

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: L0404508
Address: 399 Boylston Street
6th Floor
Boston, MA 02116 Date Received: 30-APR-2004
Attn: Jeremy Picard Date Reported: 07-MAY-2004
Project Number: 13606.06 Delivery Method: Alpha
Site: RAYTHEON

The following questions pertain only to MCP Analytical Methods

An affirmative response to questions A,B,C & D is required for "Presumptive Certainty" status

- A. Were all samples received by the laboratory in a condition consistent with those described on their Chain-of-Custody documentation for the data set? YES
- B. Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines? YES
- C. Does the analytical data included in this report meet all the requirements for "Presumptive Certainty", as described in section 2.0 of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"? YES
- D. **VPH and EPH methods only:** Was the VPH or EPH method run without significant modifications, as specified in Section 11.3? NA

A response to questions E and F is required for "Presumptive Certainty" status

- E. Were all QC performance standards and recommendations for the specified method(s) achieved? YES
- F. Were results for all analyte-list compounds/elements for the specified method(s) reported? NO

Any answers of NO to the above questions are addressed in the case narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized by: Scott McLean
This document electronically signed

ALPHA ANALYTICAL LABORATORIES

Laboratory Job Number: L0404508

Date Reported: 07-MAY-2004

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0404508-01	MW-208M	WAYLAND, MA
L0404508-02	MW-208S	WAYLAND, MA

ALPHA ANALYTICAL LABORATORIES
NARRATIVE REPORT

Laboratory Job Number: L0404508

MCP Related Narratives:

Report Submission

In reference to question F, at the client's request, the samples were analyzed only for the compounds specified on the chain of custody.

Metals

L0404508 -01, and -02 required a 5x dilution due to the sodium concentration in the samples.

**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: L0404508-01	Date Collected: 30-APR-2004 09:20
MW-208M	Date Received : 30-APR-2004
Sample Matrix: WATER	Date Reported : 07-MAY-2004
Condition of Sample: Satisfactory	Field Prep: Field Filtered
Number & Type of Containers: 2-Plastic	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	51.	mg/l	1.0	1 9251		0503 22:22	DD
Hexavalent Chromium by MCP 7196A							
Chromium, Hexavalent	ND	mg/l	0.02	55 7196A		0430 23:45	0430 23:45 JT
Dissolved Metals							
Chromium, Dissolved	ND	mg/l	0.01	54 6010B		0507 09:28	RW
Manganese, Dissolved	ND	mg/l	0.01	54 6010B		0507 09:28	RW
Sodium, Dissolved	84.	mg/l	10.	54 6010B		0507 09:25	RW

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

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

Laboratory Sample Number: L0404508-02 Date Collected: 30-APR-2004 11:00
MW-208S Date Received : 30-APR-2004
Sample Matrix: WATER Date Reported : 07-MAY-2004
Condition of Sample: Satisfactory Field Prep: Field Filtered
Number & Type of Containers: 2-Plastic

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Chloride	45.	mg/l	1.0	1 9251		0503 22:25	DD
Hexavalent Chromium by MCP 7196A							
Chromium, Hexavalent	ND	mg/l	0.02	55 7196A	0430 23:45	0430 23:45	JT
Dissolved Metals							
Chromium, Dissolved	ND	mg/l	0.01	54 6010B		0507 09:34	RW
Manganese, Dissolved	0.02	mg/l	0.01	54 6010B		0507 09:34	RW
Sodium, Dissolved	81.	mg/l	10.	54 6010B		0507 10:29	RW

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

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0404508

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Chloride for sample(s) 01-02 (L0404519-01, WG169562)					
Chloride	60.	60.	mg/l	0	7
Hexavalent Chromium by MCP 7196A for sample(s) 01-02 (L0404508-01, WG169449)					
Chromium, Hexavalent	ND	ND	mg/l	NC	20

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0404508

Parameter	% Recovery	QC Criteria
Chloride LCS for sample(s) 01-02 (WG169562)		
Chloride	97	84-110
Hexavalent Chromium by MCP 7196A LCS for sample(s) 01-02 (WG169449)		
Chromium, Hexavalent	100	80-120
Dissolved Metals LCS for sample(s) 01-02 (WG169985)		
Chromium, Dissolved	100	80-120
Manganese, Dissolved	104	80-120
Sodium, Dissolved	110	80-120
Chloride SPIKE for sample(s) 01-02 (L0404519-01, WG169562)		
Chloride	95	58-140
Hexavalent Chromium by MCP 7196A SPIKE for sample(s) 01-02 (L0404508-02, WG169449)		
Chromium, Hexavalent	100	75-125

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0404508

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01-02 (WG169562-2)							
Chloride	ND	mg/l	1.0	1 9251		0503 20:40	DD
Blank Analysis for sample(s) 01-02 (WG169449-1)							
Hexavalent Chromium by MCP 7196A							
Chromium, Hexavalent	ND	mg/l	0.02	55 7196A		0430 23:45	0430 23:45 JT
Blank Analysis for sample(s) 01-02 (WG169985-1)							
Dissolved Metals							
Chromium, Dissolved	ND	mg/l	0.01	54 6010B		0507 09:16	RW
Manganese, Dissolved	ND	mg/l	0.01	54 6010B		0507 09:16	RW
Sodium, Dissolved	ND	mg/l	2.0	54 6010B		0507 09:16	RW

**ALPHA ANALYTICAL LABORATORIES
ADDENDUM I**

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
54. Compendium of Quality Assurance and Quality Control Requirements and Performance Standards for Selected Analytical Methods. MADEP BWSC. Final Methods. May 2003.
55. Compendium of Quality Assurance and Quality Control Requirements and Performance Standards for Selected Analytical Methods. MADEP BWSC. Final Methods. 30 July 2003.

GLOSSARY OF TERMS AND SYMBOLS

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

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

LIMITATION OF LIABILITIES

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

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

ALPHA ANALYTICAL LABORATORIES
LOGIN SPECIFIC INFORMATION

Laboratory Job Number: L0404508

Were project specific reporting limits specified? NO

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0404508-01A	Plastic 250ml unpreserved	A	7	5.7 C	Y	Absent	CL-9251, MCP-HEXCR-7196
L0404508-01B	Plastic 120ml HNO3 preserved	A	<2	5.7 C	Y	Absent	CR-SI, MN-SI, NA-SI
L0404508-02A	Plastic 250ml unpreserved	A	7	5.7 C	Y	Absent	CL-9251, MCP-HEXCR-7196
L0404508-02B	Plastic 120ml HNO3 preserved	A	<2	5.7 C	Y	Absent	CR-SI, MN-SI, NA-SI

Container Comments

Container ID	Comments
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