

Report Date:
09-Oct-08 15:12



- Final Report
- Re-Issued Report
- Revised Report

SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

Norfolk RAM Group
25 Birch Street, Building B
Milford, MA 01757
Attn: Steve Lemoine

Project: Wayland High School-Wayland, MA
Project 1213.1.1

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SA85269-01	Outfall 1	Surface Water	29-Sep-08 10:00	30-Sep-08 12:51

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.

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes.

Please note that this report contains 15 pages of analytical data plus Chain of Custody document(s).

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Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
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 (NY-11840, FL-E87936 and NJ-MA012).

CASE NARRATIVE:

The samples were received 2.7 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method.

According to WSC-CAM 5/2004 Rev.4, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult.

Pentachlorophenol and Hexachlorobutadiene can not be detected at the requested GW-1 standards in the SW846 8270 analysis for sample SA85269-01.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

ASTM D 1293-99B

Samples:

SA85269-01 *Outfall 1*

A hold time of 24 hours has been set to expedite the analyses through the laboratory. However, the hold time for pH is not specified within the method other than to state that the samples should be analyzed as soon as possible.

pH

SM2540D

Duplicates:

8100311-DUP1 *Source: SA85239-01*

RPD out of acceptance range.

Total Suspended Solids

SW846 6010B

Laboratory Control Samples:

8100046-BSD1

Analyte out of acceptance range in QC spike but no reportable concentration present in sample.

Cadmium

SW846 8270C

Laboratory Control Samples:

8100120-BS1

Analyte out of acceptance range in QC spike but no reportable concentration present in sample.

2,4-Dinitrophenol
4,6-Dinitro-2-methylphenol
4-Nitroaniline
Bis(2-ethylhexyl)phthalate

Samples:

SA85269-01 *Outfall 1*

Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

Phenol-d5

Sample Identification**Outfall 1**

SA85269-01

Client Project #

1213.1.1

Matrix

Surface Water

Collection Date/Time

29-Sep-08 10:00

Received

30-Sep-08

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Cert.</i>
Semivolatile Organic Compounds by GCMS												
<u>Semivolatile Organic Compounds by SW846 8270C</u>												
Prepared by method SW846 3510C												
83-32-9	Acenaphthene	BRL	U	µg/l	5.62	0.135	1	SW846 8270C	02-Oct-08	06-Oct-08	8100120	
208-96-8	Acenaphthylene	BRL	U	µg/l	5.62	0.169	1	"	"	"	"	
62-53-3	Aniline	BRL	U	µg/l	5.62	0.427	1	"	"	"	"	
120-12-7	Anthracene	BRL	U	µg/l	5.62	0.169	1	"	"	"	"	
1912-24-9	Atrazine	BRL	U	µg/l	5.62	0.213	1	"	"	"	"	
103-33-3	Azobenzene/Diphenyldiazine	BRL	U	µg/l	5.62	0.146	1	"	"	"	"	
92-87-5	Benzidine	BRL	U	µg/l	5.62	0.629	1	"	"	"	"	
56-55-3	Benzo (a) anthracene	BRL	U	µg/l	5.62	0.360	1	"	"	"	"	
50-32-8	Benzo (a) pyrene	BRL	U	µg/l	5.62	0.191	1	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	BRL	U	µg/l	5.62	0.742	1	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	BRL	U	µg/l	5.62	0.157	1	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	BRL	U	µg/l	5.62	0.225	1	"	"	"	"	
65-85-0	Benzoic acid	BRL	U	µg/l	5.62	0.101	1	"	"	"	"	
100-51-6	Benzyl alcohol	BRL	U	µg/l	5.62	0.101	1	"	"	"	"	
111-91-1	Bis(2-chloroethoxy)methane	BRL	U	µg/l	5.62	0.112	1	"	"	"	"	
111-44-4	Bis(2-chloroethyl)ether	BRL	U	µg/l	5.62	0.0787	1	"	"	"	"	
108-60-1	Bis(2-chloroisopropyl)ether	BRL	U	µg/l	5.62	0.101	1	"	"	"	"	
117-81-7	Bis(2-ethylhexyl)phthalate	3.18	J	µg/l	5.62	1.07	1	"	"	"	"	
101-55-3	4-Bromophenyl phenyl ether	BRL	U	µg/l	5.62	0.258	1	"	"	"	"	
85-68-7	Butyl benzyl phthalate	BRL	U	µg/l	5.62	0.640	1	"	"	"	"	
86-74-8	Carbazole	BRL	U	µg/l	5.62	0.202	1	"	"	"	"	
59-50-7	4-Chloro-3-methylphenol	BRL	U	µg/l	5.62	0.202	1	"	"	"	"	
106-47-8	4-Chloroaniline	BRL	U	µg/l	5.62	0.539	1	"	"	"	"	
91-58-7	2-Chloronaphthalene	BRL	U	µg/l	5.62	0.0787	1	"	"	"	"	
95-57-8	2-Chlorophenol	BRL	U	µg/l	5.62	0.112	1	"	"	"	"	
7005-72-3	4-Chlorophenyl phenyl ether	BRL	U	µg/l	5.62	0.0674	1	"	"	"	"	
218-01-9	Chrysene	BRL	U	µg/l	5.62	0.0787	1	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	BRL	U	µg/l	5.62	0.0899	1	"	"	"	"	
132-64-9	Dibenzofuran	BRL	U	µg/l	5.62	0.0674	1	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL	U	µg/l	5.62	0.180	1	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL	U	µg/l	5.62	0.236	1	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL	U	µg/l	5.62	0.247	1	"	"	"	"	
91-94-1	3,3'-Dichlorobenzidine	BRL	U	µg/l	5.62	0.404	1	"	"	"	"	
120-83-2	2,4-Dichlorophenol	BRL	U	µg/l	5.62	0.146	1	"	"	"	"	
84-66-2	Diethyl phthalate	BRL	U	µg/l	5.62	0.180	1	"	"	"	"	
131-11-3	Dimethyl phthalate	BRL	U	µg/l	5.62	0.157	1	"	"	"	"	
105-67-9	2,4-Dimethylphenol	BRL	U	µg/l	5.62	0.258	1	"	"	"	"	
84-74-2	Di-n-butyl phthalate	BRL	U	µg/l	5.62	0.146	1	"	"	"	"	
534-52-1	4,6-Dinitro-2-methylphenol	BRL	U	µg/l	5.62	0.135	1	"	"	"	"	
51-28-5	2,4-Dinitrophenol	BRL	U	µg/l	5.62	0.348	1	"	"	"	"	
121-14-2	2,4-Dinitrotoluene	BRL	U	µg/l	5.62	0.236	1	"	"	"	"	
606-20-2	2,6-Dinitrotoluene	BRL	U	µg/l	5.62	0.135	1	"	"	"	"	
117-84-0	Di-n-octyl phthalate	1.13	J	µg/l	5.62	0.270	1	"	"	"	"	
206-44-0	Fluoranthene	BRL	U	µg/l	5.62	0.135	1	"	"	"	"	
86-73-7	Fluorene	BRL	U	µg/l	5.62	0.135	1	"	"	"	"	
118-74-1	Hexachlorobenzene	BRL	U	µg/l	5.62	0.416	1	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL	U	µg/l	5.62	0.629	1	"	"	"	"	
77-47-4	Hexachlorocyclopentadiene	BRL	U	µg/l	5.62	0.416	1	"	"	"	"	
67-72-1	Hexachloroethane	BRL	U	µg/l	5.62	0.573	1	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	BRL	U	µg/l	5.62	0.258	1	"	"	"	"	

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample Identification**Outfall 1**

SA85269-01

Client Project #

1213.1.1

Matrix

Surface Water

Collection Date/Time

29-Sep-08 10:00

Received

30-Sep-08

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Cert.
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Semivolatile Organic Compounds by GCMSSemivolatile Organic Compounds by SW846 8270C

Prepared by method SW846 3510C

78-59-1	Isophorone	BRL	U	µg/l	5.62	0.337	1	SW846 8270C	02-Oct-08	06-Oct-08	8100120	
91-57-6	2-Methylnaphthalene	BRL	U	µg/l	5.62	0.124	1	"	"	"	"	
95-48-7	2-Methylphenol	BRL	U	µg/l	5.62	0.236	1	"	"	"	"	
108-39-4, 106-44-5	3 & 4-Methylphenol	BRL	U	µg/l	11.2	0.270	1	"	"	"	"	
91-20-3	Naphthalene	BRL	U	µg/l	5.62	0.213	1	"	"	"	"	
88-74-4	2-Nitroaniline	BRL	U	µg/l	5.62	0.0674	1	"	"	"	"	
99-09-2	3-Nitroaniline	BRL	U	µg/l	5.62	0.191	1	"	"	"	"	
100-01-6	4-Nitroaniline	BRL	U	µg/l	22.5	0.213	1	"	"	"	"	
98-95-3	Nitrobenzene	BRL	U	µg/l	5.62	0.202	1	"	"	"	"	
88-75-5	2-Nitrophenol	BRL	U	µg/l	5.62	0.258	1	"	"	"	"	
100-02-7	4-Nitrophenol	BRL	U	µg/l	22.5	0.292	1	"	"	"	"	
62-75-9	N-Nitrosodimethylamine	BRL	U	µg/l	5.62	0.124	1	"	"	"	"	
621-64-7	N-Nitrosodi-n-propylamine	BRL	U	µg/l	5.62	0.674	1	"	"	"	"	
86-30-6	N-Nitrosodiphenylamine	BRL	U	µg/l	5.62	0.213	1	"	"	"	"	
87-86-5	Pentachlorophenol	BRL	U	µg/l	22.5	0.360	1	"	"	"	"	
85-01-8	Phenanthrene	BRL	U	µg/l	5.62	0.258	1	"	"	"	"	
108-95-2	Phenol	BRL	U	µg/l	5.62	0.112	1	"	"	"	"	
129-00-0	Pyrene	BRL	U	µg/l	5.62	0.393	1	"	"	"	"	
110-86-1	Pyridine	BRL	U	µg/l	5.62	0.112	1	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL	U	µg/l	5.62	0.0787	1	"	"	"	"	
90-12-0	1-Methylnaphthalene	BRL	U	µg/l	5.62	0.124	1	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	BRL	U	µg/l	5.62	0.112	1	"	"	"	"	
88-06-2	2,4,6-Trichlorophenol	BRL	U	µg/l	5.62	0.112	1	"	"	"	"	
82-68-8	Pentachloronitrobenzene	BRL	U	µg/l	5.62	2.81	1	"	"	"	"	
95-94-3	1,2,4,5-Tetrachlorobenzene	BRL	U	µg/l	5.62	2.81	1	"	"	"	"	

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	62			30-130 %			"	"	"	"	
367-12-4	2-Fluorophenol	15			15-110 %			"	"	"	"	
4165-60-0	Nitrobenzene-d5	75			30-130 %			"	"	"	"	
4165-62-2	Phenol-d5	11	SGC		15-110 %			"	"	"	"	
1718-51-0	Terphenyl-d14	51			30-130 %			"	"	"	"	
118-79-6	2,4,6-Tribromophenol	66			15-110 %			"	"	"	"	

Soluble Metals by EPA 200/6000 Series Methods

Filtration	Lab Filtered			N/A			1	EPA 200.7/3005A01-Oct-08	01-Oct-08	8100042		
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Soluble Metals by EPA 6000/7000 Series Methods

7440-43-9	Cadmium	BRL	U	mg/l	0.0025	0.0002	1	SW846 6010B	01-Oct-08	03-Oct-08	8100046	
7440-47-3	Chromium	BRL	U	mg/l	0.0050	0.0032	1	"	"	"	"	
7440-50-8	Copper	0.0032	J	mg/l	0.0050	0.0031	1	"	"	"	"	
7439-92-1	Lead	BRL	U	mg/l	0.0075	0.0025	1	"	"	"	"	
7782-49-2	Selenium	BRL	U	mg/l	0.0150	0.0048	1	"	"	"	"	
7440-66-6	Zinc	0.0358	J	mg/l	0.0375	0.0010	1	"	"	"	"	

General Chemistry Parameters

Biochemical Oxygen Demand (5 day)	BRL	U		mg/l	3.00	1.82	1	SM5210B	01-Oct-08 08:20	06-Oct-08 14:35	8100052	X
pH	7.16		pHHT	pH Units			1	ASTM D 1293-99B	30-Sep-08 19:16	30-Sep-08 19:20	8092308	X
Total Suspended Solids	BRL	U		mg/l	5.00	4.38	1	SM2540D	03-Oct-08	06-Oct-08	8100311	X

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8100120 - SW846 3510C										
Blank (8100120-BLK1)										
Prepared: 02-Oct-08 Analyzed: 03-Oct-08										
Acenaphthene	BRL	U	µg/l	5.00						
Acenaphthylene	BRL	U	µg/l	5.00						
Aniline	BRL	U	µg/l	5.00						
Anthracene	BRL	U	µg/l	5.00						
Atrazine	BRL	U	µg/l	5.00						
Azobenzene/Diphenyldiazine	BRL	U	µg/l	5.00						
Benzidine	BRL	U	µg/l	5.00						
Benzo (a) anthracene	BRL	U	µg/l	5.00						
Benzo (a) pyrene	BRL	U	µg/l	5.00						
Benzo (b) fluoranthene	BRL	U	µg/l	5.00						
Benzo (g,h,i) perylene	BRL	U	µg/l	5.00						
Benzo (k) fluoranthene	BRL	U	µg/l	5.00						
Benzoic acid	BRL	U	µg/l	5.00						
Benzyl alcohol	BRL	U	µg/l	5.00						
Bis(2-chloroethoxy)methane	BRL	U	µg/l	5.00						
Bis(2-chloroethyl)ether	BRL	U	µg/l	5.00						
Bis(2-chloroisopropyl)ether	BRL	U	µg/l	5.00						
Bis(2-ethylhexyl)phthalate	BRL	U	µg/l	5.00						
4-Bromophenyl phenyl ether	BRL	U	µg/l	5.00						
Butyl benzyl phthalate	BRL	U	µg/l	5.00						
Carbazole	BRL	U	µg/l	5.00						
4-Chloro-3-methylphenol	BRL	U	µg/l	5.00						
4-Chloroaniline	BRL	U	µg/l	5.00						
2-Chloronaphthalene	BRL	U	µg/l	5.00						
2-Chlorophenol	BRL	U	µg/l	5.00						
4-Chlorophenyl phenyl ether	BRL	U	µg/l	5.00						
Chrysene	BRL	U	µg/l	5.00						
Dibenzo (a,h) anthracene	BRL	U	µg/l	5.00						
Dibenzofuran	BRL	U	µg/l	5.00						
1,2-Dichlorobenzene	BRL	U	µg/l	5.00						
1,3-Dichlorobenzene	BRL	U	µg/l	5.00						
1,4-Dichlorobenzene	BRL	U	µg/l	5.00						
3,3'-Dichlorobenzidine	BRL	U	µg/l	5.00						
2,4-Dichlorophenol	BRL	U	µg/l	5.00						
Diethyl phthalate	BRL	U	µg/l	5.00						
Dimethyl phthalate	BRL	U	µg/l	5.00						
2,4-Dimethylphenol	BRL	U	µg/l	5.00						
Di-n-butyl phthalate	BRL	U	µg/l	5.00						
4,6-Dinitro-2-methylphenol	BRL	U	µg/l	5.00						
2,4-Dinitrophenol	BRL	U	µg/l	5.00						
2,4-Dinitrotoluene	BRL	U	µg/l	5.00						
2,6-Dinitrotoluene	BRL	U	µg/l	5.00						
Di-n-octyl phthalate	BRL	U	µg/l	5.00						
Fluoranthene	BRL	U	µg/l	5.00						
Fluorene	BRL	U	µg/l	5.00						
Hexachlorobenzene	BRL	U	µg/l	5.00						
Hexachlorobutadiene	BRL	U	µg/l	5.00						
Hexachlorocyclopentadiene	BRL	U	µg/l	5.00						
Hexachloroethane	BRL	U	µg/l	5.00						

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* Reportable Detection Limit

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8100120 - SW846 3510C										
Blank (8100120-BLK1)										
Prepared: 02-Oct-08 Analyzed: 03-Oct-08										
Indeno (1,2,3-cd) pyrene	BRL	U	µg/l	5.00						
Isophorone	BRL	U	µg/l	5.00						
2-Methylnaphthalene	BRL	U	µg/l	5.00						
2-Methylphenol	BRL	U	µg/l	5.00						
3 & 4-Methylphenol	BRL	U	µg/l	10.0						
Naphthalene	BRL	U	µg/l	5.00						
2-Nitroaniline	BRL	U	µg/l	5.00						
3-Nitroaniline	BRL	U	µg/l	5.00						
4-Nitroaniline	BRL	U	µg/l	20.0						
Nitrobenzene	BRL	U	µg/l	5.00						
2-Nitrophenol	BRL	U	µg/l	5.00						
4-Nitrophenol	BRL	U	µg/l	20.0						
N-Nitrosodimethylamine	BRL	U	µg/l	5.00						
N-Nitrosodi-n-propylamine	BRL	U	µg/l	5.00						
N-Nitrosodiphenylamine	BRL	U	µg/l	5.00						
Pentachlorophenol	BRL	U	µg/l	20.0						
Phenanthrene	BRL	U	µg/l	5.00						
Phenol	BRL	U	µg/l	5.00						
Pyrene	BRL	U	µg/l	5.00						
Pyridine	BRL	U	µg/l	5.00						
1,2,4-Trichlorobenzene	BRL	U	µg/l	5.00						
1-Methylnaphthalene	BRL	U	µg/l	5.00						
2,4,5-Trichlorophenol	BRL	U	µg/l	5.00						
2,4,6-Trichlorophenol	BRL	U	µg/l	5.00						
Pentachloronitrobenzene	BRL	U	µg/l	5.00						
1,2,4,5-Tetrachlorobenzene	BRL	U	µg/l	5.00						
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>42.1</i>		<i>µg/l</i>		<i>50.0</i>		<i>84</i>	<i>30-130</i>		
<i>Surrogate: 2-Fluorophenol</i>	<i>47.9</i>		<i>µg/l</i>		<i>50.0</i>		<i>96</i>	<i>15-110</i>		
<i>Surrogate: Nitrobenzene-d5</i>	<i>53.0</i>		<i>µg/l</i>		<i>50.0</i>		<i>106</i>	<i>30-130</i>		
<i>Surrogate: Phenol-d5</i>	<i>50.0</i>		<i>µg/l</i>		<i>50.0</i>		<i>100</i>	<i>15-110</i>		
<i>Surrogate: Terphenyl-dl4</i>	<i>44.5</i>		<i>µg/l</i>		<i>50.0</i>		<i>89</i>	<i>30-130</i>		
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>45.7</i>		<i>µg/l</i>		<i>50.0</i>		<i>91</i>	<i>15-110</i>		
LCS (8100120-BS1)										
Prepared: 02-Oct-08 Analyzed: 03-Oct-08										
Acenaphthene	47.1		µg/l	5.00	50.0		94	40-130		
Acenaphthylene	49.5		µg/l	5.00	50.0		99	40-130		
Aniline	41.0		µg/l	5.00	50.0		82	40-130		
Anthracene	45.8		µg/l	5.00	50.0		92	40-130		
Atrazine	59.6		µg/l	5.00	50.0		119	40-130		
Azobenzene/Diphenyldiazine	47.6		µg/l	5.00	50.0		95	40-130		
Benzidine	8.21		µg/l	5.00	50.0		16	0-224		
Benzo (a) anthracene	51.9		µg/l	5.00	50.0		104	40-130		
Benzo (a) pyrene	47.7		µg/l	5.00	50.0		95	40-130		
Benzo (b) fluoranthene	48.4		µg/l	5.00	50.0		97	40-130		
Benzo (g,h,i) perylene	48.3		µg/l	5.00	50.0		97	40-130		
Benzo (k) fluoranthene	46.8		µg/l	5.00	50.0		94	40-130		
Benzoic acid	65.1		µg/l	5.00	50.0		130	40-130		
Benzyl alcohol	34.3		µg/l	5.00	50.0		69	40-130		
Bis(2-chloroethoxy)methane	58.6		µg/l	5.00	50.0		117	40-130		
Bis(2-chloroethyl)ether	52.8		µg/l	5.00	50.0		106	40-130		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8100120 - SW846 3510C										
<u>LCS (8100120-BS1)</u>										
Prepared: 02-Oct-08 Analyzed: 03-Oct-08										
Bis(2-chloroisopropyl)ether	51.0		µg/l	5.00	50.0		102	40-130		
Bis(2-ethylhexyl)phthalate	70.3	QC2	µg/l	5.00	50.0		141	40-130		
4-Bromophenyl phenyl ether	56.5		µg/l	5.00	50.0		113	40-130		
Butyl benzyl phthalate	64.5		µg/l	5.00	50.0		129	40-130		
Carbazole	50.3		µg/l	5.00	50.0		101	40-130		
4-Chloro-3-methylphenol	56.4		µg/l	5.00	50.0		113	40-130		
4-Chloroaniline	46.4		µg/l	5.00	50.0		93	40-130		
2-Chloronaphthalene	43.9		µg/l	5.00	50.0		88	40-130		
2-Chlorophenol	43.5		µg/l	5.00	50.0		87	40-130		
4-Chlorophenyl phenyl ether	58.5		µg/l	5.00	50.0		117	40-130		
Chrysene	53.2		µg/l	5.00	50.0		106	40-130		
Dibenzo (a,h) anthracene	49.6		µg/l	5.00	50.0		99	40-130		
Dibenzofuran	47.1		µg/l	5.00	50.0		94	40-130		
1,2-Dichlorobenzene	42.4		µg/l	5.00	50.0		85	40-130		
1,3-Dichlorobenzene	36.0		µg/l	5.00	50.0		72	40-130		
1,4-Dichlorobenzene	44.6		µg/l	5.00	50.0		89	40-130		
3,3'-Dichlorobenzidine	63.2		µg/l	5.00	50.0		126	40-130		
2,4-Dichlorophenol	52.2		µg/l	5.00	50.0		104	40-130		
Diethyl phthalate	58.0		µg/l	5.00	50.0		116	40-130		
Dimethyl phthalate	57.6		µg/l	5.00	50.0		115	40-130		
2,4-Dimethylphenol	49.3		µg/l	5.00	50.0		99	40-130		
Di-n-butyl phthalate	57.7		µg/l	5.00	50.0		115	40-130		
4,6-Dinitro-2-methylphenol	67.9	QC2	µg/l	5.00	50.0		136	40-130		
2,4-Dinitrophenol	76.4	QC2	µg/l	5.00	50.0		153	40-130		
2,4-Dinitrotoluene	59.9		µg/l	5.00	50.0		120	40-130		
2,6-Dinitrotoluene	58.0		µg/l	5.00	50.0		116	40-130		
Di-n-octyl phthalate	64.2		µg/l	5.00	50.0		128	40-130		
Fluoranthene	49.4		µg/l	5.00	50.0		99	40-130		
Fluorene	50.1		µg/l	5.00	50.0		100	40-130		
Hexachlorobenzene	48.1		µg/l	5.00	50.0		96	40-130		
Hexachlorobutadiene	45.4		µg/l	5.00	50.0		91	40-130		
Hexachlorocyclopentadiene	40.0		µg/l	5.00	50.0		80	40-130		
Hexachloroethane	40.4		µg/l	5.00	50.0		81	40-130		
Indeno (1,2,3-cd) pyrene	51.3		µg/l	5.00	50.0		103	40-130		
Isophorone	49.4		µg/l	5.00	50.0		99	40-130		
2-Methylnaphthalene	49.4		µg/l	5.00	50.0		99	40-130		
2-Methylphenol	44.6		µg/l	5.00	50.0		89	40-130		
3 & 4-Methylphenol	56.2		µg/l	10.0	50.0		112	40-130		
Naphthalene	49.7		µg/l	5.00	50.0		99	40-130		
2-Nitroaniline	54.3		µg/l	5.00	50.0		109	40-130		
3-Nitroaniline	58.6		µg/l	5.00	50.0		117	40-130		
4-Nitroaniline	70.4	QC2	µg/l	20.0	50.0		141	40-130		
Nitrobenzene	51.3		µg/l	5.00	50.0		103	40-130		
2-Nitrophenol	55.9		µg/l	5.00	50.0		112	40-130		
4-Nitrophenol	40.0		µg/l	20.0	50.0		80	40-130		
N-Nitrosodimethylamine	40.8		µg/l	5.00	50.0		82	40-130		
N-Nitrosodi-n-propylamine	53.6		µg/l	5.00	50.0		107	40-130		
N-Nitrosodiphenylamine	55.0		µg/l	5.00	50.0		110	40-130		
Pentachlorophenol	63.2		µg/l	20.0	50.0		126	40-130		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8100120 - SW846 3510C										
<u>LCS (8100120-BS1)</u>										
Prepared: 02-Oct-08 Analyzed: 03-Oct-08										
Phenanthrene	46.3		µg/l	5.00	50.0		93	40-130		
Phenol	48.4		µg/l	5.00	50.0		97	40-130		
Pyrene	49.7		µg/l	5.00	50.0		99	40-130		
Pyridine	45.2		µg/l	5.00	50.0		90	0-130		
1-Methylnaphthalene	43.6		µg/l	5.00	50.0		87	40-140		
1,2,4-Trichlorobenzene	45.2		µg/l	5.00	50.0		90	40-130		
2,4,5-Trichlorophenol	53.0		µg/l	5.00	50.0		106	40-130		
2,4,6-Trichlorophenol	45.5		µg/l	5.00	50.0		91	40-130		
Pentachloronitrobenzene	47.7		µg/l	5.00	50.0		95	40-140		
1,2,4,5-Tetrachlorobenzene	37.8		µg/l	5.00	50.0		76	40-140		
Surrogate: 2-Fluorobiphenyl	41.9		µg/l		50.0		84	30-130		
Surrogate: 2-Fluorophenol	40.6		µg/l		50.0		81	15-110		
Surrogate: Nitrobenzene-d5	51.1		µg/l		50.0		102	30-130		
Surrogate: Phenol-d5	42.0		µg/l		50.0		84	15-110		
Surrogate: Terphenyl-d14	44.2		µg/l		50.0		88	30-130		
Surrogate: 2,4,6-Tribromophenol	53.8		µg/l		50.0		108	15-110		
<u>Duplicate (8100120-DUP1)</u> Source: SA85314-01										
Prepared: 02-Oct-08 Analyzed: 03-Oct-08										
Acenaphthene	BRL	U	µg/l	10.0		BRL				50
Acenaphthylene	BRL	U	µg/l	10.0		BRL				50
Aniline	BRL	U	µg/l	10.0		BRL				50
Anthracene	BRL	U	µg/l	10.0		BRL				50
Atrazine	BRL	U	µg/l	10.0		BRL				50
Azobenzene/Diphenyldiazine	BRL	U	µg/l	10.0		BRL				50
Benzidine	BRL	U	µg/l	10.0		BRL				50
Benzo (a) anthracene	BRL	U	µg/l	10.0		BRL				50
Benzo (a) pyrene	BRL	U	µg/l	10.0		BRL				50
Benzo (b) fluoranthene	BRL	U	µg/l	10.0		BRL				50
Benzo (g,h,i) perylene	BRL	U	µg/l	10.0		BRL				50
Benzo (k) fluoranthene	BRL	U	µg/l	10.0		BRL				50
Benzoic acid	BRL	U	µg/l	10.0		BRL				50
Benzyl alcohol	BRL	U	µg/l	10.0		BRL				50
Bis(2-chloroethoxy)methane	BRL	U	µg/l	10.0		BRL				50
Bis(2-chloroethyl)ether	BRL	U	µg/l	10.0		BRL				50
Bis(2-chloroisopropyl)ether	BRL	U	µg/l	10.0		BRL				50
Bis(2-ethylhexyl)phthalate	BRL	U	µg/l	10.0		BRL				50
4-Bromophenyl phenyl ether	BRL	U	µg/l	10.0		BRL				50
Butyl benzyl phthalate	BRL	U	µg/l	10.0		BRL				50
Carbazole	BRL	U	µg/l	10.0		BRL				50
4-Chloro-3-methylphenol	BRL	U	µg/l	10.0		BRL				50
4-Chloroaniline	BRL	U	µg/l	10.0		BRL				50
2-Chloronaphthalene	BRL	U	µg/l	10.0		BRL				50
2-Chlorophenol	BRL	U	µg/l	10.0		BRL				50
4-Chlorophenyl phenyl ether	BRL	U	µg/l	10.0		BRL				50
Chrysene	BRL	U	µg/l	10.0		BRL				50
Dibenzo (a,h) anthracene	BRL	U	µg/l	10.0		BRL				50
Dibenzofuran	BRL	U	µg/l	10.0		BRL				50
1,2-Dichlorobenzene	BRL	U	µg/l	10.0		BRL				50
1,3-Dichlorobenzene	BRL	U	µg/l	10.0		BRL				50
1,4-Dichlorobenzene	BRL	U	µg/l	10.0		BRL				50

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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Batch 8100120 - SW846 3510C									
Duplicate (8100120-DUP1) Source: SA85314-01									
Prepared: 02-Oct-08 Analyzed: 03-Oct-08									
3,3'-Dichlorobenzidine	BRL	U	µg/l	10.0		BRL			50
2,4-Dichlorophenol	BRL	U	µg/l	10.0		BRL			50
Diethyl phthalate	BRL	U	µg/l	10.0		BRL			50
Dimethyl phthalate	BRL	U	µg/l	10.0		BRL			50
2,4-Dimethylphenol	BRL	U	µg/l	10.0		BRL			50
Di-n-butyl phthalate	BRL	U	µg/l	10.0		BRL			50
4,6-Dinitro-2-methylphenol	BRL	U	µg/l	10.0		BRL			50
2,4-Dinitrophenol	BRL	U	µg/l	10.0		BRL			50
2,4-Dinitrotoluene	BRL	U	µg/l	10.0		BRL			50
2,6-Dinitrotoluene	BRL	U	µg/l	10.0		BRL			50
Di-n-octyl phthalate	BRL	U	µg/l	10.0		BRL			50
Fluoranthene	BRL	U	µg/l	10.0		BRL			50
Fluorene	BRL	U	µg/l	10.0		BRL			50
Hexachlorobenzene	BRL	U	µg/l	10.0		BRL			50
Hexachlorobutadiene	BRL	U	µg/l	10.0		BRL			50
Hexachlorocyclopentadiene	BRL	U	µg/l	10.0		BRL			50
Hexachloroethane	BRL	U	µg/l	10.0		BRL			50
Indeno (1,2,3-cd) pyrene	BRL	U	µg/l	10.0		BRL			50
Isophorone	BRL	U	µg/l	10.0		BRL			50
2-Methylnaphthalene	BRL	U	µg/l	10.0		BRL			50
2-Methylphenol	BRL	U	µg/l	10.0		BRL			50
3 & 4-Methylphenol	BRL	U	µg/l	20.0		BRL			50
Naphthalene	BRL	U	µg/l	10.0		BRL			50
2-Nitroaniline	BRL	U	µg/l	10.0		BRL			50
3-Nitroaniline	BRL	U	µg/l	10.0		BRL			50
4-Nitroaniline	BRL	U	µg/l	40.0		BRL			50
Nitrobenzene	BRL	U	µg/l	10.0		BRL			50
2-Nitrophenol	BRL	U	µg/l	10.0		BRL			50
4-Nitrophenol	BRL	U	µg/l	40.0		BRL			50
N-Nitrosodimethylamine	BRL	U	µg/l	10.0		BRL			50
N-Nitrosodi-n-propylamine	BRL	U	µg/l	10.0		BRL			50
N-Nitrosodiphenylamine	BRL	U	µg/l	10.0		BRL			50
Pentachlorophenol	BRL	U	µg/l	40.0		BRL			50
Phenanthrene	BRL	U	µg/l	10.0		BRL			50
Phenol	BRL	U	µg/l	10.0		BRL			50
Pyrene	BRL	U	µg/l	10.0		BRL			50
Pyridine	BRL	U	µg/l	10.0		BRL			50
1,2,4-Trichlorobenzene	BRL	U	µg/l	10.0		BRL			50
1-Methylnaphthalene	BRL	U	µg/l	10.0		BRL			50
2,4,5-Trichlorophenol	BRL	U	µg/l	10.0		BRL			50
2,4,6-Trichlorophenol	BRL	U	µg/l	10.0		BRL			50
Pentachloronitrobenzene	BRL	U	µg/l	10.0		BRL			50
1,2,4,5-Tetrachlorobenzene	BRL	U	µg/l	10.0		BRL			50
Surrogate: 2-Fluorobiphenyl	42.1		µg/l		50.0		84	30-130	
Surrogate: 2-Fluorophenol	42.6		µg/l		50.0		85	15-110	
Surrogate: Nitrobenzene-d5	51.9		µg/l		50.0		104	30-130	
Surrogate: Phenol-d5	39.4		µg/l		50.0		79	15-110	
Surrogate: Terphenyl-d14	44.6		µg/l		50.0		89	30-130	
Surrogate: 2,4,6-Tribromophenol	45.3		µg/l		50.0		91	15-110	

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* Reportable Detection Limit

BRL = Below Reporting Limit

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

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Batch 8100046 - SW846 3005A									
Blank (8100046-BLK1)									
Prepared: 01-Oct-08 Analyzed: 03-Oct-08									
Zinc	0.0160	J	mg/l	0.0375					
Lead	BRL	U	mg/l	0.0075					
Selenium	BRL	U	mg/l	0.0150					
Cadmium	BRL	U	mg/l	0.0025					
Copper	BRL	U	mg/l	0.0050					
Chromium	BRL	U	mg/l	0.0050					
LCS (8100046-BS1)									
Prepared: 01-Oct-08 Analyzed: 03-Oct-08									
Selenium	1.30		mg/l	0.0150	1.25		104	85-115	
Zinc	1.23		mg/l	0.0375	1.25		99	85-115	
Lead	1.29		mg/l	0.0075	1.25		104	85-115	
Chromium	1.34		mg/l	0.0050	1.25		107	85-115	
Cadmium	1.41		mg/l	0.0025	1.25		113	85-115	
Copper	1.34		mg/l	0.0050	1.25		107	85-115	
LCS Dup (8100046-BSD1)									
Prepared: 01-Oct-08 Analyzed: 03-Oct-08									
Lead	1.33		mg/l	0.0075	1.25		106	85-115	3 20
Zinc	1.24		mg/l	0.0375	1.25		99	85-115	0.5 20
Selenium	1.34		mg/l	0.0150	1.25		107	85-115	3 20
Copper	1.37		mg/l	0.0050	1.25		110	85-115	2 20
Cadmium	1.45	QC2	mg/l	0.0025	1.25		116	85-115	3 20
Chromium	1.38		mg/l	0.0050	1.25		111	85-115	3 20
Duplicate (8100046-DUP1) Source: SA85269-01									
Prepared: 01-Oct-08 Analyzed: 03-Oct-08									
Selenium	BRL	U	mg/l	0.0150		BRL			20
Zinc	0.0364	J	mg/l	0.0375		0.0358		2	20
Lead	BRL	U	mg/l	0.0075		BRL			20
Cadmium	0.0002	J	mg/l	0.0025		BRL			20
Chromium	BRL	U	mg/l	0.0050		BRL			20
Copper	BRL	U	mg/l	0.0050		0.0032			20
Matrix Spike (8100046-MS1) Source: SA85269-01									
Prepared: 01-Oct-08 Analyzed: 03-Oct-08									
Selenium	1.33		mg/l	0.0150	1.25	BRL	106	75-125	
Lead	1.31		mg/l	0.0075	1.25	BRL	105	75-125	
Zinc	1.35		mg/l	0.0375	1.25	0.0358	105	75-125	
Chromium	1.32		mg/l	0.0050	1.25	BRL	106	75-125	
Copper	1.40		mg/l	0.0050	1.25	0.0032	112	75-125	
Cadmium	1.40		mg/l	0.0025	1.25	BRL	112	75-125	
Matrix Spike Dup (8100046-MSD1) Source: SA85269-01									
Prepared: 01-Oct-08 Analyzed: 03-Oct-08									
Selenium	1.31		mg/l	0.0150	1.25	BRL	105	75-125	2 20
Lead	1.30		mg/l	0.0075	1.25	BRL	104	75-125	1 20
Zinc	1.34		mg/l	0.0375	1.25	0.0358	104	75-125	1 20
Chromium	1.31		mg/l	0.0050	1.25	BRL	105	75-125	0.9 20
Copper	1.39		mg/l	0.0050	1.25	0.0032	111	75-125	0.8 20
Cadmium	1.38		mg/l	0.0025	1.25	BRL	111	75-125	1 20
Post Spike (8100046-PS1) Source: SA85269-01									

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* Reportable Detection Limit

BRL = Below Reporting Limit

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 8100046 - SW846 3005A										
Prepared: 01-Oct-08 Analyzed: 03-Oct-08										
Lead	1.24		mg/l	0.0075	1.25	BRL	99	80-120		
Zinc	1.26		mg/l	0.0375	1.25	0.0358	98	80-120		
Selenium	1.25		mg/l	0.0150	1.25	BRL	100	80-120		
Copper	1.32		mg/l	0.0050	1.25	0.0032	106	80-120		
Chromium	1.27		mg/l	0.0050	1.25	BRL	102	80-120		
Cadmium	1.33		mg/l	0.0025	1.25	BRL	106	80-120		

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* Reportable Detection Limit BRL = Below Reporting Limit

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Batch 8092308 - General Preparation									
<u>Duplicate (8092308-DUP1)</u> Source: SA85271-01									
Prepared & Analyzed: 30-Sep-08									
pH	9.25		pH Units			9.24		0.1	5
<u>Reference (8092308-SRM1)</u>									
Prepared & Analyzed: 30-Sep-08									
pH	7.02		pH Units		7.00		100 97.5-102.5		
<u>Reference (8092308-SRM5)</u>									
Prepared & Analyzed: 30-Sep-08									
pH	7.01		pH Units		7.00		100 97.5-102.5		
Batch 8100052 - General Preparation									
<u>Blank (8100052-BLK1)</u>									
Prepared: 01-Oct-08 Analyzed: 06-Oct-08									
Biochemical Oxygen Demand (5 day)	BRL	U	mg/l	3.00					
<u>Blank (8100052-BLK2)</u>									
Prepared: 01-Oct-08 Analyzed: 06-Oct-08									
Biochemical Oxygen Demand (5 day)	BRL	U	mg/l	3.00					
<u>LCS (8100052-BS1)</u>									
Prepared: 01-Oct-08 Analyzed: 06-Oct-08									
Biochemical Oxygen Demand (5 day)	203		mg/l	50.0	198		103 85-115		
<u>Duplicate (8100052-DUP1)</u> Source: SA85272-01									
Prepared: 01-Oct-08 Analyzed: 06-Oct-08									
Biochemical Oxygen Demand (5 day)	177		mg/l	37.5		177		0	20
<u>Matrix Spike (8100052-MS1)</u> Source: SA85272-01									
Prepared: 01-Oct-08 Analyzed: 06-Oct-08									
Biochemical Oxygen Demand (5 day)	401		mg/l	100	198	177	113 75-125		
<u>Matrix Spike Dup (8100052-MSD1)</u> Source: SA85272-01									
Prepared: 01-Oct-08 Analyzed: 06-Oct-08									
Biochemical Oxygen Demand (5 day)	400		mg/l	100	198	177	113 75-125	0.2	200
<u>Reference (8100052-SRM1)</u>									
Prepared: 01-Oct-08 Analyzed: 06-Oct-08									
Biochemical Oxygen Demand (5 day)	142		mg/l	37.5	142		100 69.2-128.2		
<u>Reference (8100052-SRM2)</u>									
Prepared: 01-Oct-08 Analyzed: 06-Oct-08									
Biochemical Oxygen Demand (5 day)	142		mg/l	37.5	142		100 69.2-128.2		
Batch 8100311 - General Preparation									
<u>Blank (8100311-BLK1)</u>									
Prepared: 03-Oct-08 Analyzed: 06-Oct-08									
Total Suspended Solids	BRL	U	mg/l	5.00					
<u>Blank (8100311-BLK2)</u>									
Prepared: 03-Oct-08 Analyzed: 06-Oct-08									
Total Suspended Solids	BRL	U	mg/l	5.00					
<u>Duplicate (8100311-DUP1)</u> Source: SA85239-01									
Prepared: 03-Oct-08 Analyzed: 06-Oct-08									
Total Suspended Solids	27.0	QR5	mg/l	5.00		20.0		30	20
<u>Duplicate (8100311-DUP2)</u> Source: SA85269-01									

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8100311 - General Preparation										
Prepared: 03-Oct-08 Analyzed: 06-Oct-08										
Total Suspended Solids	BRL	U	mg/l	5.00		BRL				20
Reference (8100311-SRM1)										
Prepared: 03-Oct-08 Analyzed: 06-Oct-08										
Total Suspended Solids	82.0		mg/l	10.0	88.8		92	90-110		
Reference (8100311-SRM2)										
Prepared: 03-Oct-08 Analyzed: 06-Oct-08										
Total Suspended Solids	82.0		mg/l	10.0	88.8		92	90-110		

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* Reportable Detection Limit BRL = Below Reporting Limit

Notes and Definitions

J	Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
pHHT	A hold time of 24 hours has been set to expedite the analyses through the laboratory. However, the hold time for pH is not specified within the method other than to state that the samples should be analyzed as soon as possible.
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QR5	RPD out of acceptance range.
SGC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
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

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.

MADEP MCP ANALYTICAL METHOD REPORT CERTIFICATION FORM

Laboratory Name: Spectrum Analytical, Inc. - Agawam, MA			Project #: 1213.1.1		
Project Location: Wayland High School-Wayland, MA			MADEP RTN ¹ :		
This form provides certifications for the following data set: SA85269-01					
Sample matrices:		Surface Water			
MCP SW-846 Methods Used	<input type="checkbox"/> 8260B	<input type="checkbox"/> 8151A	<input type="checkbox"/> 8330	<input checked="" type="checkbox"/> 6010B	<input type="checkbox"/> 7470A/1A
	<input checked="" type="checkbox"/> 8270C	<input type="checkbox"/> 8081A	<input type="checkbox"/> VPH	<input type="checkbox"/> 6020	<input type="checkbox"/> 9014M ²
	<input type="checkbox"/> 8082	<input type="checkbox"/> 8021B	<input type="checkbox"/> EPH	<input type="checkbox"/> 7000S ³	<input type="checkbox"/> 7196A
<p>1 List Release Tracking Number (RTN), if known 2 M - SW-846 Method 9014 or MADEP Physiologically Available Cyanide (PAC) Method 3 S - SW-846 Methods 7000 Series List individual method and analyte</p>					
An affirmative response to questions A, B, C and D is required for "Presumptive Certainty" status					
A	Were all samples received by the laboratory in a condition consistent with that described on the Chain of Custody documentation for the data set?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C	Does the data included in this report meet all the analytical requirements for "Presumptive Certainty", as described in Section 2.0 (a), (b), (c) and (d) of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
D	<u>VPH and EPH methods only:</u> Was the VPH or EPH method conducted without significant modifications (see Section 11.3 of respective methods)?				<input type="checkbox"/> Yes <input type="checkbox"/> No
A response to questions E and F below is required for "Presumptive Certainty" status					
E	Were all analytical QC performance standards and recommendations for the specified methods achieved?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
All negative responses are addressed in a case narrative on the cover page of this report.					
<p>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 analytical report is, to the best of my knowledge and belief, accurate and complete.</p> <div style="text-align: right; margin-top: 20px;">  Hanibal C. Tayeh, Ph.D. President/Laboratory Director Date: 10/9/2008 </div>					

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* Reportable Detection Limit BRL = Below Reporting Limit



ADDRESS OF SPECIAL ANALYTICAL, INC. FORTIG HUNTER TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

- Standard TAT - 10 to 15 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.

CA852109 CW

Report To: Norfolk Ren

Invoice To: Seaw

Project No.: 1213.1.1

85 Birch St.

Site Name: Weyland High School

Location: Weyland State: MA

Project Mgr.: Steve Lemons

P.O. No.: RON Speiser

Sampler(s): SEL

1=Na₂S₂O₃, 2=HCl, 3=H₂SO₄, 4=HNO₃, 5=NaOH, 6=Ascorbic Acid
 7=CH₃OH, 8=NaHSO₄, 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

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	Containers:				Analyses:				QA Reporting Notes: (check if needed)					
							# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic										
<u>CA8521091</u>	<u>09011</u>	<u>9/25/08</u>	<u>10:00</u>	<u>G</u>	<u>SW</u>		<u>3</u>		<u>2</u>	<u>X</u>	<u>BNA/ Acid Ext.</u>	<u>X</u>	<u>BOD</u>	<u>X</u>	<u>TSS</u>	<u>X</u>	<u>pH</u>	<u>X</u>	<u>Diss Metals *</u>	<u>QA/QC Reporting Level</u> <u>X Standard</u> <input type="checkbox"/> No QC <u>Other</u> _____ State specific reporting standards: <u>GW-1</u>
																				<u>* Zn, Cu, Pb, Cr</u> <u>cd, se only</u> <u>Please Filter</u>

Relinquished by:

Received by:

Date:

Time:

Fax results when available to (_____) _____
 X E-mail to Stevenc@norfolkren.com
 EDD Format: _____
 Condition upon receipt: Iced Ambient 1°C 2.7

[Signature]

[Signature]

9/30/08 9:40
9:30-00 12:51