzene	101	105	4		
Toluene	102	105	3		
1,1-Dichloroethene	107	114	6		
Trichloroethene	110	115	4		
Surrogate(s)					
1,2-Dichloroethane-d4	94	98	4		
Toluene-d8	99	95	4		
4-Bromofluorobenzene	96	95	1		
Dibromofluoromethane	99	101	2		

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

Laboratory Job Number: L0211525

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01-18 (WG127850-1)							
Chloride	ND	mg/l	1.0	1 9251		1119 09:55	ED
Blank Analysis for sample(s) 08,10-13 (WG127635-8)							
Volatile Organics by GC/MS 8260				1 8260B		1118 09:42	AR
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				
1,4-Dichlorobutane	ND	ug/l	5.0				
Iodomethane	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				

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0211525

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 08,10-13 (WG127635-8)							
Volatile Organics by GC/MS 8260 continued				1	8260B		1118 09:42 AR
2-Butanone	ND	ug/l	5.0				
Vinyl acetate	ND	ug/l	5.0				
4-Methyl-2-pentanone	ND	ug/l	5.0				
2-Hexanone	ND	ug/l	5.0				
Ethyl methacrylate	ND	ug/l	5.0				
Acrolein	ND	ug/l	12.				
Acrylonitrile	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	2.5				
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	2.5				
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				
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5				
Ethyl ether	ND	ug/l	2.5				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	109.	%					
Toluene-d8	101.	%					
4-Bromofluorobenzene	101.	%					
Dibromofluoromethane	104.	%					

Blank Analysis for sample(s) 09 (WG127635-10)							
Volatile Organics by GC/MS 8260				1	8260B		1118 16:22 AR
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				

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QUALITY ASSURANCE BATCH BLANK ANALYSIS

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Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 09 (WG127635-10)							
Volatile Organics by GC/MS 8260 continued				1	8260B	1118 16:22 AR	
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				
1,4-Dichlorobutane	ND	ug/l	5.0				
Iodomethane	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				
Vinyl acetate	ND	ug/l	5.0				
4-Methyl-2-pentanone	ND	ug/l	5.0				
2-Hexanone	ND	ug/l	5.0				
Ethyl methacrylate	ND	ug/l	5.0				
Acrolein	ND	ug/l	12.				
Acrylonitrile	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	2.5				

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

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PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 09 (WG127635-10)							
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	16:22 AR
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	2.5				
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				
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5				
Ethyl ether	ND	ug/l	2.5				
Surrogate(s)	Recovery		QC Criteria				
1,2-Dichloroethane-d4	109.	%					
Toluene-d8	100.	%					
4-Bromofluorobenzene	100.	%					
Dibromofluoromethane	107.	%					

Blank Analysis for sample(s) 01-07 (WG127653-8)							
Volatile Organics by GC/MS 8260				1	8260B	1118	09:57 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				

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PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01-07 (WG127653-8)							
Volatile Organics by GC/MS 8260 continued				1	8260B	1118 09:57 RY	
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				
1,4-Dichlorobutane	ND	ug/l	5.0				
Iodomethane	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				
Vinyl acetate	ND	ug/l	5.0				
4-Methyl-2-pentanone	ND	ug/l	5.0				
2-Hexanone	ND	ug/l	5.0				
Ethyl methacrylate	ND	ug/l	5.0				
Acrolein	ND	ug/l	12.				
Acrylonitrile	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	2.5				
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	2.5				
Isopropylbenzene	ND	ug/l	0.50				

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

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PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01-07 (WG127653-8)							
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	09:57 RY
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				
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5				
Ethyl ether	ND	ug/l	2.5				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	110.	%					
Toluene-d8	106.	%					
4-Bromofluorobenzene	106.	%					
Dibromofluoromethane	106.	%					
Blank Analysis for sample(s) 05-06 (WG127653-10)							
Volatile Organics by GC/MS 8260				1	8260B	1118	16:42 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				
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				

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QUALITY ASSURANCE BATCH BLANK ANALYSIS

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PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 05-06 (WG127653-10)							
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	16:42 RY
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				
1,4-Dichlorobutane	ND	ug/l	5.0				
Iodomethane	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				
Vinyl acetate	ND	ug/l	5.0				
4-Methyl-2-pentanone	ND	ug/l	5.0				
2-Hexanone	ND	ug/l	5.0				
Ethyl methacrylate	ND	ug/l	5.0				
Acrolein	ND	ug/l	12.				
Acrylonitrile	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	2.5				
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	2.5				
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				
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5				
Ethyl ether	ND	ug/l	2.5				



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PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 05-06 (WG127653-10)							
Volatile Organics by GC/MS 8260 continued				1	8260B	1118 16:42 RY	
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	113.	%					
Toluene-d8	104.	%					
4-Bromofluorobenzene	105.	%					
Dibromofluoromethane	108.	%					
Blank Analysis for sample(s) 14-17 (WG127892-4)							
Volatile Organics by GC/MS 8260				1	8260B	1118 16:42 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				
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				
1,4-Dichlorobutane	ND	ug/l	5.0				
Iodomethane	ND	ug/l	5.0				
1,2,3-Trichloropropane	ND	ug/l	5.0				

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QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0211525

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 14-17 (WG127892-4)							
Volatile Organics by GC/MS 8260 continued				1	8260B	1118 16:42 RY	
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				
Vinyl acetate	ND	ug/l	5.0				
4-Methyl-2-pentanone	ND	ug/l	5.0				
2-Hexanone	ND	ug/l	5.0				
Ethyl methacrylate	ND	ug/l	5.0				
Acrolein	ND	ug/l	12.				
Acrylonitrile	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	2.5				
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	2.5				
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				
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5				
Ethyl ether	ND	ug/l	2.5				
Surrogate(s)	Recovery		QC Criteria				
1,2-Dichloroethane-d4	113.	%					
Toluene-d8	104.	%					
4-Bromofluorobenzene	105.	%					
Dibromofluoromethane	108.	%					
Blank Analysis for sample(s) 18 (WG127892-6)							
Volatile Organics by GC/MS 8260				1	8260B	1119 09:54 RY	
Methylene chloride	ND	ug/l	5.0				
1,1-Dichloroethane	ND	ug/l	0.75				
Chloroform	ND	ug/l	0.75				

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0211525

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 18 (WG127892-6)							
Volatile Organics by GC/MS 8260 continued				1	8260B	1119 09:54 RY	
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				
1,4-Dichlorobutane	ND	ug/l	5.0				
Iodomethane	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				
Vinyl acetate	ND	ug/l	5.0				
4-Methyl-2-pentanone	ND	ug/l	5.0				
2-Hexanone	ND	ug/l	5.0				
Ethyl methacrylate	ND	ug/l	5.0				
Acrolein	ND	ug/l	12.				
Acrylonitrile	ND	ug/l	5.0				

ALPHA ANALYTICAL LABORATORIES  
 QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0211525

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 18 (WG127892-6)							
Volatile Organics by GC/MS 8260 continued				1	8260B	1119 09:54 RY	
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	2.5				
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	2.5				
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				
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5				
Ethyl ether	ND	ug/l	2.5				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	110.	%					
Toluene-d8	105.	%					
4-Bromofluorobenzene	106.	%					
Dibromofluoromethane	105.	%					

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

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**REFERENCES**

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Update III, 1997.

**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.

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

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:** L0211609  
**Address:** 399 Boylston Street  
6th Floor  
Boston, MA 02116 **Date Received:** 13-NOV-2002  
**Attn:** Mr. Joe Fiacco **Date Reported:** 21-NOV-2002  
**Project Number:** 143.78 **Delivery Method:** Alpha  
**Site:** RAYTHEON

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ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0211609-01	MW-106	WAYLAND
L0211609-02	MW-212	WAYLAND
L0211609-03	MW-44S	WAYLAND
L0211609-04	MW-44D	WAYLAND
L0211609-05	MW-44M	WAYLAND
L0211609-06	MW-44S	WAYLAND
L0211609-07	TRIP BLANK	WAYLAND

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

Scott McLean - Technical Director  
This document electronically signed

ALPHA ANALYTICAL LABORATORIES  
NARRATIVE REPORT

Laboratory Job Number: L0211609

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Alpha Report L0211609:

Volatile Organics

The requested analysis of Volatile Organics by method 8021C could not be performed due to laboratory instrument failure. The analysis was performed by method 8260B with the client's authorization, however, 2-Chloroethylvinyl ether cannot be reported by this method.

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: L0211609-01	Date Collected: 12-NOV-2002 11:25
MW-106	Date Received : 13-NOV-2002
Sample Matrix: WATER	Date Reported : 21-NOV-2002
Condition of Sample: Satisfactory	Field Prep: Field Filtered
Number & Type of Containers: 1-Plastic	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP    ANAL	ID
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Dissolved Metals						
Chromium, Dissolved	ND	mg/l	0.01	1 6010B	1118 12:22	RW
Manganese, Dissolved	0.01	mg/l	0.01	1 6010B	1118 12:22	RW
Sodium, Dissolved	260	mg/l	100	1 6010B	1118 18:06	RW

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



**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

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

Laboratory Sample Number:	L0211609-02	Date Collected:	12-NOV-2002 11:30
	MW-212	Date Received :	13-NOV-2002
Sample Matrix:	WATER	Date Reported :	21-NOV-2002
Condition of Sample:	Satisfactory	Field Prep:	None
Number & Type of Containers:	1-Vial		

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260				1	8260B		1118 16:20 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	0.95	ug/l	0.50				
Chlorobenzene	ND	ug/l	0.50				
Trichlorofluoromethane	3.8	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				
Bromoform	ND	ug/l	2.0				
1,1,2,2-Tetrachloroethane	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	37.	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				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	80.0	%					
Toluene-d8	78.0	%					
4-Bromofluorobenzene	70.0	%					
Dibromofluoromethane	84.0	%					

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





**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L0211609-04  
MW-44D

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	17:39 BT
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	99.0	%					
Toluene-d8	81.0	%					
4-Bromofluorobenzene	77.0	%					
Dibromofluoromethane	98.0	%					

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> L0211609-05	<b>Date Collected:</b> 12-NOV-2002 14:50
MW-44M	<b>Date Received :</b> 13-NOV-2002
<b>Sample Matrix:</b> WATER	<b>Date Reported :</b> 21-NOV-2002
<b>Condition of Sample:</b> Satisfactory	<b>Field Prep:</b> Field Filtered
<b>Number &amp; Type of Containers:</b> 2-Plastic,2-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	52.	mg/l	1.0	1 9251		1119 10:21	ED
Dissolved Metals							
Chromium, Dissolved	ND	mg/l	0.01	1 6010B		1118 12:30	RW
Manganese, Dissolved	0.79	mg/l	0.01	1 6010B		1118 12:30	RW
Sodium, Dissolved	19.	mg/l	2.0	1 6010B		1118 12:30	RW
Volatile Organics by GC/MS 8260							
Methylene chloride	ND	ug/l	5.0		1 8260B	1118 18:18	BT
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				
Bromoform	ND	ug/l	2.0				
1,1,2,2-Tetrachloroethane	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				
cis-1,2-Dichloroethene	ND	ug/l	0.50				
Dichlorodifluoromethane	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: L0211609-05  
MW-44M

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	18:18 BT
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	101.	%					
Toluene-d8	78.0	%					
4-Bromofluorobenzene	71.0	%					
Dibromofluoromethane	91.0	%					

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







ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0211609

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Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Chloride	14.	14.	mg/l	0	

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ALPHA ANALYTICAL LABORATORIES  
 QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0211609

Parameter	% Recovery	QC Criteria
Chloride LCS for sample(s) 04-06 (WG127851)		
Chloride	100	
Volatile Organics by GC/MS 8260 LCS for sample(s) 02-05,07 (WG127806)		
Chlorobenzene	94	
Benzene	91	
Toluene	91	
1,1-Dichloroethene	90	
Trichloroethene	91	
Surrogate(s)		
1,2-Dichloroethane-d4	84	
Toluene-d8	80	
4-Bromofluorobenzene	77	
Dibromofluoromethane	81	
Chloride SPIKE for sample(s) 04-06 (L0211559-01, WG127851)		
Chloride	110	
Dissolved Metals SPIKE for sample(s) 01,04-06 (L0211588-02, WG127658)		
Chromium, Dissolved	90	75-125
Manganese, Dissolved	88	75-125
Sodium, Dissolved	110	75-125

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0211609

Parameter	MS %	MSD %	RPD	RPD Limit	MS/MSD Limits
Volatile Organics by GC/MS 8260 for sample(s) 02-05,07 (L0211566-02, WG127806)					
Chlorobenzene	96	91	5		
Benzene	96	92	5		
Toluene	96	89	8		
1,1-Dichloroethene	97	91	7		
Trichloroethene	95	93	3		
Surrogate(s)					
1,2-Dichloroethane-d4	84	80	5		
Toluene-d8	77	72	7		
4-Bromofluorobenzene	74	73	1		
Dibromofluoromethane	82	78	5		

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0211609

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 04-06 (WG127851-1)							
Chloride	ND	mg/l	1.0	1 9251		1119 09:56	ED
Blank Analysis for sample(s) 02-05,07 (WG127806-6)							
Volatile Organics by GC/MS 8260				1 8260B		1118 13:29	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				
1,4-Dichlorobutane	ND	ug/l	5.0				
Iodomethane	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				

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0211609

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 02-05,07 (WG127806-6)							
Volatile Organics by GC/MS 8260 continued				1	8260B	1118	13:29 BT
2-Butanone	ND	ug/l	5.0				
Vinyl acetate	ND	ug/l	5.0				
4-Methyl-2-pentanone	ND	ug/l	5.0				
2-Hexanone	ND	ug/l	5.0				
Ethyl methacrylate	ND	ug/l	5.0				
Acrolein	ND	ug/l	12.				
Acrylonitrile	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	2.5				
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	2.5				
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				
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5				
Ethyl ether	ND	ug/l	2.5				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	85.0	%					
Toluene-d8	74.0	%					
4-Bromofluorobenzene	71.0	%					
Dibromofluoromethane	87.0	%					

**ALPHA ANALYTICAL LABORATORIES  
ADDENDUM I**

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**REFERENCES**

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Update III, 1997.

**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.

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

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:** L0212269  
**Address:** 399 Boylston Street  
6th Floor **Date Received:** 04-DEC-2002  
Boston, MA 02116 **Date Reported:** 11-DEC-2002  
**Attn:** Mr. Joe Fiacco **Delivery Method:** Alpha  
**Project Number:** 143.78  
**Site:** RAYTHEON

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ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0212269-01	MW-117	WAYLAND, MA
L0212269-02	MW-118	WAYLAND, MA

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: James R. Roth

James R. Roth, PhD - Technical Director  
This document electronically signed

ALPHA ANALYTICAL LABORATORIES  
NARRATIVE REPORT

Laboratory Job Number: L0212269

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Alpha Report L0212269:

Chloride

The matrix spike percent recovery for the analysis of Chloride associated with Alpha Sample(s) L0212269-01 and -02 is invalid because the sample concentration is greater than four times the spike amount added.



**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> L0212269-01	<b>Date Collected:</b> 03-DEC-2002 11:00
MW-117	<b>Date Received :</b> 04-DEC-2002
<b>Sample Matrix:</b> WATER	<b>Date Reported :</b> 11-DEC-2002
<b>Condition of Sample:</b> Satisfactory	<b>Field Prep:</b> Field Filtered
<b>Number &amp; Type of Containers:</b> 2-Plastic,2-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	250	mg/l	10.	1 9251		1205 14:05	ED
Dissolved Metals							
Chromium, Dissolved	0.01	mg/l	0.01	1 6010B		1209 08:05	RW
Manganese, Dissolved	0.07	mg/l	0.01	1 6010B		1209 08:05	RW
Sodium, Dissolved	190	mg/l	40.	1 6010B		1209 08:35	RW
Volatile Organics by GC/MS 8260							
Methylene chloride	ND	ug/l	5.0		1 8260B	1206 14:13	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	2.1	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	30.	ug/l	0.50				
1,2-Dichlorobenzene	ND	ug/l	2.5				
1,3-Dichlorobenzene	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: L0212269-01  
 MW-117

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B	1206 14:13 RY	
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	4.2	ug/l	0.50				
Dibromomethane	ND	ug/l	5.0				
1,4-Dichlorobutane	ND	ug/l	5.0				
Iodomethane	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				
Vinyl acetate	ND	ug/l	5.0				
4-Methyl-2-pentanone	ND	ug/l	5.0				
2-Hexanone	ND	ug/l	5.0				
Ethyl methacrylate	ND	ug/l	5.0				
Acrolein	ND	ug/l	12.				
Acrylonitrile	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	2.5				
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	2.5				
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				
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5				
Ethyl ether	ND	ug/l	2.5				
Surrogate(s)	Recovery		QC Criteria				
1,2-Dichloroethane-d4	111.	%					
Toluene-d8	104.	%					
4-Bromofluorobenzene	107.	%					

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

ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0212269-01  
MW-117

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PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	ID ANAL
Volatile Organics by GC/MS 8260 continued				1 8260B		
Dibromofluoromethane	109.	%			1206 14:13	RY

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



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

Laboratory Sample Number: L0212269-02  
 MW-118

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1 8260B	1206 14:48 RY		
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	0.98	ug/l	0.50				
Dibromomethane	ND	ug/l	5.0				
1,4-Dichlorobutane	ND	ug/l	5.0				
Iodomethane	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				
Vinyl acetate	ND	ug/l	5.0				
4-Methyl-2-pentanone	ND	ug/l	5.0				
2-Hexanone	ND	ug/l	5.0				
Ethyl methacrylate	ND	ug/l	5.0				
Acrolein	ND	ug/l	12.				
Acrylonitrile	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	2.5				
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	2.5				
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				
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5				
Ethyl ether	ND	ug/l	2.5				
Surrogate(s)	Recovery		QC Criteria				
1,2-Dichloroethane-d4	115.	%					
Toluene-d8	103.	%					
4-Bromofluorobenzene	113.	%					

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

ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0212269-02  
MW-118

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PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	ID ANAL
Volatile Organics by GC/MS 8260 continued				1 8260B		
Dibromofluoromethane	110.	%			1206 14:48	RY

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

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0212269

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Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Chloride for sample(s) 01-02 (L0212302-02, WG129010)					
Chloride	240	230	mg/l	4	
Dissolved Metals for sample(s) 01-02 (L0212269-01, WG129138)					
Chromium, Dissolved	0.01	0.01	mg/l	0	20
Manganese, Dissolved	0.07	0.07	mg/l	0	20
Sodium, Dissolved	190	180	mg/l	5	20

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ALPHA ANALYTICAL LABORATORIES  
 QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0212269

Parameter	% Recovery	QC Criteria
Chloride LCS for sample(s) 01-02 (WG129010)		
Chloride	100	
Volatile Organics by GC/MS 8260 LCS for sample(s) 01-02 (WG128988)		
Chlorobenzene	117	
Benzene	108	
Toluene	108	
1,1-Dichloroethene	102	
Trichloroethene	105	
Surrogate(s)		
1,2-Dichloroethane-d4	116	
Toluene-d8	104	
4-Bromofluorobenzene	105	
Dibromofluoromethane	112	
Chloride SPIKE for sample(s) 01-02 (L0212302-02, WG129010)		
Chloride	0	
Dissolved Metals SPIKE for sample(s) 01-02 (L0212269-02, WG129138)		
Chromium, Dissolved	100	75-125
Manganese, Dissolved	98	75-125
Sodium, Dissolved	100	75-125



ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0212269

Parameter	MS %	MSD %	RPD	RPD Limit	MS/MSD Limits
Volatile Organics by GC/MS 8260 for sample(s) 01-02 (L0212167-03, WG128988)					
Chlorobenzene	101	92	10		
Benzene	104	94	11		
Toluene	104	93	11		
1,1-Dichloroethene	107	102	5		
Trichloroethene	113	101	11		
Surrogate(s)					
1,2-Dichloroethane-d4	96	81	17		
Toluene-d8	113	95	17		
4-Bromofluorobenzene	129	108	18		
Dibromofluoromethane	109	92	17		

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0212269

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01-02 (WG129010-1)							
Chloride	ND	mg/l	1.0	1 9251		1205 14:49	ED
Blank Analysis for sample(s) 01-02 (WG128988-10)							
Volatile Organics by GC/MS 8260				1 8260B		1206 10:01	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				
1,4-Dichlorobutane	ND	ug/l	5.0				
Iodomethane	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				

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0212269

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01-02 (WG128988-10)							
Volatile Organics by GC/MS 8260 continued				1	8260B	1206	10:01 RY
2-Butanone	ND	ug/l	5.0				
Vinyl acetate	ND	ug/l	5.0				
4-Methyl-2-pentanone	ND	ug/l	5.0				
2-Hexanone	ND	ug/l	5.0				
Ethyl methacrylate	ND	ug/l	5.0				
Acrolein	ND	ug/l	12.				
Acrylonitrile	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	2.5				
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	2.5				
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				
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5				
Ethyl ether	ND	ug/l	2.5				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	116.	%					
Toluene-d8	103.	%					
4-Bromofluorobenzene	112.	%					
Dibromofluoromethane	107.	%					

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

---

**REFERENCES**

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Update III, 1997.

**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.

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

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