

ALPHA ANALYTICAL LABORATORIES

RECEIVED OCT 22 1999

Eight Walkup Drive  
Westborough, Massachusetts 01581-1019  
(508) 898-9220

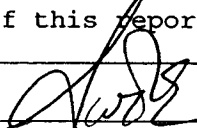
MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

CERTIFICATE OF ANALYSIS

Client: ERM-New England Laboratory Job Number: L9908057  
 Address: 399 Boylston Street Invoice Number: 30761  
 6th Floor Date Received: 06-OCT-99  
 Boston, MA 02116 Date Reported: 20-OCT-99  
 Attn: John McTigue Delivery Method: Alpha  
 Project Number: 143.48  
 Site: RAYTHEON

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9908057-01	T-7-A (0-6")	WAYLAND, MA
L9908057-02	T-7-11 (0-6")	WAYLAND, MA
L9908057-03	T-7-6	WAYLAND, MA
L9908057-04	T-3-6 (0-6")	WAYLAND, MA
L9908057-05	T-3-11 (0-6")	WAYLAND, MA
L9908057-06	T-3-7 (0-6")	WAYLAND, MA
L9908057-07	T-3-1 (0-6")	WAYLAND, MA
L9908057-08	T-3-8 (0-6")	WAYLAND, MA

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately 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 - Laboratory Director

ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908057-01 Date Collected: 05-OCT-1999  
 T-7-A (0-6") Date Received : 06-OCT-1999  
 Sample Matrix: SOIL Date Reported : 20-OCT-99  
 Condition of Sample: Satisfactory Field Prep: None  
 Number & Type of Containers: 1-Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES		ID
						PREP	ANALYSIS	
Solids, Total	24.	%	0.10	30	2540G		20-Oct	T
Sulfide, Acid Volatile	ND	umoles/gm	0.208	36	-		18-Oct	D
Simultaneously Acid Extractable Metals				36	-		18-Oct 20-Oct	MD
Antimony, Simul. Extractable	ND	umoles/gm	0.083					
Bismuth, Simul. Extractable	ND	umoles/gm	0.167					
Cadmium, Simul. Extractable	0.041	umoles/gm	0.008					
Chromium, Simul. Extractable	7.42	umoles/gm	0.016					
Copper, Simul. Extractable	20.7	umoles/gm	0.016					
Lead, Simul. Extractable	1.66	umoles/gm	0.083					
Mercury, Simul. Extractable	ND	umoles/gm	0.0004					
Nickel, Simul. Extractable	0.120	umoles/gm	0.041					
Zinc, Simul. Extractable	2.06	umoles/gm	0.016					

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908057-02  
 T-7-11 (0-6")  
 Date Collected: 05-OCT-1999  
 Date Received : 06-OCT-1999  
 Sample Matrix: SOIL  
 Date Reported : 20-OCT-99  
 Condition of Sample: Satisfactory  
 Field Prep: None  
 Number & Type of Containers: 1-Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	II
Solids, Total	11.	%	0.10	30	2540G	20-Oct	JT
Sulfide, Acid Volatile	3.54	umoles/gm	0.454	36	-	18-Oct	DI
Simultaneously Acid Extractable Metals				36	-	18-Oct 20-Oct	MI
Antimony, Simul. Extractable	ND	umoles/gm	0.182				
Bismuth, Simul. Extractable	ND	umoles/gm	0.364				
Cadmium, Simul. Extractable	ND	umoles/gm	0.018				
Chromium, Simul. Extractable	4.63	umoles/gm	0.036				
Copper, Simul. Extractable	24.6	umoles/gm	0.036				
Lead, Simul. Extractable	1.65	umoles/gm	0.182				
Mercury, Simul. Extractable	ND	umoles/gm	0.0009				
Nickel, Simul. Extractable	ND	umoles/gm	0.090				
Zinc, Simul. Extractable	2.40	umoles/gm	0.036				

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908057-03  
 T-7-6  
 Sample Matrix: SOIL  
 Condition of Sample: Satisfactory  
 Number & Type of Containers: 1-Glass

Date Collected: 05-OCT-1999  
 Date Received : 06-OCT-1999  
 Date Reported : 20-OCT-99  
 Field Prep: None

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES		ID
						PREP	ANALYSIS	
Solids, Total	14.	%	0.10	30	2540G		20-Oct	T
Sulfide, Acid Volatile	ND	umoles/gm	0.357	36	-		18-Oct	D
Simultaneously Acid Extractable Metals				36	-		18-Oct 20-Oct	MD
Antimony, Simul. Extractable	ND	umoles/gm	0.143					
Bismuth, Simul. Extractable	ND	umoles/gm	0.286					
Cadmium, Simul. Extractable	0.050	umoles/gm	0.014					
Chromium, Simul. Extractable	8.92	umoles/gm	0.028					
Copper, Simul. Extractable	45.8	umoles/gm	0.028					
Lead, Simul. Extractable	2.49	umoles/gm	0.143					
Mercury, Simul. Extractable	ND	umoles/gm	0.0007					
Nickel, Simul. Extractable	0.275	umoles/gm	0.071					
Zinc, Simul. Extractable	2.87	umoles/gm	0.028					

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908057-04  
 T-3-6 (0-6")  
 Sample Matrix: SOIL  
 Condition of Sample: Satisfactory  
 Number & Type of Containers: 1-Glass

Date Collected: 06-OCT-1999  
 Date Received : 06-OCT-1999  
 Date Reported : 20-OCT-99  
 Field Prep: None

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	22.	%	0.10	30	2540G	19-Oct	ST
Sulfide, Acid Volatile	ND	umoles/gm	0.227	36	-	18-Oct	DD
Simultaneously Acid Extractable Metals				36	-	18-Oct 20-Oct	MD
Antimony, Simul. Extractable	ND	umoles/gm	0.090				
Bismuth, Simul. Extractable	ND	umoles/gm	0.182				
Cadmium, Simul. Extractable	0.030	umoles/gm	0.009				
Chromium, Simul. Extractable	3.86	umoles/gm	0.018				
Copper, Simul. Extractable	17.9	umoles/gm	0.018				
Lead, Simul. Extractable	3.14	umoles/gm	0.090				
Mercury, Simul. Extractable	ND	umoles/gm	0.0004				
Nickel, Simul. Extractable	0.128	umoles/gm	0.045				
Zinc, Simul. Extractable	3.08	umoles/gm	0.018				

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908057-05  
 T-3-11 (0-6")  
 Date Collected: 06-OCT-1999  
 Date Received : 06-OCT-1999  
 Sample Matrix: SOIL  
 Date Reported : 20-OCT-99  
 Condition of Sample: Satisfactory  
 Field Prep: None  
 Number & Type of Containers: 1-Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES	
						PREP	ANALYSIS
Solids, Total	55.	%	0.10	30	2540G		19-Oct
Sulfide, Acid Volatile	1.13	umoles/gm	0.090	36	-		18-Oct
Simultaneously Acid Extractable Metals						36	18-Oct 20-Oct
Antimony, Simul. Extractable	ND	umoles/gm	0.036				
Bismuth, Simul. Extractable	ND	umoles/gm	0.072				
Cadmium, Simul. Extractable	0.028	umoles/gm	0.003				
Chromium, Simul. Extractable	0.095	umoles/gm	0.007				
Copper, Simul. Extractable	0.894	umoles/gm	0.007				
Lead, Simul. Extractable	0.728	umoles/gm	0.036				
Mercury, Simul. Extractable	0.0002	umoles/gm	0.0001				
Nickel, Simul. Extractable	0.093	umoles/gm	0.018				
Zinc, Simul. Extractable	0.977	umoles/gm	0.007				

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number:	L9908057-06	Date Collected:	06-OCT-1999
	T-3-7 (0-6")	Date Received :	06-OCT-1999
Sample Matrix:	SOIL	Date Reported :	20-OCT-99
Condition of Sample:	Satisfactory	Field Prep:	None
Number & Type of Containers:	1-Glass		

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	II
Solids, Total	50.	%	0.10	30	2540G	19-Oct	ST
Sulfide, Acid Volatile	1.51	umoles/gm	0.100	36	-	18-Oct	DD
Simultaneously Acid Extractable Metals				36	-	18-Oct 20-Oct	MD
Antimony, Simul. Extractable	ND	umoles/gm	0.040				
Bismuth, Simul. Extractable	ND	umoles/gm	0.080				
Cadmium, Simul. Extractable	0.009	umoles/gm	0.004				
Chromium, Simul. Extractable	0.617	umoles/gm	0.008				
Copper, Simul. Extractable	3.48	umoles/gm	0.008				
Lead, Simul. Extractable	0.903	umoles/gm	0.040				
Mercury, Simul. Extractable	ND	umoles/gm	0.0002				
Nickel, Simul. Extractable	0.078	umoles/gm	0.020				
Zinc, Simul. Extractable	3.79	umoles/gm	0.008				

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908057-07  
 Date Collected: 06-OCT-1999  
 Sample Matrix: T-3-1 (0-6") SOIL  
 Date Received : 06-OCT-1999  
 Date Reported : 20-OCT-99  
 Condition of Sample: Satisfactory  
 Field Prep: None  
 Number & Type of Containers: 1-Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES			
						PREP	ANALYSIS		
Solids, Total	20.	%	0.10	30	2540G		19-Oct	TI	
Sulfide, Acid Volatile	2.90	umoles/gm	0.250	36	-		18-Oct	TI	
<b>Simultaneously Acid Extractable Metals</b>						36	-	18-Oct 20-Oct	MI
Antimony, Simul. Extractable	ND	umoles/gm	0.100						
Bismuth, Simul. Extractable	ND	umoles/gm	0.200						
Cadmium, Simul. Extractable	0.061	umoles/gm	0.010						
Chromium, Simul. Extractable	0.830	umoles/gm	0.020						
Copper, Simul. Extractable	5.06	umoles/gm	0.020						
Lead, Simul. Extractable	0.706	umoles/gm	0.100						
Mercury, Simul. Extractable	0.0029	umoles/gm	0.0005						
Nickel, Simul. Extractable	0.198	umoles/gm	0.050						
Zinc, Simul. Extractable	3.54	umoles/gm	0.020						

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



**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908057-08  
 T-3-8 (0-6")  
 Sample Matrix: SOIL  
 Condition of Sample: Satisfactory  
 Number & Type of Containers: 1-Glass

Date Collected: 06-OCT-1999  
 Date Received : 06-OCT-1999  
 Date Reported : 20-OCT-99  
 Field Prep: None

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	17.	%	0.10	30	2540G		19-Oct ST
Sulfide, Acid Volatile	ND	umoles/gm	0.294	36	-		18-Oct DD
Simultaneously Acid Extractable Metals				36	-		18-Oct 20-Oct MD
Antimony, Simul. Extractable	0.239	umoles/gm	0.118				
Bismuth, Simul. Extractable	ND	umoles/gm	0.235				
Cadmium, Simul. Extractable	0.202	umoles/gm	0.011				
Chromium, Simul. Extractable	121.	umoles/gm	0.023				
Copper, Simul. Extractable	153.	umoles/gm	0.023				
Lead, Simul. Extractable	5.89	umoles/gm	0.118				
Mercury, Simul. Extractable	0.0011	umoles/gm	0.0005				
Nickel, Simul. Extractable	0.170	umoles/gm	0.058				
Zinc, Simul. Extractable	4.38	umoles/gm	0.023				

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

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L9908057

Parameter	Value 1	Value 2	RPD	Units
Solids, Total for sample(s) 04-08				
Solids, Total	89.	89.	0	%

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L9908057

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Parameter	% Recovery
Sulfide, Acid Volatile LCS for sample(s) 01-08	
Sulfide, Acid Volatile	83

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ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L9908057

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS
Blank Analysis for sample(s) 01-08						
Sulfide, Acid Volatile	ND	umoles/gm	0.050	36	-	18-Oct DD

**ALPHA ANALYTICAL LABORATORIES  
ADDENDUM I**

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**REFERENCES**

30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
36. Draft Analytical Method for Determination of Acid Volatile Sulfide and Selected Simultaneously Extractable Metals in Sediment. PB93-155901, 1991.

**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.

**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.

Eight Walkup Drive Westborough, MA 01581  
 PH: 508.898.9220 FAX: 508.898.9193 www.alphalab.com

**CHAIN OF CUSTODY**

No 001523

Sheet 1 of 2

Date Rec'd in Lab: 10/6

Date Due: 10/20

Client Name: ERM  
 Client Address: 399 Boylston St., 6<sup>th</sup> Fl.  
Boston, MA 02116  
 Phone #: (617) 267-8377 FAX #: (617) 267-6442

Project Name: Rathneon-  
 Project Location: Wayland  
 Project #: 143.48  
 Project Manager: John McTigue

Report To: John McTigue  
 Bill To: same  
 PO#: 143.48

- Standard TAT
- RUSH TAT \_\_\_\_\_ ( \* DAYS)
- FAX Results
- State Forms
- Smart Report

**Comments** (Please note specific method, detection limit or reporting requirements.)  
 Refer to Alpha B-ID - Revised  
 Check w/ Ellen & Scott  
 or call John McTigue  
 Split w/ 8056 + 8058

**ANALYSIS REQUEST**

Sample ID	Matrix/Source *	Sampling Date	Sampling Time	Sampler's Initials	Solubles: Field Filtered? (Y/N)	PCB 8082	PAH 6270	EPH Standard	VPM	ICP Metals List	TOC	AUS/SEM
T-7-A (0-6")			10:27			✓	✓	✓		✓	✓	✓
T-7-A (12-18")			10:31			✓	✓	✓		✓	✓	
T-7-7 (0-6")			10:53			✓	✓	✓		✓	✓	
T-7-11 (0-6")			10:43			✓	✓	✓		✓	✓	✓
T-7-6		10/5/11	16:05		N	✓	✓	✓		✓	✓	✓
T-7-6 (12-18")		10/5/11	16:05	RDE		✓	✓	✓		✓	✓	✓
T-3-6 (0-6")	sediment	10/6/11	11:15			✓	✓	✓	✓	✓	✓	✓
T-3-6 (12-18")		10/6/11	11:16			✓	✓	✓		✓	✓	
T-3-6 (18+")		10/6/11	11:20			✓	✓	✓		✓	✓	
T-3-11 (0-6")		10/6/11	12:45			✓	✓	✓		✓	✓	✓
T-3-11 (12-18")		10/6/11	12:50			✓	✓	✓		✓	✓	✓

Transfers Accepted By:	Date	Time
<i>[Signature]</i>	10/6/11	1645
<i>[Signature]</i>	10/6/11	1645

Transfers Relinquished By:
<i>Rachel Shenail</i>

All samples submitted are subject to Alpha's standard Terms and Conditions.  
 \* See Reverse side for Matrix, Container, and Preservative Codes.

# of Containers:	11	8	7	1	11	10	5
Container Type: *	G	G					
Preservative: *	A	A					

Eight Walkup Drive Westborough, MA 01581  
 PH: 508.898.9220 FAX: 508.898.9193 www.alphalab.com

**CHAIN OF CUSTODY**

No 001524

Sheet 2 of 2

Date Rec'd in Lab: 10/16

Date Due: 10/20

Client Name: ERM  
 Client Address: 399 Boylston St. 6<sup>th</sup> Fl  
Boston, MA 02116  
 Phone #: (617) 267-8377 FAX #: (617) 267-6447

Project Name: Raytheon  
 Project Location: Wayland  
 Project #: 143.46  
 Project Manager: John McTigue

Report To: John McTigue  
 Bill To: (same)  
 PO#: 143.46

- Standard TAT
- RUSH TAT \_\_\_\_\_  
(# DAYS)
- FAX Results
- State Forms
- Smart Report

Comments (Please note specific method, detection limit or reporting requirements.)

**ANALYSIS REQUEST**

ALPHA Lab #	Sample ID	Matrix/Source *	Sampling Date	Sampling Time	Sampler's Initials	Solubles: Field Filtered? (Y/N)	PCB 8082	PAH 8270	OPH Standard	VPH	ICP Metals	TOC	AVS/SBM	
	T-3-7 (0-6")						✓	✓	✓	✓	✓	✓		
	T-3-1 (0-6")						✓	✓	✓	✓	✓	✓		
	T-3-1 (12-18")						✓	✓	✓	✓	✓	✓		
	T-3-11 (0-6")						✓	✓	✓	✓	✓	✓		
	T-3-4 (12-18")						✓	✓	✓	✓	✓	✓		
	T-3-8 (0-6')	SEDIMENT	10/6/99		PAC		✓	✓	✓	✓	✓	✓	✓	
	T-3-8 (12-18")					✓	✓	✓	✓	✓	✓	✓	✓	
	T-3-8 (18+ ")					✓	✓	✓	✓	✓	✓	✓	✓	
	T-3-13 (0-6")					✓	✓	✓	✓	✓	✓	✓	✓	

Transfers Relinquished By:	Date	Time
<u>Erin Chenail</u>	<u>10/19</u>	<u>1645</u>
<u>John Keller</u>	<u>10/19</u>	<u>1645</u>

All samples submitted are subject to Alpha's standard Terms and Conditions.  
 \* See Reverse side for Matrix, Container, and Preservative Codes.

# of Containers:	9	6	5	9	9	4
Container Type: *	G					
Preservative: *	A					

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive  
Westborough, Massachusetts 01581-1019  
(508) 898-9220

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

CERTIFICATE OF ANALYSIS

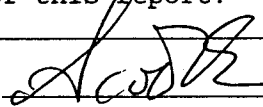
Client: ERM-New England Laboratory Job Number: L9908060  
Address: 399 Boylston Street Invoice Number: 30754  
6th Floor  
Boston, MA 02116 Date Received: 06-OCT-99  
Attn: John McTigue Date Reported: 20-OCT-99  
Project Number: 143.48 Delivery Method: Alpha  
Site: RAYTHEON

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ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9908060-01	T-2-9 (0-6")	WAYLAND, MA
L9908060-02	T-5-7 (0-6")	WAYLAND, MA
L9908060-03	T-5-A (0-6")	WAYLAND, MA
L9908060-04	T-5-6 (0-6")	WAYLAND, MA
L9908060-05	T-5-9 (0-6")	WAYLAND, MA

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately 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 - Laboratory Director



**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908060-01  
 T-2-9 (0-6")  
 Sample Matrix: SOIL  
 Condition of Sample: Satisfactory  
 Number & Type of Containers: 1-Glass  
 Date Collected: 06-OCT-1999  
 Date Received : 06-OCT-1999  
 Date Reported : 20-OCT-99  
 Field Prep: None

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES		ID
						PREP	ANALYSIS	
Solids, Total	85.	%	0.10	30	2540G		18-Oct	K
Sulfide, Acid Volatile	ND	umoles/gm	0.058	36	-		18-Oct	D
Simultaneously Acid Extractable Metals				36	-		18-Oct 20-Oct	MD
Antimony, Simul. Extractable	ND	umoles/gm	0.023					
Bismuth, Simul. Extractable	ND	umoles/gm	0.047					
Cadmium, Simul. Extractable	ND	umoles/gm	0.002					
Chromium, Simul. Extractable	0.029	umoles/gm	0.004					
Copper, Simul. Extractable	0.072	umoles/gm	0.004					
Lead, Simul. Extractable	0.034	umoles/gm	0.023					
Mercury, Simul. Extractable	ND	umoles/gm	0.0001					
Nickel, Simul. Extractable	0.014	umoles/gm	0.011					
Zinc, Simul. Extractable	0.125	umoles/gm	0.004					

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908060-02  
 T-5-7 (0-6")  
 Sample Matrix: SOIL  
 Condition of Sample: Satisfactory  
 Number & Type of Containers: 1-Glass

Date Collected: 06-OCT-1999  
 Date Received : 06-OCT-1999  
 Date Reported : 20-OCT-99  
 Field Prep: None

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	16.	%	0.10	30	2540G	18-Oct	KK
Sulfide, Acid Volatile	ND	umoles/gm	0.312	36	-	18-Oct	DD
Simultaneously Acid Extractable Metals				36	-	18-Oct 20-Oct	MD
Antimony, Simul. Extractable	ND	umoles/gm	0.125				
Bismuth, Simul. Extractable	ND	umoles/gm	0.250				
Cadmium, Simul. Extractable	0.066	umoles/gm	0.012				
Chromium, Simul. Extractable	23.0	umoles/gm	0.025				
Copper, Simul. Extractable	102.	umoles/gm	0.025				
Lead, Simul. Extractable	3.13	umoles/gm	0.125				
Mercury, Simul. Extractable	ND	umoles/gm	0.0006				
Nickel, Simul. Extractable	0.129	umoles/gm	0.062				
Zinc, Simul. Extractable	3.05	umoles/gm	0.025				

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

ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908060-03  
 Date Collected: 06-OCT-1999  
 Sample Matrix: T-5-A (0-6") SOIL  
 Date Received: 06-OCT-1999  
 Date Reported: 20-OCT-99  
 Condition of Sample: Satisfactory  
 Field Prep: None  
 Number & Type of Containers: 1-Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES		II	
						PREP	ANALYSIS		
Solids, Total	18.	%	0.10	30	2540G		18-Oct	JK	
Sulfide, Acid Volatile	2.44	umoles/gm	0.278	36	-		18-Oct	DE	
Simultaneously Acid Extractable Metals						36	-	18-Oct 20-Oct	ME
Antimony, Simul. Extractable	ND	umoles/gm	0.111						
Bismuth, Simul. Extractable	ND	umoles/gm	0.222						
Cadmium, Simul. Extractable	0.050	umoles/gm	0.011						
Chromium, Simul. Extractable	5.88	umoles/gm	0.022						
Copper, Simul. Extractable	17.9	umoles/gm	0.022						
Lead, Simul. Extractable	1.64	umoles/gm	0.111						
Mercury, Simul. Extractable	ND	umoles/gm	0.0005						
Nickel, Simul. Extractable	0.180	umoles/gm	0.055						
Zinc, Simul. Extractable	2.62	umoles/gm	0.022						

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908060-04	Date Collected: 06-OCT-1999
Sample Matrix: T-5-6 (0-6")	Date Received : 06-OCT-1999
Sample Matrix: SOIL	Date Reported : 20-OCT-99
Condition of Sample: Satisfactory	Field Prep: None
Number & Type of Containers: 1-Glass	

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	14.	%	0.10	30	2540G	18-Oct	KK
Sulfide, Acid Volatile	ND	umoles/gm	0.357	36	-	18-Oct	DD
Simultaneously Acid Extractable Metals				36	-	18-Oct 20-Oct	MD
Antimony, Simul. Extractable	ND	umoles/gm	0.143				
Bismuth, Simul. Extractable	ND	umoles/gm	0.286				
Cadmium, Simul. Extractable	0.132	umoles/gm	0.014				
Chromium, Simul. Extractable	34.1	umoles/gm	0.028				
Copper, Simul. Extractable	142.	umoles/gm	0.028				
Lead, Simul. Extractable	5.48	umoles/gm	0.143				
Mercury, Simul. Extractable	0.0011	umoles/gm	0.0007				
Nickel, Simul. Extractable	0.211	umoles/gm	0.071				
Zinc, Simul. Extractable	4.17	umoles/gm	0.028				

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908060-05	Date Collected: 06-OCT-1999
Sample Matrix: SOIL	Date Received : 06-OCT-1999
Condition of Sample: Satisfactory	Date Reported : 20-OCT-99
Number & Type of Containers: 1-Glass	Field Prep: None

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	16.	%	0.10	30	2540G	18-Oct	JK
Sulfide, Acid Volatile	ND	umoles/gm	0.312	36	-	18-Oct	JD
Simultaneously Acid Extractable Metals				36	-	18-Oct 20-Oct	MD
Antimony, Simul. Extractable	ND	umoles/gm	0.125				
Bismuth, Simul. Extractable	ND	umoles/gm	0.250				
Cadmium, Simul. Extractable	0.058	umoles/gm	0.012				
Chromium, Simul. Extractable	35.2	umoles/gm	0.025				
Copper, Simul. Extractable	96.0	umoles/gm	0.025				
Lead, Simul. Extractable	4.79	umoles/gm	0.125				
Mercury, Simul. Extractable	0.0015	umoles/gm	0.0006				
Nickel, Simul. Extractable	0.152	umoles/gm	0.062				
Zinc, Simul. Extractable	1.64	umoles/gm	0.025				

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

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L9908060

Parameter	Value 1	Value 2	RPD	Units
Solids, Total for sample(s) 01-05				
Solids, Total	93.	93.	0	%

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L9908060

Parameter	% Recovery
Sulfide, Acid Volatile LCS for sample(s) 01-05	
Sulfide, Acid Volatile	83

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L9908060

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Blank Analysis for sample(s) 01-05							
Sulfide, Acid Volatile	ND	umoles/gm	0.050	36	-	18-Oct	DD



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

---

**REFERENCES**

30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
36. Draft Analytical Method for Determination of Acid Volatile Sulfide and Selected Simultaneously Extractable Metals in Sediment. PB93-155901, 1991.

**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.

**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.

Eight Walkup Drive Westborough, MA 01581  
 PH: 508.898.9220 FAX: 508.898.9193 www.alphalab.com

**CHAIN OF CUSTODY**

No 001525

Sheet 1 of 2

Date Rec'd in Lab: 10/6

Date Due: 10/22

Client Name: ERM  
 Client Address: 399 Boylston St. 6<sup>th</sup> Floor  
Boston, MA 02116  
 Phone #: (617) 267-8377 FAX #: (617) 267-

Project Name: Raytheon-  
 Project Location: Wayland  
 Project #: 143.48  
 Project Manager: John McTigue

Report To: John McTigue  
 Bill To: (same)  
 PO#: 143.48

- Standard TAT
- RUSH TAT (\* DAYS)
- FAX Results
- State Forms
- Smart Report

Comments (Please note specific method, detection limit or reporting requirements.)

Refer to Alpha BiD - Revised  
See Ellen & Scott  
& call John McTigue

**ANALYSIS REQUEST**

Sample ID	Matrix/Source *	Sampling Date	Sampling Time	Sampler's Initials	Solubles: Field Filtered? (Y/N)	PCBs 8260	PAH 8270	EPH Standard	VPH	ICP Metals	TOC	AN/SEM
T-2-9 (0-6")	↑	↑	13:50	↑	↑	✓	✓			✓	✓	✓
T-2-9 (12-18")	↑	↑	13:55	↑	↑	✓	✓			✓	✓	✓
T-2-9 (18+ ")	↑	↑	13:56	↑	↑	✓	✓			✓	✓	✓
T-5-7 (0-6")	↑	↑	14:33	↑	↑	✓	✓	✓		✓	✓	✓
T-5-7 (12-18")	↑	↑	14:38	↑	↑	✓	✓	✓		✓	✓	✓
T-5-A (0-6")	↑	↑	14:48	↑	↑	✓	✓	✓		✓	✓	✓
T-5-A (12-18")	↑	↑	14:50	↑	↑	✓	✓	✓		✓	✓	✓
T-5-12 (0-6")	↑	↑	14:42	↑	↑	✓				✓	✓	
T-5-C (0-6")	↑	↑	14:10	↑	↑	✓				✓	✓	
T-5-6 (0-6")	↑	↑	14:25	↑	↑	✓	✓	✓		✓	✓	✓
T-5-10 (0-6")	↑	↑	14:07	↑	↑	✓				✓	✓	✓

Transfers Accepted By:	Date	Time
	10/6/00	1645
	10/6/00	1645
Transfers Relinquished By:		

All samples submitted are subject to Alpha's standard Terms and Conditions.

\* See Reverse side for Matrix, Container, and Preservative Codes.

# of Containers:	11	8	5	2	11	11	4
Container Type: *	G						
Preservative: *	A						

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 PH: 508.898.9220 FAX: 508.898.9193 www.alphalab.com

**CHAIN OF CUSTODY**

No 001526

Sheet 2 of 2

ALPHA Job #                       
 Date Rec'd in Lab: 10/6 Date Due:                     

Client Name: ERM  
 Client Address: 399 Baylston St., 6<sup>th</sup> Floor  
Boston, MA 02116  
 Phone #: (617) 267-8377 FAX #: (617) 267-6447

Project Name: Raytheon -  
 Project Location: Wayland  
 Project #: 143.48  
 Project Manager: John McTigue

Report To: John McTigue  
 Bill To: (same)  
 PO #: 143.48

- Standard TAT
- RUSH TAT \_\_\_\_\_ (\* DAYS)
- FAX Results
- State Forms
- Smart Report

Comments (Please note specific method, detection limit or reporting requirements.)

**ANALYSIS REQUEST**

Sample ID	Matrix/Source *	Sampling Date	Sampling Time	Sampler's Initials	Solubles: Field Filtered? (Y/N)	PCB 8082	ICP Metals Crst	TOX	AVS	GRAIN SIZE Analysis
T-5-9 (0-6")	SEDIMENT	10/6/99		ROC	N	✓	✓	✓	✓	✓
Peat w/ decay roots										
fine gray silt										
dark brown/black peat										
Plant decay mat										
Med. Sand										

Transfers Accepted By:	Date	Time
	10/6/99	1645
	10/6/99	1645

Transfers Relinquished By:

All samples submitted are subject to Alpha's standard Terms and Conditions.  
 \* See Reverse side for Matrix, Container, and Preservative Codes.

# of Containers:	1	1	1	1	5
Container Type: *	G				

RECEIVED OCT 22 1990

Eight Walkup Drive  
Westborough, MA 01581-1019  
(508) 898-9220 FAX: (508) 898-9193

**ALPHA**

A N A L Y T I C A L L A B S

Dear John McTigue,

The attached report is a correction stating the new Hydrometer analysis. If you have any questions please don't hesitate to call me at the above telephone number.

Catherine M Consoli

*Catherine Consoli*

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive  
Westborough, Massachusetts 01581-1019  
(508) 898-9220

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

CERTIFICATE OF ANALYSIS

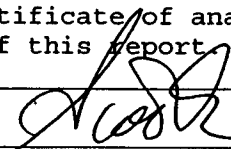
Client: ERM-New England Laboratory Job Number: L9908059  
Address: 399 Boylston Street Invoice Number: 30563  
6th Floor  
Boston, MA 02116 Date Received: 06-OCT-99  
Attn: John McTigue Date Reported: 20-OCT-99  
Project Number: 143.48 Delivery Method: Alpha  
Site: RAYTHEON

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ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9908059-01	T-2-9 (0-6")	WAYLAND
L9908059-02	T-2-9 (12-18")	WAYLAND
L9908059-03	T-2-9 (18+)"	WAYLAND
L9908059-04	T-5-7 (0-6")	WAYLAND
L9908059-05	T-5-7 (12-18")	WAYLAND
L9908059-06	T-5-A (0-6")	WAYLAND
L9908059-07	T-5-A (12-18")	WAYLAND
L9908059-08	T-5-12 (0-6")	WAYLAND
L9908059-09	T-5-C (0-6")	WAYLAND
L9908059-10	T-5-6 (0-6")	WAYLAND
L9908059-11	T-5-10 (0-6")	WAYLAND
L9908059-12	T-5-9 (0-6")	WAYLAND
L9908059-13	PEAT W/ DECAY ROOTS	WAYLAND
L9908059-14	FINE GRAY SILT	WAYLAND
L9908059-15	DARK BROWN/ BLACK PEAT	WAYLAND
L9908059-16	PLANT DECAY MAT	WAYLAND
L9908059-17	MED. SAND	WAYLAND

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately 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 - Laboratory Director

ALPHA ANALYTICAL LABORATORIES

Laboratory Job Number: L9908059  
Date Reported: 20-OCT-99

---

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9908059-18	T-5-6 (12-18")	WAYLAND

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908059-01  
T-2-9 (0-6")

Date Collected: 06-OCT-1999  
Date Received : 06-OCT-1999  
Date Reported : 20-OCT-99

Sample Matrix: SOIL

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 3-Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANALYSIS	ID
Solids, Total	83.	%	0.10	30	2540G		08-Oct	JK
Chromium, Hexavalent	ND	mg/kg	1.5	1	7196A		13-Oct	JT
Total Metals				1	3051			
Aluminum, Total	6400	mg/kg	4.8	1	6010B	08-Oct	08-Oct	JP
Antimony, Total	ND	mg/kg	2.4	1	6010B	08-Oct	08-Oct	JG
Arsenic, Total	3.4	mg/kg	0.48	1	6010B	08-Oct	08-Oct	MG
Barium, Total	24.	mg/kg	0.48	1	6010B	08-Oct	08-Oct	JG
Beryllium, Total	0.41	mg/kg	0.24	1	6010B	08-Oct	08-Oct	JG
Cadmium, Total	0.282	mg/kg	0.240	1	6010B	08-Oct	08-Oct	MG
Calcium, Total	700	mg/kg	24.	1	6010B	08-Oct	08-Oct	LP
Chromium, Total	8.0	mg/kg	0.48	1	6010B	08-Oct	08-Oct	JG
Cobalt, Total	3.3	mg/kg	0.96	1	6010B	08-Oct	08-Oct	JG
Copper, Total	11.	mg/kg	0.48	1	6010B	08-Oct	08-Oct	MG
Iron, Total	5600	mg/kg	2.4	1	6010B	08-Oct	08-Oct	LP
Lead, Total	12.	mg/kg	2.4	1	6010B	08-Oct	08-Oct	JG
Magnesium, Total	1500	mg/kg	4.8	1	6010B	08-Oct	08-Oct	JG
Manganese, Total	130	mg/kg	0.48	1	6010B	08-Oct	08-Oct	LP
Mercury, Total	ND	mg/kg	0.30	1	7471A	08-Oct	12-Oct	TT
Nickel, Total	6.1	mg/kg	1.2	1	6010B	08-Oct	08-Oct	JG
Potassium, Total	570	mg/kg	120	1	6010B	08-Oct	08-Oct	LP
Selenium, Total	ND	mg/kg	0.96	1	6010B	08-Oct	08-Oct	MG
Silver, Total	ND	mg/kg	0.240	1	6010B	08-Oct	08-Oct	JG
Sodium, Total	29.	mg/kg	24.	1	6010B	08-Oct	08-Oct	JP
Thallium, Total	ND	mg/kg	0.96	1	6010B	08-Oct	08-Oct	MG
Tin, Total	ND	mg/kg	24.	1	6010B	08-Oct	14-Oct	LP
Vanadium, Total	12.	mg/kg	0.48	1	6010B	08-Oct	08-Oct	JG
Zinc, Total	23.	mg/kg	2.4	1	6010B	08-Oct	08-Oct	JG
PAH by GC/MS SIM 8270M				1	8270C-M		07-Oct 13-Oct	TK
Acenaphthene	ND	ug/kg	48.					
2-Chloronaphthalene	ND	ug/kg	48.					
Fluoranthene	ND	ug/kg	48.					
Naphthalene	ND	ug/kg	48.					
Benzo(a)anthracene	ND	ug/kg	48.					

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9908059-01  
T-2-9 (0-6")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
PAH by GC/MS SIM 8270M continued				1	8270C-M	07-Oct 13-Oct	MK
Benzo (a, e) pyrene	ND	ug/kg	48.				
Benzo (b) fluoranthene	ND	ug/kg	48.				
Benzo (k) fluoranthene	ND	ug/kg	48.				
Chrysene	ND	ug/kg	48.				
Acenaphthylene	ND	ug/kg	48.				
Anthracene	ND	ug/kg	48.				
Benzo (ghi) perylene	ND	ug/kg	48.				
Fluorene	ND	ug/kg	48.				
Phenanthrene	ND	ug/kg	48.				
Dibenzo (a, h) anthracene	ND	ug/kg	48.				
Indeno (1, 2, 3-cd) Pyrene	ND	ug/kg	48.				
Pyrene	ND	ug/kg	48.				
1-Methylnaphthalene	ND	ug/kg	48.				
2-Methylnaphthalene	ND	ug/kg	48.				
Perylene	ND	ug/kg	48.				
Biphenyl	ND	ug/kg	48.				
Surrogate Recovery							
Nitrobenzene-d5	56.0	%					
2-Fluorobiphenyl	56.0	%					
4-Terphenyl-d14	55.0	%					
Polychlorinated Biphenyls				1	8082	07-Oct 12-Oct	PB
Aroclor 1221	ND	ug/kg	302.				
Aroclor 1232	ND	ug/kg	302.				
Aroclor 1242/1016	ND	ug/kg	302.				
Aroclor 1248	ND	ug/kg	302.				
Aroclor 1254	ND	ug/kg	302.				
Aroclor 1260	ND	ug/kg	302.				
Surrogate Recovery							
2, 4, 5, 6-Tetrachloro-m-xylene	101.	%					
Decachlorobiphenyl	56.0	%					

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



**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908059-02  
T-2-9 (12-18")  
Sample Matrix: SOIL

Date Collected: 06-OCT-1999  
Date Received : 06-OCT-1999  
Date Reported : 20-OCT-99

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 3-Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES		II
						PREP	ANALYSIS	
Solids, Total	86.	%	0.10	30	2540G		08-Oct	K
Chromium, Hexavalent	ND	mg/kg	0.58	1	7196A		13-Oct	T
Total Metals				1	3051			
Aluminum, Total	8900	mg/kg	4.6	1	6010B	08-Oct	08-Oct	P
Antimony, Total	ND	mg/kg	2.3	1	6010B	08-Oct	08-Oct	G
Arsenic, Total	5.1	mg/kg	0.46	1	6010B	08-Oct	08-Oct	MG
Barium, Total	29.	mg/kg	0.46	1	6010B	08-Oct	08-Oct	MG
Beryllium, Total	0.51	mg/kg	0.23	1	6010B	08-Oct	08-Oct	G
Cadmium, Total	0.307	mg/kg	0.230	1	6010B	08-Oct	08-Oct	MG
Calcium, Total	650	mg/kg	23.	1	6010B	08-Oct	08-Oct	LP
Chromium, Total	12.	mg/kg	0.46	1	6010B	08-Oct	08-Oct	G
Cobalt, Total	4.4	mg/kg	0.92	1	6010B	08-Oct	08-Oct	G
Copper, Total	12.	mg/kg	0.46	1	6010B	08-Oct	08-Oct	MG
Iron, Total	9200	mg/kg	2.3	1	6010B	08-Oct	08-Oct	LP
Lead, Total	9.2	mg/kg	2.3	1	6010B	08-Oct	08-Oct	G
Magnesium, Total	2600	mg/kg	4.6	1	6010B	08-Oct	08-Oct	G
Manganese, Total	170	mg/kg	0.46	1	6010B	08-Oct	08-Oct	LP
Mercury, Total	ND	mg/kg	0.29	1	7471A	08-Oct	12-Oct	TT
Nickel, Total	9.2	mg/kg	1.1	1	6010B	08-Oct	08-Oct	G
Potassium, Total	800	mg/kg	110	1	6010B	08-Oct	08-Oct	P
Selenium, Total	ND	mg/kg	0.92	1	6010B	08-Oct	08-Oct	MG
Silver, Total	ND	mg/kg	0.230	1	6010B	08-Oct	08-Oct	G
Sodium, Total	54.	mg/kg	23.	1	6010B	08-Oct	08-Oct	P
Thallium, Total	ND	mg/kg	0.92	1	6010B	08-Oct	08-Oct	MG
Tin, Total	ND	mg/kg	23.	1	6010B	08-Oct	14-Oct	LP
Vanadium, Total	15.	mg/kg	0.46	1	6010B	08-Oct	08-Oct	G
Zinc, Total	24.	mg/kg	2.3	1	6010B	08-Oct	08-Oct	G
PAH by GC/MS SIM 8270M				1	8270C-M	07-Oct	13-Oct	MK
Acenaphthene	ND	ug/kg	23.					
2-Chloronaphthalene	ND	ug/kg	23.					
Fluoranthene	ND	ug/kg	23.					
Naphthalene	ND	ug/kg	23.					
Benzo(a)anthracene	ND	ug/kg	23.					

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

ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9908059-02  
T-2-9 (12-18")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	II
PAH by GC/MS SIM 8270M continued				1	8270C-M	07-Oct 13-Oct	MK
Benzo(a,e)pyrene	ND	ug/kg	23.				
Benzo(b)fluoranthene	ND	ug/kg	23.				
Benzo(k)fluoranthene	ND	ug/kg	23.				
Chrysene	ND	ug/kg	23.				
Acenaphthylene	ND	ug/kg	23.				
Anthracene	ND	ug/kg	23.				
Benzo(ghi)perylene	ND	ug/kg	23.				
Fluorene	ND	ug/kg	23.				
Phenanthrene	ND	ug/kg	23.				
Dibenzo(a,h)anthracene	ND	ug/kg	23.				
Indeno(1,2,3-cd)Pyrene	ND	ug/kg	23.				
Pyrene	ND	ug/kg	23.				
1-Methylnaphthalene	ND	ug/kg	23.				
2-Methylnaphthalene	ND	ug/kg	23.				
Perylene	ND	ug/kg	23.				
Biphenyl	ND	ug/kg	23.				
Surrogate Recovery							
Nitrobenzene-d5	59.0	%					
2-Fluorobiphenyl	56.0	%					
4-Terphenyl-d14	72.0	%					
Polychlorinated Biphenyls				1	8082	07-Oct 12-Oct	PB
Aroclor 1221	ND	ug/kg	290.				
Aroclor 1232	ND	ug/kg	290.				
Aroclor 1242/1016	ND	ug/kg	290.				
Aroclor 1248	ND	ug/kg	290.				
Aroclor 1254	ND	ug/kg	290.				
Aroclor 1260	ND	ug/kg	290.				
Surrogate Recovery							
2,4,5,6-Tetrachloro-m-xylene	105.	%					
Decachlorobiphenyl	58.0	%					

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908059-03  
T-2-9 (18+)"  
Sample Matrix: SOIL

Date Collected: 06-OCT-1999  
Date Received : 06-OCT-1999  
Date Reported : 20-OCT-99

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 3-Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES		ID
						PREP	ANALYSIS	
Solids, Total	86.	%	0.10	30	2540G		08-Oct	JK
Chromium, Hexavalent	ND	mg/kg	0.58	1	7196A		13-Oct	T
Total Metals				1	3051			
Aluminum, Total	9000	mg/kg	4.6	1	6010B	08-Oct	08-Oct	JP
Antimony, Total	ND	mg/kg	2.3	1	6010B	08-Oct	08-Oct	MG
Arsenic, Total	5.0	mg/kg	0.46	1	6010B	08-Oct	08-Oct	MG
Barium, Total	32.	mg/kg	0.46	1	6010B	08-Oct	08-Oct	MG
Beryllium, Total	0.52	mg/kg	0.23	1	6010B	08-Oct	08-Oct	MG
Cadmium, Total	0.324	mg/kg	0.230	1	6010B	08-Oct	08-Oct	MG
Calcium, Total	680	mg/kg	23.	1	6010B	08-Oct	08-Oct	LP
Chromium, Total	13.	mg/kg	0.46	1	6010B	08-Oct	08-Oct	MG
Cobalt, Total	4.4	mg/kg	0.92	1	6010B	08-Oct	08-Oct	MG
Copper, Total	12.	mg/kg	0.46	1	6010B	08-Oct	08-Oct	MG
Iron, Total	9400	mg/kg	2.3	1	6010B	08-Oct	08-Oct	LP
Lead, Total	14.	mg/kg	2.3	1	6010B	08-Oct	08-Oct	MG
Magnesium, Total	2700	mg/kg	4.6	1	6010B	08-Oct	08-Oct	MG
Manganese, Total	170	mg/kg	0.46	1	6010B	08-Oct	08-Oct	LP
Mercury, Total	ND	mg/kg	0.29	1	7471A	08-Oct	12-Oct	T
Nickel, Total	10.	mg/kg	1.2	1	6010B	08-Oct	08-Oct	MG
Potassium, Total	830	mg/kg	120	1	6010B	08-Oct	08-Oct	LP
Selenium, Total	ND	mg/kg	0.92	1	6010B	08-Oct	08-Oct	MG
Silver, Total	ND	mg/kg	0.230	1	6010B	08-Oct	08-Oct	MG
Sodium, Total	53.	mg/kg	23.	1	6010B	08-Oct	08-Oct	MG
Thallium, Total	ND	mg/kg	0.92	1	6010B	08-Oct	08-Oct	MG
Tin, Total	ND	mg/kg	23.	1	6010B	08-Oct	14-Oct	LP
Vanadium, Total	17.	mg/kg	0.46	1	6010B	08-Oct	08-Oct	MG
Zinc, Total	25.	mg/kg	2.3	1	6010B	08-Oct	08-Oct	MG
PAH by GC/MS SIM 8270M				1	8270C-M	07-Oct	13-Oct	JK
Acenaphthene	ND	ug/kg	46.					
2-Chloronaphthalene	ND	ug/kg	46.					
Fluoranthene	ND	ug/kg	46.					
Naphthalene	ND	ug/kg	46.					
Benzo(a)anthracene	ND	ug/kg	46.					

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

ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9908059-03  
T-2-9 (18+)

PARAMETER	RESULT	UNITS	SDL	REF	METHOD	DATES PREP ANALYSIS	ID
PAH by GC/MS SIM 8270M continued				1	8270C-M	07-Oct 13-Oct	MK
Benzo (a, e) pyrene	ND	ug/kg	46.				
Benzo (b) fluoranthene	ND	ug/kg	46.				
Benzo (k) fluoranthene	ND	ug/kg	46.				
Chrysene	ND	ug/kg	46.				
Acenaphthylene	ND	ug/kg	46.				
Anthracene	ND	ug/kg	46.				
Benzo (ghi) perylene	ND	ug/kg	46.				
Fluorene	ND	ug/kg	46.				
Phenanthrene	ND	ug/kg	46.				
Dibenzo (a, h) anthracene	ND	ug/kg	46.				
Indeno (1, 2, 3-cd) Pyrene	ND	ug/kg	46.				
Pyrene	ND	ug/kg	46.				
1-Methylnaphthalene	ND	ug/kg	46.				
2-Methylnaphthalene	ND	ug/kg	46.				
Perylene	ND	ug/kg	46.				
Biphenyl	ND	ug/kg	46.				
Surrogate Recovery							
Nitrobenzene-d5	68.0	%					
2-Fluorobiphenyl	66.0	%					
4-Terphenyl-d14	64.0	%					
Polychlorinated Biphenyls				1	8082	07-Oct 12-Oct	PB
Aroclor 1221	ND	ug/kg	290.				
Aroclor 1232	ND	ug/kg	290.				
Aroclor 1242/1016	ND	ug/kg	290.				
Aroclor 1248	ND	ug/kg	290.				
Aroclor 1254	ND	ug/kg	290.				
Aroclor 1260	ND	ug/kg	290.				
Surrogate Recovery							
2, 4, 5, 6-Tetrachloro-m-xylene	134.	%					
Decachlorobiphenyl	71.0	%					

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908059-04  
 T-5-7 (0-6")  
 Sample Matrix: SOIL  
 Condition of Sample: Satisfactory  
 Number & Type of Containers: 1-Amber Glass,3-Glass

Date Collected: 06-OCT-1999  
 Date Received : 06-OCT-1999  
 Date Reported : 20-OCT-99  
 Field Prep: None

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES		ID
						PREP	ANALYSIS	
Solids, Total	14.	%	0.10	30	2540G	08-Oct		JK
Chromium, Hexavalent	ND	mg/kg	18.	1	7196A	13-Oct		T
Total Metals				1	3051			
Aluminum, Total	8400	mg/kg	28.	1	6010B	08-Oct	08-Oct	LP
Antimony, Total	38.	mg/kg	14.	1	6010B	08-Oct	08-Oct	MG
Arsenic, Total	17.	mg/kg	2.8	1	6010B	08-Oct	08-Oct	MG
Barium, Total	350	mg/kg	2.8	1	6010B	08-Oct	08-Oct	MG
Beryllium, Total	ND	mg/kg	1.4	1	6010B	08-Oct	08-Oct	MG
Cadmium, Total	14.	mg/kg	2.8	1	6010B	08-Oct	08-Oct	MG
Calcium, Total	3900	mg/kg	140	1	6010B	08-Oct	08-Oct	LP
Chromium, Total	24000	mg/kg	2.8	1	6010B	08-Oct	08-Oct	MG
Cobalt, Total	ND	mg/kg	5.6	1	6010B	08-Oct	08-Oct	MG
Copper, Total	14000	mg/kg	2.8	1	6010B	08-Oct	08-Oct	MG
Iron, Total	14000	mg/kg	14.	1	6010B	08-Oct	08-Oct	LP
Lead, Total	1400	mg/kg	14.	1	6010B	08-Oct	08-Oct	MG
Magnesium, Total	3200	mg/kg	28.	1	6010B	08-Oct	08-Oct	MG
Manganese, Total	140	mg/kg	2.8	1	6010B	08-Oct	08-Oct	LP
Mercury, Total	12.	mg/kg	1.8	1	7471A	08-Oct	12-Oct	TT
Nickel, Total	23.	mg/kg	7.0	1	6010B	08-Oct	08-Oct	MG
Potassium, Total	ND	mg/kg	700	1	6010B	08-Oct	08-Oct	LP
Selenium, Total	ND	mg/kg	5.6	1	6010B	08-Oct	08-Oct	MG
Silver, Total	500	mg/kg	2.8	1	6010B	08-Oct	08-Oct	MG
Sodium, Total	270	mg/kg	140	1	6010B	08-Oct	08-Oct	LP
Thallium, Total	ND	mg/kg	5.6	1	6010B	08-Oct	08-Oct	MG
Tin, Total	360	mg/kg	14.	1	6010B	08-Oct	08-Oct	LP
Vanadium, Total	190	mg/kg	2.8	1	6010B	08-Oct	08-Oct	MG
Zinc, Total	390	mg/kg	14.	1	6010B	08-Oct	08-Oct	MG
PAH by GC/MS SIM 8270M				1	8270C-M	07-Oct	13-Oct	JK
Acenaphthene	ND	ug/kg	710					
2-Chloronaphthalene	ND	ug/kg	710					
Fluoranthene	19000	ug/kg	710					
Naphthalene	ND	ug/kg	710					
Benzo(a)anthracene	7300	ug/kg	710					

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9908059-04  
T-5-7 (0-6")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
PAH by GC/MS SIM 8270M continued				1	8270C-M	07-Oct 13-Oct	MK
Benzo (a, e) pyrene	12000	ug/kg	710				
Benzo (b) fluoranthene	17000	ug/kg	710				
Benzo (k) fluoranthene	16000	ug/kg	710				
Chrysene	15000	ug/kg	710				
Acenaphthylene	ND	ug/kg	710				
Anthracene	1400	ug/kg	710				
Benzo (ghi) perylene	13000	ug/kg	710				
Fluorene	ND	ug/kg	710				
Phenanthrene	6600	ug/kg	710				
Dibenzo (a, h) anthracene	3400	ug/kg	710				
Indeno (1, 2, 3-cd) Pyrene	13000	ug/kg	710				
Pyrene	15000	ug/kg	710				
1-Methylnaphthalene	ND	ug/kg	710				
2-Methylnaphthalene	ND	ug/kg	710				
Perylene	2200	ug/kg	710				
Biphenyl	ND	ug/kg	710				
Surrogate Recovery							
Nitrobenzene-d5	58.0	%					
2-Fluorobiphenyl	63.0	%					
4-Terphenyl-d14	74.0	%					
Polychlorinated Biphenyls				1	8082	07-Oct 12-Oct	PB
Aroclor 1221	ND	ug/kg	1790				
Aroclor 1232	ND	ug/kg	1790				
Aroclor 1242/1016	ND	ug/kg	1790				
Aroclor 1248	ND	ug/kg	1790				
Aroclor 1254	ND	ug/kg	1790				
Aroclor 1260	9800	ug/kg	1790				
Surrogate Recovery							
2,4,5,6-Tetrachloro-m-xylene	57.0	%					
Decachlorobiphenyl	29.0	%					

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9908059-04  
T-5-7 (0-6")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
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Extractable Petroleum Hydrocarbons				46	98-1	08-Oct 13-Oct	JL
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Quality Control Information

Condition of sample received:	Satisfactory	
Sample temperature upon receipt:	Received on Ice	
Sample extraction method:	Extracted Per the Method	
Were all QA/QC procedures REQUIRED by the method followed?		YES
Were all performance/acceptance standards for the required procedures achieved?		NO
1. One or more of the EPH LCS recoveries were greater than 140%.		
Were significant modifications made to the method as specified in Sect 11.3?		NO
Please note to subtract the method blank from the stated result.		
The normal acceptance range for the extraction surrogates, Chloro-octadecane and o-Terphenyl, is 40-140%.		
The normal acceptance range for the fractionation surrogates, 2-Fluorobiphenyl and 2-Bromonaphthalene, is 40-140%.		

C9-C18 Aliphatics	798.	mg/kg	71.4
C19-C36 Aliphatics	2200	mg/kg	71.4
C11-C22 Aromatics	732.	mg/kg	71.4

Surrogate Recovery

Chloro-Octadecane	61.0	%
o-Terphenyl	87.0	%
2-Fluorobiphenyl	101.	%
2-Bromonaphthalene	84.0	%

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908059-05  
 T-5-7 (12-18")  
 Date Collected: 06-OCT-1999  
 Date Received : 06-OCT-1999  
 Sample Matrix: SOIL  
 Date Reported : 20-OCT-99  
 Condition of Sample: Satisfactory  
 Field Prep: None  
 Number & Type of Containers: 1-Amber Glass,3-Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES		ID
						PREP	ANALYSIS	
Solids, Total	32.	%	0.10	30	2540G		08-Oct	KK
Chromium, Hexavalent	ND	mg/kg	7.8	1	7196A		13-Oct	ST
Total Metals				1	3051			
Aluminum, Total	7500	mg/kg	12.	1	6010B	08-Oct	08-Oct	LP
Antimony, Total	ND	mg/kg	6.2	1	6010B	08-Oct	08-Oct	MG
Arsenic, Total	5.4	mg/kg	1.2	1	6010B	08-Oct	08-Oct	MG
Barium, Total	42.	mg/kg	1.2	1	6010B	08-Oct	08-Oct	MG
Beryllium, Total	1.0	mg/kg	0.62	1	6010B	08-Oct	08-Oct	MG
Cadmium, Total	2.1	mg/kg	1.2	1	6010B	08-Oct	08-Oct	MG
Calcium, Total	2800	mg/kg	62.	1	6010B	08-Oct	08-Oct	LP
Chromium, Total	380	mg/kg	1.2	1	6010B	08-Oct	08-Oct	MG
Cobalt, Total	2.8	mg/kg	2.5	1	6010B	08-Oct	08-Oct	MG
Copper, Total	650	mg/kg	1.2	1	6010B	08-Oct	08-Oct	MG
Iron, Total	2900	mg/kg	6.2	1	6010B	08-Oct	08-Oct	LP
Lead, Total	41.	mg/kg	6.2	1	6010B	08-Oct	08-Oct	MG
Magnesium, Total	280	mg/kg	12.	1	6010B	08-Oct	08-Oct	MG
Manganese, Total	86.	mg/kg	1.2	1	6010B	08-Oct	08-Oct	LP
Mercury, Total	ND	mg/kg	0.78	1	7471A	08-Oct	12-Oct	TT
Nickel, Total	11.	mg/kg	3.1	1	6010B	08-Oct	08-Oct	MG
Potassium, Total	ND	mg/kg	310	1	6010B	08-Oct	08-Oct	LP
Selenium, Total	ND	mg/kg	2.5	1	6010B	08-Oct	08-Oct	MG
Silver, Total	12.	mg/kg	1.2	1	6010B	08-Oct	08-Oct	MG
Sodium, Total	130	mg/kg	62.	1	6010B	08-Oct	08-Oct	LP
Thallium, Total	ND	mg/kg	2.5	1	6010B	08-Oct	08-Oct	MG
Tin, Total	ND	mg/kg	6.2	1	6010B	08-Oct	08-Oct	LP
Vanadium, Total	13.	mg/kg	1.2	1	6010B	08-Oct	08-Oct	MG
Zinc, Total	130	mg/kg	6.2	1	6010B	08-Oct	08-Oct	MG
PAH by GC/MS SIM 8270M				1	8270C-M	07-Oct	13-Oct	MK
Acenaphthene	ND	ug/kg	62.					
2-Chloronaphthalene	ND	ug/kg	62.					
Fluoranthene	450	ug/kg	62.					
Naphthalene	ND	ug/kg	62.					
Benzo(a)anthracene	190	ug/kg	62.					

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



ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9908059-05  
T-5-7 (12-18")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	
PAH by GC/MS SIM 8270M continued				1	8270C-M	07-Oct 13-Oct	JK
Benzo (a, e) pyrene	260	ug/kg	62.				
Benzo (b) fluoranthene	370	ug/kg	62.				
Benzo (k) fluoranthene	350	ug/kg	62.				
Chrysene	360	ug/kg	62.				
Acenaphthylene	ND	ug/kg	62.				
Anthracene	ND	ug/kg	62.				
Benzo (ghi) perylene	290	ug/kg	62.				
Fluorene	ND	ug/kg	62.				
Phenanthrene	160	ug/kg	62.				
Dibenzo (a, h) anthracene	78.	ug/kg	62.				
Indeno (1, 2, 3-cd) Pyrene	290	ug/kg	62.				
Pyrene	360	ug/kg	62.				
1-Methylnaphthalene	ND	ug/kg	62.				
2-Methylnaphthalene	ND	ug/kg	62.				
Perylene	ND	ug/kg	62.				
Biphenyl	ND	ug/kg	62.				
Surrogate Recovery							
Nitrobenzene-d5	60.0	%					
2-Fluorobiphenyl	61.0	%					
4-Terphenyl-d14	62.0	%					
Polychlorinated Biphenyls				1	8082	07-Oct 13-Oct	PB
Aroclor 1221	ND	ug/kg	782.				
Aroclor 1232	ND	ug/kg	782.				
Aroclor 1242/1016	ND	ug/kg	782.				
Aroclor 1248	ND	ug/kg	782.				
Aroclor 1254	ND	ug/kg	782.				
Aroclor 1260	ND	ug/kg	782.				
Surrogate Recovery							
2, 4, 5, 6-Tetrachloro-m-xylene	78.0	%					
Decachlorobiphenyl	47.0	%					

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9908059-05  
T-5-7 (12-18")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Extractable Petroleum Hydrocarbons				46	98-1	08-Oct 13-Oct	HL

Quality Control Information

Condition of sample received: Satisfactory  
Sample temperature upon receipt: Received on Ice  
Sample extraction method: Extracted Per the Method  
Were all QA/QC procedures REQUIRED by the method followed? YES  
Were all performance/acceptance standards for the required procedures achieved? NO  
1. One or more of the EPH LCS recoveries were greater than 140%.  
Were significant modifications made to the method as specified in Sect 11.3? NO  
Please note to subtract the method blank from the stated result.  
The normal acceptance range for the extraction surrogates, Chloro-octadecane and o-Terphenyl, is 40-140%.  
The normal acceptance range for the fractionation surrogates, 2-Fluorobiphenyl and 2-Bromonaphthalene, is 40-140%.

C9-C18 Aliphatics	51.6	mg/kg	31.2
C19-C36 Aliphatics	126.	mg/kg	31.2
C11-C22 Aromatics	32.6	mg/kg	31.2

Surrogate Recovery

Chloro-Octadecane	67.0	%
o-Terphenyl	78.0	%
2-Fluorobiphenyl	104.	%
2-Bromonaphthalene	92.0	%

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908059-06  
T-5-A (0-6")  
Sample Matrix: SOIL

Date Collected: 06-OCT-1999  
Date Received : 06-OCT-1999  
Date Reported : 20-OCT-99

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1-Amber Glass, 3-Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES		ID
						PREP	ANALYSIS	
Solids, Total	16.	%	0.10	30	2540G		08-Oct	JK
Chromium, Hexavalent	ND	mg/kg	16.	1	7196A		13-Oct	TI
Total Metals				1	3051			
Aluminum, Total	9800	mg/kg	25.	1	6010B	08-Oct	08-Oct	LP
Antimony, Total	ND	mg/kg	12.	1	6010B	08-Oct	08-Oct	MG
Arsenic, Total	150	mg/kg	2.5	1	6010B	08-Oct	08-Oct	MG
Barium, Total	240	mg/kg	2.5	1	6010B	08-Oct	08-Oct	MG
Beryllium, Total	ND	mg/kg	1.2	1	6010B	08-Oct	08-Oct	MG
Cadmium, Total	5.7	mg/kg	2.5	1	6010B	08-Oct	08-Oct	MG
Calcium, Total	4200	mg/kg	120	1	6010B	08-Oct	08-Oct	LP
Chromium, Total	4300	mg/kg	2.5	1	6010B	08-Oct	08-Oct	MG
Cobalt, Total	ND	mg/kg	5.0	1	6010B	08-Oct	08-Oct	MG
Copper, Total	3300	mg/kg	2.5	1	6010B	08-Oct	08-Oct	MG
Iron, Total	12000	mg/kg	12.	1	6010B	08-Oct	08-Oct	LP
Lead, Total	580	mg/kg	12.	1	6010B	08-Oct	08-Oct	MG
Magnesium, Total	2800	mg/kg	25.	1	6010B	08-Oct	08-Oct	MG
Manganese, Total	420	mg/kg	2.5	1	6010B	08-Oct	08-Oct	LP
Mercury, Total	4.3	mg/kg	1.6	1	7471A	08-Oct	12-Oct	TI
Nickel, Total	22.	mg/kg	6.2	1	6010B	08-Oct	08-Oct	MG
Potassium, Total	ND	mg/kg	620	1	6010B	08-Oct	08-Oct	LP
Selenium, Total	ND	mg/kg	5.0	1	6010B	08-Oct	08-Oct	MG
Silver, Total	240	mg/kg	2.5	1	6010B	08-Oct	08-Oct	MG
Sodium, Total	440	mg/kg	120	1	6010B	08-Oct	08-Oct	LP
Thallium, Total	ND	mg/kg	5.0	1	6010B	08-Oct	08-Oct	MG
Tin, Total	73.	mg/kg	12.	1	6010B	08-Oct	08-Oct	LP
Vanadium, Total	130	mg/kg	2.5	1	6010B	08-Oct	08-Oct	MG
Zinc, Total	230	mg/kg	12.	1	6010B	08-Oct	08-Oct	MG
PAH by GC/MS SIM 8270M				1	8270C-M	07-Oct	13-Oct	MK
Acenaphthene	ND	ug/kg	620					
2-Chloronaphthalene	ND	ug/kg	620					
Fluoranthene	8300	ug/kg	620					
Naphthalene	ND	ug/kg	620					
Benzo(a)anthracene	3000	ug/kg	620					

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9908059-06  
T-5-A (0-6")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
PAH by GC/MS SIM 8270M continued				1	8270C-M	07-Oct 13-Oct	MK
Benzo (a, e) pyrene	5100	ug/kg	620				
Benzo (b) fluoranthene	10000	ug/kg	620				
Benzo (k) fluoranthene	7000	ug/kg	620				
Chrysene	8100	ug/kg	620				
Acenaphthylene	ND	ug/kg	620				
Anthracene	ND	ug/kg	620				
Benzo (ghi) perylene	6800	ug/kg	620				
Fluorene	ND	ug/kg	620				
Phenanthrene	2700	ug/kg	620				
Dibenzo (a, h) anthracene	2000	ug/kg	620				
Indeno (1, 2, 3-cd) Pyrene	6900	ug/kg	620				
Pyrene	6900	ug/kg	620				
1-Methylnaphthalene	ND	ug/kg	620				
2-Methylnaphthalene	ND	ug/kg	620				
Perylene	880	ug/kg	620				
Biphenyl	ND	ug/kg	620				
Surrogate Recovery							
Nitrobenzene-d5	52.0	%					
2-Fluorobiphenyl	53.0	%					
4-Terphenyl-d14	63.0	%					
Polychlorinated Biphenyls				1	8082	07-Oct 13-Oct	PB
Aroclor 1221	ND	ug/kg	1560				
Aroclor 1232	ND	ug/kg	1560				
Aroclor 1242/1016	ND	ug/kg	1560				
Aroclor 1248	ND	ug/kg	1560				
Aroclor 1254	ND	ug/kg	1560				
Aroclor 1260	4770	ug/kg	1560				
Surrogate Recovery							
2,4,5,6-Tetrachloro-m-xylene	102.	%					
Decachlorobiphenyl	48.0	%					

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9908059-06  
T-5-A (0-6")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Extractable Petroleum Hydrocarbons				46	98-1	08-Oct 13-Oct	11

Quality Control Information

Condition of sample received: Satisfactory  
Sample temperature upon receipt: Received on Ice  
Sample extraction method: Extracted Per the Method  
Were all QA/QC procedures REQUIRED by the method followed? YES  
Were all performance/acceptance standards for the required procedures achieved? NO  
    1. One or more of the EPH LCS recoveries were greater than 140%.  
Were significant modifications made to the method as specified in Sect 11.3? NO  
Please note to subtract the method blank from the stated result.  
The normal acceptance range for the extraction surrogates, Chloro-octadecane and o-Terphenyl, is 40-140%.  
The normal acceptance range for the fractionation surrogates, 2-Fluorobiphenyl and 2-Bromonaphthalene, is 40-140%.

C9-C18 Aliphatics	206.	mg/kg	62.5
C19-C36 Aliphatics	607.	mg/kg	62.5
C11-C22 Aromatics	292.	mg/kg	62.5

Surrogate Recovery

Chloro-Octadecane	52.0	%
o-Terphenyl	44.0	%
2-Fluorobiphenyl	107.	%
2-Bromonaphthalene	79.0	%

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

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908059-07 Date Collected: 06-OCT-1999  
 T-5-A (12-18") Date Received : 06-OCT-1999  
 Sample Matrix: SOIL Date Reported : 20-OCT-99  
 Condition of Sample: Satisfactory Field Prep: None

Number & Type of Containers: 1-Amber Glass,3-Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES		ID
						PREP	ANALYSIS	
Solids, Total	28.	%	0.10	30	2540G		08-Oct	KK
Chromium, Hexavalent	ND	mg/kg	8.9	1	7196A		13-Oct	ST
Total Metals				1	3051			
Aluminum, Total	7200	mg/kg	14.	1	6010B	08-Oct	08-Oct	LP
Antimony, Total	ND	mg/kg	7.1	1	6010B	08-Oct	08-Oct	MG
Arsenic, Total	27.	mg/kg	1.4	1	6010B	08-Oct	08-Oct	MG
Barium, Total	39.	mg/kg	1.4	1	6010B	08-Oct	08-Oct	MG
Beryllium, Total	1.0	mg/kg	0.71	1	6010B	08-Oct	08-Oct	MG
Cadmium, Total	1.8	mg/kg	1.4	1	6010B	08-Oct	08-Oct	MG
Calcium, Total	2800	mg/kg	71.	1	6010B	08-Oct	08-Oct	LP
Chromium, Total	110	mg/kg	1.4	1	6010B	08-Oct	08-Oct	MG
Cobalt, Total	3.3	mg/kg	2.8	1	6010B	08-Oct	08-Oct	MG
Copper, Total	120	mg/kg	1.4	1	6010B	08-Oct	08-Oct	MG
Iron, Total	4900	mg/kg	7.1	1	6010B	08-Oct	08-Oct	LP
Lead, Total	27.	mg/kg	7.1	1	6010B	08-Oct	08-Oct	MG
Magnesium, Total	340	mg/kg	14.	1	6010B	08-Oct	08-Oct	MG
Manganese, Total	270	mg/kg	1.4	1	6010B	08-Oct	08-Oct	LP
Mercury, Total	ND	mg/kg	0.89	1	7471A	08-Oct	12-Oct	TT
Nickel, Total	13.	mg/kg	3.6	1	6010B	08-Oct	08-Oct	MG
Potassium, Total	ND	mg/kg	360	1	6010B	08-Oct	08-Oct	LP
Selenium, Total	ND	mg/kg	2.8	1	6010B	08-Oct	08-Oct	MG
Silver, Total	4.9	mg/kg	1.4	1	6010B	08-Oct	08-Oct	MG
Sodium, Total	240	mg/kg	71.	1	6010B	08-Oct	08-Oct	LP
Thallium, Total	ND	mg/kg	2.8	1	6010B	08-Oct	08-Oct	MG
Tin, Total	ND	mg/kg	7.1	1	6010B	08-Oct	08-Oct	LP
Vanadium, Total	16.	mg/kg	1.4	1	6010B	08-Oct	08-Oct	MG
Zinc, Total	230	mg/kg	7.1	1	6010B	08-Oct	08-Oct	MG
PAH by GC/MS SIM 8270M				1	8270C-M	07-Oct	13-Oct	MK
Acenaphthene	ND	ug/kg	71.					
2-Chloronaphthalene	ND	ug/kg	71.					
Fluoranthene	ND	ug/kg	71.					
Naphthalene	ND	ug/kg	71.					
Benzo(a)anthracene	ND	ug/kg	71.					

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9908059-07  
T-5-A (12-18")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	TL
PAH by GC/MS SIM 8270M continued				1	8270C-M	07-Oct 13-Oct	TK
Benzo (a, e) pyrene	ND	ug/kg	71.				
Benzo (b) fluoranthene	ND	ug/kg	71.				
Benzo (k) fluoranthene	ND	ug/kg	71.				
Chrysene	ND	ug/kg	71.				
Acenaphthylene	ND	ug/kg	71.				
Anthracene	ND	ug/kg	71.				
Benzo (ghi) perylene	ND	ug/kg	71.				
Fluorene	ND	ug/kg	71.				
Phenanthrene	ND	ug/kg	71.				
Dibenzo (a, h) anthracene	ND	ug/kg	71.				
Indeno (1, 2, 3-cd) Pyrene	ND	ug/kg	71.				
Pyrene	ND	ug/kg	71.				
1-Methylnaphthalene	ND	ug/kg	71.				
2-Methylnaphthalene	ND	ug/kg	71.				
Perylene	ND	ug/kg	71.				
Biphenyl	ND	ug/kg	71.				
Surrogate Recovery							
Nitrobenzene-d5	55.0	%					
2-Fluorobiphenyl	53.0	%					
4-Terphenyl-d14	50.0	%					
Polychlorinated Biphenyls				1	8082	07-Oct 13-Oct	PF
Aroclor 1221	ND	ug/kg	892.				
Aroclor 1232	ND	ug/kg	892.				
Aroclor 1242/1016	ND	ug/kg	892.				
Aroclor 1248	ND	ug/kg	892.				
Aroclor 1254	ND	ug/kg	892.				
Aroclor 1260	ND	ug/kg	892.				
Surrogate Recovery							
2, 4, 5, 6-Tetrachloro-m-xylene	82.0	%					
Decachlorobiphenyl	48.0	%					

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9908059-07  
T-5-A (12-18")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
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Extractable Petroleum Hydrocarbons				46	98-1	08-Oct 13-Oct	HL
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Quality Control Information

Condition of sample received: Satisfactory  
 Sample temperature upon receipt: Received on Ice  
 Sample extraction method: Extracted Per the Method  
 Were all QA/QC procedures REQUIRED by the method followed? YES  
 Were all performance/acceptance standards for the required procedures achieved? NO  
     1. One or more of the EPH LCS recoveries were greater than 140%.  
 Were significant modifications made to the method as specified in Sect 11.3? NO  
 Please note to subtract the method blank from the stated result.  
 The normal acceptance range for the extraction surrogates, Chloro-octadecane and o-Terphenyl, is 40-140%.  
 The normal acceptance range for the fractionation surrogates, 2-Fluorobiphenyl and 2-Bromonaphthalene, is 40-140%.

C9-C18 Aliphatics	ND	mg/kg	35.7
C19-C36 Aliphatics	ND	mg/kg	35.7
C11-C22 Aromatics	36.0	mg/kg	35.7

Surrogate Recovery

Chloro-Octadecane	57.0	%	
o-Terphenyl	77.0	%	
2-Fluorobiphenyl	103.	%	
2-Bromonaphthalene	83.0	%	

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



**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908059-08  
T-5-12 (0-6")  
Sample Matrix: SOIL

Date Collected: 06-OCT-1999  
Date Received: 06-OCT-1999  
Date Reported: 20-OCT-99

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2-Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES		II	
						PREP	ANALYSIS		
Solids, Total	35.	%	0.10	30	2540G		08-Oct	JK	
Chromium, Hexavalent	ND	mg/kg	7.1	1	7196A		13-Oct	TI	
Total Metals						1	3051		
Aluminum, Total	10000	mg/kg	11.	1	6010B	08-Oct	08-Oct	LF	
Antimony, Total	ND	mg/kg	5.7	1	6010B	08-Oct	08-Oct	MG	
Arsenic, Total	5.6	mg/kg	1.1	1	6010B	08-Oct	08-Oct	MG	
Barium, Total	57.	mg/kg	1.1	1	6010B	08-Oct	08-Oct	MG	
Beryllium, Total	0.72	mg/kg	0.57	1	6010B	08-Oct	08-Oct	MG	
Cadmium, Total	3.2	mg/kg	1.1	1	6010B	08-Oct	08-Oct	MG	
Calcium, Total	2900	mg/kg	57.	1	6010B	08-Oct	08-Oct	LP	
Chromium, Total	110	mg/kg	1.1	1	6010B	08-Oct	08-Oct	MG	
Cobalt, Total	3.6	mg/kg	2.3	1	6010B	08-Oct	08-Oct	MG	
Copper, Total	160	mg/kg	1.1	1	6010B	08-Oct	08-Oct	MG	
Iron, Total	10000	mg/kg	5.7	1	6010B	08-Oct	08-Oct	LP	
Lead, Total	340	mg/kg	5.7	1	6010B	08-Oct	08-Oct	MG	
Magnesium, Total	3000	mg/kg	11.	1	6010B	08-Oct	08-Oct	MG	
Manganese, Total	170	mg/kg	1.1	1	6010B	08-Oct	08-Oct	LP	
Mercury, Total	ND	mg/kg	0.71	1	7471A	08-Oct	12-Oct	TT	
Nickel, Total	18.	mg/kg	2.8	1	6010B	08-Oct	08-Oct	MG	
Potassium, Total	440	mg/kg	280	1	6010B	08-Oct	08-Oct	LP	
Selenium, Total	ND	mg/kg	2.3	1	6010B	08-Oct	08-Oct	MG	
Silver, Total	3.8	mg/kg	1.1	1	6010B	08-Oct	08-Oct	MG	
Sodium, Total	240	mg/kg	57.	1	6010B	08-Oct	08-Oct	LP	
Thallium, Total	ND	mg/kg	2.3	1	6010B	08-Oct	08-Oct	MG	
Tin, Total	ND	mg/kg	5.7	1	6010B	08-Oct	08-Oct	LP	
Vanadium, Total	45.	mg/kg	1.1	1	6010B	08-Oct	08-Oct	MG	
Zinc, Total	110	mg/kg	5.7	1	6010B	08-Oct	08-Oct	MG	
Polychlorinated Biphenyls						1	8082	07-Oct 13-Oct	QB
Aroclor 1221	ND	ug/kg	714.						
Aroclor 1232	ND	ug/kg	714.						
Aroclor 1242/1016	ND	ug/kg	714.						
Aroclor 1248	ND	ug/kg	714.						
Aroclor 1254	ND	ug/kg	714.						

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

ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9908059-08  
T-5-12 (0-6")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Polychlorinated Biphenyls continued				1	8082	07-Oct 13-Oct	PB
Aroclor 1260	ND	ug/kg	714.				
Surrogate Recovery							
2,4,5,6-Tetrachloro-m-xylene	104.	%					
Decachlorobiphenyl	54.0	%					

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908059-09  
T-5-C (0-6")  
Sample Matrix: SOIL

Date Collected: 06-OCT-1999  
Date Received : 06-OCT-1999  
Date Reported : 20-OCT-99

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2-Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES		ID	
						PREP	ANALYSIS		
Solids, Total	28.	%	0.10	30	2540G		08-Oct	J K	
Chromium, Hexavalent	ND	mg/kg	8.9	1	7196A		13-Oct	J T	
Total Metals				1	3051				
Aluminum, Total	4600	mg/kg	14.	1	6010B	08-Oct	08-Oct	J P	
Antimony, Total	ND	mg/kg	7.1	1	6010B	08-Oct	08-Oct	J G	
Arsenic, Total	25.	mg/kg	1.4	1	6010B	08-Oct	08-Oct	MG	
Barium, Total	69.	mg/kg	1.4	1	6010B	08-Oct	08-Oct	J G	
Beryllium, Total	ND	mg/kg	0.71	1	6010B	08-Oct	08-Oct	J G	
Cadmium, Total	6.5	mg/kg	1.4	1	6010B	08-Oct	08-Oct	MG	
Calcium, Total	1600	mg/kg	71.	1	6010B	08-Oct	08-Oct	LP	
Chromium, Total	740	mg/kg	1.4	1	6010B	08-Oct	08-Oct	J G	
Cobalt, Total	ND	mg/kg	2.8	1	6010B	08-Oct	08-Oct	J G	
Copper, Total	1300	mg/kg	1.4	1	6010B	08-Oct	08-Oct	MG	
Iron, Total	4500	mg/kg	7.1	1	6010B	08-Oct	08-Oct	LP	
Lead, Total	250	mg/kg	7.1	1	6010B	08-Oct	08-Oct	J G	
Magnesium, Total	780	mg/kg	14.	1	6010B	08-Oct	08-Oct	J G	
Manganese, Total	110	mg/kg	1.4	1	6010B	08-Oct	08-Oct	LP	
Mercury, Total	2.0	mg/kg	0.89	1	7471A	08-Oct	12-Oct	T T	
Nickel, Total	12.	mg/kg	3.5	1	6010B	08-Oct	08-Oct	J G	
Potassium, Total	ND	mg/kg	350	1	6010B	08-Oct	08-Oct	LP	
Selenium, Total	ND	mg/kg	2.8	1	6010B	08-Oct	08-Oct	MG	
Silver, Total	82.	mg/kg	1.4	1	6010B	08-Oct	08-Oct	J G	
Sodium, Total	240	mg/kg	71.	1	6010B	08-Oct	08-Oct	J P	
Thallium, Total	ND	mg/kg	2.8	1	6010B	08-Oct	08-Oct	MG	
Tin, Total	18.	mg/kg	7.1	1	6010B	08-Oct	08-Oct	LP	
Vanadium, Total	45.	mg/kg	1.4	1	6010B	08-Oct	08-Oct	J G	
Zinc, Total	130	mg/kg	7.1	1	6010B	08-Oct	08-Oct	J G	
Polychlorinated Biphenyls				1	8082		07-Oct	13-Oct	MB
Aroclor 1221	ND	ug/kg	892.						
Aroclor 1232	ND	ug/kg	892.						
Aroclor 1242/1016	ND	ug/kg	892.						
Aroclor 1248	ND	ug/kg	892.						
Aroclor 1254	ND	ug/kg	892.						

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

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9908059-09  
 T-5-C (0-6")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Polychlorinated Biphenyls continued				1	8082	07-Oct 13-Oct	PB
Aroclor 1260	ND	ug/kg	892.				
Surrogate Recovery							
2,4,5,6-Tetrachloro-m-xylene	98.0	%					
Decachlorobiphenyl	53.0	%					

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908059-10  
T-5-6 (0-6")  
Sample Matrix: SOIL

Date Collected: 06-OCT-1999  
Date Received : 06-OCT-1999  
Date Reported : 20-OCT-99

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1-40ml VOA,1-Amber Glass,3-Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES		JP	
						PREP	ANALYSIS		
Solids, Total	16.	%	0.10	30	2540G		08-Oct	K	
Chromium, Hexavalent	ND	mg/kg	16.	1	7196A		13-Oct	T	
<b>Total Metals</b>					1	3051			
Aluminum, Total	9100	mg/kg	25.	1	6010B	08-Oct	08-Oct	P	
Antimony, Total	43.	mg/kg	12.	1	6010B	08-Oct	08-Oct	MG	
Arsenic, Total	23.	mg/kg	2.5	1	6010B	08-Oct	08-Oct	MG	
Barium, Total	370	mg/kg	2.5	1	6010B	08-Oct	08-Oct	G	
Beryllium, Total	ND	mg/kg	1.2	1	6010B	08-Oct	08-Oct	G	
Cadmium, Total	29.	mg/kg	2.5	1	6010B	08-Oct	08-Oct	MG	
Calcium, Total	3300	mg/kg	120	1	6010B	08-Oct	08-Oct	LP	
Chromium, Total	29000	mg/kg	2.5	1	6010B	08-Oct	08-Oct	G	
Cobalt, Total	ND	mg/kg	5.0	1	6010B	08-Oct	08-Oct	G	
Copper, Total	22000	mg/kg	2.5	1	6010B	08-Oct	08-Oct	MG	
Iron, Total	16000	mg/kg	12.	1	6010B	08-Oct	08-Oct	LP	
Lead, Total	1700	mg/kg	12.	1	6010B	08-Oct	08-Oct	G	
Magnesium, Total	3400	mg/kg	25.	1	6010B	08-Oct	08-Oct	G	
Manganese, Total	100	mg/kg	2.5	1	6010B	08-Oct	08-Oct	LP	
Mercury, Total	18.	mg/kg	1.6	1	7471A	08-Oct	12-Oct	T	
Nickel, Total	29.	mg/kg	6.2	1	6010B	08-Oct	08-Oct	G	
Potassium, Total	680	mg/kg	620	1	6010B	08-Oct	08-Oct	LP	
Selenium, Total	ND	mg/kg	5.0	1	6010B	08-Oct	08-Oct	MG	
Silver, Total	430	mg/kg	2.5	1	6010B	08-Oct	08-Oct	G	
Sodium, Total	280	mg/kg	120	1	6010B	08-Oct	08-Oct	G	
Thallium, Total	7.2	mg/kg	5.0	1	6010B	08-Oct	08-Oct	MG	
Tin, Total	490	mg/kg	12.	1	6010B	08-Oct	08-Oct	LP	
Vanadium, Total	300	mg/kg	2.5	1	6010B	08-Oct	08-Oct	G	
Zinc, Total	470	mg/kg	12.	1	6010B	08-Oct	08-Oct	L	
<b>PAH by GC/MS SIM 8270M</b>					1	8270C-M	07-Oct	13-Oct	T
Acenaphthene	ND	ug/kg	620						
2-Chloronaphthalene	ND	ug/kg	620						
Fluoranthene	9700	ug/kg	620						
Naphthalene	ND	ug/kg	620						
Benzo(a)anthracene	4000	ug/kg	620						

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9908059-10  
T-5-6 (0-6")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
PAH by GC/MS SIM 8270M continued				1	8270C-M	07-Oct 13-Oct	MK
Benzo (a, e) pyrene	7100	ug/kg	620				
Benzo (b) fluoranthene	10000	ug/kg	620				
Benzo (k) fluoranthene	8200	ug/kg	620				
Chrysene	8400	ug/kg	620				
Acenaphthylene	ND	ug/kg	620				
Anthracene	920	ug/kg	620				
Benzo (ghi) perylene	7800	ug/kg	620				
Fluorene	ND	ug/kg	620				
Phenanthrene	3800	ug/kg	620				
Dibenzo (a, h) anthracene	2400	ug/kg	620				
Indeno (1, 2, 3-cd) Pyrene	7900	ug/kg	620				
Pyrene	7900	ug/kg	620				
1-Methylnaphthalene	ND	ug/kg	620				
2-Methylnaphthalene	ND	ug/kg	620				
Perylene	1400	ug/kg	620				
Biphenyl	ND	ug/kg	620				
Surrogate Recovery							
Nitrobenzene-d5	47.0	%					
2-Fluorobiphenyl	54.0	%					
4-Terphenyl-d14	65.0	%					
Polychlorinated Biphenyls				1	8082	07-Oct 13-Oct	PB
Aroclor 1221	ND	ug/kg	1560				
Aroclor 1232	ND	ug/kg	1560				
Aroclor 1242/1016	ND	ug/kg	1560				
Aroclor 1248	ND	ug/kg	1560				
Aroclor 1254	ND	ug/kg	1560				
Aroclor 1260	20800	ug/kg	1560				
Surrogate Recovery							
2,4,5,6-Tetrachloro-m-xylene	42.0	%					
Decachlorobiphenyl	20.0	%					

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

ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9908059-10  
T-5-6 (0-6")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
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Volatile Petroleum Hydrocarbons				47	98-1	13-Oct	TC
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Quality Control Information

Condition of sample received:	Satisfactory
Sample temperature upon receipt:	Received on Ice
Were samples received in methanol?	Covering the Soil
Methanol ratio:	1:1 +/- 25%
Were all QA/QC procedures REQUIRED by the method followed?	YES
Were all performance/acceptance standards for the required procedures achieved?	YES
Were significant modifications made to the method as specified in Sect 11.3?	NO

Please note to subtract the method blank from the stated result.  
The normal acceptance range for the surrogate, 2,5-Dibromotoluene, is 70-130%.

C5-C8 Aliphatics	ND	mg/kg	11.3
C9-C12 Aliphatics	ND	mg/kg	11.3
C9-C10 Aromatics	ND	mg/kg	11.3
C5-C8 Aliphatics, Adjusted	ND	mg/kg	11.3
C9-C12 Aliphatics, Adjusted	ND	mg/kg	11.3
Benzene	ND	mg/kg	1.13
Toluene	ND	mg/kg	1.13
Ethylbenzene	ND	mg/kg	1.13
p/m-Xylene	ND	mg/kg	1.13
o-Xylene	ND	mg/kg	1.13
Methyl tert butyl ether	ND	mg/kg	11.3
Naphthalene	ND	mg/kg	11.3

Surrogate Recovery

2,5-Dibromotoluene	104.	%	
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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: L9908059-10  
T-5-6 (0-6")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Extractable Petroleum Hydrocarbons				46	98-1	08-Oct 13-Oct	HL

Quality Control Information

Condition of sample received: Satisfactory  
 Sample temperature upon receipt: Received on Ice  
 Sample extraction method: Extracted Per the Method  
 Were all QA/QC procedures REQUIRED by the method followed? YES  
 Were all performance/acceptance standards for the required procedures achieved? NO  
 1. One or more of the EPH LCS recoveries were greater than 140%.  
 2. One or more of the extraction surrogate recoveries were greater than 140%.  
 Were significant modifications made to the method as specified in Sect 11.3? NO  
 Please note to subtract the method blank from the stated result.  
 The normal acceptance range for the extraction surrogates, Chloro-octadecane and o-Terphenyl, is 40-140%.  
 The normal acceptance range for the fractionation surrogates, 2-Fluorobiphenyl and 2-Bromonaphthalene, is 40-140%.

C9-C18 Aliphatics	1300	mg/kg	62.5
C19-C36 Aliphatics	3200	mg/kg	62.5
C11-C22 Aromatics	1860	mg/kg	62.5

Surrogate Recovery

Chloro-Octadecane	58.0	%
o-Terphenyl	280.	%
2-Fluorobiphenyl	102.	%
2-Bromonaphthalene	91.0	%

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



**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908059-11  
T-5-10 (0-6")  
Sample Matrix: SOIL

Date Collected: 06-OCT-1999  
Date Received : 06-OCT-1999  
Date Reported : 20-OCT-99

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1-40ml VOA,3-Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES		ID	
						PREP	ANALYSIS		
Solids, Total	12.	%	0.10	30	2540G		08-Oct	J K	
Chromium, Hexavalent	ND	mg/kg	21.	1	7196A		13-Oct	J T	
Total Metals				1	3051				
Aluminum, Total	6700	mg/kg	33.	1	6010B	08-Oct	08-Oct	J P	
Antimony, Total	22.	mg/kg	16.	1	6010B	08-Oct	08-Oct	J G	
Arsenic, Total	18.	mg/kg	3.3	1	6010B	08-Oct	08-Oct	M G	
Barium, Total	330	mg/kg	3.3	1	6010B	08-Oct	08-Oct	J G	
Beryllium, Total	ND	mg/kg	1.6	1	6010B	08-Oct	08-Oct	J G	
Cadmium, Total	1.76	mg/kg	1.65	1	6010B	08-Oct	08-Oct	M G	
Calcium, Total	1700	mg/kg	160	1	6010B	08-Oct	08-Oct	L P	
Chromium, Total	16000	mg/kg	3.3	1	6010B	08-Oct	08-Oct	J G	
Cobalt, Total	ND	mg/kg	6.6	1	6010B	08-Oct	08-Oct	J G	
Copper, Total	3000	mg/kg	3.3	1	6010B	08-Oct	08-Oct	M G	
Iron, Total	24000	mg/kg	16.	1	6010B	08-Oct	08-Oct	L P	
Lead, Total	1200	mg/kg	16.	1	6010B	08-Oct	08-Oct	J G	
Magnesium, Total	2800	mg/kg	33.	1	6010B	08-Oct	08-Oct	J G	
Manganese, Total	110	mg/kg	3.3	1	6010B	08-Oct	08-Oct	L P	
Mercury, Total	6.8	mg/kg	2.1	1	7471A	08-Oct	12-Oct	T T	
Nickel, Total	16.	mg/kg	8.2	1	6010B	08-Oct	08-Oct	J G	
Potassium, Total	ND	mg/kg	820	1	6010B	08-Oct	08-Oct	L P	
Selenium, Total	ND	mg/kg	6.6	1	6010B	08-Oct	08-Oct	M G	
Silver, Total	490	mg/kg	3.3	1	6010B	08-Oct	08-Oct	J G	
Sodium, Total	360	mg/kg	160	1	6010B	08-Oct	08-Oct	J P	
Thallium, Total	ND	mg/kg	6.6	1	6010B	08-Oct	08-Oct	M G	
Tin, Total	370	mg/kg	16.	1	6010B	08-Oct	08-Oct	L P	
Vanadium, Total	240	mg/kg	3.3	1	6010B	08-Oct	08-Oct	J G	
Zinc, Total	110	mg/kg	16.	1	6010B	08-Oct	08-Oct	J G	
Polychlorinated Biphenyls				1	8082		07-Oct	13-Oct	T B
Aroclor 1221	ND	ug/kg	2080						
Aroclor 1232	ND	ug/kg	2080						
Aroclor 1242/1016	ND	ug/kg	2080						
Aroclor 1248	ND	ug/kg	2080						
Aroclor 1254	ND	ug/kg	2080						

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

ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9908059-11  
T-5-10 (0-6")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Polychlorinated Biphenyls continued				1	8082	07-Oct 13-Oct	PB
Aroclor 1260	11600	ug/kg	2080				
Surrogate Recovery							
2,4,5,6-Tetrachloro-m-xylene	83.0	%					
Decachlorobiphenyl	43.0	%					

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9908059-11  
T-5-10 (0-6")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Petroleum Hydrocarbons							13-Oct 70
				47	98-1		

Quality Control Information

Condition of sample received:	Satisfactory	
Sample temperature upon receipt:	Received on Ice	
Were samples received in methanol?	Covering the Soil	
Methanol ratio:	1:1 +/- 25%	
Were all QA/QC procedures REQUIRED by the method followed?		YES
Were all performance/acceptance standards for the required procedures achieved?		YES
Were significant modifications made to the method as specified in Sect 11.3?		NO
Please note to subtract the method blank from the stated result.		
The normal acceptance range for the surrogate, 2,5-Dibromotoluene, is 70-130%.		

C5-C8 Aliphatics	ND	mg/kg	12.8
C9-C12 Aliphatics	14.6	mg/kg	12.8
C9-C10 Aromatics	ND	mg/kg	12.8
C5-C8 Aliphatics, Adjusted	ND	mg/kg	12.8
C9-C12 Aliphatics, Adjusted	ND	mg/kg	12.8
Benzene	ND	mg/kg	1.28
Toluene	ND	mg/kg	1.28
Ethylbenzene	ND	mg/kg	1.28
p/m-Xylene	2.27	mg/kg	1.28
o-Xylene	ND	mg/kg	1.28
Methyl tert butyl ether	ND	mg/kg	12.8
Naphthalene	ND	mg/kg	12.8

Surrogate Recovery

2,5-Dibromotoluene	101.	%
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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-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908059-12  
 T-5-9 (0-6")  
 Date Collected: 06-OCT-1999  
 Date Received : 06-OCT-1999  
 Sample Matrix: SOIL  
 Date Reported : 20-OCT-99  
 Condition of Sample: Satisfactory  
 Field Prep: None  
 Number & Type of Containers: 2-Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES		ID	
						PREP	ANALYSIS		
Solids, Total	15.	%	0.10	30	2540G		08-Oct	KK	
Chromium, Hexavalent	490	mg/kg	17.	1	7196A		13-Oct	ST	
Total Metals				1	3051				
Aluminum, Total	5300	mg/kg	26.	1	6010B	08-Oct	08-Oct	LP	
Antimony, Total	28.	mg/kg	13.	1	6010B	08-Oct	08-Oct	MG	
Arsenic, Total	22.	mg/kg	2.6	1	6010B	08-Oct	08-Oct	MG	
Barium, Total	240	mg/kg	2.6	1	6010B	08-Oct	08-Oct	MG	
Beryllium, Total	ND	mg/kg	1.3	1	6010B	08-Oct	08-Oct	MG	
Cadmium, Total	6.1	mg/kg	2.6	1	6010B	08-Oct	08-Oct	MG	
Calcium, Total	2200	mg/kg	130	1	6010B	08-Oct	08-Oct	LP	
Chromium, Total	20000	mg/kg	2.6	1	6010B	08-Oct	08-Oct	MG	
Cobalt, Total	ND	mg/kg	5.3	1	6010B	08-Oct	08-Oct	MG	
Copper, Total	8400	mg/kg	2.6	1	6010B	08-Oct	08-Oct	MG	
Iron, Total	22000	mg/kg	13.	1	6010B	08-Oct	08-Oct	LP	
Lead, Total	1100	mg/kg	13.	1	6010B	08-Oct	08-Oct	MG	
Magnesium, Total	1600	mg/kg	26.	1	6010B	08-Oct	08-Oct	MG	
Manganese, Total	120	mg/kg	2.6	1	6010B	08-Oct	08-Oct	LP	
Mercury, Total	12.	mg/kg	1.7	1	7471A	08-Oct	12-Oct	TT	
Nickel, Total	12.	mg/kg	6.6	1	6010B	08-Oct	08-Oct	MG	
Potassium, Total	ND	mg/kg	660	1	6010B	08-Oct	08-Oct	LP	
Selenium, Total	ND	mg/kg	5.3	1	6010B	08-Oct	08-Oct	MG	
Silver, Total	320	mg/kg	2.6	1	6010B	08-Oct	08-Oct	MG	
Sodium, Total	260	mg/kg	130	1	6010B	08-Oct	08-Oct	LP	
Thallium, Total	ND	mg/kg	5.3	1	6010B	08-Oct	08-Oct	MG	
Tin, Total	560	mg/kg	13.	1	6010B	08-Oct	08-Oct	LP	
Vanadium, Total	190	mg/kg	2.6	1	6010B	08-Oct	08-Oct	MG	
Zinc, Total	130	mg/kg	13.	1	6010B	08-Oct	08-Oct	MG	
Polychlorinated Biphenyls				1	8082		07-Oct	13-Oct	PB
Aroclor 1221	ND	ug/kg	8340						
Aroclor 1232	ND	ug/kg	8340						
Aroclor 1242/1016	ND	ug/kg	8340						
Aroclor 1248	ND	ug/kg	8340						
Aroclor 1254	ND	ug/kg	8340						

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

ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9908059-12  
T-5-9 (0-6")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Polychlorinated Biphenyls continued							
Aroclor 1260	89900	ug/kg	8340	1	8082	07-Oct 13-Oct	--
Surrogate Recovery							
2,4,5,6-Tetrachloro-m-xylene	75.0	%					
Decachlorobiphenyl	30.0	%					

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908059-13	Date Collected: 06-OCT-1999
Sample Matrix: PEAT W/ DECAY ROOTS	Date Received : 06-OCT-1999
Sample Matrix: SOIL	Date Reported : 20-OCT-99
Condition of Sample: Satisfactory	Field Prep: None
Number & Type of Containers: 1-Amber Glass	

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	44.	%	0.10	30	2540G	08-Oct	KK
Particle Size Analysis by Hydrometer							12-Oct
Sand+ (>53 um)	86.	%	-	12	D422		DT
Coarse Silt (20-53 um)	6.4	%	-				
Medium Silt (5-20 um)	4.7	%	-				
Fine Silt (2-5 um)	ND	%	0.0				
Clay (<2 um)	2.7	%	-				

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

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908059-14 Date Collected: 06-OCT-1999  
 Sample Matrix: FINE GRAY SILT Date Received : 06-OCT-1999  
 SOIL Date Reported : 20-OCT-99  
 Condition of Sample: Satisfactory Field Prep: None  
 Number & Type of Containers: 1-Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	II
Solids, Total	59.	%	0.10	30	2540G	08-Oct	J
Particle Size Analysis by Hydrometer							
Sand+ (>53 um)	72.	%	-	12	D422	12-Oct	DI
Coarse Silt (20-53 um)	18.	%	-				
Medium Silt (5-20 um)	10.	%	-				
Fine Silt (2-5 um)	ND	%	0.0				
Clay (<2 um)	ND	%	0.0				

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908059-15  
 Sample Matrix: DARK BROWN/ BLACK PEAT  
 Condition of Sample: Satisfactory  
 Number & Type of Containers: 1-Amber Glass

Date Collected: 06-OCT-1999  
 Date Received : 06-OCT-1999  
 Date Reported : 20-OCT-99

Field Prep: None

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID	
Solids, Total	58.	%	0.10	30	2540G	08-Oct	KK	
<b>Particle Size Analysis by Hydrometer</b>							12-Oct	DT
Sand+ (>53 um)	84.	%	-		D422			
Coarse Silt (20-53 um)	8.4	%	-					
Medium Silt (5-20 um)	6.3	%	-					
Fine Silt (2-5 um)	1.0	%	-					
Clay (<2 um)	0.40	%	-					

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



**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908059-16	Date Collected: 06-OCT-1999
Sample Matrix: PLANT DECAY MAT	Date Received : 06-OCT-1999
Sample Matrix: SOIL	Date Reported : 20-OCT-99
Condition of Sample: Satisfactory	Field Prep: None
Number & Type of Containers: 1-Amber Glass	

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	TD
Solids, Total	44.	%	0.10	30	2540G	08-Oct	JK
Particle Size Analysis by Hydrometer							
Sand+ (>53 um)	88.	%	-	12	D422	12-Oct	DT
Coarse Silt (20-53 um)	8.4	%	-				
Medium Silt (5-20 um)	3.3	%	-				
Fine Silt (2-5 um)	ND	%	0.0				
Clay (<2 um)	ND	%	0.0				

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

ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908059-17 Date Collected: 06-OCT-1999  
MED. SAND Date Received : 06-OCT-1999  
Sample Matrix: SOIL Date Reported : 20-OCT-99  
Condition of Sample: Satisfactory Field Prep: None  
Number & Type of Containers: 1-Amber Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	72.	%	0.10	30	2540G	08-Oct	KK
Particle Size Analysis by Hydrometer				12	D422	12-Oct	DT
Sand+ (>53 um)	98.	%	-				
Coarse Silt (20-53 um)	1.8	%	-				
Medium Silt (5-20 um)	ND	%	0.0				
Fine Silt (2-5 um)	ND	%	0.0				
Clay (<2 um)	ND	%	0.0				

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

ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L9908059-18  
 T-5-6 (12-18")  
 Sample Matrix: SOIL  
 Condition of Sample: Satisfactory  
 Number & Type of Containers: 1-Amber Glass

Date Collected: 06-OCT-1999  
 Date Received : 06-OCT-1999  
 Date Reported : 20-OCT-99  
 Field Prep: None

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Solids, Total	27.	%	0.10	30	2540G	13-Oct	4

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

**ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9908059-18  
T-5-6 (12-18")

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES	ID
							PREP ANALYSIS

Extractable Petroleum Hydrocarbons				46	98-1	09-Oct 14-Oct	HL
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Quality Control Information

Condition of sample received:	Satisfactory
Sample temperature upon receipt:	Received on Ice
Sample extraction method:	Extracted Per the Method
Were all QA/QC procedures REQUIRED by the method followed?	YES
Were all performance/acceptance standards for the required procedures achieved?	YES
Were significant modifications made to the method as specified in Sect 11.3?	NO
Please note to subtract the method blank from the stated result.	
The normal acceptance range for the extraction surrogates, Chloro-octadecane and o-Terphenyl, is 40-140%.	
The normal acceptance range for the fractionation surrogates, 2-Fluorobiphenyl and 2-Bromonaphthalene, is 40-140%.	

C9-C18 Aliphatics	ND	mg/kg	37.0
C19-C36 Aliphatics	92.3	mg/kg	37.0
C11-C22 Aromatics	38.5	mg/kg	37.0
C11-C22 Aromatics, Adjusted	38.5	mg/kg	37.0
Naphthalene	ND	mg/kg	1.85
2-Methylnaphthalene	ND	mg/kg	1.85
Acenaphthalene	ND	mg/kg	1.85
Acenaphthene	ND	mg/kg	1.85
Fluorene	ND	mg/kg	1.85
Phenanthrene	ND	mg/kg	1.85
Anthracene	ND	mg/kg	1.85
Fluoranthene	ND	mg/kg	1.85
Pyrene	ND	mg/kg	1.85
Benzo (a) anthracene	ND	mg/kg	1.85
Chrysene	ND	mg/kg	1.85
Benzo (b) fluoranthene	ND	mg/kg	1.85
Benzo (k) fluoranthene	ND	mg/kg	1.85
Benzo (a) pyrene	ND	mg/kg	1.85
Indeno (1, 2, 3-cd) Pyrene	ND	mg/kg	1.85
Dibenzo (a, h) anthracene	ND	mg/kg	1.85
Benzo (ghi) perylene	ND	mg/kg	1.85

Surrogate Recovery

Chloro-Octadecane	49.0	%
o-Terphenyl	64.0	%
2-Fluorobiphenyl	85.0	%
2-Bromonaphthalene	67.0	%

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

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

Laboratory Job Number: L9908059

Parameter	Value 1	Value 2	RPD	Units
Solids, Total for sample(s) 01-17				
Solids, Total	28.	28.	0	%
Solids, Total for sample(s) 18				
Solids, Total	96.	96.	0	%
Chromium, Hexavalent for sample(s) 01-12				
Chromium, Hexavalent	ND	ND	NC	mg/kg
Total Metals for sample(s) 01-12				
Aluminum, Total	6400	8100	23	mg/kg
Antimony, Total	ND	ND	NC	mg/kg
Arsenic, Total	3.4	3.9	14	mg/kg
Barium, Total	24.	26.	8	mg/kg
Beryllium, Total	0.41	0.45	9	mg/kg
Cadmium, Total	0.282	0.294	4	mg/kg
Calcium, Total	700	700	0	mg/kg
Chromium, Total	8.0	9.5	17	mg/kg
Cobalt, Total	3.3	3.8	14	mg/kg
Copper, Total	11.	12.	9	mg/kg
Iron, Total	5600	8900	46	mg/kg
Lead, Total	12.	12.	0	mg/kg
Magnesium, Total	1500	1900	24	mg/kg
Manganese, Total	130	150	14	mg/kg
Nickel, Total	6.1	7.4	19	mg/kg
Potassium, Total	570	790	32	mg/kg
Selenium, Total	ND	ND	NC	mg/kg
Silver, Total	ND	ND	NC	mg/kg
Sodium, Total	29.	38.	27	mg/kg
Thallium, Total	ND	ND	NC	mg/kg
Tin, Total	ND	ND	NC	mg/kg
Vanadium, Total	12.	14.	15	mg/kg
Zinc, Total	23.	24.	4	mg/kg
Total Metals for sample(s) 01-12				
Mercury, Total	ND	ND	NC	mg/kg
Polychlorinated Biphenyls for sample(s) 01-12				
Aroclor 1221	ND	ND	NC	ug/kg
Aroclor 1232	ND	ND	NC	ug/kg
Aroclor 1242/1016	ND	ND	NC	ug/kg
Aroclor 1248	ND	ND	NC	ug/kg
Aroclor 1254	ND	ND	NC	ug/kg
Aroclor 1260	ND	ND	NC	ug/kg
Surrogate Recovery				
2,4,5,6-Tetrachloro-m-xylene	101.	93.0	8	%
Decachlorobiphenyl	56.0	52.0	7	%

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L9908059

Continued

Parameter	Value 1	Value 2	RPD	Units
Volatile Petroleum Hydrocarbons for sample(s) 10-11				
C5-C8 Aliphatics	ND	ND	NC	mg/kg
C9-C12 Aliphatics	ND	ND	NC	mg/kg
C9-C10 Aromatics	ND	ND	NC	mg/kg
C5-C8 Aliphatics, Adjusted	ND	ND	NC	mg/kg
C9-C12 Aliphatics, Adjusted	ND	ND	NC	mg/kg
Benzene	ND	ND	NC	mg/kg
Toluene	ND	ND	NC	mg/kg
Ethylbenzene	ND	ND	NC	mg/kg
p/m-Xylene	ND	ND	NC	mg/kg
o-Xylene	ND	ND	NC	mg/kg
Methyl tert butyl ether	ND	ND	NC	mg/kg
Naphthalene	ND	ND	NC	mg/kg
Surrogate Recovery				
2,5-Dibromotoluene	123.	107.	14	%
Extractable Petroleum Hydrocarbons for sample(s) 04-07,10				
C9-C18 Aliphatics	ND	ND	NC	mg/kg
C19-C36 Aliphatics	ND	ND	NC	mg/kg
C11-C22 Aromatics	ND	ND	NC	mg/kg
Surrogate Recovery				
Chloro-Octadecane	88.0	77.0	13	%
o-Terphenyl	90.0	89.0	1	%
2-Fluorobiphenyl	101.	102.	0	%
2-Bromonaphthalene	63.0	74.0	16	%
Extractable Petroleum Hydrocarbons for sample(s) 18				
C9-C18 Aliphatics	ND	ND	NC	mg/kg
C19-C36 Aliphatics	ND	ND	NC	mg/kg
C11-C22 Aromatics	ND	ND	NC	mg/kg
Surrogate Recovery				
Chloro-Octadecane	78.0	60.0	26	%
o-Terphenyl	89.0	81.0	9	%
2-Fluorobiphenyl	102.	92.0	10	%
2-Bromonaphthalene	84.0	68.0	21	%

**ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH SPIKE ANALYSES**

Laboratory Job Number: L9908059

Parameter	% Recovery
<b>Chromium, Hexavalent LCS for sample(s) 01-12</b>	
Chromium, Hexavalent	96
<b>Total Metals LCS for sample(s) 01-12</b>	
Aluminum, Total	100
Antimony, Total	91
Arsenic, Total	86
Barium, Total	100
Beryllium, Total	100
Cadmium, Total	94
Calcium, Total	93
Chromium, Total	100
Cobalt, Total	100
Copper, Total	110
Lead, Total	96
Magnesium, Total	100
Manganese, Total	110
Nickel, Total	97
Potassium, Total	97
Selenium, Total	92
Silver, Total	81
Sodium, Total	97
Thallium, Total	110
Vanadium, Total	100
Zinc, Total	98
<b>Total Metals LCS for sample(s) 01-12</b>	
Mercury, Total	87
<b>PAH by GC/MS SIM 8270M LCS for sample(s) 01-07,10</b>	
Acenaphthene	90
Pyrene	84
Surrogate Recovery	
Nitrobenzene-d5	81
2-Fluorobiphenyl	72
4-Terphenyl-d14	74
<b>Polychlorinated Biphenyls LCS for sample(s) 01-12</b>	
Aroclor 1242/1016	69
Aroclor 1260	69
Surrogate Recovery	
2,4,5,6-Tetrachloro-m-xylene	77
Decachlorobiphenyl	43

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L9908059

Continued

Parameter	% Recovery
Volatile Petroleum Hydrocarbons LCS for sample(s) 10-11	
Benzene	96
Toluene	107
Ethylbenzene	99
p/m-Xylene	104
o-Xylene	103
Naphthalene	108
Surrogate Recovery	
2,5-Dibromotoluene	122
Extractable Petroleum Hydrocarbons LCS for sample(s) 04-07,10	
Naphthalene	83
Acenaphthene	91
Anthracene	88
Pyrene	76
Chrysene	78
Nonane (C9)	61
Tetradecane (C14)	104
Nonadecane (C19)	88
Eicosane (C20)	113
Octacosane (C28)	314
Surrogate Recovery	
Chloro-Octadecane	79
o-Terphenyl	87
2-Fluorobiphenyl	103
2-Bromonaphthalene	85
Extractable Petroleum Hydrocarbons LCS for sample(s) 18	
Naphthalene	81
Acenaphthene	88
Anthracene	95
Pyrene	87
Chrysene	88
Nonane (C9)	61
Tetradecane (C14)	100
Nonadecane (C19)	96
Eicosane (C20)	124
Octacosane (C28)	71
Surrogate Recovery	
Chloro-Octadecane	93
o-Terphenyl	101
2-Fluorobiphenyl	90
2-Bromonaphthalene	73



ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L9908059

Continued

Parameter	% Recovery
Chromium, Hexavalent SPIKE for sample(s) 01-12	
Chromium, Hexavalent	185
Total Metals SPIKE for sample(s) 01-12	
Barium, Total	98
Beryllium, Total	95
Cadmium, Total	89
Calcium, Total	71
Cobalt, Total	93
Copper, Total	78
Lead, Total	92
Nickel, Total	81
Selenium, Total	76
Silver, Total	74
Sodium, Total	88
Thallium, Total	100
Vanadium, Total	78
Zinc, Total	61
Total Metals SPIKE for sample(s) 01-12	
Mercury, Total	96

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L9908059

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Parameter	MS %	MSD %	RPD
PAH by GC/MS SIM 8270M for sample(s) 01-07,10			
Acenaphthene	100	110	10
Pyrene	100	100	0

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

Laboratory Job Number: L9908059

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES		
						PREP	ANALYSIS	
Blank Analysis for sample(s) 01-12								
Chromium, Hexavalent	ND	mg/kg	0.50	1	7196A		13-Oct	ST
Blank Analysis for sample(s) 01-12								
Total Metals				1	3051			
Aluminum, Total	ND	mg/kg	4.0	1	6010B	08-Oct	08-Oct	P
Antimony, Total	ND	mg/kg	2.0	1	6010B	08-Oct	08-Oct	G
Arsenic, Total	ND	mg/kg	0.40	1	6010B	08-Oct	08-Oct	MG
Barium, Total	ND	mg/kg	0.40	1	6010B	08-Oct	08-Oct	MG
Beryllium, Total	ND	mg/kg	0.20	1	6010B	08-Oct	08-Oct	G
Cadmium, Total	ND	mg/kg	0.200	1	6010B	08-Oct	08-Oct	MG
Calcium, Total	ND	mg/kg	20.	1	6010B	08-Oct	08-Oct	LP
Chromium, Total	ND	mg/kg	0.40	1	6010B	08-Oct	08-Oct	G
Cobalt, Total	ND	mg/kg	0.80	1	6010B	08-Oct	08-Oct	G
Copper, Total	ND	mg/kg	0.40	1	6010B	08-Oct	08-Oct	MG
Iron, Total	ND	mg/kg	2.0	1	6010B	08-Oct	08-Oct	LP
Lead, Total	ND	mg/kg	2.0	1	6010B	08-Oct	08-Oct	G
Magnesium, Total	ND	mg/kg	4.0	1	6010B	08-Oct	08-Oct	G
Manganese, Total	ND	mg/kg	0.40	1	6010B	08-Oct	08-Oct	LP
Nickel, Total	ND	mg/kg	1.0	1	6010B	08-Oct	08-Oct	MG
Potassium, Total	ND	mg/kg	100	1	6010B	08-Oct	08-Oct	P
Selenium, Total	ND	mg/kg	0.80	1	6010B	08-Oct	08-Oct	G
Silver, Total	ND	mg/kg	0.200	1	6010B	08-Oct	08-Oct	MG
Sodium, Total	ND	mg/kg	20.	1	6010B	08-Oct	08-Oct	P
Thallium, Total	ND	mg/kg	0.80	1	6010B	08-Oct	08-Oct	G
Tin, Total	ND	mg/kg	2.0	1	6010B	08-Oct	08-Oct	LP
Vanadium, Total	ND	mg/kg	0.40	1	6010B	08-Oct	08-Oct	MG
Zinc, Total	ND	mg/kg	2.0	1	6010B	08-Oct	08-Oct	G
Blank Analysis for sample(s) 01-12								
Total Metals								
Mercury, Total	ND	mg/kg	0.25	1	7471A	08-Oct	12-Oct	T
Blank Analysis for sample(s) 01-07,10								
PAH by GC/MS SIM 8270M				1	8270C-M	07-Oct	13-Oct	K
Acenaphthene	ND	ug/kg	20.					
2-Chloronaphthalene	ND	ug/kg	20.					
Fluoranthene	ND	ug/kg	20.					
Naphthalene	ND	ug/kg	20.					
Benzo(a)anthracene	ND	ug/kg	20.					
Benzo(a,e)pyrene	ND	ug/kg	20.					
Benzo(b)fluoranthene	ND	ug/kg	20.					
Benzo(k)fluoranthene	ND	ug/kg	20.					
Chrysene	ND	ug/kg	20.					
Acenaphthylene	ND	ug/kg	20.					
Anthracene	ND	ug/kg	20.					

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L9908059

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Blank Analysis for sample(s) 01-07,10							
PAH by GC/MS SIM 8270M continued				1	8270C-M	07-Oct 13-Oct	MK
Benzo (ghi)perylene	ND	ug/kg	20.				
Fluorene	ND	ug/kg	20.				
Phenanthrene	ND	ug/kg	20.				
Dibenzo (a, h) anthracene	ND	ug/kg	20.				
Indeno (1, 2, 3- cd) Pyrene	ND	ug/kg	20.				
Pyrene	ND	ug/kg	20.				
1-Methylnaphthalene	ND	ug/kg	20.				
2-Methylnaphthalene	ND	ug/kg	20.				
Perylene	ND	ug/kg	20.				
Biphenyl	ND	ug/kg	20.				
Surrogate Recovery							
Nitrobenzene-d5	72.0	%					
2-Fluorobiphenyl	71.0	%					
4-Terphenyl-d14	72.0	%					
Blank Analysis for sample(s) 01-12							
Polychlorinated Biphenyls				1	8082	07-Oct 12-Oct	PB
Aroclor 1221	ND	ug/kg	250.				
Aroclor 1232	ND	ug/kg	250.				
Aroclor 1242/1016	ND	ug/kg	250.				
Aroclor 1248	ND	ug/kg	250.				
Aroclor 1254	ND	ug/kg	250.				
Aroclor 1260	ND	ug/kg	250.				
Surrogate Recovery							
2,4,5,6-Tetrachloro-m-xylene	121.	%					
Decachlorobiphenyl	64.0	%					
Blank Analysis for sample(s) 10-11							
Volatile Petroleum Hydrocarbons				47	98-1	13-Oct	JC
C5-C8 Aliphatics	ND	mg/kg	1.00				
C9-C12 Aliphatics	ND	mg/kg	1.00				
C9-C10 Aromatics	ND	mg/kg	1.00				
C5-C8 Aliphatics, Adjusted	ND	mg/kg	1.00				
C9-C12 Aliphatics, Adjusted	ND	mg/kg	1.00				
Benzene	ND	mg/kg	0.100				
Toluene	ND	mg/kg	0.100				
Ethylbenzene	ND	mg/kg	0.100				
p/m-Xylene	ND	mg/kg	0.100				
o-Xylene	ND	mg/kg	0.100				
Methyl tert butyl ether	ND	mg/kg	1.00				
Naphthalene	ND	mg/kg	1.00				

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

Laboratory Job Number: L9908059

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	
Blank Analysis for sample(s) 10-11							
Volatile Petroleum Hydrocarbons continued				47	98-1	13-Oct	JC
Surrogate Recovery							
2,5-Dibromotoluene	79.0	%					
Blank Analysis for sample(s) 04-07,10							
Extractable Petroleum Hydrocarbons				46	98-1	08-Oct 12-Oct	L
C9-C18 Aliphatics	ND	mg/kg	10.0				
C19-C36 Aliphatics	ND	mg/kg	10.0				
C11-C22 Aromatics	ND	mg/kg	10.0				
Surrogate Recovery							
Chloro-Octadecane	88.0	%					
o-Terphenyl	90.0	%					
2-Fluorobiphenyl	98.0	%					
2-Bromonaphthalene	50.0	%					
Blank Analysis for sample(s) 18							
Extractable Petroleum Hydrocarbons				46	98-1	09-Oct 13-Oct	H
C9-C18 Aliphatics	ND	mg/kg	10.0				
C19-C36 Aliphatics	ND	mg/kg	10.0				
C11-C22 Aromatics	ND	mg/kg	10.0				
C11-C22 Aromatics, Adjusted	ND	mg/kg	10.0				
Naphthalene	ND	mg/kg	0.500				
2-Methylnaphthalene	ND	mg/kg	0.500				
Acenaphthalene	ND	mg/kg	0.500				
Acenaphthene	ND	mg/kg	0.500				
Fluorene	ND	mg/kg	0.500				
Phenanthrene	ND	mg/kg	0.500				
Anthracene	ND	mg/kg	0.500				
Fluoranthene	ND	mg/kg	0.500				
Pyrene	ND	mg/kg	0.500				
Benzo(a)anthracene	ND	mg/kg	0.500				
Chrysene	ND	mg/kg	0.500				
Benzo(b)fluoranthene	ND	mg/kg	0.500				
Benzo(k)fluoranthene	ND	mg/kg	0.500				
Benzo(a)pyrene	ND	mg/kg	0.500				
Indeno(1,2,3-cd)Pyrene	ND	mg/kg	0.500				
Dibenzo(a,h)anthracene	ND	mg/kg	0.500				
Benzo(ghi)perylene	ND	mg/kg	0.500				
Surrogate Recovery							
Chloro-Octadecane	76.0	%					
o-Terphenyl	90.0	%					
2-Fluorobiphenyl	95.0	%					
2-Bromonaphthalene	69.0	%					

**ALPHA ANALYTICAL LABORATORIES  
ADDENDUM I**

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**REFERENCES**

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12. Annual Book of ASTM Standards. American Society for Testing and Materials 1995.
30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
46. Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), Massachusetts Department of Environmental Protection, (MADEP-EPH-98-1), January 1998.
47. Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), Massachusetts Department of Environmental Protection, (MADEP-VPH-98-1), January 1998.

**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.

**LIMITATION OF LIABILITIES**

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