



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

### PROJECT NARRATIVE

Mark Deuger  
Advanced Environmental Solutions, Inc.  
90 Madison Street, Suite 605  
Worcester, MA 01608

**RE: Baltic Mill**  
**ESS Laboratory Work Order Number: 0905266**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this Project Narrative, the entire report has been paginated. The ESS Laboratory Certifications sheet is the final report page. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

A handwritten signature in black ink, appearing to read 'Laurel Stoddard'.

Laurel Stoddard  
Laboratory Director



#### Analytical Summary

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration may be used instead of automated integration because it produces more accurate results. All ICP Metals were analyzed using the established linear dynamic range to determine acceptable analytical results.

ESS Laboratory certifies that the test results meet the requirements of NELAC, except where noted within this project narrative.

To achieve Reasonable Confidence Protocols (RCP) compliance for Connecticut data, ESS laboratory has performed and reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All RCP requirements have been achieved unless noted in the project narrative.

**Question 5:** Each method has been set-up in the laboratory to reach required RCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes (ie for GWPC samples, 1,2-Dibromoethane regulatory levels will not be met by VOA 8260. If this is a contaminant of concern Method 8011 will need to be used.). The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Data Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

#### Sample Receipt

The following sample(s) were received on May 20, 2009 for the analyses specified on the enclosed Chain of Custody Record.

Question 6: All samples for SVOA and Metals were analyzed for a subset of the required RCP list per the client's request.

<u>Laboratory ID</u>	<u>Matrix</u>	<u>Client Sample ID</u>
0905266-01	Soil	TP-18 2.5 Ft
0905266-02	Soil	TP-19 2 ft
0905266-03	Soil	TP-22 2ft



# ESS Laboratory

*Division of Thielsch Engineering, Inc.*

## CERTIFICATE OF ANALYSIS

Client Name: Advanced Environmental Solutions, Inc.  
Client Project ID: Baltic Mill

ESS Laboratory Work Order: 0905266

## PROJECT NARRATIVE

### 3050B/6000/7000 Total Metals

BE92014-MS2 **Matrix Spike recovery is below lower control limit.**  
Antimony, Lead

### 8100M Extractable Total Petroleum Hydrocarbons

0905266-02 **Matrix Spike/Matrix Spike Dup do not match sample. Reextraction confirms nonhomogeneity.**

BE92125-MS1 **Matrix Spike recovery is above upper control limit.**  
Total Petroleum Hydrocarbons

BE92125-MSD1 **Matrix Spike recovery is above upper control limit.**  
Total Petroleum Hydrocarbons

BE92125-MSD1 **Relative percent difference for duplicate is outside of criteria.**  
Total Petroleum Hydrocarbons

### 8270C Polynuclear Aromatic Hydrocarbons

BE92113-MSD2 **Matrix Spike recovery is above upper control limit.**  
Fluoranthene

BE92113-MSD2 **Matrix Spike recovery is below lower control limit.**  
Phenanthrene, Pyrene

BE92113-MSD2 **Relative percent difference for duplicate is outside of criteria.**  
Fluoranthene, Phenanthrene, Pyrene

**No other observations noted.**

**End of Project Narrative.**



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Advanced Environmental Solutions, Inc.  
Client Project ID: Baltic Mill

ESS Laboratory Work Order: 0905266

### Laboratory Analysis QA/QC Certification Form

Project Number: N/A

Sampling Date(s): 5/20/2009

Laboratory Sample ID(s): 0905266-01 through 0905266-03

List RCP Methods Used      ( ) 8260B      ( ) 8151A      (x) ETPH      (x) 6010B      (x) 7470A/1A  
 Other: \_\_\_\_\_ (x) 8270C      ( ) 8081A      ( ) VPH      ( ) 6020      ( ) 9014M  
 \_\_\_\_\_ ( ) 8082      ( ) 8021B      ( ) EPH      (x) 7000 S      ( ) 7196A

7841-TL

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria failing outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
1A	Were the method specific preservation and holding time requirements met?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
1B	<u>VPH and EPH Methods only:</u> Was the VPH or EPH method conducted without significant modifications (see Section 11.3 of respective RCP methods)?	<input type="radio"/> Yes	<input checked="" type="radio"/> N/A
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No
3	Were samples received at an appropriate temperature (<6° C°)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No N/A
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	<input type="radio"/> Yes	<input checked="" type="radio"/> No
5	a) Were reporting limits specified or referenced on the chain-of-custody? b) Were these reporting limits met?	<input checked="" type="radio"/> Yes <input checked="" type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> No
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	<input type="radio"/> Yes	<input checked="" type="radio"/> No
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	<input type="radio"/> Yes	<input checked="" type="radio"/> No

Notes: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence." This form may not be altered and all questions must be answered.

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.

Authorized Signature: Laurel Stoddard

Position: Laboratory Director

Printed Name: Laurel Stoddard

Date: May 28, 2009



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Advanced Environmental Solutions, Inc.  
Client Project ID: Baltic Mill  
Client Sample ID: TP-18 2.5 Ft  
Date Sampled: 05/20/09 08:30  
Percent Solids: 88

ESS Laboratory Work Order: 0905266  
ESS Laboratory Sample ID: 0905266-01  
Sample Matrix: Soil

### 3050B/6000/7000 Total Metals

CT - RES DEC

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>
Antimony	ND	mg/kg dry	6.1	6010B	27	1	SVD	05/20/09	1.87	100
Arsenic	9.0	mg/kg dry	3.0	6010B	10	1	SVD	05/20/09	1.87	100
Beryllium	ND	mg/kg dry	0.06	6010B	2	1	SVD	05/20/09	1.87	100
Cadmium	ND	mg/kg dry	0.61	6010B	34	1	SVD	05/20/09	1.87	100
Chromium	8.5	mg/kg dry	1.2	6010B	3900	1	SVD	05/20/09	1.87	100
Copper	12.4	mg/kg dry	1.2	6010B	2500	1	SVD	05/20/09	1.87	100
Lead	495	mg/kg dry	6.1	6010B	400	1	SVD	05/20/09	1.87	100
Mercury	ND	mg/kg dry	0.036	7471A	20	1	KAB	05/21/09	0.62	40
Nickel	7.4	mg/kg dry	3.0	6010B	1400	1	SVD	05/20/09	1.87	100
Selenium	ND	mg/kg dry	6.1	6010B	340	1	SVD	05/20/09	1.87	100
Silver	ND	mg/kg dry	0.61	6010B	340	1	SVD	05/20/09	1.87	100
Thallium	ND	mg/kg dry	1.50	7841	5.4	5	SVD	05/21/09	1.87	100
Zinc	17.6	mg/kg dry	3.0	6010B	20000	1	SVD	05/20/09	1.87	100



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## CERTIFICATE OF ANALYSIS

Client Name: Advanced Environmental Solutions, Inc.  
 Client Project ID: Baltic Mill  
 Client Sample ID: TP-18 2.5 Ft  
 Date Sampled: 05/20/09 08:30  
 Percent Solids: 88  
 Initial Volume: 14.5  
 Final Volume: 0.5  
 Extraction Method: 3546

ESS Laboratory Work Order: 0905266  
 ESS Laboratory Sample ID: 0905266-01  
 Sample Matrix: Soil  
 Analyst: IBM  
 Prepared: 05/21/09

### 8270C Polynuclear Aromatic Hydrocarbons

CT - RES DEC

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>
2-Methylnaphthalene	ND	mg/kg dry	0.391	474	1	05/22/09
Acenaphthene	ND	mg/kg dry	0.391	1000	1	05/22/09
Acenaphthylene	ND	mg/kg dry	0.391	1000	1	05/22/09
Anthracene	ND	mg/kg dry	0.391	1000	1	05/22/09
Benzo(a)anthracene	ND	mg/kg dry	0.391	1	1	05/22/09
Benzo(a)pyrene	ND	mg/kg dry	0.196	1	1	05/22/09
Benzo(b)fluoranthene	ND	mg/kg dry	0.391	1	1	05/22/09
Benzo(g,h,i)perylene	ND	mg/kg dry	0.391	1000	1	05/22/09
Benzo(k)fluoranthene	ND	mg/kg dry	0.391	8.4	1	05/22/09
Chrysene	ND	mg/kg dry	0.196	84	1	05/22/09
Dibenzo(a,h)Anthracene	ND	mg/kg dry	0.196	0.33	1	05/22/09
Fluoranthene	ND	mg/kg dry	0.391	1000	1	05/22/09
Fluorene	ND	mg/kg dry	0.391	1000	1	05/22/09
Indeno(1,2,3-cd)Pyrene	ND	mg/kg dry	0.391	1	1	05/22/09
Naphthalene	ND	mg/kg dry	0.391	1000	1	05/22/09
Phenanthrene	ND	mg/kg dry	0.391	1000	1	05/22/09
Pyrene	ND	mg/kg dry	0.391	1000	1	05/22/09

	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>
Surrogate: 1,2-Dichlorobenzene-d4	72 %		30-130
Surrogate: 2-Fluorobiphenyl	74 %		30-130
Surrogate: Nitrobenzene-d5	68 %		30-130
Surrogate: p-Terphenyl-d14	83 %		30-130



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## CERTIFICATE OF ANALYSIS

Client Name: Advanced Environmental Solutions, Inc.  
 Client Project ID: Baltic Mill  
 Client Sample ID: TP-18 2.5 Ft  
 Date Sampled: 05/20/09 08:30  
 Percent Solids: 88  
 Initial Volume: 20.2  
 Final Volume: 1  
 Extraction Method: 3546

ESS Laboratory Work Order: 0905266  
 ESS Laboratory Sample ID: 0905266-01  
 Sample Matrix: Soil  
 Analyst: ML  
 Prepared: 05/21/09

### 8100M Extractable Total Petroleum Hydrocarbons

CT - RES DEC

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>
Total Petroleum Hydrocarbons	ND	mg/kg dry	22.5	500	1	05/21/09

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: O-Terphenyl</i>	77 %		50-150



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Advanced Environmental Solutions, Inc.  
Client Project ID: Baltic Mill  
Client Sample ID: TP-19 2 ft  
Date Sampled: 05/20/09 09:00  
Percent Solids: 91

ESS Laboratory Work Order: 0905266  
ESS Laboratory Sample ID: 0905266-02  
Sample Matrix: Soil

### 3050B/6000/7000 Total Metals

CT - RES DEC

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>
Antimony	ND	mg/kg dry	6.1	6010B	27	1	SVD	05/21/09	1.81	100
Arsenic	5.5	mg/kg dry	3.0	6010B	10	1	SVD	05/21/09	1.81	100
Beryllium	0.12	mg/kg dry	0.06	6010B	2	1	SVD	05/21/09	1.81	100
Cadmium	ND	mg/kg dry	0.61	6010B	34	1	SVD	05/21/09	1.81	100
Chromium	13.2	mg/kg dry	1.2	6010B	3900	1	SVD	05/21/09	1.81	100
Copper	16.1	mg/kg dry	1.2	6010B	2500	1	SVD	05/21/09	1.81	100
Lead	112	mg/kg dry	6.1	6010B	400	1	SVD	05/21/09	1.81	100
Mercury	ND	mg/kg dry	0.035	7471A	20	1	KAB	05/21/09	0.63	40
Nickel	9.5	mg/kg dry	3.0	6010B	1400	1	SVD	05/21/09	1.81	100
Selenium	ND	mg/kg dry	6.1	6010B	340	1	SVD	05/21/09	1.81	100
Silver	ND	mg/kg dry	0.61	6010B	340	1	SVD	05/21/09	1.81	100
Thallium	ND	mg/kg dry	1.50	7841	5.4	5	SVD	05/21/09	1.81	100
Zinc	30.4	mg/kg dry	3.0	6010B	20000	1	SVD	05/21/09	1.81	100



# ESS Laboratory

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## CERTIFICATE OF ANALYSIS

Client Name: Advanced Environmental Solutions, Inc.  
 Client Project ID: Baltic Mill  
 Client Sample ID: TP-19 2 ft  
 Date Sampled: 05/20/09 09:00  
 Percent Solids: 91  
 Initial Volume: 14.7  
 Final Volume: 0.5  
 Extraction Method: 3546

ESS Laboratory Work Order: 0905266  
 ESS Laboratory Sample ID: 0905266-02  
 Sample Matrix: Soil  
 Analyst: IBM  
 Prepared: 05/21/09

### 8270C Polynuclear Aromatic Hydrocarbons

CT - RES DEC

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>
2-Methylnaphthalene	0.803	mg/kg dry	0.373	474	1	05/22/09
Acenaphthene	1.43	mg/kg dry	0.373	1000	1	05/22/09
Acenaphthylene	ND	mg/kg dry	0.373	1000	1	05/22/09
Anthracene	2.80	mg/kg dry	0.373	1000	1	05/22/09
Benzo(a)anthracene	4.98	mg/kg dry	0.373	1	1	05/22/09
Benzo(a)pyrene	3.69	mg/kg dry	0.187	1	1	05/22/09
Benzo(b)fluoranthene	4.45	mg/kg dry	0.373	1	1	05/22/09
Benzo(g,h,i)perylene	1.48	mg/kg dry	0.373	1000	1	05/22/09
Benzo(k)fluoranthene	2.75	mg/kg dry	0.373	8.4	1	05/22/09
Chrysene	4.34	mg/kg dry	0.187	84	1	05/22/09
Dibenzo(a,h)Anthracene	0.570	mg/kg dry	0.187	0.33	1	05/22/09
Fluoranthene	11.4	mg/kg dry	1.87	1000	5	05/22/09
Fluorene	1.57	mg/kg dry	0.373	1000	1	05/22/09
Indeno(1,2,3-cd)Pyrene	1.59	mg/kg dry	0.373	1	1	05/22/09
Naphthalene	0.921	mg/kg dry	0.373	1000	1	05/22/09
Phenanthrene	10.3	mg/kg dry	1.87	1000	5	05/22/09
Pyrene	8.86	mg/kg dry	1.87	1000	5	05/22/09

	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>
Surrogate: 1,2-Dichlorobenzene-d4	77 %		30-130
Surrogate: 2-Fluorobiphenyl	91 %		30-130
Surrogate: Nitrobenzene-d5	73 %		30-130
Surrogate: p-Terphenyl-d14	89 %		30-130





# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Advanced Environmental Solutions, Inc.  
 Client Project ID: Baltic Mill  
 Client Sample ID: TP-19 2 ft  
 Date Sampled: 05/20/09 09:00  
 Percent Solids: 91  
 Initial Volume: 20.3  
 Final Volume: 1  
 Extraction Method: 3546

ESS Laboratory Work Order: 0905266  
 ESS Laboratory Sample ID: 0905266-02  
 Sample Matrix: Soil  
 Analyst: ML  
 Prepared: 05/21/09

### 8100M Extractable Total Petroleum Hydrocarbons

CT - RES DEC

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>
Total Petroleum Hydrocarbons	219	mg/kg dry	21.7	500	1	05/21/09

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: O-Terphenyl</i>	113 %		50-150



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Advanced Environmental Solutions, Inc.  
Client Project ID: Baltic Mill  
Client Sample ID: TP-22 2ft  
Date Sampled: 05/20/09 11:00  
Percent Solids: 94

ESS Laboratory Work Order: 0905266  
ESS Laboratory Sample ID: 0905266-03  
Sample Matrix: Soil

### 3050B/6000/7000 Total Metals

CT - RES DEC

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>
Antimony	ND	mg/kg dry	5.8	6010B	27	1	SVD	05/21/09	1.83	100
Arsenic	8.6	mg/kg dry	2.9	6010B	10	1	SVD	05/21/09	1.83	100
Beryllium	0.13	mg/kg dry	0.06	6010B	2	1	SVD	05/21/09	1.83	100
Cadmium	ND	mg/kg dry	0.58	6010B	34	1	SVD	05/21/09	1.83	100
Chromium	10.0	mg/kg dry	1.2	6010B	3900	1	SVD	05/21/09	1.83	100
Copper	9.3	mg/kg dry	1.2	6010B	2500	1	SVD	05/21/09	1.83	100
Lead	7.1	mg/kg dry	5.8	6010B	400	1	SVD	05/21/09	1.83	100
Mercury	ND	mg/kg dry	0.034	7471A	20	1	KAB	05/21/09	0.62	40
Nickel	7.8	mg/kg dry	2.9	6010B	1400	1	SVD	05/21/09	1.83	100
Selenium	ND	mg/kg dry	5.8	6010B	340	1	SVD	05/21/09	1.83	100
Silver	ND	mg/kg dry	0.58	6010B	340	1	SVD	05/21/09	1.83	100
Thallium	ND	mg/kg dry	1.44	7841	5.4	5	SVD	05/21/09	1.83	100
Zinc	8.9	mg/kg dry	2.9	6010B	20000	1	SVD	05/21/09	1.83	100



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Advanced Environmental Solutions, Inc.  
 Client Project ID: Baltic Mill  
 Client Sample ID: TP-22 2ft  
 Date Sampled: 05/20/09 11:00  
 Percent Solids: 94  
 Initial Volume: 15  
 Final Volume: 0.5  
 Extraction Method: 3546

ESS Laboratory Work Order: 0905266  
 ESS Laboratory Sample ID: 0905266-03  
 Sample Matrix: Soil  
 Analyst: IBM  
 Prepared: 05/21/09

### 8270C Polynuclear Aromatic Hydrocarbons

#### CT - RES DEC

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>
2-Methylnaphthalene	ND	mg/kg dry	0.354	474	1	05/22/09
Acenaphthene	ND	mg/kg dry	0.354	1000	1	05/22/09
Acenaphthylene	ND	mg/kg dry	0.354	1000	1	05/22/09
Anthracene	ND	mg/kg dry	0.354	1000	1	05/22/09
Benzo(a)anthracene	ND	mg/kg dry	0.354	1	1	05/22/09
Benzo(a)pyrene	ND	mg/kg dry	0.178	1	1	05/22/09
Benzo(b)fluoranthene	ND	mg/kg dry	0.354	1	1	05/22/09
Benzo(g,h,i)perylene	ND	mg/kg dry	0.354	1000	1	05/22/09
Benzo(k)fluoranthene	ND	mg/kg dry	0.354	8.4	1	05/22/09
Chrysene	ND	mg/kg dry	0.178	84	1	05/22/09
Dibenzo(a,h)Anthracene	ND	mg/kg dry	0.178	0.33	1	05/22/09
Fluoranthene	ND	mg/kg dry	0.354	1000	1	05/22/09
Fluorene	ND	mg/kg dry	0.354	1000	1	05/22/09
Indeno(1,2,3-cd)Pyrene	ND	mg/kg dry	0.354	1	1	05/22/09
Naphthalene	ND	mg/kg dry	0.354	1000	1	05/22/09
Phenanthrene	ND	mg/kg dry	0.354	1000	1	05/22/09
Pyrene	ND	mg/kg dry	0.354	1000	1	05/22/09

	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>
Surrogate: 1,2-Dichlorobenzene-d4	63 %		30-130
Surrogate: 2-Fluorobiphenyl	74 %		30-130
Surrogate: Nitrobenzene-d5	65 %		30-130
Surrogate: p-Terphenyl-d14	90 %		30-130



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Advanced Environmental Solutions, Inc.  
 Client Project ID: Baltic Mill  
 Client Sample ID: TP-22 2ft  
 Date Sampled: 05/20/09 11:00  
 Percent Solids: 94  
 Initial Volume: 19.1  
 Final Volume: 1  
 Extraction Method: 3546

ESS Laboratory Work Order: 0905266  
 ESS Laboratory Sample ID: 0905266-03  
 Sample Matrix: Soil  
 Analyst: ML  
 Prepared: 05/21/09

### 8100M Extractable Total Petroleum Hydrocarbons

CT - RES DEC

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>MRL</u>	<u>Limit</u>	<u>DF</u>	<u>Analyzed</u>
Total Petroleum Hydrocarbons	ND	mg/kg dry	22.3	500	1	05/21/09

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: O-Terphenyl</i>	86 %		50-150



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Advanced Environmental Solutions, Inc.  
 Client Project ID: Baltic Mill

ESS Laboratory Work Order: 0905266

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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#### 3050B/6000/7000 Total Metals

#### Batch BE92014 - 3050B

##### Blank

Antimony	ND	6.7	mg/kg wet
Arsenic	ND	3.3	mg/kg wet
Beryllium	ND	0.07	mg/kg wet
Cadmium	ND	0.67	mg/kg wet
Chromium	ND	1.3	mg/kg wet
Copper	ND	1.3	mg/kg wet
Lead	ND	6.7	mg/kg wet
Nickel	ND	3.3	mg/kg wet
Selenium	ND	6.7	mg/kg wet
Silver	ND	0.67	mg/kg wet
Thallium	ND	0.33	mg/kg wet
Zinc	ND	3.3	mg/kg wet

##### LCS

Antimony	33.2	6.7	mg/kg wet	33.33	100	80-120
Arsenic	35.2	3.3	mg/kg wet	33.33	106	80-120
Beryllium	3.35	0.07	mg/kg wet	3.333	100	80-120
Cadmium	15.9	0.67	mg/kg wet	16.67	95	80-120
Chromium	33.8	1.3	mg/kg wet	33.33	102	80-120
Copper	32.8	1.3	mg/kg wet	33.33	98	80-120
Lead	34.2	6.7	mg/kg wet	33.33	103	80-120
Nickel	33.6	3.3	mg/kg wet	33.33	101	80-120
Selenium	62.4	6.7	mg/kg wet	66.67	94	80-120
Silver	16.4	0.67	mg/kg wet	16.67	99	80-120
Thallium	36.0	6.60	mg/kg wet	33.33	108	80-120
Zinc	32.9	3.3	mg/kg wet	33.33	99	80-120

##### LCS Dup

Antimony	32.6	6.7	mg/kg wet	33.33	98	80-120	2	20
Arsenic	34.1	3.3	mg/kg wet	33.33	102	80-120	3	20
Beryllium	3.30	0.07	mg/kg wet	3.333	99	80-120	1	20
Cadmium	15.6	0.67	mg/kg wet	16.67	94	80-120	2	20
Chromium	33.3	1.3	mg/kg wet	33.33	100	80-120	1	20
Copper	32.3	1.3	mg/kg wet	33.33	97	80-120	2	20
Lead	33.7	6.7	mg/kg wet	33.33	101	80-120	2	20
Nickel	33.4	3.3	mg/kg wet	33.33	100	80-120	0.4	20
Selenium	61.4	6.7	mg/kg wet	66.67	92	80-120	2	20
Silver	16.2	0.67	mg/kg wet	16.67	97	80-120	2	20
Thallium	36.9	6.60	mg/kg wet	33.33	111	80-120	3	20
Zinc	32.4	3.3	mg/kg wet	33.33	97	80-120	2	20

##### Duplicate

Source: 0905266-02

Antimony	ND	6.1	mg/kg dry	ND				35
Arsenic	5.11	3.0	mg/kg dry	5.51			8	35
Beryllium	0.110	0.06	mg/kg dry	0.119			7	35
Cadmium	0.267	0.61	mg/kg dry	0.260			3	35
Chromium	12.3	1.2	mg/kg dry	13.2			7	35



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Advanced Environmental Solutions, Inc.  
 Client Project ID: Baltic Mill

ESS Laboratory Work Order: 0905266

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>3050B/6000/7000 Total Metals</b>										
<b>Batch BE92014 - 3050B</b>										
Copper	15.7	1.2	mg/kg dry		16.1			3	35	
Lead	84.1	6.1	mg/kg dry		112			29	35	
Nickel	9.05	3.0	mg/kg dry		9.48			5	35	
Selenium	ND	6.1	mg/kg dry		ND				35	
Silver	ND	0.61	mg/kg dry		ND				35	
Thallium	ND	1.50	mg/kg dry		ND				35	
Zinc	37.5	3.0	mg/kg dry		30.4			21	35	
<b>Matrix Spike Source: 0905266-02</b>										
Antimony	15.2	5.9	mg/kg dry	29.70	ND	51	75-125			M-
Arsenic	32.0	3.0	mg/kg dry	29.70	5.51	89	75-125			
Beryllium	2.63	0.06	mg/kg dry	2.970	0.119	85	75-125			
Cadmium	12.0	0.60	mg/kg dry	14.85	0.260	79	75-125			
Chromium	37.6	1.2	mg/kg dry	29.70	13.2	82	75-125			
Copper	41.4	1.2	mg/kg dry	29.70	16.1	85	75-125			
Lead	107	5.9	mg/kg dry	29.70	112	NR	75-125			M-
Nickel	34.5	3.0	mg/kg dry	29.70	9.48	84	75-125			
Selenium	48.3	5.9	mg/kg dry	59.40	ND	81	75-125			
Silver	13.2	0.60	mg/kg dry	14.85	ND	89	75-125			
Thallium	27.3	5.88	mg/kg dry	29.70	ND	92	75-125			
Zinc	58.9	3.0	mg/kg dry	29.70	30.4	96	75-125			
<b>Reference</b>										
Antimony	86.6	9.9	mg/kg wet	127.0		68	0-210			
Arsenic	265	4.9	mg/kg wet	280.0		95	81-119			
Beryllium	47.5	0.10	mg/kg wet	51.00		93	83-117			
Cadmium	161	1.00	mg/kg wet	182.0		88	82-118			
Chromium	129	2.0	mg/kg wet	142.0		91	81-120			
Copper	118	2.0	mg/kg wet	132.0		89	83-117			
Lead	68.3	9.9	mg/kg wet	72.20		95	82-118			
Nickel	148	4.9	mg/kg wet	155.0		95	82-117			
Selenium	149	9.9	mg/kg wet	165.0		90	78-123			
Silver	122	1.00	mg/kg wet	126.0		97	66-134			
Thallium	212	24.5	mg/kg wet	184.0		115	77-122			
Zinc	302	4.9	mg/kg wet	346.0		87	79-121			
<b>Batch BE92016 - 7471A</b>										
<b>Blank</b>										
Mercury	ND	0.033	mg/kg wet							
<b>LCS</b>										
Mercury	0.234	0.033	mg/kg wet	0.2000		117	80-120			
<b>LCS Dup</b>										
Mercury	0.218	0.033	mg/kg wet	0.2000		109	80-120	7	20	
<b>Duplicate Source: 0905266-02</b>										
Mercury	0.0209	0.035	mg/kg dry		0.0215			3	35	
<b>Matrix Spike Source: 0905266-02</b>										
Mercury	0.259	0.036	mg/kg dry	0.2198	0.0215	108	75-125			



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Advanced Environmental Solutions, Inc.  
 Client Project ID: Baltic Mill

ESS Laboratory Work Order: 0905266

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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#### 3050B/6000/7000 Total Metals

#### Batch BE92016 - 7471A

#### Matrix Spike Dup Source: 0905266-02

Mercury	0.262	0.036	mg/kg dry	0.2198	0.0215	109	75-125	1	35	
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#### Reference

Mercury	7.82	0.660	mg/kg wet	8.480		92	66-132			
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#### 8270C Polynuclear Aromatic Hydrocarbons

#### Batch BE92113 - 3546

#### Blank

2-Methylnaphthalene	ND	0.333	mg/kg wet							
Acenaphthene	ND	0.333	mg/kg wet							
Acenaphthylene	ND	0.333	mg/kg wet							
Anthracene	ND	0.333	mg/kg wet							
Benzo(a)anthracene	ND	0.333	mg/kg wet							
Benzo(a)pyrene	ND	0.167	mg/kg wet							
Benzo(b)fluoranthene	ND	0.333	mg/kg wet							
Benzo(g,h,i)perylene	ND	0.333	mg/kg wet							
Benzo(k)fluoranthene	ND	0.333	mg/kg wet							
Chrysene	ND	0.167	mg/kg wet							
Dibenzo(a,h)Anthracene	ND	0.167	mg/kg wet							
Fluoranthene	ND	0.333	mg/kg wet							
Fluorene	ND	0.333	mg/kg wet							
Indeno(1,2,3-cd)Pyrene	ND	0.333	mg/kg wet							
Naphthalene	ND	0.333	mg/kg wet							
Phenanthrene	ND	0.333	mg/kg wet							
Pyrene	ND	0.333	mg/kg wet							
Surrogate: 1,2-Dichlorobenzene-d4	2.55		mg/kg wet	3.333		77	30-130			
Surrogate: 2-Fluorobiphenyl	2.94		mg/kg wet	3.333		88	30-130			
Surrogate: Nitrobenzene-d5	2.46		mg/kg wet	3.333		74	30-130			
Surrogate: p-Terphenyl-d14	3.36		mg/kg wet	3.333		101	30-130			

#### LCS

2-Methylnaphthalene	2.89	0.333	mg/kg wet	3.333		87	40-140			
Acenaphthene	2.84	0.333	mg/kg wet	3.333		85	40-140			
Acenaphthylene	2.54	0.333	mg/kg wet	3.333		76	40-140			
Anthracene	3.12	0.333	mg/kg wet	3.333		93	40-140			
Benzo(a)anthracene	3.40	0.333	mg/kg wet	3.333		102	40-140			
Benzo(a)pyrene	3.13	0.167	mg/kg wet	3.333		94	40-140			
Benzo(b)fluoranthene	3.23	0.333	mg/kg wet	3.333		97	40-140			
Benzo(g,h,i)perylene	3.65	0.333	mg/kg wet	3.333		109	40-140			
Benzo(k)fluoranthene	3.03	0.333	mg/kg wet	3.333		91	40-140			
Chrysene	3.38	0.167	mg/kg wet	3.333		101	40-140			
Dibenzo(a,h)Anthracene	3.47	0.167	mg/kg wet	3.333		104	40-140			
Fluoranthene	3.39	0.333	mg/kg wet	3.333		102	40-140			
Fluorene	3.16	0.333	mg/kg wet	3.333		95	40-140			
Indeno(1,2,3-cd)Pyrene	3.57	0.333	mg/kg wet	3.333		107	40-140			
Naphthalene	2.60	0.333	mg/kg wet	3.333		78	40-140			



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Advanced Environmental Solutions, Inc.  
 Client Project ID: Baltic Mill

ESS Laboratory Work Order: 0905266

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>8270C Polynuclear Aromatic Hydrocarbons</b>										
<b>Batch BE92113 - 3546</b>										
Phenanthrene	2.83	0.333	mg/kg wet	3.333		85	40-140			
Pyrene	3.46	0.333	mg/kg wet	3.333		104	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	2.57		mg/kg wet	3.333		77	30-130			
Surrogate: 2-Fluorobiphenyl	2.69		mg/kg wet	3.333		81	30-130			
Surrogate: Nitrobenzene-d5	2.37		mg/kg wet	3.333		71	30-130			
Surrogate: p-Terphenyl-d14	3.34		mg/kg wet	3.333		100	30-130			
<b>LCS Dup</b>										
2-Methylnaphthalene	3.16	0.333	mg/kg wet	3.333		95	40-140	9	30	
Acenaphthene	2.90	0.333	mg/kg wet	3.333		87	40-140	2	30	
Acenaphthylene	2.58	0.333	mg/kg wet	3.333		78	40-140	2	30	
Anthracene	3.05	0.333	mg/kg wet	3.333		91	40-140	2	30	
Benzo(a)anthracene	3.23	0.333	mg/kg wet	3.333		97	40-140	5	30	
Benzo(a)pyrene	3.04	0.167	mg/kg wet	3.333		91	40-140	3	30	
Benzo(b)fluoranthene	2.84	0.333	mg/kg wet	3.333		85	40-140	13	30	
Benzo(g,h,i)perylene	3.50	0.333	mg/kg wet	3.333		105	40-140	4	30	
Benzo(k)fluoranthene	3.30	0.333	mg/kg wet	3.333		99	40-140	9	30	
Chrysene	3.19	0.167	mg/kg wet	3.333		96	40-140	6	30	
Dibenzo(a,h)Anthracene	3.53	0.167	mg/kg wet	3.333		106	40-140	2	30	
Fluoranthene	3.19	0.333	mg/kg wet	3.333		96	40-140	6	30	
Fluorene	3.20	0.333	mg/kg wet	3.333		96	40-140	1	30	
Indeno(1,2,3-cd)Pyrene	3.38	0.333	mg/kg wet	3.333		101	40-140	6	30	
Naphthalene	2.79	0.333	mg/kg wet	3.333		84	40-140	7	30	
Phenanthrene	2.77	0.333	mg/kg wet	3.333		83	40-140	2	30	
Pyrene	3.33	0.333	mg/kg wet	3.333		100	40-140	4	30	
Surrogate: 1,2-Dichlorobenzene-d4	2.74		mg/kg wet	3.333		82	30-130			
Surrogate: 2-Fluorobiphenyl	3.05		mg/kg wet	3.333		91	30-130			
Surrogate: Nitrobenzene-d5	2.48		mg/kg wet	3.333		74	30-130			
Surrogate: p-Terphenyl-d14	3.22		mg/kg wet	3.333		97	30-130			
<b>Matrix Spike Source: 0905266-02</b>										
2-Methylnaphthalene	3.87	0.368	mg/kg dry	3.688	0.803	83	40-140			
Acenaphthene	4.16	0.368	mg/kg dry	3.688	1.43	74	40-140			
Acenaphthylene	2.59	0.368	mg/kg dry	3.688	ND	70	40-140			
Anthracene	5.74	0.368	mg/kg dry	3.688	2.80	80	40-140			
Benzo(a)anthracene	7.81	1.84	mg/kg dry	3.688	4.98	77	40-140			
Benzo(a)pyrene	6.71	0.185	mg/kg dry	3.688	3.69	82	40-140			
Benzo(b)fluoranthene	5.98	1.84	mg/kg dry	3.688	4.45	41	40-140			
Benzo(g,h,i)perylene	4.03	0.368	mg/kg dry	3.688	1.48	69	40-140			
Benzo(k)fluoranthene	5.49	0.368	mg/kg dry	3.688	2.75	74	40-140			
Chrysene	7.36	0.924	mg/kg dry	3.688	4.34	82	40-140			
Dibenzo(a,h)Anthracene	3.43	0.185	mg/kg dry	3.688	0.570	78	40-140			
Fluoranthene	14.5	1.84	mg/kg dry	3.688	11.4	84	40-140			
Fluorene	4.74	0.368	mg/kg dry	3.688	1.57	86	40-140			
Indeno(1,2,3-cd)Pyrene	4.16	0.368	mg/kg dry	3.688	1.59	70	40-140			
Naphthalene	3.01	0.368	mg/kg dry	3.688	0.921	57	40-140			
Phenanthrene	13.1	1.84	mg/kg dry	3.688	10.3	76	40-140			
Pyrene	12.1	1.84	mg/kg dry	3.688	8.86	89	40-140			





# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Advanced Environmental Solutions, Inc.  
Client Project ID: Baltic Mill

ESS Laboratory Work Order: 0905266

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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#### 8270C Polynuclear Aromatic Hydrocarbons

##### Batch BE92113 - 3546

Surrogate: 1,2-Dichlorobenzene-d4	2.68		mg/kg dry	3.688		73	30-130			
Surrogate: 2-Fluorobiphenyl	3.14		mg/kg dry	3.688		85	30-130			
Surrogate: Nitrobenzene-d5	2.45		mg/kg dry	3.688		66	30-130			
Surrogate: p-Terphenyl-d14	3.53		mg/kg dry	3.688		96	30-130			

##### Matrix Spike Dup Source: 0905266-02

2-Methylnaphthalene	3.51	0.373	mg/kg dry	3.738	0.803	72	40-140	10	30	
Acenaphthene	3.59	0.373	mg/kg dry	3.738	1.43	58	40-140	15	30	
Acenaphthylene	2.63	0.373	mg/kg dry	3.738	ND	70	40-140	1	30	
Anthracene	4.87	0.373	mg/kg dry	3.738	2.80	55	40-140	16	30	
Benzo(a)anthracene	6.65	0.373	mg/kg dry	3.738	4.98	45	40-140	16	30	
Benzo(a)pyrene	5.53	0.187	mg/kg dry	3.738	3.69	49	40-140	19	30	
Benzo(b)fluoranthene	6.74	0.373	mg/kg dry	3.738	4.45	61	40-140	12	30	
Benzo(g,h,i)perylene	3.17	0.373	mg/kg dry	3.738	1.48	45	40-140	24	30	
Benzo(k)fluoranthene	5.21	0.373	mg/kg dry	3.738	2.75	66	40-140	5	30	
Chrysene	6.22	0.187	mg/kg dry	3.738	4.34	50	40-140	17	30	
Dibenzo(a,h)Anthracene	3.05	0.187	mg/kg dry	3.738	0.570	66	40-140	12	30	
Fluoranthene	10.6	1.87	mg/kg dry	3.738	11.4	NR	40-140	31	30	D+, M+
Fluorene	4.10	0.373	mg/kg dry	3.738	1.57	68	40-140	14	30	
Indeno(1,2,3-cd)Pyrene	3.39	0.373	mg/kg dry	3.738	1.59	48	40-140	20	30	
Naphthalene	2.86	0.373	mg/kg dry	3.738	0.921	52	40-140	5	30	
Phenanthrene	8.84	1.87	mg/kg dry	3.738	10.3	NR	40-140	39	30	D+, M-
Pyrene	8.30	1.87	mg/kg dry	3.738	8.86	NR	40-140	37	30	D+, M-
Surrogate: 1,2-Dichlorobenzene-d4	2.55		mg/kg dry	3.738		68	30-130			
Surrogate: 2-Fluorobiphenyl	3.11		mg/kg dry	3.738		83	30-130			
Surrogate: Nitrobenzene-d5	2.33		mg/kg dry	3.738		62	30-130			
Surrogate: p-Terphenyl-d14	3.55		mg/kg dry	3.738		95	30-130			

#### 8100M Extractable Total Petroleum Hydrocarbons

##### Batch BE92125 - 3546

<b>Blank</b>										
Total Petroleum Hydrocarbons	ND	20.0	mg/kg wet							
Surrogate: O-Terphenyl	4.05		mg/kg wet	5.000		81	50-150			
<b>LCS</b>										
Total Petroleum Hydrocarbons	32.6	20.0	mg/kg wet	35.00		93	60-120			
Surrogate: O-Terphenyl	4.25		mg/kg wet	5.000		85	50-150			
<b>LCS Dup</b>										
Total Petroleum Hydrocarbons	32.4	20.0	mg/kg wet	35.00		93	60-120	0.4	30	
Surrogate: O-Terphenyl	4.07		mg/kg wet	5.000		81	50-150			
<b>Matrix Spike Source: 0905266-02</b>										
Total Petroleum Hydrocarbons	404	22.3	mg/kg dry	39.05	219	473	50-150			M+
Surrogate: O-Terphenyl	7.34		mg/kg dry	5.578		132	50-150			



# ESS Laboratory

Division of Thielsch Engineering, Inc.

CERTIFICATE OF ANALYSIS

Client Name: Advanced Environmental Solutions, Inc.  
 Client Project ID: Baltic Mill

ESS Laboratory Work Order: 0905266

## Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Extractable Total Petroleum Hydrocarbons										
<b>Batch BE92125 - 3546</b>										
<b>Matrix Spike Dup Source: 0905266-02</b>										
Total Petroleum Hydrocarbons	1110	21.3	mg/kg dry	37.34	219	NR	50-150	93	30	D+, M+
Surrogate: O-Terphenyl	7.08		mg/kg dry	5.334		133	50-150			

Evaluate Continuing Calibration Report

Data File : Q:\SVOA\TPH GC2\DATA\052109\G2F07088.D Vial: 99  
 Acq On : 21 May 2009 07:35 Operator: ML  
 Sample : TPH 50 Inst : GC2  
 Misc : Multiplr: 1.00  
 IntFile : events.e

Method : Q:\SVOA\TPH GC2\METHODS\8100FDT.M (Chemstation Integrator)  
 Title : ELEMENT ID: 0502007  
 Last Update : Sat May 02 12:03:04 2009  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	C9	36.930	36.152 E3	2.1	99	0.00
2	C10	37.786	37.399 E3	1.0	100	-0.01
3	C12	37.844	38.780 E3	-2.5	100	-0.02
4	C14	39.146	40.302 E3	-3.0	99	-0.03
5	C16	41.216	41.553 E3	-0.8	98	-0.03
6	C18	42.726	42.282 E3	1.0	97	-0.03
7	C19	43.774	42.293 E3	3.4	96	-0.04
8	C20	43.804	42.450 E3	3.1	96	-0.03
9	C22	44.757	43.068 E3	3.8	96	-0.04
10	C24	44.106	42.871 E3	2.8	96	-0.04
11	C26	44.904	43.654 E3	2.8	96	-0.04
12	C28	44.478	43.680 E3	1.8	96	-0.04
13	C30	43.582	43.721 E3	-0.3	96	-0.04
14	C36	31.621	41.336 E3	-30.7#	102	-0.05
15 S	O-Terphenyl	47.832	46.280 E3	3.2	97	-0.04
16 H	C9-C36	48.989	43.361 E3	11.5	99	0.00

AVG RF = 41.19  
 +/-20% = 32.952-49.428 ALL WITHIN  
 Evaluate Continuing Calibration Report - Not Found

Data File : Q:\SVOA\TPH GC2\DATA\052109\G2F07088.D Vial: 99  
 Acq On : 21 May 2009 07:35 Operator: ML  
 Sample : TPH 50 Inst : GC2  
 Misc : Multiplr: 1.00  
 IntFile : events.e

Method : Q:\SVOA\TPH GC2\METHODS\8100FDT.M (Chemstation Integrator)  
 Title : ELEMENT ID: 0502007  
 Last Update : Sat May 02 12:03:04 2009  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
17 H	C10-C28	46.170	0.000 E3	100.0#	0#	-11.78#

(#) = Out of Range SPCC's out = 0 CCC's out = 0  
 G2F06829.D 8100FDT.M Thu May 21 11:12:48 2009



# ESS Laboratory

*Division of Thielsch Engineering, Inc.*

## *CERTIFICATE OF ANALYSIS*

Client Name: Advanced Environmental Solutions, Inc.

Client Project ID: Baltic Mill

ESS Laboratory Work Order: 0905266

### **Notes and Definitions**

U	Analyte included in the analysis, but not detected
M+	Matrix Spike recovery is above upper control limit.
M-	Matrix Spike recovery is below lower control limit.
D+	Relative percent difference for duplicate is outside of criteria.
D	Diluted.
4	Matrix Spike/Matrix Spike Dup do not match sample. Reextraction confirms nonhomogeneity.
ND	Analyte NOT DETECTED above the detection limit
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.



# ESS Laboratory

*Division of Thielsch Engineering, Inc.*

## CERTIFICATE OF ANALYSIS

Client Name: Advanced Environmental Solutions, Inc.  
Client Project ID: Baltic Mill

ESS Laboratory Work Order: 0905266

### ESS LABORATORY CERTIFICATIONS

U.S. Army Corps of Engineers  
Soil and Water

Rhode Island: A-179  
Potable and Non Potable Water

<http://www.health.ri.gov/labs/waterlabs-instate.php>

Connecticut: PH-0750  
Potable and Non Potable Water, Solid and Hazardous Waste

[http://www.ct.gov/dph/lib/dph/environmental\\_health/environmental\\_laboratories/pdf/out\\_state.pdf](http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/out_state.pdf)

Maine: RI002  
Potable and Non Potable Water

[http://www.maine.gov/dep/blwq/topic/vessel/lab\\_list.pdf](http://www.maine.gov/dep/blwq/topic/vessel/lab_list.pdf)

Massachusetts: M-RI002  
Potable and Non Potable Water

<http://public.dep.state.ma.us/labcert/labcert.aspx>

New Hampshire (NELAP accredited): 242405  
Potable and Non Potable Water

<http://www4.egov.nh.gov/des/nhelap/namesearch.asp>

New York (NELAP accredited): 11313  
Potable and Non Potable Water, Solid and Hazardous Waste

<http://www.wadsworth.org/labcert/elap/comm.html>

United States Department of Agriculture  
Soil Permit: S-54210

New Jersey (NELAP accredited): RI002  
Potable and Non Potable Water, Solid and Hazardous Waste

<http://www.nj.gov/dep/oqa/certlabs.htm>

Maryland: 301  
Potable Water

[http://www.mde.state.md.us/assets/document/wsp\\_labs](http://www.mde.state.md.us/assets/document/wsp_labs)

South Carolina: 78003  
Volatile Organic Compounds in Potable Water

**ESS Laboratory**  
 Division of Thielsch Engineering, Inc.  
 185 Frances Avenue, Cranston, RI 02910-2211  
 Tel. (401) 461-7181 Fax (401) 461-4486  
 www.esslaboratory.com

# CHAIN OF CUSTODY

Turn Time:  Standard Other \_\_\_\_\_  
 If faster than 5 days, prior approval by laboratory is required # \_\_\_\_\_  
 State where samples were collected from:  
 MA RI RI NH NJ NY ME Other \_\_\_\_\_  
 Is this project for any of the following: USACE Other EPA  
 MA-MCP Navy \_\_\_\_\_

Reporting Limits \_\_\_\_\_  
 Electronic Deliverable  Yes  No  
 Format: Excel  Access  PDF  Other \_\_\_\_\_  
 ESS LAB PROJECT ID 0905266

Co. Name Advanced Environmental Solutions.  
 Project # \_\_\_\_\_  
 Project Name (20 Char. or less) Baltic Mill  
 Contact Person Mark Deuger  
 Address 90 Madison St, Ste 605  
 City Worcester State MA Zip 01608  
 Telephone # 508-363-4882 Fax # 508-363-4883  
 Email Address m.deuger@advancedenvironmentalsolutions.com

ESS LAB Sample#	Date	Collection Time	COMP	GRAB	MATRIX	Sample Identification (20 Char. or less)	Pres Code	Type of Containers	Number of Containers	Write Required Analysis
01	5-20-09	0830	X	S	TP-18 (2.5 FT)		1	ETPH PAHs PP Metals	1	
02	5-20-09	0900	X	S	TP-19 (2 FT)		1	X	1	
02	5-20-09	0900	X	S	TP-19 (2 FT) MS/MSD		1	X	1	
03	5-20-09	1100	X	S	TP-22 (2 FT)		1	X	1	

Container Type: P-Poly  Glass S-Sterile V-VOA Matrix:  Soil  SD-Solid  D-Sludge  WW-Waste Water  GW-Ground Water  SW-Surface Water  DW-Drinking Water  O-Oil  W-Wipes  F-Filters

Cooler Present  Yes  No Internal Use Only  Yes  No NA  Pickup  Technicians

Seals Intact  Yes  No

Cooler Temp: 50°C

Preservation Code: 1- NP, 2- HCl, 3- H<sub>2</sub>SO<sub>4</sub>, 4- HNO<sub>3</sub>, 5- NaOH, 6- MeOH, 7- Asorbic Acid, 8- ZnAct, 9- NA

Sampled by: Mark S. Deuger  
 Comments: \_\_\_\_\_

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
<u>Mark S. Deuger</u>	<u>5/20/09 1330</u>	<u>Robert Banda</u>	<u>5/20/09 15:00</u>
<u>Mark S. Deuger</u>	<u>5/20/09 13:30</u>	<u>Robert Banda</u>	<u>5/20/09 15:00</u>