Appendix C
Analytical Laboratory Reports
(Provided on CD)

Appendix C
Water Treatment Samples

Report Date:
27-Aug-07 15:39

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

Maxymillian Technologies, Inc.
1801 East Street
Pittsfield, MA 01201
Attn: John Anthony

Project: Wayland - Boston Post Road
Project 07029

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SA67181-01	Retreat-Eff3	Aqueous	22-Aug-07 00:00	23-Aug-07 15:00
SA67181-02	Retreat-Eff4	Aqueous	22-Aug-07 00:00	23-Aug-07 15:00

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.
Please note that this report contains 5 pages of analytical data plus Chain of Custody document(s).

Massachusetts Certification # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538/2972
New Jersey # MA011/MA012
New York # 11393/11840
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393

Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NH-2972, NY-11840, FL-E87936 and NJ-MA012).

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Retreat-Eff3 SA67181-01	07029	Aqueous	22-Aug-07 00:00	23-Aug-07

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	0.0175		mg/l	0.0080	1	SW846 6010B	25-Aug-07	26-Aug-07	7082110	JLC
7440-50-8	Copper	0.0303		mg/l	0.0100	1	"	"	"	"	"
7439-89-6	Iron	BRL		mg/l	0.0480	1	"	"	"	"	"
7440-02-0	Nickel	0.0408		mg/l	0.0100	1	"	"	"	"	"

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Retreat-Eff4 SA67181-02	07029	Aqueous	22-Aug-07 00:00	23-Aug-07

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*
Soluble Metals by EPA 200/6000 Series Methods											
	Filtration	Lab Filtered		N/A		1	EPA 200.7/3005A	27-Aug-07	27-Aug-07	7082147	YP
Soluble Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	0.0167		mg/l	0.0080	1	SW846 6010B	27-Aug-07	27-Aug-07	7082155	SA

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7082110 - SW846 3005A										
Blank (7082110-BLK1)										
Prepared: 25-Aug-07 Analyzed: 26-Aug-07										
Nickel	BRL		mg/l	0.0100						
Iron	BRL		mg/l	0.0480						
Arsenic	BRL		mg/l	0.0080						
Copper	BRL		mg/l	0.0100						
LCS (7082110-BS1)										
Prepared: 25-Aug-07 Analyzed: 26-Aug-07										
Iron	1.22		mg/l	0.0480	1.25		98	85-115		
Nickel	1.22		mg/l	0.0100	1.25		97	85-115		
Arsenic	1.21		mg/l	0.0080	1.25		96	85-115		
Copper	1.26		mg/l	0.0100	1.25		101	85-115		
LCS Dup (7082110-BSD1)										
Prepared: 25-Aug-07 Analyzed: 26-Aug-07										
Iron	1.26		mg/l	0.0480	1.25		101	85-115	3	20
Nickel	1.24		mg/l	0.0100	1.25		99	85-115	2	20
Copper	1.31		mg/l	0.0100	1.25		105	85-115	4	20
Arsenic	1.22		mg/l	0.0080	1.25		98	85-115	1	20
Duplicate (7082110-DUP1) **Source: SA67229-02**										
Prepared: 25-Aug-07 Analyzed: 26-Aug-07										
Nickel	0.0014	J,QR4	mg/l	0.0100		0.0049			111	20
Iron	0.0397	J	mg/l	0.0480		0.0471			17	20
Arsenic	0.510		mg/l	0.0080		0.505			1	20
Copper	0.0033	J	mg/l	0.0100		0.0032			3	20
Matrix Spike (7082110-MS1) **Source: SA67229-01**										
Prepared: 25-Aug-07 Analyzed: 26-Aug-07										
Iron	3.53		mg/l	0.0480	1.25	2.28	100	75-125		
Nickel	1.26		mg/l	0.0100	1.25	0.0138	100	75-125		
Arsenic	1.22		mg/l	0.0080	1.25	0.0103	97	75-125		
Copper	1.32		mg/l	0.0100	1.25	0.0072	105	75-125		
Matrix Spike Dup (7082110-MSD1) **Source: SA67229-01**										
Prepared: 25-Aug-07 Analyzed: 26-Aug-07										
Nickel	1.27		mg/l	0.0100	1.25	0.0138	100	75-125	0.2	20
Iron	3.54		mg/l	0.0480	1.25	2.28	101	75-125	0.2	20
Arsenic	1.22		mg/l	0.0080	1.25	0.0103	97	75-125	0.2	20
Copper	1.32		mg/l	0.0100	1.25	0.0072	105	75-125	0.08	20
Post Spike (7082110-PS1) **Source: SA67229-01**										
Prepared: 25-Aug-07 Analyzed: 26-Aug-07										
Iron	3.38		mg/l	0.0480	1.25	2.28	88	80-120		
Nickel	1.30		mg/l	0.0100	1.25	0.0138	103	80-120		
Arsenic	1.26		mg/l	0.0080	1.25	0.0103	100	80-120		
Copper	1.36		mg/l	0.0100	1.25	0.0072	109	80-120		

Soluble Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7082155 - SW846 3005A										
Blank (7082155-BLK1)										
Prepared & Analyzed: 27-Aug-07										
Arsenic	BRL		mg/l	0.0080						
LCS (7082155-BS1)										
Prepared & Analyzed: 27-Aug-07										
Arsenic	0.928		mg/l	0.0080	1.00		93	85-115		
LCS Dup (7082155-BSD1)										
Prepared & Analyzed: 27-Aug-07										
Arsenic	0.926		mg/l	0.0080	1.00		93	85-115	0.1	20
Duplicate (7082155-DUP1)	**Source: SA67181-02**									
Prepared & Analyzed: 27-Aug-07										
Arsenic	0.0214	QR1	mg/l	0.0080		0.0167			25	20
Matrix Spike (7082155-MS1)	**Source: SA67181-02**									
Prepared & Analyzed: 27-Aug-07										
Arsenic	2.40		mg/l	0.0080	2.50	0.0167	95	75-125		
Matrix Spike Dup (7082155-MSD1)	**Source: SA67181-02**									
Prepared & Analyzed: 27-Aug-07										
Arsenic	2.39		mg/l	0.0080	2.50	0.0167	95	75-125	0.5	20

Notes and Definitions

QR1	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QR4	Analyses are not controlled on RPD values from sample concentrations less than the reporting limit. QC batch accepted based on LCS and/or LCSD QC results
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Validated by:
Hanibal C. Tayeh, Ph.D.
Christopher Hall

SAL7481 CK

MAXYMILLIAN Technologies

CHAIN OF CUSTODY RECORD

PO # 15790

Client:	Maxymillian Technologies	Project Name:	Wayland
Date:	8/22/07	Project Number:	07029
Report To:	John Anthony	Address:	Boston Post Road
Address:	1801 East Street.	Date Samples Collected:	8/22/07
Telephone:	413-499-3050	By:	John Anthony

Sampling Information					Analysis Required	# Of Cont.	Type of Cont.	Pres.	Comments: (special instruction, cautions, etc.)
ID#	Date	Time	Location	Sample Type					
RETREAT EFF3	8/22/07	a.m.	Post .5	Grab	Total As, Cu, Ni, Fe	1	500 ml	HNO_3	SAL7481 OK
RETREAT EFF4	8/22/07	am	Post .5	Grab	Dissolved As *	1	250 ml	None	" OK

REMARKS: (special instructions, sample storage, non-standard sample bottles, etc.)

* Lab filter dissolved As.

3.7 °C

Relinquished by: _____ Date: 8/22/07

Received by: _____ Date: 8/23/07

Relinquished by: _____ Date: 8/23/07

Received by: _____ Date: 8/27/07 15:00

Relinquished by: _____ Date: _____

Received by: _____ Date: _____

Turnaround: 24 hrs. ____ 48 hrs. ____ 1 week ____ 2 weeks ____ 4 weeks ____ Other 2 day

Report Date:
14-Aug-07 17:44

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

Maxymillian Technologies, Inc.
1801 East Street
Pittsfield, MA 01201
Attn: S.Epstein

Project: ERM RCM Raytheon Exc. - Wayland, MA
Project 07029

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SA66464-01	Coffar Dam	Ground Water	09-Aug-07 10:00	09-Aug-07 15:50
SA66464-02	Trip Blank	Ground Water	09-Aug-07 00:00	09-Aug-07 15:50

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.
Please note that this report contains 11 pages of analytical data plus Chain of Custody document(s).

Massachusetts Certification # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538/2972
New Jersey # MA011/MA012
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President/Laboratory Director

Technical Reviewer's Initial:

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Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Coffar Dam	07029	Ground Water	09-Aug-07 10:00	09-Aug-07
SA66464-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Volatile Organic Compounds												
Volatile Organic Aromatics by SW846 8260B												
Prepared by method SW846 5030 Water MS												
71-43-2	Benzene	BRL		µg/l	1.0	0.6	1	SW 846 8260B	10-Aug-07	11-Aug-07	7080888	eq
100-41-4	Ethylbenzene	BRL		µg/l	1.0	0.3	1	"	"	"	"	"
1634-04-4	Methyl tert-butyl ether	BRL		µg/l	1.0	0.3	1	"	"	"	"	"
108-88-3	Toluene	BRL		µg/l	1.0	0.6	1	"	"	"	"	"
1330-20-7	m,p-Xylene	BRL		µg/l	2.0	0.7	1	"	"	"	"	"
95-47-6	o-Xylene	BRL		µg/l	1.0	0.5	1	"	"	"	"	"
Surrogate recoveries:												
460-00-4	*4-Bromofluorobenzene*	*88*		*70-130 %*				"	"	"	"	"
2037-26-5	*Toluene-d8*	*100*		*70-130 %*				"	"	"	"	"
17060-07-0	*1,2-Dichloroethane-d4*	*108*		*70-130 %*				"	"	"	"	"
1868-53-7	*Dibromofluoromethane*	*102*		*70-130 %*				"	"	"	"	"
Volatile Organic Halocarbons by SW846 8260B												
Prepared by method SW846 5030 Water MS												
75-27-4	Bromodichloromethane	BRL		µg/l	1.0	0.9	1	"	"	"	"	"
75-25-2	Bromoform	BRL		µg/l	1.0	0.4	1	"	"	"	"	"
74-83-9	Bromomethane	BRL		µg/l	2.0	1.6	1	"	"	"	"	"
56-23-5	Carbon tetrachloride	BRL		µg/l	1.0	0.6	1	"	"	"	"	"
108-90-7	Chlorobenzene	BRL		µg/l	1.0	0.5	1	"	"	"	"	"
75-00-3	Chloroethane	BRL		µg/l	2.0	0.7	1	"	"	"	"	"
67-66-3	Chloroform	BRL		µg/l	1.0	0.8	1	"	"	"	"	"
74-87-3	Chloromethane	BRL		µg/l	2.0	0.6	1	"	"	"	"	"
124-48-1	Dibromochloromethane	BRL		µg/l	1.0	0.4	1	"	"	"	"	"
95-50-1	1,2-Dichlorobenzene	BRL		µg/l	1.0	0.5	1	"	"	"	"	"
541-73-1	1,3-Dichlorobenzene	BRL		µg/l	1.0	0.6	1	"	"	"	"	"
106-46-7	1,4-Dichlorobenzene	BRL		µg/l	1.0	0.4	1	"	"	"	"	"
75-71-8	Dichlorodifluoromethane (Freon12)	BRL		µg/l	2.0	0.6	1	"	"	"	"	"
75-34-3	1,1-Dichloroethane	BRL		µg/l	1.0	0.3	1	"	"	"	"	"
107-06-2	1,2-Dichloroethane	BRL		µg/l	1.0	0.4	1	"	"	"	"	"
75-35-4	1,1-Dichloroethene	BRL		µg/l	1.0	0.6	1	"	"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL		µg/l	1.0	0.4	1	"	"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL		µg/l	1.0	0.9	1	"	"	"	"	"
78-87-5	1,2-Dichloropropane	BRL		µg/l	1.0	0.4	1	"	"	"	"	"
10061-01-5	cis-1,3-Dichloropropene	BRL		µg/l	1.0	0.4	1	"	"	"	"	"
10061-02-6	trans-1,3-Dichloropropene	BRL		µg/l	1.0	0.4	1	"	"	"	"	"
75-09-2	Methylene chloride	BRL		µg/l	5.0	0.6	1	"	"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL		µg/l	1.0	0.7	1	"	"	"	"	"
127-18-4	Tetrachloroethene	BRL		µg/l	1.0	0.5	1	"	"	"	"	"
71-55-6	1,1,1-Trichloroethane	BRL		µg/l	1.0	0.5	1	"	"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL		µg/l	1.0	0.9	1	"	"	"	"	"
79-01-6	Trichloroethene	BRL		µg/l	1.0	0.5	1	"	"	"	"	"
75-69-4	Trichlorofluoromethane (Freon 11)	BRL		µg/l	1.0	0.5	1	"	"	"	"	"
75-01-4	Vinyl chloride	BRL		µg/l	1.0	0.9	1	"	"	"	"	"
Surrogate recoveries:												
460-00-4	*4-Bromofluorobenzene*	*88*		*70-130 %*				"	"	"	"	"
2037-26-5	*Toluene-d8*	*100*		*70-130 %*				"	"	"	"	"
17060-07-0	*1,2-Dichloroethane-d4*	*108*		*70-130 %*				"	"	"	"	"
1868-53-7	*Dibromofluoromethane*	*102*		*70-130 %*				"	"	"	"	"
Semivolatile Organic Compounds by GCMS												

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Coffar Dam SA66464-01	07029	Ground Water	09-Aug-07 10:00	09-Aug-07

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Semivolatile Organic Compounds by GCMS												
Acid Extractables/Phenols by SW846 8270C												
Prepared by method SW846 3510C												
87-86-5	Pentachlorophenol	BRL	U	µg/l	2.69	0.172	1	SW846 8270C	09-Aug-07	14-Aug-07	7080709	M.B
Surrogate recoveries:												
367-12-4	*2-Fluorophenol*	*64*		*15-110 %*				"	"	"	"	"
4165-62-2	*Phenol-d5*	*56*		*15-110 %*				"	"	"	"	"
Total Metals by EPA 6000/7000 Series Methods												
7440-38-2	Arsenic	0.0626		mg/l	0.0040	0.0025	1	SW846 6010B	10-Aug-07	10-Aug-07	7080851	SA
7440-50-8	Copper	BRL		mg/l	0.0050	0.0015	1	"	"	"	"	"
7439-89-6	Iron	0.0574		mg/l	0.0150	0.0075	1	"	"	"	"	"
7440-02-0	Nickel	0.0078		mg/l	0.0050	0.0005	1	"	"	"	"	"
General Chemistry Parameters												
	pH	7.99		pH Units			1	ASTM D 1293	09-Aug-07 19:00	09-Aug-07	7080863	QP
	Total Suspended Solids	BRL		mg/l	5.00	1.00	1	SM2540D	11-Aug-07	11-Aug-07	7080947	DN

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Trip Blank SA66464-02	07029	Ground Water	09-Aug-07 00:00	09-Aug-07

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Volatile Organic Compounds												
Volatile Organic Aromatics by SW846 8260B												
Prepared by method SW846 5030 Water MS												
71-43-2	Benzene	BRL		µg/l	1.0	0.6	1	SW 846 8260B	10-Aug-07	11-Aug-07	7080888	eq
100-41-4	Ethylbenzene	BRL		µg/l	1.0	0.3	1	"	"	"	"	"
1634-04-4	Methyl tert-butyl ether	BRL		µg/l	1.0	0.3	1	"	"	"	"	"
108-88-3	Toluene	BRL		µg/l	1.0	0.6	1	"	"	"	"	"
1330-20-7	m,p-Xylene	BRL		µg/l	2.0	0.7	1	"	"	"	"	"
95-47-6	o-Xylene	BRL		µg/l	1.0	0.5	1	"	"	"	"	"
Surrogate recoveries:												
460-00-4	*4-Bromofluorobenzene*	*88*		*70-130 %*				"	"	"	"	"
2037-26-5	*Toluene-d8*	*100*		*70-130 %*				"	"	"	"	"
17060-07-0	*1,2-Dichloroethane-d4*	*109*		*70-130 %*				"	"	"	"	"
1868-53-7	*Dibromofluoromethane*	*103*		*70-130 %*				"	"	"	"	"
Volatile Organic Halocarbons by SW846 8260B												
Prepared by method SW846 5030 Water MS												
75-27-4	Bromodichloromethane	BRL		µg/l	1.0	0.9	1	"	"	"	"	"
75-25-2	Bromoform	BRL		µg/l	1.0	0.4	1	"	"	"	"	"
74-83-9	Bromomethane	BRL		µg/l	2.0	1.6	1	"	"	"	"	"
56-23-5	Carbon tetrachloride	BRL		µg/l	1.0	0.6	1	"	"	"	"	"
108-90-7	Chlorobenzene	BRL		µg/l	1.0	0.5	1	"	"	"	"	"
75-00-3	Chloroethane	BRL		µg/l	2.0	0.7	1	"	"	"	"	"
67-66-3	Chloroform	BRL		µg/l	1.0	0.8	1	"	"	"	"	"
74-87-3	Chloromethane	BRL		µg/l	2.0	0.6	1	"	"	"	"	"
124-48-1	Dibromochloromethane	BRL		µg/l	1.0	0.4	1	"	"	"	"	"
95-50-1	1,2-Dichlorobenzene	BRL		µg/l	1.0	0.5	1	"	"	"	"	"
541-73-1	1,3-Dichlorobenzene	BRL		µg/l	1.0	0.6	1	"	"	"	"	"
106-46-7	1,4-Dichlorobenzene	BRL		µg/l	1.0	0.4	1	"	"	"	"	"
75-71-8	Dichlorodifluoromethane (Freon12)	BRL		µg/l	2.0	0.6	1	"	"	"	"	"
75-34-3	1,1-Dichloroethane	BRL		µg/l	1.0	0.3	1	"	"	"	"	"
107-06-2	1,2-Dichloroethane	BRL		µg/l	1.0	0.4	1	"	"	"	"	"
75-35-4	1,1-Dichloroethene	BRL		µg/l	1.0	0.6	1	"	"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL		µg/l	1.0	0.4	1	"	"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL		µg/l	1.0	0.9	1	"	"	"	"	"
78-87-5	1,2-Dichloropropane	BRL		µg/l	1.0	0.4	1	"	"	"	"	"
10061-01-5	cis-1,3-Dichloropropene	BRL		µg/l	1.0	0.4	1	"	"	"	"	"
10061-02-6	trans-1,3-Dichloropropene	BRL		µg/l	1.0	0.4	1	"	"	"	"	"
75-09-2	Methylene chloride	BRL		µg/l	5.0	0.6	1	"	"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL		µg/l	1.0	0.7	1	"	"	"	"	"
127-18-4	Tetrachloroethene	BRL		µg/l	1.0	0.5	1	"	"	"	"	"
71-55-6	1,1,1-Trichloroethane	BRL		µg/l	1.0	0.5	1	"	"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL		µg/l	1.0	0.9	1	"	"	"	"	"
79-01-6	Trichloroethene	BRL		µg/l	1.0	0.5	1	"	"	"	"	"
75-69-4	Trichlorofluoromethane (Freon 11)	BRL		µg/l	1.0	0.5	1	"	"	"	"	"
75-01-4	Vinyl chloride	BRL		µg/l	1.0	0.9	1	"	"	"	"	"
Surrogate recoveries:												
460-00-4	*4-Bromofluorobenzene*	*88*		*70-130 %*				"	"	"	"	"
2037-26-5	*Toluene-d8*	*100*		*70-130 %*				"	"	"	"	"
17060-07-0	*1,2-Dichloroethane-d4*	*109*		*70-130 %*				"	"	"	"	"
1868-53-7	*Dibromofluoromethane*	*103*		*70-130 %*				"	"	"	"	"

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7080888 - SW846 5030 Water MS										
Blank (7080888-BLK1)										
Prepared & Analyzed: 10-Aug-07										
Benzene	BRL		µg/l	1.0						
Benzene	BRL		µg/l	1.0						
Bromodichloromethane	BRL		µg/l	1.0						
Bromoform	BRL		µg/l	1.0						
Bromomethane	BRL		µg/l	2.0						
Carbon tetrachloride	BRL		µg/l	1.0						
Chlorobenzene	BRL		µg/l	1.0						
Chloroethane	BRL		µg/l	2.0						
Chloroform	BRL		µg/l	1.0						
Chloromethane	BRL		µg/l	2.0						
Dibromochloromethane	BRL		µg/l	1.0						
1,2-Dichlorobenzene	BRL		µg/l	1.0						
1,3-Dichlorobenzene	BRL		µg/l	1.0						
1,4-Dichlorobenzene	BRL		µg/l	1.0						
Dichlorodifluoromethane (Freon12)	BRL		µg/l	2.0						
1,1-Dichloroethane	BRL		µg/l	1.0						
1,2-Dichloroethane	BRL		µg/l	1.0						
1,1-Dichloroethene	BRL		µg/l	1.0						
cis-1,2-Dichloroethene	BRL		µg/l	1.0						
trans-1,2-Dichloroethene	BRL		µg/l	1.0						
1,2-Dichloropropane	BRL		µg/l	1.0						
cis-1,3-Dichloropropene	BRL		µg/l	1.0						
trans-1,3-Dichloropropene	BRL		µg/l	1.0						
Ethylbenzene	BRL		µg/l	1.0						
Methyl tert-butyl ether	BRL		µg/l	1.0						
Methylene chloride	BRL		µg/l	5.0						
1,1,2,2-Tetrachloroethane	BRL		µg/l	1.0						
Tetrachloroethene	BRL		µg/l	1.0						
Toluene	BRL		µg/l	1.0						
Toluene	BRL		µg/l	1.0						
1,1,1-Trichloroethane	BRL		µg/l	1.0						
1,1,2-Trichloroethane	BRL		µg/l	1.0						
Trichloroethene	BRL		µg/l	1.0						
Trichlorofluoromethane (Freon 11)	BRL		µg/l	1.0						
Vinyl chloride	BRL		µg/l	1.0						
m,p-Xylene	BRL		µg/l	2.0						
o-Xylene	BRL		µg/l	1.0						
Chlorobenzene	BRL		µg/l	1.0						
1,1-Dichloroethene	BRL		µg/l	1.0						
Trichloroethene	BRL		µg/l	1.0						
Surrogate: 4-Bromofluorobenzene	*45.0*		µg/l		*50.0*		*90*	*70-130*		
Surrogate: 4-Bromofluorobenzene	*45.0*		µg/l		*50.0*		*90*	*70-130*		
Surrogate: Toluene-d8	*49.4*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: Toluene-d8	*49.4*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*52.2*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*52.2*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: Dibromofluoromethane	*51.0*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: Dibromofluoromethane	*51.0*		µg/l		*50.0*		*102*	*70-130*		
LCS (7080888-BS1)										
Prepared: 10-Aug-07 Analyzed: 11-Aug-07										

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7080888 - SW846 5030 Water MS										
LCS (7080888-BS1)										
Prepared: 10-Aug-07 Analyzed: 11-Aug-07										
Benzene	17.1		µg/l		20.0		86	70-130		
Bromodichloromethane	17.7		µg/l		20.0		88	70-130		
Bromoform	16.9		µg/l		20.0		84	70-130		
Bromomethane	18.7		µg/l		20.0		94	70-130		
Carbon tetrachloride	17.8		µg/l		20.0		89	70-130		
Chlorobenzene	17.5		µg/l		20.0		88	70-130		
Chloroethane	16.6		µg/l		20.0		83	70-130		
Chloroform	16.8		µg/l		20.0		84	70-130		
Chloromethane	17.2		µg/l		20.0		86	70-130		
Dibromochloromethane	18.2		µg/l		20.0		91	70-130		
1,2-Dichlorobenzene	18.7		µg/l		20.0		94	70-130		
1,3-Dichlorobenzene	16.4		µg/l		20.0		82	70-130		
1,4-Dichlorobenzene	17.2		µg/l		20.0		86	70-130		
1,1-Dichloroethane	17.3		µg/l		20.0		86	70-130		
1,2-Dichloroethane	16.9		µg/l		20.0		85	70-130		
1,1-Dichloroethene	16.4		µg/l		20.0		82	70-130		
cis-1,2-Dichloroethene	18.1		µg/l		20.0		90	70-130		
trans-1,2-Dichloroethene	16.9		µg/l		20.0		85	70-130		
1,2-Dichloropropane	17.7		µg/l		20.0		88	70-130		
cis-1,3-Dichloropropene	17.0		µg/l		20.0		85	70-130		
trans-1,3-Dichloropropene	15.9		µg/l		20.0		80	70-130		
Ethylbenzene	18.4		µg/l		20.0		92	70-130		
Methyl tert-butyl ether	17.5		µg/l		20.0		88	70-130		
Methylene chloride	16.7		µg/l		20.0		84	70-130		
1,1,2,2-Tetrachloroethane	16.8		µg/l		20.0		84	70-130		
Tetrachloroethene	16.6		µg/l		20.0		83	70-130		
Toluene	17.0		µg/l		20.0		85	70-130		
1,1,1-Trichloroethane	17.2		µg/l		20.0		86	70-130		
1,1,2-Trichloroethane	17.5		µg/l		20.0		88	70-130		
Trichloroethene	17.4		µg/l		20.0		87	70-130		
Trichlorofluoromethane (Freon 11)	17.0		µg/l		20.0		85	70-130		
Vinyl chloride	18.5		µg/l		20.0		92	70-130		
m,p-Xylene	33.5		µg/l		40.0		84	70-130		
o-Xylene	17.1		µg/l		20.0		86	70-130		
Surrogate: 4-Bromofluorobenzene	*52.1*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: 4-Bromofluorobenzene	*52.1*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: Toluene-d8	*50.2*		µg/l		*50.0*		*100*	*70-130*		
Surrogate: Toluene-d8	*50.2*		µg/l		*50.0*		*100*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*49.5*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*49.5*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: Dibromofluoromethane	*49.4*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: Dibromofluoromethane	*49.4*		µg/l		*50.0*		*99*	*70-130*		
LCS Dup (7080888-BSD1)										
Prepared: 10-Aug-07 Analyzed: 11-Aug-07										
Benzene	16.0		µg/l		20.0		80	70-130	7	25
Bromodichloromethane	16.7		µg/l		20.0		84	70-130	6	25
Bromoform	16.0		µg/l		20.0		80	70-130	5	25
Bromomethane	16.8		µg/l		20.0		84	70-130	11	50
Carbon tetrachloride	15.6		µg/l		20.0		78	70-130	13	25
Chlorobenzene	16.8		µg/l		20.0		84	70-130	4	25

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7080888 - SW846 5030 Water MS										
LCS Dup (7080888-BSD1)										
Prepared: 10-Aug-07 Analyzed: 11-Aug-07										
Chloroethane	14.2		µg/l		20.0		71	70-130	16	50
Chloroform	16.1		µg/l		20.0		81	70-130	4	25
Chloromethane	15.0		µg/l		20.0		75	70-130	14	25
Dibromochloromethane	17.9		µg/l		20.0		89	70-130	2	50
1,2-Dichlorobenzene	17.3		µg/l		20.0		86	70-130	8	25
1,3-Dichlorobenzene	15.2		µg/l		20.0		76	70-130	7	25
1,4-Dichlorobenzene	16.2		µg/l		20.0		81	70-130	7	25
1,1-Dichloroethane	16.3		µg/l		20.0		82	70-130	6	25
1,2-Dichloroethane	16.5		µg/l		20.0		82	70-130	3	25
1,1-Dichloroethene	14.4		µg/l		20.0		72	70-130	13	25
cis-1,2-Dichloroethene	17.2		µg/l		20.0		86	70-130	5	25
trans-1,2-Dichloroethene	15.4		µg/l		20.0		77	70-130	9	25
1,2-Dichloropropane	16.6		µg/l		20.0		83	70-130	6	25
cis-1,3-Dichloropropene	16.2		µg/l		20.0		81	70-130	5	25
trans-1,3-Dichloropropene	15.5		µg/l		20.0		77	70-130	3	25
Ethylbenzene	16.8		µg/l		20.0		84	70-130	9	25
Methyl tert-butyl ether	17.5		µg/l		20.0		87	70-130	0.2	25
Methylene chloride	15.9		µg/l		20.0		80	70-130	5	25
1,1,2,2-Tetrachloroethane	16.3		µg/l		20.0		81	70-130	3	25
Tetrachloroethene	15.4		µg/l		20.0		77	70-130	8	25
Toluene	15.7		µg/l		20.0		78	70-130	8	25
1,1,1-Trichloroethane	15.2		µg/l		20.0		76	70-130	13	25
1,1,2-Trichloroethane	16.9		µg/l		20.0		84	70-130	4	25
Trichloroethene	15.6		µg/l		20.0		78	70-130	11	25
Trichlorofluoromethane (Freon 11)	14.9		µg/l		20.0		74	70-130	13	50
Vinyl chloride	15.6		µg/l		20.0		78	70-130	17	25
m,p-Xylene	30.6		µg/l		40.0		77	70-130	9	25
o-Xylene	15.6		µg/l		20.0		78	70-130	9	25
Surrogate: 4-Bromofluorobenzene	*52.2*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: 4-Bromofluorobenzene	*52.2*		µg/l		*50.0*		*104*	*70-130*		
Surrogate: Toluene-d8	*50.0*		µg/l		*50.0*		*100*	*70-130*		
Surrogate: Toluene-d8	*50.0*		µg/l		*50.0*		*100*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*49.5*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*49.5*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: Dibromofluoromethane	*49.3*		µg/l		*50.0*		*99*	*70-130*		
Surrogate: Dibromofluoromethane	*49.3*		µg/l		*50.0*		*99*	*70-130*		
Matrix Spike (7080888-MS1) **Source: SA66258-06**										
Prepared: 10-Aug-07 Analyzed: 11-Aug-07										
Benzene	16.0		µg/l		20.0	0.0	80	70-130		
Benzene	16.0		µg/l		20.0	BRL	80	70-130		
Chlorobenzene	18.9		µg/l		20.0	BRL	94	70-130		
1,1-Dichloroethene	14.7		µg/l		20.0	BRL	73	70-130		
Toluene	16.6		µg/l		20.0	BRL	83	70-130		
Toluene	16.6		µg/l		20.0	0.0	83	70-130		
Trichloroethene	17.6		µg/l		20.0	BRL	88	70-130		
Chlorobenzene	18.9		µg/l		20.0	0.0	94	70-130		
1,1-Dichloroethene	14.7		µg/l		20.0	0.0	73	70-130		
Trichloroethene	17.6		µg/l		20.0	0.0	88	70-130		
Surrogate: 4-Bromofluorobenzene	*45.2*		µg/l		*50.0*		*90*	*70-130*		
Surrogate: 4-Bromofluorobenzene	*45.2*		µg/l		*50.0*		*90*	*70-130*		
Surrogate: Toluene-d8	*48.9*		µg/l		*50.0*		*98*	*70-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7080888 - SW846 5030 Water MS										
Matrix Spike (7080888-MS1)	**Source: SA66258-06**									
Prepared: 10-Aug-07 Analyzed: 11-Aug-07										
Surrogate: Toluene-d8	*48.9*		µg/l		*50.0*		*98*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*51.1*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*51.1*		µg/l		*50.0*		*102*	*70-130*		
Surrogate: Dibromofluoromethane	*49.8*		µg/l		*50.0*		*100*	*70-130*		
Surrogate: Dibromofluoromethane	*49.8*		µg/l		*50.0*		*100*	*70-130*		
Matrix Spike Dup (7080888-MSD1)	**Source: SA66258-06**									
Prepared: 10-Aug-07 Analyzed: 11-Aug-07										
Benzene	16.0		µg/l		20.0	0.0	80	70-130	0.4	30
Benzene	16.0		µg/l		20.0	BRL	80	70-130	0.4	30
Chlorobenzene	18.8		µg/l		20.0	BRL	94	70-130	0.4	30
1,1-Dichloroethene	14.4		µg/l		20.0	BRL	72	70-130	1	30
Toluene	17.0		µg/l		20.0	BRL	85	70-130	2	30
Toluene	17.0		µg/l		20.0	0.0	85	70-130	2	30
Trichloroethene	17.4		µg/l		20.0	BRL	87	70-130	2	30
Chlorobenzene	18.8		µg/l		20.0	0.0	94	70-130	0.4	30
1,1-Dichloroethene	14.4		µg/l		20.0	0.0	72	70-130	1	30
Trichloroethene	17.4		µg/l		20.0	0.0	87	70-130	2	30
Surrogate: 4-Bromofluorobenzene	*44.1*		µg/l		*50.0*		*88*	*70-130*		
Surrogate: 4-Bromofluorobenzene	*44.1*		µg/l		*50.0*		*88*	*70-130*		
Surrogate: Toluene-d8	*49.0*		µg/l		*50.0*		*98*	*70-130*		
Surrogate: Toluene-d8	*49.0*		µg/l		*50.0*		*98*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*51.6*		µg/l		*50.0*		*103*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*51.6*		µg/l		*50.0*		*103*	*70-130*		
Surrogate: Dibromofluoromethane	*48.9*		µg/l		*50.0*		*98*	*70-130*		
Surrogate: Dibromofluoromethane	*48.9*		µg/l		*50.0*		*98*	*70-130*		

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7080851 - SW846 3005A										
Blank (7080851-BLK1)										
Prepared & Analyzed: 10-Aug-07										
Nickel	BRL		mg/l	0.0050						
Iron	BRL		mg/l	0.0150						
Arsenic	BRL		mg/l	0.0040						
Copper	BRL		mg/l	0.0050						
LCS (7080851-BS1)										
Prepared & Analyzed: 10-Aug-07										
Iron	1.31		mg/l	0.0150	1.25		105	85-115		
Nickel	1.30		mg/l	0.0050	1.25		104	85-115		
Copper	1.30		mg/l	0.0050	1.25		104	85-115		
Arsenic	1.22		mg/l	0.0040	1.25		98	85-115		
LCS Dup (7080851-BSD1)										
Prepared & Analyzed: 10-Aug-07										
Iron	1.29		mg/l	0.0150	1.25		103	85-115	2	20
Nickel	1.18		mg/l	0.0050	1.25		94	85-115	10	20
Copper	1.18		mg/l	0.0050	1.25		94	85-115	10	20
Arsenic	1.11		mg/l	0.0040	1.25		89	85-115	9	20
Duplicate (7080851-DUP1)	**Source: SA66464-01**									
Prepared & Analyzed: 10-Aug-07										
Nickel	0.0074		mg/l	0.0050		0.0078			5	20
Iron	0.108	QR1	mg/l	0.0150		0.0574			61	20
Copper	0.0060	J,QR4	mg/l	0.0061		0.0022			95	20
Arsenic	0.0615		mg/l	0.0040		0.0626			2	20
Matrix Spike (7080851-MS1)	**Source: SA66464-01**									
Prepared & Analyzed: 10-Aug-07										
Iron	1.33		mg/l	0.0150	1.25	0.0574	101	75-125		
Nickel	1.24		mg/l	0.0050	1.25	0.0078	99	75-125		
Copper	1.29		mg/l	0.0050	1.25	0.0022	103	75-125		
Arsenic	1.27		mg/l	0.0040	1.25	0.0626	96	75-125		
Matrix Spike Dup (7080851-MSD1)	**Source: SA66464-01**									
Prepared & Analyzed: 10-Aug-07										
Iron	1.28		mg/l	0.0150	1.25	0.0574	98	75-125	4	20
Nickel	1.24		mg/l	0.0050	1.25	0.0078	98	75-125	0.3	20
Copper	1.29		mg/l	0.0050	1.25	0.0022	103	75-125	0.1	20
Arsenic	1.25		mg/l	0.0040	1.25	0.0626	95	75-125	2	20
Post Spike (7080851-PS1)	**Source: SA66464-01**									
Prepared & Analyzed: 10-Aug-07										
Nickel	1.24		mg/l	0.0050	1.25	0.0078	99	80-120		
Iron	1.29		mg/l	0.0150	1.25	0.0574	99	80-120		
Copper	1.27		mg/l	0.0050	1.25	0.0022	101	80-120		
Arsenic	1.26		mg/l	0.0040	1.25	0.0626	96	80-120		

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7080863 - General Preparation										
Duplicate (7080863-DUP1)	**Source: SA66418-01**									
Prepared & Analyzed: 09-Aug-07										
pH	8.10		pH Units			8.11			0.1	5
Reference (7080863-SRM1)										
Prepared & Analyzed: 09-Aug-07										
pH	7.09		pH Units		7.00		101	97.5-102.5		
Batch 7080947 - General Preparation										
Blank (7080947-BLK1)										
Prepared & Analyzed: 11-Aug-07										
Total Suspended Solids	BRL		mg/l	5.00						
Duplicate (7080947-DUP1)	**Source: SA66450-02**									
Prepared & Analyzed: 11-Aug-07										
Total Suspended Solids	460		mg/l	100		480			4	20
Reference (7080947-SRM1)										
Prepared & Analyzed: 11-Aug-07										
Total Suspended Solids	94.0		mg/l	10.0	93.8		100	90-110		

Notes and Definitions

QR1	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QR4	Analyses are not controlled on RPD values from sample concentrations less than the reporting limit. QC batch accepted based on LCS and/or LCSD QC results
U	Analyte included in the analysis, but not detected
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Brown

SA06464 Ck

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
- ☐ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: ______
- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: Marymillian Technologies, 1801 East St., Pittsfield, MA

Invoice To: Same

Project No.: 07029
Site Name: Erm Rcm Raytheon Exc.
Location: Wayland State: MA
Sampler(s): Chris Jones

Project Mgr.: Sara Epstein
P.O. No.: 3547 RQN: ______

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=______ 10=______

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1=______ X2=______ X3=______

G=Grab C=Composite

Analyses: Per P.O.

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	pH	TSS	8260 halocarbons	8260 aromatics (BTEX/MTBE only)	8270 Full List (QCP only)	As, Cu, Ni, Fe via 6010			QA Reporting Notes
SA06464-01	cofferdam	8/9/07	10 am		GW	2/3	3	1		2	X	X	X	X	X	X			*See attached P.O.
2	Trip Blank				GW		1						X	X					

QA Reporting Notes: (check if needed)
- ☐ Provide MA DEP MCP CAM Report
- ☐ Provide CT DPH RCP Report

QA/QC Reporting Level: ☐ Standard ☐ No QC ☐ Other ______

State specific reporting standards: ______

Relinquished by:	Received by:	Date:	Time:
Chris Jones	Bin Hong	8/9/07	10 Am
Bin Hong	Ashton Bowles	8/9/07	3:50 pm

☐ Fax results when available to (____) ______
☐ E-mail to ______
EDD Format ______

Condition upon receipt: ☐ Iced ☒ Ambient ☐ °C 20.5

Protocol for Spectrum Analytical
Former Raytheon Facility; Wayland, MA
Maxymillian Technologies, Inc. Project No. 07029

Purchase Order No. 3547

Parameter	Effluent Limit	Test Method and Minimum Detection Level	Method by Spectrum
pH	6.5-8.3		pH
Total Suspended Solids	30 mg/l	Method 160.2 5 mg/l	Total Suspended Solids (TSS)
Benzene	5.0 ug/l	Method 602 0.5 ug/l	SW846 Aromatics BTEX & MtBE
Xylenes (m,p,o)	Limited as 100 ug/l Total BTEX	Method 602 (total btex) 0.5 ug/l	SW846 Aromatics BTEX & MtBE
MtBE	70 ug/l	Method 602 0.5 ug/l	SW846 Aromatics BTEX & MtBE
Carbon Tetrachloride	4.4 ug/l	Method 601 0.5ug/l	SW846 8260 Halocarbons
1,4 Dichorobenzene (p-DCB)	5.0 ug/l	Method 601,602 0.5 ug/l	SW846 Aromatics BTEX & MtBE & SW846 8260 Halocarbons
1,1 Dichloroethane (DCA)	70.0 ug/l	Method 601 0.5 ug/l	SW846 8260 Halocarbons
Cis-1,2,Dicholoro-ethylene (DCE)	70 ug/l	Method 601 0.5 ug/l	SW846 8260 Halocarbons
Dichloromethane (Methylene Chloride)	4.6 ug/l	Method 601 0.5 ug/l	SW846 8260 Halocarbons
Tetrachloroethylene (PCE)	5.0 ug/l	Method 601 0.5 ug/l	SW846 8260 Halocarbons
1,1,2 Trichloro-ethane (TCA)	5.0 ug/l	Method 601 0.5 ug/l	SW846 8260 Halocarbons
Tricloroethylene (TCE)	5.0 ug/l	Method 601 0.5 ug/l	SW846 8260 Halocarbons
Vinyl Chloride (Chloroethene)	2.0 ug/l	Method 601 0.5 ug/l	SW846 8260 Halocarbons
Pentachlorophenol (PCP)	1.0 ug/l	Method 604 1 ug/l	8270 SIM Method
Arsenic	10 ug/l	Furnace AA Method 2 ug/l	Single Element via 6010 5 ug/l
Copper	5.2 ug/l	Furnace AA Method 2 ug/l	Single Element via 6010 5 ug/l
Nickel	29 ug/l	Furnace AA Method 5 ug/l	Single Element via 6010 10 ug/l
Iron	1000 ug/l	Methods 6010b or 200.7 Lowest listed minimum level for method	Single Element via 6010

Post-it® Fax Note 7671	Date 8/10	# of pages ▶ 1
To Nicole	From Rachel	
Co./Dept. Spectrum	Co. Malymillian	
Phone # 800-789-9115	Phone # 499-3050	
Fax # 413-789-4076	Fax # 443-0511	

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220 www.alphalab.com
MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

CERTIFICATE OF ANALYSIS

Client: ERM-New England

Address: 399 Boylston Street
6th Floor
Boston, MA 02116

Attn: Mr. Jason Flattery

Project Number: 0051545

Laboratory Job Number: L0714521

Date Received: 02-OCT-2007

Date Reported: 05-OCT-2007

Delivery Method: Alpha

Site: NA SOIL EXCAVATION

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0714521-01	EFF-20071002-01	RAYTHEON WAYLAND

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

Authorized by: Michelle M. Morris
Technical Representative

ALPHA ANALYTICAL LABORATORIES
NARRATIVE REPORT

Laboratory Job Number: L0714521

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Semivolatile Organics

The WG296453-2 LCS % recovery for 2,4-Dinitrotoluene is above method acceptance criteria.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

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

Laboratory Sample Number: L0714521-01
EFF-20071002-01
Sample Matrix: WATER

Date Collected: 02-OCT-2007 14:50
Date Received : 02-OCT-2007
Date Reported : 05-OCT-2007

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2-Amber,3-Plastic,2-Vial

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Solids, Total Suspended	ND	mg/l	5.0	30	2540D		1005 09:10	DW
pH (H)	7.7	SU	-	30	4500H+-B		1002 20:15	LR
Total Metals								
Arsenic, Total	0.0182	mg/l	0.0005	1	6020	1003 17:45	1004 21:57	BM
Copper, Total	0.0019	mg/l	0.0005	1	6020	1003 17:45	1004 21:57	BM
Iron, Total	ND	mg/l	0.05	19	200.7	1003 17:45	1005 11:13	AI
Nickel, Total	0.0046	mg/l	0.0020	1	6020	1003 17:45	1004 21:57	BM
Volatile Organics by GC/MS 624				5	624		1003 11:34	MM
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	1.5					
Chloroform	ND	ug/l	1.5					
Carbon tetrachloride	ND	ug/l	1.0					
1,2-Dichloropropane	ND	ug/l	3.5					
Dibromochloromethane	ND	ug/l	1.0					
1,1,2-Trichloroethane	ND	ug/l	1.5					
2-Chloroethylvinyl ether	ND	ug/l	10.					
Tetrachloroethene	ND	ug/l	1.5					
Chlorobenzene	ND	ug/l	3.5					
Trichlorofluoromethane	ND	ug/l	5.0					
1,2-Dichloroethane	ND	ug/l	1.5					
1,1,1-Trichloroethane	ND	ug/l	2.0					
Bromodichloromethane	ND	ug/l	1.0					
trans-1,3-Dichloropropene	ND	ug/l	1.5					
cis-1,3-Dichloropropene	ND	ug/l	1.5					
Bromoform	ND	ug/l	1.0					
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0					
Benzene	ND	ug/l	1.0					
Toluene	ND	ug/l	1.0					
Ethylbenzene	ND	ug/l	1.0					
Chloromethane	ND	ug/l	10.					
Bromomethane	ND	ug/l	5.0					
Vinyl chloride	ND	ug/l	2.0					
Chloroethane	ND	ug/l	2.0					
1,1-Dichloroethene	ND	ug/l	1.0					
trans-1,2-Dichloroethene	ND	ug/l	1.5					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714521-01
EFF-20071002-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics by GC/MS 624 cont'd				5	624		1003 11:34	MM
cis-1,2-Dichloroethene	ND	ug/l	1.0					
Trichloroethene	ND	ug/l	1.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
p/m-Xylene	ND	ug/l	2.0					
o-xylene	ND	ug/l	1.0					
Xylene (Total)	ND	ug/l	2.0					
Styrene	ND	ug/l	1.0					
Acetone	ND	ug/l	10.					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	10.					
Vinyl acetate	ND	ug/l	20.					
4-Methyl-2-pentanone	ND	ug/l	10.					
2-Hexanone	ND	ug/l	10.					
Acrolein	ND	ug/l	8.0					
Acrylonitrile	ND	ug/l	10.					
Methyl tert butyl ether	ND	ug/l	20.					
1,4-Dioxane	ND	ug/l	2000					
Tert-Butyl Alcohol	ND	ug/l	100					
Tertiary-Amyl Methyl Ether	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
Pentafluorobenzene	101	%	80-120					
Fluorobenzene	107	%	80-120					
4-Bromofluorobenzene	97.0	%	80-120					
SVOC's by GC/MS 8270				1	8270C	1002 19:00	1003 13:06	RL
Acenaphthene	ND	ug/l	4.9					
Benzidine	ND	ug/l	49.					
1,2,4-Trichlorobenzene	ND	ug/l	4.9					
Hexachlorobenzene	ND	ug/l	4.9					
Bis(2-chloroethyl)ether	ND	ug/l	4.9					
1-Chloronaphthalene	ND	ug/l	4.9					
2-Chloronaphthalene	ND	ug/l	5.9					
1,2-Dichlorobenzene	ND	ug/l	4.9					
1,3-Dichlorobenzene	ND	ug/l	4.9					
1,4-Dichlorobenzene	ND	ug/l	4.9					
3,3'-Dichlorobenzidine	ND	ug/l	49.					
2,4-Dinitrotoluene	ND	ug/l	5.9					
2,6-Dinitrotoluene	ND	ug/l	4.9					
Azobenzene	ND	ug/l	4.9					
Fluoranthene	ND	ug/l	4.9					
4-Chlorophenyl phenyl ether	ND	ug/l	4.9					
4-Bromophenyl phenyl ether	ND	ug/l	4.9					
Bis(2-chloroisopropyl)ether	ND	ug/l	4.9					
Bis(2-chloroethoxy)methane	ND	ug/l	4.9					
Hexachlorobutadiene	ND	ug/l	9.8					
Hexachlorocyclopentadiene	ND	ug/l	29.					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714521-01
EFF-20071002-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
SVOC's by GC/MS 8270 cont'd				1	8270C	1002 19:00	1003 13:06	RL
Hexachloroethane	ND	ug/l	4.9					
Isophorone	ND	ug/l	4.9					
Naphthalene	ND	ug/l	4.9					
Nitrobenzene	ND	ug/l	4.9					
NDPA/DPA	ND	ug/l	15.					
n-Nitrosodi-n-propylamine	ND	ug/l	4.9					
Bis(2-ethylhexyl)phthalate	ND	ug/l	4.9					
Butyl benzyl phthalate	ND	ug/l	4.9					
Di-n-butylphthalate	ND	ug/l	4.9					
Di-n-octylphthalate	ND	ug/l	4.9					
Diethyl phthalate	ND	ug/l	4.9					
Dimethyl phthalate	ND	ug/l	4.9					
Benzo(a)anthracene	ND	ug/l	4.9					
Benzo(a)pyrene	ND	ug/l	4.9					
Benzo(b)fluoranthene	ND	ug/l	4.9					
Benzo(k)fluoranthene	ND	ug/l	4.9					
Chrysene	ND	ug/l	4.9					
Acenaphthylene	ND	ug/l	4.9					
Anthracene	ND	ug/l	4.9					
Benzo(ghi)perylene	ND	ug/l	4.9					
Fluorene	ND	ug/l	4.9					
Phenanthrene	ND	ug/l	4.9					
Dibenzo(a,h)anthracene	ND	ug/l	4.9					
Indeno(1,2,3-cd)pyrene	ND	ug/l	6.8					
Pyrene	ND	ug/l	4.9					
Benzo(e)pyrene	ND	ug/l	4.9					
Biphenyl	ND	ug/l	4.9					
Perylene	ND	ug/l	4.9					
Aniline	ND	ug/l	20.					
4-Chloroaniline	ND	ug/l	4.9					
1-Methylnaphthalene	ND	ug/l	4.9					
2-Nitroaniline	ND	ug/l	4.9					
3-Nitroaniline	ND	ug/l	4.9					
4-Nitroaniline	ND	ug/l	6.8					
Dibenzofuran	ND	ug/l	4.9					
a,a-Dimethylphenethylamine	ND	ug/l	49.					
Hexachloropropene	ND	ug/l	9.8					
Nitrosodi-n-butylamine	ND	ug/l	9.8					
2-Methylnaphthalene	ND	ug/l	4.9					
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.					
Pentachlorobenzene	ND	ug/l	20.					
a-Naphthylamine	ND	ug/l	24.					
b-Naphthylamine	ND	ug/l	20.					
Phenacetin	ND	ug/l	9.8					
Dimethoate	ND	ug/l	20.					
4-Aminobiphenyl	ND	ug/l	9.8					
Pentachloronitrobenzene	ND	ug/l	9.8					
Isodrin	ND	ug/l	9.8					
p-Dimethylaminoazobenzene	ND	ug/l	9.8					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714521-01
EFF-20071002-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
SVOC's by GC/MS 8270 cont'd				1	8270C	1002 19:00	1003 13:06	RL
Chlorobenzilate	ND	ug/l	20.					
3-Methylcholanthrene	ND	ug/l	20.					
Ethyl Methanesulfonate	ND	ug/l	15.					
Acetophenone	ND	ug/l	20.					
Nitrosodipiperidine	ND	ug/l	20.					
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.					
n-Nitrosodimethylamine	ND	ug/l	49.					
2,4,6-Trichlorophenol	ND	ug/l	4.9					
p-Chloro-m-cresol	ND	ug/l	4.9					
2-Chlorophenol	ND	ug/l	5.9					
2,4-Dichlorophenol	ND	ug/l	9.8					
2,4-Dimethylphenol	ND	ug/l	9.8					
2-Nitrophenol	ND	ug/l	20.					
4-Nitrophenol	ND	ug/l	9.8					
2,4-Dinitrophenol	ND	ug/l	29.					
4,6-Dinitro-o-cresol	ND	ug/l	20.					
Pentachlorophenol	ND	ug/l	9.8					
Phenol	ND	ug/l	6.8					
2-Methylphenol	ND	ug/l	5.9					
3-Methylphenol/4-Methylphenol	ND	ug/l	5.9					
2,4,5-Trichlorophenol	ND	ug/l	4.9					
2,6-Dichlorophenol	ND	ug/l	9.8					
Benzoic Acid	ND	ug/l	49.					
Benzyl Alcohol	ND	ug/l	9.8					
Carbazole	ND	ug/l	4.9					
Pyridine	ND	ug/l	49.					
2-Picoline	ND	ug/l	20.					
Pronamide	ND	ug/l	20.					
Methyl methanesulfonate	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	35.0	%	21-120					
Phenol-d6	30.0	%	10-120					
Nitrobenzene-d5	74.0	%	23-120					
2-Fluorobiphenyl	57.0	%	43-120					
2,4,6-Tribromophenol	57.0	%	10-120					
4-Terphenyl-d14	65.0	%	33-120					
PAH by GC/MS SIM 8270M				1	8270C-M	1002 19:00	1003 15:13	RL
Acenaphthene	ND	ug/l	0.20					
2-Chloronaphthalene	ND	ug/l	0.20					
Fluoranthene	ND	ug/l	0.20					
Hexachlorobutadiene	ND	ug/l	0.49					
Naphthalene	ND	ug/l	0.20					
Benzo(a)anthracene	ND	ug/l	0.20					
Benzo(a)pyrene	ND	ug/l	0.20					
Benzo(b)fluoranthene	ND	ug/l	0.20					
Benzo(k)fluoranthene	ND	ug/l	0.20					
Chrysene	ND	ug/l	0.20					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714521-01
EFF-20071002-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
PAH by GC/MS SIM 8270M cont'd				1	8270C-M	1002 19:00	1003 15:13	RL
Acenaphthylene	ND	ug/l	0.20					
Anthracene	ND	ug/l	0.20					
Benzo(ghi)perylene	ND	ug/l	0.20					
Fluorene	ND	ug/l	0.20					
Phenanthrene	ND	ug/l	0.20					
Dibenzo(a,h)anthracene	ND	ug/l	0.20					
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20					
Pyrene	ND	ug/l	0.20					
1-Methylnaphthalene	ND	ug/l	0.20					
2-Methylnaphthalene	ND	ug/l	0.20					
Pentachlorophenol	ND	ug/l	0.78					
Hexachlorobenzene	ND	ug/l	0.78					
Perylene	ND	ug/l	0.20					
Biphenyl	ND	ug/l	0.20					
2,6-Dimethylnaphthalene	ND	ug/l	0.20					
1-Methylphenanthrene	ND	ug/l	0.20					
Benzo(e)Pyrene	ND	ug/l	0.20					
Hexachloroethane	ND	ug/l	0.78					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	36.0	%	21-120					
Phenol-d6	32.0	%	10-120					
Nitrobenzene-d5	100	%	23-120					
2-Fluorobiphenyl	73.0	%	43-120					
2,4,6-Tribromophenol	68.0	%	10-120					
4-Terphenyl-d14	119	%	33-120					

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

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0714521

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Solids, Total Suspended for sample(s) 01 (L0714571-01, WG296853-2)					
Solids, Total Suspended	2700	2600	mg/l	4	32
pH for sample(s) 01 (L0714521-01, WG296441-1)					
pH (H)	7.7	7.8	SU	1	5
Total Metals for sample(s) 01 (L0714521-01, WG296626-1)					
Iron, Total	ND	ND	mg/l	NC	
Total Metals for sample(s) 01 (L0714521-01, WG296625-1)					
Arsenic, Total	0.0182	0.0190	mg/l	4	20
Copper, Total	0.0019	0.0022	mg/l	10	20
Nickel, Total	0.0046	0.0050	mg/l	7	20
Volatile Organics by GC/MS 624 for sample(s) 01 (L0714233-02, WG296515-2)					
Methylene chloride	ND	ND	ug/l	NC	30
1,1-Dichloroethane	ND	ND	ug/l	NC	30
Chloroform	ND	ND	ug/l	NC	30
Carbon tetrachloride	ND	ND	ug/l	NC	30
1,2-Dichloropropane	ND	ND	ug/l	NC	30
Dibromochloromethane	ND	ND	ug/l	NC	30
1,1,2-Trichloroethane	ND	ND	ug/l	NC	30
2-Chloroethylvinyl ether	ND	ND	ug/l	NC	30
Tetrachloroethene	ND	ND	ug/l	NC	30
Chlorobenzene	ND	ND	ug/l	NC	30
Trichlorofluoromethane	ND	ND	ug/l	NC	30
1,2-Dichloroethane	ND	ND	ug/l	NC	30
1,1,1-Trichloroethane	ND	ND	ug/l	NC	30
Bromodichloromethane	ND	ND	ug/l	NC	30
trans-1,3-Dichloropropene	ND	ND	ug/l	NC	30
cis-1,3-Dichloropropene	ND	ND	ug/l	NC	30
Bromoform	ND	ND	ug/l	NC	30
1,1,2,2-Tetrachloroethane	ND	ND	ug/l	NC	30
Benzene	ND	ND	ug/l	NC	30
Toluene	ND	ND	ug/l	NC	30
Ethylbenzene	ND	ND	ug/l	NC	30
Chloromethane	ND	ND	ug/l	NC	30
Bromomethane	ND	ND	ug/l	NC	30
Vinyl chloride	ND	ND	ug/l	NC	30
Chloroethane	ND	ND	ug/l	NC	30
1,1-Dichloroethene	ND	ND	ug/l	NC	30
trans-1,2-Dichloroethene	ND	ND	ug/l	NC	30
cis-1,2-Dichloroethene	ND	ND	ug/l	NC	30
Trichloroethene	ND	ND	ug/l	NC	30
1,2-Dichlorobenzene	ND	ND	ug/l	NC	30
1,3-Dichlorobenzene	ND	ND	ug/l	NC	30
1,4-Dichlorobenzene	ND	ND	ug/l	NC	30
p/m-Xylene	ND	ND	ug/l	NC	30
o-xylene	ND	ND	ug/l	NC	30

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0714521

Continued

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Volatile Organics by GC/MS 624 for sample(s) 01 (L0714233-02, WG296515-2)					
Xylene (Total)	ND	ND	ug/l	NC	30
Styrene	ND	ND	ug/l	NC	30
Acetone	ND	ND	ug/l	NC	30
Carbon disulfide	ND	ND	ug/l	NC	30
2-Butanone	ND	ND	ug/l	NC	30
Vinyl acetate	ND	ND	ug/l	NC	30
4-Methyl-2-pentanone	ND	ND	ug/l	NC	30
2-Hexanone	ND	ND	ug/l	NC	30
Acrolein	ND	ND	ug/l	NC	30
Acrylonitrile	ND	ND	ug/l	NC	30
Surrogate(s)	Recovery				QC Criteria
Pentafluorobenzene	101	102	%		80-120
Fluorobenzene	103	103	%		80-120
4-Bromofluorobenzene	104	105	%		80-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714521

Parameter	% Recovery	QC Criteria
pH LCS for sample(s) 01 (WG296441-2)		
pH	99	99-101
Total Metals LCS for sample(s) 01 (WG296626-4)		
Iron, Total	96	
Total Metals LCS for sample(s) 01 (WG296625-4)		
Arsenic, Total	95	80-120
Copper, Total	94	80-120
Nickel, Total	94	80-120
Volatile Organics by GC/MS 624 LCS for sample(s) 01 (WG296515-7)		
Methylene chloride	112	10-221
1,1-Dichloroethane	99	59-155
Chloroform	106	51-138
Carbon tetrachloride	110	70-140
1,2-Dichloropropane	103	10-210
Dibromochloromethane	98	53-149
1,1,2-Trichloroethane	99	52-150
2-Chloroethylvinyl ether	100	10-305
Tetrachloroethene	103	64-148
Chlorobenzene	98	37-160
Trichlorofluoromethane	124	17-181
1,2-Dichloroethane	108	49-155
1,1,1-Trichloroethane	102	52-162
Bromodichloromethane	103	35-155
trans-1,3-Dichloropropene	107	17-183
cis-1,3-Dichloropropene	104	10-227
Bromoform	97	45-169
1,1,2,2-Tetrachloroethane	98	46-157
Benzene	115	37-151
Toluene	110	47-150
Ethylbenzene	107	37-162
Chloromethane	135	10-273
Bromomethane	132	10-242
Vinyl chloride	122	10-251
Chloroethane	124	14-230
1,1-Dichloroethene	115	10-234
trans-1,2-Dichloroethene	115	54-156
cis-1,2-Dichloroethene	102	60-140
Trichloroethene	111	71-157
1,2-Dichlorobenzene	100	18-190
1,3-Dichlorobenzene	100	59-156
1,4-Dichlorobenzene	103	18-190
p/m-Xylene	112	40-160
o-Xylene	102	40-160
XYLENE (TOTAL)	108	40-160
Styrene	101	40-160
Acetone	106	40-160

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714521

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 LCS for sample(s) 01 (WG296515-7)		
Carbon disulfide	133	40-160
2-Butanone	88	40-160
Vinyl acetate	103	40-160
4-Methyl-2-pentanone	100	40-160
2-Hexanone	96	40-160
Acrolein	98	40-160
Acrylonitrile	117	40-160
Surrogate(s)		
Pentafluorobenzene	100	80-120
Fluorobenzene	105	80-120
4-Bromofluorobenzene	99	80-120
SVOC's by GC/MS 8270 LCS for sample(s) 01 (WG296453-2)		
Acenaphthene	81	46-118
1,2,4-Trichlorobenzene	68	39-98
2-Chloronaphthalene	73	40-140
1,2-Dichlorobenzene	66	40-140
1,4-Dichlorobenzene	64	36-97
2,4-Dinitrotoluene	101	24-96
2,6-Dinitrotoluene	103	40-140
Fluoranthene	92	40-140
4-Chlorophenyl phenyl ether	81	40-140
n-Nitrosodi-n-propylamine	73	41-116
Butyl benzyl phthalate	100	40-140
Anthracene	76	40-140
Pyrene	87	26-127
Hexachloropropene	62	40-140
P-Chloro-M-Cresol	79	23-97
2-Chlorophenol	66	27-123
2-Nitrophenol	81	30-130
4-Nitrophenol	52	10-80
2,4-Dinitrophenol	92	30-130
Pentachlorophenol	79	9-103
Phenol	31	12-110
Surrogate(s)		
2-Fluorophenol	46	21-120
Phenol-d6	40	10-120
Nitrobenzene-d5	84	23-120
2-Fluorobiphenyl	73	43-120
2,4,6-Tribromophenol	80	10-120
4-Terphenyl-d14	82	33-120
PAH by GC/MS SIM 8270M LCS for sample(s) 01 (WG296454-2)		
Acenaphthene	73	40-140
2-Chloronaphthalene	82	40-140
Fluoranthene	102	40-140

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714521

Continued

Parameter	% Recovery	QC Criteria
PAH by GC/MS SIM 8270M LCS for sample(s) 01 (WG296454-2)		
Anthracene	83	40-140
Pyrene	91	40-140
Pentachlorophenol	66	30-130
Surrogate(s)		
2-Fluorophenol	52	21-120
Phenol-d6	44	10-120
Nitrobenzene-d5	118	23-120
2-Fluorobiphenyl	71	43-120
2,4,6-Tribromophenol	91	10-120
4-Terphenyl-d14	112	33-120
Total Metals SPIKE for sample(s) 01 (L0714521-01, WG296626-2)		
Iron, Total	100	
Total Metals SPIKE for sample(s) 01 (L0714521-01, WG296625-2)		
Arsenic, Total	102	80-120
Copper, Total	99	80-120
Nickel, Total	98	80-120
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01 (L0714233-02, WG296515-1)		
Methylene chloride	100	10-221
1,1-Dichloroethane	93	59-155
Chloroform	97	51-138
Carbon tetrachloride	105	70-140
1,2-Dichloropropane	102	10-210
Dibromochloromethane	95	53-149
1,1,2-Trichloroethane	98	52-150
2-Chloroethylvinyl ether	94	10-305
Tetrachloroethene	98	64-148
Chlorobenzene	96	37-160
Trichlorofluoromethane	122	17-181
1,2-Dichloroethane	105	49-155
1,1,1-Trichloroethane	101	52-162
Bromodichloromethane	97	35-155
trans-1,3-Dichloropropene	90	17-183
cis-1,3-Dichloropropene	92	10-227
Bromoform	93	45-169
1,1,2,2-Tetrachloroethane	94	46-157
Benzene	104	35-151
Toluene	101	47-150
Ethylbenzene	106	37-162
Chloromethane	107	10-273
Bromomethane	113	10-242
Vinyl chloride	122	10-251
Chloroethane	122	14-230
1,1-Dichloroethene	108	10-234
trans-1,2-Dichloroethene	104	54-156

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714521

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01 (L0714233-02, WG296515-1)		
cis-1,2-Dichloroethene	96	60-140
Trichloroethene	105	71-157
1,2-Dichlorobenzene	95	18-190
1,3-Dichlorobenzene	93	59-156
1,4-Dichlorobenzene	94	18-190
p/m-Xylene	115	40-160
o-Xylene	101	40-160
XYLENE (TOTAL)	110	40-160
Styrene	100	40-160
Acetone	117	40-160
Carbon disulfide	109	40-160
2-Butanone	100	40-160
Vinyl acetate	91	40-160
4-Methyl-2-pentanone	103	40-160
2-Hexanone	101	40-160
Acrolein	95	40-160
Acrylonitrile	114	40-160
Surrogate(s)		
Pentafluorobenzene	95	80-120
Fluorobenzene	104	80-120
4-Bromofluorobenzene	99	80-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0714521

Parameter	MS %	MSD %	RPD	RPD Limit	MS/MSD Limits
SVOC's by GC/MS 8270 for sample(s) 01 (L0714428-01, WG296453-4)					
Acenaphthene	66	75	13	30	46-118
1,2,4-Trichlorobenzene	52	66	24	30	39-98
2-Chloronaphthalene	61	66	8	30	40-140
1,2-Dichlorobenzene	52	66	24	30	40-140
1,4-Dichlorobenzene	52	61	16	30	36-97
2,4-Dinitrotoluene	80	89	11	30	24-96
2,6-Dinitrotoluene	85	94	10	30	40-140
Fluoranthene	75	80	6	30	40-140
4-Chlorophenyl phenyl ether	66	75	13	30	40-140
n-Nitrosodi-n-propylamine	56	66	16	30	41-116
Butyl benzyl phthalate	85	89	5	30	40-140
Anthracene	61	66	8	30	40-140
Pyrene	71	75	5	30	26-127
Hexachloropropene	52	66	24	30	40-140
P-Chloro-M-Cresol	66	73	10	30	23-97
2-Chlorophenol	54	63	15	30	27-123
2-Nitrophenol	63	75	17	30	30-130
4-Nitrophenol	66	73	10	30	10-80
2,4-Dinitrophenol	78	87	11	30	30-130
Pentachlorophenol	63	68	8	30	9-103
Phenol	35	45	25	30	12-110
Surrogate(s)					
2-Fluorophenol	46	57	21		21-120
Phenol-d6	50	59	17		10-120
Nitrobenzene-d5	67	78	15		23-120
2-Fluorobiphenyl	59	66	11		43-120
2,4,6-Tribromophenol	65	70	7		10-120
4-Terphenyl-d14	69	73	6		33-120
PAH by GC/MS SIM 8270M for sample(s) 01 (L0714428-01, WG296454-4)					
Acenaphthene	66	75	13	40	40-140
2-Chloronaphthalene	75	80	6	40	40-140
Fluoranthene	100	110	10	40	40-140
Anthracene	75	80	6	40	40-140
Pyrene	94	99	5	40	40-140
Pentachlorophenol	63	66	5	40	30-130
Surrogate(s)					
2-Fluorophenol	51	64	23		21-120
Phenol-d6	56	65	15		10-120
Nitrobenzene-d5	101	117	15		23-120
2-Fluorobiphenyl	79	85	7		43-120
2,4,6-Tribromophenol	86	90	5		10-120
4-Terphenyl-d14	102	111	8		33-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714521

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG296853-1)								
Solids, Total Suspended	ND	mg/l	5.0	30	2540D		1005 09:10	DW
Blank Analysis for sample(s) 01 (WG296626-3)								
Total Metals				19	200.7			
Iron, Total	ND	mg/l	0.05	19	200.7	1003 17:45	1005 11:05	AI
Blank Analysis for sample(s) 01 (WG296625-3)								
Total Metals								
Arsenic, Total	ND	mg/l	0.0005	1	6020	1003 17:45	1004 21:46	BM
Copper, Total	ND	mg/l	0.0005	1	6020	1003 17:45	1004 21:46	BM
Nickel, Total	ND	mg/l	0.0020	1	6020	1003 17:45	1004 21:46	BM
Blank Analysis for sample(s) 01 (WG296515-8)								
Volatile Organics by GC/MS 624				5	624		1003 09:48	MM
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	1.5					
Chloroform	ND	ug/l	1.5					
Carbon tetrachloride	ND	ug/l	1.0					
1,2-Dichloropropane	ND	ug/l	3.5					
Dibromochloromethane	ND	ug/l	1.0					
1,1,2-Trichloroethane	ND	ug/l	1.5					
Tetrachloroethene	ND	ug/l	1.5					
Chlorobenzene	ND	ug/l	3.5					
Trichlorofluoromethane	ND	ug/l	5.0					
1,2-Dichloroethane	ND	ug/l	1.5					
1,1,1-Trichloroethane	ND	ug/l	2.0					
Bromodichloromethane	ND	ug/l	1.0					
trans-1,3-Dichloropropene	ND	ug/l	1.5					
cis-1,3-Dichloropropene	ND	ug/l	1.5					
Bromoform	ND	ug/l	1.0					
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0					
Benzene	ND	ug/l	1.0					
Toluene	ND	ug/l	1.0					
Ethylbenzene	ND	ug/l	1.0					
Chloromethane	ND	ug/l	10.					
Bromomethane	ND	ug/l	5.0					
Vinyl chloride	ND	ug/l	2.0					
Chloroethane	ND	ug/l	2.0					
1,1-Dichloroethene	ND	ug/l	1.0					
trans-1,2-Dichloroethene	ND	ug/l	1.5					
cis-1,2-Dichloroethene	ND	ug/l	1.0					
Trichloroethene	ND	ug/l	1.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714521

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG296515-8)								
Volatile Organics by GC/MS 624 cont'd				5	624		1003 09:48	MM
1,4-Dichlorobenzene	ND	ug/l	5.0					
p/m-Xylene	ND	ug/l	2.0					
o-xylene	ND	ug/l	1.0					
Xylene (Total)	ND	ug/l	2.0					
Styrene	ND	ug/l	1.0					
Acetone	ND	ug/l	10.					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	10.					
Vinyl acetate	ND	ug/l	20.					
4-Methyl-2-pentanone	ND	ug/l	10.					
2-Hexanone	ND	ug/l	10.					
Acrolein	ND	ug/l	8.0					
Acrylonitrile	ND	ug/l	10.					
Methyl Acetate	ND	ug/l	20.					
Ethyl Acetate	ND	ug/l	20.					
Tetrahydrofuran	ND	ug/l	20.					
Acetonitrile	ND	ug/l	40.					
n-Hexane	ND	ug/l	20.					
Isopropyl Ether	ND	ug/l	20.					
Cyclohexane	ND	ug/l	20.					
Heptane	ND	ug/l	20.					
Butyl Acetate	ND	ug/l	20.					
Methyl tert butyl ether	ND	ug/l	20.					
Ethyl Ether	ND	ug/l	20.					
Dibromomethane	ND	ug/l	20.					
1,4-Dioxane	ND	ug/l	2000					
Tert-Butyl Alcohol	ND	ug/l	100					
Tertiary-Amyl Methyl Ether	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
Pentafluorobenzene	102	%	80-120					
Fluorobenzene	106	%	80-120					
4-Bromofluorobenzene	106	%	80-120					
Blank Analysis for sample(s) 01 (WG296453-1)								
SVOC's by GC/MS 8270				1	8270C	1002 19:00	1003 11:11	RL
Acenaphthene	ND	ug/l	5.0					
Benzidine	ND	ug/l	50.					
1,2,4-Trichlorobenzene	ND	ug/l	5.0					
Hexachlorobenzene	ND	ug/l	5.0					
Bis(2-chloroethyl)ether	ND	ug/l	5.0					
1-Chloronaphthalene	ND	ug/l	5.0					
2-Chloronaphthalene	ND	ug/l	6.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714521

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG296453-1)								
SVOC's by GC/MS 8270 cont'd				1	8270C	1002 19:00	1003 11:11	RL
3,3'-Dichlorobenzidine	ND	ug/l	50.					
2,4-Dinitrotoluene	ND	ug/l	6.0					
2,6-Dinitrotoluene	ND	ug/l	5.0					
Azobenzene	ND	ug/l	5.0					
Fluoranthene	ND	ug/l	5.0					
4-Chlorophenyl phenyl ether	ND	ug/l	5.0					
4-Bromophenyl phenyl ether	ND	ug/l	5.0					
Bis(2-chloroisopropyl)ether	ND	ug/l	5.0					
Bis(2-chloroethoxy)methane	ND	ug/l	5.0					
Hexachlorobutadiene	ND	ug/l	10.					
Hexachlorocyclopentadiene	ND	ug/l	30.					
Hexachloroethane	ND	ug/l	5.0					
Isophorone	ND	ug/l	5.0					
Naphthalene	ND	ug/l	5.0					
Nitrobenzene	ND	ug/l	5.0					
NDPA/DPA	ND	ug/l	15.					
n-Nitrosodi-n-propylamine	ND	ug/l	5.0					
Bis(2-ethylhexyl)phthalate	ND	ug/l	5.0					
Butyl benzyl phthalate	ND	ug/l	5.0					
Di-n-butylphthalate	ND	ug/l	5.0					
Di-n-octylphthalate	ND	ug/l	5.0					
Diethyl phthalate	ND	ug/l	5.0					
Dimethyl phthalate	ND	ug/l	5.0					
Benzo(a)anthracene	ND	ug/l	5.0					
Benzo(a)pyrene	ND	ug/l	5.0					
Benzo(b)fluoranthene	ND	ug/l	5.0					
Benzo(k)fluoranthene	ND	ug/l	5.0					
Chrysene	ND	ug/l	5.0					
Acenaphthylene	ND	ug/l	5.0					
Anthracene	ND	ug/l	5.0					
Benzo(ghi)perylene	ND	ug/l	5.0					
Fluorene	ND	ug/l	5.0					
Phenanthrene	ND	ug/l	5.0					
Dibenzo(a,h)anthracene	ND	ug/l	5.0					
Indeno(1,2,3-cd)pyrene	ND	ug/l	7.0					
Pyrene	ND	ug/l	5.0					
Benzo(e)pyrene	ND	ug/l	5.0					
Biphenyl	ND	ug/l	5.0					
Perylene	ND	ug/l	5.0					
Aniline	ND	ug/l	20.					
4-Chloroaniline	ND	ug/l	5.0					
1-Methylnaphthalene	ND	ug/l	5.0					
2-Nitroaniline	ND	ug/l	5.0					
3-Nitroaniline	ND	ug/l	5.0					
4-Nitroaniline	ND	ug/l	7.0					
Dibenzofuran	ND	ug/l	5.0					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714521

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG296453-1)								
SVOC's by GC/MS 8270 cont'd				1	8270C	1002 19:00	1003 11:11	RL
a,a-Dimethylphenethylamine	ND	ug/l	50.					
Hexachloropropene	ND	ug/l	10.					
Nitrosodi-n-butylamine	ND	ug/l	10.					
2-Methylnaphthalene	ND	ug/l	5.0					
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.					
Pentachlorobenzene	ND	ug/l	20.					
a-Naphthylamine	ND	ug/l	25.					
b-Naphthylamine	ND	ug/l	20.					
Phenacetin	ND	ug/l	10.					
Dimethoate	ND	ug/l	20.					
4-Aminobiphenyl	ND	ug/l	10.					
Pentachloronitrobenzene	ND	ug/l	10.					
Isodrin	ND	ug/l	10.					
p-Dimethylaminoazobenzene	ND	ug/l	10.					
Chlorobenzilate	ND	ug/l	20.					
3-Methylcholanthrene	ND	ug/l	20.					
Ethyl Methanesulfonate	ND	ug/l	15.					
Acetophenone	ND	ug/l	20.					
Nitrosodipiperidine	ND	ug/l	20.					
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.					
n-Nitrosodimethylamine	ND	ug/l	50.					
2,4,6-Trichlorophenol	ND	ug/l	5.0					
p-Chloro-m-cresol	ND	ug/l	5.0					
2-Chlorophenol	ND	ug/l	6.0					
2,4-Dichlorophenol	ND	ug/l	10.					
2,4-Dimethylphenol	ND	ug/l	10.					
2-Nitrophenol	ND	ug/l	20.					
4-Nitrophenol	ND	ug/l	10.					
2,4-Dinitrophenol	ND	ug/l	30.					
4,6-Dinitro-o-cresol	ND	ug/l	20.					
Pentachlorophenol	ND	ug/l	10.					
Phenol	ND	ug/l	7.0					
2-Methylphenol	ND	ug/l	6.0					
3-Methylphenol/4-Methylphenol	ND	ug/l	6.0					
2,4,5-Trichlorophenol	ND	ug/l	5.0					
2,6-Dichlorophenol	ND	ug/l	10.					
Benzoic Acid	ND	ug/l	50.					
Benzyl Alcohol	ND	ug/l	10.					
Carbazole	ND	ug/l	5.0					
Pyridine	ND	ug/l	50.					
2-Picoline	ND	ug/l	20.					
Pronamide	ND	ug/l	20.					
Methyl methanesulfonate	ND	ug/l	20.					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714521

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG296453-1)								
SVOC's by GC/MS 8270 cont'd				1	8270C	1002 19:00	1003 11:11	RL
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	56.0	%	21-120					
Phenol-d6	51.0	%	10-120					
Nitrobenzene-d5	89.0	%	23-120					
2-Fluorobiphenyl	63.0	%	43-120					
2,4,6-Tribromophenol	67.0	%	10-120					
4-Terphenyl-d14	73.0	%	33-120					
Blank Analysis for sample(s) 01 (WG296454-1)								
PAH by GC/MS SIM 8270M				1	8270C-M	1002 19:00	1003 11:35	RL
Acenaphthene	ND	ug/l	0.20					
2-Chloronaphthalene	ND	ug/l	0.20					
Fluoranthene	ND	ug/l	0.20					
Hexachlorobutadiene	ND	ug/l	0.50					
Naphthalene	ND	ug/l	0.20					
Benzo(a)anthracene	ND	ug/l	0.20					
Benzo(a)pyrene	ND	ug/l	0.20					
Benzo(b)fluoranthene	ND	ug/l	0.20					
Benzo(k)fluoranthene	ND	ug/l	0.20					
Chrysene	ND	ug/l	0.20					
Acenaphthylene	ND	ug/l	0.20					
Anthracene	ND	ug/l	0.20					
Benzo(ghi)perylene	ND	ug/l	0.20					
Fluorene	ND	ug/l	0.20					
Phenanthrene	ND	ug/l	0.20					
Dibenzo(a,h)anthracene	ND	ug/l	0.20					
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20					
Pyrene	ND	ug/l	0.20					
1-Methylnaphthalene	ND	ug/l	0.20					
2-Methylnaphthalene	ND	ug/l	0.20					
Pentachlorophenol	ND	ug/l	0.80					
Hexachlorobenzene	ND	ug/l	0.80					
Perylene	ND	ug/l	0.20					
Biphenyl	ND	ug/l	0.20					
2,6-Dimethylnaphthalene	ND	ug/l	0.20					
1-Methylphenanthrene	ND	ug/l	0.20					
Benzo(e)Pyrene	ND	ug/l	0.20					
Hexachloroethane	ND	ug/l	0.80					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	55.0	%	21-120					
Phenol-d6	49.0	%	10-120					
Nitrobenzene-d5	109	%	23-120					
2-Fluorobiphenyl	72.0	%	43-120					
2,4,6-Tribromophenol	75.0	%	10-120					
4-Terphenyl-d14	117	%	33-120					

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

5. Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).

19. Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

GLOSSARY OF TERMS AND SYMBOLS

REF	Reference number in which test method may be found.
METHOD	Method number by which analysis was performed.
ID	Initials of the analyst.
ND	Not detected in comparison to the reported detection limit.
NI	Not Ignitable.
ug/cart	Micrograms per Cartridge.
H	The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

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.

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA WOODS HOLE LABS

WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193
RAYNHAM,MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 10/2

ALPHA Job #: L0714521

Client Information

Client: ERM-Boston
Address: 399 Boylston St. 6th Floor
Boston, MA 02116
Phone: 617 646 7800
Fax: 617 267 6447
Email: jason.flattery@erm.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NA Soil Excavation
Project Location: Raytheon Wayland
Project #: 0051545
Project Manager: Jason Flattery
ALPHA Quote #:

Turn-Around Time

☐ Standard 72 HR ☐ RUSH *(only confirmed if pre-approved!)*
Date Due: 10/5/07 Time:

Report Information - Data Deliverables

☐ FAX ☑ EMAIL
☑ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	*Criteria*
EPA RGP	

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTOCOLS

☑ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☑ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

SAMPLE HANDLING
Filtration
☐ Done
☑ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: VOCs by 624	Total As, Cu, Ni, Fe	TSS	pH	SVOCs by 8270 w/ penta chloro phenol	Sample Specific Comments	TOTAL # BOTTLES
4521.1	EFF-20071002-01	10/02/07	1450	GW	BM	2	1	1	1	2		7
	Container Type					V	P	P	P	A		
	Preservative					P	C	A	A	A		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
Paul Gillert	10/2/07 15:25	Paul Gillert	10/2/07 15:25
[illegible]	10/2/07 1815	[illegible]	10/2 1815

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

FORM NO: 01-01 (rev. 10-OCT-05)

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220 www.alphalab.com
MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

CERTIFICATE OF ANALYSIS

Client: ERM-New England

Address: 399 Boylston Street
6th Floor
Boston, MA 02116

Attn: Mr. Jason Flattery

Project Number: 0051545

Laboratory Job Number: L0714428

Date Received: 01-OCT-2007

Date Reported: 12-OCT-2007

Delivery Method: Alpha

Site: NA SOIL EXCAVATION

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0714428-01	EFF-2007 1001-01	RAYTHEON WAYLAND

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

Authorized by: _____
Technical Representative

ALPHA ANALYTICAL LABORATORIES
NARRATIVE REPORT

Laboratory Job Number: L0714428

Report Submission

This report replaces the report issued on October 4, 2007. The Volatile Organics results have been amended to include the requested compound reporting list.

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Semivolatile Organics

The WG296453-2 LCS % recovery for 2,4-Dinitrotoluene is above the method acceptance criteria. All associated samples are non-detect for this compound.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

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

Laboratory Sample Number: L0714428-01
EFF-2007 1001-01
Sample Matrix: WATER

Date Collected: 01-OCT-2007 14:40
Date Received : 01-OCT-2007
Date Reported : 12-OCT-2007

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2-Amber,3-Plastic,2-Vial

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Solids, Total Suspended	ND	mg/l	5.0	30	2540D		1003 13:30	DW
pH (H)	7.5	SU	-	30	4500H+-B		1001 22:45	LR
Total Metals								
Arsenic, Total	0.0185	mg/l	0.0005	1	6020	1002 18:00	1003 16:19	BM
Copper, Total	0.0016	mg/l	0.0005	1	6020	1002 18:00	1003 16:19	BM
Iron, Total	ND	mg/l	0.05	19	200.7	1002 18:00	1003 14:43	AI
Nickel, Total	0.0051	mg/l	0.0005	1	6020	1002 18:00	1003 16:19	BM
Volatile Organics by GC/MS 624				5	624		1002 08:52	MM
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	1.5					
Chloroform	ND	ug/l	1.5					
Carbon tetrachloride	ND	ug/l	1.0					
1,2-Dichloropropane	ND	ug/l	3.5					
Dibromochloromethane	ND	ug/l	1.0					
1,1,2-Trichloroethane	ND	ug/l	1.5					
2-Chloroethylvinyl ether	ND	ug/l	10.					
Tetrachloroethene	ND	ug/l	1.5					
Chlorobenzene	ND	ug/l	3.5					
Trichlorofluoromethane	ND	ug/l	5.0					
1,2-Dichloroethane	ND	ug/l	1.5					
1,1,1-Trichloroethane	ND	ug/l	2.0					
Bromodichloromethane	ND	ug/l	1.0					
trans-1,3-Dichloropropene	ND	ug/l	1.5					
cis-1,3-Dichloropropene	ND	ug/l	1.5					
Bromoform	ND	ug/l	1.0					
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0					
Benzene	ND	ug/l	1.0					
Toluene	ND	ug/l	1.0					
Ethylbenzene	ND	ug/l	1.0					
Chloromethane	ND	ug/l	10.					
Bromomethane	ND	ug/l	5.0					
Vinyl chloride	ND	ug/l	2.0					
Chloroethane	ND	ug/l	2.0					
1,1-Dichloroethene	ND	ug/l	1.0					
trans-1,2-Dichloroethene	ND	ug/l	1.5					

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

Laboratory Sample Number: L0714428-01
EFF-2007 1001-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics by GC/MS 624 cont'd				5	624	1002 08:52	MM	
cis-1,2-Dichloroethene	ND	ug/l	1.0					
Trichloroethene	ND	ug/l	1.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
p/m-Xylene	ND	ug/l	2.0					
o-xylene	ND	ug/l	1.0					
Xylene (Total)	ND	ug/l	2.0					
Styrene	ND	ug/l	1.0					
Acetone	ND	ug/l	10.					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	10.					
Vinyl acetate	ND	ug/l	20.					
4-Methyl-2-pentanone	ND	ug/l	10.					
2-Hexanone	ND	ug/l	10.					
Acrolein	ND	ug/l	8.0					
Acrylonitrile	ND	ug/l	10.					
Methyl tert butyl ether	ND	ug/l	20.					
1,4-Dioxane	ND	ug/l	2000					
Tert-Butyl Alcohol	ND	ug/l	100					
Tertiary-Amyl Methyl Ether	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
Pentafluorobenzene	104	%	80-120					
Fluorobenzene	108	%	80-120					
4-Bromofluorobenzene	106	%	80-120					
SVOC's by GC/MS 8270				1	8270C	1002 19:00	1003 12:44	RL
Acenaphthene	ND	ug/l	4.9					
Benzidine	ND	ug/l	49.					
1,2,4-Trichlorobenzene	ND	ug/l	4.9					
Hexachlorobenzene	ND	ug/l	4.9					
Bis(2-chloroethyl)ether	ND	ug/l	4.9					
1-Chloronaphthalene	ND	ug/l	4.9					
2-Chloronaphthalene	ND	ug/l	5.9					
1,2-Dichlorobenzene	ND	ug/l	4.9					
1,3-Dichlorobenzene	ND	ug/l	4.9					
1,4-Dichlorobenzene	ND	ug/l	4.9					
3,3'-Dichlorobenzidine	ND	ug/l	49.					
2,4-Dinitrotoluene	ND	ug/l	5.9					
2,6-Dinitrotoluene	ND	ug/l	4.9					
Azobenzene	ND	ug/l	4.9					
Fluoranthene	ND	ug/l	4.9					
4-Chlorophenyl phenyl ether	ND	ug/l	4.9					
4-Bromophenyl phenyl ether	ND	ug/l	4.9					
Bis(2-chloroisopropyl)ether	ND	ug/l	4.9					
Bis(2-chloroethoxy)methane	ND	ug/l	4.9					
Hexachlorobutadiene	ND	ug/l	9.9					
Hexachlorocyclopentadiene	ND	ug/l	30.					

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

Laboratory Sample Number: L0714428-01
EFF-2007 1001-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
SVOC's by GC/MS 8270 cont'd				1	8270C	1002 19:00	1003 12:44	RL
Hexachloroethane	ND	ug/l	4.9					
Isophorone	ND	ug/l	4.9					
Naphthalene	ND	ug/l	4.9					
Nitrobenzene	ND	ug/l	4.9					
NDPA/DPA	ND	ug/l	15.					
n-Nitrosodi-n-propylamine	ND	ug/l	4.9					
Bis(2-ethylhexyl)phthalate	ND	ug/l	4.9					
Butyl benzyl phthalate	ND	ug/l	4.9					
Di-n-butylphthalate	ND	ug/l	4.9					
Di-n-octylphthalate	ND	ug/l	4.9					
Diethyl phthalate	ND	ug/l	4.9					
Dimethyl phthalate	ND	ug/l	4.9					
Benzo(a)anthracene	ND	ug/l	4.9					
Benzo(a)pyrene	ND	ug/l	4.9					
Benzo(b)fluoranthene	ND	ug/l	4.9					
Benzo(k)fluoranthene	ND	ug/l	4.9					
Chrysene	ND	ug/l	4.9					
Acenaphthylene	ND	ug/l	4.9					
Anthracene	ND	ug/l	4.9					
Benzo(ghi)perylene	ND	ug/l	4.9					
Fluorene	ND	ug/l	4.9					
Phenanthrene	ND	ug/l	4.9					
Dibenzo(a,h)anthracene	ND	ug/l	4.9					
Indeno(1,2,3-cd)pyrene	ND	ug/l	6.9					
Pyrene	ND	ug/l	4.9					
Benzo(e)pyrene	ND	ug/l	4.9					
Biphenyl	ND	ug/l	4.9					
Perylene	ND	ug/l	4.9					
Aniline	ND	ug/l	20.					
4-Chloroaniline	ND	ug/l	4.9					
1-Methylnaphthalene	ND	ug/l	4.9					
2-Nitroaniline	ND	ug/l	4.9					
3-Nitroaniline	ND	ug/l	4.9					
4-Nitroaniline	ND	ug/l	6.9					
Dibenzofuran	ND	ug/l	4.9					
a,a-Dimethylphenethylamine	ND	ug/l	49.					
Hexachloropropene	ND	ug/l	9.9					
Nitrosodi-n-butylamine	ND	ug/l	9.9					
2-Methylnaphthalene	ND	ug/l	4.9					
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.					
Pentachlorobenzene	ND	ug/l	20.					
a-Naphthylamine	ND	ug/l	25.					
b-Naphthylamine	ND	ug/l	20.					
Phenacetin	ND	ug/l	9.9					
Dimethoate	ND	ug/l	20.					
4-Aminobiphenyl	ND	ug/l	9.9					
Pentachloronitrobenzene	ND	ug/l	9.9					
Isodrin	ND	ug/l	9.9					
p-Dimethylaminoazobenzene	ND	ug/l	9.9					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714428-01
EFF-2007 1001-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
SVOC's by GC/MS 8270 cont'd				1	8270C	1002 19:00	1003 12:44	RL
Chlorobenzilate	ND	ug/l	20.					
3-Methylcholanthrene	ND	ug/l	20.					
Ethyl Methanesulfonate	ND	ug/l	15.					
Acetophenone	ND	ug/l	20.					
Nitrosodipiperidine	ND	ug/l	20.					
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.					
n-Nitrosodimethylamine	ND	ug/l	49.					
2,4,6-Trichlorophenol	ND	ug/l	4.9					
p-Chloro-m-cresol	ND	ug/l	4.9					
2-Chlorophenol	ND	ug/l	5.9					
2,4-Dichlorophenol	ND	ug/l	9.9					
2,4-Dimethylphenol	ND	ug/l	9.9					
2-Nitrophenol	ND	ug/l	20.					
4-Nitrophenol	ND	ug/l	9.9					
2,4-Dinitrophenol	ND	ug/l	30.					
4,6-Dinitro-o-cresol	ND	ug/l	20.					
Pentachlorophenol	ND	ug/l	9.9					
Phenol	ND	ug/l	6.9					
2-Methylphenol	ND	ug/l	5.9					
3-Methylphenol/4-Methylphenol	ND	ug/l	5.9					
2,4,5-Trichlorophenol	ND	ug/l	4.9					
2,6-Dichlorophenol	ND	ug/l	9.9					
Benzoic Acid	ND	ug/l	49.					
Benzyl Alcohol	ND	ug/l	9.9					
Carbazole	ND	ug/l	4.9					
Pyridine	ND	ug/l	49.					
2-Picoline	ND	ug/l	20.					
Pronamide	ND	ug/l	20.					
Methyl methanesulfonate	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	47.0	%	21-120					
Phenol-d6	41.0	%	10-120					
Nitrobenzene-d5	86.0	%	23-120					
2-Fluorobiphenyl	64.0	%	43-120					
2,4,6-Tribromophenol	64.0	%	10-120					
4-Terphenyl-d14	68.0	%	33-120					
PAH by GC/MS SIM 8270M				1	8270C-M	1002 19:00	1003 14:29	RL
Acenaphthene	ND	ug/l	0.20					
2-Chloronaphthalene	ND	ug/l	0.20					
Fluoranthene	ND	ug/l	0.20					
Hexachlorobutadiene	ND	ug/l	0.49					
Naphthalene	ND	ug/l	0.20					
Benzo(a)anthracene	ND	ug/l	0.20					
Benzo(a)pyrene	ND	ug/l	0.20					
Benzo(b)fluoranthene	ND	ug/l	0.20					
Benzo(k)fluoranthene	ND	ug/l	0.20					
Chrysene	ND	ug/l	0.20					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714428-01
EFF-2007 1001-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
PAH by GC/MS SIM 8270M cont'd				1	8270C-M	1002 19:00	1003 14:29	RL
Acenaphthylene	ND	ug/l	0.20					
Anthracene	ND	ug/l	0.20					
Benzo(ghi)perylene	ND	ug/l	0.20					
Fluorene	ND	ug/l	0.20					
Phenanthrene	ND	ug/l	0.20					
Dibenzo(a,h)anthracene	ND	ug/l	0.20					
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20					
Pyrene	ND	ug/l	0.20					
1-Methylnaphthalene	ND	ug/l	0.20					
2-Methylnaphthalene	ND	ug/l	0.20					
Pentachlorophenol	ND	ug/l	0.79					
Hexachlorobenzene	ND	ug/l	0.79					
Perylene	ND	ug/l	0.20					
Biphenyl	ND	ug/l	0.20					
2,6-Dimethylnaphthalene	ND	ug/l	0.20					
1-Methylphenanthrene	ND	ug/l	0.20					
Benzo(e)Pyrene	ND	ug/l	0.20					
Hexachloroethane	ND	ug/l	0.79					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	49.0	%	21-120					
Phenol-d6	43.0	%	10-120					
Nitrobenzene-d5	112	%	23-120					
2-Fluorobiphenyl	79.0	%	43-120					
2,4,6-Tribromophenol	74.0	%	10-120					
4-Terphenyl-d14	111	%	33-120					

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

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0714428

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Solids, Total Suspended for sample(s) 01 (L0714322-01, WG296505-2)					
Solids, Total Suspended	83	70	mg/l	17	32
pH for sample(s) 01 (L0714436-01, WG296297-1)					
pH (H)	7.2	7.2	SU	0	5
Total Metals for sample(s) 01 (L0714216-02, WG296464-1)					
Iron, Total	0.19	0.19	mg/l	0	
Total Metals for sample(s) 01 (L0714216-02, WG296463-1)					
Arsenic, Total	0.0112	0.0111	mg/l	1	20
Copper, Total	0.0007	0.0008	mg/l	3	20
Volatile Organics by GC/MS 624 for sample(s) 01 (L0714428-01, WG296345-2)					
Methylene chloride	ND	ND	ug/l	NC	30
1,1-Dichloroethane	ND	ND	ug/l	NC	30
Chloroform	ND	ND	ug/l	NC	30
Carbon tetrachloride	ND	ND	ug/l	NC	30
1,2-Dichloropropane	ND	ND	ug/l	NC	30
Dibromochloromethane	ND	ND	ug/l	NC	30
1,1,2-Trichloroethane	ND	ND	ug/l	NC	30
2-Chloroethylvinyl ether	ND	ND	ug/l	NC	30
Tetrachloroethene	ND	ND	ug/l	NC	30
Chlorobenzene	ND	ND	ug/l	NC	30
Trichlorofluoromethane	ND	ND	ug/l	NC	30
1,2-Dichloroethane	ND	ND	ug/l	NC	30
1,1,1-Trichloroethane	ND	ND	ug/l	NC	30
Bromodichloromethane	ND	ND	ug/l	NC	30
trans-1,3-Dichloropropene	ND	ND	ug/l	NC	30
cis-1,3-Dichloropropene	ND	ND	ug/l	NC	30
Bromoform	ND	ND	ug/l	NC	30
1,1,2,2-Tetrachloroethane	ND	ND	ug/l	NC	30
Benzene	ND	ND	ug/l	NC	30
Toluene	ND	ND	ug/l	NC	30
Ethylbenzene	ND	ND	ug/l	NC	30
Chloromethane	ND	ND	ug/l	NC	30
Bromomethane	ND	ND	ug/l	NC	30
Vinyl chloride	ND	ND	ug/l	NC	30
Chloroethane	ND	ND	ug/l	NC	30
1,1-Dichloroethene	ND	ND	ug/l	NC	30
trans-1,2-Dichloroethene	ND	ND	ug/l	NC	30
cis-1,2-Dichloroethene	ND	ND	ug/l	NC	30
Trichloroethene	ND	ND	ug/l	NC	30
1,2-Dichlorobenzene	ND	ND	ug/l	NC	30
1,3-Dichlorobenzene	ND	ND	ug/l	NC	30
1,4-Dichlorobenzene	ND	ND	ug/l	NC	30
p/m-Xylene	ND	ND	ug/l	NC	30
o-xylene	ND	ND	ug/l	NC	30
Xylene (Total)	ND	ND	ug/l	NC	30

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0714428

Continued

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Volatile Organics by GC/MS 624 for sample(s) 01 (L0714428-01, WG296345-2)					
Styrene	ND	ND	ug/l	NC	30
Acetone	ND	ND	ug/l	NC	30
Carbon disulfide	ND	ND	ug/l	NC	30
2-Butanone	ND	ND	ug/l	NC	30
Vinyl acetate	ND	ND	ug/l	NC	30
4-Methyl-2-pentanone	ND	ND	ug/l	NC	30
2-Hexanone	ND	ND	ug/l	NC	30
Acrolein	ND	ND	ug/l	NC	30
Acrylonitrile	ND	ND	ug/l	NC	30
Methyl tert butyl ether	ND	ND	ug/l	NC	30
1,4-Dioxane	ND	ND	ug/l	NC	30
Tert-Butyl Alcohol	ND	ND	ug/l	NC	30
Tertiary-Amyl Methyl Ether	ND	ND	ug/l	NC	30
Surrogate(s)	Recovery				QC Criteria
Pentafluorobenzene	104	99.0	%		80-120
Fluorobenzene	108	105	%		80-120
4-Bromofluorobenzene	106	104	%		80-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714428

Parameter	% Recovery	QC Criteria
pH LCS for sample(s) 01 (WG296297-2)		
pH	100	99-101
Total Metals LCS for sample(s) 01 (WG296464-4)		
Iron, Total	92	
Total Metals LCS for sample(s) 01 (WG296463-4)		
Arsenic, Total	94	80-120
Copper, Total	94	80-120
Nickel, Total	95	80-120
Volatile Organics by GC/MS 624 LCS for sample(s) 01 (WG296345-5)		
Methylene chloride	109	10-221
1,1-Dichloroethane	92	59-155
Chloroform	102	51-138
Carbon tetrachloride	104	70-140
1,2-Dichloropropane	111	10-210
Dibromochloromethane	100	53-149
1,1,2-Trichloroethane	104	52-150
2-Chloroethylvinyl ether	106	10-305
Tetrachloroethene	101	64-148
Chlorobenzene	101	37-160
Trichlorofluoromethane	121	17-181
1,2-Dichloroethane	109	49-155
1,1,1-Trichloroethane	102	52-162
Bromodichloromethane	100	35-155
trans-1,3-Dichloropropene	101	17-183
cis-1,3-Dichloropropene	99	10-227
Bromoform	90	45-169
1,1,2,2-Tetrachloroethane	98	46-157
Benzene	116	37-151
Toluene	111	47-150
Ethylbenzene	107	37-162
Chloromethane	132	10-273
Bromomethane	126	10-242
Vinyl chloride	125	10-251
Chloroethane	132	14-230
1,1-Dichloroethene	118	10-234
trans-1,2-Dichloroethene	112	54-156
cis-1,2-Dichloroethene	94	60-140
Trichloroethene	111	71-157
1,2-Dichlorobenzene	100	18-190
1,3-Dichlorobenzene	99	59-156
1,4-Dichlorobenzene	102	18-190
p/m-Xylene	112	40-160
o-Xylene	104	40-160
XYLENE (TOTAL)	109	40-160
Styrene	105	40-160
Acetone	125	40-160

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714428

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 LCS for sample(s) 01 (WG296345-5)		
Carbon disulfide	126	40-160
2-Butanone	103	40-160
Vinyl acetate	84	40-160
4-Methyl-2-pentanone	106	40-160
2-Hexanone	102	40-160
Acrolein	112	40-160
Acrylonitrile	124	40-160
Surrogate(s)		
Pentafluorobenzene	99	80-120
Fluorobenzene	103	80-120
4-Bromofluorobenzene	95	80-120
SVOC's by GC/MS 8270 LCS for sample(s) 01 (WG296453-2)		
Acenaphthene	81	46-118
1,2,4-Trichlorobenzene	68	39-98
2-Chloronaphthalene	73	40-140
1,2-Dichlorobenzene	66	40-140
1,4-Dichlorobenzene	64	36-97
2,4-Dinitrotoluene	101	24-96
2,6-Dinitrotoluene	103	40-140
Fluoranthene	92	40-140
4-Chlorophenyl phenyl ether	81	40-140
n-Nitrosodi-n-propylamine	73	41-116
Butyl benzyl phthalate	100	40-140
Anthracene	76	40-140
Pyrene	87	26-127
Hexachloropropene	62	40-140
P-Chloro-M-Cresol	79	23-97
2-Chlorophenol	66	27-123
2-Nitrophenol	81	30-130
4-Nitrophenol	52	10-80
2,4-Dinitrophenol	92	30-130
Pentachlorophenol	79	9-103
Phenol	31	12-110
Surrogate(s)		
2-Fluorophenol	46	21-120
Phenol-d6	40	10-120
Nitrobenzene-d5	84	23-120
2-Fluorobiphenyl	73	43-120
2,4,6-Tribromophenol	80	10-120
4-Terphenyl-d14	82	33-120
PAH by GC/MS SIM 8270M LCS for sample(s) 01 (WG296454-2)		
Acenaphthene	73	40-140
2-Chloronaphthalene	82	40-140
Fluoranthene	102	40-140

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714428

Continued

Parameter	% Recovery	QC Criteria
PAH by GC/MS SIM 8270M LCS for sample(s) 01 (WG296454-2)		
Anthracene	83	40-140
Pyrene	91	40-140
Pentachlorophenol	66	30-130
Surrogate(s)		
2-Fluorophenol	52	21-120
Phenol-d6	44	10-120
Nitrobenzene-d5	118	23-120
2-Fluorobiphenyl	71	43-120
2,4,6-Tribromophenol	91	10-120
4-Terphenyl-d14	112	33-120
Total Metals SPIKE for sample(s) 01 (L0714216-02, WG296464-2)		
Iron, Total	91	
Total Metals SPIKE for sample(s) 01 (L0714216-02, WG296463-2)		
Arsenic, Total	103	80-120
Copper, Total	93	80-120
Nickel, Total	93	80-120
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01 (L0714428-01, WG296345-1)		
Methylene chloride	91	10-221
1,1-Dichloroethane	72	59-155
Chloroform	83	51-138
Carbon tetrachloride	80	70-140
1,2-Dichloropropane	85	10-210
Dibromochloromethane	81	53-149
1,1,2-Trichloroethane	88	52-150
2-Chloroethylvinyl ether	80	10-305
Tetrachloroethene	77	64-148
Chlorobenzene	76	37-160
Trichlorofluoromethane	95	17-181
1,2-Dichloroethane	97	49-155
1,1,1-Trichloroethane	83	52-162
Bromodichloromethane	83	35-155
trans-1,3-Dichloropropene	75	17-183
cis-1,3-Dichloropropene	69	10-227
Bromoform	82	45-169
1,1,2,2-Tetrachloroethane	81	46-157
Benzene	90	35-151
Toluene	83	47-150
Ethylbenzene	82	37-162
Chloromethane	90	10-273
Bromomethane	77	10-242
Vinyl chloride	96	10-251
Chloroethane	101	14-230
1,1-Dichloroethene	87	10-234
trans-1,2-Dichloroethene	85	54-156

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714428

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01 (L0714428-01, WG296345-1)		
cis-1,2-Dichloroethene	82	60-140
Trichloroethene	85	71-157
1,2-Dichlorobenzene	33	18-190
1,3-Dichlorobenzene	77	59-156
1,4-Dichlorobenzene	78	18-190
p/m-Xylene	87	40-160
o-Xylene	80	40-160
XYLENE (TOTAL)	85	40-160
Styrene	82	40-160
Acetone	114	40-160
Carbon disulfide	92	40-160
2-Butanone	94	40-160
Vinyl acetate	70	40-160
4-Methyl-2-pentanone	98	40-160
2-Hexanone	93	40-160
Acrolein	69	40-160
Acrylonitrile	114	40-160
Surrogate(s)		
Pentafluorobenzene	101	80-120
Fluorobenzene	107	80-120
4-Bromofluorobenzene	99	80-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0714428

Parameter	MS %	MSD %	RPD	RPD Limit	MS/MSD Limits
SVOC's by GC/MS 8270 for sample(s) 01 (L0714428-01, WG296453-4)					
Acenaphthene	66	75	13	30	46-118
1,2,4-Trichlorobenzene	52	66	24	30	39-98
2-Chloronaphthalene	61	66	8	30	40-140
1,2-Dichlorobenzene	52	66	24	30	40-140
1,4-Dichlorobenzene	52	61	16	30	36-97
2,4-Dinitrotoluene	80	89	11	30	24-96
2,6-Dinitrotoluene	85	94	10	30	40-140
Fluoranthene	75	80	6	30	40-140
4-Chlorophenyl phenyl ether	66	75	13	30	40-140
n-Nitrosodi-n-propylamine	56	66	16	30	41-116
Butyl benzyl phthalate	85	89	5	30	40-140
Anthracene	61	66	8	30	40-140
Pyrene	71	75	5	30	26-127
Hexachloropropene	52	66	24	30	40-140
P-Chloro-M-Cresol	66	73	10	30	23-97
2-Chlorophenol	54	63	15	30	27-123
2-Nitrophenol	63	75	17	30	30-130
4-Nitrophenol	66	73	10	30	10-80
2,4-Dinitrophenol	78	87	11	30	30-130
Pentachlorophenol	63	68	8	30	9-103
Phenol	35	45	25	30	12-110
Surrogate(s)					
2-Fluorophenol	46	57	21		21-120
Phenol-d6	50	59	17		10-120
Nitrobenzene-d5	67	78	15		23-120
2-Fluorobiphenyl	59	66	11		43-120
2,4,6-Tribromophenol	65	70	7		10-120
4-Terphenyl-d14	69	73	6		33-120
PAH by GC/MS SIM 8270M for sample(s) 01 (L0714428-01, WG296454-4)					
Acenaphthene	66	75	13	40	40-140
2-Chloronaphthalene	75	80	6	40	40-140
Fluoranthene	100	110	10	40	40-140
Anthracene	75	80	6	40	40-140
Pyrene	94	99	5	40	40-140
Pentachlorophenol	63	66	5	40	30-130
Surrogate(s)					
2-Fluorophenol	51	64	23		21-120
Phenol-d6	56	65	15		10-120
Nitrobenzene-d5	101	117	15		23-120
2-Fluorobiphenyl	79	85	7		43-120
2,4,6-Tribromophenol	86	90	5		10-120
4-Terphenyl-d14	102	111	8		33-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714428

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG296505-1)								
Solids, Total Suspended	ND	mg/l	5.0	30	2540D		1003 13:30	DW
Blank Analysis for sample(s) 01 (WG296464-3)								
Total Metals				19	200.7			
Iron, Total	ND	mg/l	0.05	19	200.7	1002 18:00	1003 13:46	AI
Blank Analysis for sample(s) 01 (WG296463-3)								
Total Metals								
Arsenic, Total	ND	mg/l	0.0005	1	6020	1002 18:00	1003 15:06	BM
Copper, Total	ND	mg/l	0.0005	1	6020	1002 18:00	1003 15:06	BM
Nickel, Total	ND	mg/l	0.0005	1	6020	1002 18:00	1003 15:06	BM
Blank Analysis for sample(s) 01 (WG296345-6)								
Volatile Organics by GC/MS 624				5	624		1002 07:42	MM
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	1.5					
Chloroform	ND	ug/l	1.5					
Carbon tetrachloride	ND	ug/l	1.0					
1,2-Dichloropropane	ND	ug/l	3.5					
Dibromochloromethane	ND	ug/l	1.0					
1,1,2-Trichloroethane	ND	ug/l	1.5					
2-Chloroethylvinyl ether	ND	ug/l	10.					
Tetrachloroethene	ND	ug/l	1.5					
Chlorobenzene	ND	ug/l	3.5					
Trichlorofluoromethane	ND	ug/l	5.0					
1,2-Dichloroethane	ND	ug/l	1.5					
1,1,1-Trichloroethane	ND	ug/l	2.0					
Bromodichloromethane	ND	ug/l	1.0					
trans-1,3-Dichloropropene	ND	ug/l	1.5					
cis-1,3-Dichloropropene	ND	ug/l	1.5					
Bromoform	ND	ug/l	1.0					
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0					
Benzene	ND	ug/l	1.0					
Toluene	ND	ug/l	1.0					
Ethylbenzene	ND	ug/l	1.0					
Chloromethane	ND	ug/l	10.					
Bromomethane	ND	ug/l	5.0					
Vinyl chloride	ND	ug/l	2.0					
Chloroethane	ND	ug/l	2.0					
1,1-Dichloroethene	ND	ug/l	1.0					
trans-1,2-Dichloroethene	ND	ug/l	1.5					
cis-1,2-Dichloroethene	ND	ug/l	1.0					
Trichloroethene	ND	ug/l	1.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714428

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG296345-6)								
Volatile Organics by GC/MS 624 cont'd				5	624		1002 07:42	MM
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
p/m-Xylene	ND	ug/l	2.0					
o-xylene	ND	ug/l	1.0					
Xylene (Total)	ND	ug/l	2.0					
Styrene	ND	ug/l	1.0					
Acetone	ND	ug/l	10.					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	10.					
Vinyl acetate	ND	ug/l	20.					
4-Methyl-2-pentanone	ND	ug/l	10.					
2-Hexanone	ND	ug/l	10.					
Acrolein	ND	ug/l	8.0					
Acrylonitrile	ND	ug/l	10.					
Methyl tert butyl ether	ND	ug/l	20.					
1,4-Dioxane	ND	ug/l	2000					
Tert-Butyl Alcohol	ND	ug/l	100					
Tertiary-Amyl Methyl Ether	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
Pentafluorobenzene	104	%	80-120					
Fluorobenzene	80.0	%	80-120					
4-Bromofluorobenzene	103	%	80-120					
Blank Analysis for sample(s) 01 (WG296453-1)								
SVOC's by GC/MS 8270				1	8270C	1002 19:00	1003 11:11	RL
Acenaphthene	ND	ug/l	5.0					
Benzidine	ND	ug/l	50.					
1,2,4-Trichlorobenzene	ND	ug/l	5.0					
Hexachlorobenzene	ND	ug/l	5.0					
Bis(2-chloroethyl)ether	ND	ug/l	5.0					
1-Chloronaphthalene	ND	ug/l	5.0					
2-Chloronaphthalene	ND	ug/l	6.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
3,3'-Dichlorobenzidine	ND	ug/l	50.					
2,4-Dinitrotoluene	ND	ug/l	6.0					
2,6-Dinitrotoluene	ND	ug/l	5.0					
Azobenzene	ND	ug/l	5.0					
Fluoranthene	ND	ug/l	5.0					
4-Chlorophenyl phenyl ether	ND	ug/l	5.0					
4-Bromophenyl phenyl ether	ND	ug/l	5.0					
Bis(2-chloroisopropyl)ether	ND	ug/l	5.0					
Bis(2-chloroethoxy)methane	ND	ug/l	5.0					
Hexachlorobutadiene	ND	ug/l	10.					

Laboratory Job Number: L0714428

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG296453-1)								
SVOC's by GC/MS 8270 cont'd				1	8270C	1002 19:00	1003 11:11	RL
Hexachlorocyclopentadiene	ND	ug/l	30.					
Hexachloroethane	ND	ug/l	5.0					
Isophorone	ND	ug/l	5.0					
Naphthalene	ND	ug/l	5.0					
Nitrobenzene	ND	ug/l	5.0					
NDPA/DPA	ND	ug/l	15.					
n-Nitrosodi-n-propylamine	ND	ug/l	5.0					
Bis(2-ethylhexyl)phthalate	ND	ug/l	5.0					
Butyl benzyl phthalate	ND	ug/l	5.0					
Di-n-butylphthalate	ND	ug/l	5.0					
Di-n-octylphthalate	ND	ug/l	5.0					
Diethyl phthalate	ND	ug/l	5.0					
Dimethyl phthalate	ND	ug/l	5.0					
Benzo(a)anthracene	ND	ug/l	5.0					
Benzo(a)pyrene	ND	ug/l	5.0					
Benzo(b)fluoranthene	ND	ug/l	5.0					
Benzo(k)fluoranthene	ND	ug/l	5.0					
Chrysene	ND	ug/l	5.0					
Acenaphthylene	ND	ug/l	5.0					
Anthracene	ND	ug/l	5.0					
Benzo(ghi)perylene	ND	ug/l	5.0					
Fluorene	ND	ug/l	5.0					
Phenanthrene	ND	ug/l	5.0					
Dibenzo(a,h)anthracene	ND	ug/l	5.0					
Indeno(1,2,3-cd)pyrene	ND	ug/l	7.0					
Pyrene	ND	ug/l	5.0					
Benzo(e)pyrene	ND	ug/l	5.0					
Biphenyl	ND	ug/l	5.0					
Perylene	ND	ug/l	5.0					
Aniline	ND	ug/l	20.					
4-Chloroaniline	ND	ug/l	5.0					
1-Methylnaphthalene	ND	ug/l	5.0					
2-Nitroaniline	ND	ug/l	5.0					
3-Nitroaniline	ND	ug/l	5.0					
4-Nitroaniline	ND	ug/l	7.0					
Dibenzofuran	ND	ug/l	5.0					
a,a-Dimethylphenethylamine	ND	ug/l	50.					
Hexachloropropene	ND	ug/l	10.					
Nitrosodi-n-butylamine	ND	ug/l	10.					
2-Methylnaphthalene	ND	ug/l	5.0					
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.					
Pentachlorobenzene	ND	ug/l	20.					
a-Naphthylamine	ND	ug/l	25.					
b-Naphthylamine	ND	ug/l	20.					
Phenacetin	ND	ug/l	10.					
Dimethoate	ND	ug/l	20.					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714428

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG296453-1)								
SVOC's by GC/MS 8270 cont'd				1	8270C	1002 19:00	1003 11:11	RL
4-Aminobiphenyl	ND	ug/l	10.					
Pentachloronitrobenzene	ND	ug/l	10.					
Isodrin	ND	ug/l	10.					
p-Dimethylaminoazobenzene	ND	ug/l	10.					
Chlorobenzilate	ND	ug/l	20.					
3-Methylcholanthrene	ND	ug/l	20.					
Ethyl Methanesulfonate	ND	ug/l	15.					
Acetophenone	ND	ug/l	20.					
Nitrosodipiperidine	ND	ug/l	20.					
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.					
n-Nitrosodimethylamine	ND	ug/l	50.					
2,4,6-Trichlorophenol	ND	ug/l	5.0					
p-Chloro-m-cresol	ND	ug/l	5.0					
2-Chlorophenol	ND	ug/l	6.0					
2,4-Dichlorophenol	ND	ug/l	10.					
2,4-Dimethylphenol	ND	ug/l	10.					
2-Nitrophenol	ND	ug/l	20.					
4-Nitrophenol	ND	ug/l	10.					
2,4-Dinitrophenol	ND	ug/l	30.					
4,6-Dinitro-o-cresol	ND	ug/l	20.					
Pentachlorophenol	ND	ug/l	10.					
Phenol	ND	ug/l	7.0					
2-Methylphenol	ND	ug/l	6.0					
3-Methylphenol/4-Methylphenol	ND	ug/l	6.0					
2,4,5-Trichlorophenol	ND	ug/l	5.0					
2,6-Dichlorophenol	ND	ug/l	10.					
Benzoic Acid	ND	ug/l	50.					
Benzyl Alcohol	ND	ug/l	10.					
Carbazole	ND	ug/l	5.0					
Pyridine	ND	ug/l	50.					
2-Picoline	ND	ug/l	20.					
Pronamide	ND	ug/l	20.					
Methyl methanesulfonate	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	56.0	%	21-120					
Phenol-d6	51.0	%	10-120					
Nitrobenzene-d5	89.0	%	23-120					
2-Fluorobiphenyl	63.0	%	43-120					
2,4,6-Tribromophenol	67.0	%	10-120					
4-Terphenyl-d14	73.0	%	33-120					
Blank Analysis for sample(s) 01 (WG296454-1)								
PAH by GC/MS SIM 8270M				1	8270C-M	1002 19:00	1003 11:35	RL
Acenaphthene	ND	ug/l	0.20					
2-Chloronaphthalene	ND	ug/l	0.20					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714428

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG296454-1)								
PAH by GC/MS SIM 8270M cont'd				1	8270C-M	1002 19:00	1003 11:35	RL
Fluoranthene	ND	ug/l	0.20					
Hexachlorobutadiene	ND	ug/l	0.50					
Naphthalene	ND	ug/l	0.20					
Benzo(a)anthracene	ND	ug/l	0.20					
Benzo(a)pyrene	ND	ug/l	0.20					
Benzo(b)fluoranthene	ND	ug/l	0.20					
Benzo(k)fluoranthene	ND	ug/l	0.20					
Chrysene	ND	ug/l	0.20					
Acenaphthylene	ND	ug/l	0.20					
Anthracene	ND	ug/l	0.20					
Benzo(ghi)perylene	ND	ug/l	0.20					
Fluorene	ND	ug/l	0.20					
Phenanthrene	ND	ug/l	0.20					
Dibenzo(a,h)anthracene	ND	ug/l	0.20					
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20					
Pyrene	ND	ug/l	0.20					
1-Methylnaphthalene	ND	ug/l	0.20					
2-Methylnaphthalene	ND	ug/l	0.20					
Pentachlorophenol	ND	ug/l	0.80					
Hexachlorobenzene	ND	ug/l	0.80					
Perylene	ND	ug/l	0.20					
Biphenyl	ND	ug/l	0.20					
2,6-Dimethylnaphthalene	ND	ug/l	0.20					
1-Methylphenanthrene	ND	ug/l	0.20					
Benzo(e)Pyrene	ND	ug/l	0.20					
Hexachloroethane	ND	ug/l	0.80					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	55.0	%	21-120					
Phenol-d6	49.0	%	10-120					
Nitrobenzene-d5	109	%	23-120					
2-Fluorobiphenyl	72.0	%	43-120					
2,4,6-Tribromophenol	75.0	%	10-120					
4-Terphenyl-d14	117	%	33-120					

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

5. Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).

19. Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

GLOSSARY OF TERMS AND SYMBOLS

REF	Reference number in which test method may be found.
METHOD	Method number by which analysis was performed.
ID	Initials of the analyst.
ND	Not detected in comparison to the reported detection limit.
NI	Not Ignitable.
ug/cart	Micrograms per Cartridge.
H	The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

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.

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA WOODS HOLE LABS

WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

RAYNHAM, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 10/1/07

ALPHA Job #: L0714428

Client Information

Client: ERM - Boston
Address: 399 Boylston St. 6th Floor
Boston, MA 02116
Phone: (617) 646-7800
Fax: (617) 267-6447
Email: jason.flattery@erm.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NA Soil Excavation
Project Location: Raytheon Wayland
Project #: 0051545
Project Manager: Jason Flattery
ALPHA Quote #:

Turn-Around Time

☐ Standard ☒ RUSH (only confirmed if pre-approved!)

Date Due: 72 HR per 10/4/07 ERA
Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info
PO #:

Regulatory Requirements/Report Limits

State /Fed Program	Criteria
EPA RGP	

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☒ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs by 624	Total As, Cu, Ni, Fe	TSS	pH	SVOCs by 8270 w/ para chloro phenol	Sample Specific Comments	TOTAL # BOTTLES
14428-1	EFF-20071001-01	10/01/07	1440	GW	BM	2	1	1	1	2		7
Container Type						V	P	P	P	A		
Preservative						H	C	A	A	A		

JDF

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/1/07 1526	[signature]	10/1/07 1526
[signature]	10/1/07 1559	[signature]	10/1/07 1559

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

FORM NO: 01-01 (rev. 10-OCT-05)

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220 www.alphalab.com
MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

CERTIFICATE OF ANALYSIS

Client: ERM-New England

Address: 399 Boylston Street
6th Floor
Boston, MA 02116

Attn: Mr. Jason Flattery

Project Number: 0051545

Laboratory Job Number: L0714218

Date Received: 27-SEP-2007

Date Reported: 02-OCT-2007

Delivery Method: Alpha

Site: NA SOIL EXCAVATION

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0714218-01	DAY-1-EFF-20070927-01	RAYTHEON-WAYLAND

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

Authorized by: _____
Technical Representative

ALPHA ANALYTICAL LABORATORIES
NARRATIVE REPORT

Laboratory Job Number: L0714218

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Semivolatile Organics

The WG295957 LCS, MS, and MSD % recoveries for 1,2-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2,4-Trichlorobenzene and Hexachloropropene are below the method acceptance criteria. Re-extraction could not be performed due to lack of additional sample.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

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

Laboratory Sample Number: L0714218-01
DAY-1-EFF-20070927-01
Sample Matrix: WATER

Date Collected: 27-SEP-2007 14:45
Date Received : 27-SEP-2007
Date Reported : 02-OCT-2007

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2-Amber,3-Plastic,2-Vial

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Solids, Total Suspended	ND	mg/l	5.0	30	2540D		0928 15:40	DW
pH (H)	8.2	SU	-	30	4500H+-B		0927 20:30	LR
Total Metals								
Arsenic, Total	0.0144	mg/l	0.0005	1	6020	0929 11:45	1001 18:37	BM
Copper, Total	0.0012	mg/l	0.0005	1	6020	0929 11:45	1001 18:37	BM
Iron, Total	0.05	mg/l	0.05	19	200.7	1001 15:00	1002 09:46	AI
Nickel, Total	0.0060	mg/l	0.0005	1	6020	0929 11:45	1001 18:37	BM
Volatile Organics by GC/MS 624				5	624		1001 20:37	MM
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	1.5					
Chloroform	ND	ug/l	1.5					
Carbon tetrachloride	ND	ug/l	1.0					
1,2-Dichloropropane	ND	ug/l	3.5					
Dibromochloromethane	ND	ug/l	1.0					
1,1,2-Trichloroethane	ND	ug/l	1.5					
2-Chloroethylvinyl ether	ND	ug/l	10.					
Tetrachloroethene	ND	ug/l	1.5					
Chlorobenzene	ND	ug/l	3.5					
Trichlorofluoromethane	ND	ug/l	5.0					
1,2-Dichloroethane	ND	ug/l	1.5					
1,1,1-Trichloroethane	ND	ug/l	2.0					
Bromodichloromethane	ND	ug/l	1.0					
trans-1,3-Dichloropropene	ND	ug/l	1.5					
cis-1,3-Dichloropropene	ND	ug/l	1.5					
Bromoform	ND	ug/l	1.0					
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0					
Benzene	ND	ug/l	1.0					
Toluene	ND	ug/l	1.0					
Ethylbenzene	ND	ug/l	1.0					
Chloromethane	ND	ug/l	10.					
Bromomethane	ND	ug/l	5.0					
Vinyl chloride	ND	ug/l	2.0					
Chloroethane	ND	ug/l	2.0					
1,1-Dichloroethene	ND	ug/l	1.0					
trans-1,2-Dichloroethene	ND	ug/l	1.5					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714218-01
DAY-1-EFF-20070927-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics by GC/MS 624 cont'd				5	624		1001 20:37	MM
cis-1,2-Dichloroethene	ND	ug/l	1.0					
Trichloroethene	ND	ug/l	1.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
p/m-Xylene	ND	ug/l	2.0					
o-xylene	ND	ug/l	1.0					
Xylene (Total)	ND	ug/l	2.0					
Styrene	ND	ug/l	1.0					
Acetone	ND	ug/l	10.					
Carbon disulfide	10	ug/l	5.0					
2-Butanone	ND	ug/l	10.					
Vinyl acetate	ND	ug/l	20.					
4-Methyl-2-pentanone	ND	ug/l	10.					
2-Hexanone	ND	ug/l	10.					
Acrolein	ND	ug/l	8.0					
Acrylonitrile	ND	ug/l	10.					
Methyl tert butyl ether	ND	ug/l	20.					
1,4-Dioxane	ND	ug/l	2000					
Tert-Butyl Alcohol	ND	ug/l	100					
Tertiary-Amyl Methyl Ether	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
Pentafluorobenzene	101	%	80-120					
Fluorobenzene	103	%	80-120					
4-Bromofluorobenzene	100	%	80-120					
SVOC's by GC/MS 8270				1	8270C	0928 10:40	0929 16:04	RL
Acenaphthene	ND	ug/l	4.9					
Benzidine	ND	ug/l	49.					
1,2,4-Trichlorobenzene	ND	ug/l	4.9					
Hexachlorobenzene	ND	ug/l	4.9					
Bis(2-chloroethyl)ether	ND	ug/l	4.9					
1-Chloronaphthalene	ND	ug/l	4.9					
2-Chloronaphthalene	ND	ug/l	5.9					
1,2-Dichlorobenzene	ND	ug/l	4.9					
1,3-Dichlorobenzene	ND	ug/l	4.9					
1,4-Dichlorobenzene	ND	ug/l	4.9					
3,3'-Dichlorobenzidine	ND	ug/l	49.					
2,4-Dinitrotoluene	ND	ug/l	5.9					
2,6-Dinitrotoluene	ND	ug/l	4.9					
Azobenzene	ND	ug/l	4.9					
Fluoranthene	ND	ug/l	4.9					
4-Chlorophenyl phenyl ether	ND	ug/l	4.9					
4-Bromophenyl phenyl ether	ND	ug/l	4.9					
Bis(2-chloroisopropyl)ether	ND	ug/l	4.9					
Bis(2-chloroethoxy)methane	ND	ug/l	4.9					
Hexachlorobutadiene	ND	ug/l	9.9					
Hexachlorocyclopentadiene	ND	ug/l	30.					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714218-01
DAY-1-EFF-20070927-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
SVOC's by GC/MS 8270 cont'd				1	8270C	0928 10:40	0929 16:04	RL
Hexachloroethane	ND	ug/l	4.9					
Isophorone	ND	ug/l	4.9					
Naphthalene	ND	ug/l	4.9					
Nitrobenzene	ND	ug/l	4.9					
NDPA/DPA	ND	ug/l	15.					
n-Nitrosodi-n-propylamine	ND	ug/l	4.9					
Bis(2-ethylhexyl)phthalate	9.8	ug/l	4.9					
Butyl benzyl phthalate	ND	ug/l	4.9					
Di-n-butylphthalate	ND	ug/l	4.9					
Di-n-octylphthalate	ND	ug/l	4.9					
Diethyl phthalate	ND	ug/l	4.9					
Dimethyl phthalate	ND	ug/l	4.9					
Benzo(a)anthracene	ND	ug/l	4.9					
Benzo(a)pyrene	ND	ug/l	4.9					
Benzo(b)fluoranthene	ND	ug/l	4.9					
Benzo(k)fluoranthene	ND	ug/l	4.9					
Chrysene	ND	ug/l	4.9					
Acenaphthylene	ND	ug/l	4.9					
Anthracene	ND	ug/l	4.9					
Benzo(ghi)perylene	ND	ug/l	4.9					
Fluorene	ND	ug/l	4.9					
Phenanthrene	ND	ug/l	4.9					
Dibenzo(a,h)anthracene	ND	ug/l	4.9					
Indeno(1,2,3-cd)pyrene	ND	ug/l	6.9					
Pyrene	ND	ug/l	4.9					
Benzo(e)pyrene	ND	ug/l	4.9					
Biphenyl	ND	ug/l	4.9					
Perylene	ND	ug/l	4.9					
Aniline	ND	ug/l	20.					
4-Chloroaniline	ND	ug/l	4.9					
1-Methylnaphthalene	ND	ug/l	4.9					
2-Nitroaniline	ND	ug/l	4.9					
3-Nitroaniline	ND	ug/l	4.9					
4-Nitroaniline	ND	ug/l	6.9					
Dibenzofuran	ND	ug/l	4.9					
a,a-Dimethylphenethylamine	ND	ug/l	49.					
Hexachloropropene	ND	ug/l	9.9					
Nitrosodi-n-butylamine	ND	ug/l	9.9					
2-Methylnaphthalene	ND	ug/l	4.9					
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.					
Pentachlorobenzene	ND	ug/l	20.					
a-Naphthylamine	ND	ug/l	25.					
b-Naphthylamine	ND	ug/l	20.					
Phenacetin	ND	ug/l	9.9					
Dimethoate	ND	ug/l	20.					
4-Aminobiphenyl	ND	ug/l	9.9					
Pentachloronitrobenzene	ND	ug/l	9.9					
Isodrin	ND	ug/l	9.9					
p-Dimethylaminoazobenzene	ND	ug/l	9.9					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714218-01
DAY-1-EFF-20070927-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
SVOC's by GC/MS 8270 cont'd				1	8270C	0928 10:40	0929 16:04	RL
Chlorobenzilate	ND	ug/l	20.					
3-Methylcholanthrene	ND	ug/l	20.					
Ethyl Methanesulfonate	ND	ug/l	15.					
Acetophenone	ND	ug/l	20.					
Nitrosodipiperidine	ND	ug/l	20.					
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.					
n-Nitrosodimethylamine	ND	ug/l	49.					
2,4,6-Trichlorophenol	ND	ug/l	4.9					
p-Chloro-m-cresol	ND	ug/l	4.9					
2-Chlorophenol	ND	ug/l	5.9					
2,4-Dichlorophenol	ND	ug/l	9.9					
2,4-Dimethylphenol	ND	ug/l	9.9					
2-Nitrophenol	ND	ug/l	20.					
4-Nitrophenol	ND	ug/l	9.9					
2,4-Dinitrophenol	ND	ug/l	30.					
4,6-Dinitro-o-cresol	ND	ug/l	20.					
Pentachlorophenol	ND	ug/l	9.9					
Phenol	ND	ug/l	6.9					
2-Methylphenol	ND	ug/l	5.9					
3-Methylphenol/4-Methylphenol	ND	ug/l	5.9					
2,4,5-Trichlorophenol	ND	ug/l	4.9					
2,6-Dichlorophenol	ND	ug/l	9.9					
Benzoic Acid	ND	ug/l	49.					
Benzyl Alcohol	ND	ug/l	9.9					
Carbazole	ND	ug/l	4.9					
Pyridine	ND	ug/l	49.					
2-Picoline	ND	ug/l	20.					
Pronamide	ND	ug/l	20.					
Methyl methanesulfonate	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	28.0	%	21-120					
Phenol-d6	23.0	%	10-120					
Nitrobenzene-d5	58.0	%	23-120					
2-Fluorobiphenyl	45.0	%	43-120					
2,4,6-Tribromophenol	66.0	%	10-120					
4-Terphenyl-d14	67.0	%	33-120					
PAH by GC/MS SIM 8270M				1	8270C-M	0928 10:40	0930 04:20	RL
Acenaphthene	ND	ug/l	0.20					
2-Chloronaphthalene	ND	ug/l	0.20					
Fluoranthene	ND	ug/l	0.20					
Hexachlorobutadiene	ND	ug/l	0.49					
Naphthalene	ND	ug/l	0.20					
Benzo(a)anthracene	ND	ug/l	0.20					
Benzo(a)pyrene	ND	ug/l	0.20					
Benzo(b)fluoranthene	ND	ug/l	0.20					
Benzo(k)fluoranthene	ND	ug/l	0.20					
Chrysene	ND	ug/l	0.20					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0714218-01
DAY-1-EFF-20070927-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
PAH by GC/MS SIM 8270M cont'd				1	8270C-M	0928 10:40	0930 04:20	RL
Acenaphthylene	ND	ug/l	0.20					
Anthracene	ND	ug/l	0.20					
Benzo(ghi)perylene	ND	ug/l	0.20					
Fluorene	ND	ug/l	0.20					
Phenanthrene	ND	ug/l	0.20					
Dibenzo(a,h)anthracene	ND	ug/l	0.20					
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20					
Pyrene	ND	ug/l	0.20					
1-Methylnaphthalene	ND	ug/l	0.20					
2-Methylnaphthalene	ND	ug/l	0.20					
Pentachlorophenol	ND	ug/l	0.79					
Hexachlorobenzene	ND	ug/l	0.79					
Perylene	ND	ug/l	0.20					
Biphenyl	ND	ug/l	0.20					
2,6-Dimethylnaphthalene	ND	ug/l	0.20					
1-Methylphenanthrene	ND	ug/l	0.20					
Benzo(e)Pyrene	ND	ug/l	0.20					
Hexachloroethane	ND	ug/l	0.79					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	30.0	%	21-120					
Phenol-d6	25.0	%	10-120					
Nitrobenzene-d5	84.0	%	23-120					
2-Fluorobiphenyl	57.0	%	43-120					
2,4,6-Tribromophenol	88.0	%	10-120					
4-Terphenyl-d14	94.0	%	33-120					

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

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0714218

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Solids, Total Suspended for sample(s) 01 (L0714048-01, WG295971-2)					
Solids, Total Suspended	47	40	mg/l	16	32
pH for sample(s) 01 (L0714218-01, WG295861-2)					
pH (H)	8.2	8.2	SU	0	5
Total Metals for sample(s) 01 (L0714340-02, WG296114-1)					
Copper, Total	0.0045	0.0045	mg/l	0	20
Total Metals for sample(s) 01 (L0714218-01, WG296272-1)					
Iron, Total	0.05	0.06	mg/l	2	
Volatile Organics by GC/MS 624 for sample(s) 01 (L0714428-01, WG296345-2)					
Methylene chloride	ND	ND	ug/l	NC	30
1,1-Dichloroethane	ND	ND	ug/l	NC	30
Chloroform	ND	ND	ug/l	NC	30
Carbon tetrachloride	ND	ND	ug/l	NC	30
1,2-Dichloropropane	ND	ND	ug/l	NC	30
Dibromochloromethane	ND	ND	ug/l	NC	30
1,1,2-Trichloroethane	ND	ND	ug/l	NC	30
2-Chloroethylvinyl ether	ND	ND	ug/l	NC	30
Tetrachloroethene	ND	ND	ug/l	NC	30
Chlorobenzene	ND	ND	ug/l	NC	30
Trichlorofluoromethane	ND	ND	ug/l	NC	30
1,2-Dichloroethane	ND	ND	ug/l	NC	30
1,1,1-Trichloroethane	ND	ND	ug/l	NC	30
Bromodichloromethane	ND	ND	ug/l	NC	30
trans-1,3-Dichloropropene	ND	ND	ug/l	NC	30
cis-1,3-Dichloropropene	ND	ND	ug/l	NC	30
Bromoform	ND	ND	ug/l	NC	30
1,1,2,2-Tetrachloroethane	ND	ND	ug/l	NC	30
Benzene	ND	ND	ug/l	NC	30
Toluene	ND	ND	ug/l	NC	30
Ethylbenzene	ND	ND	ug/l	NC	30
Chloromethane	ND	ND	ug/l	NC	30
Bromomethane	ND	ND	ug/l	NC	30
Vinyl chloride	ND	ND	ug/l	NC	30
Chloroethane	ND	ND	ug/l	NC	30
1,1-Dichloroethene	ND	ND	ug/l	NC	30
trans-1,2-Dichloroethene	ND	ND	ug/l	NC	30
cis-1,2-Dichloroethene	ND	ND	ug/l	NC	30
Trichloroethene	ND	ND	ug/l	NC	30
1,2-Dichlorobenzene	ND	ND	ug/l	NC	30
1,3-Dichlorobenzene	ND	ND	ug/l	NC	30
1,4-Dichlorobenzene	ND	ND	ug/l	NC	30
p/m-Xylene	ND	ND	ug/l	NC	30
o-xylene	ND	ND	ug/l	NC	30
Xylene (Total)	ND	ND	ug/l	NC	30
Styrene	ND	ND	ug/l	NC	30

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0714218

Continued

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Volatile Organics by GC/MS 624 for sample(s) 01 (L0714428-01, WG296345-2)					
Acetone	ND	ND	ug/l	NC	30
Carbon disulfide	ND	ND	ug/l	NC	30
2-Butanone	ND	ND	ug/l	NC	30
Vinyl acetate	ND	ND	ug/l	NC	30
4-Methyl-2-pentanone	ND	ND	ug/l	NC	30
2-Hexanone	ND	ND	ug/l	NC	30
Acrolein	ND	ND	ug/l	NC	30
Acrylonitrile	ND	ND	ug/l	NC	30
Surrogate(s)	Recovery				QC Criteria
Pentafluorobenzene	104	99.0	%		80-120
Fluorobenzene	108	105	%		80-120
4-Bromofluorobenzene	106	104	%		80-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714218

Parameter	% Recovery	QC Criteria
pH LCS for sample(s) 01 (WG295861-1)		
pH	100	99-101
Total Metals LCS for sample(s) 01 (WG296114-4)		
Arsenic, Total	95	80-120
Copper, Total	97	80-120
Nickel, Total	96	80-120
Total Metals LCS for sample(s) 01 (WG296272-4)		
Iron, Total	95	
Volatile Organics by GC/MS 624 LCS for sample(s) 01 (WG296345-3)		
Methylene chloride	91	10-221
1,1-Dichloroethane	82	59-155
Chloroform	83	51-138
Carbon tetrachloride	126	70-140
1,2-Dichloropropane	124	10-210
Dibromochloromethane	105	53-149
1,1,2-Trichloroethane	106	52-150
2-Chloroethylvinyl ether	111	10-305
Tetrachloroethene	112	64-148
Chlorobenzene	116	37-160
Trichlorofluoromethane	116	17-181
1,2-Dichloroethane	119	49-155
1,1,1-Trichloroethane	122	52-162
Bromodichloromethane	112	35-155
trans-1,3-Dichloropropene	113	17-183
cis-1,3-Dichloropropene	112	10-227
Bromoform	107	45-169
1,1,2,2-Tetrachloroethane	110	46-157
Benzene	126	37-151
Toluene	120	47-150
Ethylbenzene	126	37-162
Chloromethane	120	10-273
Bromomethane	123	10-242
Vinyl chloride	111	10-251
Chloroethane	109	14-230
1,1-Dichloroethene	100	10-234
trans-1,2-Dichloroethene	94	54-156
cis-1,2-Dichloroethene	82	60-140
Trichloroethene	120	71-157
1,2-Dichlorobenzene	115	18-190
1,3-Dichlorobenzene	114	59-156
1,4-Dichlorobenzene	117	18-190
p/m-Xylene	127	40-160
o-Xylene	118	40-160
XYLENE (TOTAL)	124	40-160
Styrene	117	40-160
Acetone	94	40-160

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714218

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 LCS for sample(s) 01 (WG296345-3)		
Carbon disulfide	110	40-160
2-Butanone	87	40-160
Vinyl acetate	102	40-160
4-Methyl-2-pentanone	115	40-160
2-Hexanone	106	40-160
Acrolein	66	40-160
Acrylonitrile	79	40-160
Surrogate(s)		
Pentafluorobenzene	118	80-120
Fluorobenzene	112	80-120
4-Bromofluorobenzene	97	80-120
SVOC's by GC/MS 8270 LCS for sample(s) 01 (WG295957-2)		
Acenaphthene	53	46-118
1,2,4-Trichlorobenzene	27	39-98
2-Chloronaphthalene	41	40-140
1,2-Dichlorobenzene	34	40-140
1,4-Dichlorobenzene	31	36-97
2,4-Dinitrotoluene	89	24-96
2,6-Dinitrotoluene	92	40-140
Fluoranthene	83	40-140
4-Chlorophenyl phenyl ether	58	40-140
n-Nitrosodi-n-propylamine	58	41-116
Butyl benzyl phthalate	90	40-140
Anthracene	69	40-140
Pyrene	80	26-127
Hexachloropropene	15	40-140
P-Chloro-M-Cresol	61	23-97
2-Chlorophenol	54	27-123
2-Nitrophenol	63	30-130
4-Nitrophenol	35	10-80
2,4-Dinitrophenol	80	30-130
Pentachlorophenol	69	9-103
Phenol	19	12-110
Surrogate(s)		
2-Fluorophenol	31	21-120
Phenol-d6	25	10-120
Nitrobenzene-d5	66	23-120
2-Fluorobiphenyl	50	43-120
2,4,6-Tribromophenol	68	10-120
4-Terphenyl-d14	76	33-120
PAH by GC/MS SIM 8270M LCS for sample(s) 01 (WG295956-2)		
Acenaphthene	66	40-140
2-Chloronaphthalene	66	40-140
Fluoranthene	100	40-140

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714218

Continued

Parameter	% Recovery	QC Criteria
PAH by GC/MS SIM 8270M LCS for sample(s) 01 (WG295956-2)		
Anthracene	84	40-140
Pyrene	107	40-140
Pentachlorophenol	70	30-130
Surrogate(s)		
2-Fluorophenol	36	21-120
Phenol-d6	30	10-120
Nitrobenzene-d5	103	23-120
2-Fluorobiphenyl	68	43-120
2,4,6-Tribromophenol	100	10-120
4-Terphenyl-d14	101	33-120
Total Metals SPIKE for sample(s) 01 (L0714340-02, WG296114-2)		
Arsenic, Total	105	80-120
Copper, Total	94	80-120
Nickel, Total	93	80-120
Total Metals SPIKE for sample(s) 01 (L0714218-01, WG296272-2)		
Iron, Total	95	
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01 (L0714428-01, WG296345-1)		
Methylene chloride	91	10-221
1,1-Dichloroethane	72	59-155
Chloroform	83	51-138
Carbon tetrachloride	80	70-140
1,2-Dichloropropane	85	10-210
Dibromochloromethane	81	53-149
1,1,2-Trichloroethane	88	52-150
2-Chloroethylvinyl ether	80	10-305
Tetrachloroethene	77	64-148
Chlorobenzene	76	37-160
Trichlorofluoromethane	95	17-181
1,2-Dichloroethane	97	49-155
1,1,1-Trichloroethane	83	52-162
Bromodichloromethane	83	35-155
trans-1,3-Dichloropropene	75	17-183
cis-1,3-Dichloropropene	69	10-227
Bromoform	82	45-169
1,1,2,2-Tetrachloroethane	81	46-157
Benzene	90	35-151
Toluene	83	47-150
Ethylbenzene	82	37-162
Chloromethane	90	10-273
Bromomethane	77	10-242
Vinyl chloride	96	10-251
Chloroethane	101	14-230
1,1-Dichloroethene	87	10-234
trans-1,2-Dichloroethene	85	54-156

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0714218

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01 (L0714428-01, WG296345-1)		
cis-1,2-Dichloroethene	82	60-140
Trichloroethene	85	71-157
1,2-Dichlorobenzene	33	18-190
1,3-Dichlorobenzene	77	59-156
1,4-Dichlorobenzene	78	18-190
p/m-Xylene	87	40-160
o-Xylene	80	40-160
XYLENE (TOTAL)	85	40-160
Styrene	82	40-160
Acetone	114	40-160
Carbon disulfide	92	40-160
2-Butanone	94	40-160
Vinyl acetate	70	40-160
4-Methyl-2-pentanone	98	40-160
2-Hexanone	93	40-160
Acrolein	69	40-160
Acrylonitrile	114	40-160
Surrogate(s)		
Pentafluorobenzene	101	80-120
Fluorobenzene	107	80-120
4-Bromofluorobenzene	99	80-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0714218

Parameter	MS %	MSD %	RPD	RPD Limit	MS/MSD Limits
SVOC's by GC/MS 8270 for sample(s) 01 (L0714218-01, WG295957-4)					
Acenaphthene	57	52	9	30	46-118
1,2,4-Trichlorobenzene	33	28	16	30	39-98
2-Chloronaphthalene	48	44	9	30	40-140
1,2-Dichlorobenzene	36	30	18	30	40-140
1,4-Dichlorobenzene	34	29	16	30	36-97
2,4-Dinitrotoluene	86	81	6	30	24-96
2,6-Dinitrotoluene	90	86	5	30	40-140
Fluoranthene	81	76	6	30	40-140
4-Chlorophenyl phenyl ether	67	62	8	30	40-140
n-Nitrosodi-n-propylamine	52	48	8	30	41-116
Butyl benzyl phthalate	86	86	0	30	40-140
Anthracene	67	62	8	30	40-140
Pyrene	76	71	7	30	26-127
Hexachloropropene	25	20	22	30	40-140
P-Chloro-M-Cresol	62	57	8	30	23-97
2-Chlorophenol	50	43	15	30	27-123
2-Nitrophenol	59	50	17	30	30-130
4-Nitrophenol	62	59	5	30	10-80
2,4-Dinitrophenol	81	78	4	30	30-130
Pentachlorophenol	67	64	5	30	9-103
Phenol	31	26	18	30	12-110
Surrogate(s)					
2-Fluorophenol	40	35	13		21-120
Phenol-d6	40	34	16		10-120
Nitrobenzene-d5	59	52	13		23-120
2-Fluorobiphenyl	51	44	15		43-120
2,4,6-Tribromophenol	66	63	5		10-120
4-Terphenyl-d14	72	70	3		33-120
PAH by GC/MS SIM 8270M for sample(s) 01 (L0714218-01, WG295956-4)					
Acenaphthene	67	57	16	40	40-140
2-Chloronaphthalene	62	52	18	40	40-140
Fluoranthene	100	90	11	40	40-140
Anthracene	81	76	6	40	40-140
Pyrene	110	100	10	40	40-140
Pentachlorophenol	78	67	15	40	30-130
Surrogate(s)					
2-Fluorophenol	40	31	25		21-120
Phenol-d6	41	33	22		10-120
Nitrobenzene-d5	86	70	21		23-120
2-Fluorobiphenyl	67	59	13		43-120
2,4,6-Tribromophenol	88	85	3		10-120
4-Terphenyl-d14	114	105	8		33-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714218

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG295971-1)								
Solids, Total Suspended	ND	mg/l	5.0	30	2540D		0928 15:40	DW
Blank Analysis for sample(s) 01 (WG296114-3)								
Total Metals								
Arsenic, Total	ND	mg/l	0.0005	1	6020	0929 11:45	1001 18:26	BM
Copper, Total	ND	mg/l	0.0005	1	6020	0929 11:45	1001 18:26	BM
Nickel, Total	ND	mg/l	0.0005	1	6020	0929 11:45	1001 18:26	BM
Blank Analysis for sample(s) 01 (WG296272-3)								
Total Metals				19	200.7			
Iron, Total	ND	mg/l	0.05	19	200.7	1001 15:00	1002 09:23	AI
Blank Analysis for sample(s) 01 (WG296345-4)								
Volatile Organics by GC/MS 624				5	624		1001 20:01	MM
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	1.5					
Chloroform	ND	ug/l	1.5					
Carbon tetrachloride	ND	ug/l	1.0					
1,2-Dichloropropane	ND	ug/l	3.5					
Dibromochloromethane	ND	ug/l	1.0					
1,1,2-Trichloroethane	ND	ug/l	1.5					
2-Chloroethylvinyl ether	ND	ug/l	10.					
Tetrachloroethene	ND	ug/l	1.5					
Chlorobenzene	ND	ug/l	3.5					
Trichlorofluoromethane	ND	ug/l	5.0					
1,2-Dichloroethane	ND	ug/l	1.5					
1,1,1-Trichloroethane	ND	ug/l	2.0					
Bromodichloromethane	ND	ug/l	1.0					
trans-1,3-Dichloropropene	ND	ug/l	1.5					
cis-1,3-Dichloropropene	ND	ug/l	1.5					
Bromoform	ND	ug/l	1.0					
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0					
Benzene	ND	ug/l	1.0					
Toluene	ND	ug/l	1.0					
Ethylbenzene	ND	ug/l	1.0					
Chloromethane	ND	ug/l	10.					
Bromomethane	ND	ug/l	5.0					
Vinyl chloride	ND	ug/l	2.0					
Chloroethane	ND	ug/l	2.0					
1,1-Dichloroethene	ND	ug/l	1.0					
trans-1,2-Dichloroethene	ND	ug/l	1.5					
cis-1,2-Dichloroethene	ND	ug/l	1.0					
Trichloroethene	ND	ug/l	1.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714218

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG296345-4)								
Volatile Organics by GC/MS 624 cont'd				5	624		1001 20:01	MM
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
p/m-Xylene	ND	ug/l	2.0					
o-xylene	ND	ug/l	1.0					
Xylene (Total)	ND	ug/l	2.0					
Styrene	ND	ug/l	1.0					
Acetone	ND	ug/l	10.					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	10.					
Vinyl acetate	ND	ug/l	20.					
4-Methyl-2-pentanone	ND	ug/l	10.					
2-Hexanone	ND	ug/l	10.					
Acrolein	ND	ug/l	8.0					
Acrylonitrile	ND	ug/l	10.					
Methyl tert butyl ether	ND	ug/l	20.					
1,4-Dioxane	ND	ug/l	2000					
Tert-Butyl Alcohol	ND	ug/l	100					
Tertiary-Amyl Methyl Ether	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
Pentafluorobenzene	106	%	80-120					
Fluorobenzene	109	%	80-120					
4-Bromofluorobenzene	99.0	%	80-120					
Blank Analysis for sample(s) 01 (WG295957-1)								
SVOC's by GC/MS 8270				1	8270C	0928 10:40	1001 14:22	RL
Acenaphthene	ND	ug/l	5.0					
Benzidine	ND	ug/l	50.					
1,2,4-Trichlorobenzene	ND	ug/l	5.0					
Hexachlorobenzene	ND	ug/l	5.0					
Bis(2-chloroethyl)ether	ND	ug/l	5.0					
1-Chloronaphthalene	ND	ug/l	5.0					
2-Chloronaphthalene	ND	ug/l	6.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
3,3'-Dichlorobenzidine	ND	ug/l	50.					
2,4-Dinitrotoluene	ND	ug/l	6.0					
2,6-Dinitrotoluene	ND	ug/l	5.0					
Azobenzene	ND	ug/l	5.0					
Fluoranthene	ND	ug/l	5.0					
4-Chlorophenyl phenyl ether	ND	ug/l	5.0					
4-Bromophenyl phenyl ether	ND	ug/l	5.0					
Bis(2-chloroisopropyl)ether	ND	ug/l	5.0					
Bis(2-chloroethoxy)methane	ND	ug/l	5.0					
Hexachlorobutadiene	ND	ug/l	10.					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714218

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG295957-1)								
SVOC's by GC/MS 8270 cont'd				1	8270C	0928 10:40	1001 14:22	RL
Hexachlorocyclopentadiene	ND	ug/l	30.					
Hexachloroethane	ND	ug/l	5.0					
Isophorone	ND	ug/l	5.0					
Naphthalene	ND	ug/l	5.0					
Nitrobenzene	ND	ug/l	5.0					
NDPA/DPA	ND	ug/l	15.					
n-Nitrosodi-n-propylamine	ND	ug/l	5.0					
Bis(2-ethylhexyl)phthalate	ND	ug/l	5.0					
Butyl benzyl phthalate	ND	ug/l	5.0					
Di-n-butylphthalate	ND	ug/l	5.0					
Di-n-octylphthalate	ND	ug/l	5.0					
Diethyl phthalate	ND	ug/l	5.0					
Dimethyl phthalate	ND	ug/l	5.0					
Benzo(a)anthracene	ND	ug/l	5.0					
Benzo(a)pyrene	ND	ug/l	5.0					
Benzo(b)fluoranthene	ND	ug/l	5.0					
Benzo(k)fluoranthene	ND	ug/l	5.0					
Chrysene	ND	ug/l	5.0					
Acenaphthylene	ND	ug/l	5.0					
Anthracene	ND	ug/l	5.0					
Benzo(ghi)perylene	ND	ug/l	5.0					
Fluorene	ND	ug/l	5.0					
Phenanthrene	ND	ug/l	5.0					
Dibenzo(a,h)anthracene	ND	ug/l	5.0					
Indeno(1,2,3-cd)pyrene	ND	ug/l	7.0					
Pyrene	ND	ug/l	5.0					
Benzo(e)pyrene	ND	ug/l	5.0					
Biphenyl	ND	ug/l	5.0					
Perylene	ND	ug/l	5.0					
Aniline	ND	ug/l	20.					
4-Chloroaniline	ND	ug/l	5.0					
1-Methylnaphthalene	ND	ug/l	5.0					
2-Nitroaniline	ND	ug/l	5.0					
3-Nitroaniline	ND	ug/l	5.0					
4-Nitroaniline	ND	ug/l	7.0					
Dibenzofuran	ND	ug/l	5.0					
a,a-Dimethylphenethylamine	ND	ug/l	50.					
Hexachloropropene	ND	ug/l	10.					
Nitrosodi-n-butylamine	ND	ug/l	10.					
2-Methylnaphthalene	ND	ug/l	5.0					
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.					
Pentachlorobenzene	ND	ug/l	20.					
a-Naphthylamine	ND	ug/l	25.					
b-Naphthylamine	ND	ug/l	20.					
Phenacetin	ND	ug/l	10.					
Dimethoate	ND	ug/l	20.					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714218

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG295957-1)								
SVOC's by GC/MS 8270 cont'd				1	8270C	0928 10:40	1001 14:22	RL
4-Aminobiphenyl	ND	ug/l	10.					
Pentachloronitrobenzene	ND	ug/l	10.					
Isodrin	ND	ug/l	10.					
p-Dimethylaminoazobenzene	ND	ug/l	10.					
Chlorobenzilate	ND	ug/l	20.					
3-Methylcholanthrene	ND	ug/l	20.					
Ethyl Methanesulfonate	ND	ug/l	15.					
Acetophenone	ND	ug/l	20.					
Nitrosodipiperidine	ND	ug/l	20.					
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.					
n-Nitrosodimethylamine	ND	ug/l	50.					
2,4,6-Trichlorophenol	ND	ug/l	5.0					
p-Chloro-m-cresol	ND	ug/l	5.0					
2-Chlorophenol	ND	ug/l	6.0					
2,4-Dichlorophenol	ND	ug/l	10.					
2,4-Dimethylphenol	ND	ug/l	10.					
2-Nitrophenol	ND	ug/l	20.					
4-Nitrophenol	ND	ug/l	10.					
2,4-Dinitrophenol	ND	ug/l	30.					
4,6-Dinitro-o-cresol	ND	ug/l	20.					
Pentachlorophenol	ND	ug/l	10.					
Phenol	ND	ug/l	7.0					
2-Methylphenol	ND	ug/l	6.0					
3-Methylphenol/4-Methylphenol	ND	ug/l	6.0					
2,4,5-Trichlorophenol	ND	ug/l	5.0					
2,6-Dichlorophenol	ND	ug/l	10.					
Benzoic Acid	ND	ug/l	50.					
Benzyl Alcohol	ND	ug/l	10.					
Carbazole	ND	ug/l	5.0					
Pyridine	ND	ug/l	50.					
2-Picoline	ND	ug/l	20.					
Pronamide	ND	ug/l	20.					
Methyl methanesulfonate	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	30.0	%	21-120					
Phenol-d6	20.0	%	10-120					
Nitrobenzene-d5	53.0	%	23-120					
2-Fluorobiphenyl	46.0	%	43-120					
2,4,6-Tribromophenol	79.0	%	10-120					
4-Terphenyl-d14	88.0	%	33-120					
Blank Analysis for sample(s) 01 (WG295956-1)								
PAH by GC/MS SIM 8270M				1	8270C-M	0928 10:40	0930 00:17	RL
Acenaphthene	ND	ug/l	0.20					
2-Chloronaphthalene	ND	ug/l	0.20					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0714218

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG295956-1)								
PAH by GC/MS SIM 8270M cont'd				1	8270C-M	0928 10:40	0930 00:17	RL
Fluoranthene	ND	ug/l	0.20					
Hexachlorobutadiene	ND	ug/l	0.50					
Naphthalene	ND	ug/l	0.20					
Benzo(a)anthracene	ND	ug/l	0.20					
Benzo(a)pyrene	ND	ug/l	0.20					
Benzo(b)fluoranthene	ND	ug/l	0.20					
Benzo(k)fluoranthene	ND	ug/l	0.20					
Chrysene	ND	ug/l	0.20					
Acenaphthylene	ND	ug/l	0.20					
Anthracene	ND	ug/l	0.20					
Benzo(ghi)perylene	ND	ug/l	0.20					
Fluorene	ND	ug/l	0.20					
Phenanthrene	ND	ug/l	0.20					
Dibenzo(a,h)anthracene	ND	ug/l	0.20					
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20					
Pyrene	ND	ug/l	0.20					
1-Methylnaphthalene	ND	ug/l	0.20					
2-Methylnaphthalene	ND	ug/l	0.20					
Pentachlorophenol	ND	ug/l	0.80					
Hexachlorobenzene	ND	ug/l	0.80					
Perylene	ND	ug/l	0.20					
Biphenyl	ND	ug/l	0.20					
2,6-Dimethylnaphthalene	ND	ug/l	0.20					
1-Methylphenanthrene	ND	ug/l	0.20					
Benzo(e)Pyrene	ND	ug/l	0.20					
Hexachloroethane	ND	ug/l	0.80					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	26.0	%	21-120					
Phenol-d6	22.0	%	10-120					
Nitrobenzene-d5	69.0	%	23-120					
2-Fluorobiphenyl	45.0	%	43-120					
2,4,6-Tribromophenol	67.0	%	10-120					
4-Terphenyl-d14	86.0	%	33-120					

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

5. Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).

19. Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

GLOSSARY OF TERMS AND SYMBOLS

REF	Reference number in which test method may be found.
METHOD	Method number by which analysis was performed.
ID	Initials of the analyst.
ND	Not detected in comparison to the reported detection limit.
NI	Not Ignitable.
ug/cart	Micrograms per Cartridge.
H	The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

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.

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 9/27

ALPHA Job #: L0714218

ALPHA WOODS HOLE LABS
WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193
RAYNHAM, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: ERM-Boston
Address: 399 Boylston St. 6th Floor, Boston, MA 02116
Phone: 617-646-7800
Fax: 617-267-6447
Email: Jason.flattery@erm.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NA Soil Excavation
Project Location: Raytheon-Wayland
Project #: 0051545
Project Manager: Jason Flattery
ALPHA Quote #:

Turn-Around Time

☐ Standard ☒ RUSH (only confirmed if pre-approved!) 72 HR. per EPA
Date Due: 10/2/07 Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program	Criteria
EPA RGP	

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs by 624	Total As, Cu, Ni, Fe	TSS	pH	SVOC's by 8270 w/ pentachlorophenol	Sample Specific Comments	TOTAL # BOTTLES
14218-01	DAY-1-EFF-20070927-01	9/27/07	1445	GW	BM	2	1	1	1	2		7
Container Type						V	P	P	P	A		
Preservative						H	C	A	A	A		

SAMPLE HANDLING
Filtration
☐ Done
☒ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	9/27/07 15:18	[signature]	9/27/07 15:18
[signature]	9/27 16:15	[signature]	9/27 16:15

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

FORM NO: 01-01 (rev. 10-OCT-05)

ANALYTICAL REPORT

Lab Number:	L0712298
Client:	ERM-New England 399 Boylston Street 6th Floor Boston, MA 02116
ATTN:	Jason Flattery
Project Name:	NA SOIL EXCAVATION
Project Number:	0051545
Report Date:	08/28/07

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (200305), NJ (MA935), RI (LAO00065), ME (2006012), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: NA SOIL EXCAVATION
Project Number: 0051545

Lab Number: L0712298
Report Date: 08/28/07

Alpha Sample ID	Client ID	Sample Location
L0712298-01	HYD-20070823-01	RAYTHEON WAYLAND
L0712298-02	FRAC4-20070823-01	RAYTHEON WAYLAND

Project Name:	NA SOIL EXCAVATION	**Lab Number:**	L0712298
Project Number:	0051545	**Report Date:**	08/28/07

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

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

A response to questions E and F is required for "Presumptive Certainty" status		
E	Were all QC performance standards and recommendations for the specified method(s) achieved?	YES
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?	NO

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name:	NA SOIL EXCAVATION	**Lab Number:**	L0712298
Project Number:	0051545	**Report Date:**	08/28/07

Case Narrative

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Report Submission

It should be noted that this is a final report to replace the preliminary report issued on August 27, 2007. This report includes final data for all requested analytes.

MCP Related Narratives:

Metals

In reference to question F:

At the client's request, all submitted samples were not analyzed for the full MCP list of compounds specified for the Method.

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

Authorized Signature: 

Title: Technical Director/Representative Date: 08/28/07

METALS

Project Name: NA SOIL EXCAVATION
Lab Number: L0712298
Project Number: 0051545
Report Date: 08/28/07

SAMPLE RESULTS

Lab ID: L0712298-01
Client ID: HYD-20070823-01
Sample Location: RAYTHEON WAYLAND
Matrix: Water

Date Collected: 08/23/07 14:25
Date Received: 08/24/07
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	0.005		mg/l	0.005	1		08/28/07 15:03	EPA 3005A	60,6010B	AI
Copper, Total	0.011		mg/l	0.010	1		08/28/07 15:03	EPA 3005A	60,6010B	AI
Iron, Total	0.30		mg/l	0.05	1		08/28/07 15:03	EPA 3005A	60,6010B	AI
Nickel, Total	ND		mg/l	0.025	1		08/28/07 15:03	EPA 3005A	60,6010B	AI

Project Name: NA SOIL EXCAVATION
Lab Number: L0712298
Project Number: 0051545
Report Date: 08/28/07

SAMPLE RESULTS

Lab ID: L0712298-02
Client ID: FRAC4-20070823-01
Sample Location: RAYTHEON WAYLAND
Matrix: Water

Date Collected: 08/23/07 14:20
Date Received: 08/24/07
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	0.016		mg/l	0.005	1		08/28/07 15:06	EPA 3005A	60,6010B	AI
Copper, Total	0.013		mg/l	0.010	1		08/28/07 15:06	EPA 3005A	60,6010B	AI
Iron, Total	ND		mg/l	0.05	1		08/28/07 15:06	EPA 3005A	60,6010B	AI
Nickel, Total	ND		mg/l	0.025	1		08/28/07 15:06	EPA 3005A	60,6010B	AI

Project Name: NA SOIL EXCAVATION **Lab Number:** L0712298

Project Number: 0051545 **Report Date:** 08/28/07

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series for sample(s): 01-02 Batch: WG291967-1									
Arsenic, Total	ND		mg/l	0.005	1		08/27/07 15:53	60,6010B	AI
Copper, Total	ND		mg/l	0.010	1		08/27/07 15:53	60,6010B	AI
Iron, Total	ND		mg/l	0.05	1		08/27/07 15:53	60,6010B	AI
Nickel, Total	ND		mg/l	0.025	1		08/27/07 15:53	60,6010B	AI

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: NA SOIL EXCAVATION

Project Number: 0051545

Lab Number: L0712298

Report Date: 08/28/07

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals by MCP 6000/7000 series Associated sample(s): 01-02 Batch: WG291967-2 WG291967-3					
Arsenic, Total	98	104	80-120	6	20
Copper, Total	99	93	80-120	6	20
Iron, Total	92	96	80-120	4	20
Nickel, Total	92	97	80-120	5	20

Project Name: NA SOIL EXCAVATION
Project Number: 0051545

Lab Number: L0712298
Report Date: 08/28/07

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0712298-01A	Plastic 500ml HNO3 preserved	A	<2	2C	Y	Absent	MCP-AS-6010T,MCP-CU-6010T,MCP-FE-6010T,MCP-NI-6010T
L0712298-02A	Plastic 500ml HNO3 preserved	A	<2	2C	Y	Absent	MCP-AS-6010T,MCP-CU-6010T,MCP-FE-6010T,MCP-NI-6010T

Container Comments

L0712298-01A	Temp Probe
L0712298-02A	Temp Probe

Project Name:	NA SOIL EXCAVATION	**Lab Number:**	L0712298
Project Number:	0051545	**Report Date:**	08/28/07

GLOSSARY

Acronyms

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NI - Not Ignitable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

ND - Not detected at the reported detection limit for the sample.

RDL - Reported Detection Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

The following data qualifiers have been identified for use under the CT DEP Reasonable Confidence Protocols.

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

J - Estimated value. The analyte was tentatively identified; the quantitation is an estimation. (Tentatively identified compounds only.)

Standard Qualifiers

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

Report Format: Data Usability Report

Project Name:	NA SOIL EXCAVATION	**Lab Number:**	L0712298
Project Number:	0051545	**Report Date:**	08/28/07

REFERENCES

60 Quality Assurance and Quality Control Requirements and Performance Standards for SW-846 Methods. MADEP BWSC. WSC-CAM-IIA (Revision 4), WSC-CAM-V C (Revision 2), WSC-CAM-IIIA (Revision 5). May 2004.

LIMITATION OF LIABILITIES

Alpha Woods Hole Labs 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 Woods Hole Labs shall be to re-perform the work at it's own expense. In no event shall Alpha Woods Hole Labs 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 Woods Hole Labs.

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

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 8/24

ALPHA Job #: L0712298

ALPHA ANALYTICAL LABS
WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193
RAYNHAM, MA TEL: 508-822-9300 FAX: 508-822-3288

08280717:06

Client Information

Client: ERM - Boston
Address: 399 Boylston St. 6th Floor
Boston, MA 02116
Phone: 617 646 7800
Fax: 617 267 6447
Email: jason.flattery@erm.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NA Soil Excavation
Project Location: Raytheon Wayland
Project #: 0051545
Project Manager: Jason Flattery
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: ~~8/30~~ 8/31 Time:

Other Project Specific Requirements/Comments/Detection Limits:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

~~☐~~ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program: MCP
Criteria:

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS: Total ASCuNite (4)

SAMPLE HANDLING
Filtration
☐ Done
☒ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Total ASCuNite	Sample Specific Comments	TOTAL # BOTTLES
12298-1	HYD-20070823-01	8/23/07	1425	GW	JDF	1		1
2	FRAC4-20070823-01	8/23/07	1420	GW	JDF	1		1

(5)

Container Type	P	P										
Preservative	C	C										

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

FORM NO: 01-01 (rev. 10-OCT-05)

Relinquished By:	Date/Time	Received By:	Date/Time
Eugene Mak	8/24 13:50	Eugene Mak	8/24 1:50
	8/24	Jason Flattery	8/24/07 15:00

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

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220 www.alphalab.com

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

CERTIFICATE OF ANALYSIS

Client: ERM-New England

Address: 399 Boylston Street
6th Floor
Boston, MA 02116

Attn: Mr. Jason Flattery

Project Number: 0051545

Site: NA SOIL EXCAVATION

Laboratory Job Number: L0711966

Date Received: 17-AUG-2007

Date Reported: 21-AUG-2007

Delivery Method: Alpha

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0711966-01	FLOC-INF-20070817-01	RAYTHEON WAYLAND
L0711966-02	FLOC-EFF-20070817-01	RAYTHEON WAYLAND

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

Authorized by: Michelle M. Morris
Technical Representative

ALPHA ANALYTICAL LABORATORIES
NARRATIVE REPORT

Laboratory Job Number: L0711966

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

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

Laboratory Sample Number: L0711966-01
FLOC-INF-20070817-01
Sample Matrix: WATER

Date Collected: 17-AUG-2007 11:15
Date Received : 17-AUG-2007
Date Reported : 21-AUG-2007

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1-Plastic

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Total Metals								
Arsenic, Total	0.052	mg/l	0.005	1	6010B	0820 17:40	0821 09:31	AI
Copper, Total	0.211	mg/l	0.010	1	6010B	0820 17:40	0821 09:31	AI

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

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

Laboratory Sample Number: L0711966-02
FLOC-EFF-20070817-01
Sample Matrix: WATER

Date Collected: 17-AUG-2007 11:20
Date Received : 17-AUG-2007
Date Reported : 21-AUG-2007

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1-Plastic

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Total Metals								
Arsenic, Total	ND	mg/l	0.005	1	6010B	0820 17:40	0821 09:34	AI
Copper, Total	0.010	mg/l	0.010	1	6010B	0820 17:40	0821 09:34	AI

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

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0711966

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Total Metals for sample(s) 01-02 (L0711748-06, WG291233-1)					
Arsenic, Total	0.009	0.008	mg/l	18	20
Copper, Total	0.141	0.144	mg/l	2	20

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0711966

Parameter	% Recovery	QC Criteria
Total Metals LCS for sample(s) 01-02 (WG291233-4)		
Arsenic, Total	108	80-120
Copper, Total	97	80-120
Total Metals SPIKE for sample(s) 01-02 (L0711748-06, WG291233-2)		
Arsenic, Total	104	75-125
Copper, Total	96	75-125

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711966

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01-02 (WG291233-3)								
Total Metals								
Arsenic, Total	ND	mg/l	0.005	1	6010B	0820 17:40	0821 09:07	AI
Copper, Total	ND	mg/l	0.010	1	6010B	0820 17:40	0821 09:07	AI

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

GLOSSARY OF TERMS AND SYMBOLS

REF	Reference number in which test method may be found.
METHOD	Method number by which analysis was performed.
ID	Initials of the analyst.
ND	Not detected in comparison to the reported detection limit.
NI	Not Ignitable.
ug/cart	Micrograms per Cartridge.
H	The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

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.

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA
ANALYTICAL LABS

WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193
RAYNHAM, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 8/17

ALPHA Job #: L0711966

Client Information

Client: ERM-Boston
Address: 399 Boylston St 6th Floor
Boston, MA 02116
Phone: (617) 646-7800
Fax: (617) 267-6447
Email: jason.flattery@erm.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NA Soil Excavation
Project Location: Raytheon - Wayland
Project #: 0051545
Project Manager: Jason Flattery
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due: 8/24 Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program	Criteria
USEPA RCP	

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS: Total As, Cu

SAMPLE HANDLING
Filtration
☐ Done
☐ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials		Sample Specific Comments	TOTAL # BOTTLES
11966-1	FLOC-INF-20070317-01	8/17/07	11:15	GW	BM	X		1
2	FLOC-EFF-20070317-01	8/17/07	11:20	GW	BM	X		1

Container Type: P
Preservative: C

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
	8/17/07 1420		8/17/07 1420
	8/17/07		8/17/07 1812

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

FORM NO: 01-01 (rev. 10-OCT-05)

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220 www.alphalab.com

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

CERTIFICATE OF ANALYSIS

Client: ERM-New England

Address: 399 Boylston Street
6th Floor
Boston, MA 02116

Attn: Mr. Jason Flattery

Project Number: 0051545

Site: NA EXCAVATION

Laboratory Job Number: L0711768

Date Received: 15-AUG-2007

Date Reported: 20-AUG-2007

Delivery Method: Alpha

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0711768-01	INF-20070815-01	RAYTHEON-WAYLAND
L0711768-02	EFF-20070815-01	RAYTHEON-WAYLAND
L0711768-03	EFF2-20070808-01	RAYTHEON-WAYLAND

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

Authorized by: Michelle M. Morris
Technical Representative

ALPHA ANALYTICAL LABORATORIES
NARRATIVE REPORT

Laboratory Job Number: L0711768

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

TSS

L0711768-01 has an elevated detection limit due to the 20x dilution required by the elevated concentration of TSS in the sample.

Volatile Organics

L0711768-01 was re-analyzed due to over dilution of the original analysis. The results of the re-analysis are reported.

The WG291142-3 LCS % recovery for Carbon tetrachloride is above method acceptance criteria.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

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

Laboratory Sample Number: L0711768-01
INF-20070815-01
Sample Matrix: WATER

Date Collected: 15-AUG-2007 13:35
Date Received : 15-AUG-2007
Date Reported : 20-AUG-2007

Condition of Sample: Satisfactory

Field Prep: None

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

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Solids, Total Suspended	3100	mg/l	100	30	2540D		0817 14:15	DW
pH (H)	7.1	SU	-	30	4500H+-B		0815 19:40	LR
Total Metals								
Arsenic, Total	0.0164	mg/l	0.0005	1	6020	0816 16:00	0817 15:58	BM
Copper, Total	0.1061	mg/l	0.0005	1	6020	0816 16:00	0817 15:58	BM
Iron, Total	100	mg/l	0.05	19	200.7	0816 16:00	0817 17:07	AI
Nickel, Total	0.0968	mg/l	0.0005	1	6020	0816 16:00	0817 15:58	BM
Volatile Organics by GC/MS 624				5	624		0817 11:40	MM
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	1.5					
Chloroform	ND	ug/l	1.5					
Carbon tetrachloride	ND	ug/l	1.0					
1,2-Dichloropropane	ND	ug/l	3.5					
Dibromochloromethane	ND	ug/l	1.0					
1,1,2-Trichloroethane	ND	ug/l	1.5					
2-Chloroethylvinyl ether	ND	ug/l	10.					
Tetrachloroethene	16	ug/l	1.5					
Chlorobenzene	ND	ug/l	3.5					
Trichlorofluoromethane	ND	ug/l	5.0					
1,2-Dichloroethane	ND	ug/l	1.5					
1,1,1-Trichloroethane	ND	ug/l	2.0					
Bromodichloromethane	ND	ug/l	1.0					
trans-1,3-Dichloropropene	ND	ug/l	1.5					
cis-1,3-Dichloropropene	ND	ug/l	1.5					
Bromoform	ND	ug/l	1.0					
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0					
Benzene	ND	ug/l	1.0					
Toluene	5.3	ug/l	1.0					
Ethylbenzene	ND	ug/l	1.0					
Chloromethane	ND	ug/l	10.					
Bromomethane	ND	ug/l	5.0					
Vinyl chloride	ND	ug/l	2.0					
Chloroethane	ND	ug/l	2.0					
1,1-Dichloroethene	ND	ug/l	1.0					
trans-1,2-Dichloroethene	ND	ug/l	1.5					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711768-01
INF-20070815-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics by GC/MS 624 cont'd				5	624		0817 11:40	MM
cis-1,2-Dichloroethene	8.1	ug/l	1.0					
Trichloroethene	180	ug/l	1.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
p/m-Xylene	ND	ug/l	2.0					
o-xylene	ND	ug/l	1.0					
Xylene (Total)	ND	ug/l	2.0					
Styrene	ND	ug/l	1.0					
Acetone	59	ug/l	10					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	10.					
Vinyl acetate	ND	ug/l	20.					
4-Methyl-2-pentanone	ND	ug/l	10.					
2-Hexanone	ND	ug/l	10.					
Acrolein	ND	ug/l	8.0					
Acrylonitrile	ND	ug/l	10.					
Methyl tert butyl ether	ND	ug/l	20.					
1,4-Dioxane	ND	ug/l	2000					
Tert-Butyl Alcohol	ND	ug/l	100					
Tertiary-Amyl Methyl Ether	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
Pentafluorobenzene	103	%	80-120					
Fluorobenzene	100	%	80-120					
4-Bromofluorobenzene	98.0	%	80-120					
SVOC's by GC/MS 8270				1	8270C	0815 18:30	0816 15:01	AK
Acenaphthene	ND	ug/l	5.0					
Benzidine	ND	ug/l	50.					
1,2,4-Trichlorobenzene	ND	ug/l	5.0					
Hexachlorobenzene	ND	ug/l	5.0					
Bis(2-chloroethyl)ether	ND	ug/l	5.0					
1-Chloronaphthalene	ND	ug/l	5.0					
2-Chloronaphthalene	ND	ug/l	6.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
3,3'-Dichlorobenzidine	ND	ug/l	50.					
2,4-Dinitrotoluene	ND	ug/l	6.0					
2,6-Dinitrotoluene	ND	ug/l	5.0					
Azobenzene	ND	ug/l	5.0					
Fluoranthene	ND	ug/l	5.0					
4-Chlorophenyl phenyl ether	ND	ug/l	5.0					
4-Bromophenyl phenyl ether	ND	ug/l	5.0					
Bis(2-chloroisopropyl)ether	ND	ug/l	5.0					
Bis(2-chloroethoxy)methane	ND	ug/l	5.0					
Hexachlorobutadiene	ND	ug/l	10.					
Hexachlorocyclopentadiene	ND	ug/l	30.					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711768-01
INF-20070815-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
SVOC's by GC/MS 8270 cont'd				1	8270C	0815 18:30	0816 15:01	AK
Hexachloroethane	ND	ug/l	5.0					
Isophorone	ND	ug/l	5.0					
Naphthalene	ND	ug/l	5.0					
Nitrobenzene	ND	ug/l	5.0					
NDPA/DPA	ND	ug/l	15.					
n-Nitrosodi-n-propylamine	ND	ug/l	5.0					
Bis(2-ethylhexyl)phthalate	ND	ug/l	5.0					
Butyl benzyl phthalate	ND	ug/l	5.0					
Di-n-butylphthalate	ND	ug/l	5.0					
Di-n-octylphthalate	ND	ug/l	5.0					
Diethyl phthalate	ND	ug/l	5.0					
Dimethyl phthalate	ND	ug/l	5.0					
Benzo(a)anthracene	ND	ug/l	5.0					
Benzo(a)pyrene	ND	ug/l	5.0					
Benzo(b)fluoranthene	ND	ug/l	5.0					
Benzo(k)fluoranthene	ND	ug/l	5.0					
Chrysene	ND	ug/l	5.0					
Acenaphthylene	ND	ug/l	5.0					
Anthracene	ND	ug/l	5.0					
Benzo(ghi)perylene	ND	ug/l	5.0					
Fluorene	ND	ug/l	5.0					
Phenanthrene	ND	ug/l	5.0					
Dibenzo(a,h)anthracene	ND	ug/l	5.0					
Indeno(1,2,3-cd)pyrene	ND	ug/l	7.0					
Pyrene	ND	ug/l	5.0					
Benzo(e)pyrene	ND	ug/l	5.0					
Biphenyl	ND	ug/l	5.0					
Perylene	ND	ug/l	5.0					
Aniline	ND	ug/l	20.					
4-Chloroaniline	ND	ug/l	5.0					
1-Methylnaphthalene	ND	ug/l	5.0					
2-Nitroaniline	ND	ug/l	5.0					
3-Nitroaniline	ND	ug/l	5.0					
4-Nitroaniline	ND	ug/l	7.0					
Dibenzofuran	ND	ug/l	5.0					
a,a-Dimethylphenethylamine	ND	ug/l	50.					
Hexachloropropene	ND	ug/l	10.					
Nitrosodi-n-butylamine	ND	ug/l	10.					
2-Methylnaphthalene	ND	ug/l	5.0					
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.					
Pentachlorobenzene	ND	ug/l	20.					
a-Naphthylamine	ND	ug/l	25.					
b-Naphthylamine	ND	ug/l	20.					
Phenacetin	ND	ug/l	10.					
Dimethoate	ND	ug/l	20.					
4-Aminobiphenyl	ND	ug/l	10.					
Pentachloronitrobenzene	ND	ug/l	10.					
Isodrin	ND	ug/l	10.					
p-Dimethylaminoazobenzene	ND	ug/l	10.					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711768-01
INF-20070815-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
SVOC's by GC/MS 8270 cont'd				1	8270C	0815 18:30	0816 15:01	AK
Chlorobenzilate	ND	ug/l	20.					
3-Methylcholanthrene	ND	ug/l	20.					
Ethyl Methanesulfonate	ND	ug/l	15.					
Acetophenone	ND	ug/l	20.					
Nitrosodipiperidine	ND	ug/l	20.					
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.					
n-Nitrosodimethylamine	ND	ug/l	50.					
2,4,6-Trichlorophenol	ND	ug/l	5.0					
p-Chloro-m-cresol	ND	ug/l	5.0					
2-Chlorophenol	ND	ug/l	6.0					
2,4-Dichlorophenol	ND	ug/l	10.					
2,4-Dimethylphenol	ND	ug/l	10.					
2-Nitrophenol	ND	ug/l	20.					
4-Nitrophenol	ND	ug/l	10.					
2,4-Dinitrophenol	ND	ug/l	30.					
4,6-Dinitro-o-cresol	ND	ug/l	20.					
Pentachlorophenol	ND	ug/l	10.					
Phenol	ND	ug/l	7.0					
2-Methylphenol	ND	ug/l	6.0					
3-Methylphenol/4-Methylphenol	ND	ug/l	6.0					
2,4,5-Trichlorophenol	ND	ug/l	5.0					
2,6-Dichlorophenol	ND	ug/l	10.					
Benzoic Acid	ND	ug/l	50.					
Benzyl Alcohol	ND	ug/l	10.					
Carbazole	ND	ug/l	5.0					
Pyridine	ND	ug/l	50.					
2-Picoline	ND	ug/l	20.					
Pronamide	ND	ug/l	20.					
Methyl methanesulfonate	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	33.0	%	21-120					
Phenol-d6	27.0	%	10-120					
Nitrobenzene-d5	58.0	%	23-120					
2-Fluorobiphenyl	60.0	%	43-120					
2,4,6-Tribromophenol	89.0	%	10-120					
4-Terphenyl-d14	75.0	%	33-120					
PAH by GC/MS SIM 8270M				1	8270C-M	0815 18:30	0816 14:51	RL
Acenaphthene	ND	ug/l	0.20					
2-Chloronaphthalene	ND	ug/l	0.20					
Fluoranthene	ND	ug/l	0.20					
Hexachlorobutadiene	ND	ug/l	0.50					
Naphthalene	ND	ug/l	0.20					
Benzo(a)anthracene	ND	ug/l	0.20					
Benzo(a)pyrene	ND	ug/l	0.20					
Benzo(b)fluoranthene	ND	ug/l	0.20					
Benzo(k)fluoranthene	ND	ug/l	0.20					
Chrysene	ND	ug/l	0.20					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711768-01
INF-20070815-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
PAH by GC/MS SIM 8270M cont'd				1	8270C-M	0815 18:30	0816 14:51	RL
Acenaphthylene	ND	ug/l	0.20					
Anthracene	ND	ug/l	0.20					
Benzo(ghi)perylene	ND	ug/l	0.20					
Fluorene	ND	ug/l	0.20					
Phenanthrene	ND	ug/l	0.20					
Dibenzo(a,h)anthracene	ND	ug/l	0.20					
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20					
Pyrene	ND	ug/l	0.20					
1-Methylnaphthalene	ND	ug/l	0.20					
2-Methylnaphthalene	ND	ug/l	0.20					
Pentachlorophenol	ND	ug/l	0.80					
Hexachlorobenzene	ND	ug/l	0.80					
Perylene	ND	ug/l	0.20					
Biphenyl	ND	ug/l	0.20					
2,6-Dimethylnaphthalene	ND	ug/l	0.20					
1-Methylphenanthrene	ND	ug/l	0.20					
Benzo(e)Pyrene	ND	ug/l	0.20					
Hexachloroethane	ND	ug/l	0.80					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	35.0	%	21-120					
Phenol-d6	29.0	%	10-120					
Nitrobenzene-d5	53.0	%	23-120					
2-Fluorobiphenyl	54.0	%	43-120					
2,4,6-Tribromophenol	59.0	%	10-120					
4-Terphenyl-d14	67.0	%	33-120					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

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

Laboratory Sample Number: L0711768-02 **Date Collected:** 15-AUG-2007 13:32
EFF-20070815-01 **Date Received :** 15-AUG-2007
Sample Matrix: WATER **Date Reported :** 20-AUG-2007

Condition of Sample: Satisfactory **Field Prep:** None

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

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Solids, Total Suspended	13	mg/l	5.0	30	2540D		0817 14:15	DW
pH (H)	7.9	SU	-	30	4500H+-B		0815 19:40	LR
Total Metals								
Arsenic, Total	0.0425	mg/l	0.0005	1	6020	0816 16:00	0817 16:04	BM
Copper, Total	0.0252	mg/l	0.0005	1	6020	0816 16:00	0817 16:04	BM
Iron, Total	0.40	mg/l	0.05	19	200.7	0816 16:00	0817 17:11	AI
Nickel, Total	0.0109	mg/l	0.0005	1	6020	0816 16:00	0817 16:04	BM
Volatile Organics by GC/MS 624				5	624		0816 10:06	MM
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	1.5					
Chloroform	ND	ug/l	1.5					
Carbon tetrachloride	ND	ug/l	1.0					
1,2-Dichloropropane	ND	ug/l	3.5					
Dibromochloromethane	ND	ug/l	1.0					
1,1,2-Trichloroethane	ND	ug/l	1.5					
2-Chloroethylvinyl ether	ND	ug/l	10.					
Tetrachloroethene	ND	ug/l	1.5					
Chlorobenzene	ND	ug/l	3.5					
Trichlorofluoromethane	ND	ug/l	5.0					
1,2-Dichloroethane	ND	ug/l	1.5					
1,1,1-Trichloroethane	ND	ug/l	2.0					
Bromodichloromethane	ND	ug/l	1.0					
trans-1,3-Dichloropropene	ND	ug/l	1.5					
cis-1,3-Dichloropropene	ND	ug/l	1.5					
Bromoform	ND	ug/l	1.0					
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0					
Benzene	ND	ug/l	1.0					
Toluene	ND	ug/l	1.0					
Ethylbenzene	ND	ug/l	1.0					
Chloromethane	ND	ug/l	10.					
Bromomethane	ND	ug/l	5.0					
Vinyl chloride	ND	ug/l	2.0					
Chloroethane	ND	ug/l	2.0					
1,1-Dichloroethene	ND	ug/l	1.0					
trans-1,2-Dichloroethene	ND	ug/l	1.5					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711768-02
EFF-20070815-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics by GC/MS 624 cont'd				5	624		0816 10:06	MM
cis-1,2-Dichloroethene	ND	ug/l	1.0					
Trichloroethene	ND	ug/l	1.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
p/m-Xylene	ND	ug/l	2.0					
o-xylene	ND	ug/l	1.0					
Xylene (Total)	ND	ug/l	2.0					
Styrene	ND	ug/l	1.0					
Acetone	ND	ug/l	10.					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	10.					
Vinyl acetate	ND	ug/l	20.					
4-Methyl-2-pentanone	ND	ug/l	10.					
2-Hexanone	ND	ug/l	10.					
Acrolein	ND	ug/l	8.0					
Acrylonitrile	ND	ug/l	10.					
Methyl tert butyl ether	ND	ug/l	20.					
1,4-Dioxane	ND	ug/l	2000					
Tert-Butyl Alcohol	ND	ug/l	100					
Tertiary-Amyl Methyl Ether	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
Pentafluorobenzene	83.0	%	80-120					
Fluorobenzene	96.0	%	80-120					
4-Bromofluorobenzene	108	%	80-120					
SVOC's by GC/MS 8270				1	8270C	0815 18:30	0816 14:29	AK
Acenaphthene	ND	ug/l	4.9					
Benzidine	ND	ug/l	49.					
1,2,4-Trichlorobenzene	ND	ug/l	4.9					
Hexachlorobenzene	ND	ug/l	4.9					
Bis(2-chloroethyl)ether	ND	ug/l	4.9					
1-Chloronaphthalene	ND	ug/l	4.9					
2-Chloronaphthalene	ND	ug/l	5.9					
1,2-Dichlorobenzene	ND	ug/l	4.9					
1,3-Dichlorobenzene	ND	ug/l	4.9					
1,4-Dichlorobenzene	ND	ug/l	4.9					
3,3'-Dichlorobenzidine	ND	ug/l	49.					
2,4-Dinitrotoluene	ND	ug/l	5.9					
2,6-Dinitrotoluene	ND	ug/l	4.9					
Azobenzene	ND	ug/l	4.9					
Fluoranthene	ND	ug/l	4.9					
4-Chlorophenyl phenyl ether	ND	ug/l	4.9					
4-Bromophenyl phenyl ether	ND	ug/l	4.9					
Bis(2-chloroisopropyl)ether	ND	ug/l	4.9					
Bis(2-chloroethoxy)methane	ND	ug/l	4.9					
Hexachlorobutadiene	ND	ug/l	9.9					
Hexachlorocyclopentadiene	ND	ug/l	30.					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711768-02
EFF-20070815-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
SVOC's by GC/MS 8270 cont'd				1	8270C	0815 18:30	0816 14:29	AK
Hexachloroethane	ND	ug/l	4.9					
Isophorone	ND	ug/l	4.9					
Naphthalene	ND	ug/l	4.9					
Nitrobenzene	ND	ug/l	4.9					
NDPA/DPA	ND	ug/l	15.					
n-Nitrosodi-n-propylamine	ND	ug/l	4.9					
Bis(2-ethylhexyl)phthalate	ND	ug/l	4.9					
Butyl benzyl phthalate	ND	ug/l	4.9					
Di-n-butylphthalate	ND	ug/l	4.9					
Di-n-octylphthalate	ND	ug/l	4.9					
Diethyl phthalate	ND	ug/l	4.9					
Dimethyl phthalate	ND	ug/l	4.9					
Benzo(a)anthracene	ND	ug/l	4.9					
Benzo(a)pyrene	ND	ug/l	4.9					
Benzo(b)fluoranthene	ND	ug/l	4.9					
Benzo(k)fluoranthene	ND	ug/l	4.9					
Chrysene	ND	ug/l	4.9					
Acenaphthylene	ND	ug/l	4.9					
Anthracene	ND	ug/l	4.9					
Benzo(ghi)perylene	ND	ug/l	4.9					
Fluorene	ND	ug/l	4.9					
Phenanthrene	ND	ug/l	4.9					
Dibenzo(a,h)anthracene	ND	ug/l	4.9					
Indeno(1,2,3-cd)pyrene	ND	ug/l	6.9					
Pyrene	ND	ug/l	4.9					
Benzo(e)pyrene	ND	ug/l	4.9					
Biphenyl	ND	ug/l	4.9					
Perylene	ND	ug/l	4.9					
Aniline	ND	ug/l	20.					
4-Chloroaniline	ND	ug/l	4.9					
1-Methylnaphthalene	ND	ug/l	4.9					
2-Nitroaniline	ND	ug/l	4.9					
3-Nitroaniline	ND	ug/l	4.9					
4-Nitroaniline	ND	ug/l	6.9					
Dibenzofuran	ND	ug/l	4.9					
a,a-Dimethylphenethylamine	ND	ug/l	49.					
Hexachloropropene	ND	ug/l	9.9					
Nitrosodi-n-butylamine	ND	ug/l	9.9					
2-Methylnaphthalene	ND	ug/l	4.9					
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.					
Pentachlorobenzene	ND	ug/l	20.					
a-Naphthylamine	ND	ug/l	25.					
b-Naphthylamine	ND	ug/l	20.					
Phenacetin	ND	ug/l	9.9					
Dimethoate	ND	ug/l	20.					
4-Aminobiphenyl	ND	ug/l	9.9					
Pentachloronitrobenzene	ND	ug/l	9.9					
Isodrin	ND	ug/l	9.9					
p-Dimethylaminoazobenzene	ND	ug/l	9.9					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711768-02
EFF-20070815-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
SVOC's by GC/MS 8270 cont'd				1	8270C	0815 18:30	0816 14:29	AK
Chlorobenzilate	ND	ug/l	20.					
3-Methylcholanthrene	ND	ug/l	20.					
Ethyl Methanesulfonate	ND	ug/l	15.					
Acetophenone	ND	ug/l	20.					
Nitrosodipiperidine	ND	ug/l	20.					
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.					
n-Nitrosodimethylamine	ND	ug/l	49.					
2,4,6-Trichlorophenol	ND	ug/l	4.9					
p-Chloro-m-cresol	ND	ug/l	4.9					
2-Chlorophenol	ND	ug/l	5.9					
2,4-Dichlorophenol	ND	ug/l	9.9					
2,4-Dimethylphenol	ND	ug/l	9.9					
2-Nitrophenol	ND	ug/l	20.					
4-Nitrophenol	ND	ug/l	9.9					
2,4-Dinitrophenol	ND	ug/l	30.					
4,6-Dinitro-o-cresol	ND	ug/l	20.					
Pentachlorophenol	ND	ug/l	9.9					
Phenol	ND	ug/l	6.9					
2-Methylphenol	ND	ug/l	5.9					
3-Methylphenol/4-Methylphenol	ND	ug/l	5.9					
2,4,5-Trichlorophenol	ND	ug/l	4.9					
2,6-Dichlorophenol	ND	ug/l	9.9					
Benzoic Acid	ND	ug/l	49.					
Benzyl Alcohol	ND	ug/l	9.9					
Carbazole	ND	ug/l	4.9					
Pyridine	ND	ug/l	49.					
2-Picoline	ND	ug/l	20.					
Pronamide	ND	ug/l	20.					
Methyl methanesulfonate	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	34.0	%	21-120					
Phenol-d6	27.0	%	10-120					
Nitrobenzene-d5	65.0	%	23-120					
2-Fluorobiphenyl	65.0	%	43-120					
2,4,6-Tribromophenol	103	%	10-120					
4-Terphenyl-d14	95.0	%	33-120					
PAH by GC/MS SIM 8270M				1	8270C-M	0815 18:30	0816 15:39	RL
Acenaphthene	ND	ug/l	0.20					
2-Chloronaphthalene	ND	ug/l	0.20					
Fluoranthene	ND	ug/l	0.20					
Hexachlorobutadiene	ND	ug/l	0.49					
Naphthalene	ND	ug/l	0.20					
Benzo(a)anthracene	ND	ug/l	0.20					
Benzo(a)pyrene	ND	ug/l	0.20					
Benzo(b)fluoranthene	ND	ug/l	0.20					
Benzo(k)fluoranthene	ND	ug/l	0.20					
Chrysene	ND	ug/l	0.20					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711768-02
EFF-20070815-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
PAH by GC/MS SIM 8270M cont'd				1	8270C-M	0815 18:30	0816 15:39	RL
Acenaphthylene	ND	ug/l	0.20					
Anthracene	ND	ug/l	0.20					
Benzo(ghi)perylene	ND	ug/l	0.20					
Fluorene	ND	ug/l	0.20					
Phenanthrene	ND	ug/l	0.20					
Dibenzo(a,h)anthracene	ND	ug/l	0.20					
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20					
Pyrene	ND	ug/l	0.20					
1-Methylnaphthalene	ND	ug/l	0.20					
2-Methylnaphthalene	ND	ug/l	0.20					
Pentachlorophenol	ND	ug/l	0.79					
Hexachlorobenzene	ND	ug/l	0.79					
Perylene	ND	ug/l	0.20					
Biphenyl	ND	ug/l	0.20					
2,6-Dimethylnaphthalene	ND	ug/l	0.20					
1-Methylphenanthrene	ND	ug/l	0.20					
Benzo(e)Pyrene	ND	ug/l	0.20					
Hexachloroethane	ND	ug/l	0.79					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	33.0	%	21-120					
Phenol-d6	28.0	%	10-120					
Nitrobenzene-d5	53.0	%	23-120					
2-Fluorobiphenyl	55.0	%	43-120					
2,4,6-Tribromophenol	63.0	%	10-120					
4-Terphenyl-d14	88.0	%	33-120					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

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

Laboratory Sample Number: L0711768-03
EFF2-20070808-01
Sample Matrix: WATER

Date Collected: 15-AUG-2007 13:31
Date Received : 15-AUG-2007
Date Reported : 20-AUG-2007

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1-Plastic

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Total Metals								
Arsenic, Total	0.0492	mg/l	0.0005	1	6020	0816 16:00	0817 16:10	BM
Copper, Total	0.0032	mg/l	0.0005	1	6020	0816 16:00	0817 16:10	BM
Iron, Total	0.75	mg/l	0.05	19	200.7	0816 16:00	0817 17:15	AI
Nickel, Total	0.0077	mg/l	0.0005	1	6020	0816 16:00	0817 16:10	BM

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

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0711768

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Solids, Total Suspended for sample(s) 01-02 (L0711768-01, WG291007-2)					
Solids, Total Suspended	3100	3100	mg/l	0	32
pH for sample(s) 01-02 (L0711768-02, WG290751-2)					
pH (H)	7.9	7.9	SU	0	5
Total Metals for sample(s) 01-03 (L0711768-03, WG290888-1)					
Arsenic, Total	0.0492	0.0478	mg/l	3	20
Copper, Total	0.0032	0.0032	mg/l	0	20
Nickel, Total	0.0077	0.0074	mg/l	3	20
Total Metals for sample(s) 01-03 (L0711768-03, WG290889-1)					
Iron, Total	0.75	0.75	mg/l	0	
Volatile Organics by GC/MS 624 for sample(s) 02 (L0711569-02, WG290639-2)					
Methylene chloride	ND	ND	ug/l	NC	30
1,1-Dichloroethane	ND	ND	ug/l	NC	30
Chloroform	ND	ND	ug/l	NC	30
Carbon tetrachloride	ND	ND	ug/l	NC	30
1,2-Dichloropropane	ND	ND	ug/l	NC	30
Dibromochloromethane	ND	ND	ug/l	NC	30
1,1,2-Trichloroethane	ND	ND	ug/l	NC	30
2-Chloroethylvinyl ether	ND	ND	ug/l	NC	30
Tetrachloroethene	ND	ND	ug/l	NC	30
Chlorobenzene	ND	ND	ug/l	NC	30
Trichlorofluoromethane	ND	ND	ug/l	NC	30
1,2-Dichloroethane	ND	ND	ug/l	NC	30
1,1,1-Trichloroethane	ND	ND	ug/l	NC	30
Bromodichloromethane	ND	ND	ug/l	NC	30
trans-1,3-Dichloropropene	ND	ND	ug/l	NC	30
cis-1,3-Dichloropropene	ND	ND	ug/l	NC	30
Bromoform	ND	ND	ug/l	NC	30
1,1,2,2-Tetrachloroethane	ND	ND	ug/l	NC	30
Benzene	ND	ND	ug/l	NC	30
Toluene	ND	ND	ug/l	NC	30
Ethylbenzene	ND	ND	ug/l	NC	30
Chloromethane	ND	ND	ug/l	NC	30
Bromomethane	ND	ND	ug/l	NC	30
Vinyl chloride	ND	ND	ug/l	NC	30
Chloroethane	ND	ND	ug/l	NC	30
1,1-Dichloroethene	ND	ND	ug/l	NC	30
trans-1,2-Dichloroethene	ND	ND	ug/l	NC	30
cis-1,2-Dichloroethene	ND	ND	ug/l	NC	30
Trichloroethene	ND	ND	ug/l	NC	30
1,2-Dichlorobenzene	ND	ND	ug/l	NC	30
1,3-Dichlorobenzene	ND	ND	ug/l	NC	30
1,4-Dichlorobenzene	ND	ND	ug/l	NC	30
p/m-Xylene	ND	ND	ug/l	NC	30
o-xylene	ND	ND	ug/l	NC	30

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0711768

Continued

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Volatile Organics by GC/MS 624 for sample(s) 02 (L0711569-02, WG290639-2)					
Xylene (Total)	ND	ND	ug/l	NC	30
Styrene	ND	ND	ug/l	NC	30
Acetone	ND	ND	ug/l	NC	30
Carbon disulfide	ND	ND	ug/l	NC	30
2-Butanone	ND	ND	ug/l	NC	30
Vinyl acetate	ND	ND	ug/l	NC	30
4-Methyl-2-pentanone	ND	ND	ug/l	NC	30
2-Hexanone	ND	ND	ug/l	NC	30
Acrolein	ND	ND	ug/l	NC	30
Acrylonitrile	ND	ND	ug/l	NC	30
Surrogate(s)	Recovery				QC Criteria
Pentafluorobenzene	81.0	81.0	%		80-120
Fluorobenzene	97.0	97.0	%		80-120
4-Bromofluorobenzene	107	109	%		80-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0711768

Parameter	% Recovery	QC Criteria
pH LCS for sample(s) 01-02 (WG290751-1)		
pH	100	99-101
Total Metals LCS for sample(s) 01-03 (WG290888-4)		
Arsenic, Total	94	80-120
Copper, Total	100	80-120
Nickel, Total	101	80-120
Total Metals LCS for sample(s) 01-03 (WG290889-4)		
Iron, Total	99	
Volatile Organics by GC/MS 624 LCS for sample(s) 01 (WG291142-3)		
Methylene chloride	108	10-221
1,1-Dichloroethane	124	59-155
Chloroform	112	51-138
Carbon tetrachloride	141	70-140
1,2-Dichloropropane	95	10-210
Dibromochloromethane	115	53-149
1,1,2-Trichloroethane	103	52-150
2-Chloroethylvinyl ether	90	10-305
Tetrachloroethene	100	64-148
Chlorobenzene	101	37-160
Trichlorofluoromethane	132	17-181
1,2-Dichloroethane	124	49-155
1,1,1-Trichloroethane	162	52-162
Bromodichloromethane	116	35-155
trans-1,3-Dichloropropene	107	17-183
cis-1,3-Dichloropropene	110	10-227
Bromoform	128	45-169
1,1,2,2-Tetrachloroethane	98	46-157
Benzene	105	37-151
Toluene	93	47-150
Ethylbenzene	104	37-162
Chloromethane	107	10-273
Bromomethane	101	10-242
Vinyl chloride	132	10-251
Chloroethane	124	14-230
1,1-Dichloroethene	90	10-234
trans-1,2-Dichloroethene	106	54-156
cis-1,2-Dichloroethene	96	60-140
Trichloroethene	109	71-157
1,2-Dichlorobenzene	102	18-190
1,3-Dichlorobenzene	100	59-156
1,4-Dichlorobenzene	100	18-190
p/m-Xylene	108	40-160
o-Xylene	102	40-160
XYLENE (TOTAL)	106	40-160
Styrene	98	40-160
Acetone	122	40-160

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0711768

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 LCS for sample(s) 01 (WG291142-3)		
Carbon disulfide	113	40-160
2-Butanone	108	40-160
Vinyl acetate	81	40-160
4-Methyl-2-pentanone	110	40-160
2-Hexanone	109	40-160
Acrolein	86	40-160
Acrylonitrile	96	40-160
Surrogate(s)		
Pentafluorobenzene	101	80-120
Fluorobenzene	100	80-120
4-Bromofluorobenzene	101	80-120
Volatile Organics by GC/MS 624 LCS for sample(s) 02 (WG290639-9)		
Methylene chloride	102	10-221
1,1-Dichloroethane	92	59-155
Chloroform	100	51-138
Carbon tetrachloride	103	70-140
1,2-Dichloropropane	96	10-210
Dibromochloromethane	99	53-149
1,1,2-Trichloroethane	95	52-150
2-Chloroethylvinyl ether	61	10-305
Tetrachloroethene	96	64-148
Chlorobenzene	93	37-160
Trichlorofluoromethane	108	17-181
1,2-Dichloroethane	105	49-155
1,1,1-Trichloroethane	99	52-162
Bromodichloromethane	96	35-155
trans-1,3-Dichloropropene	96	17-183
cis-1,3-Dichloropropene	91	10-227
Bromoform	91	45-169
1,1,2,2-Tetrachloroethane	94	46-157
Benzene	108	37-151
Toluene	104	47-150
Ethylbenzene	112	37-162
Chloromethane	97	10-273
Bromomethane	100	10-242
Vinyl chloride	123	10-251
Chloroethane	123	14-230
1,1-Dichloroethene	102	10-234
trans-1,2-Dichloroethene	88	54-156
cis-1,2-Dichloroethene	100	60-140
Trichloroethene	97	71-157
1,2-Dichlorobenzene	98	18-190
1,3-Dichlorobenzene	99	59-156
1,4-Dichlorobenzene	105	18-190
p/m-Xylene	114	40-160
o-Xylene	104	40-160

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0711768

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 LCS for sample(s) 02 (WG290639-9)		
XYLENE (TOTAL)	111	40-160
Styrene	91	40-160
Acetone	123	40-160
Carbon disulfide	119	40-160
2-Butanone	84	40-160
Vinyl acetate	112	40-160
4-Methyl-2-pentanone	89	40-160
2-Hexanone	91	40-160
Acrolein	108	40-160
Acrylonitrile	96	40-160
Surrogate(s)		
Pentafluorobenzene	107	80-120
Fluorobenzene	106	80-120
4-Bromofluorobenzene	96	80-120
SVOC's by GC/MS 8270 LCS for sample(s) 01-02 (WG290753-2)		
Acenaphthene	76	46-118
1,2,4-Trichlorobenzene	71	39-98
2-Chloronaphthalene	80	40-140
1,2-Dichlorobenzene	65	40-140
1,4-Dichlorobenzene	66	36-97
2,4-Dinitrotoluene	88	24-96
2,6-Dinitrotoluene	103	40-140
Fluoranthene	96	40-140
4-Chlorophenyl phenyl ether	90	40-140
n-Nitrosodi-n-propylamine	60	41-116
Butyl benzyl phthalate	97	40-140
Anthracene	68	40-140
Pyrene	93	26-127
Hexachloropropene	80	40-140
P-Chloro-M-Cresol	80	23-97
2-Chlorophenol	62	27-123
2-Nitrophenol	72	30-130
4-Nitrophenol	38	10-80
2,4-Dinitrophenol	86	30-130
Pentachlorophenol	93	9-103
Phenol	24	12-110
Surrogate(s)		
2-Fluorophenol	41	21-120
Phenol-d6	32	10-120
Nitrobenzene-d5	75	23-120
2-Fluorobiphenyl	80	43-120
2,4,6-Tribromophenol	116	10-120
4-Terphenyl-d14	96	33-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0711768

Continued

Parameter	% Recovery	QC Criteria
PAH by GC/MS SIM 8270M LCS for sample(s) 01-02 (WG290754-2)		
Acenaphthene	55	40-140
2-Chloronaphthalene	51	40-140
Fluoranthene	62	40-140
Anthracene	51	40-140
Pyrene	64	40-140
Pentachlorophenol	57	30-130
Surrogate(s)		
2-Fluorophenol	34	21-120
Phenol-d6	27	10-120
Nitrobenzene-d5	52	23-120
2-Fluorobiphenyl	53	43-120
2,4,6-Tribromophenol	67	10-120
4-Terphenyl-d14	84	33-120
Total Metals SPIKE for sample(s) 01-03 (L0711768-03, WG290888-2)		
Arsenic, Total	97	80-120
Copper, Total	99	80-120
Nickel, Total	101	80-120
Total Metals SPIKE for sample(s) 01-03 (L0711768-03, WG290889-2)		
Iron, Total	95	
Volatile Organics by GC/MS 624 SPIKE for sample(s) 02 (L0711569-02, WG290639-1)		
Methylene chloride	130	10-221
1,1-Dichloroethane	112	59-155
Chloroform	127	51-138
Carbon tetrachloride	129	70-140
1,2-Dichloropropane	125	10-210
Dibromochloromethane	101	53-149
1,1,2-Trichloroethane	96	52-150
2-Chloroethylvinyl ether	75	10-305
Tetrachloroethene	100	64-148
Chlorobenzene	89	37-160
Trichlorofluoromethane	142	17-181
1,2-Dichloroethane	136	49-155
1,1,1-Trichloroethane	124	52-162
Bromodichloromethane	98	35-155
trans-1,3-Dichloropropene	88	17-183
cis-1,3-Dichloropropene	77	10-227
Bromoform	85	45-169
1,1,2,2-Tetrachloroethane	90	46-157
Benzene	143	35-151
Toluene	106	47-150
Ethylbenzene	107	37-162
Chloromethane	108	10-273
Bromomethane	107	10-242
Vinyl chloride	160	10-251

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0711768

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 SPIKE for sample(s) 02 (L0711569-02, WG290639-1)		
Chloroethane	151	14-230
1,1-Dichloroethene	137	10-234
trans-1,2-Dichloroethene	113	54-156
cis-1,2-Dichloroethene	131	60-140
Trichloroethene	124	71-157
1,2-Dichlorobenzene	88	18-190
1,3-Dichlorobenzene	86	59-156
1,4-Dichlorobenzene	95	18-190
p/m-Xylene	108	40-160
o-Xylene	102	40-160
XYLENE (TOTAL)	106	40-160
Styrene	88	40-160
Acetone	145	40-160
Carbon disulfide	134	40-160
2-Butanone	113	40-160
Vinyl acetate	96	40-160
4-Methyl-2-pentanone	101	40-160
2-Hexanone	102	40-160
Acrolein	119	40-160
Acrylonitrile	135	40-160
Surrogate(s)		
Pentafluorobenzene	99	80-120
Fluorobenzene	106	80-120
4-Bromofluorobenzene	100	80-120
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01 (L0711787-06, WG291142-1)		
Methylene chloride	104	10-221
1,1-Dichloroethane	117	59-155
Chloroform	114	51-138
Carbon tetrachloride	146	70-140
1,2-Dichloropropane	96	10-210
Dibromochloromethane	106	53-149
1,1,2-Trichloroethane	96	52-150
2-Chloroethylvinyl ether	85	10-305
Tetrachloroethene	96	64-148
Chlorobenzene	99	37-160
Trichlorofluoromethane	137	17-181
1,2-Dichloroethane	126	49-155
1,1,1-Trichloroethane	170	52-162
Bromodichloromethane	103	35-155
trans-1,3-Dichloropropene	101	17-183
cis-1,3-Dichloropropene	99	10-227
Bromoform	125	45-169
1,1,2,2-Tetrachloroethane	94	46-157
Benzene	107	35-151
Toluene	96	47-150
Ethylbenzene	106	37-162

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0711768

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01 (L0711787-06, WG291142-1)		
Chloromethane	100	10-273
Bromomethane	95	10-242
Vinyl chloride	126	10-251
Chloroethane	129	14-230
1,1-Dichloroethene	96	10-234
trans-1,2-Dichloroethene	100	54-156
cis-1,2-Dichloroethene	98	60-140
Trichloroethene	106	71-157
1,2-Dichlorobenzene	91	18-190
1,3-Dichlorobenzene	89	59-156
1,4-Dichlorobenzene	88	18-190
p/m-Xylene	105	40-160
o-Xylene	100	40-160
XYLENE (TOTAL)	103	40-160
Styrene	86	40-160
Acetone	139	40-160
Carbon disulfide	105	40-160
2-Butanone	107	40-160
Vinyl acetate	82	40-160
4-Methyl-2-pentanone	100	40-160
2-Hexanone	100	40-160
Acrolein	86	40-160
Acrylonitrile	90	40-160
Surrogate(s)		
Pentafluorobenzene	104	80-120
Fluorobenzene	105	80-120
4-Bromofluorobenzene	103	80-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0711768

Parameter	MS %	MSD %	RPD	RPD Limit	MS/MSD Limits
SVOC's by GC/MS 8270 for sample(s) 01-02 (L0711768-02, WG290753-4)					
Acenaphthene	67	72	7	30	46-118
1,2,4-Trichlorobenzene	58	62	7	30	39-98
2-Chloronaphthalene	67	77	14	30	40-140
1,2-Dichlorobenzene	53	62	16	30	40-140
1,4-Dichlorobenzene	53	62	16	30	36-97
2,4-Dinitrotoluene	77	86	11	30	24-96
2,6-Dinitrotoluene	86	96	11	30	40-140
Fluoranthene	91	96	5	30	40-140
4-Chlorophenyl phenyl ether	77	86	11	30	40-140
n-Nitrosodi-n-propylamine	53	58	9	30	41-116
Butyl benzyl phthalate	91	100	9	30	40-140
Anthracene	62	67	8	30	40-140
Pyrene	86	96	11	30	26-127
Hexachloropropene	67	77	14	30	40-140
P-Chloro-M-Cresol	67	79	16	30	23-97
2-Chlorophenol	55	58	5	30	27-123
2-Nitrophenol	60	67	11	30	30-130
4-Nitrophenol	58	65	11	30	10-80
2,4-Dinitrophenol	77	84	9	30	30-130
Pentachlorophenol	89	96	8	30	9-103
Phenol	34	36	6	30	12-110
Surrogate(s)					
2-Fluorophenol	45	52	14		21-120
Phenol-d6	44	50	13		10-120
Nitrobenzene-d5	62	65	5		23-120
2-Fluorobiphenyl	67	73	9		43-120
2,4,6-Tribromophenol	103	111	7		10-120
4-Terphenyl-d14	87	94	8		33-120
PAH by GC/MS SIM 8270M for sample(s) 01-02 (L0711768-02, WG290754-4)					
Acenaphthene	62	67	8	40	40-140
2-Chloronaphthalene	58	62	7	40	40-140
Fluoranthene	72	72	0	40	40-140
Anthracene	58	58	0	40	40-140
Pyrene	72	77	7	40	40-140
Pentachlorophenol	65	70	7	40	30-130
Surrogate(s)					
2-Fluorophenol	48	51	6		21-120
Phenol-d6	50	52	4		10-120
Nitrobenzene-d5	58	60	3		23-120
2-Fluorobiphenyl	62	64	3		43-120
2,4,6-Tribromophenol	63	66	5		10-120
4-Terphenyl-d14	86	89	3		33-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711768

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01-02 (WG291007-1)								
Solids, Total Suspended	ND	mg/l	5.0	30	2540D		0817 14:15	DW
Blank Analysis for sample(s) 01-03 (WG290888-3)								
Total Metals								
Arsenic, Total	ND	mg/l	0.0005	1	6020	0816 16:00	0817 15:47	BM
Copper, Total	ND	mg/l	0.0005	1	6020	0816 16:00	0817 15:47	BM
Nickel, Total	ND	mg/l	0.0005	1	6020	0816 16:00	0817 15:47	BM
Blank Analysis for sample(s) 01-03 (WG290889-3)								
Total Metals				19	200.7			
Iron, Total	ND	mg/l	0.05	19	200.7	0816 16:00	0817 16:58	AI
Blank Analysis for sample(s) 02 (WG290639-8)								
Volatile Organics by GC/MS 624				5	624		0815 08:38	MM
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	1.5					
Chloroform	ND	ug/l	1.5					
Carbon tetrachloride	ND	ug/l	1.0					
1,2-Dichloropropane	ND	ug/l	3.5					
Dibromochloromethane	ND	ug/l	1.0					
1,1,2-Trichloroethane	ND	ug/l	1.5					
2-Chloroethylvinyl ether	ND	ug/l	10.					
Tetrachloroethene	ND	ug/l	1.5					
Chlorobenzene	ND	ug/l	3.5					
Trichlorofluoromethane	ND	ug/l	5.0					
1,2-Dichloroethane	ND	ug/l	1.5					
1,1,1-Trichloroethane	ND	ug/l	2.0					
Bromodichloromethane	ND	ug/l	1.0					
trans-1,3-Dichloropropene	ND	ug/l	1.5					
cis-1,3-Dichloropropene	ND	ug/l	1.5					
Bromoform	ND	ug/l	1.0					
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0					
Benzene	ND	ug/l	1.0					
Toluene	ND	ug/l	1.0					
Ethylbenzene	ND	ug/l	1.0					
Chloromethane	ND	ug/l	10.					
Bromomethane	ND	ug/l	5.0					
Vinyl chloride	ND	ug/l	2.0					
Chloroethane	ND	ug/l	2.0					
1,1-Dichloroethene	ND	ug/l	1.0					
trans-1,2-Dichloroethene	ND	ug/l	1.5					
cis-1,2-Dichloroethene	ND	ug/l	1.0					
Trichloroethene	ND	ug/l	1.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711768

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 02 (WG290639-8)								
Volatile Organics by GC/MS 624 cont'd				5	624		0815 08:38	MM
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
p/m-Xylene	ND	ug/l	2.0					
o-xylene	ND	ug/l	1.0					
Xylene (Total)	ND	ug/l	2.0					
Styrene	ND	ug/l	1.0					
Acetone	ND	ug/l	10.					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	10.					
Vinyl acetate	ND	ug/l	20.					
4-Methyl-2-pentanone	ND	ug/l	10.					
2-Hexanone	ND	ug/l	10.					
Acrolein	ND	ug/l	8.0					
Acrylonitrile	ND	ug/l	10.					
Surrogate(s)	Recovery		QC Criteria					
Pentafluorobenzene	115	%	80-120					
Fluorobenzene	108	%	80-120					
4-Bromofluorobenzene	106	%	80-120					
Blank Analysis for sample(s) 01-02 (WG290753-1)								
SVOC's by GC/MS 8270				1	8270C	0815 18:30	0816 12:24	AK
Acenaphthene	ND	ug/l	5.0					
Benzidine	ND	ug/l	50.					
1,2,4-Trichlorobenzene	ND	ug/l	5.0					
Hexachlorobenzene	ND	ug/l	5.0					
Bis(2-chloroethyl)ether	ND	ug/l	5.0					
1-Chloronaphthalene	ND	ug/l	5.0					
2-Chloronaphthalene	ND	ug/l	6.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
3,3'-Dichlorobenzidine	ND	ug/l	50.					
2,4-Dinitrotoluene	ND	ug/l	6.0					
2,6-Dinitrotoluene	ND	ug/l	5.0					
Azobenzene	ND	ug/l	5.0					
Fluoranthene	ND	ug/l	5.0					
4-Chlorophenyl phenyl ether	ND	ug/l	5.0					
4-Bromophenyl phenyl ether	ND	ug/l	5.0					
Bis(2-chloroisopropyl)ether	ND	ug/l	5.0					
Bis(2-chloroethoxy)methane	ND	ug/l	5.0					
Hexachlorobutadiene	ND	ug/l	10.					
Hexachlorocyclopentadiene	ND	ug/l	30.					
Hexachloroethane	ND	ug/l	5.0					
Isophorone	ND	ug/l	5.0					
Naphthalene	ND	ug/l	5.0					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711768

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01-02 (WG290753-1)								
SVOC's by GC/MS 8270 cont'd				1	8270C	0815 18:30	0816 12:24	AK
Nitrobenzene	ND	ug/l	5.0					
NDPA/DPA	ND	ug/l	15.					
n-Nitrosodi-n-propylamine	ND	ug/l	5.0					
Bis(2-ethylhexyl)phthalate	ND	ug/l	5.0					
Butyl benzyl phthalate	ND	ug/l	5.0					
Di-n-butylphthalate	ND	ug/l	5.0					
Di-n-octylphthalate	ND	ug/l	5.0					
Diethyl phthalate	ND	ug/l	5.0					
Dimethyl phthalate	ND	ug/l	5.0					
Benzo(a)anthracene	ND	ug/l	5.0					
Benzo(a)pyrene	ND	ug/l	5.0					
Benzo(b)fluoranthene	ND	ug/l	5.0					
Benzo(k)fluoranthene	ND	ug/l	5.0					
Chrysene	ND	ug/l	5.0					
Acenaphthylene	ND	ug/l	5.0					
Anthracene	ND	ug/l	5.0					
Benzo(ghi)perylene	ND	ug/l	5.0					
Fluorene	ND	ug/l	5.0					
Phenanthrene	ND	ug/l	5.0					
Dibenzo(a,h)anthracene	ND	ug/l	5.0					
Indeno(1,2,3-cd)pyrene	ND	ug/l	7.0					
Pyrene	ND	ug/l	5.0					
Benzo(e)pyrene	ND	ug/l	5.0					
Biphenyl	ND	ug/l	5.0					
Perylene	ND	ug/l	5.0					
Aniline	ND	ug/l	20.					
4-Chloroaniline	ND	ug/l	5.0					
1-Methylnaphthalene	ND	ug/l	5.0					
2-Nitroaniline	ND	ug/l	5.0					
3-Nitroaniline	ND	ug/l	5.0					
4-Nitroaniline	ND	ug/l	7.0					
Dibenzofuran	ND	ug/l	5.0					
a,a-Dimethylphenethylamine	ND	ug/l	50.					
Hexachloropropene	ND	ug/l	10.					
Nitrosodi-n-butylamine	ND	ug/l	10.					
2-Methylnaphthalene	ND	ug/l	5.0					
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.					
Pentachlorobenzene	ND	ug/l	20.					
a-Naphthylamine	ND	ug/l	25.					
b-Naphthylamine	ND	ug/l	20.					
Phenacetin	ND	ug/l	10.					
Dimethoate	ND	ug/l	20.					
4-Aminobiphenyl	ND	ug/l	10.					
Pentachloronitrobenzene	ND	ug/l	10.					
Isodrin	ND	ug/l	10.					
p-Dimethylaminoazobenzene	ND	ug/l	10.					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711768

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01-02 (WG290753-1)								
SVOC's by GC/MS 8270 cont'd				1	8270C	0815 18:30	0816 12:24	AK
Chlorobenzilate	ND	ug/l	20.					
3-Methylcholanthrene	ND	ug/l	20.					
Ethyl Methanesulfonate	ND	ug/l	15.					
Acetophenone	ND	ug/l	20.					
Nitrosodipiperidine	ND	ug/l	20.					
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.					
n-Nitrosodimethylamine	ND	ug/l	50.					
2,4,6-Trichlorophenol	ND	ug/l	5.0					
p-Chloro-m-cresol	ND	ug/l	5.0					
2-Chlorophenol	ND	ug/l	6.0					
2,4-Dichlorophenol	ND	ug/l	10.					
2,4-Dimethylphenol	ND	ug/l	10.					
2-Nitrophenol	ND	ug/l	20.					
4-Nitrophenol	ND	ug/l	10.					
2,4-Dinitrophenol	ND	ug/l	30.					
4,6-Dinitro-o-cresol	ND	ug/l	20.					
Pentachlorophenol	ND	ug/l	10.					
Phenol	ND	ug/l	7.0					
2-Methylphenol	ND	ug/l	6.0					
3-Methylphenol/4-Methylphenol	ND	ug/l	6.0					
2,4,5-Trichlorophenol	ND	ug/l	5.0					
2,6-Dichlorophenol	ND	ug/l	10.					
Benzoic Acid	ND	ug/l	50.					
Benzyl Alcohol	ND	ug/l	10.					
Carbazole	ND	ug/l	5.0					
Pyridine	ND	ug/l	50.					
2-Picoline	ND	ug/l	20.					
Pronamide	ND	ug/l	20.					
Methyl methanesulfonate	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	35.0	%	21-120					
Phenol-d6	25.0	%	10-120					
Nitrobenzene-d5	55.0	%	23-120					
2-Fluorobiphenyl	60.0	%	43-120					
2,4,6-Tribromophenol	89.0	%	10-120					
4-Terphenyl-d14	88.0	%	33-120					
Blank Analysis for sample(s) 01-02 (WG290754-1)								
PAH by GC/MS SIM 8270M				1	8270C-M	0815 18:30	0816 11:32	RL
Acenaphthene	ND	ug/l	0.20					
2-Chloronaphthalene	ND	ug/l	0.20					
Fluoranthene	ND	ug/l	0.20					
Hexachlorobutadiene	ND	ug/l	0.50					
Naphthalene	ND	ug/l	0.20					
Benzo(a)anthracene	ND	ug/l	0.20					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711768

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01-02 (WG290754-1)								
PAH by GC/MS SIM 8270M cont'd				1	8270C-M	0815 18:30	0816 11:32	RL
Benzo(a)pyrene	ND	ug/l	0.20					
Benzo(b)fluoranthene	ND	ug/l	0.20					
Benzo(k)fluoranthene	ND	ug/l	0.20					
Chrysene	ND	ug/l	0.20					
Acenaphthylene	ND	ug/l	0.20					
Anthracene	ND	ug/l	0.20					
Benzo(ghi)perylene	ND	ug/l	0.20					
Fluorene	ND	ug/l	0.20					
Phenanthrene	ND	ug/l	0.20					
Dibenzo(a,h)anthracene	ND	ug/l	0.20					
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20					
Pyrene	ND	ug/l	0.20					
1-Methylnaphthalene	ND	ug/l	0.20					
2-Methylnaphthalene	ND	ug/l	0.20					
Pentachlorophenol	ND	ug/l	0.80					
Hexachlorobenzene	ND	ug/l	0.80					
Perylene	ND	ug/l	0.20					
Biphenyl	ND	ug/l	0.20					
2,6-Dimethylnaphthalene	ND	ug/l	0.20					
1-Methylphenanthrene	ND	ug/l	0.20					
Benzo(e)Pyrene	ND	ug/l	0.20					
Hexachloroethane	ND	ug/l	0.80					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	36.0	%	21-120					
Phenol-d6	29.0	%	10-120					
Nitrobenzene-d5	54.0	%	23-120					
2-Fluorobiphenyl	55.0	%	43-120					
2,4,6-Tribromophenol	63.0	%	10-120					
4-Terphenyl-d14	101	%	33-120					

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

5. Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).

19. Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

GLOSSARY OF TERMS AND SYMBOLS

REF	Reference number in which test method may be found.
METHOD	Method number by which analysis was performed.
ID	Initials of the analyst.
ND	Not detected in comparison to the reported detection limit.
NI	Not Ignitable.
ug/cart	Micrograms per Cartridge.
H	The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

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.

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 8/15

ALPHA Job #: L0711768

ALPHA ANALYTICAL LABS

WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193

RAYNHAM, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: ERM-Boston

Address: 399 Boylston St 6th Floor
Boston, MA 02116

Phone: (617) 646-7800

Fax: (617) 267-6447

Email: jason.flattery@erm.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NA Excavation

Project Location: Raytheon - Wayland

Project #: 0051545

Project Manager: Jason Flattery

ALPHA Quote #:

Turn-Around Time

☐ Standard ☒ RUSH (only confirmed if pre-approved!)

Date Due: 72-hr Time:

8/20 per EPA regulations

Other Project Specific Requirements/Comments/Detection Limits:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program	Criteria
USEPA RGP	Discharge Limits (Appendix III)

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

SAMPLE HANDLING

Filtration
☐ Done
☒ Not needed
☐ Lab to do

Preservation
☐ Lab to do

(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs by 624	Total As, Cu, Ni, Fe	TSS, pH (150.1)	SVOCs by 8270 w/ Pentachlorophenol								Sample Specific Comments	TOTAL # BOTTLES
1768-01	INF-20070815-01	8/15/07	13:35	GW	BM	X	X	X	X									4
-02	EFF-20070815-01	8/15/07	13:32	GW	BM	X	X	X	X									4
-03	EFF2-20070808-01	8/15/07	13:31	GW	JDF		X											1

Container Type	V	P	P	P													
Preservative	H	K	A	A													

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
	8/15/07 15:30		8/15/07 15:30
	8/15/07 16:15		8/15/07 16:15

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

FORM NO: 01-01 (rev. 10-OCT-05)

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220 www.alphalab.com

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

CERTIFICATE OF ANALYSIS

Client: ERM-New England

Address: 399 Boylston Street
6th Floor
Boston, MA 02116

Attn: Mr. Jason Flattery

Project Number: 0051545

Site: NA SOIL EXCAVATION

Laboratory Job Number: L0711560

Date Received: 10-AUG-2007

Date Reported: 15-AUG-2007

Delivery Method: Alpha

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0711560-01	INF-20070810-01	RAYTHEON WAYLAND
L0711560-02	EFF-20070810-01	RAYTHEON WAYLAND

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

Authorized by: Michelle M. Morris
Technical Representative

ALPHA ANALYTICAL LABORATORIES
NARRATIVE REPORT

Laboratory Job Number: L0711560

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Solids, Total Suspended

L0711560-01 has an elevated detection limit due to the 6x dilution required by the elevated concentrations of Solids in the sample.

Volatile Organics

Re-analysis on a 12.5x dilution was required in order to quantitate sample L0711560-01 within the range of the calibration. The result is reported as a greater than value for the compound that exceeded the calibration on the initial analysis. The re-analysis was performed only for the compound which exceeded the range of the calibration.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

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

Laboratory Sample Number: L0711560-01 **Date Collected:** 10-AUG-2007 06:35
INF-20070810-01 **Date Received :** 10-AUG-2007
Sample Matrix: WATER **Date Reported :** 15-AUG-2007

Condition of Sample: Satisfactory **Field Prep:** None

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

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Solids, Total Suspended	520	mg/l	30	30	2540D		0813 14:05	DW
pH (H)	6.9	SU	-	30	4500H+-B		0813 17:15	LR
Total Metals								
Arsenic, Total	0.0051	mg/l	0.0005	1	6020	0811 10:30	0814 18:24	BM
Copper, Total	0.0332	mg/l	0.0005	1	6020	0811 10:30	0814 18:24	BM
Iron, Total	24	mg/l	0.05	19	200.7	0811 10:30	0813 14:09	AI
Nickel, Total	0.0307	mg/l	0.0005	1	6020	0811 10:30	0814 18:24	BM
Volatile Organics by GC/MS 624				5	624		0810 16:52	MM
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	1.5					
Chloroform	ND	ug/l	1.5					
Carbon tetrachloride	ND	ug/l	1.0					
1,2-Dichloropropane	ND	ug/l	3.5					
Dibromochloromethane	ND	ug/l	1.0					
1,1,2-Trichloroethane	ND	ug/l	1.5					
2-Chloroethylvinyl ether	ND	ug/l	10.					
Tetrachloroethene	>200	ug/l	1.5					
Chlorobenzene	ND	ug/l	3.5					
Trichlorofluoromethane	ND	ug/l	5.0					
1,2-Dichloroethane	ND	ug/l	1.5					
1,1,1-Trichloroethane	ND	ug/l	2.0					
Bromodichloromethane	ND	ug/l	1.0					
trans-1,3-Dichloropropene	ND	ug/l	1.5					
cis-1,3-Dichloropropene	ND	ug/l	1.5					
Bromoform	ND	ug/l	1.0					
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0					
Benzene	ND	ug/l	1.0					
Toluene	1.6	ug/l	1.0					
Ethylbenzene	ND	ug/l	1.0					
Chloromethane	ND	ug/l	10.					
Bromomethane	ND	ug/l	5.0					
Vinyl chloride	ND	ug/l	2.0					
Chloroethane	ND	ug/l	2.0					
1,1-Dichloroethene	ND	ug/l	1.0					
trans-1,2-Dichloroethene	ND	ug/l	1.5					

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

Laboratory Sample Number: L0711560-01
INF-20070810-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics by GC/MS 624 cont'd				5	624		0810 16:52	MM
cis-1,2-Dichloroethene	100	ug/l	1.0					
Trichloroethene	>200	ug/l	1					
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
p/m-Xylene	ND	ug/l	2.0					
o-xylene	ND	ug/l	1.0					
Xylene (Total)	ND	ug/l	2.0					
Styrene	ND	ug/l	1.0					
Acetone	ND	ug/l	10.					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	10.					
Vinyl acetate	ND	ug/l	20.					
4-Methyl-2-pentanone	ND	ug/l	10.					
2-Hexanone	ND	ug/l	10.					
Acrolein	ND	ug/l	8.0					
Acrylonitrile	ND	ug/l	10.					
Methyl tert butyl ether	ND	ug/l	20.					
1,4-Dioxane	ND	ug/l	2000					
Tert-Butyl Alcohol	ND	ug/l	100					
Tertiary-Amyl Methyl Ether	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
Pentafluorobenzene	102	%	80-120					
Fluorobenzene	98.0	%	80-120					
4-Bromofluorobenzene	106	%	80-120					
Volatile Organics by GC/MS 624				5	624		0813 11:47	MM
Tetrachloroethene	180	ug/l	19					
Trichloroethene	1900	ug/l	12					
Surrogate(s)	Recovery		QC Criteria					
Pentafluorobenzene	87.0	%	80-120					
Fluorobenzene	98.0	%	80-120					
4-Bromofluorobenzene	109	%	80-120					
SVOC's by GC/MS 8270				1	8270C	0811 10:30	0813 17:15	RL
Acenaphthene	ND	ug/l	4.9					
Benzidine	ND	ug/l	49.					
1,2,4-Trichlorobenzene	ND	ug/l	4.9					
Hexachlorobenzene	ND	ug/l	4.9					
Bis(2-chloroethyl)ether	ND	ug/l	4.9					
1-Chloronaphthalene	ND	ug/l	4.9					
2-Chloronaphthalene	ND	ug/l	5.9					
1,2-Dichlorobenzene	ND	ug/l	4.9					
1,3-Dichlorobenzene	ND	ug/l	4.9					
1,4-Dichlorobenzene	ND	ug/l	4.9					
3,3'-Dichlorobenzidine	ND	ug/l	49.					
2,4-Dinitrotoluene	ND	ug/l	5.9					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711560-01
INF-20070810-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
SVOC's by GC/MS 8270 cont'd				1	8270C	0811 10:30	0813 17:15	RL
2,6-Dinitrotoluene	ND	ug/l	4.9					
Azobenzene	ND	ug/l	4.9					
Fluoranthene	ND	ug/l	4.9					
4-Chlorophenyl phenyl ether	ND	ug/l	4.9					
4-Bromophenyl phenyl ether	ND	ug/l	4.9					
Bis(2-chloroisopropyl)ether	ND	ug/l	4.9					
Bis(2-chloroethoxy)methane	ND	ug/l	4.9					
Hexachlorobutadiene	ND	ug/l	9.9					
Hexachlorocyclopentadiene	ND	ug/l	30.					
Hexachloroethane	ND	ug/l	4.9					
Isophorone	ND	ug/l	4.9					
Naphthalene	ND	ug/l	4.9					
Nitrobenzene	ND	ug/l	4.9					
NDPA/DPA	ND	ug/l	15.					
n-Nitrosodi-n-propylamine	ND	ug/l	4.9					
Bis(2-ethylhexyl)phthalate	9.8	ug/l	4.9					
Butyl benzyl phthalate	18	ug/l	4.9					
Di-n-butylphthalate	ND	ug/l	4.9					
Di-n-octylphthalate	ND	ug/l	4.9					
Diethyl phthalate	ND	ug/l	4.9					
Dimethyl phthalate	ND	ug/l	4.9					
Benzo(a)anthracene	ND	ug/l	4.9					
Benzo(a)pyrene	ND	ug/l	4.9					
Benzo(b)fluoranthene	ND	ug/l	4.9					
Benzo(k)fluoranthene	ND	ug/l	4.9					
Chrysene	ND	ug/l	4.9					
Acenaphthylene	ND	ug/l	4.9					
Anthracene	ND	ug/l	4.9					
Benzo(ghi)perylene	ND	ug/l	4.9					
Fluorene	ND	ug/l	4.9					
Phenanthrene	ND	ug/l	4.9					
Dibenzo(a,h)anthracene	ND	ug/l	4.9					
Indeno(1,2,3-cd)pyrene	ND	ug/l	6.9					
Pyrene	ND	ug/l	4.9					
Benzo(e)pyrene	ND	ug/l	4.9					
Biphenyl	ND	ug/l	4.9					
Perylene	ND	ug/l	4.9					
Aniline	ND	ug/l	20.					
4-Chloroaniline	ND	ug/l	4.9					
1-Methylnaphthalene	ND	ug/l	4.9					
2-Nitroaniline	ND	ug/l	4.9					
3-Nitroaniline	ND	ug/l	4.9					
4-Nitroaniline	ND	ug/l	6.9					
Dibenzofuran	ND	ug/l	4.9					
a,a-Dimethylphenethylamine	ND	ug/l	49.					
Hexachloropropene	ND	ug/l	9.9					
Nitrosodi-n-butylamine	ND	ug/l	9.9					
2-Methylnaphthalene	ND	ug/l	4.9					
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711560-01
INF-20070810-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
SVOC's by GC/MS 8270 cont'd				1	8270C	0811 10:30	0813 17:15	RL
Pentachlorobenzene	ND	ug/l	20.					
a-Naphthylamine	ND	ug/l	25.					
b-Naphthylamine	ND	ug/l	20.					
Phenacetin	ND	ug/l	9.9					
Dimethoate	ND	ug/l	20.					
4-Aminobiphenyl	ND	ug/l	9.9					
Pentachloronitrobenzene	ND	ug/l	9.9					
Isodrin	ND	ug/l	9.9					
p-Dimethylaminoazobenzene	ND	ug/l	9.9					
Chlorobenzilate	ND	ug/l	20.					
3-Methylcholanthrene	ND	ug/l	20.					
Ethyl Methanesulfonate	ND	ug/l	15.					
Acetophenone	ND	ug/l	20.					
Nitrosodipiperidine	ND	ug/l	20.					
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.					
n-Nitrosodimethylamine	ND	ug/l	49.					
2,4,6-Trichlorophenol	ND	ug/l	4.9					
p-Chloro-m-cresol	ND	ug/l	4.9					
2-Chlorophenol	ND	ug/l	5.9					
2,4-Dichlorophenol	ND	ug/l	9.9					
2,4-Dimethylphenol	ND	ug/l	9.9					
2-Nitrophenol	ND	ug/l	20.					
4-Nitrophenol	ND	ug/l	9.9					
2,4-Dinitrophenol	ND	ug/l	30.					
4,6-Dinitro-o-cresol	ND	ug/l	20.					
Pentachlorophenol	ND	ug/l	9.9					
Phenol	ND	ug/l	6.9					
2-Methylphenol	ND	ug/l	5.9					
3-Methylphenol/4-Methylphenol	ND	ug/l	5.9					
2,4,5-Trichlorophenol	ND	ug/l	4.9					
2,6-Dichlorophenol	ND	ug/l	9.9					
Benzoic Acid	ND	ug/l	49.					
Benzyl Alcohol	ND	ug/l	9.9					
Carbazole	ND	ug/l	4.9					
Pyridine	ND	ug/l	49.					
2-Picoline	ND	ug/l	20.					
Pronamide	ND	ug/l	20.					
Methyl methanesulfonate	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	34.0	%	21-120					
Phenol-d6	25.0	%	10-120					
Nitrobenzene-d5	63.0	%	23-120					
2-Fluorobiphenyl	59.0	%	43-120					
2,4,6-Tribromophenol	102	%	10-120					
4-Terphenyl-d14	86.0	%	33-120					
PAH by GC/MS SIM 8270M				1	8270C-M	0811 10:30	0813 17:54	HL
Acenaphthene	ND	ug/l	0.20					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711560-01
INF-20070810-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
PAH by GC/MS SIM 8270M cont'd				1	8270C-M	0811 10:30	0813 17:54	HL
2-Chloronaphthalene	ND	ug/l	0.20					
Fluoranthene	ND	ug/l	0.20					
Hexachlorobutadiene	ND	ug/l	0.50					
Naphthalene	ND	ug/l	0.20					
Benzo(a)anthracene	ND	ug/l	0.20					
Benzo(a)pyrene	ND	ug/l	0.20					
Benzo(b)fluoranthene	ND	ug/l	0.20					
Benzo(k)fluoranthene	ND	ug/l	0.20					
Chrysene	ND	ug/l	0.20					
Acenaphthylene	ND	ug/l	0.20					
Anthracene	ND	ug/l	0.20					
Benzo(ghi)perylene	ND	ug/l	0.20					
Fluorene	ND	ug/l	0.20					
Phenanthrene	ND	ug/l	0.20					
Dibenzo(a,h)anthracene	ND	ug/l	0.20					
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20					
Pyrene	ND	ug/l	0.20					
1-Methylnaphthalene	ND	ug/l	0.20					
2-Methylnaphthalene	ND	ug/l	0.20					
Pentachlorophenol	ND	ug/l	0.80					
Hexachlorobenzene	ND	ug/l	0.80					
Perylene	ND	ug/l	0.20					
Biphenyl	ND	ug/l	0.20					
2,6-Dimethylnaphthalene	ND	ug/l	0.20					
1-Methylphenanthrene	ND	ug/l	0.20					
Benzo(e)Pyrene	ND	ug/l	0.20					
Hexachloroethane	ND	ug/l	0.80					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	31.0	%	21-120					
Phenol-d6	25.0	%	10-120					
Nitrobenzene-d5	52.0	%	23-120					
2-Fluorobiphenyl	49.0	%	43-120					
2,4,6-Tribromophenol	65.0	%	10-120					
4-Terphenyl-d14	72.0	%	33-120					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

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

Laboratory Sample Number: L0711560-02 **Date Collected:** 10-AUG-2007 06:45
EFF-20070810-01 **Date Received :** 10-AUG-2007
Sample Matrix: WATER **Date Reported :** 15-AUG-2007

Condition of Sample: Satisfactory **Field Prep:** None

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

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Solids, Total Suspended	ND	mg/l	5.0	30	2540D		0813 14:05	DW
pH (H)	7.9	SU	-	30	4500H+-B		0813 17:15	LR
Total Metals								
Arsenic, Total	0.0216	mg/l	0.0005	1	6020	0811 10:30	0814 18:29	BM
Copper, Total	0.0812	mg/l	0.0005	1	6020	0811 10:30	0814 18:29	BM
Iron, Total	1.0	mg/l	0.05	19	200.7	0811 10:30	0813 14:14	AI
Nickel, Total	0.0086	mg/l	0.0005	1	6020	0811 10:30	0814 18:29	BM
Volatile Organics by GC/MS 624				5	624		0810 16:18	MM
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	1.5					
Chloroform	ND	ug/l	1.5					
Carbon tetrachloride	ND	ug/l	1.0					
1,2-Dichloropropane	ND	ug/l	3.5					
Dibromochloromethane	ND	ug/l	1.0					
1,1,2-Trichloroethane	ND	ug/l	1.5					
2-Chloroethylvinyl ether	ND	ug/l	10.					
Tetrachloroethene	ND	ug/l	1.5					
Chlorobenzene	ND	ug/l	3.5					
Trichlorofluoromethane	ND	ug/l	5.0					
1,2-Dichloroethane	ND	ug/l	1.5					
1,1,1-Trichloroethane	ND	ug/l	2.0					
Bromodichloromethane	ND	ug/l	1.0					
trans-1,3-Dichloropropene	ND	ug/l	1.5					
cis-1,3-Dichloropropene	ND	ug/l	1.5					
Bromoform	ND	ug/l	1.0					
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0					
Benzene	ND	ug/l	1.0					
Toluene	ND	ug/l	1.0					
Ethylbenzene	ND	ug/l	1.0					
Chloromethane	ND	ug/l	10.					
Bromomethane	ND	ug/l	5.0					
Vinyl chloride	ND	ug/l	2.0					
Chloroethane	ND	ug/l	2.0					
1,1-Dichloroethene	ND	ug/l	1.0					
trans-1,2-Dichloroethene	ND	ug/l	1.5					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711560-02
EFF-20070810-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics by GC/MS 624 cont'd				5	624		0810 16:18	MM
cis-1,2-Dichloroethene	ND	ug/l	1.0					
Trichloroethene	ND	ug/l	1.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
p/m-Xylene	ND	ug/l	2.0					
o-xylene	ND	ug/l	1.0					
Xylene (Total)	ND	ug/l	2.0					
Styrene	ND	ug/l	1.0					
Acetone	ND	ug/l	10.					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	10.					
Vinyl acetate	ND	ug/l	20.					
4-Methyl-2-pentanone	ND	ug/l	10.					
2-Hexanone	ND	ug/l	10.					
Acrolein	ND	ug/l	8.0					
Acrylonitrile	ND	ug/l	10.					
Methyl tert butyl ether	ND	ug/l	20.					
1,4-Dioxane	ND	ug/l	2000					
Tert-Butyl Alcohol	ND	ug/l	100					
Tertiary-Amyl Methyl Ether	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
Pentafluorobenzene	84.0	%	80-120					
Fluorobenzene	97.0	%	80-120					
4-Bromofluorobenzene	107	%	80-120					
SVOC's by GC/MS 8270				1	8270C	0811 10:30	0813 17:46	RL
Acenaphthene	ND	ug/l	4.8					
Benzidine	ND	ug/l	48.					
1,2,4-Trichlorobenzene	ND	ug/l	4.8					
Hexachlorobenzene	ND	ug/l	4.8					
Bis(2-chloroethyl)ether	ND	ug/l	4.8					
1-Chloronaphthalene	ND	ug/l	4.8					
2-Chloronaphthalene	ND	ug/l	5.7					
1,2-Dichlorobenzene	ND	ug/l	4.8					
1,3-Dichlorobenzene	ND	ug/l	4.8					
1,4-Dichlorobenzene	ND	ug/l	4.8					
3,3'-Dichlorobenzidine	ND	ug/l	48.					
2,4-Dinitrotoluene	ND	ug/l	5.7					
2,6-Dinitrotoluene	ND	ug/l	4.8					
Azobenzene	ND	ug/l	4.8					
Fluoranthene	ND	ug/l	4.8					
4-Chlorophenyl phenyl ether	ND	ug/l	4.8					
4-Bromophenyl phenyl ether	ND	ug/l	4.8					
Bis(2-chloroisopropyl)ether	ND	ug/l	4.8					
Bis(2-chloroethoxy)methane	ND	ug/l	4.8					
Hexachlorobutadiene	ND	ug/l	9.6					
Hexachlorocyclopentadiene	ND	ug/l	29.					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711560-02
EFF-20070810-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
SVOC's by GC/MS 8270 cont'd				1	8270C	0811 10:30	0813 17:46	RL
Hexachloroethane	ND	ug/l	4.8					
Isophorone	ND	ug/l	4.8					
Naphthalene	ND	ug/l	4.8					
Nitrobenzene	ND	ug/l	4.8					
NDPA/DPA	ND	ug/l	14.					
n-Nitrosodi-n-propylamine	ND	ug/l	4.8					
Bis(2-ethylhexyl)phthalate	ND	ug/l	4.8					
Butyl benzyl phthalate	ND	ug/l	4.8					
Di-n-butylphthalate	ND	ug/l	4.8					
Di-n-octylphthalate	ND	ug/l	4.8					
Diethyl phthalate	ND	ug/l	4.8					
Dimethyl phthalate	ND	ug/l	4.8					
Benzo(a)anthracene	ND	ug/l	4.8					
Benzo(a)pyrene	ND	ug/l	4.8					
Benzo(b)fluoranthene	ND	ug/l	4.8					
Benzo(k)fluoranthene	ND	ug/l	4.8					
Chrysene	ND	ug/l	4.8					
Acenaphthylene	ND	ug/l	4.8					
Anthracene	ND	ug/l	4.8					
Benzo(ghi)perylene	ND	ug/l	4.8					
Fluorene	ND	ug/l	4.8					
Phenanthrene	ND	ug/l	4.8					
Dibenzo(a,h)anthracene	ND	ug/l	4.8					
Indeno(1,2,3-cd)pyrene	ND	ug/l	6.7					
Pyrene	ND	ug/l	4.8					
Benzo(e)pyrene	ND	ug/l	4.8					
Biphenyl	ND	ug/l	4.8					
Perylene	ND	ug/l	4.8					
Aniline	ND	ug/l	19.					
4-Chloroaniline	ND	ug/l	4.8					
1-Methylnaphthalene	ND	ug/l	4.8					
2-Nitroaniline	ND	ug/l	4.8					
3-Nitroaniline	ND	ug/l	4.8					
4-Nitroaniline	ND	ug/l	6.7					
Dibenzofuran	ND	ug/l	4.8					
a,a-Dimethylphenethylamine	ND	ug/l	48.					
Hexachloropropene	ND	ug/l	9.6					
Nitrosodi-n-butylamine	ND	ug/l	9.6					
2-Methylnaphthalene	ND	ug/l	4.8					
1,2,4,5-Tetrachlorobenzene	ND	ug/l	19.					
Pentachlorobenzene	ND	ug/l	19.					
a-Naphthylamine	ND	ug/l	24.					
b-Naphthylamine	ND	ug/l	19.					
Phenacetin	ND	ug/l	9.6					
Dimethoate	ND	ug/l	19.					
4-Aminobiphenyl	ND	ug/l	9.6					
Pentachloronitrobenzene	ND	ug/l	9.6					
Isodrin	ND	ug/l	9.6					
p-Dimethylaminoazobenzene	ND	ug/l	9.6					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711560-02
EFF-20070810-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
SVOC's by GC/MS 8270 cont'd				1	8270C	0811 10:30	0813 17:46	RL
Chlorobenzilate	ND	ug/l	19.					
3-Methylcholanthrene	ND	ug/l	19.					
Ethyl Methanesulfonate	ND	ug/l	14.					
Acetophenone	ND	ug/l	19.					
Nitrosodipiperidine	ND	ug/l	19.					
7,12-Dimethylbenz(a)anthracene	ND	ug/l	19.					
n-Nitrosodimethylamine	ND	ug/l	48.					
2,4,6-Trichlorophenol	ND	ug/l	4.8					
p-Chloro-m-cresol	ND	ug/l	4.8					
2-Chlorophenol	ND	ug/l	5.7					
2,4-Dichlorophenol	ND	ug/l	9.6					
2,4-Dimethylphenol	ND	ug/l	9.6					
2-Nitrophenol	ND	ug/l	19.					
4-Nitrophenol	ND	ug/l	9.6					
2,4-Dinitrophenol	ND	ug/l	29.					
4,6-Dinitro-o-cresol	ND	ug/l	19.					
Pentachlorophenol	ND	ug/l	9.6					
Phenol	ND	ug/l	6.7					
2-Methylphenol	ND	ug/l	5.7					
3-Methylphenol/4-Methylphenol	ND	ug/l	5.7					
2,4,5-Trichlorophenol	ND	ug/l	4.8					
2,6-Dichlorophenol	ND	ug/l	9.6					
Benzoic Acid	ND	ug/l	48.					
Benzyl Alcohol	ND	ug/l	9.6					
Carbazole	ND	ug/l	4.8					
Pyridine	ND	ug/l	48.					
2-Picoline	ND	ug/l	19.					
Pronamide	ND	ug/l	19.					
Methyl methanesulfonate	ND	ug/l	19.					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	37.0	%	21-120					
Phenol-d6	27.0	%	10-120					
Nitrobenzene-d5	65.0	%	23-120					
2-Fluorobiphenyl	67.0	%	43-120					
2,4,6-Tribromophenol	106	%	10-120					
4-Terphenyl-d14	91.0	%	33-120					
PAH by GC/MS SIM 8270M				1	8270C-M	0811 10:30	0813 18:43	HL
Acenaphthene	ND	ug/l	0.19					
2-Chloronaphthalene	ND	ug/l	0.19					
Fluoranthene	ND	ug/l	0.19					
Hexachlorobutadiene	ND	ug/l	0.48					
Naphthalene	ND	ug/l	0.19					
Benzo(a)anthracene	ND	ug/l	0.19					
Benzo(a)pyrene	ND	ug/l	0.19					
Benzo(b)fluoranthene	ND	ug/l	0.19					
Benzo(k)fluoranthene	ND	ug/l	0.19					
Chrysene	ND	ug/l	0.19					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711560-02
EFF-20070810-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
PAH by GC/MS SIM 8270M cont'd				1	8270C-M	0811 10:30	0813 18:43	HL
Acenaphthylene	ND	ug/l	0.19					
Anthracene	ND	ug/l	0.19					
Benzo(ghi)perylene	ND	ug/l	0.19					
Fluorene	ND	ug/l	0.19					
Phenanthrene	ND	ug/l	0.19					
Dibenzo(a,h)anthracene	ND	ug/l	0.19					
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.19					
Pyrene	ND	ug/l	0.19					
1-Methylnaphthalene	ND	ug/l	0.19					
2-Methylnaphthalene	ND	ug/l	0.19					
Pentachlorophenol	ND	ug/l	0.76					
Hexachlorobenzene	ND	ug/l	0.76					
Perylene	ND	ug/l	0.19					
Biphenyl	ND	ug/l	0.19					
2,6-Dimethylnaphthalene	ND	ug/l	0.19					
1-Methylphenanthrene	ND	ug/l	0.19					
Benzo(e)Pyrene	ND	ug/l	0.19					
Hexachloroethane	ND	ug/l	0.76					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	28.0	%	21-120					
Phenol-d6	24.0	%	10-120					
Nitrobenzene-d5	47.0	%	23-120					
2-Fluorobiphenyl	48.0	%	43-120					
2,4,6-Tribromophenol	62.0	%	10-120					
4-Terphenyl-d14	72.0	%	33-120					

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

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0711560

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Solids, Total Suspended for sample(s) 01-02 (L0711360-01, WG290366-2)					
Solids, Total Suspended	300	300	mg/l	0	32
pH for sample(s) 01-02 (L0711644-02, WG290450-2)					
pH (H)	4.6	4.6	SU	0	5
Total Metals for sample(s) 01-02 (L0711377-02, WG290336-1)					
Arsenic, Total	ND	ND	mg/l	NC	20
Copper, Total	0.0044	0.0044	mg/l	0	20
Nickel, Total	0.0081	0.0085	mg/l	4	20
Total Metals for sample(s) 01-02 (L0711580-01, WG290338-1)					
Iron, Total	13	13	mg/l	0	
Volatile Organics by GC/MS 624 for sample(s) 01-02 (L0711407-02, WG290227-2)					
Chlorobenzene	ND	ND	ug/l	NC	30
Benzene	ND	ND	ug/l	NC	30
1,2-Dichlorobenzene	ND	ND	ug/l	NC	30
Surrogate(s)	Recovery				QC Criteria
Pentafluorobenzene	85.0	88.0	%		80-120
Fluorobenzene	99.0	98.0	%		80-120
4-Bromofluorobenzene	110	106	%		80-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0711560

Parameter	% Recovery	QC Criteria
pH LCS for sample(s) 01-02 (WG290450-1)		
pH	100	99-101
Total Metals LCS for sample(s) 01-02 (WG290336-4)		
Arsenic, Total	95	80-120
Copper, Total	99	80-120
Nickel, Total	100	80-120
Total Metals LCS for sample(s) 01-02 (WG290338-4)		
Iron, Total	95	
Volatile Organics by GC/MS 624 LCS for sample(s) 01-02 (WG290227-5)		
Methylene chloride	113	10-221
1,1-Dichloroethane	102	59-155
Chloroform	113	51-138
Carbon tetrachloride	112	70-140
1,2-Dichloropropane	109	10-210
Dibromochloromethane	101	53-149
1,1,2-Trichloroethane	98	52-150
2-Chloroethylvinyl ether	70	10-305
Tetrachloroethene	101	64-148
Chlorobenzene	94	37-160
Trichlorofluoromethane	127	17-181
1,2-Dichloroethane	118	49-155
1,1,1-Trichloroethane	108	52-162
Bromodichloromethane	98	35-155
trans-1,3-Dichloropropene	99	17-183
cis-1,3-Dichloropropene	90	10-227
Bromoform	89	45-169
1,1,2,2-Tetrachloroethane	92	46-157
Benzene	122	37-151
Toluene	107	47-150
Ethylbenzene	109	37-162
Chloromethane	111	10-273
Bromomethane	142	10-242
Vinyl chloride	134	10-251
Chloroethane	135	14-230
1,1-Dichloroethene	119	10-234
trans-1,2-Dichloroethene	104	54-156
cis-1,2-Dichloroethene	119	60-140
Trichloroethene	112	71-157
1,2-Dichlorobenzene	96	18-190
1,3-Dichlorobenzene	109	59-156
1,4-Dichlorobenzene	106	18-190
p/m-Xylene	109	40-160
o-Xylene	105	40-160
XYLENE (TOTAL)	107	40-160
Styrene	86	40-160
Acetone	131	40-160

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0711560

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 LCS for sample(s) 01-02 (WG290227-5)		
Carbon disulfide	137	40-160
2-Butanone	106	40-160
Vinyl acetate	107	40-160
4-Methyl-2-pentanone	98	40-160
2-Hexanone	101	40-160
Acrolein	129	40-160
Acrylonitrile	122	40-160
Surrogate(s)		
Pentafluorobenzene	104	80-120
Fluorobenzene	107	80-120
4-Bromofluorobenzene	98	80-120
Volatile Organics by GC/MS 624 LCS for sample(s) 01 (WG290227-7)		
Methylene chloride	128	10-221
1,1-Dichloroethane	107	59-155
Chloroform	121	51-138
Carbon tetrachloride	118	70-140
1,2-Dichloropropane	117	10-210
Dibromochloromethane	98	53-149
1,1,2-Trichloroethane	97	52-150
2-Chloroethylvinyl ether	78	10-305
Tetrachloroethene	98	64-148
Chlorobenzene	88	37-160
Trichlorofluoromethane	136	17-181
1,2-Dichloroethane	129	49-155
1,1,1-Trichloroethane	116	52-162
Bromodichloromethane	95	35-155
trans-1,3-Dichloropropene	88	17-183
cis-1,3-Dichloropropene	83	10-227
Bromoform	83	45-169
1,1,2,2-Tetrachloroethane	90	46-157
Benzene	130	37-151
Toluene	104	47-150
Ethylbenzene	104	37-162
Chloromethane	112	10-273
Bromomethane	118	10-242
Vinyl chloride	145	10-251
Chloroethane	141	14-230
1,1-Dichloroethene	132	10-234
trans-1,2-Dichloroethene	123	54-156
cis-1,2-Dichloroethene	125	60-140
Trichloroethene	120	71-157
1,2-Dichlorobenzene	89	18-190
1,3-Dichlorobenzene	88	59-156
1,4-Dichlorobenzene	96	18-190
p/m-Xylene	105	40-160
o-Xylene	100	40-160

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0711560

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 LCS for sample(s) 01 (WG290227-7)		
XYLENE (TOTAL)	104	40-160
Styrene	85	40-160
Acetone	144	40-160
Carbon disulfide	137	40-160
2-Butanone	112	40-160
Vinyl acetate	95	40-160
4-Methyl-2-pentanone	97	40-160
2-Hexanone	100	40-160
Acrolein	143	40-160
Acrylonitrile	125	40-160
Surrogate(s)		
Pentafluorobenzene	108	80-120
Fluorobenzene	111	80-120
4-Bromofluorobenzene	98	80-120
SVOC's by GC/MS 8270 LCS for sample(s) 01-02 (WG290358-2)		
Acenaphthene	73	46-118
1,2,4-Trichlorobenzene	47	39-98
2-Chloronaphthalene	69	40-140
1,2-Dichlorobenzene	42	40-140
1,4-Dichlorobenzene	38	36-97
2,4-Dinitrotoluene	86	24-96
2,6-Dinitrotoluene	89	40-140
Fluoranthene	103	40-140
4-Chlorophenyl phenyl ether	81	40-140
n-Nitrosodi-n-propylamine	52	41-116
Butyl benzyl phthalate	106	40-140
Anthracene	84	40-140
Pyrene	100	26-127
Hexachloropropene	45	40-140
P-Chloro-M-Cresol	74	23-97
2-Chlorophenol	44	27-123
2-Nitrophenol	55	30-130
4-Nitrophenol	38	10-80
2,4-Dinitrophenol	87	30-130
Pentachlorophenol	101	9-103
Phenol	17	12-110
Surrogate(s)		
2-Fluorophenol	28	21-120
Phenol-d6	21	10-120
Nitrobenzene-d5	52	23-120
2-Fluorobiphenyl	63	43-120
2,4,6-Tribromophenol	106	10-120
4-Terphenyl-d14	98	33-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0711560

Continued

Parameter	% Recovery	QC Criteria
PAH by GC/MS SIM 8270M LCS for sample(s) 01-02 (WG290360-2)		
Acenaphthene	46	40-140
2-Chloronaphthalene	42	40-140
Fluoranthene	59	40-140
Anthracene	48	40-140
Pyrene	61	40-140
Pentachlorophenol	52	30-130
Surrogate(s)		
2-Fluorophenol	28	21-120
Phenol-d6	22	10-120
Nitrobenzene-d5	45	23-120
2-Fluorobiphenyl	43	43-120
2,4,6-Tribromophenol	55	10-120
4-Terphenyl-d14	87	33-120
Total Metals SPIKE for sample(s) 01-02 (L0711377-02, WG290336-2)		
Arsenic, Total	103	80-120
Copper, Total	95	80-120
Nickel, Total	100	80-120
Total Metals SPIKE for sample(s) 01-02 (L0711580-01, WG290338-2)		
Iron, Total	100	
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01-02 (L0711407-01, WG290227-1)		
Methylene chloride	104	10-221
1,1-Dichloroethane	90	59-155
Chloroform	102	51-138
Carbon tetrachloride	102	70-140
1,2-Dichloropropane	100	10-210
Dibromochloromethane	87	53-149
1,1,2-Trichloroethane	88	52-150
2-Chloroethylvinyl ether	72	10-305
Tetrachloroethene	88	64-148
Chlorobenzene	82	37-160
Trichlorofluoromethane	114	17-181
1,2-Dichloroethane	107	49-155
1,1,1-Trichloroethane	93	52-162
Bromodichloromethane	85	35-155
trans-1,3-Dichloropropene	81	17-183
cis-1,3-Dichloropropene	72	10-227
Bromoform	77	45-169
1,1,2,2-Tetrachloroethane	83	46-157
Benzene	114	35-151
Toluene	93	47-150
Ethylbenzene	97	37-162
Chloromethane	116	10-273
Bromomethane	122	10-242
Vinyl chloride	136	10-251

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0711560

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01-02 (L0711407-01, WG290227-1)		
Chloroethane	125	14-230
1,1-Dichloroethene	110	10-234
trans-1,2-Dichloroethene	92	54-156
cis-1,2-Dichloroethene	105	60-140
Trichloroethene	97	71-157
1,2-Dichlorobenzene	82	18-190
1,3-Dichlorobenzene	80	59-156
1,4-Dichlorobenzene	86	18-190
p/m-Xylene	97	40-160
o-Xylene	93	40-160
XYLENE (TOTAL)	96	40-160
Styrene	76	40-160
Acetone	128	40-160
Carbon disulfide	103	40-160
2-Butanone	104	40-160
Vinyl acetate	81	40-160
4-Methyl-2-pentanone	99	40-160
2-Hexanone	99	40-160
Acrolein	108	40-160
Acrylonitrile	114	40-160
Surrogate(s)		
Pentafluorobenzene	105	80-120
Fluorobenzene	110	80-120
4-Bromofluorobenzene	97	80-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0711560

Parameter	MS %	MSD %	RPD	RPD Limit	MS/MSD Limits
SVOC's by GC/MS 8270 for sample(s) 01-02 (L0711580-01, WG290358-4)					
Acenaphthene	72	72	0	30	46-118
1,2,4-Trichlorobenzene	50	50	0	30	39-98
2-Chloronaphthalene	72	68	6	30	40-140
1,2-Dichlorobenzene	45	45	0	30	40-140
1,4-Dichlorobenzene	43	42	2	30	36-97
2,4-Dinitrotoluene	86	81	6	30	24-96
2,6-Dinitrotoluene	99	90	10	30	40-140
Fluoranthene	95	90	5	30	40-140
4-Chlorophenyl phenyl ether	86	81	6	30	40-140
n-Nitrosodi-n-propylamine	54	54	0	30	41-116
Butyl benzyl phthalate	95	90	5	30	40-140
Anthracene	77	77	0	30	40-140
Pyrene	95	90	5	30	26-127
Hexachloropropene	50	45	11	30	40-140
P-Chloro-M-Cresol	83	79	5	30	23-97
2-Chlorophenol	54	54	0	30	27-123
2-Nitrophenol	63	61	3	30	30-130
4-Nitrophenol	79	70	12	30	10-80
2,4-Dinitrophenol	97	88	10	30	30-130
Pentachlorophenol	100	99	1	30	9-103
Phenol	36	36	0	30	12-110
Surrogate(s)					
2-Fluorophenol	48	47	2		21-120
Phenol-d6	45	47	4		10-120
Nitrobenzene-d5	58	58	0		23-120
2-Fluorobiphenyl	69	69	0		43-120
2,4,6-Tribromophenol	111	108	3		10-120
4-Terphenyl-d14	87	85	2		33-120
PAH by GC/MS SIM 8270M for sample(s) 01-02 (L0711580-01, WG290360-4)					
Acenaphthene	54	54	0	40	40-140
2-Chloronaphthalene	59	59	0	40	40-140
Fluoranthene	76	72	5	40	40-140
Anthracene	63	63	0	40	40-140
Pyrene	76	72	5	40	40-140
Pentachlorophenol	81	74	9	40	30-130
Surrogate(s)					
2-Fluorophenol	48	46	4		21-120
Phenol-d6	50	48	4		10-120
Nitrobenzene-d5	56	55	2		23-120
2-Fluorobiphenyl	58	60	3		43-120
2,4,6-Tribromophenol	60	62	3		10-120
4-Terphenyl-d14	74	72	3		33-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711560

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01-02 (WG290366-1)								
Solids, Total Suspended	ND	mg/l	5.0	30	2540D		0813 14:05	DW
Blank Analysis for sample(s) 01-02 (WG290336-3)								
Total Metals								
Arsenic, Total	ND	mg/l	0.0005	1	6020	0811 10:30	0814 17:50	BM
Copper, Total	ND	mg/l	0.0005	1	6020	0811 10:30	0814 17:50	BM
Nickel, Total	ND	mg/l	0.0005	1	6020	0811 10:30	0814 17:50	BM
Blank Analysis for sample(s) 01-02 (WG290338-3)								
Total Metals				19	200.7			
Iron, Total	ND	mg/l	0.05	19	200.7	0811 10:30	0813 13:05	AI
Blank Analysis for sample(s) 01-02 (WG290227-6)								
Volatile Organics by GC/MS 624				5	624		0810 07:58	MM
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	1.5					
Chloroform	ND	ug/l	1.5					
Carbon tetrachloride	ND	ug/l	1.0					
1,2-Dichloropropane	ND	ug/l	3.5					
Dibromochloromethane	ND	ug/l	1.0					
1,1,2-Trichloroethane	ND	ug/l	1.5					
2-Chloroethylvinyl ether	ND	ug/l	10.					
Tetrachloroethene	ND	ug/l	1.5					
Chlorobenzene	ND	ug/l	3.5					
Trichlorofluoromethane	ND	ug/l	5.0					
1,2-Dichloroethane	ND	ug/l	1.5					
1,1,1-Trichloroethane	ND	ug/l	2.0					
Bromodichloromethane	ND	ug/l	1.0					
trans-1,3-Dichloropropene	ND	ug/l	1.5					
cis-1,3-Dichloropropene	ND	ug/l	1.5					
Bromoform	ND	ug/l	1.0					
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0					
Benzene	ND	ug/l	1.0					
Toluene	ND	ug/l	1.0					
Ethylbenzene	ND	ug/l	1.0					
Chloromethane	ND	ug/l	10.					
Bromomethane	ND	ug/l	5.0					
Vinyl chloride	ND	ug/l	2.0					
Chloroethane	ND	ug/l	2.0					
1,1-Dichloroethene	ND	ug/l	1.0					
trans-1,2-Dichloroethene	ND	ug/l	1.5					
cis-1,2-Dichloroethene	ND	ug/l	1.0					
Trichloroethene	ND	ug/l	1.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711560

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01-02 (WG290227-6)								
Volatile Organics by GC/MS 624 cont'd				5	624		0810 07:58	MM
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
p/m-Xylene	ND	ug/l	2.0					
o-xylene	ND	ug/l	1.0					
Xylene (Total)	ND	ug/l	2.0					
Styrene	ND	ug/l	1.0					
Acetone	ND	ug/l	10.					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	10.					
Vinyl acetate	ND	ug/l	20.					
4-Methyl-2-pentanone	ND	ug/l	10.					
2-Hexanone	ND	ug/l	10.					
Acrolein	ND	ug/l	8.0					
Acrylonitrile	ND	ug/l	10.					
Surrogate(s)	Recovery		QC Criteria					
Pentafluorobenzene	91.0	%	80-120					
Fluorobenzene	100	%	80-120					
4-Bromofluorobenzene	107	%	80-120					
Blank Analysis for sample(s) 01 (WG290227-8)								
Volatile Organics by GC/MS 624				5	624		0813 09:33	MM
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	1.5					
Chloroform	ND	ug/l	1.5					
Carbon tetrachloride	ND	ug/l	1.0					
1,2-Dichloropropane	ND	ug/l	3.5					
Dibromochloromethane	ND	ug/l	1.0					
1,1,2-Trichloroethane	ND	ug/l	1.5					
2-Chloroethylvinyl ether	ND	ug/l	10.					
Tetrachloroethene	ND	ug/l	1.5					
Chlorobenzene	ND	ug/l	3.5					
Trichlorofluoromethane	ND	ug/l	5.0					
1,2-Dichloroethane	ND	ug/l	1.5					
1,1,1-Trichloroethane	ND	ug/l	2.0					
Bromodichloromethane	ND	ug/l	1.0					
trans-1,3-Dichloropropene	ND	ug/l	1.5					
cis-1,3-Dichloropropene	ND	ug/l	1.5					
Bromoform	ND	ug/l	1.0					
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0					
Benzene	ND	ug/l	1.0					
Toluene	ND	ug/l	1.0					
Ethylbenzene	ND	ug/l	1.0					
Chloromethane	ND	ug/l	10.					
Bromomethane	ND	ug/l	5.0					
Vinyl chloride	ND	ug/l	2.0					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711560

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG290227-8)								
Volatile Organics by GC/MS 624 cont'd				5	624		0813 09:33	MM
Chloroethane	ND	ug/l	2.0					
1,1-Dichloroethene	ND	ug/l	1.0					
trans-1,2-Dichloroethene	ND	ug/l	1.5					
cis-1,2-Dichloroethene	ND	ug/l	1.0					
Trichloroethene	ND	ug/l	1.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
p/m-Xylene	ND	ug/l	2.0					
o-xylene	ND	ug/l	1.0					
Xylene (Total)	ND	ug/l	2.0					
Styrene	ND	ug/l	1.0					
Acetone	ND	ug/l	10.					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	10.					
Vinyl acetate	ND	ug/l	20.					
4-Methyl-2-pentanone	ND	ug/l	10.					
2-Hexanone	ND	ug/l	10.					
Acrolein	ND	ug/l	8.0					
Acrylonitrile	ND	ug/l	10.					
Methyl tert butyl ether	ND	ug/l	20.					
1,4-Dioxane	ND	ug/l	2000					
Tert-Butyl Alcohol	ND	ug/l	100					
Tertiary-Amyl Methyl Ether	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
Pentafluorobenzene	85.0	%	80-120					
Fluorobenzene	96.0	%	80-120					
4-Bromofluorobenzene	106	%	80-120					
Blank Analysis for sample(s) 01-02 (WG290358-1)								
SVOC's by GC/MS 8270				1	8270C	0811 10:30	0813 14:40	RL
Acenaphthene	ND	ug/l	5.0					
Benzidine	ND	ug/l	50.					
1,2,4-Trichlorobenzene	ND	ug/l	5.0					
Hexachlorobenzene	ND	ug/l	5.0					
Bis(2-chloroethyl)ether	ND	ug/l	5.0					
1-Chloronaphthalene	ND	ug/l	5.0					
2-Chloronaphthalene	ND	ug/l	6.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
3,3'-Dichlorobenzidine	ND	ug/l	50.					
2,4-Dinitrotoluene	ND	ug/l	6.0					
2,6-Dinitrotoluene	ND	ug/l	5.0					
Azobenzene	ND	ug/l	5.0					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711560

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01-02 (WG290358-1)								
SVOC's by GC/MS 8270 cont'd				1	8270C	0811 10:30	0813 14:40	RL
Fluoranthene	ND	ug/l	5.0					
4-Chlorophenyl phenyl ether	ND	ug/l	5.0					
4-Bromophenyl phenyl ether	ND	ug/l	5.0					
Bis(2-chloroisopropyl)ether	ND	ug/l	5.0					
Bis(2-chloroethoxy)methane	ND	ug/l	5.0					
Hexachlorobutadiene	ND	ug/l	10.					
Hexachlorocyclopentadiene	ND	ug/l	30.					
Hexachloroethane	ND	ug/l	5.0					
Isophorone	ND	ug/l	5.0					
Naphthalene	ND	ug/l	5.0					
Nitrobenzene	ND	ug/l	5.0					
NDPA/DPA	ND	ug/l	15.					
n-Nitrosodi-n-propylamine	ND	ug/l	5.0					
Bis(2-ethylhexyl)phthalate	ND	ug/l	5.0					
Butyl benzyl phthalate	ND	ug/l	5.0					
Di-n-butylphthalate	ND	ug/l	5.0					
Di-n-octylphthalate	ND	ug/l	5.0					
Diethyl phthalate	ND	ug/l	5.0					
Dimethyl phthalate	ND	ug/l	5.0					
Benzo(a)anthracene	ND	ug/l	5.0					
Benzo(a)pyrene	ND	ug/l	5.0					
Benzo(b)fluoranthene	ND	ug/l	5.0					
Benzo(k)fluoranthene	ND	ug/l	5.0					
Chrysene	ND	ug/l	5.0					
Acenaphthylene	ND	ug/l	5.0					
Anthracene	ND	ug/l	5.0					
Benzo(ghi)perylene	ND	ug/l	5.0					
Fluorene	ND	ug/l	5.0					
Phenanthrene	ND	ug/l	5.0					
Dibenzo(a,h)anthracene	ND	ug/l	5.0					
Indeno(1,2,3-cd)pyrene	ND	ug/l	7.0					
Pyrene	ND	ug/l	5.0					
Benzo(e)pyrene	ND	ug/l	5.0					
Biphenyl	ND	ug/l	5.0					
Perylene	ND	ug/l	5.0					
Aniline	ND	ug/l	20.					
4-Chloroaniline	ND	ug/l	5.0					
1-Methylnaphthalene	ND	ug/l	5.0					
2-Nitroaniline	ND	ug/l	5.0					
3-Nitroaniline	ND	ug/l	5.0					
4-Nitroaniline	ND	ug/l	7.0					
Dibenzofuran	ND	ug/l	5.0					
a,a-Dimethylphenethylamine	ND	ug/l	50.					
Hexachloropropene	ND	ug/l	10.					
Nitrosodi-n-butylamine	ND	ug/l	10.					
2-Methylnaphthalene	ND	ug/l	5.0					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711560

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01-02 (WG290358-1)								
SVOC's by GC/MS 8270 cont'd				1	8270C	0811 10:30	0813 14:40	RL
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.					
Pentachlorobenzene	ND	ug/l	20.					
a-Naphthylamine	ND	ug/l	25.					
b-Naphthylamine	ND	ug/l	20.					
Phenacetin	ND	ug/l	10.					
Dimethoate	ND	ug/l	20.					
4-Aminobiphenyl	ND	ug/l	10.					
Pentachloronitrobenzene	ND	ug/l	10.					
Isodrin	ND	ug/l	10.					
p-Dimethylaminoazobenzene	ND	ug/l	10.					
Chlorobenzilate	ND	ug/l	20.					
3-Methylcholanthrene	ND	ug/l	20.					
Ethyl Methanesulfonate	ND	ug/l	15.					
Acetophenone	ND	ug/l	20.					
Nitrosodipiperidine	ND	ug/l	20.					
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.					
n-Nitrosodimethylamine	ND	ug/l	50.					
2,4,6-Trichlorophenol	ND	ug/l	5.0					
p-Chloro-m-cresol	ND	ug/l	5.0					
2-Chlorophenol	ND	ug/l	6.0					
2,4-Dichlorophenol	ND	ug/l	10.					
2,4-Dimethylphenol	ND	ug/l	10.					
2-Nitrophenol	ND	ug/l	20.					
4-Nitrophenol	ND	ug/l	10.					
2,4-Dinitrophenol	ND	ug/l	30.					
4,6-Dinitro-o-cresol	ND	ug/l	20.					
Pentachlorophenol	ND	ug/l	10.					
Phenol	ND	ug/l	7.0					
2-Methylphenol	ND	ug/l	6.0					
3-Methylphenol/4-Methylphenol	ND	ug/l	6.0					
2,4,5-Trichlorophenol	ND	ug/l	5.0					
2,6-Dichlorophenol	ND	ug/l	10.					
Benzoic Acid	ND	ug/l	50.					
Benzyl Alcohol	ND	ug/l	10.					
Carbazole	ND	ug/l	5.0					
Pyridine	ND	ug/l	50.					
2-Picoline	ND	ug/l	20.					
Pronamide	ND	ug/l	20.					
Methyl methanesulfonate	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	29.0	%	21-120					
Phenol-d6	19.0	%	10-120					
Nitrobenzene-d5	49.0	%	23-120					
2-Fluorobiphenyl	45.0	%	43-120					
2,4,6-Tribromophenol	84.0	%	10-120					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711560

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01-02 (WG290358-1)								
SVOC's by GC/MS 8270 cont'd				1	8270C	0811 10:30	0813 14:40	RL
4-Terphenyl-d14	90.0	%	33-120					
Blank Analysis for sample(s) 01-02 (WG290360-1)								
PAH by GC/MS SIM 8270M				1	8270C-M	0811 10:30	0813 13:50	HL
Acenaphthene	ND	ug/l	0.20					
2-Chloronaphthalene	ND	ug/l	0.20					
Fluoranthene	ND	ug/l	0.20					
Hexachlorobutadiene	ND	ug/l	0.50					
Naphthalene	ND	ug/l	0.20					
Benzo(a)anthracene	ND	ug/l	0.20					
Benzo(a)pyrene	ND	ug/l	0.20					
Benzo(b)fluoranthene	ND	ug/l	0.20					
Benzo(k)fluoranthene	ND	ug/l	0.20					
Chrysene	ND	ug/l	0.20					
Acenaphthylene	ND	ug/l	0.20					
Anthracene	ND	ug/l	0.20					
Benzo(ghi)perylene	ND	ug/l	0.20					
Fluorene	ND	ug/l	0.20					
Phenanthrene	ND	ug/l	0.20					
Dibenzo(a,h)anthracene	ND	ug/l	0.20					
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20					
Pyrene	ND	ug/l	0.20					
1-Methylnaphthalene	ND	ug/l	0.20					
2-Methylnaphthalene	ND	ug/l	0.20					
Pentachlorophenol	ND	ug/l	0.80					
Hexachlorobenzene	ND	ug/l	0.80					
Perylene	ND	ug/l	0.20					
Biphenyl	ND	ug/l	0.20					
2,6-Dimethylnaphthalene	ND	ug/l	0.20					
1-Methylphenanthrene	ND	ug/l	0.20					
Benzo(e)Pyrene	ND	ug/l	0.20					
Hexachloroethane	ND	ug/l	0.80					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	24.0	%	21-120					
Phenol-d6	18.0	%	10-120					
Nitrobenzene-d5	41.0	%	23-120					
2-Fluorobiphenyl	43.0	%	43-120					
2,4,6-Tribromophenol	54.0	%	10-120					
4-Terphenyl-d14	95.0	%	33-120					

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

5. Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).

19. Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

GLOSSARY OF TERMS AND SYMBOLS

REF	Reference number in which test method may be found.
METHOD	Method number by which analysis was performed.
ID	Initials of the analyst.
ND	Not detected in comparison to the reported detection limit.
NI	Not Ignitable.
ug/cart	Micrograms per Cartridge.
H	The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

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.

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 8/10

ALPHA Job #: L0711560

ALPHA WOODS HOLE LABS

WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

RAYNHAM, MA
TEL: 508-822-9300
FAX: 508-822-3288

Client Information

Client: ERM - Boston

Address: 399 Boylston St. 6th Flor Boston, MA 02116

Phone: 617 646 7800

Fax: 617 267 6447

Email: jason.flattery@erm.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NA Soil Excavation

Project Location: Raytheon Wayland

Project #: 0051545

Project Manager: Jason Flattery

ALPHA Quote #:

Turn-Around Time

☐ Standard ☒ RUSH *(only confirmed if pre-approved!)*

Date Due: 48 HR. 8/14 Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program	Criteria
MCP	

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

SAMPLE HANDLING

Filtration
☐ Done
☐ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ANALYSIS: VOCs by 624 | Total As, Cu, Ni, Fe | TSS | SVOCs by 8270 w/ pentachlorophenol

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs by 624	Total As, Cu, Ni, Fe	TSS	SVOCs by 8270 w/ pentachlorophenol	Sample Specific Comments	TOTAL # BOTTLES
11560-01	INF-20070810-01	8/10/07	06:35	GW	BM	2	1	1	2		6
-02	EFF-20070810-01	8/10/07	06:45	GW	BM	2	1	1	2		6

BM

Container Type	V	P	P	A
Preservative	H	C	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	8/10/07 12:05	J. Bianchi	8/10 12:05
[signature]	8/10 12:50	Karoline [signature]	8/10 12:50

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

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220 www.alphalab.com

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

CERTIFICATE OF ANALYSIS

Client: ERM-New England

Address: 399 Boylston Street
6th Floor
Boston, MA 02116

Attn: Mr. Jason Flattery

Project Number: 0051545

Site: NA SOIL EXCAVATION

Laboratory Job Number: L0711359

Date Received: 08-AUG-2007

Date Reported: 10-AUG-2007

Delivery Method: Alpha

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0711359-01	INF-20070808-01	RAYTHEON WAYLAND
L0711359-02	EFF-20070808-01	RAYTHEON WAYLAND

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

Authorized by: Michelle M. Morris
Technical Representative

ALPHA ANALYTICAL LABORATORIES
NARRATIVE REPORT

Laboratory Job Number: L0711359

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Report Submission

At the request of the client, the samples were analyzed to achieve NPDES Reporting Limits not MCP as indicated on the Chain of Custody.

Semi-Volatile Organics

The WG289965 Batch QC associated with sample L0711359-01 had failures of one or more elements. Re-extraction of the samples in the original batch was required; however, insufficient sample remained to perform re-extraction on sample L0711359-01, therefore, the original data is reported.

L0711359-02 was re-extracted due to a QC failure in the original analysis. Re-extraction was performed within the method required holding time and the re-extracted data is reported.

The WG289965 LCS % recoveries for 1,4-Dichlorobenzene, 1,2-Dichlorobenzene and Hexachloropropene are below method acceptance criteria.

The WG289965 MS/MSD % recoveries for 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, 1,2,4-Trichlorobenzene, Hexachloropropene, and 2,4-Dinitrophenol (in the MS only) are below method acceptance criteria. The WG289965 MS/MSD RPDs for 2,4-Dinitophenol and Pentachlorophenol are above method acceptance criteria.

The WG290138 MS % recoveries for 2,4-Dinitrotoluene and Pentachlorophenol are above method acceptance criteria. The % recoveries for those compounds are within method acceptance criteria in the LCS; no further action taken. The WG290138 MS/MSD RPDs for 1,2,4-trichlorobenzene and 1,2-Dichlorobenzene are above method acceptance criteria.

PAH-SIM

The WG289964 LCS has a low surrogate % recovery for 2-Fluorobiphenyl.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

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

Laboratory Sample Number: L0711359-01
INF-20070808-01
Sample Matrix: WATER

Date Collected: 08-AUG-2007 07:00
Date Received : 08-AUG-2007
Date Reported : 10-AUG-2007

Condition of Sample: Satisfactory

Field Prep: None

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

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Solids, Total Suspended	19	mg/l	5.0	30	2540D		0809 14:15	DW
Total Metals								
Arsenic, Total	0.0023	mg/l	0.0005	1	6020	0808 16:20	0808 23:10	BM
Copper, Total	0.0161	mg/l	0.0005	1	6020	0808 16:20	0808 23:10	BM
Iron, Total	2.6	mg/l	0.05	19	200.7	0808 16:20	0810 09:46	MG
Nickel, Total	0.0062	mg/l	0.0005	1	6020	0808 16:20	0808 23:10	BM
Volatile Organics by GC/MS 624				5	624		0808 16:38	MM
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	1.5					
Chloroform	ND	ug/l	1.5					
Carbon tetrachloride	ND	ug/l	1.0					
1,2-Dichloropropane	ND	ug/l	3.5					
Dibromochloromethane	ND	ug/l	1.0					
1,1,2-Trichloroethane	ND	ug/l	1.5					
2-Chloroethylvinyl ether	ND	ug/l	10.					
Tetrachloroethene	22	ug/l	1.5					
Chlorobenzene	ND	ug/l	3.5					
Trichlorofluoromethane	ND	ug/l	5.0					
1,2-Dichloroethane	ND	ug/l	1.5					
1,1,1-Trichloroethane	ND	ug/l	2.0					
Bromodichloromethane	ND	ug/l	1.0					
trans-1,3-Dichloropropene	ND	ug/l	1.5					
cis-1,3-Dichloropropene	ND	ug/l	1.5					
Bromoform	ND	ug/l	1.0					
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0					
Benzene	ND	ug/l	1.0					
Toluene	ND	ug/l	1.0					
Ethylbenzene	ND	ug/l	1.0					
Chloromethane	ND	ug/l	10.					
Bromomethane	ND	ug/l	5.0					
Vinyl chloride	ND	ug/l	2.0					
Chloroethane	ND	ug/l	2.0					
1,1-Dichloroethene	ND	ug/l	1.0					
trans-1,2-Dichloroethene	ND	ug/l	1.5					
cis-1,2-Dichloroethene	1.2	ug/l	1.0					
Trichloroethene	170	ug/l	1.0					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711359-01
INF-20070808-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics by GC/MS 624 cont'd				5	624		0808 16:38	MM
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
p/m-Xylene	ND	ug/l	2.0					
o-xylene	ND	ug/l	1.0					
Xylene (Total)	ND	ug/l	2.0					
Styrene	ND	ug/l	1.0					
Acetone	ND	ug/l	10.					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	10.					
Vinyl acetate	ND	ug/l	20.					
4-Methyl-2-pentanone	ND	ug/l	10.					
2-Hexanone	ND	ug/l	10.					
Acrolein	ND	ug/l	8.0					
Acrylonitrile	ND	ug/l	10.					
Methyl tert butyl ether	ND	ug/l	20.					
1,4-Dioxane	ND	ug/l	2000					
Tert-Butyl Alcohol	ND	ug/l	100					
Tertiary-Amyl Methyl Ether	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
Pentafluorobenzene	83.0	%	80-120					
Fluorobenzene	98.0	%	80-120					
4-Bromofluorobenzene	104	%	80-120					
SVOC's by GC/MS 8270				1	8270C	0808 15:15	0809 13:56	AK
Acenaphthene	ND	ug/l	4.8					
Benzidine	ND	ug/l	48.					
1,2,4-Trichlorobenzene	ND	ug/l	4.8					
Hexachlorobenzene	ND	ug/l	4.8					
Bis(2-chloroethyl)ether	ND	ug/l	4.8					
1-Chloronaphthalene	ND	ug/l	4.8					
2-Chloronaphthalene	ND	ug/l	5.7					
1,2-Dichlorobenzene	ND	ug/l	4.8					
1,3-Dichlorobenzene	ND	ug/l	4.8					
1,4-Dichlorobenzene	ND	ug/l	4.8					
3,3'-Dichlorobenzidine	ND	ug/l	48.					
2,4-Dinitrotoluene	ND	ug/l	5.7					
2,6-Dinitrotoluene	ND	ug/l	4.8					
Azobenzene	ND	ug/l	4.8					
Fluoranthene	ND	ug/l	4.8					
4-Chlorophenyl phenyl ether	ND	ug/l	4.8					
4-Bromophenyl phenyl ether	ND	ug/l	4.8					
Bis(2-chloroisopropyl)ether	ND	ug/l	4.8					
Bis(2-chloroethoxy)methane	ND	ug/l	4.8					
Hexachlorobutadiene	ND	ug/l	9.6					
Hexachlorocyclopentadiene	ND	ug/l	29.					
Hexachloroethane	ND	ug/l	4.8					
Isophorone	ND	ug/l	4.8					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711359-01
INF-20070808-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
SVOC's by GC/MS 8270 cont'd				1	8270C	0808 15:15	0809 13:56	AK
Naphthalene	ND	ug/l	4.8					
Nitrobenzene	ND	ug/l	4.8					
NDPA/DPA	ND	ug/l	14.					
n-Nitrosodi-n-propylamine	ND	ug/l	4.8					
Bis(2-ethylhexyl)phthalate	ND	ug/l	4.8					
Butyl benzyl phthalate	ND	ug/l	4.8					
Di-n-butylphthalate	ND	ug/l	4.8					
Di-n-octylphthalate	ND	ug/l	4.8					
Diethyl phthalate	ND	ug/l	4.8					
Dimethyl phthalate	ND	ug/l	4.8					
Benzo(a)anthracene	ND	ug/l	4.8					
Benzo(a)pyrene	ND	ug/l	4.8					
Benzo(b)fluoranthene	ND	ug/l	4.8					
Benzo(k)fluoranthene	ND	ug/l	4.8					
Chrysene	ND	ug/l	4.8					
Acenaphthylene	ND	ug/l	4.8					
Anthracene	ND	ug/l	4.8					
Benzo(ghi)perylene	ND	ug/l	4.8					
Fluorene	ND	ug/l	4.8					
Phenanthrene	ND	ug/l	4.8					
Dibenzo(a,h)anthracene	ND	ug/l	4.8					
Indeno(1,2,3-cd)pyrene	ND	ug/l	6.7					
Pyrene	ND	ug/l	4.8					
Benzo(e)pyrene	ND	ug/l	4.8					
Biphenyl	ND	ug/l	4.8					
Perylene	ND	ug/l	4.8					
Aniline	ND	ug/l	19.					
4-Chloroaniline	ND	ug/l	4.8					
1-Methylnaphthalene	ND	ug/l	4.8					
2-Nitroaniline	ND	ug/l	4.8					
3-Nitroaniline	ND	ug/l	4.8					
4-Nitroaniline	ND	ug/l	6.7					
Dibenzofuran	ND	ug/l	4.8					
a,a-Dimethylphenethylamine	ND	ug/l	48.					
Hexachloropropene	ND	ug/l	9.6					
Nitrosodi-n-butylamine	ND	ug/l	9.6					
2-Methylnaphthalene	ND	ug/l	4.8					
1,2,4,5-Tetrachlorobenzene	ND	ug/l	19.					
Pentachlorobenzene	ND	ug/l	19.					
a-Naphthylamine	ND	ug/l	24.					
b-Naphthylamine	ND	ug/l	19.					
Phenacetin	ND	ug/l	9.6					
Dimethoate	ND	ug/l	19.					
4-Aminobiphenyl	ND	ug/l	9.6					
Pentachloronitrobenzene	ND	ug/l	9.6					
Isodrin	ND	ug/l	9.6					
p-Dimethylaminoazobenzene	ND	ug/l	9.6					
Chlorobenzilate	ND	ug/l	19.					
3-Methylcholanthrene	ND	ug/l	19.					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711359-01
INF-20070808-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
SVOC's by GC/MS 8270 cont'd				1	8270C	0808 15:15	0809 13:56	AK
Ethyl Methanesulfonate	ND	ug/l	14.					
Acetophenone	ND	ug/l	19.					
Nitrosodipiperidine	ND	ug/l	19.					
7,12-Dimethylbenz(a)anthracene	ND	ug/l	19.					
n-Nitrosodimethylamine	ND	ug/l	48.					
2,4,6-Trichlorophenol	ND	ug/l	4.8					
p-Chloro-m-cresol	ND	ug/l	4.8					
2-Chlorophenol	ND	ug/l	5.7					
2,4-Dichlorophenol	ND	ug/l	9.6					
2,4-Dimethylphenol	ND	ug/l	9.6					
2-Nitrophenol	ND	ug/l	19.					
4-Nitrophenol	ND	ug/l	9.6					
2,4-Dinitrophenol	ND	ug/l	29.					
4,6-Dinitro-o-cresol	ND	ug/l	19.					
Pentachlorophenol	ND	ug/l	9.6					
Phenol	ND	ug/l	6.7					
2-Methylphenol	ND	ug/l	5.7					
3-Methylphenol/4-Methylphenol	ND	ug/l	5.7					
2,4,5-Trichlorophenol	ND	ug/l	4.8					
2,6-Dichlorophenol	ND	ug/l	9.6					
Benzoic Acid	ND	ug/l	48.					
Benzyl Alcohol	ND	ug/l	9.6					
Carbazole	ND	ug/l	4.8					
Pyridine	ND	ug/l	48.					
2-Picoline	ND	ug/l	19.					
Pronamide	ND	ug/l	19.					
Methyl methanesulfonate	ND	ug/l	19.					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	33.0	%	21-120					
Phenol-d6	25.0	%	10-120					
Nitrobenzene-d5	60.0	%	23-120					
2-Fluorobiphenyl	61.0	%	43-120					
2,4,6-Tribromophenol	110	%	10-120					
4-Terphenyl-d14	85.0	%	33-120					
PAH by GC/MS SIM 8270M				1	8270C-M	0808 15:15	0809 18:39	HL
Acenaphthene	ND	ug/l	0.19					
2-Chloronaphthalene	ND	ug/l	0.19					
Fluoranthene	ND	ug/l	0.19					
Hexachlorobutadiene	ND	ug/l	0.48					
Naphthalene	ND	ug/l	0.19					
Benzo(a)anthracene	ND	ug/l	0.19					
Benzo(a)pyrene	ND	ug/l	0.19					
Benzo(b)fluoranthene	ND	ug/l	0.19					
Benzo(k)fluoranthene	ND	ug/l	0.19					
Chrysene	ND	ug/l	0.19					
Acenaphthylene	ND	ug/l	0.19					
Anthracene	ND	ug/l	0.19					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711359-01
INF-20070808-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
PAH by GC/MS SIM 8270M cont'd				1	8270C-M	0808 15:15	0809 18:39	HL
Benzo(ghi)perylene	ND	ug/l	0.19					
Fluorene	ND	ug/l	0.19					
Phenanthrene	ND	ug/l	0.19					
Dibenzo(a,h)anthracene	ND	ug/l	0.19					
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.19					
Pyrene	ND	ug/l	0.19					
1-Methylnaphthalene	ND	ug/l	0.19					
2-Methylnaphthalene	ND	ug/l	0.19					
Pentachlorophenol	ND	ug/l	0.76					
Hexachlorobenzene	ND	ug/l	0.76					
Perylene	ND	ug/l	0.19					
Biphenyl	ND	ug/l	0.19					
2,6-Dimethylnaphthalene	ND	ug/l	0.19					
1-Methylphenanthrene	ND	ug/l	0.19					
Benzo(e)Pyrene	ND	ug/l	0.19					
Hexachloroethane	ND	ug/l	0.76					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	35.0	%	21-120					
Phenol-d6	28.0	%	10-120					
Nitrobenzene-d5	55.0	%	23-120					
2-Fluorobiphenyl	59.0	%	43-120					
2,4,6-Tribromophenol	72.0	%	10-120					
4-Terphenyl-d14	75.0	%	33-120					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

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

Laboratory Sample Number: L0711359-02 **Date Collected:** 08-AUG-2007 07:10
EFF-20070808-01 **Date Received :** 08-AUG-2007
Sample Matrix: WATER **Date Reported :** 10-AUG-2007

Condition of Sample: Satisfactory **Field Prep:** None

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

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Solids, Total Suspended	ND	mg/l	5.0	30	2540D		0809 14:15	DW
Total Metals								
Arsenic, Total	0.0640	mg/l	0.0005	1	6020	0808 16:20	0808 23:16	BM
Copper, Total	0.0110	mg/l	0.0005	1	6020	0808 16:20	0808 23:16	BM
Iron, Total	0.60	mg/l	0.05	19	200.7	0808 16:20	0810 09:48	MG
Nickel, Total	0.0116	mg/l	0.0005	1	6020	0808 16:20	0808 23:16	BM
Volatile Organics by GC/MS 624				5	624		0808 16:05	MM
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	1.5					
Chloroform	ND	ug/l	1.5					
Carbon tetrachloride	ND	ug/l	1.0					
1,2-Dichloropropane	ND	ug/l	3.5					
Dibromochloromethane	ND	ug/l	1.0					
1,1,2-Trichloroethane	ND	ug/l	1.5					
2-Chloroethylvinyl ether	ND	ug/l	10.					
Tetrachloroethene	ND	ug/l	1.5					
Chlorobenzene	ND	ug/l	3.5					
Trichlorofluoromethane	ND	ug/l	5.0					
1,2-Dichloroethane	ND	ug/l	1.5					
1,1,1-Trichloroethane	ND	ug/l	2.0					
Bromodichloromethane	ND	ug/l	1.0					
trans-1,3-Dichloropropene	ND	ug/l	1.5					
cis-1,3-Dichloropropene	ND	ug/l	1.5					
Bromoform	ND	ug/l	1.0					
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0					
Benzene	ND	ug/l	1.0					
Toluene	ND	ug/l	1.0					
Ethylbenzene	ND	ug/l	1.0					
Chloromethane	ND	ug/l	10.					
Bromomethane	ND	ug/l	5.0					
Vinyl chloride	ND	ug/l	2.0					
Chloroethane	ND	ug/l	2.0					
1,1-Dichloroethene	ND	ug/l	1.0					
trans-1,2-Dichloroethene	ND	ug/l	1.5					
cis-1,2-Dichloroethene	ND	ug/l	1.0					
Trichloroethene	ND	ug/l	1.0					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711359-02
EFF-20070808-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics by GC/MS 624 cont'd				5	624		0808 16:05	MM
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
p/m-Xylene	ND	ug/l	2.0					
o-xylene	ND	ug/l	1.0					
Xylene (Total)	ND	ug/l	2.0					
Styrene	ND	ug/l	1.0					
Acetone	ND	ug/l	10.					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	10.					
Vinyl acetate	ND	ug/l	20.					
4-Methyl-2-pentanone	ND	ug/l	10.					
2-Hexanone	ND	ug/l	10.					
Acrolein	ND	ug/l	8.0					
Acrylonitrile	ND	ug/l	10.					
Methyl tert butyl ether	ND	ug/l	20.					
1,4-Dioxane	ND	ug/l	2000					
Tert-Butyl Alcohol	ND	ug/l	100					
Tertiary-Amyl Methyl Ether	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
Pentafluorobenzene	82.0	%	80-120					
Fluorobenzene	97.0	%	80-120					
4-Bromofluorobenzene	109	%	80-120					
SVOC's by GC/MS 8270				1	8270C	0809 16:15	0810 14:49	AK
Acenaphthene	ND	ug/l	4.8					
Benzidine	ND	ug/l	48.					
1,2,4-Trichlorobenzene	ND	ug/l	4.8					
Hexachlorobenzene	ND	ug/l	4.8					
Bis(2-chloroethyl)ether	ND	ug/l	4.8					
1-Chloronaphthalene	ND	ug/l	4.8					
2-Chloronaphthalene	ND	ug/l	5.7					
1,2-Dichlorobenzene	ND	ug/l	4.8					
1,3-Dichlorobenzene	ND	ug/l	4.8					
1,4-Dichlorobenzene	ND	ug/l	4.8					
3,3'-Dichlorobenzidine	ND	ug/l	48.					
2,4-Dinitrotoluene	ND	ug/l	5.7					
2,6-Dinitrotoluene	ND	ug/l	4.8					
Azobenzene	ND	ug/l	4.8					
Fluoranthene	ND	ug/l	4.8					
4-Chlorophenyl phenyl ether	ND	ug/l	4.8					
4-Bromophenyl phenyl ether	ND	ug/l	4.8					
Bis(2-chloroisopropyl)ether	ND	ug/l	4.8					
Bis(2-chloroethoxy)methane	ND	ug/l	4.8					
Hexachlorobutadiene	ND	ug/l	9.6					
Hexachlorocyclopentadiene	ND	ug/l	29.					
Hexachloroethane	ND	ug/l	4.8					
Isophorone	ND	ug/l	4.8					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711359-02
EFF-20070808-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
SVOC's by GC/MS 8270 cont'd				1	8270C	0809 16:15	0810 14:49	AK
Naphthalene	ND	ug/l	4.8					
Nitrobenzene	ND	ug/l	4.8					
NDPA/DPA	ND	ug/l	14.					
n-Nitrosodi-n-propylamine	ND	ug/l	4.8					
Bis(2-ethylhexyl)phthalate	ND	ug/l	4.8					
Butyl benzyl phthalate	ND	ug/l	4.8					
Di-n-butylphthalate	ND	ug/l	4.8					
Di-n-octylphthalate	ND	ug/l	4.8					
Diethyl phthalate	ND	ug/l	4.8					
Dimethyl phthalate	ND	ug/l	4.8					
Benzo(a)anthracene	ND	ug/l	4.8					
Benzo(a)pyrene	ND	ug/l	4.8					
Benzo(b)fluoranthene	ND	ug/l	4.8					
Benzo(k)fluoranthene	ND	ug/l	4.8					
Chrysene	ND	ug/l	4.8					
Acenaphthylene	ND	ug/l	4.8					
Anthracene	ND	ug/l	4.8					
Benzo(ghi)perylene	ND	ug/l	4.8					
Fluorene	ND	ug/l	4.8					
Phenanthrene	ND	ug/l	4.8					
Dibenzo(a,h)anthracene	ND	ug/l	4.8					
Indeno(1,2,3-cd)pyrene	ND	ug/l	6.7					
Pyrene	ND	ug/l	4.8					
Benzo(e)pyrene	ND	ug/l	4.8					
Biphenyl	ND	ug/l	4.8					
Perylene	ND	ug/l	4.8					
Aniline	ND	ug/l	19.					
4-Chloroaniline	ND	ug/l	4.8					
1-Methylnaphthalene	ND	ug/l	4.8					
2-Nitroaniline	ND	ug/l	4.8					
3-Nitroaniline	ND	ug/l	4.8					
4-Nitroaniline	ND	ug/l	6.7					
Dibenzofuran	ND	ug/l	4.8					
a,a-Dimethylphenethylamine	ND	ug/l	48.					
Hexachloropropene	ND	ug/l	9.6					
Nitrosodi-n-butylamine	ND	ug/l	9.6					
2-Methylnaphthalene	ND	ug/l	4.8					
1,2,4,5-Tetrachlorobenzene	ND	ug/l	19.					
Pentachlorobenzene	ND	ug/l	19.					
a-Naphthylamine	ND	ug/l	24.					
b-Naphthylamine	ND	ug/l	19.					
Phenacetin	ND	ug/l	9.6					
Dimethoate	ND	ug/l	19.					
4-Aminobiphenyl	ND	ug/l	9.6					
Pentachloronitrobenzene	ND	ug/l	9.6					
Isodrin	ND	ug/l	9.6					
p-Dimethylaminoazobenzene	ND	ug/l	9.6					
Chlorobenzilate	ND	ug/l	19.					
3-Methylcholanthrene	ND	ug/l	19.					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711359-02
EFF-20070808-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
SVOC's by GC/MS 8270 cont'd				1	8270C	0809 16:15	0810 14:49	AK
Ethyl Methanesulfonate	ND	ug/l	14.					
Acetophenone	ND	ug/l	19.					
Nitrosodipiperidine	ND	ug/l	19.					
7,12-Dimethylbenz(a)anthracene	ND	ug/l	19.					
n-Nitrosodimethylamine	ND	ug/l	48.					
2,4,6-Trichlorophenol	ND	ug/l	4.8					
p-Chloro-m-cresol	ND	ug/l	4.8					
2-Chlorophenol	ND	ug/l	5.7					
2,4-Dichlorophenol	ND	ug/l	9.6					
2,4-Dimethylphenol	ND	ug/l	9.6					
2-Nitrophenol	ND	ug/l	19.					
4-Nitrophenol	ND	ug/l	9.6					
2,4-Dinitrophenol	ND	ug/l	29.					
4,6-Dinitro-o-cresol	ND	ug/l	19.					
Pentachlorophenol	ND	ug/l	9.6					
Phenol	ND	ug/l	6.7					
2-Methylphenol	ND	ug/l	5.7					
3-Methylphenol/4-Methylphenol	ND	ug/l	5.7					
2,4,5-Trichlorophenol	ND	ug/l	4.8					
2,6-Dichlorophenol	ND	ug/l	9.6					
Benzoic Acid	ND	ug/l	48.					
Benzyl Alcohol	ND	ug/l	9.6					
Carbazole	ND	ug/l	4.8					
Pyridine	ND	ug/l	48.					
2-Picoline	ND	ug/l	19.					
Pronamide	ND	ug/l	19.					
Methyl methanesulfonate	ND	ug/l	19.					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	41.0	%	21-120					
Phenol-d6	32.0	%	10-120					
Nitrobenzene-d5	61.0	%	23-120					
2-Fluorobiphenyl	61.0	%	43-120					
2,4,6-Tribromophenol	78.0	%	10-120					
4-Terphenyl-d14	76.0	%	33-120					
PAH by GC/MS SIM 8270M				1	8270C-M	0808 15:15	0809 19:27	HL
Acenaphthene	ND	ug/l	0.19					
2-Chloronaphthalene	ND	ug/l	0.19					
Fluoranthene	ND	ug/l	0.19					
Hexachlorobutadiene	ND	ug/l	0.48					
Naphthalene	ND	ug/l	0.19					
Benzo(a)anthracene	ND	ug/l	0.19					
Benzo(a)pyrene	ND	ug/l	0.19					
Benzo(b)fluoranthene	ND	ug/l	0.19					
Benzo(k)fluoranthene	ND	ug/l	0.19					
Chrysene	ND	ug/l	0.19					
Acenaphthylene	ND	ug/l	0.19					
Anthracene	ND	ug/l	0.19					

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

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0711359-02
EFF-20070808-01

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
PAH by GC/MS SIM 8270M cont'd				1	8270C-M	0808 15:15	0809 19:27	HL
Benzo(ghi)perylene	ND	ug/l	0.19					
Fluorene	ND	ug/l	0.19					
Phenanthrene	ND	ug/l	0.19					
Dibenzo(a,h)anthracene	ND	ug/l	0.19					
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.19					
Pyrene	ND	ug/l	0.19					
1-Methylnaphthalene	ND	ug/l	0.19					
2-Methylnaphthalene	ND	ug/l	0.19					
Pentachlorophenol	ND	ug/l	0.76					
Hexachlorobenzene	ND	ug/l	0.76					
Perylene	ND	ug/l	0.19					
Biphenyl	ND	ug/l	0.19					
2,6-Dimethylnaphthalene	ND	ug/l	0.19					
1-Methylphenanthrene	ND	ug/l	0.19					
Benzo(e)Pyrene	ND	ug/l	0.19					
Hexachloroethane	ND	ug/l	0.76					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	32.0	%	21-120					
Phenol-d6	25.0	%	10-120					
Nitrobenzene-d5	49.0	%	23-120					
2-Fluorobiphenyl	51.0	%	43-120					
2,4,6-Tribromophenol	58.0	%	10-120					
4-Terphenyl-d14	78.0	%	33-120					

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

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0711359

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Solids, Total Suspended for sample(s) 01-02 (L0711336-01, WG290091-2)					
Solids, Total Suspended	3500	3500	mg/l	0	32
Total Metals for sample(s) 01-02 (L0711359-02, WG289984-1)					
Arsenic, Total	0.0640	0.0630	mg/l	2	20
Copper, Total	0.0110	0.0106	mg/l	3	20
Nickel, Total	0.0116	0.0113	mg/l	3	20
Total Metals for sample(s) 01-02 (L0711359-02, WG290123-1)					
Iron, Total	0.60	0.60	mg/l	0	
Volatile Organics by GC/MS 624 for sample(s) 01-02 (L0711172-02, WG289896-2)					
Methylene chloride	ND	ND	ug/l	NC	30
1,1-Dichloroethane	ND	ND	ug/l	NC	30
Chloroform	ND	ND	ug/l	NC	30
Carbon tetrachloride	ND	ND	ug/l	NC	30
1,2-Dichloropropane	ND	ND	ug/l	NC	30
Dibromochloromethane	ND	ND	ug/l	NC	30
1,1,2-Trichloroethane	ND	ND	ug/l	NC	30
Tetrachloroethene	ND	ND	ug/l	NC	30
Chlorobenzene	ND	ND	ug/l	NC	30
Trichlorofluoromethane	ND	ND	ug/l	NC	30
1,2-Dichloroethane	ND	ND	ug/l	NC	30
1,1,1-Trichloroethane	ND	ND	ug/l	NC	30
Bromodichloromethane	ND	ND	ug/l	NC	30
trans-1,3-Dichloropropene	ND	ND	ug/l	NC	30
cis-1,3-Dichloropropene	ND	ND	ug/l	NC	30
Bromoform	ND	ND	ug/l	NC	30
1,1,2,2-Tetrachloroethane	ND	ND	ug/l	NC	30
Benzene	ND	ND	ug/l	NC	30
Toluene	ND	ND	ug/l	NC	30
Ethylbenzene	ND	ND	ug/l	NC	30
Chloromethane	ND	ND	ug/l	NC	30
Bromomethane	ND	ND	ug/l	NC	30
Vinyl chloride	ND	ND	ug/l	NC	30
Chloroethane	ND	ND	ug/l	NC	30
1,1-Dichloroethene	ND	ND	ug/l	NC	30
trans-1,2-Dichloroethene	ND	ND	ug/l	NC	30
cis-1,2-Dichloroethene	ND	ND	ug/l	NC	30
Trichloroethene	ND	ND	ug/l	NC	30
1,2-Dichlorobenzene	ND	ND	ug/l	NC	30
1,3-Dichlorobenzene	ND	ND	ug/l	NC	30
1,4-Dichlorobenzene	ND	ND	ug/l	NC	30
p/m-Xylene	ND	ND	ug/l	NC	30
o-xylene	ND	ND	ug/l	NC	30
Xylene (Total)	ND	ND	ug/l	NC	30
Styrene	ND	ND	ug/l	NC	30
Acetone	ND	ND	ug/l	NC	30
Carbon disulfide	ND	ND	ug/l	NC	30

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0711359

Continued

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Volatile Organics by GC/MS 624 for sample(s) 01-02 (L0711172-02, WG289896-2)					
2-Butanone	ND	ND	ug/l	NC	30
Vinyl acetate	ND	ND	ug/l	NC	30
4-Methyl-2-pentanone	ND	ND	ug/l	NC	30
2-Hexanone	ND	ND	ug/l	NC	30
Acrolein	ND	ND	ug/l	NC	30
Acrylonitrile	ND	ND	ug/l	NC	30
Methyl Acetate	ND	ND	ug/l	NC	30
Ethyl Acetate	ND	ND	ug/l	NC	30
Tetrahydrofuran	ND	ND	ug/l	NC	30
Acetonitrile	ND	ND	ug/l	NC	30
n-Hexane	ND	ND	ug/l	NC	30
Isopropyl Ether	ND	ND	ug/l	NC	30
Cyclohexane	ND	ND	ug/l	NC	30
Heptane	ND	ND	ug/l	NC	30
Butyl Acetate	ND	ND	ug/l	NC	30
Methyl tert butyl ether	ND	ND	ug/l	NC	30
Ethyl Ether	ND	ND	ug/l	NC	30
Dibromomethane	ND	ND	ug/l	NC	30
Surrogate(s)	Recovery				QC Criteria
Pentafluorobenzene	82.0	84.0	%		80-120
Fluorobenzene	97.0	97.0	%		80-120
4-Bromofluorobenzene	98.0	101	%		80-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0711359

Parameter	% Recovery	QC Criteria
Total Metals LCS for sample(s) 01-02 (WG289984-4)		
Arsenic, Total	100	80-120
Copper, Total	103	80-120
Nickel, Total	104	80-120
Total Metals LCS for sample(s) 01-02 (WG290123-4)		
Iron, Total	100	
Volatile Organics by GC/MS 624 LCS for sample(s) 01-02 (WG289896-5)		
Methylene chloride	110	10-221
1,1-Dichloroethane	95	59-155
Chloroform	108	51-138
Carbon tetrachloride	110	70-140
1,2-Dichloropropane	107	10-210
Dibromochloromethane	99	53-149
1,1,2-Trichloroethane	98	52-150
2-Chloroethylvinyl ether	75	10-305
Tetrachloroethene	100	64-148
Chlorobenzene	96	37-160
Trichlorofluoromethane	120	17-181
1,2-Dichloroethane	116	49-155
1,1,1-Trichloroethane	102	52-162
Bromodichloromethane	98	35-155
trans-1,3-Dichloropropene	92	17-183
cis-1,3-Dichloropropene	85	10-227
Bromoform	91	45-169
1,1,2,2-Tetrachloroethane	94	46-157
Benzene	135	37-151
Toluene	106	47-150
Ethylbenzene	111	37-162
Chloromethane	121	10-273
Bromomethane	119	10-242
Vinyl chloride	135	10-251
Chloroethane	133	14-230
1,1-Dichloroethene	112	10-234
trans-1,2-Dichloroethene	102	54-156
cis-1,2-Dichloroethene	114	60-140
Trichloroethene	109	71-157
1,2-Dichlorobenzene	94	18-190
1,3-Dichlorobenzene	97	59-156
1,4-Dichlorobenzene	101	18-190
p/m-Xylene	110	40-160
o-Xylene	107	40-160
XYLENE (TOTAL)	109	40-160
Styrene	88	40-160
Acetone	126	40-160
Carbon disulfide	123	40-160
2-Butanone	101	40-160
Vinyl acetate	85	40-160

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0711359

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 LCS for sample(s) 01-02 (WG289896-5)		
4-Methyl-2-pentanone	98	40-160
2-Hexanone	97	40-160
Acrolein	102	40-160
Acrylonitrile	111	40-160
Surrogate(s)		
Pentafluorobenzene	103	80-120
Fluorobenzene	104	80-120
4-Bromofluorobenzene	97	80-120
SVOC's by GC/MS 8270 LCS for sample(s) 01 (WG289965-2)		
Acenaphthene	60	46-118
1,2,4-Trichlorobenzene	39	39-98
2-Chloronaphthalene	54	40-140
1,2-Dichlorobenzene	36	40-140
1,4-Dichlorobenzene	33	36-97
2,4-Dinitrotoluene	76	24-96
2,6-Dinitrotoluene	82	40-140
Fluoranthene	83	40-140
4-Chlorophenyl phenyl ether	69	40-140
n-Nitrosodi-n-propylamine	50	41-116
Butyl benzyl phthalate	86	40-140
Anthracene	71	40-140
Pyrene	82	26-127
Hexachloropropene	37	40-140
P-Chloro-M-Cresol	65	23-97
2-Chlorophenol	48	27-123
2-Nitrophenol	58	30-130
4-Nitrophenol	29	10-80
2,4-Dinitrophenol	73	30-130
Pentachlorophenol	81	9-103
Phenol	18	12-110
Surrogate(s)		
2-Fluorophenol	28	21-120
Phenol-d6	24	10-120
Nitrobenzene-d5	54	23-120
2-Fluorobiphenyl	59	43-120
2,4,6-Tribromophenol	92	10-120
4-Terphenyl-d14	79	33-120
SVOC's by GC/MS 8270 LCS for sample(s) 02 (WG290138-2)		
Acenaphthene	71	46-118
1,2,4-Trichlorobenzene	62	39-98
2-Chloronaphthalene	69	40-140
1,2-Dichlorobenzene	56	40-140
1,4-Dichlorobenzene	54	36-97
2,4-Dinitrotoluene	90	24-96

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0711359

Continued

Parameter	% Recovery	QC Criteria
SVOC's by GC/MS 8270 LCS for sample(s) 02 (WG290138-2)		
2,6-Dinitrotoluene	95	40-140
Fluoranthene	97	40-140
4-Chlorophenyl phenyl ether	77	40-140
n-Nitrosodi-n-propylamine	58	41-116
Butyl benzyl phthalate	100	40-140
Anthracene	85	40-140
Pyrene	96	26-127
Hexachloropropene	62	40-140
P-Chloro-M-Cresol	74	23-97
2-Chlorophenol	62	27-123
2-Nitrophenol	66	30-130
4-Nitrophenol	44	10-80
2,4-Dinitrophenol	88	30-130
Pentachlorophenol	96	9-103
Phenol	27	12-110
Surrogate(s)		
2-Fluorophenol	41	21-120
Phenol-d6	34	10-120
Nitrobenzene-d5	62	23-120
2-Fluorobiphenyl	65	43-120
2,4,6-Tribromophenol	102	10-120
4-Terphenyl-d14	91	33-120
PAH by GC/MS SIM 8270M LCS for sample(s) 01-02 (WG289964-2)		
Acenaphthene	48	40-140
2-Chloronaphthalene	40	40-140
Fluoranthene	72	40-140
Anthracene	53	40-140
Pyrene	73	40-140
Pentachlorophenol	61	30-130
Surrogate(s)		
2-Fluorophenol	24	21-120
Phenol-d6	19	10-120
Nitrobenzene-d5	38	23-120
2-Fluorobiphenyl	39	43-120
2,4,6-Tribromophenol	49	10-120
4-Terphenyl-d14	72	33-120
Total Metals SPIKE for sample(s) 01-02 (L0711359-02, WG289984-2)		
Arsenic, Total	103	80-120
Copper, Total	102	80-120
Nickel, Total	103	80-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0711359

Continued

Parameter	% Recovery	QC Criteria
Total Metals SPIKE for sample(s) 01-02 (L0711359-02, WG290123-2)		
Iron, Total	90	
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01-02 (L0711172-01, WG289896-1)		
Methylene chloride	101	10-221
1,1-Dichloroethane	92	59-155
Chloroform	103	51-138
Carbon tetrachloride	102	70-140
1,2-Dichloropropane	101	10-210
Dibromochloromethane	93	53-149
1,1,2-Trichloroethane	96	52-150
2-Chloroethylvinyl ether	80	10-305
Tetrachloroethene	89	64-148
Chlorobenzene	84	37-160
Trichlorofluoromethane	110	17-181
1,2-Dichloroethane	109	49-155
1,1,1-Trichloroethane	95	52-162
Bromodichloromethane	90	35-155
trans-1,3-Dichloropropene	84	17-183
cis-1,3-Dichloropropene	75	10-227
Bromoform	85	45-169
1,1,2,2-Tetrachloroethane	93	46-157
Benzene	112	35-151
Toluene	97	47-150
Ethylbenzene	99	37-162
Chloromethane	90	10-273
Bromomethane	85	10-242
Vinyl chloride	120	10-251
Chloroethane	113	14-230
1,1-Dichloroethene	102	10-234
trans-1,2-Dichloroethene	92	54-156
cis-1,2-Dichloroethene	103	60-140
Trichloroethene	97	71-157
1,2-Dichlorobenzene	81	18-190
1,3-Dichlorobenzene	78	59-156
1,4-Dichlorobenzene	85	18-190
p/m-Xylene	101	40-160
o-Xylene	94	40-160
XYLENE (TOTAL)	98	40-160
Styrene	80	40-160
Acetone	112	40-160
Carbon disulfide	97	40-160
2-Butanone	106	40-160
Vinyl acetate	85	40-160
4-Methyl-2-pentanone	112	40-160
2-Hexanone	114	40-160
Acrolein	100	40-160
Acrylonitrile	114	40-160

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0711359

Continued

Parameter	% Recovery	QC Criteria
Volatile Organics by GC/MS 624 SPIKE for sample(s) 01-02 (L0711172-01, WG289896-1)		
Surrogate(s)		
Pentafluorobenzene	100	80-120
Fluorobenzene	107	80-120
4-Bromofluorobenzene	96	80-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0711359

Parameter	MS %	MSD %	RPD	RPD Limit	MS/MSD Limits
SVOC's by GC/MS 8270 for sample(s) 01 (L0711359-01, WG289965-4)					
Acenaphthene	58	62	7	30	46-118
1,2,4-Trichlorobenzene	33	37	11	30	39-98
2-Chloronaphthalene	53	53	0	30	40-140
1,2-Dichlorobenzene	33	34	3	30	40-140
1,4-Dichlorobenzene	30	31	3	30	36-97
2,4-Dinitrotoluene	82	86	5	30	24-96
2,6-Dinitrotoluene	86	82	5	30	40-140
Fluoranthene	96	91	5	30	40-140
4-Chlorophenyl phenyl ether	77	77	0	30	40-140
n-Nitrosodi-n-propylamine	45	41	9	30	41-116
Butyl benzyl phthalate	96	96	0	30	40-140
Anthracene	82	72	13	30	40-140
Pyrene	91	91	0	30	26-127
Hexachloropropene	31	38	20	30	40-140
P-Chloro-M-Cresol	74	70	6	30	23-97
2-Chlorophenol	46	46	0	30	27-123
2-Nitrophenol	53	50	6	30	30-130
4-Nitrophenol	58	60	3	30	10-80
2,4-Dinitrophenol	7	79	167	30	30-130
Pentachlorophenol	65	96	39	30	9-103
Phenol	29	29	0	30	12-110
Surrogate(s)					
2-Fluorophenol	40	38	5		21-120
Phenol-d6	38	35	8		10-120
Nitrobenzene-d5	53	48	10		23-120
2-Fluorobiphenyl	57	55	4		43-120
2,4,6-Tribromophenol	106	97	9		10-120
4-Terphenyl-d14	90	83	8		33-120
SVOC's by GC/MS 8270 for sample(s) 02 (L0711399-01, WG290138-4)					
Acenaphthene	87	73	18	30	46-118
1,2,4-Trichlorobenzene	73	53	32	30	39-98
2-Chloronaphthalene	87	68	25	30	40-140
1,2-Dichlorobenzene	68	49	32	30	40-140
1,4-Dichlorobenzene	63	47	29	30	36-97
2,4-Dinitrotoluene	100	92	8	30	24-96
2,6-Dinitrotoluene	120	92	26	30	40-140
Fluoranthene	110	97	13	30	40-140
4-Chlorophenyl phenyl ether	97	82	17	30	40-140
n-Nitrosodi-n-propylamine	78	58	29	30	41-116
Butyl benzyl phthalate	110	97	13	30	40-140
Anthracene	97	82	17	30	40-140
Pyrene	110	97	13	30	26-127
Hexachloropropene	68	53	25	30	40-140
P-Chloro-M-Cresol	92	70	27	30	23-97
2-Chlorophenol	82	61	29	30	27-123
2-Nitrophenol	87	65	29	30	30-130

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0711359

Continued

Parameter	MS %	MSD %	RPD	RPD Limit	MS/MSD Limits
SVOC's by GC/MS 8270 for sample(s) 02 (L0711399-01, WG290138-4)					
4-Nitrophenol	78	70	11	30	10-80
2,4-Dinitrophenol	100	92	8	30	30-130
Pentachlorophenol	110	97	13	30	9-103
Phenol	53	39	30	30	12-110
Surrogate(s)					
2-Fluorophenol	68	52	27		21-120
Phenol-d6	69	51	30		10-120
Nitrobenzene-d5	81	61	28		23-120
2-Fluorobiphenyl	87	65	29		43-120
2,4,6-Tribromophenol	116	101	14		10-120
4-Terphenyl-d14	101	92	9		33-120
PAH by GC/MS SIM 8270M for sample(s) 01-02 (L0711359-01, WG289964-4)					
Acenaphthene	53	58	9	40	40-140
2-Chloronaphthalene	48	53	10	40	40-140
Fluoranthene	86	86	0	40	40-140
Anthracene	77	72	7	40	40-140
Pyrene	91	86	6	40	40-140
Pentachlorophenol	70	86	21	40	30-130
Surrogate(s)					
2-Fluorophenol	43	43	0		21-120
Phenol-d6	42	42	0		10-120
Nitrobenzene-d5	49	49	0		23-120
2-Fluorobiphenyl	52	54	4		43-120
2,4,6-Tribromophenol	73	69	6		10-120
4-Terphenyl-d14	97	94	3		33-120

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711359

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01-02 (WG290091-1)								
Solids, Total Suspended	ND	mg/l	5.0	30	2540D		0809 14:15	DW
Blank Analysis for sample(s) 01-02 (WG289984-3)								
Total Metals								
Arsenic, Total	ND	mg/l	0.0005	1	6020	0808 16:20	0808 22:21	BM
Copper, Total	ND	mg/l	0.0005	1	6020	0808 16:20	0808 22:21	BM
Nickel, Total	ND	mg/l	0.0005	1	6020	0808 16:20	0808 22:21	BM
Blank Analysis for sample(s) 01-02 (WG290123-3)								
Total Metals				19	200.7			
Iron, Total	ND	mg/l	0.05	19	200.7	0808 16:20	0810 09:40	MG
Blank Analysis for sample(s) 01-02 (WG289896-6)								
Volatile Organics by GC/MS 624				5	624		0808 09:01	MM
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	1.5					
Chloroform	ND	ug/l	1.5					
Carbon tetrachloride	ND	ug/l	1.0					
1,2-Dichloropropane	ND	ug/l	3.5					
Dibromochloromethane	ND	ug/l	1.0					
1,1,2-Trichloroethane	ND	ug/l	1.5					
2-Chloroethylvinyl ether	ND	ug/l	10.					
Tetrachloroethene	ND	ug/l	1.5					
Chlorobenzene	ND	ug/l	3.5					
Trichlorofluoromethane	ND	ug/l	5.0					
1,2-Dichloroethane	ND	ug/l	1.5					
1,1,1-Trichloroethane	ND	ug/l	2.0					
Bromodichloromethane	ND	ug/l	1.0					
trans-1,3-Dichloropropene	ND	ug/l	1.5					
cis-1,3-Dichloropropene	ND	ug/l	1.5					
Bromoform	ND	ug/l	1.0					
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0					
Benzene	ND	ug/l	1.0					
Toluene	ND	ug/l	1.0					
Ethylbenzene	ND	ug/l	1.0					
Chloromethane	ND	ug/l	10.					
Bromomethane	ND	ug/l	5.0					
Vinyl chloride	ND	ug/l	2.0					
Chloroethane	ND	ug/l	2.0					
1,1-Dichloroethene	ND	ug/l	1.0					
trans-1,2-Dichloroethene	ND	ug/l	1.5					
cis-1,2-Dichloroethene	ND	ug/l	1.0					
Trichloroethene	ND	ug/l	1.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711359

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01-02 (WG289896-6)								
Volatile Organics by GC/MS 624 cont'd				5	624	0808 09:01		MM
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
p/m-Xylene	ND	ug/l	2.0					
o-xylene	ND	ug/l	1.0					
Xylene (Total)	ND	ug/l	2.0					
Styrene	ND	ug/l	1.0					
Acetone	ND	ug/l	10.					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	10.					
Vinyl acetate	ND	ug/l	20.					
4-Methyl-2-pentanone	ND	ug/l	10.					
2-Hexanone	ND	ug/l	10.					
Acrolein	ND	ug/l	8.0					
Acrylonitrile	ND	ug/l	10.					
Surrogate(s)	Recovery		QC Criteria					
Pentafluorobenzene	85.0	%	80-120					
Fluorobenzene	98.0	%	80-120					
4-Bromofluorobenzene	108	%	80-120					
Blank Analysis for sample(s) 01 (WG289965-1)								
SVOC's by GC/MS 8270				1	8270C	0808 15:15	0809 11:50	AK
Acenaphthene	ND	ug/l	5.0					
Benzidine	ND	ug/l	50.					
1,2,4-Trichlorobenzene	ND	ug/l	5.0					
Hexachlorobenzene	ND	ug/l	5.0					
Bis(2-chloroethyl)ether	ND	ug/l	5.0					
1-Chloronaphthalene	ND	ug/l	5.0					
2-Chloronaphthalene	ND	ug/l	6.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
3,3'-Dichlorobenzidine	ND	ug/l	50.					
2,4-Dinitrotoluene	ND	ug/l	6.0					
2,6-Dinitrotoluene	ND	ug/l	5.0					
Azobenzene	ND	ug/l	5.0					
Fluoranthene	ND	ug/l	5.0					
4-Chlorophenyl phenyl ether	ND	ug/l	5.0					
4-Bromophenyl phenyl ether	ND	ug/l	5.0					
Bis(2-chloroisopropyl)ether	ND	ug/l	5.0					
Bis(2-chloroethoxy)methane	ND	ug/l	5.0					
Hexachlorobutadiene	ND	ug/l	10.					
Hexachlorocyclopentadiene	ND	ug/l	30.					
Hexachloroethane	ND	ug/l	5.0					
Isophorone	ND	ug/l	5.0					
Naphthalene	ND	ug/l	5.0					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711359

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG289965-1)								
SVOC's by GC/MS 8270 cont'd				1	8270C	0808 15:15	0809 11:50	AK
Nitrobenzene	ND	ug/l	5.0					
NDPA/DPA	ND	ug/l	15.					
n-Nitrosodi-n-propylamine	ND	ug/l	5.0					
Bis(2-ethylhexyl)phthalate	ND	ug/l	5.0					
Butyl benzyl phthalate	ND	ug/l	5.0					
Di-n-butylphthalate	ND	ug/l	5.0					
Di-n-octylphthalate	ND	ug/l	5.0					
Diethyl phthalate	ND	ug/l	5.0					
Dimethyl phthalate	ND	ug/l	5.0					
Benzo(a)anthracene	ND	ug/l	5.0					
Benzo(a)pyrene	ND	ug/l	5.0					
Benzo(b)fluoranthene	ND	ug/l	5.0					
Benzo(k)fluoranthene	ND	ug/l	5.0					
Chrysene	ND	ug/l	5.0					
Acenaphthylene	ND	ug/l	5.0					
Anthracene	ND	ug/l	5.0					
Benzo(ghi)perylene	ND	ug/l	5.0					
Fluorene	ND	ug/l	5.0					
Phenanthrene	ND	ug/l	5.0					
Dibenzo(a,h)anthracene	ND	ug/l	5.0					
Indeno(1,2,3-cd)pyrene	ND	ug/l	7.0					
Pyrene	ND	ug/l	5.0					
Benzo(e)pyrene	ND	ug/l	5.0					
Biphenyl	ND	ug/l	5.0					
Perylene	ND	ug/l	5.0					
Aniline	ND	ug/l	20.					
4-Chloroaniline	ND	ug/l	5.0					
1-Methylnaphthalene	ND	ug/l	5.0					
2-Nitroaniline	ND	ug/l	5.0					
3-Nitroaniline	ND	ug/l	5.0					
4-Nitroaniline	ND	ug/l	7.0					
Dibenzofuran	ND	ug/l	5.0					
a,a-Dimethylphenethylamine	ND	ug/l	50.					
Hexachloropropene	ND	ug/l	10.					
Nitrosodi-n-butylamine	ND	ug/l	10.					
2-Methylnaphthalene	ND	ug/l	5.0					
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.					
Pentachlorobenzene	ND	ug/l	20.					
a-Naphthylamine	ND	ug/l	25.					
b-Naphthylamine	ND	ug/l	20.					
Phenacetin	ND	ug/l	10.					
Dimethoate	ND	ug/l	20.					
4-Aminobiphenyl	ND	ug/l	10.					
Pentachloronitrobenzene	ND	ug/l	10.					
Isodrin	ND	ug/l	10.					
p-Dimethylaminoazobenzene	ND	ug/l	10.					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711359

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG289965-1)								
SVOC's by GC/MS 8270 cont'd				1	8270C	0808 15:15	0809 11:50	AK
Chlorobenzilate	ND	ug/l	20.					
3-Methylcholanthrene	ND	ug/l	20.					
Ethyl Methanesulfonate	ND	ug/l	15.					
Acetophenone	ND	ug/l	20.					
Nitrosodipiperidine	ND	ug/l	20.					
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.					
n-Nitrosodimethylamine	ND	ug/l	50.					
2,4,6-Trichlorophenol	ND	ug/l	5.0					
p-Chloro-m-cresol	ND	ug/l	5.0					
2-Chlorophenol	ND	ug/l	6.0					
2,4-Dichlorophenol	ND	ug/l	10.					
2,4-Dimethylphenol	ND	ug/l	10.					
2-Nitrophenol	ND	ug/l	20.					
4-Nitrophenol	ND	ug/l	10.					
2,4-Dinitrophenol	ND	ug/l	30.					
4,6-Dinitro-o-cresol	ND	ug/l	20.					
Pentachlorophenol	ND	ug/l	10.					
Phenol	ND	ug/l	7.0					
2-Methylphenol	ND	ug/l	6.0					
3-Methylphenol/4-Methylphenol	ND	ug/l	6.0					
2,4,5-Trichlorophenol	ND	ug/l	5.0					
2,6-Dichlorophenol	ND	ug/l	10.					
Benzoic Acid	ND	ug/l	50.					
Benzyl Alcohol	ND	ug/l	10.					
Carbazole	ND	ug/l	5.0					
Pyridine	ND	ug/l	50.					
2-Picoline	ND	ug/l	20.					
Pronamide	ND	ug/l	20.					
Methyl methanesulfonate	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	34.0	%	21-120					
Phenol-d6	24.0	%	10-120					
Nitrobenzene-d5	51.0	%	23-120					
2-Fluorobiphenyl	51.0	%	43-120					
2,4,6-Tribromophenol	76.0	%	10-120					
4-Terphenyl-d14	77.0	%	33-120					
Blank Analysis for sample(s) 02 (WG290138-1)								
SVOC's by GC/MS 8270				1	8270C	0809 16:15	0810 12:15	AK
Acenaphthene	ND	ug/l	5.0					
Benzidine	ND	ug/l	50.					
1,2,4-Trichlorobenzene	ND	ug/l	5.0					
Hexachlorobenzene	ND	ug/l	5.0					
Bis(2-chloroethyl)ether	ND	ug/l	5.0					
1-Chloronaphthalene	ND	ug/l	5.0					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711359

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 02 (WG290138-1)								
SVOC's by GC/MS 8270 cont'd				1	8270C	0809 16:15	0810 12:15	AK
2-Chloronaphthalene	ND	ug/l	6.0					
1,2-Dichlorobenzene	ND	ug/l	5.0					
1,3-Dichlorobenzene	ND	ug/l	5.0					
1,4-Dichlorobenzene	ND	ug/l	5.0					
3,3'-Dichlorobenzidine	ND	ug/l	50.					
2,4-Dinitrotoluene	ND	ug/l	6.0					
2,6-Dinitrotoluene	ND	ug/l	5.0					
Azobenzene	ND	ug/l	5.0					
Fluoranthene	ND	ug/l	5.0					
4-Chlorophenyl phenyl ether	ND	ug/l	5.0					
4-Bromophenyl phenyl ether	ND	ug/l	5.0					
Bis(2-chloroisopropyl)ether	ND	ug/l	5.0					
Bis(2-chloroethoxy)methane	ND	ug/l	5.0					
Hexachlorobutadiene	ND	ug/l	10.					
Hexachlorocyclopentadiene	ND	ug/l	30.					
Hexachloroethane	ND	ug/l	5.0					
Isophorone	ND	ug/l	5.0					
Naphthalene	ND	ug/l	5.0					
Nitrobenzene	ND	ug/l	5.0					
NDPA/DPA	ND	ug/l	15.					
n-Nitrosodi-n-propylamine	ND	ug/l	5.0					
Bis(2-ethylhexyl)phthalate	ND	ug/l	5.0					
Butyl benzyl phthalate	ND	ug/l	5.0					
Di-n-butylphthalate	ND	ug/l	5.0					
Di-n-octylphthalate	ND	ug/l	5.0					
Diethyl phthalate	ND	ug/l	5.0					
Dimethyl phthalate	ND	ug/l	5.0					
Benzo(a)anthracene	ND	ug/l	5.0					
Benzo(a)pyrene	ND	ug/l	5.0					
Benzo(b)fluoranthene	ND	ug/l	5.0					
Benzo(k)fluoranthene	ND	ug/l	5.0					
Chrysene	ND	ug/l	5.0					
Acenaphthylene	ND	ug/l	5.0					
Anthracene	ND	ug/l	5.0					
Benzo(ghi)perylene	ND	ug/l	5.0					
Fluorene	ND	ug/l	5.0					
Phenanthrene	ND	ug/l	5.0					
Dibenzo(a,h)anthracene	ND	ug/l	5.0					
Indeno(1,2,3-cd)pyrene	ND	ug/l	7.0					
Pyrene	ND	ug/l	5.0					
Benzo(e)pyrene	ND	ug/l	5.0					
Biphenyl	ND	ug/l	5.0					
Perylene	ND	ug/l	5.0					
Aniline	ND	ug/l	20.					
4-Chloroaniline	ND	ug/l	5.0					
1-Methylnaphthalene	ND	ug/l	5.0					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711359

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 02 (WG290138-1)								
SVOC's by GC/MS 8270 cont'd				1	8270C	0809 16:15	0810 12:15	AK
2-Nitroaniline	ND	ug/l	5.0					
3-Nitroaniline	ND	ug/l	5.0					
4-Nitroaniline	ND	ug/l	7.0					
Dibenzofuran	ND	ug/l	5.0					
a,a-Dimethylphenethylamine	ND	ug/l	50.					
Hexachloropropene	ND	ug/l	10.					
Nitrosodi-n-butylamine	ND	ug/l	10.					
2-Methylnaphthalene	ND	ug/l	5.0					
1,2,4,5-Tetrachlorobenzene	ND	ug/l	20.					
Pentachlorobenzene	ND	ug/l	20.					
a-Naphthylamine	ND	ug/l	25.					
b-Naphthylamine	ND	ug/l	20.					
Phenacetin	ND	ug/l	10.					
Dimethoate	ND	ug/l	20.					
4-Aminobiphenyl	ND	ug/l	10.					
Pentachloronitrobenzene	ND	ug/l	10.					
Isodrin	ND	ug/l	10.					
p-Dimethylaminoazobenzene	ND	ug/l	10.					
Chlorobenzilate	ND	ug/l	20.					
3-Methylcholanthrene	ND	ug/l	20.					
Ethyl Methanesulfonate	ND	ug/l	15.					
Acetophenone	ND	ug/l	20.					
Nitrosodipiperidine	ND	ug/l	20.					
7,12-Dimethylbenz(a)anthracene	ND	ug/l	20.					
n-Nitrosodimethylamine	ND	ug/l	50.					
2,4,6-Trichlorophenol	ND	ug/l	5.0					
p-Chloro-m-cresol	ND	ug/l	5.0					
2-Chlorophenol	ND	ug/l	6.0					
2,4-Dichlorophenol	ND	ug/l	10.					
2,4-Dimethylphenol	ND	ug/l	10.					
2-Nitrophenol	ND	ug/l	20.					
4-Nitrophenol	ND	ug/l	10.					
2,4-Dinitrophenol	ND	ug/l	30.					
4,6-Dinitro-o-cresol	ND	ug/l	20.					
Pentachlorophenol	ND	ug/l	10.					
Phenol	ND	ug/l	7.0					
2-Methylphenol	ND	ug/l	6.0					
3-Methylphenol/4-Methylphenol	ND	ug/l	6.0					
2,4,5-Trichlorophenol	ND	ug/l	5.0					
2,6-Dichlorophenol	ND	ug/l	10.					
Benzoic Acid	ND	ug/l	50.					
Benzyl Alcohol	ND	ug/l	10.					
Carbazole	ND	ug/l	5.0					
Pyridine	ND	ug/l	50.					
2-Picoline	ND	ug/l	20.					
Pronamide	ND	ug/l	20.					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711359

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 02 (WG290138-1)								
SVOC's by GC/MS 8270 cont'd				1	8270C	0809 16:15	0810 12:15	AK
Methyl methanesulfonate	ND	ug/l	20.					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	40.0	%	21-120					
Phenol-d6	29.0	%	10-120					
Nitrobenzene-d5	61.0	%	23-120					
2-Fluorobiphenyl	56.0	%	43-120					
2,4,6-Tribromophenol	85.0	%	10-120					
4-Terphenyl-d14	85.0	%	33-120					
Blank Analysis for sample(s) 01-02 (WG289964-1)								
PAH by GC/MS SIM 8270M				1	8270C-M	0808 15:15	0809 15:26	HL
Acenaphthene	ND	ug/l	0.20					
2-Chloronaphthalene	ND	ug/l	0.20					
Fluoranthene	ND	ug/l	0.20					
Hexachlorobutadiene	ND	ug/l	0.50					
Naphthalene	ND	ug/l	0.20					
Benzo(a)anthracene	ND	ug/l	0.20					
Benzo(a)pyrene	ND	ug/l	0.20					
Benzo(b)fluoranthene	ND	ug/l	0.20					
Benzo(k)fluoranthene	ND	ug/l	0.20					
Chrysene	ND	ug/l	0.20					
Acenaphthylene	ND	ug/l	0.20					
Anthracene	ND	ug/l	0.20					
Benzo(ghi)perylene	ND	ug/l	0.20					
Fluorene	ND	ug/l	0.20					
Phenanthrene	ND	ug/l	0.20					
Dibenzo(a,h)anthracene	ND	ug/l	0.20					
Indeno(1,2,3-cd)Pyrene	ND	ug/l	0.20					
Pyrene	ND	ug/l	0.20					
1-Methylnaphthalene	ND	ug/l	0.20					
2-Methylnaphthalene	ND	ug/l	0.20					
Pentachlorophenol	ND	ug/l	0.80					
Hexachlorobenzene	ND	ug/l	0.80					
Perylene	ND	ug/l	0.20					
Biphenyl	ND	ug/l	0.20					
2,6-Dimethylnaphthalene	ND	ug/l	0.20					
1-Methylphenanthrene	ND	ug/l	0.20					
Benzo(e)Pyrene	ND	ug/l	0.20					
Hexachloroethane	ND	ug/l	0.80					
Surrogate(s)	Recovery		QC Criteria					
2-Fluorophenol	33.0	%	21-120					
Phenol-d6	25.0	%	10-120					
Nitrobenzene-d5	50.0	%	23-120					
2-Fluorobiphenyl	48.0	%	43-120					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0711359

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PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01-02 (WG289964-1)								
PAH by GC/MS SIM 8270M cont'd				1	8270C-M	0808 15:15	0809 15:26	HL
2,4,6-Tribromophenol	59.0	%	10-120					
4-Terphenyl-d14	77.0	%	33-120					

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

5. Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).

19. Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

GLOSSARY OF TERMS AND SYMBOLS

REF	Reference number in which test method may be found.
METHOD	Method number by which analysis was performed.
ID	Initials of the analyst.
ND	Not detected in comparison to the reported detection limit.
NI	Not Ignitable.
ug/cart	Micrograms per Cartridge.

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.

CHAIN OF COUSTODY

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ALPHA Woods Hole Labs

WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

RAYNHAM, MA
TEL: 508-822-9300
FAX: 508-822-3288

Date Rec'd in Lab: 8/8/07

ALPHA Job #: L0711359.

Client Information

Client: ERM-Boston
Address: 399 Boylston St. 6th Flr
Boston, MA 02116
Phone: 617 646 7800
Fax: 617 267 6447
Email: jason.flattery@erm.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: NA Soil Excavation
Project Location: Raytheon Wayland
Project #: 0051545
Project Manager: Jason Flattery
ALPHA Quote #:

Turn-Around Time

☐ Standard ☒ RUSH (only confirmed if pre-approved!)
Date Due: ~~24 HR~~ 48 Turnaround Time: 8/10/07

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program	Criteria
MCP	

MA MCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

SAMPLE HANDLING
Filtration
☐ Done
☒ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	ANALYSIS: VOCs by 624	Total As, Cu, Ni, Fe	TSS	SVOCs by 8270 w/ Pentachlorophenol								Sample Specific Comments	TOTAL # BOTTLES
1135-01	INF-20070808-01	8/8/07	07:00	GW	BM	X	X	X	X									6
-02	EFF-20070808-01	8/8/07	07:10	GW	BM	X	X	X	X									6

Container Type	V	P	P	A
Preservative	H	C	A	A

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	8/8/07 12:00	John Bianchi	8/8 12:00
John Bianchi	8/8 1300	[signature]	8/8/07 1300

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

FORM NO: 01-01 (rev. 10-OCT-05)