

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: L0309787
Address: 399 Boylston Street
6th Floor
Boston, MA 02116 Date Received: 30-SEP-2003
Attn: J. Picard Date Reported: 07-OCT-2003
Project Number: 1922.07.2 Delivery Method: Alpha
Site: RAYTHEON

The following questions pertain only to MCP Analytical Methods

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

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

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

- E. Were all QC performance standards and recommendations for the specified method(s) achieved? 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: L0309787

Date Reported: 07-OCT-2003

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0309787-01	MW-204D	WAYLAND
L0309787-02	MW-203D	WAYLAND
L0309787-03	MW-206D	WAYLAND
L0309787-04	MW-206S	WAYLAND
L0309787-05	MW-207M	WAYLAND

ALPHA ANALYTICAL LABORATORIES
NARRATIVE REPORT

Laboratory Job Number: L0309787

MCP Related Narratives

Volatile Organics

In reference to question F, at the client's request, the only those compounds specified on the chain of custody were reported on L0309787-02.

L0309787-02 has elevated limits of detection due to the dilutions required by the elevated concentrations of target compounds in the sample.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0309787-01
 MW-204D

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	1003 19:33 RY		
Dichlorodifluoromethane	ND	ug/l	5.0				
Acetone	ND	ug/l	5.0				
Carbon disulfide	ND	ug/l	5.0				
2-Butanone	ND	ug/l	5.0				
4-Methyl-2-pentanone	ND	ug/l	5.0				
2-Hexanone	ND	ug/l	5.0				
Bromochloromethane	ND	ug/l	2.5				
Tetrahydrofuran	ND	ug/l	10.				
2,2-Dichloropropane	ND	ug/l	2.5				
1,2-Dibromoethane	ND	ug/l	2.5				
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				
Ethyl ether	ND	ug/l	2.5				
Isopropyl Ether	ND	ug/l	2.0				
Ethyl-Tert-Butyl-Ether	ND	ug/l	2.0				
Tertiary-Amyl Methyl Ether	ND	ug/l	2.0				
1,4-Dioxane	ND	ug/l	250				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	105.	%		70-130			
Toluene-d8	99.0	%		70-130			
4-Bromofluorobenzene	107.	%		70-130			
Dibromofluoromethane	100.	%		70-130			

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

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

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

Laboratory Sample Number: L0309787-02	Date Collected: 30-SEP-2003 10:19
MW-203D	Date Received : 30-SEP-2003
Sample Matrix: WATER	Date Reported : 07-OCT-2003
Condition of Sample: Satisfactory	Field Prep: None
Number & Type of Containers: 2-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP ANAL	ID
Volatile Organics by MCP 8260B				54 8260B	1003 13:59 RY	
Methylene chloride	ND	ug/l	10.			
1,1-Dichloroethane	ND	ug/l	1.5			
Chloroform	ND	ug/l	1.5			
Carbon tetrachloride	ND	ug/l	1.0			
1,2-Dichloropropane	ND	ug/l	3.5			
Dibromochloromethane	ND	ug/l	1.0			
1,1,2-Trichloroethane	ND	ug/l	1.5			
Tetrachloroethene	2.4	ug/l	1.0			
Chlorobenzene	ND	ug/l	1.0			
1,2-Dichloroethane	ND	ug/l	1.0			
1,1,1-Trichloroethane	ND	ug/l	1.0			
Bromodichloromethane	ND	ug/l	1.0			
trans-1,3-Dichloropropene	ND	ug/l	1.0			
cis-1,3-Dichloropropene	ND	ug/l	1.0			
Bromoform	ND	ug/l	4.0			
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0			
Chloromethane	ND	ug/l	5.0			
Vinyl chloride	ND	ug/l	2.0			
Chloroethane	ND	ug/l	2.0			
1,1-Dichloroethene	ND	ug/l	1.0			
trans-1,2-Dichloroethene	ND	ug/l	1.5			
Trichloroethene	87.	ug/l	1.0			
1,2-Dichlorobenzene	ND	ug/l	5.0			
1,3-Dichlorobenzene	ND	ug/l	5.0			
1,4-Dichlorobenzene	ND	ug/l	5.0			
Methyl tert butyl ether	ND	ug/l	2.0			
cis-1,2-Dichloroethene	5.4	ug/l	1.0			
Dichlorodifluoromethane	ND	ug/l	10.			
1,2-Dibromoethane	ND	ug/l	5.0			
1,3-Dichloropropane	ND	ug/l	5.0			
1,1,1,2-Tetrachloroethane	ND	ug/l	1.0			
o-Chlorotoluene	ND	ug/l	5.0			
p-Chlorotoluene	ND	ug/l	5.0			
Hexachlorobutadiene	ND	ug/l	5.0			
1,2,4-Trichlorobenzene	ND	ug/l	5.0			

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

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L0309787-02
MW-203D

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	1003 13:59 RY		
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	89.0	%		70-130			
Toluene-d8	98.0	%		70-130			
4-Bromofluorobenzene	114.	%		70-130			
Dibromofluoromethane	99.0	%		70-130			

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

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

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

Laboratory Sample Number: L0309787-03	Date Collected: 30-SEP-2003 12:14
MW-206D	Date Received : 30-SEP-2003
Sample Matrix: WATER	Date Reported : 07-OCT-2003
Condition of Sample: Satisfactory	Field Prep: None
Number & Type of Containers: 2-Vial	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B				54 8260B	1003 20:08 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	27.	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	3.4	ug/l	0.50				
Dibromomethane	ND	ug/l	5.0				
1,2,3-Trichloropropane	ND	ug/l	5.0				
Styrene	ND	ug/l	0.50				

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0309787-03
 MW-206D

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	1003 20:08 RY		
Dichlorodifluoromethane	ND	ug/l	5.0				
Acetone	ND	ug/l	5.0				
Carbon disulfide	ND	ug/l	5.0				
2-Butanone	ND	ug/l	5.0				
4-Methyl-2-pentanone	ND	ug/l	5.0				
2-Hexanone	ND	ug/l	5.0				
Bromochloromethane	ND	ug/l	2.5				
Tetrahydrofuran	ND	ug/l	10.				
2,2-Dichloropropane	ND	ug/l	2.5				
1,2-Dibromoethane	ND	ug/l	2.5				
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				
Ethyl ether	ND	ug/l	2.5				
Isopropyl Ether	ND	ug/l	2.0				
Ethyl-Tert-Butyl-Ether	ND	ug/l	2.0				
Tertiary-Amyl Methyl Ether	ND	ug/l	2.0				
1,4-Dioxane	ND	ug/l	250				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	106.	%		70-130			
Toluene-d8	99.0	%		70-130			
4-Bromofluorobenzene	105.	%		70-130			
Dibromofluoromethane	98.0	%		70-130			

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0309787-04
 MW-206S

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	1003 20:44 RY		
Dichlorodifluoromethane	ND	ug/l	5.0				
Acetone	ND	ug/l	5.0				
Carbon disulfide	ND	ug/l	5.0				
2-Butanone	ND	ug/l	5.0				
4-Methyl-2-pentanone	ND	ug/l	5.0				
2-Hexanone	ND	ug/l	5.0				
Bromochloromethane	ND	ug/l	2.5				
Tetrahydrofuran	ND	ug/l	10.				
2,2-Dichloropropane	ND	ug/l	2.5				
1,2-Dibromoethane	ND	ug/l	2.5				
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				
Ethyl ether	ND	ug/l	2.5				
Isopropyl Ether	ND	ug/l	2.0				
Ethyl-Tert-Butyl-Ether	ND	ug/l	2.0				
Tertiary-Amyl Methyl Ether	ND	ug/l	2.0				
1,4-Dioxane	ND	ug/l	250				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	105.	%		70-130			
Toluene-d8	100.	%		70-130			
4-Bromofluorobenzene	106.	%		70-130			
Dibromofluoromethane	99.0	%		70-130			

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0309787-05
 MW-207M

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by MCP 8260B continued				54 8260B	1006 10:52 RY		
Dichlorodifluoromethane	ND	ug/l	5.0				
Acetone	ND	ug/l	5.0				
Carbon disulfide	ND	ug/l	5.0				
2-Butanone	ND	ug/l	5.0				
4-Methyl-2-pentanone	ND	ug/l	5.0				
2-Hexanone	ND	ug/l	5.0				
Bromochloromethane	ND	ug/l	2.5				
Tetrahydrofuran	ND	ug/l	10.				
2,2-Dichloropropane	ND	ug/l	2.5				
1,2-Dibromoethane	ND	ug/l	2.5				
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				
Ethyl ether	ND	ug/l	2.5				
Isopropyl Ether	ND	ug/l	2.0				
Ethyl-Tert-Butyl-Ether	ND	ug/l	2.0				
Tertiary-Amyl Methyl Ether	ND	ug/l	2.0				
1,4-Dioxane	ND	ug/l	250				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	104.	%		70-130			
Toluene-d8	98.0	%		70-130			
4-Bromofluorobenzene	106.	%		70-130			
Dibromofluoromethane	98.0	%		70-130			

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

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0309787

Parameter	% Recovery	QC Criteria
Volatile Organics by MCP 8260B LCS for sample(s) 02 (WG152480)		
Methylene chloride	80	70-130
1,1-Dichloroethane	95	70-130
Chloroform	94	70-130
Carbon tetrachloride	101	70-130
1,2-Dichloropropane	95	70-130
Dibromochloromethane	92	70-130
1,1,2-Trichloroethane	104	70-130
Tetrachloroethene	105	70-130
Chlorobenzene	105	70-130
1,2-Dichloroethane	83	70-130
1,1,1-Trichloroethane	97	70-130
Bromodichloromethane	93	70-130
trans-1,3-Dichloropropene	90	70-130
cis-1,3-Dichloropropene	90	70-130
Bromoform	113	70-130
1,1,2,2-Tetrachloroethane	107	70-130
Chloromethane	78	70-130
Vinyl chloride	105	70-130
Chloroethane	99	70-130
1,1-Dichloroethene	99	70-130
trans-1,2-Dichloroethene	97	70-130
Trichloroethene	96	70-130
1,2-Dichlorobenzene	99	70-130
1,3-Dichlorobenzene	101	70-130
1,4-Dichlorobenzene	101	70-130
Methyl tert butyl ether	73	70-130
cis-1,2-Dichloroethene	100	70-130
Dichlorodifluoromethane	119	70-130
1,2-Dibromoethane	95	70-130
1,3-Dichloropropane	98	70-130
1,1,1,2-Tetrachloroethane	98	70-130
o-Chlorotoluene	113	70-130
p-Chlorotoluene	109	70-130
Hexachlorobutadiene	113	70-130
1,2,4-Trichlorobenzene	91	70-130
Surrogate(s)		
1,2-Dichloroethane-d4	84	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130
Dibromofluoromethane	95	70-130
Volatile Organics by MCP 8260B LCS for sample(s) 01,03-04 (WG152501)		
Methylene chloride	86	70-130
1,1-Dichloroethane	99	70-130
Chloroform	102	70-130
Carbon tetrachloride	107	70-130
1,2-Dichloropropane	106	70-130

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0309787

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by MCP 8260B LCS for sample(s) 01,03-04 (WG152501)		
Dibromochloromethane	91	70-130
1,1,2-Trichloroethane	95	70-130
Tetrachloroethene	99	70-130
Chlorobenzene	99	70-130
Trichlorofluoromethane	108	70-130
1,2-Dichloroethane	101	70-130
1,1,1-Trichloroethane	106	70-130
Bromodichloromethane	102	70-130
trans-1,3-Dichloropropene	96	70-130
cis-1,3-Dichloropropene	108	70-130
1,1-Dichloropropene	108	70-130
Bromoform	89	70-130
1,1,2,2-Tetrachloroethane	91	70-130
Benzene	91	70-130
Toluene	103	70-130
Ethylbenzene	104	70-130
Chloromethane	103	70-130
Bromomethane	92	70-130
Vinyl chloride	117	70-130
Chloroethane	102	70-130
1,1-Dichloroethene	101	70-130
trans-1,2-Dichloroethene	100	70-130
Trichloroethene	104	70-130
1,2-Dichlorobenzene	94	70-130
1,3-Dichlorobenzene	97	70-130
1,4-Dichlorobenzene	95	70-130
Methyl tert butyl ether	99	70-130
p/m-Xylene	103	70-130
o-Xylene	100	70-130
cis-1,2-Dichloroethene	103	70-130
Dibromomethane	103	70-130
1,2,3-Trichloropropane	97	70-130
Styrene	102	70-130
Dichlorodifluoromethane	108	70-130
Acetone	95	70-130
Carbon disulfide	94	70-130
2-Butanone	86	70-130
4-Methyl-2-pentanone	92	70-130
2-Hexanone	83	70-130
Bromochloromethane	103	70-130
Tetrahydrofuran	98	70-130
2,2-Dichloropropane	101	70-130
1,2-Dibromoethane	96	70-130
1,3-Dichloropropane	100	70-130
1,1,1,2-Tetrachloroethane	96	70-130
Bromobenzene	98	70-130
n-Butylbenzene	110	70-130
sec-Butylbenzene	110	70-130

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0309787

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by MCP 8260B LCS for sample(s) 01,03-04 (WG152501)		
tert-Butylbenzene	107	70-130
o-Chlorotoluene	92	70-130
p-Chlorotoluene	101	70-130
1,2-Dibromo-3-chloropropane	89	70-130
Hexachlorobutadiene	99	70-130
Isopropylbenzene	100	70-130
p-Isopropyltoluene	111	70-130
Naphthalene	92	70-130
n-Propylbenzene	108	70-130
1,2,3-Trichlorobenzene	91	70-130
1,2,4-Trichlorobenzene	94	70-130
1,3,5-Trimethylbenzene	107	70-130
1,2,4-Trimethylbenzene	112	70-130
Ethyl ether	93	70-130
Isopropyl Ether	99	70-130
Ethyl-Tert-Butyl-Ether	98	70-130
Tertiary-Amyl Methyl Ether	99	70-130
1,4-Dioxane	86	70-130
Surrogate(s)		
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130
Dibromofluoromethane	98	70-130
Volatile Organics by MCP 8260B LCS for sample(s) 05 (WG152501)		
Methylene chloride	86	70-130
1,1-Dichloroethane	104	70-130
Chloroform	100	70-130
Carbon tetrachloride	104	70-130
1,2-Dichloropropane	104	70-130
Dibromochloromethane	96	70-130
1,1,2-Trichloroethane	99	70-130
Tetrachloroethene	95	70-130
Chlorobenzene	97	70-130
Trichlorofluoromethane	98	70-130
1,2-Dichloroethane	102	70-130
1,1,1-Trichloroethane	103	70-130
Bromodichloromethane	102	70-130
trans-1,3-Dichloropropene	101	70-130
cis-1,3-Dichloropropene	108	70-130
1,1-Dichloropropene	102	70-130
Bromoform	97	70-130
1,1,2,2-Tetrachloroethane	94	70-130
Benzene	90	70-130
Toluene	100	70-130
Ethylbenzene	102	70-130
Chloromethane	95	70-130

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0309787

Continued

Parameter	% Recovery	QC Criteria
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Volatile Organics by MCP 8260B LCS for sample(s) 05 (WG152501)

Bromomethane	95	70-130
Vinyl chloride	101	70-130
Chloroethane	96	70-130
1,1-Dichloroethene	95	70-130
trans-1,2-Dichloroethene	95	70-130
Trichloroethene	100	70-130
1,2-Dichlorobenzene	95	70-130
1,3-Dichlorobenzene	98	70-130
1,4-Dichlorobenzene	98	70-130
Methyl tert butyl ether	103	70-130
p/m-Xylene	98	70-130
o-Xylene	99	70-130
cis-1,2-Dichloroethene	98	70-130
Dibromomethane	102	70-130
1,2,3-Trichloropropane	102	70-130
Styrene	102	70-130
Dichlorodifluoromethane	85	70-130
Acetone	100	70-130
Carbon disulfide	89	70-130
2-Butanone	93	70-130
4-Methyl-2-pentanone	95	70-130
2-Hexanone	91	70-130
Bromochloromethane	103	70-130
Tetrahydrofuran	107	70-130
2,2-Dichloropropane	106	70-130
1,2-Dibromoethane	99	70-130
1,3-Dichloropropane	101	70-130
1,1,1,2-Tetrachloroethane	99	70-130
Bromobenzene	99	70-130
n-Butylbenzene	100	70-130
sec-Butylbenzene	105	70-130
tert-Butylbenzene	105	70-130
o-Chlorotoluene	101	70-130
p-Chlorotoluene	101	70-130
1,2-Dibromo-3-chloropropane	97	70-130
Hexachlorobutadiene	94	70-130
Isopropylbenzene	98	70-130
p-Isopropyltoluene	105	70-130
Naphthalene	91	70-130
n-Propylbenzene	105	70-130
1,2,3-Trichlorobenzene	91	70-130
1,2,4-Trichlorobenzene	89	70-130
1,3,5-Trimethylbenzene	104	70-130
1,2,4-Trimethylbenzene	107	70-130
Ethyl ether	98	70-130
Isopropyl Ether	97	70-130
Ethyl-Tert-Butyl-Ether	97	70-130
Tertiary-Amyl Methyl Ether	100	70-130

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0309787

Continued

Parameter	% Recovery	QC Criteria
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Volatile Organics by MCP 8260B LCS for sample(s) 05 (WG152501)

1,4-Dioxane	99	70-130
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Surrogate(s)

1,2-Dichloroethane-d4	104	70-130
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Toluene-d8	100	70-130
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4-Bromofluorobenzene	102	70-130
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Dibromofluoromethane	98	70-130
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ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0309787

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 02 (WG152480-2)							
Volatile Organics by MCP 8260B				54 8260B		1003 09:30 RY	
Methylene chloride	ND	ug/l	5.0				
1,1-Dichloroethane	ND	ug/l	0.75				
Chloroform	ND	ug/l	0.75				
Carbon tetrachloride	ND	ug/l	0.50				
1,2-Dichloropropane	ND	ug/l	1.8				
Dibromochloromethane	ND	ug/l	0.50				
1,1,2-Trichloroethane	ND	ug/l	0.75				
Tetrachloroethene	ND	ug/l	0.50				
Chlorobenzene	ND	ug/l	0.50				
1,2-Dichloroethane	ND	ug/l	0.50				
1,1,1-Trichloroethane	ND	ug/l	0.50				
Bromodichloromethane	ND	ug/l	0.50				
trans-1,3-Dichloropropene	ND	ug/l	0.50				
cis-1,3-Dichloropropene	ND	ug/l	0.50				
Bromoform	ND	ug/l	2.0				
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50				
Chloromethane	ND	ug/l	2.5				
Vinyl chloride	ND	ug/l	1.0				
Chloroethane	ND	ug/l	1.0				
1,1-Dichloroethene	ND	ug/l	0.50				
trans-1,2-Dichloroethene	ND	ug/l	0.75				
Trichloroethene	ND	ug/l	0.50				
1,2-Dichlorobenzene	ND	ug/l	2.5				
1,3-Dichlorobenzene	ND	ug/l	2.5				
1,4-Dichlorobenzene	ND	ug/l	2.5				
Methyl tert butyl ether	ND	ug/l	1.0				
cis-1,2-Dichloroethene	ND	ug/l	0.50				
Dichlorodifluoromethane	ND	ug/l	5.0				
1,2-Dibromoethane	ND	ug/l	2.5				
1,3-Dichloropropane	ND	ug/l	2.5				
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50				
o-Chlorotoluene	ND	ug/l	2.5				
p-Chlorotoluene	ND	ug/l	2.5				
Hexachlorobutadiene	ND	ug/l	2.5				
1,2,4-Trichlorobenzene	ND	ug/l	2.5				
Surrogate(s)	Recovery		QC Criteria				
1,2-Dichloroethane-d4	87.0	%	70-130				
Toluene-d8	99.0	%	70-130				
4-Bromofluorobenzene	112.	%	70-130				
Dibromofluoromethane	98.0	%	70-130				

Blank Analysis for sample(s) 01,03-04 (WG152501-2)							
Volatile Organics by MCP 8260B				54 8260B		1003 10:58 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: L0309787

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01,03-04 (WG152501-2)							
Volatile Organics by MCP 8260B continued				54 8260B		1003 10:58 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				
1,2,3-Trichloropropane	ND	ug/l	5.0				
Styrene	ND	ug/l	0.50				
Dichlorodifluoromethane	ND	ug/l	5.0				
Acetone	ND	ug/l	5.0				
Carbon disulfide	ND	ug/l	5.0				
2-Butanone	ND	ug/l	5.0				
4-Methyl-2-pentanone	ND	ug/l	5.0				
2-Hexanone	ND	ug/l	5.0				
Bromochloromethane	ND	ug/l	2.5				
Tetrahydrofuran	ND	ug/l	10.				
2,2-Dichloropropane	ND	ug/l	2.5				
1,2-Dibromoethane	ND	ug/l	2.5				
1,3-Dichloropropane	ND	ug/l	2.5				
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0309787

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01,03-04 (WG152501-2)							
Volatile Organics by MCP 8260B continued				54 8260B		1003 10:58	RY
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				
Ethyl ether	ND	ug/l	2.5				
Isopropyl Ether	ND	ug/l	2.0				
Ethyl-Tert-Butyl-Ether	ND	ug/l	2.0				
Tertiary-Amyl Methyl Ether	ND	ug/l	2.0				
1,4-Dioxane	ND	ug/l	250				
Surrogate(s)	Recovery		QC Criteria				
1,2-Dichloroethane-d4	103.	%	70-130				
Toluene-d8	100.	%	70-130				
4-Bromofluorobenzene	106.	%	70-130				
Dibromofluoromethane	97.0	%	70-130				
Blank Analysis for sample(s) 05 (WG152501-4)							
Volatile Organics by MCP 8260B				54 8260B		1006 10:15	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				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0309787

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 05 (WG152501-4)							
Volatile Organics by MCP 8260B continued				54 8260B		1006 10:15 RY	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50				
Benzene	ND	ug/l	0.50				
Toluene	ND	ug/l	0.75				
Ethylbenzene	ND	ug/l	0.50				
Chloromethane	ND	ug/l	2.5				
Bromomethane	ND	ug/l	1.0				
Vinyl chloride	ND	ug/l	1.0				
Chloroethane	ND	ug/l	1.0				
1,1-Dichloroethene	ND	ug/l	0.50				
trans-1,2-Dichloroethene	ND	ug/l	0.75				
Trichloroethene	ND	ug/l	0.50				
1,2-Dichlorobenzene	ND	ug/l	2.5				
1,3-Dichlorobenzene	ND	ug/l	2.5				
1,4-Dichlorobenzene	ND	ug/l	2.5				
Methyl tert butyl ether	ND	ug/l	1.0				
p/m-Xylene	ND	ug/l	0.50				
o-Xylene	ND	ug/l	0.50				
cis-1,2-Dichloroethene	ND	ug/l	0.50				
Dibromomethane	ND	ug/l	5.0				
1,2,3-Trichloropropane	ND	ug/l	5.0				
Styrene	ND	ug/l	0.50				
Dichlorodifluoromethane	ND	ug/l	5.0				
Acetone	ND	ug/l	5.0				
Carbon disulfide	ND	ug/l	5.0				
2-Butanone	ND	ug/l	5.0				
4-Methyl-2-pentanone	ND	ug/l	5.0				
2-Hexanone	ND	ug/l	5.0				
Bromochloromethane	ND	ug/l	2.5				
Tetrahydrofuran	ND	ug/l	10.				
2,2-Dichloropropane	ND	ug/l	2.5				
1,2-Dibromoethane	ND	ug/l	2.5				
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				

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0309787

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 05 (WG152501-4)							
Volatile Organics by MCP 8260B continued				54 8260B		1006 10:15	RY
1,3,5-Trimethylbenzene	ND	ug/l	2.5				
1,2,4-Trimethylbenzene	ND	ug/l	2.5				
Ethyl ether	ND	ug/l	2.5				
Isopropyl Ether	ND	ug/l	2.0				
Ethyl-Tert-Butyl-Ether	ND	ug/l	2.0				
Tertiary-Amyl Methyl Ether	ND	ug/l	2.0				
1,4-Dioxane	ND	ug/l	250				
Surrogate(s)	Recovery			QC Criteria			
1,2-Dichloroethane-d4	108.	%		70-130			
Toluene-d8	99.0	%		70-130			
4-Bromofluorobenzene	104.	%		70-130			
Dibromofluoromethane	101.	%		70-130			

**ALPHA ANALYTICAL LABORATORIES
ADDENDUM I**

REFERENCES

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

GLOSSARY OF TERMS AND SYMBOLS

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

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

LIMITATION OF LIABILITIES

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

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

ALPHA ANALYTICAL LABORATORIES
LOGIN SPECIFIC INFORMATION

Laboratory Job Number: L0309787

Were project specific reporting limits specified? YES

Cooler Information

Cooler Custody Seal

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0309787-01A	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0309787-01B	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0309787-02A	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0309787-02B	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0309787-03A	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0309787-03B	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0309787-04A	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0309787-04B	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0309787-05A	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260
L0309787-05B	Vial HCl preserved	A	NA	1.7 C	Y	Absent	MCP-8260

Container Comments

Container ID Comments

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

Client Information

Client: ERM
Address: 399 Boylston St
Boston, MA 02116
Phone: (617) 267-8377
Fax: (617) 267-6747
Email:

Project Information

Project Name: Raytheon
Project Location: Wayland
Project #: 1922.07.2
Project Manager: Jeremy P. Ward
ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)
Date Due: 10/7/03 Time:

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: 9/30/03 ALPHA Job #: LO309787

Report Information - Data Deliverables

FAX EMAIL Add'l Deliverables Hard Copy

Regulatory Requirements/Report Limits

State / Fed Program Criteria

MCP PRESUMPTIVE CERTAINTY - THESE QUESTIONS MUST BE ANSWERED

Yes No Are MCP Analytical Methods Required?
 Yes No Are Drinking Water Samples Submitted?
 Yes No Have you met minimum field QC requirements?

ANALYSIS	TOTAL #	BOTTLES	SAMPLE HANDLING
<u>B260</u>	<u>2</u>	<u>2</u>	<u>Filtration</u> <input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do <u>Preservation</u> <input type="checkbox"/> Lab to do (Please specify below)
<u>B021C + MTRF</u>	<u>2</u>	<u>2</u>	
	<u>2</u>	<u>2</u>	
	<u>2</u>	<u>2</u>	
	<u>2</u>	<u>2</u>	

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Time	Sample Matrix	Sampler's Initials
<u>09787.1</u>	<u>MW-2041D</u>	<u>9/30/03</u>	<u>8:30</u>	<u>GW</u>	<u>WS</u>
<u>2</u>	<u>MW-203D</u>	<u>9/30/03</u>	<u>10:14 (10:15)</u> <u>4:35</u>	<u>GW</u>	<u>WS</u>
<u>3</u>	<u>MW-206D</u>	<u>9/30/03</u>	<u>12:14</u>	<u>GW</u>	<u>WS</u>
<u>4</u>	<u>MW-206S</u>	<u>9/30/03</u>	<u>14:33</u>	<u>GW</u>	<u>WS</u>
<u>5</u>	<u>MW-207M</u>	<u>9/30/03</u>	<u>15:28 (16:05)</u>	<u>GW</u>	<u>WS</u>

QUESTIONS ABOVE MUST BE ANSWERED FOR PRESUMPTIVE CERTAINTY

IS YOUR PROJECT MCP?

Relinquished By: William Statham
Date/Time: 9/30/03 10:35 AM

Received By: Paul Beaudry
Date/Time: 9/30/03 11:35 AM

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms. See reverse side.