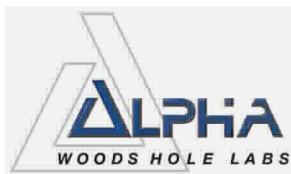


*Appendix C*  
*Analytical Laboratory Reports*  
*(Provided on CD)*

*Appendix C*  
*Clean Fill Confirmation Samples*



## ANALYTICAL REPORT

Lab Number: L0712214

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: 08/27/07

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.

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



**Project Name:** NA SOIL EXCAVATION  
**Project Number:** 0051545

**Lab Number:** L0712214  
**Report Date:** 08/27/07

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>
L0712214-01	CF-1-20070823-01	RAYTHEON-WAYLAND
L0712214-02	CF-2-20070823-01	RAYTHEON-WAYLAND
L0712214-03	CF-3-20070823-01	RAYTHEON-WAYLAND
L0712214-04	CF-4-20070823-01	RAYTHEON-WAYLAND
L0712214-05	CF-5-20070823-01	RAYTHEON-WAYLAND
L0712214-06	CF-6-20070823-01	RAYTHEON-WAYLAND

**Project Name:** NA SOIL EXCAVATION  
**Project Number:** 0051545

**Lab Number:** L0712214  
**Report Date:** 08/27/07

### 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.

<b>An affirmative response to questions A, B, C &amp; D is required for "Presumptive Certainty" status</b>		
A	Were all samples received by the laboratory in a condition consistent with those described on their Chain-of-Custody documentation for the data set?	YES
B	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?	YES
C	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty", as described in section 2.0 of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	YES
D	VPH and EPH methods only: Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?	N/A
<b>A response to questions E and F is required for "Presumptive Certainty" status</b>		
E	Were all QC performance standards and recommendations for the specified method(s) achieved?	NO
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?	NO
<b>For any questions answered "No", please refer to the case narrative section on the following page(s).</b>		

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



**Project Name:** NA SOIL EXCAVATION  
**Project Number:** 0051545

**Lab Number:** L0712214  
**Report Date:** 08/27/07

### 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.

#### MCP Related Narratives

##### Report Submission

The results for the analysis of Volatile Organics by Method 8260B will be reported under a separate cover. The analysis of Grain Size was performed at the Alpha Woods Hole Mansfield facility. The Grain Size results and test report from the Mansfield facility are included as an addendum.

##### Semivolatile Organics

In reference to question E:

The WG291639-2/-3 LCS/LCSD % recoveries for Aniline and 4-Chloroaniline and LCS % recovery for 3,3'-Dichlorobenzidine are below the individual acceptance criteria for the compounds, but within the overall method allowances.

##### Metals

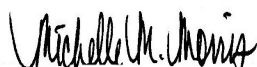
The WG291896-2/-3 LCS/LCSD were not prepared using the SRM solid matrix as requested. The in-house standard spiking solution was utilized.

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: 08/27/07

# ORGANICS

# SEMIVOLATILES



**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

**Lab ID:** L0712214-01  
**Client ID:** CF-1-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil  
**Anaytical Method:** 64,8270C  
**Analytical Date:** 08/24/07 14:24  
**Analyst:** AK  
**Percent Solids:** 95%

**Date Collected:** 08/23/07 09:15  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3545  
**Extraction Date:** 08/23/07 15:00

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Semivolatile Organics by MCP 8270C</b>					
Acenaphthene	ND		ug/kg	350	1
1,2,4-Trichlorobenzene	ND		ug/kg	350	1
Hexachlorobenzene	ND		ug/kg	350	1
Bis(2-chloroethyl)ether	ND		ug/kg	350	1
2-Chloronaphthalene	ND		ug/kg	350	1
1,2-Dichlorobenzene	ND		ug/kg	350	1
1,3-Dichlorobenzene	ND		ug/kg	350	1
1,4-Dichlorobenzene	ND		ug/kg	350	1
3,3'-Dichlorobenzidine	ND		ug/kg	700	1
2,4-Dinitrotoluene	ND		ug/kg	350	1
2,6-Dinitrotoluene	ND		ug/kg	350	1
Azobenzene	ND		ug/kg	350	1
Fluoranthene	ND		ug/kg	350	1
4-Bromophenyl phenyl ether	ND		ug/kg	350	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	350	1
Bis(2-chloroethoxy)methane	ND		ug/kg	350	1
Hexachlorobutadiene	ND		ug/kg	700	1
Hexachloroethane	ND		ug/kg	350	1
Isophorone	ND		ug/kg	350	1
Naphthalene	ND		ug/kg	350	1
Nitrobenzene	ND		ug/kg	350	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	700	1
Butyl benzyl phthalate	ND		ug/kg	350	1
Di-n-butylphthalate	ND		ug/kg	350	1
Di-n-octylphthalate	ND		ug/kg	350	1
Diethyl phthalate	ND		ug/kg	350	1
Dimethyl phthalate	ND		ug/kg	350	1
Benzo(a)anthracene	ND		ug/kg	350	1
Benzo(a)pyrene	ND		ug/kg	350	1
Benzo(b)fluoranthene	ND		ug/kg	350	1

Project Name: NA SOIL EXCAVATION

Lab Number: L0712214

Project Number: 0051545

Report Date: 08/27/07

## SAMPLE RESULTS

Lab ID: L0712214-01

Date Collected: 08/23/07 09:15

Client ID: CF-1-20070823-01

Date Received: 08/23/07

Sample Location: RAYTHEON-WAYLAND

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Semivolatile Organics by MCP 8270C</b>					
Benzo(k)fluoranthene	ND		ug/kg	350	1
Chrysene	ND		ug/kg	350	1
Acenaphthylene	ND		ug/kg	350	1
Anthracene	ND		ug/kg	350	1
Benzo(ghi)perylene	ND		ug/kg	350	1
Fluorene	ND		ug/kg	350	1
Phenanthrene	ND		ug/kg	350	1
Dibenzo(a,h)anthracene	ND		ug/kg	350	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	350	1
Pyrene	ND		ug/kg	350	1
Aniline	ND		ug/kg	700	1
4-Chloroaniline	ND		ug/kg	350	1
Dibenzofuran	ND		ug/kg	350	1
2-Methylnaphthalene	ND		ug/kg	350	1
Acetophenone	ND		ug/kg	1400	1
2,4,6-Trichlorophenol	ND		ug/kg	350	1
2-Chlorophenol	ND		ug/kg	420	1
2,4-Dichlorophenol	ND		ug/kg	700	1
2,4-Dimethylphenol	ND		ug/kg	350	1
2-Nitrophenol	ND		ug/kg	1400	1
4-Nitrophenol	ND		ug/kg	700	1
2,4-Dinitrophenol	ND		ug/kg	1400	1
Pentachlorophenol	ND		ug/kg	1400	1
Phenol	ND		ug/kg	490	1
2-Methylphenol	ND		ug/kg	420	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	420	1
2,4,5-Trichlorophenol	ND		ug/kg	350	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		30-130
Phenol-d6	72		30-130
Nitrobenzene-d5	64		30-130
2-Fluorobiphenyl	53		30-130
2,4,6-Tribromophenol	60		30-130
4-Terphenyl-d14	92		30-130

**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

**Lab ID:** L0712214-02  
**Client ID:** CF-2-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil  
**Anaytical Method:** 64,8270C  
**Analytical Date:** 08/24/07 14:46  
**Analyst:** AK  
**Percent Solids:** 95%

**Date Collected:** 08/23/07 09:20  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3545  
**Extraction Date:** 08/23/07 15:00

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Semivolatile Organics by MCP 8270C</b>					
Acenaphthene	ND		ug/kg	350	1
1,2,4-Trichlorobenzene	ND		ug/kg	350	1
Hexachlorobenzene	ND		ug/kg	350	1
Bis(2-chloroethyl)ether	ND		ug/kg	350	1
2-Chloronaphthalene	ND		ug/kg	350	1
1,2-Dichlorobenzene	ND		ug/kg	350	1
1,3-Dichlorobenzene	ND		ug/kg	350	1
1,4-Dichlorobenzene	ND		ug/kg	350	1
3,3'-Dichlorobenzidine	ND		ug/kg	700	1
2,4-Dinitrotoluene	ND		ug/kg	350	1
2,6-Dinitrotoluene	ND		ug/kg	350	1
Azobenzene	ND		ug/kg	350	1
Fluoranthene	ND		ug/kg	350	1
4-Bromophenyl phenyl ether	ND		ug/kg	350	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	350	1
Bis(2-chloroethoxy)methane	ND		ug/kg	350	1
Hexachlorobutadiene	ND		ug/kg	700	1
Hexachloroethane	ND		ug/kg	350	1
Isophorone	ND		ug/kg	350	1
Naphthalene	ND		ug/kg	350	1
Nitrobenzene	ND		ug/kg	350	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	700	1
Butyl benzyl phthalate	ND		ug/kg	350	1
Di-n-butylphthalate	ND		ug/kg	350	1
Di-n-octylphthalate	ND		ug/kg	350	1
Diethyl phthalate	ND		ug/kg	350	1
Dimethyl phthalate	ND		ug/kg	350	1
Benzo(a)anthracene	ND		ug/kg	350	1
Benzo(a)pyrene	ND		ug/kg	350	1
Benzo(b)fluoranthene	ND		ug/kg	350	1

Project Name: NA SOIL EXCAVATION

Lab Number: L0712214

Project Number: 0051545

Report Date: 08/27/07

## SAMPLE RESULTS

Lab ID: L0712214-02  
 Client ID: CF-2-20070823-01  
 Sample Location: RAYTHEON-WAYLAND

Date Collected: 08/23/07 09:20  
 Date Received: 08/23/07  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Semivolatile Organics by MCP 8270C</b>					
Benzo(k)fluoranthene	ND		ug/kg	350	1
Chrysene	ND		ug/kg	350	1
Acenaphthylene	ND		ug/kg	350	1
Anthracene	ND		ug/kg	350	1
Benzo(ghi)perylene	ND		ug/kg	350	1
Fluorene	ND		ug/kg	350	1
Phenanthrene	ND		ug/kg	350	1
Dibenzo(a,h)anthracene	ND		ug/kg	350	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	350	1
Pyrene	ND		ug/kg	350	1
Aniline	ND		ug/kg	700	1
4-Chloroaniline	ND		ug/kg	350	1
Dibenzofuran	ND		ug/kg	350	1
2-Methylnaphthalene	ND		ug/kg	350	1
Acetophenone	ND		ug/kg	1400	1
2,4,6-Trichlorophenol	ND		ug/kg	350	1
2-Chlorophenol	ND		ug/kg	420	1
2,4-Dichlorophenol	ND		ug/kg	700	1
2,4-Dimethylphenol	ND		ug/kg	350	1
2-Nitrophenol	ND		ug/kg	1400	1
4-Nitrophenol	ND		ug/kg	700	1
2,4-Dinitrophenol	ND		ug/kg	1400	1
Pentachlorophenol	ND		ug/kg	1400	1
Phenol	ND		ug/kg	490	1
2-Methylphenol	ND		ug/kg	420	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	420	1
2,4,5-Trichlorophenol	ND		ug/kg	350	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	66		30-130
Phenol-d6	83		30-130
Nitrobenzene-d5	69		30-130
2-Fluorobiphenyl	61		30-130
2,4,6-Tribromophenol	62		30-130
4-Terphenyl-d14	86		30-130

**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

**Lab ID:** L0712214-03  
**Client ID:** CF-3-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil  
**Anaytical Method:** 64,8270C  
**Analytical Date:** 08/24/07 15:09  
**Analyst:** AK  
**Percent Solids:** 94%

**Date Collected:** 08/23/07 09:25  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3545  
**Extraction Date:** 08/23/07 15:00

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Semivolatile Organics by MCP 8270C</b>					
Acenaphthene	ND		ug/kg	350	1
1,2,4-Trichlorobenzene	ND		ug/kg	350	1
Hexachlorobenzene	ND		ug/kg	350	1
Bis(2-chloroethyl)ether	ND		ug/kg	350	1
2-Chloronaphthalene	ND		ug/kg	350	1
1,2-Dichlorobenzene	ND		ug/kg	350	1
1,3-Dichlorobenzene	ND		ug/kg	350	1
1,4-Dichlorobenzene	ND		ug/kg	350	1
3,3'-Dichlorobenzidine	ND		ug/kg	710	1
2,4-Dinitrotoluene	ND		ug/kg	350	1
2,6-Dinitrotoluene	ND		ug/kg	350	1
Azobenzene	ND		ug/kg	350	1
Fluoranthene	ND		ug/kg	350	1
4-Bromophenyl phenyl ether	ND		ug/kg	350	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	350	1
Bis(2-chloroethoxy)methane	ND		ug/kg	350	1
Hexachlorobutadiene	ND		ug/kg	710	1
Hexachloroethane	ND		ug/kg	350	1
Isophorone	ND		ug/kg	350	1
Naphthalene	ND		ug/kg	350	1
Nitrobenzene	ND		ug/kg	350	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	710	1
Butyl benzyl phthalate	ND		ug/kg	350	1
Di-n-butylphthalate	ND		ug/kg	350	1
Di-n-octylphthalate	ND		ug/kg	350	1
Diethyl phthalate	ND		ug/kg	350	1
Dimethyl phthalate	ND		ug/kg	350	1
Benzo(a)anthracene	ND		ug/kg	350	1
Benzo(a)pyrene	ND		ug/kg	350	1
Benzo(b)fluoranthene	ND		ug/kg	350	1

Project Name: NA SOIL EXCAVATION

Lab Number: L0712214

Project Number: 0051545

Report Date: 08/27/07

## SAMPLE RESULTS

Lab ID: L0712214-03  
 Client ID: CF-3-20070823-01  
 Sample Location: RAYTHEON-WAYLAND

Date Collected: 08/23/07 09:25  
 Date Received: 08/23/07  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Semivolatile Organics by MCP 8270C</b>					
Benzo(k)fluoranthene	ND		ug/kg	350	1
Chrysene	ND		ug/kg	350	1
Acenaphthylene	ND		ug/kg	350	1
Anthracene	ND		ug/kg	350	1
Benzo(ghi)perylene	ND		ug/kg	350	1
Fluorene	ND		ug/kg	350	1
Phenanthrene	ND		ug/kg	350	1
Dibenzo(a,h)anthracene	ND		ug/kg	350	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	350	1
Pyrene	ND		ug/kg	350	1
Aniline	ND		ug/kg	710	1
4-Chloroaniline	ND		ug/kg	350	1
Dibenzofuran	ND		ug/kg	350	1
2-Methylnaphthalene	ND		ug/kg	350	1
Acetophenone	ND		ug/kg	1400	1
2,4,6-Trichlorophenol	ND		ug/kg	350	1
2-Chlorophenol	ND		ug/kg	420	1
2,4-Dichlorophenol	ND		ug/kg	710	1
2,4-Dimethylphenol	ND		ug/kg	350	1
2-Nitrophenol	ND		ug/kg	1400	1
4-Nitrophenol	ND		ug/kg	710	1
2,4-Dinitrophenol	ND		ug/kg	1400	1
Pentachlorophenol	ND		ug/kg	1400	1
Phenol	ND		ug/kg	500	1
2-Methylphenol	ND		ug/kg	420	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	420	1
2,4,5-Trichlorophenol	ND		ug/kg	350	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		30-130
Phenol-d6	64		30-130
Nitrobenzene-d5	55		30-130
2-Fluorobiphenyl	50		30-130
2,4,6-Tribromophenol	62		30-130
4-Terphenyl-d14	87		30-130

**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

Lab ID: L0712214-04  
 Client ID: CF-4-20070823-01  
 Sample Location: RAYTHEON-WAYLAND  
 Matrix: Soil  
 Analytical Method: 64,8270C  
 Analytical Date: 08/24/07 15:32  
 Analyst: AK  
 Percent Solids: 95%

Date Collected: 08/23/07 09:30  
 Date Received: 08/23/07  
 Field Prep: Not Specified  
 Extraction Method: EPA 3545  
 Extraction Date: 08/23/07 15:00

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Semivolatile Organics by MCP 8270C</b>					
Acenaphthene	ND		ug/kg	350	1
1,2,4-Trichlorobenzene	ND		ug/kg	350	1
Hexachlorobenzene	ND		ug/kg	350	1
Bis(2-chloroethyl)ether	ND		ug/kg	350	1
2-Chloronaphthalene	ND		ug/kg	350	1
1,2-Dichlorobenzene	ND		ug/kg	350	1
1,3-Dichlorobenzene	ND		ug/kg	350	1
1,4-Dichlorobenzene	ND		ug/kg	350	1
3,3'-Dichlorobenzidine	ND		ug/kg	700	1
2,4-Dinitrotoluene	ND		ug/kg	350	1
2,6-Dinitrotoluene	ND		ug/kg	350	1
Azobenzene	ND		ug/kg	350	1
Fluoranthene	ND		ug/kg	350	1
4-Bromophenyl phenyl ether	ND		ug/kg	350	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	350	1
Bis(2-chloroethoxy)methane	ND		ug/kg	350	1
Hexachlorobutadiene	ND		ug/kg	700	1
Hexachloroethane	ND		ug/kg	350	1
Isophorone	ND		ug/kg	350	1
Naphthalene	ND		ug/kg	350	1
Nitrobenzene	ND		ug/kg	350	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	700	1
Butyl benzyl phthalate	ND		ug/kg	350	1
Di-n-butylphthalate	ND		ug/kg	350	1
Di-n-octylphthalate	ND		ug/kg	350	1
Diethyl phthalate	ND		ug/kg	350	1
Dimethyl phthalate	ND		ug/kg	350	1
Benzo(a)anthracene	ND		ug/kg	350	1
Benzo(a)pyrene	ND		ug/kg	350	1
Benzo(b)fluoranthene	ND		ug/kg	350	1

Project Name: NA SOIL EXCAVATION

Lab Number: L0712214

Project Number: 0051545

Report Date: 08/27/07

## SAMPLE RESULTS

Lab ID: L0712214-04  
 Client ID: CF-4-20070823-01  
 Sample Location: RAYTHEON-WAYLAND

Date Collected: 08/23/07 09:30  
 Date Received: 08/23/07  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Semivolatile Organics by MCP 8270C</b>					
Benzo(k)fluoranthene	ND		ug/kg	350	1
Chrysene	ND		ug/kg	350	1
Acenaphthylene	ND		ug/kg	350	1
Anthracene	ND		ug/kg	350	1
Benzo(ghi)perylene	ND		ug/kg	350	1
Fluorene	ND		ug/kg	350	1
Phenanthrene	ND		ug/kg	350	1
Dibenzo(a,h)anthracene	ND		ug/kg	350	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	350	1
Pyrene	ND		ug/kg	350	1
Aniline	ND		ug/kg	700	1
4-Chloroaniline	ND		ug/kg	350	1
Dibenzofuran	ND		ug/kg	350	1
2-Methylnaphthalene	ND		ug/kg	350	1
Acetophenone	ND		ug/kg	1400	1
2,4,6-Trichlorophenol	ND		ug/kg	350	1
2-Chlorophenol	ND		ug/kg	420	1
2,4-Dichlorophenol	ND		ug/kg	700	1
2,4-Dimethylphenol	ND		ug/kg	350	1
2-Nitrophenol	ND		ug/kg	1400	1
4-Nitrophenol	ND		ug/kg	700	1
2,4-Dinitrophenol	ND		ug/kg	1400	1
Pentachlorophenol	ND		ug/kg	1400	1
Phenol	ND		ug/kg	490	1
2-Methylphenol	ND		ug/kg	420	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	420	1
2,4,5-Trichlorophenol	ND		ug/kg	350	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	50		30-130
Phenol-d6	66		30-130
Nitrobenzene-d5	55		30-130
2-Fluorobiphenyl	50		30-130
2,4,6-Tribromophenol	54		30-130
4-Terphenyl-d14	77		30-130



**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

Lab ID: L0712214-05  
 Client ID: CF-5-20070823-01  
 Sample Location: RAYTHEON-WAYLAND  
 Matrix: Soil  
 Analytical Method: 64,8270C  
 Analytical Date: 08/24/07 15:55  
 Analyst: AK  
 Percent Solids: 94%

Date Collected: 08/23/07 09:35  
 Date Received: 08/23/07  
 Field Prep: Not Specified  
 Extraction Method: EPA 3545  
 Extraction Date: 08/23/07 15:00

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Semivolatile Organics by MCP 8270C</b>					
Acenaphthene	ND		ug/kg	350	1
1,2,4-Trichlorobenzene	ND		ug/kg	350	1
Hexachlorobenzene	ND		ug/kg	350	1
Bis(2-chloroethyl)ether	ND		ug/kg	350	1
2-Chloronaphthalene	ND		ug/kg	350	1
1,2-Dichlorobenzene	ND		ug/kg	350	1
1,3-Dichlorobenzene	ND		ug/kg	350	1
1,4-Dichlorobenzene	ND		ug/kg	350	1
3,3'-Dichlorobenzidine	ND		ug/kg	710	1
2,4-Dinitrotoluene	ND		ug/kg	350	1
2,6-Dinitrotoluene	ND		ug/kg	350	1
Azobenzene	ND		ug/kg	350	1
Fluoranthene	ND		ug/kg	350	1
4-Bromophenyl phenyl ether	ND		ug/kg	350	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	350	1
Bis(2-chloroethoxy)methane	ND		ug/kg	350	1
Hexachlorobutadiene	ND		ug/kg	710	1
Hexachloroethane	ND		ug/kg	350	1
Isophorone	ND		ug/kg	350	1
Naphthalene	ND		ug/kg	350	1
Nitrobenzene	ND		ug/kg	350	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	710	1
Butyl benzyl phthalate	ND		ug/kg	350	1
Di-n-butylphthalate	ND		ug/kg	350	1
Di-n-octylphthalate	ND		ug/kg	350	1
Diethyl phthalate	ND		ug/kg	350	1
Dimethyl phthalate	ND		ug/kg	350	1
Benzo(a)anthracene	ND		ug/kg	350	1
Benzo(a)pyrene	ND		ug/kg	350	1
Benzo(b)fluoranthene	ND		ug/kg	350	1

Project Name: NA SOIL EXCAVATION

Lab Number: L0712214

Project Number: 0051545

Report Date: 08/27/07

## SAMPLE RESULTS

Lab ID: L0712214-05  
 Client ID: CF-5-20070823-01  
 Sample Location: RAYTHEON-WAYLAND

Date Collected: 08/23/07 09:35  
 Date Received: 08/23/07  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Semivolatile Organics by MCP 8270C</b>					
Benzo(k)fluoranthene	ND		ug/kg	350	1
Chrysene	ND		ug/kg	350	1
Acenaphthylene	ND		ug/kg	350	1
Anthracene	ND		ug/kg	350	1
Benzo(ghi)perylene	ND		ug/kg	350	1
Fluorene	ND		ug/kg	350	1
Phenanthrene	ND		ug/kg	350	1
Dibenzo(a,h)anthracene	ND		ug/kg	350	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	350	1
Pyrene	ND		ug/kg	350	1
Aniline	ND		ug/kg	710	1
4-Chloroaniline	ND		ug/kg	350	1
Dibenzofuran	ND		ug/kg	350	1
2-Methylnaphthalene	ND		ug/kg	350	1
Acetophenone	ND		ug/kg	1400	1
2,4,6-Trichlorophenol	ND		ug/kg	350	1
2-Chlorophenol	ND		ug/kg	420	1
2,4-Dichlorophenol	ND		ug/kg	710	1
2,4-Dimethylphenol	ND		ug/kg	350	1
2-Nitrophenol	ND		ug/kg	1400	1
4-Nitrophenol	ND		ug/kg	710	1
2,4-Dinitrophenol	ND		ug/kg	1400	1
Pentachlorophenol	ND		ug/kg	1400	1
Phenol	ND		ug/kg	500	1
2-Methylphenol	ND		ug/kg	420	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	420	1
2,4,5-Trichlorophenol	ND		ug/kg	350	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		30-130
Phenol-d6	85		30-130
Nitrobenzene-d5	70		30-130
2-Fluorobiphenyl	65		30-130
2,4,6-Tribromophenol	67		30-130
4-Terphenyl-d14	85		30-130

**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

**Lab ID:** L0712214-06  
**Client ID:** CF-6-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil  
**Anaytical Method:** 64,8270C  
**Analytical Date:** 08/24/07 16:17  
**Analyst:** AK  
**Percent Solids:** 88%

**Date Collected:** 08/23/07 09:40  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3545  
**Extraction Date:** 08/23/07 15:00

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Semivolatile Organics by MCP 8270C</b>					
Acenaphthene	ND		ug/kg	380	1
1,2,4-Trichlorobenzene	ND		ug/kg	380	1
Hexachlorobenzene	ND		ug/kg	380	1
Bis(2-chloroethyl)ether	ND		ug/kg	380	1
2-Chloronaphthalene	ND		ug/kg	380	1
1,2-Dichlorobenzene	ND		ug/kg	380	1
1,3-Dichlorobenzene	ND		ug/kg	380	1
1,4-Dichlorobenzene	ND		ug/kg	380	1
3,3'-Dichlorobenzidine	ND		ug/kg	760	1
2,4-Dinitrotoluene	ND		ug/kg	380	1
2,6-Dinitrotoluene	ND		ug/kg	380	1
Azobenzene	ND		ug/kg	380	1
Fluoranthene	ND		ug/kg	380	1
4-Bromophenyl phenyl ether	ND		ug/kg	380	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	380	1
Bis(2-chloroethoxy)methane	ND		ug/kg	380	1
Hexachlorobutadiene	ND		ug/kg	760	1
Hexachloroethane	ND		ug/kg	380	1
Isophorone	ND		ug/kg	380	1
Naphthalene	ND		ug/kg	380	1
Nitrobenzene	ND		ug/kg	380	1
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	760	1
Butyl benzyl phthalate	ND		ug/kg	380	1
Di-n-butylphthalate	ND		ug/kg	380	1
Di-n-octylphthalate	ND		ug/kg	380	1
Diethyl phthalate	ND		ug/kg	380	1
Dimethyl phthalate	ND		ug/kg	380	1
Benzo(a)anthracene	ND		ug/kg	380	1
Benzo(a)pyrene	ND		ug/kg	380	1
Benzo(b)fluoranthene	ND		ug/kg	380	1

Project Name: NA SOIL EXCAVATION

Lab Number: L0712214

Project Number: 0051545

Report Date: 08/27/07

## SAMPLE RESULTS

Lab ID: L0712214-06  
 Client ID: CF-6-20070823-01  
 Sample Location: RAYTHEON-WAYLAND

Date Collected: 08/23/07 09:40  
 Date Received: 08/23/07  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Semivolatile Organics by MCP 8270C</b>					
Benzo(k)fluoranthene	ND		ug/kg	380	1
Chrysene	ND		ug/kg	380	1
Acenaphthylene	ND		ug/kg	380	1
Anthracene	ND		ug/kg	380	1
Benzo(ghi)perylene	ND		ug/kg	380	1
Fluorene	ND		ug/kg	380	1
Phenanthrene	ND		ug/kg	380	1
Dibenzo(a,h)anthracene	ND		ug/kg	380	1
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	380	1
Pyrene	ND		ug/kg	380	1
Aniline	ND		ug/kg	760	1
4-Chloroaniline	ND		ug/kg	380	1
Dibenzofuran	ND		ug/kg	380	1
2-Methylnaphthalene	ND		ug/kg	380	1
Acetophenone	ND		ug/kg	1500	1
2,4,6-Trichlorophenol	ND		ug/kg	380	1
2-Chlorophenol	ND		ug/kg	450	1
2,4-Dichlorophenol	ND		ug/kg	760	1
2,4-Dimethylphenol	ND		ug/kg	380	1
2-Nitrophenol	ND		ug/kg	1500	1
4-Nitrophenol	ND		ug/kg	760	1
2,4-Dinitrophenol	ND		ug/kg	1500	1
Pentachlorophenol	ND		ug/kg	1500	1
Phenol	ND		ug/kg	530	1
2-Methylphenol	ND		ug/kg	450	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	450	1
2,4,5-Trichlorophenol	ND		ug/kg	380	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	55		30-130
Phenol-d6	71		30-130
Nitrobenzene-d5	60		30-130
2-Fluorobiphenyl	51		30-130
2,4,6-Tribromophenol	48		30-130
4-Terphenyl-d14	68		30-130

**Project Name:** NA SOIL EXCAVATION  
**Project Number:** 0051545

**Lab Number:** L0712214  
**Report Date:** 08/27/07

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 64,8270C  
**Analytical Date:** 08/24/07 13:12  
**Analyst:** AK

**Extraction Method:** EPA 3545  
**Extraction Date:** 08/23/07 15:00

Parameter	Result	Qualifier	Units	RDL
Semivolatile Organics by MCP 8270C for sample(s): 01-06 Batch: WG291639-1				
Acenaphthene	ND		ug/kg	330
1,2,4-Trichlorobenzene	ND		ug/kg	330
Hexachlorobenzene	ND		ug/kg	330
Bis(2-chloroethyl)ether	ND		ug/kg	330
2-Chloronaphthalene	ND		ug/kg	330
1,2-Dichlorobenzene	ND		ug/kg	330
1,3-Dichlorobenzene	ND		ug/kg	330
1,4-Dichlorobenzene	ND		ug/kg	330
3,3'-Dichlorobenzidine	ND		ug/kg	670
2,4-Dinitrotoluene	ND		ug/kg	330
2,6-Dinitrotoluene	ND		ug/kg	330
Azobenzene	ND		ug/kg	330
Fluoranthene	ND		ug/kg	330
4-Bromophenyl phenyl ether	ND		ug/kg	330
Bis(2-chloroisopropyl)ether	ND		ug/kg	330
Bis(2-chloroethoxy)methane	ND		ug/kg	330
Hexachlorobutadiene	ND		ug/kg	670
Hexachloroethane	ND		ug/kg	330
Isophorone	ND		ug/kg	330
Naphthalene	ND		ug/kg	330
Nitrobenzene	ND		ug/kg	330
Bis(2-Ethylhexyl)phthalate	ND		ug/kg	670
Butyl benzyl phthalate	ND		ug/kg	330
Di-n-butylphthalate	ND		ug/kg	330
Di-n-octylphthalate	ND		ug/kg	330
Diethyl phthalate	ND		ug/kg	330
Dimethyl phthalate	ND		ug/kg	330
Benzo(a)anthracene	ND		ug/kg	330
Benzo(a)pyrene	ND		ug/kg	330
Benzo(b)fluoranthene	ND		ug/kg	330
Benzo(k)fluoranthene	ND		ug/kg	330



**Project Name:** NA SOIL EXCAVATION  
**Project Number:** 0051545

**Lab Number:** L0712214  
**Report Date:** 08/27/07

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 64,8270C  
**Analytical Date:** 08/24/07 13:12  
**Analyst:** AK

**Extraction Method:** EPA 3545  
**Extraction Date:** 08/23/07 15:00

Parameter	Result	Qualifier	Units	RDL
Semivolatile Organics by MCP 8270C for sample(s): 01-06 Batch: WG291639-1				
Chrysene	ND		ug/kg	330
Acenaphthylene	ND		ug/kg	330
Anthracene	ND		ug/kg	330
Benzo(ghi)perylene	ND		ug/kg	330
Fluorene	ND		ug/kg	330
Phenanthrene	ND		ug/kg	330
Dibenzo(a,h)anthracene	ND		ug/kg	330
Indeno(1,2,3-cd)Pyrene	ND		ug/kg	330
Pyrene	ND		ug/kg	330
Aniline	ND		ug/kg	670
4-Chloroaniline	ND		ug/kg	330
Dibenzofuran	ND		ug/kg	330
2-Methylnaphthalene	ND		ug/kg	330
Acetophenone	ND		ug/kg	1300
2,4,6-Trichlorophenol	ND		ug/kg	330
2-Chlorophenol	ND		ug/kg	400
2,4-Dichlorophenol	ND		ug/kg	670
2,4-Dimethylphenol	ND		ug/kg	330
2-Nitrophenol	ND		ug/kg	1300
4-Nitrophenol	ND		ug/kg	670
2,4-Dinitrophenol	ND		ug/kg	1300
Pentachlorophenol	ND		ug/kg	1300
Phenol	ND		ug/kg	470
2-Methylphenol	ND		ug/kg	400
3-Methylphenol/4-Methylphenol	ND		ug/kg	400
2,4,5-Trichlorophenol	ND		ug/kg	330

Project Name: NA SOIL EXCAVATION

Lab Number: L0712214

Project Number: 0051545

Report Date: 08/27/07

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 64,8270C  
 Analytical Date: 08/24/07 13:12  
 Analyst: AK

Extraction Method: EPA 3545  
 Extraction Date: 08/23/07 15:00

Parameter	Result	Qualifier	Units	RDL
Semivolatile Organics by MCP 8270C for sample(s): 01-06 Batch: WG291639-1				

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		30-130
Phenol-d6	69		30-130
Nitrobenzene-d5	58		30-130
2-Fluorobiphenyl	49		30-130
2,4,6-Tribromophenol	58		30-130
4-Terphenyl-d14	83		30-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** NA SOIL EXCAVATION

**Lab Number:** L0712214

**Project Number:** 0051545

**Report Date:** 08/27/07

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Semivolatile Organics by MCP 8270C Associated sample(s): 01-06 Batch: WG291639-2 WG291639-3					
Acenaphthene	66	64	40-140	3	30
1,2,4-Trichlorobenzene	52	52	40-140	0	30
Hexachlorobenzene	73	69	40-140	6	30
Bis(2-chloroethyl)ether	60	57	40-140	5	30
2-Chloronaphthalene	65	59	40-140	10	30
1,2-Dichlorobenzene	49	48	40-140	2	30
1,3-Dichlorobenzene	46	49	40-140	6	30
1,4-Dichlorobenzene	50	48	40-140	4	30
3,3'-Dichlorobenzidine	39	41	40-140	5	30
2,4-Dinitrotoluene	83	83	40-140	0	30
2,6-Dinitrotoluene	76	84	40-140	10	30
Azobenzene	78	82	40-140	5	30
Fluoranthene	82	85	40-140	4	30
4-Bromophenyl phenyl ether	76	72	40-140	5	30
Bis(2-chloroisopropyl)ether	54	56	40-140	4	30
Bis(2-chloroethoxy)methane	58	58	40-140	0	30
Hexachlorobutadiene	52	48	40-140	8	30
Hexachloroethane	48	50	40-140	4	30
Isophorone	59	55	40-140	7	30
Naphthalene	51	51	40-140	0	30
Nitrobenzene	66	53	40-140	22	30



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** NA SOIL EXCAVATION

**Lab Number:** L0712214

**Project Number:** 0051545

**Report Date:** 08/27/07

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Semivolatile Organics by MCP 8270C Associated sample(s): 01-06 Batch: WG291639-2 WG291639-3					
Bis(2-Ethylhexyl)phthalate	90	95	40-140	5	30
Butyl benzyl phthalate	87	89	40-140	2	30
Di-n-butylphthalate	88	90	40-140	2	30
Di-n-octylphthalate	96	97	40-140	1	30
Diethyl phthalate	74	75	40-140	1	30
Dimethyl phthalate	76	78	40-140	3	30
Benzo(a)anthracene	81	80	40-140	1	30
Benzo(a)pyrene	84	87	40-140	4	30
Benzo(b)fluoranthene	84	86	40-140	2	30
Benzo(k)fluoranthene	71	73	40-140	3	30
Chrysene	78	79	40-140	1	30
Acenaphthylene	64	62	40-140	3	30
Anthracene	77	79	40-140	3	30
Benzo(ghi)perylene	78	82	40-140	5	30
Fluorene	74	76	40-140	3	30
Phenanthrene	72	79	40-140	9	30
Dibenzo(a,h)anthracene	80	81	40-140	1	30
Indeno(1,2,3-cd)Pyrene	84	86	40-140	2	30
Pyrene	79	81	40-140	3	30
Aniline	28	29	40-140	4	30
4-Chloroaniline	35	39	40-140	11	30

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** NA SOIL EXCAVATION

**Project Number:** 0051545

**Lab Number:** L0712214

**Report Date:** 08/27/07

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Semivolatile Organics by MCP 8270C Associated sample(s): 01-06 Batch: WG291639-2 WG291639-3					
Dibenzofuran	68	62	40-140	9	30
2-Methylnaphthalene	55	53	40-140	4	30
Acetophenone	56	56	40-140	0	30
2,4,6-Trichlorophenol	66	61	30-130	8	30
2-Chlorophenol	51	48	30-130	6	30
2,4-Dichlorophenol	60	56	30-130	7	30
2,4-Dimethylphenol	50	43	30-130	15	30
2-Nitrophenol	54	50	30-130	8	30
4-Nitrophenol	80	76	30-130	5	30
2,4-Dinitrophenol	50	46	30-130	8	30
Pentachlorophenol	58	66	30-130	13	30
Phenol	56	55	30-130	2	30
2-Methylphenol	51	49	30-130	4	30
3-Methylphenol/4-Methylphenol	54	57	30-130	5	30
2,4,5-Trichlorophenol	58	61	30-130	5	30

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** NA SOIL EXCAVATION

**Project Number:** 0051545

**Lab Number:** L0712214

**Report Date:** 08/27/07

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
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Semivolatile Organics by MCP 8270C Associated sample(s): 01-06 Batch: WG291639-2 WG291639-3

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		47		30-130
Phenol-d6	66		65		30-130
Nitrobenzene-d5	59		55		30-130
2-Fluorobiphenyl	57		53		30-130
2,4,6-Tribromophenol	59		66		30-130
4-Terphenyl-d14	77		81		30-130

# PETROLEUM HYDROCARBONS

**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

**Lab ID:** L0712214-01  
**Client ID:** CF-1-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil  
**Anaytical Method:** 1,8015B(M)  
**Analytical Date:** 08/24/07 12:15  
**Analyst:** MF  
**Percent Solids:** 95%

**Date Collected:** 08/23/07 09:15  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3545  
**Extraction Date:** 08/23/07 15:10

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Petroleum Hydrocarbons by GC-DRO					
Diesel Range Organics	ND		ug/kg	35000	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	56		40-140

**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

**Lab ID:** L0712214-02  
**Client ID:** CF-2-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil  
**Anaytical Method:** 1,8015B(M)  
**Analytical Date:** 08/24/07 12:57  
**Analyst:** MF  
**Percent Solids:** 95%

**Date Collected:** 08/23/07 09:20  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3545  
**Extraction Date:** 08/23/07 15:10

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Petroleum Hydrocarbons by GC-DRO</b>					
Diesel Range Organics	ND		ug/kg	35000	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	72		40-140

**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

**Lab ID:** L0712214-03  
**Client ID:** CF-3-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil  
**Anaytical Method:** 1,8015B(M)  
**Analytical Date:** 08/24/07 13:19  
**Analyst:** MF  
**Percent Solids:** 94%

**Date Collected:** 08/23/07 09:25  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3545  
**Extraction Date:** 08/23/07 15:10

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Petroleum Hydrocarbons by GC-DRO</b>					
Diesel Range Organics	ND		ug/kg	35000	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	67		40-140

**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

**Lab ID:** L0712214-04  
**Client ID:** CF-4-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil  
**Anaytical Method:** 1,8015B(M)  
**Analytical Date:** 08/24/07 14:02  
**Analyst:** MF  
**Percent Solids:** 95%

**Date Collected:** 08/23/07 09:30  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3545  
**Extraction Date:** 08/23/07 15:10

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Petroleum Hydrocarbons by GC-DRO</b>					
Diesel Range Organics	ND		ug/kg	35000	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	85		40-140



**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

**Lab ID:** L0712214-05  
**Client ID:** CF-5-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil  
**Anaytical Method:** 1,8015B(M)  
**Analytical Date:** 08/24/07 14:24  
**Analyst:** MF  
**Percent Solids:** 94%

**Date Collected:** 08/23/07 09:35  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3545  
**Extraction Date:** 08/23/07 15:10

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Petroleum Hydrocarbons by GC-DRO</b>					
Diesel Range Organics	ND		ug/kg	35000	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	90		40-140

**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

**Lab ID:** L0712214-06  
**Client ID:** CF-6-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil  
**Anaytical Method:** 1,8015B(M)  
**Analytical Date:** 08/24/07 15:07  
**Analyst:** MF  
**Percent Solids:** 88%

**Date Collected:** 08/23/07 09:40  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3545  
**Extraction Date:** 08/23/07 15:10

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Petroleum Hydrocarbons by GC-DRO</b>					
Diesel Range Organics	ND		ug/kg	38000	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	80		40-140

**Project Name:** NA SOIL EXCAVATION  
**Project Number:** 0051545

**Lab Number:** L0712214  
**Report Date:** 08/27/07

**Method Blank Analysis  
Batch Quality Control**

**Analytical Method:** 1,8015B(M)  
**Analytical Date:** 08/24/07 10:53  
**Analyst:** MF

**Extraction Method:** EPA 3545  
**Extraction Date:** 08/23/07 15:10

Parameter	Result	Qualifier	Units	RDL
Petroleum Hydrocarbons by GC-DRO for sample(s): 01-06 Batch: WG291640-1				
Diesel Range Organics	ND		ug/kg	33000

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	94		40-140

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NA SOIL EXCAVATION

**Lab Number:** L0712214

**Project Number:** 0051545

**Report Date:** 08/27/07

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Petroleum Hydrocarbons by GC-DRO Associated sample(s): 01-06 Batch: WG291640-2					
Diesel Range Organics	88	-	40-140	-	

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	96				40-140

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** NA SOIL EXCAVATION

**Lab Number:** L0712214

**Project Number:** 0051545

**Report Date:** 08/27/07

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Petroleum Hydrocarbons by GC-DRO Associated sample(s): 01-06 QC Batch ID: WG291640-3 QC Sample: L0712214-01 Client ID: CF-1-20070823-01					
Diesel Range Organics	ND	ND	ug/kg	NC	40

Surrogate	%Recovery Qualifier	%Recovery Qualifier	Acceptance Criteria
o-Terphenyl	56	80	40-140

# PCBS

**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

**Lab ID:** L0712214-01  
**Client ID:** CF-1-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil  
**Anaytical Method:** 64,8082  
**Analytical Date:** 08/24/07 14:37  
**Analyst:** AK  
**Percent Solids:** 95%

**Date Collected:** 08/23/07 09:15  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3546  
**Extraction Date:** 08/23/07 18:40  
 08/24/07  
**Cleanup Date1:**

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Polychlorinated Biphenyls by MCP 8082</b>					
Aroclor 1016	ND		ug/kg	35.1	1
Aroclor 1221	ND		ug/kg	35.1	1
Aroclor 1232	ND		ug/kg	35.1	1
Aroclor 1242	ND		ug/kg	35.1	1
Aroclor 1248	ND		ug/kg	35.1	1
Aroclor 1254	ND		ug/kg	35.1	1
Aroclor 1260	ND		ug/kg	35.1	1
Aroclor 1262	ND		ug/kg	35.1	1
Aroclor 1268	ND		ug/kg	35.1	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	85		30-150	A
Decachlorobiphenyl	80		30-150	A
2,4,5,6-Tetrachloro-m-xylene	61		30-150	B
Decachlorobiphenyl	56		30-150	B

**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

**Lab ID:** L0712214-02  
**Client ID:** CF-2-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil  
**Anaytical Method:** 64,8082  
**Analytical Date:** 08/24/07 15:06  
**Analyst:** AK  
**Percent Solids:** 95%

**Date Collected:** 08/23/07 09:20  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3546  
**Extraction Date:** 08/23/07 18:40  
 08/24/07  
**Cleanup Date1:**

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Polychlorinated Biphenyls by MCP 8082</b>					
Aroclor 1016	ND		ug/kg	35.1	1
Aroclor 1221	ND		ug/kg	35.1	1
Aroclor 1232	ND		ug/kg	35.1	1
Aroclor 1242	ND		ug/kg	35.1	1
Aroclor 1248	ND		ug/kg	35.1	1
Aroclor 1254	ND		ug/kg	35.1	1
Aroclor 1260	ND		ug/kg	35.1	1
Aroclor 1262	ND		ug/kg	35.1	1
Aroclor 1268	ND		ug/kg	35.1	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	95		30-150	A
Decachlorobiphenyl	85		30-150	A
2,4,5,6-Tetrachloro-m-xylene	75		30-150	B
Decachlorobiphenyl	65		30-150	B



**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

**Lab ID:** L0712214-03  
**Client ID:** CF-3-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil  
**Anaytical Method:** 64,8082  
**Analytical Date:** 08/24/07 15:34  
**Analyst:** AK  
**Percent Solids:** 94%

**Date Collected:** 08/23/07 09:25  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3546  
**Extraction Date:** 08/23/07 18:40  
 08/24/07  
**Cleanup Date1:**

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Polychlorinated Biphenyls by MCP 8082</b>					
Aroclor 1016	ND		ug/kg	35.5	1
Aroclor 1221	ND		ug/kg	35.5	1
Aroclor 1232	ND		ug/kg	35.5	1
Aroclor 1242	ND		ug/kg	35.5	1
Aroclor 1248	ND		ug/kg	35.5	1
Aroclor 1254	ND		ug/kg	35.5	1
Aroclor 1260	ND		ug/kg	35.5	1
Aroclor 1262	ND		ug/kg	35.5	1
Aroclor 1268	ND		ug/kg	35.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	96		30-150	A
Decachlorobiphenyl	87		30-150	A
2,4,5,6-Tetrachloro-m-xylene	78		30-150	B
Decachlorobiphenyl	69		30-150	B

**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

**Lab ID:** L0712214-04  
**Client ID:** CF-4-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil  
**Anaytical Method:** 64,8082  
**Analytical Date:** 08/24/07 16:03  
**Analyst:** AK  
**Percent Solids:** 95%

**Date Collected:** 08/23/07 09:30  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3546  
**Extraction Date:** 08/23/07 18:40  
 08/24/07  
**Cleanup Date1:**

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Polychlorinated Biphenyls by MCP 8082</b>					
Aroclor 1016	ND		ug/kg	35.1	1
Aroclor 1221	ND		ug/kg	35.1	1
Aroclor 1232	ND		ug/kg	35.1	1
Aroclor 1242	ND		ug/kg	35.1	1
Aroclor 1248	ND		ug/kg	35.1	1
Aroclor 1254	ND		ug/kg	35.1	1
Aroclor 1260	ND		ug/kg	35.1	1
Aroclor 1262	ND		ug/kg	35.1	1
Aroclor 1268	ND		ug/kg	35.1	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	96		30-150	A
Decachlorobiphenyl	86		30-150	A
2,4,5,6-Tetrachloro-m-xylene	79		30-150	B
Decachlorobiphenyl	67		30-150	B

**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

**Lab ID:** L0712214-05  
**Client ID:** CF-5-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil  
**Anaytical Method:** 64,8082  
**Analytical Date:** 08/24/07 16:32  
**Analyst:** AK  
**Percent Solids:** 94%

**Date Collected:** 08/23/07 09:35  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3546  
**Extraction Date:** 08/23/07 18:40  
 08/24/07  
**Cleanup Date1:**

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Polychlorinated Biphenyls by MCP 8082</b>					
Aroclor 1016	ND		ug/kg	35.5	1
Aroclor 1221	ND		ug/kg	35.5	1
Aroclor 1232	ND		ug/kg	35.5	1
Aroclor 1242	ND		ug/kg	35.5	1
Aroclor 1248	ND		ug/kg	35.5	1
Aroclor 1254	ND		ug/kg	35.5	1
Aroclor 1260	ND		ug/kg	35.5	1
Aroclor 1262	ND		ug/kg	35.5	1
Aroclor 1268	ND		ug/kg	35.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	86		30-150	A
Decachlorobiphenyl	85		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		30-150	B
Decachlorobiphenyl	69		30-150	B

**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

**Lab ID:** L0712214-06  
**Client ID:** CF-6-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil  
**Anaytical Method:** 64,8082  
**Analytical Date:** 08/24/07 17:00  
**Analyst:** AK  
**Percent Solids:** 88%

**Date Collected:** 08/23/07 09:40  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3546  
**Extraction Date:** 08/23/07 18:40  
 08/24/07  
**Cleanup Date1:**

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
<b>Polychlorinated Biphenyls by MCP 8082</b>					
Aroclor 1016	ND		ug/kg	37.9	1
Aroclor 1221	ND		ug/kg	37.9	1
Aroclor 1232	ND		ug/kg	37.9	1
Aroclor 1242	ND		ug/kg	37.9	1
Aroclor 1248	ND		ug/kg	37.9	1
Aroclor 1254	ND		ug/kg	37.9	1
Aroclor 1260	ND		ug/kg	37.9	1
Aroclor 1262	ND		ug/kg	37.9	1
Aroclor 1268	ND		ug/kg	37.9	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		30-150	A
Decachlorobiphenyl	67		30-150	A
2,4,5,6-Tetrachloro-m-xylene	60		30-150	B
Decachlorobiphenyl	55		30-150	B

**Project Name:** NA SOIL EXCAVATION  
**Project Number:** 0051545

**Lab Number:** L0712214  
**Report Date:** 08/27/07

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 64,8082  
Analytical Date: 08/24/07 17:29  
Analyst: AK

Extraction Method: EPA 3546  
Extraction Date: 08/23/07 09:30  
Cleanup Method1: EPA 3665A  
Cleanup Date1: 08/24/07

Parameter	Result	Qualifier	Units	RDL
Polychlorinated Biphenyls by MCP 8082 for sample(s): 01-06 Batch: WG291571-1				
Aroclor 1016	ND		ug/kg	33.3
Aroclor 1221	ND		ug/kg	33.3
Aroclor 1232	ND		ug/kg	33.3
Aroclor 1242	ND		ug/kg	33.3
Aroclor 1248	ND		ug/kg	33.3
Aroclor 1254	ND		ug/kg	33.3
Aroclor 1260	ND		ug/kg	33.3
Aroclor 1262	ND		ug/kg	33.3
Aroclor 1268	ND		ug/kg	33.3

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	91		30-150	A
Decachlorobiphenyl	87		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	70		30-150	B

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** NA SOIL EXCAVATION

**Lab Number:** L0712214

**Project Number:** 0051545

**Report Date:** 08/27/07

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Polychlorinated Biphenyls by MCP 8082 Associated sample(s): 01-06 Batch: WG291571-2 WG291571-3					
Aroclor 1016	90	84	40-140	7	30
Aroclor 1260	102	100	40-140	2	30

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	90		81		30-150	A
Decachlorobiphenyl	85		81		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		70		30-150	B
Decachlorobiphenyl	69		66		30-150	B

# METALS



**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

Lab ID: L0712214-01

Date Collected: 08/23/07 09:15

Client ID: CF-1-20070823-01

Date Received: 08/23/07

Sample Location: RAYTHEON-WAYLAND

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 95%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals by MCP 6000/7000 series</b>										
Arsenic, Total	6.4		mg/kg	0.42	1	08/26/07 10:50	08/27/07 11:10	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.42	1	08/26/07 10:50	08/27/07 11:10	EPA 3050B	60,6010B	MG
Chromium, Total	10		mg/kg	0.42	1	08/26/07 10:50	08/27/07 11:10	EPA 3050B	60,6010B	MG
Lead, Total	7.4		mg/kg	2.1	1	08/26/07 10:50	08/27/07 11:10	EPA 3050B	60,6010B	MG
Mercury, Total	ND		mg/kg	0.08	1	08/23/07 17:30	08/24/07 14:30	EPA 7471A	64,7471A	RC





**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

**Lab ID:** L0712214-02  
**Client ID:** CF-2-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil  
**Percent Solids:** 95%

**Date Collected:** 08/23/07 09:20  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals by MCP 6000/7000 series</b>										
Arsenic, Total	6.3		mg/kg	0.42	1	08/26/07 10:50	08/27/07 11:16	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.42	1	08/26/07 10:50	08/27/07 11:16	EPA 3050B	60,6010B	MG
Chromium, Total	9.5		mg/kg	0.42	1	08/26/07 10:50	08/27/07 11:16	EPA 3050B	60,6010B	MG
Lead, Total	4.0		mg/kg	2.1	1	08/26/07 10:50	08/27/07 11:16	EPA 3050B	60,6010B	MG
Mercury, Total	ND		mg/kg	0.08	1	08/23/07 17:30	08/24/07 14:32	EPA 7471A	64,7471A	RC



**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

Lab ID: L0712214-03

Date Collected: 08/23/07 09:25

Client ID: CF-3-20070823-01

Date Received: 08/23/07

Sample Location: RAYTHEON-WAYLAND

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 94%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals by MCP 6000/7000 series</b>										
Arsenic, Total	5.5		mg/kg	0.42	1	08/26/07 10:50	08/27/07 11:19	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.42	1	08/26/07 10:50	08/27/07 11:19	EPA 3050B	60,6010B	MG
Chromium, Total	8.1		mg/kg	0.42	1	08/26/07 10:50	08/27/07 11:19	EPA 3050B	60,6010B	MG
Lead, Total	3.1		mg/kg	2.1	1	08/26/07 10:50	08/27/07 11:19	EPA 3050B	60,6010B	MG
Mercury, Total	ND		mg/kg	0.08	1	08/23/07 17:30	08/24/07 14:34	EPA 7471A	64,7471A	RC



**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

Lab ID: L0712214-04

Date Collected: 08/23/07 09:30

Client ID: CF-4-20070823-01

Date Received: 08/23/07

Sample Location: RAYTHEON-WAYLAND

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 95%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals by MCP 6000/7000 series</b>										
Arsenic, Total	5.4		mg/kg	0.41	1	08/26/07 10:50	08/27/07 11:22	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.41	1	08/26/07 10:50	08/27/07 11:22	EPA 3050B	60,6010B	MG
Chromium, Total	8.6		mg/kg	0.41	1	08/26/07 10:50	08/27/07 11:22	EPA 3050B	60,6010B	MG
Lead, Total	3.4		mg/kg	2.1	1	08/26/07 10:50	08/27/07 11:22	EPA 3050B	60,6010B	MG
Mercury, Total	ND		mg/kg	0.08	1	08/23/07 17:30	08/24/07 14:36	EPA 7471A	64,7471A	RC



**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

Lab ID: L0712214-05

Date Collected: 08/23/07 09:35

Client ID: CF-5-20070823-01

Date Received: 08/23/07

Sample Location: RAYTHEON-WAYLAND

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 94%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals by MCP 6000/7000 series</b>										
Arsenic, Total	6.0		mg/kg	0.42	1	08/26/07 10:50	08/27/07 11:24	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.42	1	08/26/07 10:50	08/27/07 11:24	EPA 3050B	60,6010B	MG
Chromium, Total	9.1		mg/kg	0.42	1	08/26/07 10:50	08/27/07 11:24	EPA 3050B	60,6010B	MG
Lead, Total	6.5		mg/kg	2.1	1	08/26/07 10:50	08/27/07 11:24	EPA 3050B	60,6010B	MG
Mercury, Total	ND		mg/kg	0.09	1	08/23/07 17:30	08/24/07 14:38	EPA 7471A	64,7471A	RC



**Project Name:** NA SOIL EXCAVATION**Lab Number:** L0712214**Project Number:** 0051545**Report Date:** 08/27/07**SAMPLE RESULTS**

Lab ID: L0712214-06

Date Collected: 08/23/07 09:40

Client ID: CF-6-20070823-01

Date Received: 08/23/07

Sample Location: RAYTHEON-WAYLAND

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 88%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals by MCP 6000/7000 series</b>										
Arsenic, Total	5.8		mg/kg	0.45	1	08/26/07 10:50	08/27/07 11:27	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.45	1	08/26/07 10:50	08/27/07 11:27	EPA 3050B	60,6010B	MG
Chromium, Total	11		mg/kg	0.45	1	08/26/07 10:50	08/27/07 11:27	EPA 3050B	60,6010B	MG
Lead, Total	4.7		mg/kg	2.2	1	08/26/07 10:50	08/27/07 11:27	EPA 3050B	60,6010B	MG
Mercury, Total	ND		mg/kg	0.09	1	08/23/07 17:30	08/24/07 14:43	EPA 7471A	64,7471A	RC



Project Name: NA SOIL EXCAVATION

Lab Number: L0712214

Project Number: 0051545

Report Date: 08/27/07

### 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): 01-06 Batch: WG291660-1								
Mercury, Total	ND	mg/kg	0.08	1	08/23/07 17:30	08/24/07 14:25	64,7471A	RC

#### Prep Information

Digestion Method: EPA 7471A

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series for sample(s): 01-06 Batch: WG291896-1								
Arsenic, Total	ND	mg/kg	0.40	1	08/26/07 10:50	08/27/07 10:53	60,6010B	MG
Cadmium, Total	ND	mg/kg	0.40	1	08/26/07 10:50	08/27/07 10:53	60,6010B	MG
Chromium, Total	ND	mg/kg	0.40	1	08/26/07 10:50	08/27/07 10:53	60,6010B	MG
Lead, Total	ND	mg/kg	2.0	1	08/26/07 10:50	08/27/07 10:53	60,6010B	MG

#### Prep Information

Digestion Method: EPA 3050B



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** NA SOIL EXCAVATION

**Project Number:** 0051545

**Lab Number:** L0712214

**Report Date:** 08/27/07

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals by MCP 6000/7000 series Associated sample(s): 01-06 Batch: WG291660-2 WG291660-3					
Mercury, Total	102	97	75-125	5	30
Total Metals by MCP 6000/7000 series Associated sample(s): 01-06 Batch: WG291896-2 WG291896-3					
Arsenic, Total	102	105	75-125	3	30
Cadmium, Total	103	104	75-125	1	30
Chromium, Total	97	99	75-125	2	30
Lead, Total	98	99	75-125	1	30

# **INORGANICS & MISCELLANEOUS**



**Project Name:** NA SOIL EXCAVATION  
**Project Number:** 0051545

**Lab Number:** L0712214  
**Report Date:** 08/27/07

### SAMPLE RESULTS

**Lab ID:** L0712214-01  
**Client ID:** CF-1-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil

**Date Collected:** 08/23/07 09:15  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry</b>									
Solids, Total	95		%	0.10	1	-	08/23/07 21:10	30,2540G	NM



**Project Name:** NA SOIL EXCAVATION  
**Project Number:** 0051545

**Lab Number:** L0712214  
**Report Date:** 08/27/07

### SAMPLE RESULTS

Lab ID: L0712214-02  
 Client ID: CF-2-20070823-01  
 Sample Location: RAYTHEON-WAYLAND  
 Matrix: Soil

Date Collected: 08/23/07 09:20  
 Date Received: 08/23/07  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry</b>									
Solids, Total	95		%	0.10	1	-	08/23/07 21:10	30,2540G	NM



**Project Name:** NA SOIL EXCAVATION  
**Project Number:** 0051545

**Lab Number:** L0712214  
**Report Date:** 08/27/07

### SAMPLE RESULTS

**Lab ID:** L0712214-03  
**Client ID:** CF-3-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil

**Date Collected:** 08/23/07 09:25  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry</b>									
Solids, Total	94		%	0.10	1	-	08/23/07 21:10	30,2540G	NM



**Project Name:** NA SOIL EXCAVATION  
**Project Number:** 0051545

**Lab Number:** L0712214  
**Report Date:** 08/27/07

### SAMPLE RESULTS

Lab ID: L0712214-04  
 Client ID: CF-4-20070823-01  
 Sample Location: RAYTHEON-WAYLAND  
 Matrix: Soil

Date Collected: 08/23/07 09:30  
 Date Received: 08/23/07  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry</b>									
Solids, Total	95		%	0.10	1	-	08/23/07 21:10	30,2540G	NM



**Project Name:** NA SOIL EXCAVATION  
**Project Number:** 0051545

**Lab Number:** L0712214  
**Report Date:** 08/27/07

### SAMPLE RESULTS

**Lab ID:** L0712214-05  
**Client ID:** CF-5-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil

**Date Collected:** 08/23/07 09:35  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry</b>									
Solids, Total	94		%	0.10	1	-	08/23/07 21:10	30,2540G	NM



**Project Name:** NA SOIL EXCAVATION  
**Project Number:** 0051545

**Lab Number:** L0712214  
**Report Date:** 08/27/07

### SAMPLE RESULTS

**Lab ID:** L0712214-06  
**Client ID:** CF-6-20070823-01  
**Sample Location:** RAYTHEON-WAYLAND  
**Matrix:** Soil

**Date Collected:** 08/23/07 09:40  
**Date Received:** 08/23/07  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry</b>									
Solids, Total	88		%	0.10	1	-	08/23/07 21:10	30,2540G	NM



## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** NA SOIL EXCAVATION

**Project Number:** 0051545

**Lab Number:** L0712214

**Report Date:** 08/27/07

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Associated sample(s): 01-06 QC Batch ID: WG291681-1 QC Sample: L0712214-01 Client ID: CF-1-20070823-01					
Solids, Total	95	95	%	0	20

Project Name: NA SOIL EXCAVATION

Lab Number: L0712214

Project Number: 0051545

Report Date: 08/27/07

## 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
L0712214-01A	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-8082-04,MCP-8270-04,TPH-DRO
L0712214-01B	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-7471T,MCP-AS-6010T,MCP-CD-6010T,MCP-CR-6010T,MCP-PB-6010T,TS
L0712214-02A	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-8082-04,MCP-8270-04,TPH-DRO
L0712214-02B	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-7471T,MCP-AS-6010T,MCP-CD-6010T,MCP-CR-6010T,MCP-PB-6010T,TS
L0712214-02C	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	SUB-MAN-GRAIN/SIEVE
L0712214-03A	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-8082-04,MCP-8270-04,TPH-DRO
L0712214-03B	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-7471T,MCP-AS-6010T,MCP-CD-6010T,MCP-CR-6010T,MCP-PB-6010T,TS
L0712214-04A	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-8082-04,MCP-8270-04,TPH-DRO
L0712214-04B	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-7471T,MCP-AS-6010T,MCP-CD-6010T,MCP-CR-6010T,MCP-PB-6010T,TS
L0712214-04V	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	SUB-MAN-GRAIN/SIEVE
L0712214-05A	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-8082-04,MCP-8270-04,TPH-DRO
L0712214-05B	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-7471T,MCP-AS-6010T,MCP-CD-6010T,MCP-CR-6010T,MCP-PB-6010T,TS
L0712214-06A	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-8082-04,MCP-8270-04,TPH-DRO
L0712214-06B	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-7471T,MCP-AS-6010T,MCP-CD-6010T,MCP-CR-6010T,MCP-PB-6010T,TS
L0712214-06C	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	SUB-MAN-GRAIN/SIEVE

## Container Comments

L0712214-01A	Temp Probe
L0712214-01B	Temp Probe
L0712214-02A	Temp Probe
L0712214-02B	Temp Probe
L0712214-02C	Temp Probe



**Project Name:** NA SOIL EXCAVATION**Project Number:** 0051545**Lab Number:** L0712214**Report Date:** 08/27/07**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>pH</b>	<b>Temp</b>	<b>Pres</b>	<b>Seal</b>	<b>Analysis</b>
---------------------	-----------------------	---------------	-----------	-------------	-------------	-------------	-----------------

**Container Comments**

L0712214-03A	Temp Probe
L0712214-03B	Temp Probe
L0712214-04A	Temp Probe
L0712214-04B	Temp Probe
L0712214-04V	Temp Probe
L0712214-05A	Temp Probe
L0712214-05B	Temp Probe
L0712214-06A	Temp Probe
L0712214-06B	Temp Probe
L0712214-06C	Temp Probe

**Project Name:** NA SOIL EXCAVATION  
**Project Number:** 0051545

**Lab Number:** L0712214  
**Report Date:** 08/27/07

## 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.

**Project Name:** NA SOIL EXCAVATION  
**Project Number:** 0051545

**Lab Number:** L0712214  
**Report Date:** 08/27/07

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 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.
- 64 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). August 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

**ALPHA**  
LABORATORY

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 BOSTON Sr 6<sup>TH</sup> FLOOR  
BOSTON, MA 02116

Phone: (617) 646-7800

Fax: (617) 267-6447

Email: Jason.Flettery@erm.com

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

**Project Information**

Project Name: NA SOIL EXCAVATION

Project Location: RAYTHEON - WARD

Project #: 0051545

Project Manager: JASON FLETTERY

ALPHA Quote #:

Turn-Around Time

Standard 8/27  RUSH (only confirmed if pre-approved!)

Date Due: 24 hr Time:

Date Rec'd in Lab: 8/23/07

**Report Information - Data Deliverables**

FAX  EMAIL

INDEX  Add'l Deliverables

**Regulatory Requirements/Report Limits**

State/Fed Program: MA MCP Criteria: Various Lab's Reuse Criteria

MAMCP PRESUMPTIVE CERTAINTY... CT REASONABLE CONFIDENCE PROTOCOLS

**Billing Information**

ALPHA Job #: 20712214

Same as Client info PO #:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS							
		Date	Time			VOCs (HIGH) 8260	VOCs (LOW) 8260	TOTAL SOLIDS	PCBs, SVOCs, TPH	TCRRA 5 AS, Cd, Cr Pb, Hg	GRAIN SIZE	SAMPLE HANDLING	
12214-01	CF-1-20070823-01	8/23/07	9:15	S	JDF	X	X	X	X	X	X		
-02	CF-2-20070823-01		9:20			X	X	X	X	X	X		
-03	CF-3-20070823-01		9:25			X	X	X	X	X	X		
-04	CF-4-20070823-01		9:30			X	X	X	X	X	X		
-05	CF-5-20070823-01		9:35			X	X	X	X	X	X		
-06	CF-6-20070823-01		9:40			X	X	X	X	X	X		
-07	DUP-001-20070823-01		24:00			X	X	X	X	X	X		
	TB-001-20070823-01	8/23/07	14:15	TB Water	DS	X	X	X	X	X	X		

**PLEASE ANSWER QUESTIONS ABOVE!**

IS YOUR PROJECT  
MA MCP or CT RCP?

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

Requested By: [Signature]

Date/Time: 8/23/07 12:18

Received By: [Signature]

Date/Time: 8/23/07 13:30

**SAMPLE HANDLING**

Filtration  Done  Not needed

Lab to do  Lab to do  Lab to do

(Please specify below)

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.



## ANALYTICAL REPORT

**Prepared for:**

**Alpha Woods Hole Labs - Westborough  
8 Walkup Drive  
Westborough, MA 01581**

**Project:** L0712214 - ERM  
**ETR:** 0708201  
**Report Date:** August 24, 2007

**Certifications and Accreditations**

**Massachusetts M-MA030  
Connecticut PH-0141  
New Hampshire 2206  
Rhode Island LAO00289  
New Jersey MA015  
Maine MA0030  
New York 11627  
Louisiana 03090  
Florida E87814  
Pennsylvania 68-02089  
Army Corps of Engineers  
Department of the Navy**

This report shall not be reproduced except in full, without written approval from the laboratory.



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# CASE NARRATIVE

## Alpha Woods Hole Labs

**ETR: 0708201**  
**Project: L0712214-ERM**

All analyses were performed according to Alpha Woods Hole Labs quality assurance program and documented Standard Operating Procedures (SOPs). The analytical results contained in this report were performed within holding time, and with appropriate quality control measures, except where noted. A summary of all state and federal accreditations is provided within this report. Blank correction of results is not performed in the laboratory for any parameter.

The enclosed results of analyses are representative of the samples as received by the laboratory. Alpha Woods Hole Labs makes no representations or certifications as to the method of sample collection, sample identification, or transporting/handling procedures used prior to the receipt of samples by Alpha Woods Hole Labs. To the best of my knowledge, the information contained in this report is accurate and complete.

Approved by: Nancy J. Rose Title: Project Manager Date: 8/24/07

## Sample ID Cross Reference

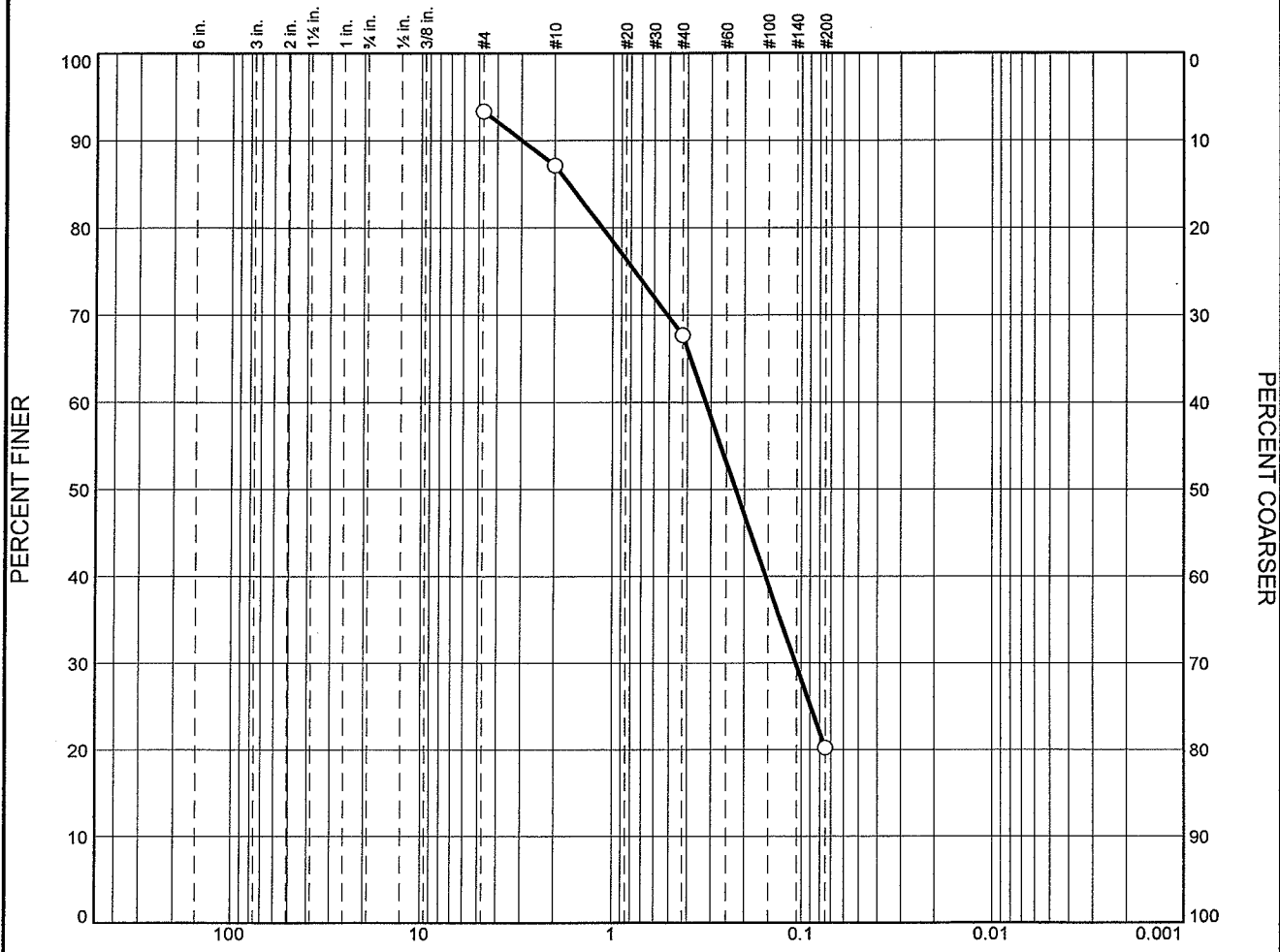


Client: **Alpha Woods Hole Labs - Westborough**  
Project: **L0712214 - ERM**

Lab Code: **MA00030**  
ETR: **0708201**

<b>Lab Sample ID</b>	<b>Client Sample ID</b>
<u>0708201-01</u>	<u>CF-2-20070823-01</u>
<u>0708201-02</u>	<u>CF-4-20070823-01</u>
<u>0708201-03</u>	<u>CF-6-20070823-01</u>

# Particle Size Distribution Report



GRAIN SIZE - mm.

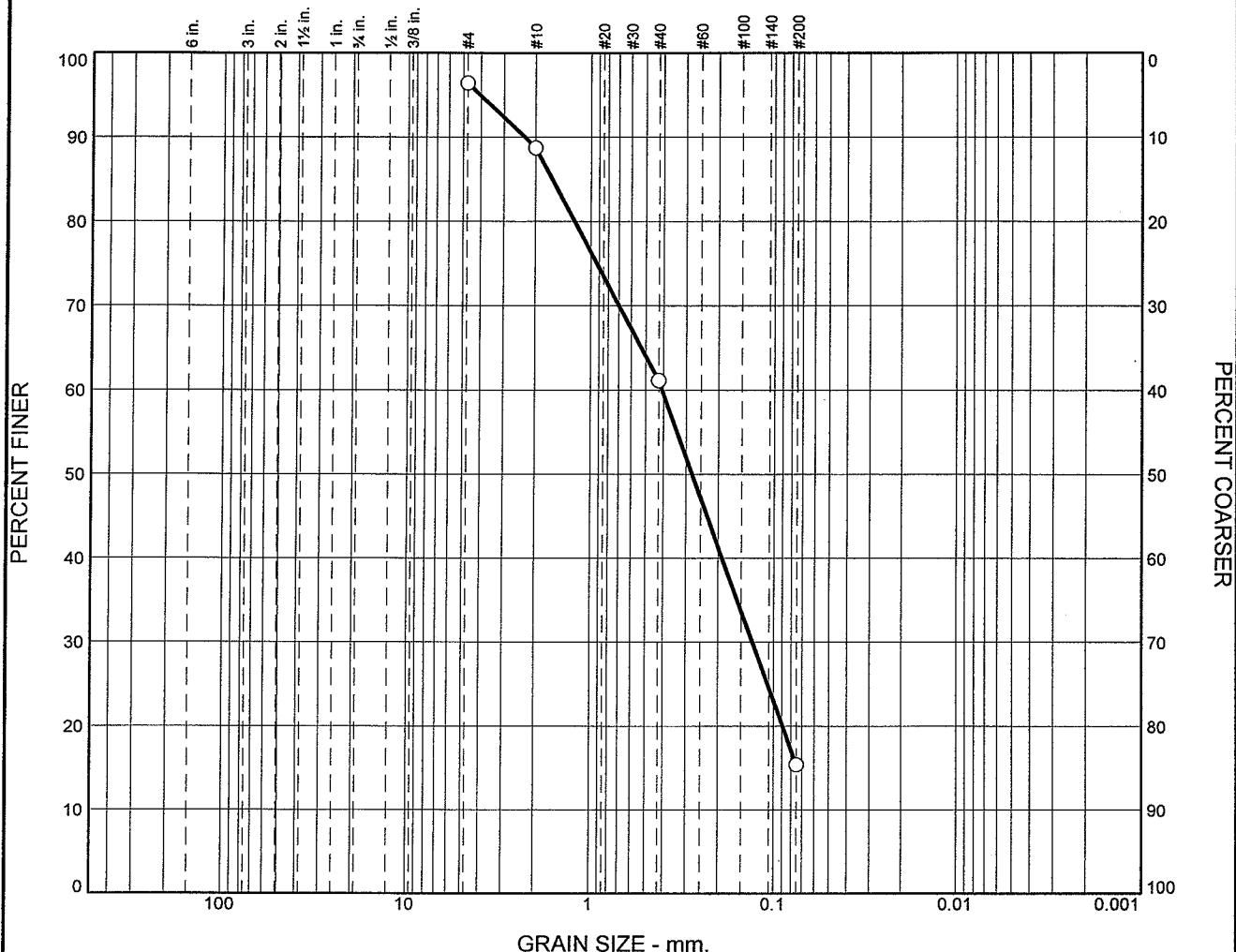
	% Cobbles	% Gravel		% Sand			% Fines			
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay		
<input type="radio"/>				6.2	19.4	47.5	20.2			
<input checked="" type="checkbox"/>	LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
<input type="radio"/>			1.6870	0.3209	0.2227	0.1073				

Material Description	USCS	AASHTO
<input type="radio"/>	SM	A-2-4(0)

<p><b>Project No.</b> 0708201    <b>Client:</b> Alpha</p> <p><b>Project:</b> L0712214 - ERM</p> <p><input type="radio"/> <b>Source of Sample:</b> CF-2-20070823-01    <b>Sample Number:</b> 0708201-01</p>	<p><b>Remarks:</b></p>
<p><b>ALPHA WOODS HOLE LABS</b></p> <p><b>Raynham, MA</b></p>	<p><b>Project</b></p>



# Particle Size Distribution Report



GRAIN SIZE - mm.

	% Cobbles	% Gravel		% Sand			% Fines			
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay		
○				7.7	27.6	45.7	15.4			
⊗	LL	PL	D <sub>85</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>15</sub>	D <sub>10</sub>	C <sub>c</sub>	C <sub>u</sub>
○			1.6226	0.4069	0.2785	0.1304				
<b>Material Description</b>								<b>USCS</b>	<b>AASHTO</b>	
○								SM	A-2-4(0)	

**Project No.** 0708201      **Client:** Alpha  
**Project:** L0712214 - ERM  
  
 ○ **Source of Sample:** CF-4-20070823-01      **Sample Number:** 0708201-02

---

**ALPHA WOODS HOLE LABS**

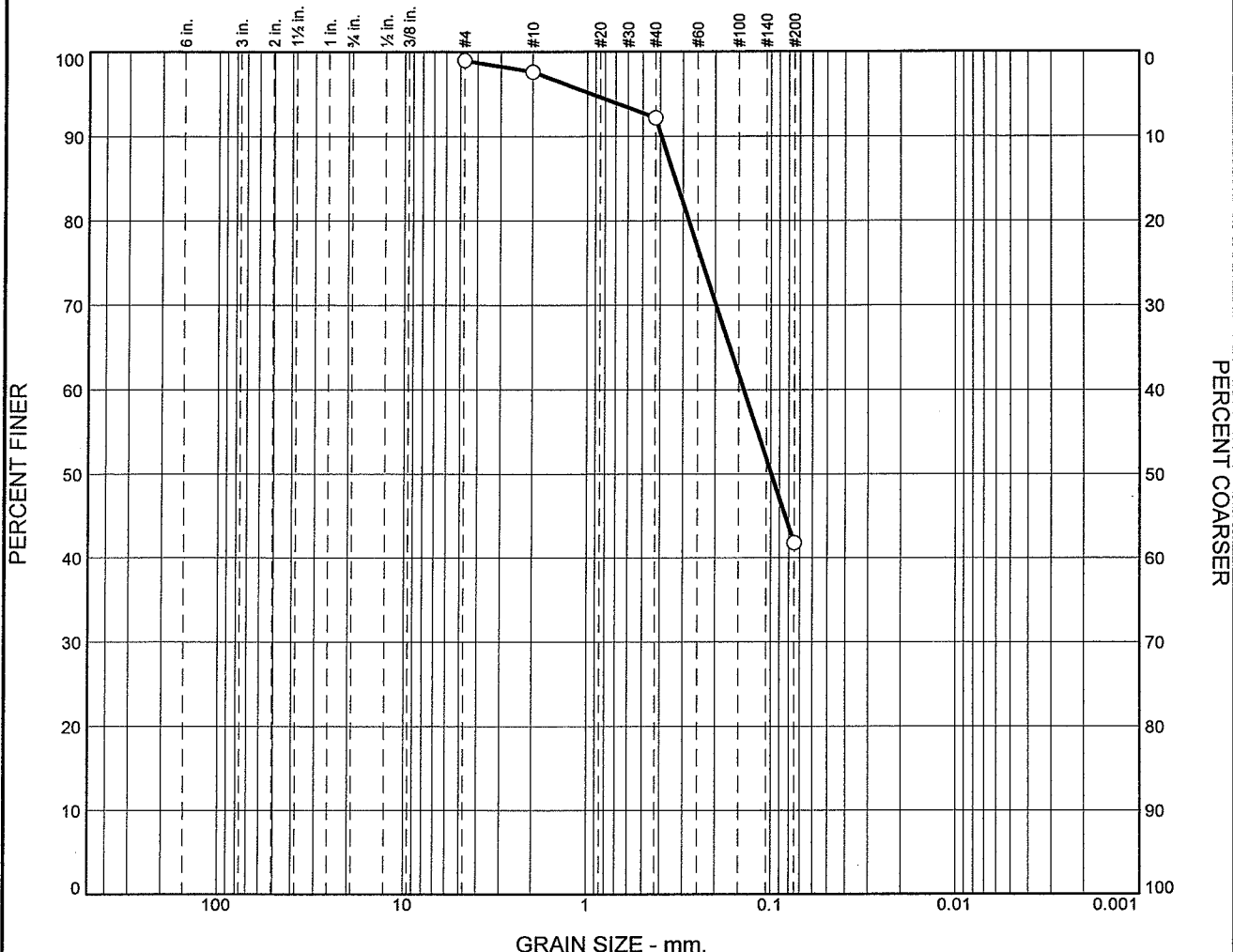
**Raynham, MA**

**Remarks:**

**Project**

# Particle Size Distribution Report



	% Cobbles		% Gravel		% Sand			% Fines		
			Coarse	Fine	Coarse	Medium	Fine	Silt	Clay	
○					1.4	5.4	50.4	41.8		
X	LL	PL	D85	D60	D50	D30	D15	D10	Cc	Cu
○			0.3321	0.1403	0.0994					
○	Material Description							USCS	AASHTO	
○								SM	A-4(0)	

Project No. 0708201      Client: Alpha Project: L0712214 - ERM ○ Source of Sample: CF-6-20070823-01      Sample Number: 0708201-03	Remarks:
<b>ALPHA WOODS HOLE LABS</b>  Raynham, MA	Project

# CHAIN OF CUSTODY

PAGE 1 OF 1



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

### Client Information

Client: ERM - BOSTON  
Address: 399 BOYLSTON ST 6<sup>TH</sup> FLOOR  
BOSTON, MA 02116  
Phone: (617) 646-7800  
Fax: (617) 267-6447  
Email: jason.flettery@erm.com

These samples have been previously analyzed by Alpha

### Other Project Specific Requirements/Comments/Detection Limits:

### Project Information

Project Name: NA SOIL EXCAVATION  
Project Location: RAYTHEON - WAKLAND  
Project #: 0051545  
Project Manager: JASON FLETTERY  
ALPHA Quote #:

### Turn-Around Time

Standard  RUSH (only confirmed if pre-approved!)  
Date Due: 24 hr Time:

Date Rec'd In Lab: 8/23/07

### Report Information - Data Deliverables

FAX  EMAIL  
 ADEx  Add'l Deliverables

ALPHA Job #: 10712214

Billing Information  
 Same as Client info PO #:

### Regulatory Requirements/Report Limits

State / Fed Program Criteria

MA MCP UNLAWED LAMPELL REUSE 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	VOCS (HIGH) 8260		VOCS (LOW) 8260		TOTAL SOIDS		PCBS, SVOCS, TPH		TECPAS 5, 6, 7, 8, 9, 10		SAMPLE HANDLING	TOTAL # BOTTLES
	X		X		X		X		X			
	X		X		X		X		X		Filtration <input type="checkbox"/> Done <input checked="" type="checkbox"/> Not needed <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please specify below)	5
	X		X		X		X		X			6
	X		X		X		X		X			5
	X		X		X		X		X			6
	X		X		X		X		X			5
	X		X		X		X		X			6
	X		X		X		X		X			3
	X		X		X		X		X			1

PLEASE ANSWER QUESTIONS ABOVE!  
IS YOUR PROJECT  
MA MCP or CT RCP?

Relinquished By: [Signature] Date/Time: 8/23/07 12:15  
Received By: J. Blanchard Date/Time: 8/23/07 13:00

Container Type: V P A A  
Preservative: NA NA NA NA NA NA

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.



## Sample Receipt Checklist

Page 1 of 1

Client: ALPHA	Receipt Date: 8/23/07
Project: 0708001	Log-in Date: ↓
ETR #: 0708201	Inspection by: W Login by: W

## ALL SECTIONS BELOW MUST BE COMPLETED

ALL SECTIONS BELOW MUST BE COMPLETED	Comments / Notes
Were samples shipped? Yes, FedEx / UPS / Other: _____ <input checked="" type="radio"/> No, WHG Courier pick-up / Hand delivered	Sample storage refrigerator #: F1
Is bill of lading retained? Yes, Tracking #: _____ No, Unavailable / <input checked="" type="radio"/> NA	Sample storage freezer #: _____
Number of coolers received for this project delivery: _____ / _____	
Indicate cooler temperature upon opening (if multiple coolers, record <u>all</u> temps): <b>Note:</b> If <u>all</u> coolers are 2-6°C, use one checklist, if NOT, use separate checklists and note <u>all</u> samples received <u>above</u> 6°C. <b>Cooler 1:</b> Temperature(s) taken from: 3° IR Gun, 3° Temp. Blank, / NA	Cooler 2: _____ Cooler 3: _____ Cooler 4: _____ Cooler 5: _____ Cooler 6: _____ Cooler 7: _____ More: _____
Were samples received on ice? <input checked="" type="radio"/> Yes / No	
Chain-of-Custody present? <input checked="" type="radio"/> Yes / No Complete? <input checked="" type="radio"/> Yes / No	
Custody seals present on Cooler? Yes / <input checked="" type="radio"/> No on Bottles? Yes / <input checked="" type="radio"/> No Intact? Yes / No / <input checked="" type="radio"/> NA <i>Note: Affix custody seals to back of this page.</i>	
Were sample containers intact? <input checked="" type="radio"/> Yes / No - If No, list samples: →	
Did VOA/VPH waters contain headspace (>5mm)? Yes / No / <input checked="" type="radio"/> NA If Yes, list samples: →	
Were 5035 VOA soils, or VPH soils, covered with MeOH? Yes / No / <input checked="" type="radio"/> NA If No, list samples: →	
Was a sufficient amount of sample received for each test indicated on the COC? <input checked="" type="radio"/> Yes / No If No, list samples: →	
If chemical preservation is appropriate - Were samples field preserved? Yes / No / <input checked="" type="radio"/> NA <input type="checkbox"/> C=HCl <input type="checkbox"/> M=MeOH <input type="checkbox"/> S=H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> H=NaOH <input type="checkbox"/> N=HNO <sub>3</sub> <input type="checkbox"/> Other: _____ <input type="checkbox"/> U= Unknown	Chemical preservation OK for ALL samples? Yes / No / <input checked="" type="radio"/> N/A If No, list samples below:
Preservation (pH) verified at lab for EVERY bottle? (Not: VOA / VPH / Sulfide) YES: <2 or >12 (CN) or NO <input checked="" type="radio"/> NA If No, why?:	
Were samples received within hold time? <input checked="" type="radio"/> Yes / No If No, list samples: →	
Discrepancy between samples rec'd & COC? Yes / <input checked="" type="radio"/> No If Yes, list samples: →	
Was the Project Manager notified of any other problems? Yes / No / NA	
Project Manager Acknowledgement: NAL Date: 8/24/07	Please use back for any additional notes!

Alpha Woods Hole Labs  
Raynham, Massachusetts

# Alpha Analytical Labs Sample Delivery Group Form

Laboratory Job No. LO712214

SDG Reviewer J

Client: ERM

Date/Time: 8/23/07 13:30

### Preliminary Review

1. Samples Delivered via:

- Alpha Courier
- Client
- Express Mail
- Other \_\_\_\_\_

2. Chain of Custody:

- Present
- Absent

3. Custody Seal:

- Absent
- Present/Intact
- Present/Broken

3. All Containers Accounted for:

- Yes
- No

4. Samples received:

- Intact
- Extra: \_\_\_\_\_

Broken      Sample IDs : \_\_\_\_\_

Leaking      Sample IDs : \_\_\_\_\_

5. Temperature Blank:

- Present
- Absent
- Temperature (in Celsius):
- 2 - 6 Celsius degrees
- Other 1.6°C

Is the ice (n blue ice) present?  Yes      Cooler Temp: 2°C TP

No \*

### Secondary Review

1. Do the sample(s) labels and Chain of Custody agree?

- Yes
- No \*

2. Are the samples in appropriate containers?

- Yes
- No \*

3. Are the samples properly preserved?

- Yes
- No \*      Initial pH= N/A Soln Preserved In-House w/ \_\_\_\_\_

4. Are the samples within holding times?

- Yes
- No \*

\* Contact client and attach the phone log

## Certificate/Approval Program Summary



Method numbers assume the most recent EPA revisions. For a complete listing of analytes for the referenced methods please contact your Alpha Woods Hole Lab Project Manager or the Quality Assurance Manager.

**Connecticut Department of Public Health** Certificate/Lab ID : PH-0141 - *Wastewater* (General Chemistry: EPA 120.1, 150.1, 160.1, 160.2, 180.1, 300.0, 310.1, 335.2, 365.2; Metals: 200.8, 245.1; Organics: 608, 624, 625, ETPH) *Solid Waste/Soil* (General Chemistry: 1010, 9010/9014, 9045, 9060; Metals: 6020, 7470, 7471; Organics: 8081, 8082, 8260, 8270, ETPH).

**Florida Department of Health** Certificate/Lab ID : E87814 - Primary NELAP Accreditation Authority for Air & Emissions. Secondary NELAP Accreditation for Wastewater and Solid & Hazardous Waste. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 335.2, 365.2, SM2320B, SM2340B, SM2540G, SM4500NH3; Metals: 245.1; Organics: 608, 624, 625). *Solid and Hazardous Waste* (General Chemistry: 9010/9014, 9045, 9050, 9056, 9065, Reactivity 7.3; Metals: 6020, 7470, 7471; Organics: 8081, 8082, 8260, 8270). *Air & Emissions* (Organics: EPA TO-15).

**Louisiana Department of Environmental Quality** Certificate/Lab ID : 03090 - Primary NELAP Accrediting Authority for Wastewater, Solid & Hazardous Waste. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 365.2, 376.2, 9010/9014, 9056, SM2540G; Metals: 200.8, 245.1, 6020; Organics: 608, 624, 625, 8015-DRO/GRO, 8081, 8082, 8260, 8270). *Solid and Hazardous Waste* (General Chemistry: 1010, 1311, 9010/9014, 9040, 9045, 9056, 9060, Reactivity 7.3; Metals: 6020, 7196, 7470, 7471; Organics: 8015-DRO/GRO, 8081, 8082, 8260, 8270).

**Maine Department of Human Services** Certificate/Lab ID : MA0030 - *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 335.2, 365.2; Metals: EPA 245.1; Organics: 608, 624)

**Massachusetts Department of Environmental Protection** Certificate/Lab ID: M-MA030 - *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 335.2, 365.2; Metals: EPA 245.1; Organics: EPA 608, 624).

**New Hampshire Department of Environmental Services** Certificate/Lab ID: 2206 - Secondary NELAP Accreditation. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 365.2, 376.2, SM2540G; Metals: 200.8, 245.4; Organics: 608, 624, 625).

**New Jersey Department of Environmental Protection** Certificate/Lab ID : MA015 - Secondary NELAP Accreditation. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 376.2, 9010/9014, 9056, SM2540G; Metals: 200.8, 245.1 6020; Organics: 608, 624, 625, 8081, 8082, 8260, 8270). *Solid & Hazardous Waste* (General Chemistry: EPA 1010, 1311, 9010/9014, 9040, 9045, 9056, 9060; Metals: 6020, 7196, 7470, 7471; Organics: 8015-DRO/GRO, 8081, 8082, 8260, 8270). *Air & Emissions* (Organics: EPA TO-15).

**New York Department of Health** Certificate/Lab ID : 11627 - Secondary NELAP Accreditation. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 365.2, 376.2; Metals: 245.1; Organics: 608, 624, 625). *Solid and Hazardous Waste* (General Chemistry: EPA 1010, 1311; : 245.1; 6020, 7041; Organics: 8081, 8082, 8260, 8270). *Air & Emissions* (Organics: EPA TO-15).

**Rhode Island Department of Health** Certificate/Lab ID : LAO00289 - Chemistry: *Organic and Inorganic in Non-Poratable Water, Wastewater/Sewage and Soil* (Refer to LADEQ and MADEP certificates for method numbers.)

**Pennsylvania Department of Environmental Protection** Certificate/Lab ID : 68-02089 - Registered laboratory

**U.S. Army Corps of Engineers**

**Department of the Navy**



# CHAIN OF CUSTODY

WESTBORO, MA  
TEL: 508-898-9220  
FAX: 508-998-9193

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

### Client Information

Client: **ERM - Boston**  
Address: **399 Boylston St 6<sup>TH</sup> Floor**  
**Boston, MA 02116**  
Phone: **(617) 646-7800**  
Fax: **(617) 267-6447**  
Email: **Jason.Flettery@erm.com**

Project Name: **MA Soil Excavation**  
Project Location: **RAYTHEON - Maryland**  
Project #: **0051545**  
Project Manager: **JASON FLETTERY**  
ALPHA Quote #:  
Turn-Around Time

Standard  RUSH (only confirmed if pre-approved)  
Date Due: **24hr** Time: **8/27/07**  
 Those samples have been previously analyzed by Alpha  
Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: **8/23/07**

ALPHA Job #: **10710213**

Report Information - Data Deliverables  
 FAX  EMAIL  
 SDEX  Add'l Deliverables  
Regulatory Requirements/Report Limits

State/Fed Program: **MA MCP** Criteria  
**MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS**  
Billing Information  
 Same as Client info PO #:

ANALYSIS	Yes	No	Are MCP Analytical Methods Required?	Are CT RCP (Reasonable Confidence Protocols) Required?
VOCs (HIGH) 8260	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
VOCs (LOW) 8260	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TOTAL SOLIDS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PCBs, SVOCs, TPH	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TECRA 5 AS, Cd, Cr Pb, Hg	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
GRAIN SIZE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS						Sample Specific Comments
		Date	Time			VOCs (HIGH) 8260	VOCs (LOW) 8260	TOTAL SOLIDS	PCBs, SVOCs, TPH	TECRA 5 AS, Cd, Cr Pb, Hg	GRAIN SIZE	
10213-01	CF-1-20070823-01	8/23/07	9:15	S	JDF	X	X	X	X	X	X	
	02	CF-2-20070823-01	9:20			X	X	X	X	X	X	
	03	CF-3-20070823-01	9:25			X	X	X	X	X	X	
	04	CF-4-20070823-01	9:30			X	X	X	X	X	X	
	05	CF-5-20070823-01	9:35			X	X	X	X	X	X	
	06	CF-6-20070823-01	9:40			X	X	X	X	X	X	
	07	DUP-001-20070823-01	24:00			X	X	X	X	X	X	
	08	TR-001-20070823-01	8/22/07	14:15	DS	X	X	X	X	X	X	

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT  
MA MCP or CT RCP?

Requested By: *[Signature]*

Container Type: **V**  
Preservative: **NO**

Received By: *[Signature]*

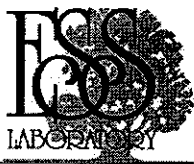
Date/Time: **8/23/07 12:50**

Date/Time: **8/23/07 13:30**

FORM NO: 01-01 (rev. 10-OCT-06)

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.





# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

## PROJECT NARRATIVE

Mary Davis  
Alpha Analytical  
8 Walkup Drive  
Westborough, MA 01581

**RE: Alpha Analytical Sampling**  
**ESS Laboratory Work Order Number: 0708357**

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 mailed. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard  
Laboratory Director

Date: August 27, 2007

### 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.

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

Holding time and preservation requirements for all MCP analytes were achieved, unless otherwise noted in this Project Narrative.

### Sample Receipt

The following samples were received on August 23, 2007 for the analyses specified on the enclosed Chain of Custody Record.

Laboratory ID	Matrix	Client Sample ID
0708357-01	Soil	L0712213-01
0708357-02	Soil	L0712213-02
0708357-03	Soil	L0712213-03
0708357-04	Soil	L0712213-04
0708357-05	Soil	L0712213-05
0708357-06	Soil	L0712213-06
0708357-07	Soil	L0712213-07
0708357-08	Solid	Trip Blank L0712213-08



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
Client Project ID: Alpha Analytical Sampling

ESS Laboratory Work Order: 0708357

### PROJECT NARRATIVE

#### 5035/8260B Volatile Organic Compounds / Low Level

0708357-01

Due to equipment malfunction, surrogates were not added to any of the low level VOA samples resulting in no recovery for any of the surrogates. Only 1 vial was received. All associated LCS and Internal Standard data was within criteria.

1,2-Dichloroethane-d4  
4-Bromofluorobenzene  
Dibromofluoromethane  
Toluene-d8

Outside QC Limits.  
Outside QC Limits.  
Outside QC Limits.  
Outside QC Limits.

0708357-02

Due to equipment malfunction, surrogates were not added to any of the low level VOA samples resulting in no recovery for any of the surrogates. Only 1 vial was received. All associated LCS and Internal Standard data was within criteria.

1,2-Dichloroethane-d4  
4-Bromofluorobenzene  
Dibromofluoromethane  
Toluene-d8

Outside QC Limits.  
Outside QC Limits.  
Outside QC Limits.  
Outside QC Limits.

0708357-03

Due to equipment malfunction, surrogates were not added to any of the low level VOA samples resulting in no recovery for any of the surrogates. Only 1 vial was received. All associated LCS and Internal Standard data was within criteria.

1,2-Dichloroethane-d4  
4-Bromofluorobenzene  
Dibromofluoromethane  
Toluene-d8

Outside QC Limits.  
Outside QC Limits.  
Outside QC Limits.  
Outside QC Limits.

0708357-04

Due to equipment malfunction, surrogates were not added to any of the low level VOA samples resulting in no recovery for any of the surrogates. Only 1 vial was received. All associated LCS and Internal Standard data was within criteria.

1,2-Dichloroethane-d4  
4-Bromofluorobenzene  
Dibromofluoromethane  
Toluene-d8

Outside QC Limits.  
Outside QC Limits.  
Outside QC Limits.  
Outside QC Limits.

0708357-05

Due to equipment malfunction, surrogates were not added to any of the low level VOA samples resulting in no recovery for any of the surrogates. Only 1 vial was received. All associated LCS and Internal Standard data was within criteria.

1,2-Dichloroethane-d4  
4-Bromofluorobenzene  
Dibromofluoromethane  
Toluene-d8

Outside QC Limits.  
Outside QC Limits.  
Outside QC Limits.  
Outside QC Limits.



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
Client Project ID: Alpha Analytical Sampling  
0708357-06

ESS Laboratory Work Order: 0708357

Due to equipment malfunction, surrogates were not added to any of the low level VOA samples resulting in no recovery for any of the surrogates. Only 1 vial was received. All associated LCS data was within criteria.

1,2-Dichloroethane-d4  
1,4-Dichlorobenzene-D4  
1,4-Dichlorobenzene-D4  
4-Bromofluorobenzene  
Chlorobenzene-d5  
Chlorobenzene-d5  
Dibromofluoromethane  
Fluorobenzene  
Fluorobenzene  
Toluene-d8

Outside QC Limits.  
Internal Standard was outside of criteria due to matrix (UCM present).  
Internal Standard is outside of criteria. Insufficient sample for reanalysis.  
Outside QC Limits.  
Internal Standard was outside of criteria due to matrix (UCM present).  
Internal Standard is outside of criteria. Insufficient sample for reanalysis.  
Outside QC Limits.  
Internal Standard was outside of criteria due to matrix (UCM present).  
Internal Standard is outside of criteria. Insufficient sample for reanalysis.  
Outside QC Limits.

0708357-07

Due to equipment malfunction, surrogates were not added to any of the low level VOA samples resulting in no recovery for any of the surrogates. Only 1 vial was received. All associated LCS and Internal Standard data was within criteria.

1,2-Dichloroethane-d4  
4-Bromofluorobenzene  
Dibromofluoromethane  
Toluene-d8

Outside QC Limits.  
Outside QC Limits.  
Outside QC Limits.  
Outside QC Limits.

0708357-08

Due to equipment malfunction, surrogates were not added to any of the low level VOA samples resulting in no recovery for any of the surrogates. Only 1 vial was received. All associated LCS and Internal Standard data was within criteria.

1,2-Dichloroethane-d4  
4-Bromofluorobenzene  
Dibromofluoromethane  
Toluene-d8

Outside QC Limits.  
Outside QC Limits.  
Outside QC Limits.  
Outside QC Limits.

BH72405-BLK1

1,2-Dichloroethane-d4  
4-Bromofluorobenzene  
Dibromofluoromethane  
Toluene-d8

Outside QC Limits.  
Outside QC Limits.  
Outside QC Limits.  
Outside QC Limits.

No other observations noted.

End of Project Narrative.



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
Client Project ID: Alpha Analytical Sampling

ESS Laboratory Work Order: 0708357

### MADEP MCP Response Action Analytical Report Certification Form

MADEP RTN\*: \_\_\_\_\_

This form provides certification for the following data set:  
0708357-01 through 0708357-08

Sample Matrices:	( ) Ground Water	(X) Soil/Sediment	( ) Drinking Water	( ) Other:
MCP SW-846	8260B (X)	8151A ( )	8330 ( )	6010B ( ) 7470A/1A ( )
Methods Used	8270C ( )	8081A ( )	VPH ( )	6020 ( ) 9014M** ( )
	8082 ( )	8021B ( )	EPH ( )	7000 S*** ( ) 7194A ( )

As specified in MADEP  
Compendium of Analytical  
Methods (Check all that apply)

\* List Release Tracking Number (RTN), if known.  
\*\* M-SW-846 9014 or MADEP Physiologically Available Cyanide (PAC) Method  
\*\*\* S - SW - 846 Methods 7000 Series - List individual method and analyte

#### 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? (Yes) 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? (Yes) No\*
- C Does the data included in the report meet all the 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"? (Yes) No\*
- D **VPH and EPH methods only:** Was the VPH and EPH method conducted without significant modifications (see Section 11.3 of respective Methods)? Yes No\*

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

- E Were all QC performance standards and recommendations for the specific methods achieved? Yes (No)\*
- F Were results for all analyte-list compounds/elements for the specified method(s) reported? (Yes) No\*

*\*All negative responses must be addressed in an attached Environmental Laboratory Case Narrative.*

*I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.*

Signature: Laurel Stoddard

Date: August 27, 2007

Printed Name: Laurel Stoddard

Position: Laboratory Director



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: L0712213-01  
 Date Sampled: 08/23/07 09:15  
 Percent Solids: 96  
 Initial Volume: 5.7  
 Final Volume: 10  
 Extraction Method: 5035

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-01  
 Sample Matrix: Soil  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

#### MA - S2GW1

Analyte	Results	Units	MRL	Limit	DF	Analyzed
1,1,1,2-Tetrachloroethane	ND	mg/kg dry	0.0046	0.1	1	08/24/07
1,1,1-Trichloroethane	ND	mg/kg dry	0.0046	30	1	08/24/07
1,1,2,2-Tetrachloroethane	ND	mg/kg dry	0.0046	0.005	1	08/24/07
1,1,2-Trichloroethane	ND	mg/kg dry	0.0046	0.1	1	08/24/07
1,1-Dichloroethane	ND	mg/kg dry	0.0046	0.4	1	08/24/07
1,1-Dichloroethene	ND	mg/kg dry	0.0046	3	1	08/24/07
1,1-Dichloropropene	ND	mg/kg dry	0.0046		1	08/24/07
1,2,3-Trichlorobenzene	ND	mg/kg dry	0.0046		1	08/24/07
1,2,3-Trichloropropane	ND	mg/kg dry	0.0046		1	08/24/07
1,2,4-Trichlorobenzene	ND	mg/kg dry	0.0046	2	1	08/24/07
1,2,4-Trimethylbenzene	ND	mg/kg dry	0.0046	100	1	08/24/07
1,2-Dibromo-3-Chloropropane	ND	mg/kg dry	0.0046		1	08/24/07
1,2-Dibromoethane	ND	mg/kg dry	0.0046	0.1	1	08/24/07
1,2-Dichlorobenzene	ND	mg/kg dry	0.0046	9	1	08/24/07
1,2-Dichloroethane	ND	mg/kg dry	0.0046	0.1	1	08/24/07
1,2-Dichloropropane	ND	mg/kg dry	0.0046	0.1	1	08/24/07
1,3,5-Trimethylbenzene	ND	mg/kg dry	0.0046	100	1	08/24/07
1,3-Dichlorobenzene	ND	mg/kg dry	0.0046	1	1	08/24/07
1,3-Dichloropropane	ND	mg/kg dry	0.0046		1	08/24/07
1,4-Dichlorobenzene	ND	mg/kg dry	0.0046	0.7	1	08/24/07
1,4-Dioxane - Screen	ND	mg/kg dry	0.228		1	08/24/07
2,2-Dichloropropane	ND	mg/kg dry	0.0046		1	08/24/07
2-Butanone	ND	mg/kg dry	0.0457	0.3	1	08/24/07
2-Chlorotoluene	ND	mg/kg dry	0.0046		1	08/24/07
2-Hexanone	ND	mg/kg dry	0.0457		1	08/24/07
4-Chlorotoluene	ND	mg/kg dry	0.0046		1	08/24/07
4-Isopropyltoluene	ND	mg/kg dry	0.0046	100	1	08/24/07
4-Methyl-2-Pentanone	ND	mg/kg dry	0.0457	0.4	1	08/24/07
Acetone	ND	mg/kg dry	0.0457	3	1	08/24/07
Benzene	ND	mg/kg dry	0.0046	2	1	08/24/07
Bromobenzene	ND	mg/kg dry	0.0046		1	08/24/07
Bromochloromethane	ND	mg/kg dry	0.0046		1	08/24/07
Bromodichloromethane	ND	mg/kg dry	0.0046	0.1	1	08/24/07
Bromoform	ND	mg/kg dry	0.0046	0.1	1	08/24/07
Bromomethane	ND	mg/kg dry	0.0091	10	1	08/24/07



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: L0712213-01  
 Date Sampled: 08/23/07 09:15  
 Percent Solids: 96  
 Initial Volume: 5.7  
 Final Volume: 10  
 Extraction Method: 5035

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-01  
 Sample Matrix: Soil  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

Carbon Disulfide	ND	mg/kg dry	0.0046	1	08/24/07
Carbon Tetrachloride	ND	mg/kg dry	0.0046	10	08/24/07
Chlorobenzene	ND	mg/kg dry	0.0046	1	08/24/07
Chloroethane	ND	mg/kg dry	0.0091	1	08/24/07
Chloroform	ND	mg/kg dry	0.0046	0.1	08/24/07
Chloromethane	ND	mg/kg dry	0.0091	1	08/24/07
cis-1,2-Dichloroethene	ND	mg/kg dry	0.0046	0.3	08/24/07
cis-1,3-Dichloropropene	ND	mg/kg dry	0.0046	0.01	08/24/07
Dibromochloromethane	ND	mg/kg dry	0.0046	0.005	08/24/07
Dibromomethane	ND	mg/kg dry	0.0046	1	08/24/07
Dichlorodifluoromethane	ND	mg/kg dry	0.0091	1	08/24/07
Diethyl Ether	ND	mg/kg dry	0.0046	1	08/24/07
Di-isopropyl ether	ND	mg/kg dry	0.0046	1	08/24/07
Ethyl tertiary-butyl ether	ND	mg/kg dry	0.0046	1	08/24/07
Ethylbenzene	ND	mg/kg dry	0.0046	80	08/24/07
Hexachlorobutadiene	ND	mg/kg dry	0.0046	90	08/24/07
Isopropylbenzene	ND	mg/kg dry	0.0046	100	08/24/07
Methyl tert-Butyl Ether	ND	mg/kg dry	0.0046	0.1	08/24/07
Methylene Chloride	ND	mg/kg dry	0.0228	0.1	08/24/07
Naphthalene	ND	mg/kg dry	0.0046	4	08/24/07
n-Butylbenzene	ND	mg/kg dry	0.0046	100	08/24/07
n-Propylbenzene	ND	mg/kg dry	0.0046	100	08/24/07
sec-Butylbenzene	ND	mg/kg dry	0.0046	100	08/24/07
Styrene	ND	mg/kg dry	0.0046	3	08/24/07
tert-Butylbenzene	ND	mg/kg dry	0.0046	100	08/24/07
Tertiary-amyl methyl ether	ND	mg/kg dry	0.0046	1	08/24/07
Tetrachloroethene	ND	mg/kg dry	0.0046	1	08/24/07
Tetrahydrofuran	ND	mg/kg dry	0.0046	1	08/24/07
Toluene	ND	mg/kg dry	0.0046	30	08/24/07
trans-1,2-Dichloroethene	ND	mg/kg dry	0.0046	1	08/24/07
trans-1,3-Dichloropropene	ND	mg/kg dry	0.0046	0.01	08/24/07
Trichloroethene	ND	mg/kg dry	0.0046	0.3	08/24/07
Trichlorofluoromethane	ND	mg/kg dry	0.0046	1	08/24/07
Vinyl Chloride	ND	mg/kg dry	0.0091	0.9	08/24/07
Xylene O	ND	mg/kg dry	0.0046	400	08/24/07
Xylene P,M	ND	mg/kg dry	0.0091	400	08/24/07



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: L0712213-01  
 Date Sampled: 08/23/07 09:15  
 Percent Solids: 96  
 Initial Volume: 1  
 Final Volume: 1  
 Extraction Method: [CALC]

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-01  
 Sample Matrix: Soil  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

Xylenes (Total) ND mg/kg dry 0.0137 400 0 08/24/07

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	0.7 %	+	70-130
Surrogate: 4-Bromofluorobenzene	0.2 %	+	70-130
Surrogate: Dibromofluoromethane	0.8 %	+	70-130
Surrogate: Toluene-d8	0.1 %	+	70-130



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: L0712213-02  
 Date Sampled: 08/23/07 09:20  
 Percent Solids: 94  
 Initial Volume: 5.5  
 Final Volume: 10  
 Extraction Method: 5035

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-02  
 Sample Matrix: Soil  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

MA - S2GW1

Analyte	Results	Units	MRL	Limit	DF	Analyzed
1,1,1,2-Tetrachloroethane	ND	mg/kg dry	0.0048	0.1	1	08/24/07
1,1,1-Trichloroethane	ND	mg/kg dry	0.0048	30	1	08/24/07
1,1,2,2-Tetrachloroethane	ND	mg/kg dry	0.0048	0.005	1	08/24/07
1,1,2-Trichloroethane	ND	mg/kg dry	0.0048	0.1	1	08/24/07
1,1-Dichloroethane	ND	mg/kg dry	0.0048	0.4	1	08/24/07
1,1-Dichloroethene	ND	mg/kg dry	0.0048	3	1	08/24/07
1,1-Dichloropropene	ND	mg/kg dry	0.0048		1	08/24/07
1,2,3-Trichlorobenzene	ND	mg/kg dry	0.0048		1	08/24/07
1,2,3-Trichloropropane	ND	mg/kg dry	0.0048		1	08/24/07
1,2,4-Trichlorobenzene	ND	mg/kg dry	0.0048	2	1	08/24/07
1,2,4-Trimethylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
1,2-Dibromo-3-Chloropropane	ND	mg/kg dry	0.0048		1	08/24/07
1,2-Dibromoethane	ND	mg/kg dry	0.0048	0.1	1	08/24/07
1,2-Dichlorobenzene	ND	mg/kg dry	0.0048	9	1	08/24/07
1,2-Dichloroethane	ND	mg/kg dry	0.0048	0.1	1	08/24/07
1,2-Dichloropropane	ND	mg/kg dry	0.0048	0.1	1	08/24/07
1,3,5-Trimethylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
1,3-Dichlorobenzene	ND	mg/kg dry	0.0048	1	1	08/24/07
1,3-Dichloropropane	ND	mg/kg dry	0.0048		1	08/24/07
1,4-Dichlorobenzene	ND	mg/kg dry	0.0048	0.7	1	08/24/07
1,4-Dioxane - Screen	ND	mg/kg dry	0.242		1	08/24/07
2,2-Dichloropropane	ND	mg/kg dry	0.0048		1	08/24/07
2-Butanone	ND	mg/kg dry	0.0484	0.3	1	08/24/07
2-Chlorotoluene	ND	mg/kg dry	0.0048		1	08/24/07
2-Hexanone	ND	mg/kg dry	0.0484		1	08/24/07
4-Chlorotoluene	ND	mg/kg dry	0.0048		1	08/24/07
4-Isopropyltoluene	ND	mg/kg dry	0.0048	100	1	08/24/07
4-Methyl-2-Pentanone	ND	mg/kg dry	0.0484	0.4	1	08/24/07
Acetone	ND	mg/kg dry	0.0484	3	1	08/24/07
Benzene	ND	mg/kg dry	0.0048	2	1	08/24/07
Bromobenzene	ND	mg/kg dry	0.0048		1	08/24/07
Bromochloromethane	ND	mg/kg dry	0.0048		1	08/24/07
Bromodichloromethane	ND	mg/kg dry	0.0048	0.1	1	08/24/07
Bromoform	ND	mg/kg dry	0.0048	0.1	1	08/24/07
Bromomethane	ND	mg/kg dry	0.0097	10	1	08/24/07





# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: L0712213-02  
 Date Sampled: 08/23/07 09:20  
 Percent Solids: 94  
 Initial Volume: 5.5  
 Final Volume: 10  
 Extraction Method: 5035

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-02  
 Sample Matrix: Soil  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

Carbon Disulfide	ND	mg/kg dry	0.0048		1	08/24/07
Carbon Tetrachloride	ND	mg/kg dry	0.0048	10	1	08/24/07
Chlorobenzene	ND	mg/kg dry	0.0048	1	1	08/24/07
Chloroethane	ND	mg/kg dry	0.0097		1	08/24/07
Chloroform	ND	mg/kg dry	0.0048	0.1	1	08/24/07
Chloromethane	ND	mg/kg dry	0.0097		1	08/24/07
cis-1,2-Dichloroethene	ND	mg/kg dry	0.0048	0.3	1	08/24/07
cis-1,3-Dichloropropene	ND	mg/kg dry	0.0048	0.01	1	08/24/07
Dibromochloromethane	ND	mg/kg dry	0.0048	0.005	1	08/24/07
Dibromomethane	ND	mg/kg dry	0.0048		1	08/24/07
Dichlorodifluoromethane	ND	mg/kg dry	0.0097		1	08/24/07
Diethyl Ether	ND	mg/kg dry	0.0048		1	08/24/07
Di-isopropyl ether	ND	mg/kg dry	0.0048		1	08/24/07
Ethyl tertiary-butyl ether	ND	mg/kg dry	0.0048		1	08/24/07
Ethylbenzene	ND	mg/kg dry	0.0048	80	1	08/24/07
Hexachlorobutadiene	ND	mg/kg dry	0.0048	90	1	08/24/07
Isopropylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
Methyl tert-Butyl Ether	ND	mg/kg dry	0.0048	0.1	1	08/24/07
Methylene Chloride	ND	mg/kg dry	0.0242	0.1	1	08/24/07
Naphthalene	ND	mg/kg dry	0.0048	4	1	08/24/07
n-Butylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
n-Propylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
sec-Butylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
Styrene	ND	mg/kg dry	0.0048	3	1	08/24/07
tert-Butylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
Tertiary-amyl methyl ether	ND	mg/kg dry	0.0048		1	08/24/07
Tetrachloroethene	ND	mg/kg dry	0.0048	1	1	08/24/07
Tetrahydrofuran	ND	mg/kg dry	0.0048		1	08/24/07
Toluene	ND	mg/kg dry	0.0048	30	1	08/24/07
trans-1,2-Dichloroethene	ND	mg/kg dry	0.0048	1	1	08/24/07
trans-1,3-Dichloropropene	ND	mg/kg dry	0.0048	0.01	1	08/24/07
Trichloroethene	ND	mg/kg dry	0.0048	0.3	1	08/24/07
Trichlorofluoromethane	ND	mg/kg dry	0.0048		1	08/24/07
Vinyl Chloride	ND	mg/kg dry	0.0097	0.9	1	08/24/07
Xylene O	ND	mg/kg dry	0.0048	400	1	08/24/07
Xylene P,M	ND	mg/kg dry	0.0097	400	1	08/24/07



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
Client Project ID: Alpha Analytical Sampling  
Client Sample ID: L0712213-02  
Date Sampled: 08/23/07 09:20  
Percent Solids: 94  
Initial Volume: 1  
Final Volume: 1  
Extraction Method: [CALC]

ESS Laboratory Work Order: 0708357  
ESS Laboratory Sample ID: 0708357-02  
Sample Matrix: Soil  
Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

Xylenes (Total) ND mg/kg dry 0.0145 400 0 08/24/07

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	0.5 %	+	70-130
Surrogate: 4-Bromofluorobenzene	0.2 %	+	70-130
Surrogate: Dibromofluoromethane	0.8 %	+	70-130
Surrogate: Toluene-d8	0.08 %	+	70-130



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: L0712213-03  
 Date Sampled: 08/23/07 09:25  
 Percent Solids: 95  
 Initial Volume: 5.5  
 Final Volume: 10  
 Extraction Method: 5035

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-03  
 Sample Matrix: Soil  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

#### MA - S2GW1

Analyte	Results	Units	MRL	Limit	DF	Analyzed
1,1,1,2-Tetrachloroethane	ND	mg/kg dry	0.0048	0.1	1	08/24/07
1,1,1-Trichloroethane	ND	mg/kg dry	0.0048	30	1	08/24/07
1,1,2,2-Tetrachloroethane	ND	mg/kg dry	0.0048	0.005	1	08/24/07
1,1,2-Trichloroethane	ND	mg/kg dry	0.0048	0.1	1	08/24/07
1,1-Dichloroethane	ND	mg/kg dry	0.0048	0.4	1	08/24/07
1,1-Dichloroethene	ND	mg/kg dry	0.0048	3	1	08/24/07
1,1-Dichloropropene	ND	mg/kg dry	0.0048		1	08/24/07
1,2,3-Trichlorobenzene	ND	mg/kg dry	0.0048		1	08/24/07
1,2,3-Trichloropropane	ND	mg/kg dry	0.0048		1	08/24/07
1,2,4-Trichlorobenzene	ND	mg/kg dry	0.0048	2	1	08/24/07
1,2,4-Trimethylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
1,2-Dibromo-3-Chloropropane	ND	mg/kg dry	0.0048		1	08/24/07
1,2-Dibromoethane	ND	mg/kg dry	0.0048	0.1	1	08/24/07
1,2-Dichlorobenzene	ND	mg/kg dry	0.0048	9	1	08/24/07
1,2-Dichloroethane	ND	mg/kg dry	0.0048	0.1	1	08/24/07
1,2-Dichloropropane	ND	mg/kg dry	0.0048	0.1	1	08/24/07
1,3,5-Trimethylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
1,3-Dichlorobenzene	ND	mg/kg dry	0.0048	1	1	08/24/07
1,3-Dichloropropane	ND	mg/kg dry	0.0048		1	08/24/07
1,4-Dichlorobenzene	ND	mg/kg dry	0.0048	0.7	1	08/24/07
1,4-Dioxane - Screen	ND	mg/kg dry	0.239		1	08/24/07
2,2-Dichloropropane	ND	mg/kg dry	0.0048		1	08/24/07
2-Butanone	ND	mg/kg dry	0.0478	0.3	1	08/24/07
2-Chlorotoluene	ND	mg/kg dry	0.0048		1	08/24/07
2-Hexanone	ND	mg/kg dry	0.0478		1	08/24/07
4-Chlorotoluene	ND	mg/kg dry	0.0048		1	08/24/07
4-Isopropyltoluene	ND	mg/kg dry	0.0048	100	1	08/24/07
4-Methyl-2-Pentanone	ND	mg/kg dry	0.0478	0.4	1	08/24/07
Acetone	ND	mg/kg dry	0.0478	3	1	08/24/07
Benzene	ND	mg/kg dry	0.0048	2	1	08/24/07
Bromobenzene	ND	mg/kg dry	0.0048		1	08/24/07
Bromochloromethane	ND	mg/kg dry	0.0048		1	08/24/07
Bromodichloromethane	ND	mg/kg dry	0.0048	0.1	1	08/24/07
Bromoform	ND	mg/kg dry	0.0048	0.1	1	08/24/07
Bromomethane	ND	mg/kg dry	0.0096	10	1	08/24/07



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: L0712213-03  
 Date Sampled: 08/23/07 09:25  
 Percent Solids: 95  
 Initial Volume: 5.5  
 Final Volume: 10  
 Extraction Method: 5035

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-03  
 Sample Matrix: Soil  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

Carbon Disulfide	ND	mg/kg dry	0.0048		1	08/24/07
Carbon Tetrachloride	ND	mg/kg dry	0.0048	10	1	08/24/07
Chlorobenzene	ND	mg/kg dry	0.0048	1	1	08/24/07
Chloroethane	ND	mg/kg dry	0.0096		1	08/24/07
Chloroform	ND	mg/kg dry	0.0048	0.1	1	08/24/07
Chloromethane	ND	mg/kg dry	0.0096		1	08/24/07
cis-1,2-Dichloroethene	ND	mg/kg dry	0.0048	0.3	1	08/24/07
cis-1,3-Dichloropropene	ND	mg/kg dry	0.0048	0.01	1	08/24/07
Dibromochloromethane	ND	mg/kg dry	0.0048	0.005	1	08/24/07
Dibromomethane	ND	mg/kg dry	0.0048		1	08/24/07
Dichlorodifluoromethane	ND	mg/kg dry	0.0096		1	08/24/07
Diethyl Ether	ND	mg/kg dry	0.0048		1	08/24/07
Di-isopropyl ether	ND	mg/kg dry	0.0048		1	08/24/07
Ethyl tertiary-butyl ether	ND	mg/kg dry	0.0048		1	08/24/07
Ethylbenzene	ND	mg/kg dry	0.0048	80	1	08/24/07
Hexachlorobutadiene	ND	mg/kg dry	0.0048	90	1	08/24/07
Isopropylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
Methyl tert-Butyl Ether	ND	mg/kg dry	0.0048	0.1	1	08/24/07
Methylene Chloride	ND	mg/kg dry	0.0239	0.1	1	08/24/07
Naphthalene	ND	mg/kg dry	0.0048	4	1	08/24/07
n-Butylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
n-Propylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
sec-Butylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
Styrene	ND	mg/kg dry	0.0048	3	1	08/24/07
tert-Butylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
Tertiary-amyl methyl ether	ND	mg/kg dry	0.0048		1	08/24/07
Tetrachloroethene	ND	mg/kg dry	0.0048	1	1	08/24/07
Tetrahydrofuran	ND	mg/kg dry	0.0048		1	08/24/07
Toluene	ND	mg/kg dry	0.0048	30	1	08/24/07
trans-1,2-Dichloroethene	ND	mg/kg dry	0.0048	1	1	08/24/07
trans-1,3-Dichloropropene	ND	mg/kg dry	0.0048	0.01	1	08/24/07
Trichloroethene	ND	mg/kg dry	0.0048	0.3	1	08/24/07
Trichlorofluoromethane	ND	mg/kg dry	0.0048		1	08/24/07
Vinyl Chloride	ND	mg/kg dry	0.0096	0.9	1	08/24/07
Xylene O	ND	mg/kg dry	0.0048	400	1	08/24/07
Xylene P,M	ND	mg/kg dry	0.0096	400	1	08/24/07



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
Client Project ID: Alpha Analytical Sampling  
Client Sample ID: L0712213-03  
Date Sampled: 08/23/07 09:25  
Percent Solids: 95  
Initial Volume: 1  
Final Volume: 1  
Extraction Method: [CALC]

ESS Laboratory Work Order: 0708357  
ESS Laboratory Sample ID: 0708357-03  
Sample Matrix: Soil  
Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

Xylenes (Total) ND mg/kg dry 0.0144 400 0 08/24/07

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	0.3 %	+	70-130
Surrogate: 4-Bromofluorobenzene	0.2 %	+	70-130
Surrogate: Dibromofluoromethane	0.7 %	+	70-130
Surrogate: Toluene-d8	0.1 %	+	70-130



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: L0712213-04  
 Date Sampled: 08/23/07 09:30  
 Percent Solids: 93  
 Initial Volume: 5.8  
 Final Volume: 10  
 Extraction Method: 5035

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-04  
 Sample Matrix: Soil  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

MA - S2GW1

Analyte	Results	Units	MRL	Limit	DF	Analyzed
1,1,1,2-Tetrachloroethane	ND	mg/kg dry	0.0046	0.1	1	08/24/07
1,1,1-Trichloroethane	ND	mg/kg dry	0.0046	30	1	08/24/07
1,1,2,2-Tetrachloroethane	ND	mg/kg dry	0.0046	0.005	1	08/24/07
1,1,2-Trichloroethane	ND	mg/kg dry	0.0046	0.1	1	08/24/07
1,1-Dichloroethane	ND	mg/kg dry	0.0046	0.4	1	08/24/07
1,1-Dichloroethene	ND	mg/kg dry	0.0046	3	1	08/24/07
1,1-Dichloropropene	ND	mg/kg dry	0.0046		1	08/24/07
1,2,3-Trichlorobenzene	ND	mg/kg dry	0.0046		1	08/24/07
1,2,3-Trichloropropane	ND	mg/kg dry	0.0046		1	08/24/07
1,2,4-Trichlorobenzene	ND	mg/kg dry	0.0046	2	1	08/24/07
1,2,4-Trimethylbenzene	ND	mg/kg dry	0.0046	100	1	08/24/07
1,2-Dibromo-3-Chloropropane	ND	mg/kg dry	0.0046		1	08/24/07
1,2-Dibromoethane	ND	mg/kg dry	0.0046	0.1	1	08/24/07
1,2-Dichlorobenzene	ND	mg/kg dry	0.0046	9	1	08/24/07
1,2-Dichloroethane	ND	mg/kg dry	0.0046	0.1	1	08/24/07
1,2-Dichloropropane	ND	mg/kg dry	0.0046	0.1	1	08/24/07
1,3,5-Trimethylbenzene	ND	mg/kg dry	0.0046	100	1	08/24/07
1,3-Dichlorobenzene	ND	mg/kg dry	0.0046	1	1	08/24/07
1,3-Dichloropropane	ND	mg/kg dry	0.0046		1	08/24/07
1,4-Dichlorobenzene	ND	mg/kg dry	0.0046	0.7	1	08/24/07
1,4-Dioxane - Screen	ND	mg/kg dry	0.232		1	08/24/07
2,2-Dichloropropane	ND	mg/kg dry	0.0046		1	08/24/07
2-Butanone	ND	mg/kg dry	0.0463	0.3	1	08/24/07
2-Chlorotoluene	ND	mg/kg dry	0.0046		1	08/24/07
2-Hexanone	ND	mg/kg dry	0.0463		1	08/24/07
4-Chlorotoluene	ND	mg/kg dry	0.0046		1	08/24/07
4-Isopropyltoluene	ND	mg/kg dry	0.0046	100	1	08/24/07
4-Methyl-2-Pentanone	ND	mg/kg dry	0.0463	0.4	1	08/24/07
Acetone	ND	mg/kg dry	0.0463	3	1	08/24/07
Benzene	ND	mg/kg dry	0.0046	2	1	08/24/07
Bromobenzene	ND	mg/kg dry	0.0046		1	08/24/07
Bromochloromethane	ND	mg/kg dry	0.0046		1	08/24/07
Bromodichloromethane	ND	mg/kg dry	0.0046	0.1	1	08/24/07
Bromoform	ND	mg/kg dry	0.0046	0.1	1	08/24/07
Bromomethane	ND	mg/kg dry	0.0093	10	1	08/24/07



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: L0712213-04  
 Date Sampled: 08/23/07 09:30  
 Percent Solids: 93  
 Initial Volume: 5.8  
 Final Volume: 10  
 Extraction Method: 5035

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-04  
 Sample Matrix: Soil  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

Carbon Disulfide	ND	mg/kg dry	0.0046		1	08/24/07
Carbon Tetrachloride	ND	mg/kg dry	0.0046	10	1	08/24/07
Chlorobenzene	ND	mg/kg dry	0.0046	1	1	08/24/07
Chloroethane	ND	mg/kg dry	0.0093		1	08/24/07
Chloroform	ND	mg/kg dry	0.0046	0.1	1	08/24/07
Chloromethane	ND	mg/kg dry	0.0093		1	08/24/07
cis-1,2-Dichloroethene	ND	mg/kg dry	0.0046	0.3	1	08/24/07
cis-1,3-Dichloropropene	ND	mg/kg dry	0.0046	0.01	1	08/24/07
Dibromochloromethane	ND	mg/kg dry	0.0046	0.005	1	08/24/07
Dibromomethane	ND	mg/kg dry	0.0046		1	08/24/07
Dichlorodifluoromethane	ND	mg/kg dry	0.0093		1	08/24/07
Diethyl Ether	ND	mg/kg dry	0.0046		1	08/24/07
Di-isopropyl ether	ND	mg/kg dry	0.0046		1	08/24/07
Ethyl tertiary-butyl ether	ND	mg/kg dry	0.0046		1	08/24/07
Ethylbenzene	ND	mg/kg dry	0.0046	80	1	08/24/07
Hexachlorobutadiene	ND	mg/kg dry	0.0046	90	1	08/24/07
Isopropylbenzene	ND	mg/kg dry	0.0046	100	1	08/24/07
Methyl tert-Butyl Ether	ND	mg/kg dry	0.0046	0.1	1	08/24/07
Methylene Chloride	ND	mg/kg dry	0.0232	0.1	1	08/24/07
Naphthalene	ND	mg/kg dry	0.0046	4	1	08/24/07
n-Butylbenzene	ND	mg/kg dry	0.0046	100	1	08/24/07
n-Propylbenzene	ND	mg/kg dry	0.0046	100	1	08/24/07
sec-Butylbenzene	ND	mg/kg dry	0.0046	100	1	08/24/07
Styrene	ND	mg/kg dry	0.0046	3	1	08/24/07
tert-Butylbenzene	ND	mg/kg dry	0.0046	100	1	08/24/07
Tertiary-amyl methyl ether	ND	mg/kg dry	0.0046		1	08/24/07
Tetrachloroethene	ND	mg/kg dry	0.0046	1	1	08/24/07
Tetrahydrofuran	ND	mg/kg dry	0.0046		1	08/24/07
Toluene	ND	mg/kg dry	0.0046	30	1	08/24/07
trans-1,2-Dichloroethene	ND	mg/kg dry	0.0046	1	1	08/24/07
trans-1,3-Dichloropropene	ND	mg/kg dry	0.0046	0.01	1	08/24/07
Trichloroethene	ND	mg/kg dry	0.0046	0.3	1	08/24/07
Trichlorofluoromethane	ND	mg/kg dry	0.0046		1	08/24/07
Vinyl Chloride	ND	mg/kg dry	0.0093	0.9	1	08/24/07
Xylene O	ND	mg/kg dry	0.0046	400	1	08/24/07
Xylene P,M	ND	mg/kg dry	0.0093	400	1	08/24/07



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
Client Project ID: Alpha Analytical Sampling  
Client Sample ID: L0712213-04  
Date Sampled: 08/23/07 09:30  
Percent Solids: 93  
Initial Volume: 1  
Final Volume: 1  
Extraction Method: [CALC]

ESS Laboratory Work Order: 0708357  
ESS Laboratory Sample ID: 0708357-04  
Sample Matrix: Soil  
Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

Xylenes (Total) ND mg/kg dry 0.0139 400 0 08/24/07

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	0.3 %	+	70-130
Surrogate: 4-Bromofluorobenzene	0.1 %	+	70-130
Surrogate: Dibromofluoromethane	0.6 %	+	70-130
Surrogate: Toluene-d8	0.04 %	+	70-130





# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: L0712213-05  
 Date Sampled: 08/23/07 09:35  
 Percent Solids: 90  
 Initial Volume: 5.8  
 Final Volume: 10  
 Extraction Method: 5035

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-05  
 Sample Matrix: Soil  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

MA - S2GW1

Analyte	Results	Units	MRL	Limit	DF	Analyzed
1,1,1,2-Tetrachloroethane	ND	mg/kg dry	0.0048	0.1	1	08/24/07
1,1,1-Trichloroethane	ND	mg/kg dry	0.0048	30	1	08/24/07
1,1,2,2-Tetrachloroethane	ND	mg/kg dry	0.0048	0.005	1	08/24/07
1,1,2-Trichloroethane	ND	mg/kg dry	0.0048	0.1	1	08/24/07
1,1-Dichloroethane	ND	mg/kg dry	0.0048	0.4	1	08/24/07
1,1-Dichloroethene	ND	mg/kg dry	0.0048	3	1	08/24/07
1,1-Dichloropropene	ND	mg/kg dry	0.0048		1	08/24/07
1,2,3-Trichlorobenzene	ND	mg/kg dry	0.0048		1	08/24/07
1,2,3-Trichloropropane	ND	mg/kg dry	0.0048		1	08/24/07
1,2,4-Trichlorobenzene	ND	mg/kg dry	0.0048	2	1	08/24/07
1,2,4-Trimethylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
1,2-Dibromo-3-Chloropropane	ND	mg/kg dry	0.0048		1	08/24/07
1,2-Dibromoethane	ND	mg/kg dry	0.0048	0.1	1	08/24/07
1,2-Dichlorobenzene	ND	mg/kg dry	0.0048	9	1	08/24/07
1,2-Dichloroethane	ND	mg/kg dry	0.0048	0.1	1	08/24/07
1,2-Dichloropropane	ND	mg/kg dry	0.0048	0.1	1	08/24/07
1,3,5-Trimethylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
1,3-Dichlorobenzene	ND	mg/kg dry	0.0048	1	1	08/24/07
1,3-Dichloropropane	ND	mg/kg dry	0.0048		1	08/24/07
1,4-Dichlorobenzene	ND	mg/kg dry	0.0048	0.7	1	08/24/07
1,4-Dioxane - Screen	ND	mg/kg dry	0.239		1	08/24/07
2,2-Dichloropropane	ND	mg/kg dry	0.0048		1	08/24/07
2-Butanone	ND	mg/kg dry	0.0479	0.3	1	08/24/07
2-Chlorotoluene	ND	mg/kg dry	0.0048		1	08/24/07
2-Hexanone	ND	mg/kg dry	0.0479		1	08/24/07
4-Chlorotoluene	ND	mg/kg dry	0.0048		1	08/24/07
4-Isopropyltoluene	ND	mg/kg dry	0.0048	100	1	08/24/07
4-Methyl-2-Pentanone	ND	mg/kg dry	0.0479	0.4	1	08/24/07
Acetone	ND	mg/kg dry	0.0479	3	1	08/24/07
Benzene	ND	mg/kg dry	0.0048	2	1	08/24/07
Bromobenzene	ND	mg/kg dry	0.0048		1	08/24/07
Bromochloromethane	ND	mg/kg dry	0.0048		1	08/24/07
Bromodichloromethane	ND	mg/kg dry	0.0048	0.1	1	08/24/07
Bromoform	ND	mg/kg dry	0.0048	0.1	1	08/24/07
Bromomethane	ND	mg/kg dry	0.0096	10	1	08/24/07



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: L0712213-05  
 Date Sampled: 08/23/07 09:35  
 Percent Solids: 90  
 Initial Volume: 5.8  
 Final Volume: 10  
 Extraction Method: 5035

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-05  
 Sample Matrix: Soil  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

Carbon Disulfide	ND	mg/kg dry	0.0048		1	08/24/07
Carbon Tetrachloride	ND	mg/kg dry	0.0048	10	1	08/24/07
Chlorobenzene	ND	mg/kg dry	0.0048	1	1	08/24/07
Chloroethane	ND	mg/kg dry	0.0096		1	08/24/07
Chloroform	ND	mg/kg dry	0.0048	0.1	1	08/24/07
Chloromethane	ND	mg/kg dry	0.0096		1	08/24/07
cis-1,2-Dichloroethene	ND	mg/kg dry	0.0048	0.3	1	08/24/07
cis-1,3-Dichloropropene	ND	mg/kg dry	0.0048	0.01	1	08/24/07
Dibromochloromethane	ND	mg/kg dry	0.0048	0.005	1	08/24/07
Dibromomethane	ND	mg/kg dry	0.0048		1	08/24/07
Dichlorodifluoromethane	ND	mg/kg dry	0.0096		1	08/24/07
Diethyl Ether	ND	mg/kg dry	0.0048		1	08/24/07
Di-isopropyl ether	ND	mg/kg dry	0.0048		1	08/24/07
Ethyl tertiary-butyl ether	ND	mg/kg dry	0.0048		1	08/24/07
Ethylbenzene	ND	mg/kg dry	0.0048	80	1	08/24/07
Hexachlorobutadiene	ND	mg/kg dry	0.0048	90	1	08/24/07
Isopropylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
Methyl tert-Butyl Ether	ND	mg/kg dry	0.0048	0.1	1	08/24/07
Methylene Chloride	ND	mg/kg dry	0.0239	0.1	1	08/24/07
Naphthalene	ND	mg/kg dry	0.0048	4	1	08/24/07
n-Butylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
n-Propylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
sec-Butylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
Styrene	ND	mg/kg dry	0.0048	3	1	08/24/07
tert-Butylbenzene	ND	mg/kg dry	0.0048	100	1	08/24/07
Tertiary-amyl methyl ether	ND	mg/kg dry	0.0048		1	08/24/07
Tetrachloroethene	ND	mg/kg dry	0.0048	1	1	08/24/07
Tetrahydrofuran	ND	mg/kg dry	0.0048		1	08/24/07
Toluene	ND	mg/kg dry	0.0048	30	1	08/24/07
trans-1,2-Dichloroethene	ND	mg/kg dry	0.0048	1	1	08/24/07
trans-1,3-Dichloropropene	ND	mg/kg dry	0.0048	0.01	1	08/24/07
Trichloroethene	ND	mg/kg dry	0.0048	0.3	1	08/24/07
Trichlorofluoromethane	ND	mg/kg dry	0.0048		1	08/24/07
Vinyl Chloride	ND	mg/kg dry	0.0096	0.9	1	08/24/07
Xylene O	ND	mg/kg dry	0.0048	400	1	08/24/07
Xylene P,M	ND	mg/kg dry	0.0096	400	1	08/24/07



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: L0712213-05  
 Date Sampled: 08/23/07 09:35  
 Percent Solids: 90  
 Initial Volume: 1  
 Final Volume: 1  
 Extraction Method: [CALC]

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-05  
 Sample Matrix: Soil  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

Xylenes (Total) ND mg/kg dry 0.0144 400 0 08/24/07

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	0.6 %	+	70-130
Surrogate: 4-Bromofluorobenzene	0.2 %	+	70-130
Surrogate: Dibromofluoromethane	0.6 %	+	70-130
Surrogate: Toluene-d8	0.08 %	+	70-130



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: L0712213-06  
 Date Sampled: 08/23/07 09:40  
 Percent Solids: 89  
 Initial Volume: 5.6  
 Final Volume: 10  
 Extraction Method: 5035

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-06  
 Sample Matrix: Soil  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

MA - S2GW1

Analyte	Results	Units	MRL	Limit	DF	Analyzed
1,1,1,2-Tetrachloroethane	ND	mg/kg dry	0.0050	0.1	1	08/24/07
1,1,1-Trichloroethane	ND	mg/kg dry	0.0050	30	1	08/24/07
1,1,2,2-Tetrachloroethane	ND	mg/kg dry	0.0050	0.005	1	08/24/07
1,1,2-Trichloroethane	ND	mg/kg dry	0.0050	0.1	1	08/24/07
1,1-Dichloroethane	ND	mg/kg dry	0.0050	0.4	1	08/24/07
1,1-Dichloroethene	ND	mg/kg dry	0.0050	3	1	08/24/07
1,1-Dichloropropene	ND	mg/kg dry	0.0050		1	08/24/07
1,2,3-Trichlorobenzene	ND	mg/kg dry	0.0050		1	08/24/07
1,2,3-Trichloropropane	ND	mg/kg dry	0.0050		1	08/24/07
1,2,4-Trichlorobenzene	ND	mg/kg dry	0.0050	2	1	08/24/07
1,2,4-Trimethylbenzene	ND	mg/kg dry	0.0050	100	1	08/24/07
1,2-Dibromo-3-Chloropropane	ND	mg/kg dry	0.0050		1	08/24/07
1,2-Dibromoethane	ND	mg/kg dry	0.0050	0.1	1	08/24/07
1,2-Dichlorobenzene	ND	mg/kg dry	0.0050	9	1	08/24/07
1,2-Dichloroethane	ND	mg/kg dry	0.0050	0.1	1	08/24/07
1,2-Dichloropropane	ND	mg/kg dry	0.0050	0.1	1	08/24/07
1,3,5-Trimethylbenzene	ND	mg/kg dry	0.0050	100	1	08/24/07
1,3-Dichlorobenzene	ND	mg/kg dry	0.0050	1	1	08/24/07
1,3-Dichloropropane	ND	mg/kg dry	0.0050		1	08/24/07
1,4-Dichlorobenzene	ND	mg/kg dry	0.0050	0.7	1	08/24/07
1,4-Dioxane - Screen	ND	mg/kg dry	0.251		1	08/24/07
2,2-Dichloropropane	ND	mg/kg dry	0.0050		1	08/24/07
2-Butanone	ND	mg/kg dry	0.0502	0.3	1	08/24/07
2-Chlorotoluene	ND	mg/kg dry	0.0050		1	08/24/07
2-Hexanone	ND	mg/kg dry	0.0502		1	08/24/07
4-Chlorotoluene	ND	mg/kg dry	0.0050		1	08/24/07
4-Isopropyltoluene	ND	mg/kg dry	0.0050	100	1	08/24/07
4-Methyl-2-Pentanone	ND	mg/kg dry	0.0502	0.4	1	08/24/07
Acetone	ND	mg/kg dry	0.0502	3	1	08/24/07
Benzene	ND	mg/kg dry	0.0050	2	1	08/24/07
Bromobenzene	ND	mg/kg dry	0.0050		1	08/24/07
Bromochloromethane	ND	mg/kg dry	0.0050		1	08/24/07
Bromodichloromethane	ND	mg/kg dry	0.0050	0.1	1	08/24/07
Bromoform	ND	mg/kg dry	0.0050	0.1	1	08/24/07
Bromomethane	ND	mg/kg dry	0.0100	10	1	08/24/07



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: L0712213-06  
 Date Sampled: 08/23/07 09:40  
 Percent Solids: 89  
 Initial Volume: 5.6  
 Final Volume: 10  
 Extraction Method: 5035

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-06  
 Sample Matrix: Soil  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

Carbon Disulfide	ND	mg/kg dry	0.0050		1	08/24/07
Carbon Tetrachloride	ND	mg/kg dry	0.0050	10	1	08/24/07
Chlorobenzene	ND	mg/kg dry	0.0050	1	1	08/24/07
Chloroethane	ND	mg/kg dry	0.0100		1	08/24/07
Chloroform	ND	mg/kg dry	0.0050	0.1	1	08/24/07
Chloromethane	ND	mg/kg dry	0.0100		1	08/24/07
cis-1,2-Dichloroethene	ND	mg/kg dry	0.0050	0.3	1	08/24/07
cis-1,3-Dichloropropene	ND	mg/kg dry	0.0050	0.01	1	08/24/07
Dibromochloromethane	ND	mg/kg dry	0.0050	0.005	1	08/24/07
Dibromomethane	ND	mg/kg dry	0.0050		1	08/24/07
Dichlorodifluoromethane	ND	mg/kg dry	0.0100		1	08/24/07
Diethyl Ether	ND	mg/kg dry	0.0050		1	08/24/07
Di-isopropyl ether	ND	mg/kg dry	0.0050		1	08/24/07
Ethyl tertiary-butyl ether	ND	mg/kg dry	0.0050		1	08/24/07
Ethylbenzene	ND	mg/kg dry	0.0050	80	1	08/24/07
Hexachlorobutadiene	ND	mg/kg dry	0.0050	90	1	08/24/07
Isopropylbenzene	ND	mg/kg dry	0.0050	100	1	08/24/07
Methyl tert-Butyl Ether	ND	mg/kg dry	0.0050	0.1	1	08/24/07
Methylene Chloride	ND	mg/kg dry	0.0251	0.1	1	08/24/07
Naphthalene	ND	mg/kg dry	0.0050	4	1	08/24/07
n-Butylbenzene	ND	mg/kg dry	0.0050	100	1	08/24/07
n-Propylbenzene	ND	mg/kg dry	0.0050	100	1	08/24/07
sec-Butylbenzene	ND	mg/kg dry	0.0050	100	1	08/24/07
Styrene	ND	mg/kg dry	0.0050	3	1	08/24/07
tert-Butylbenzene	ND	mg/kg dry	0.0050	100	1	08/24/07
Tertiary-amyl methyl ether	ND	mg/kg dry	0.0050		1	08/24/07
Tetrachloroethene	ND	mg/kg dry	0.0050	1	1	08/24/07
Tetrahydrofuran	ND	mg/kg dry	0.0050		1	08/24/07
Toluene	ND	mg/kg dry	0.0050	30	1	08/24/07
trans-1,2-Dichloroethene	ND	mg/kg dry	0.0050	1	1	08/24/07
trans-1,3-Dichloropropene	ND	mg/kg dry	0.0050	0.01	1	08/24/07
Trichloroethene	ND	mg/kg dry	0.0050	0.3	1	08/24/07
Trichlorofluoromethane	ND	mg/kg dry	0.0050		1	08/24/07
Vinyl Chloride	ND	mg/kg dry	0.0100	0.9	1	08/24/07
Xylene O	ND	mg/kg dry	0.0050	400	1	08/24/07
Xylene P,M	ND	mg/kg dry	0.0100	400	1	08/24/07



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: L0712213-06  
 Date Sampled: 08/23/07 09:40  
 Percent Solids: 89  
 Initial Volume: 1  
 Final Volume: 1  
 Extraction Method: [CALC]

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-06  
 Sample Matrix: Soil  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

Xylenes (Total) ND mg/kg dry 0.0150 400 0 08/24/07

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	%	+	70-130
Surrogate: 4-Bromofluorobenzene	%	+	70-130
Surrogate: Dibromofluoromethane	%	+	70-130
Surrogate: Toluene-d8	%	+	70-130



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: L0712213-07  
 Date Sampled: 08/23/07 00:00  
 Percent Solids: 96  
 Initial Volume: 5.5  
 Final Volume: 10  
 Extraction Method: 5035

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-07  
 Sample Matrix: Soil  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

MA - S2GW1

Analyte	Results	Units	MRL	Limit	DF	Analyzed
1,1,1,2-Tetrachloroethane	ND	mg/kg dry	0.0047	0.1	1	08/24/07
1,1,1-Trichloroethane	ND	mg/kg dry	0.0047	30	1	08/24/07
1,1,2,2-Tetrachloroethane	ND	mg/kg dry	0.0047	0.005	1	08/24/07
1,1,2-Trichloroethane	ND	mg/kg dry	0.0047	0.1	1	08/24/07
1,1-Dichloroethane	ND	mg/kg dry	0.0047	0.4	1	08/24/07
1,1-Dichloroethene	ND	mg/kg dry	0.0047	3	1	08/24/07
1,1-Dichloropropene	ND	mg/kg dry	0.0047		1	08/24/07
1,2,3-Trichlorobenzene	ND	mg/kg dry	0.0047		1	08/24/07
1,2,3-Trichloropropane	ND	mg/kg dry	0.0047		1	08/24/07
1,2,4-Trichlorobenzene	ND	mg/kg dry	0.0047	2	1	08/24/07
1,2,4-Trimethylbenzene	ND	mg/kg dry	0.0047	100	1	08/24/07
1,2-Dibromo-3-Chloropropane	ND	mg/kg dry	0.0047		1	08/24/07
1,2-Dibromoethane	ND	mg/kg dry	0.0047	0.1	1	08/24/07
1,2-Dichlorobenzene	ND	mg/kg dry	0.0047	9	1	08/24/07
1,2-Dichloroethane	ND	mg/kg dry	0.0047	0.1	1	08/24/07
1,2-Dichloropropane	ND	mg/kg dry	0.0047	0.1	1	08/24/07
1,3,5-Trimethylbenzene	ND	mg/kg dry	0.0047	100	1	08/24/07
1,3-Dichlorobenzene	ND	mg/kg dry	0.0047	1	1	08/24/07
1,3-Dichloropropane	ND	mg/kg dry	0.0047		1	08/24/07
1,4-Dichlorobenzene	ND	mg/kg dry	0.0047	0.7	1	08/24/07
1,4-Dioxane - Screen	ND	mg/kg dry	0.237		1	08/24/07
2,2-Dichloropropane	ND	mg/kg dry	0.0047		1	08/24/07
2-Butanone	ND	mg/kg dry	0.0473	0.3	1	08/24/07
2-Chlorotoluene	ND	mg/kg dry	0.0047		1	08/24/07
2-Hexanone	ND	mg/kg dry	0.0473		1	08/24/07
4-Chlorotoluene	ND	mg/kg dry	0.0047		1	08/24/07
4-Isopropyltoluene	ND	mg/kg dry	0.0047	100	1	08/24/07
4-Methyl-2-Pentanone	ND	mg/kg dry	0.0473	0.4	1	08/24/07
Acetone	ND	mg/kg dry	0.0473	3	1	08/24/07
Benzene	ND	mg/kg dry	0.0047	2	1	08/24/07
Bromobenzene	ND	mg/kg dry	0.0047		1	08/24/07
Bromochloromethane	ND	mg/kg dry	0.0047		1	08/24/07
Bromodichloromethane	ND	mg/kg dry	0.0047	0.1	1	08/24/07
Bromoform	ND	mg/kg dry	0.0047	0.1	1	08/24/07
Bromomethane	ND	mg/kg dry	0.0095	10	1	08/24/07



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: L0712213-07  
 Date Sampled: 08/23/07 00:00  
 Percent Solids: 96  
 Initial Volume: 5.5  
 Final Volume: 10  
 Extraction Method: 5035

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-07  
 Sample Matrix: Soil  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

Carbon Disulfide	ND	mg/kg dry	0.0047	1	08/24/07
Carbon Tetrachloride	ND	mg/kg dry	0.0047	10	08/24/07
Chlorobenzene	ND	mg/kg dry	0.0047	1	08/24/07
Chloroethane	ND	mg/kg dry	0.0095	1	08/24/07
Chloroform	ND	mg/kg dry	0.0047	0.1	08/24/07
Chloromethane	ND	mg/kg dry	0.0095	1	08/24/07
cis-1,2-Dichloroethene	ND	mg/kg dry	0.0047	0.3	08/24/07
cis-1,3-Dichloropropene	ND	mg/kg dry	0.0047	0.01	08/24/07
Dibromochloromethane	ND	mg/kg dry	0.0047	0.005	08/24/07
Dibromomethane	ND	mg/kg dry	0.0047	1	08/24/07
Dichlorodifluoromethane	ND	mg/kg dry	0.0095	1	08/24/07
Diethyl Ether	ND	mg/kg dry	0.0047	1	08/24/07
Di-isopropyl ether	ND	mg/kg dry	0.0047	1	08/24/07
Ethyl tertiary-butyl ether	ND	mg/kg dry	0.0047	1	08/24/07
Ethylbenzene	ND	mg/kg dry	0.0047	80	08/24/07
Hexachlorobutadiene	ND	mg/kg dry	0.0047	90	08/24/07
Isopropylbenzene	ND	mg/kg dry	0.0047	100	08/24/07
Methyl tert-Butyl Ether	ND	mg/kg dry	0.0047	0.1	08/24/07
Methylene Chloride	ND	mg/kg dry	0.0237	0.1	08/24/07
Naphthalene	ND	mg/kg dry	0.0047	4	08/24/07
n-Butylbenzene	ND	mg/kg dry	0.0047	100	08/24/07
n-Propylbenzene	ND	mg/kg dry	0.0047	100	08/24/07
sec-Butylbenzene	ND	mg/kg dry	0.0047	100	08/24/07
Styrene	ND	mg/kg dry	0.0047	3	08/24/07
tert-Butylbenzene	ND	mg/kg dry	0.0047	100	08/24/07
Tertiary-amyl methyl ether	ND	mg/kg dry	0.0047	1	08/24/07
Tetrachloroethene	ND	mg/kg dry	0.0047	1	08/24/07
Tetrahydrofuran	ND	mg/kg dry	0.0047	1	08/24/07
Toluene	ND	mg/kg dry	0.0047	30	08/24/07
trans-1,2-Dichloroethene	ND	mg/kg dry	0.0047	1	08/24/07
trans-1,3-Dichloropropene	ND	mg/kg dry	0.0047	0.01	08/24/07
Trichloroethene	ND	mg/kg dry	0.0047	0.3	08/24/07
Trichlorofluoromethane	ND	mg/kg dry	0.0047	1	08/24/07
Vinyl Chloride	ND	mg/kg dry	0.0095	0.9	08/24/07
Xylene O	ND	mg/kg dry	0.0047	400	08/24/07
Xylene P,M	ND	mg/kg dry	0.0095	400	08/24/07





# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: L0712213-07  
 Date Sampled: 08/23/07 00:00  
 Percent Solids: 96  
 Initial Volume: 1  
 Final Volume: 1  
 Extraction Method: [CALC]

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-07  
 Sample Matrix: Soil  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

Xylenes (Total) ND mg/kg dry 0.0142 400 0 08/24/07

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	%	+	70-130
Surrogate: 4-Bromofluorobenzene	0.2 %	+	70-130
Surrogate: Dibromofluoromethane	0.6 %	+	70-130
Surrogate: Toluene-d8	0.04 %	+	70-130



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling  
 Client Sample ID: Trip Blank L0712213-08  
 Date Sampled: 08/22/07 00:00  
 Percent Solids: N/A  
 Initial Volume: 5  
 Final Volume: 10  
 Extraction Method: 5035

ESS Laboratory Work Order: 0708357  
 ESS Laboratory Sample ID: 0708357-08  
 Sample Matrix: Solid  
 Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

MA - S2GW1

Analyte	Results	Units	MRL	Limit	DF	Analyzed
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.005	0.1	1	08/24/07
1,1,1-Trichloroethane	ND	mg/kg	0.005	30	1	08/24/07
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.005	0.005	1	08/24/07
1,1,2-Trichloroethane	ND	mg/kg	0.005	0.1	1	08/24/07
1,1-Dichloroethane	ND	mg/kg	0.005	0.4	1	08/24/07
1,1-Dichloroethene	ND	mg/kg	0.005	3	1	08/24/07
1,1-Dichloropropene	ND	mg/kg	0.005		1	08/24/07
1,2,3-Trichlorobenzene	ND	mg/kg	0.005		1	08/24/07
1,2,3-Trichloropropane	ND	mg/kg	0.005		1	08/24/07
1,2,4-Trichlorobenzene	ND	mg/kg	0.005	2	1	08/24/07
1,2,4-Trimethylbenzene	ND	mg/kg	0.005	100	1	08/24/07
1,2-Dibromo-3-Chloropropane	ND	mg/kg	0.005		1	08/24/07
1,2-Dibromoethane	ND	mg/kg	0.005	0.1	1	08/24/07
1,2-Dichlorobenzene	ND	mg/kg	0.005	9	1	08/24/07
1,2-Dichloroethane	ND	mg/kg	0.005	0.1	1	08/24/07
1,2-Dichloropropane	ND	mg/kg	0.005	0.1	1	08/24/07
1,3,5-Trimethylbenzene	ND	mg/kg	0.005	100	1	08/24/07
1,3-Dichlorobenzene	ND	mg/kg	0.005	1	1	08/24/07
1,3-Dichloropropane	ND	mg/kg	0.005		1	08/24/07
1,4-Dichlorobenzene	ND	mg/kg	0.005	0.7	1	08/24/07
1,4-Dioxane - Screen	ND	mg/kg	0.2		1	08/24/07
2,2-Dichloropropane	ND	mg/kg	0.005		1	08/24/07
2-Butanone	ND	mg/kg	0.05	0.3	1	08/24/07
2-Chlorotoluene	ND	mg/kg	0.005		1	08/24/07
2-Hexanone	ND	mg/kg	0.05		1	08/24/07
4-Chlorotoluene	ND	mg/kg	0.005		1	08/24/07
4-Isopropyltoluene	ND	mg/kg	0.005	100	1	08/24/07
4-Methyl-2-Pentanone	ND	mg/kg	0.05	0.4	1	08/24/07
Acetone	ND	mg/kg	0.05	3	1	08/24/07
Benzene	ND	mg/kg	0.005	2	1	08/24/07
Bromobenzene	ND	mg/kg	0.005		1	08/24/07
Bromochloromethane	ND	mg/kg	0.005		1	08/24/07
Bromodichloromethane	ND	mg/kg	0.005	0.1	1	08/24/07
Bromoform	ND	mg/kg	0.005	0.1	1	08/24/07
Bromomethane	ND	mg/kg	0.01	10	1	08/24/07



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
Client Project ID: Alpha Analytical Sampling  
Client Sample ID: Trip Blank L0712213-08  
Date Sampled: 08/22/07 00:00  
Percent Solids: N/A  
Initial Volume: 5  
Final Volume: 10  
Extraction Method: 5035

ESS Laboratory Work Order: 0708357  
ESS Laboratory Sample ID: 0708357-08  
Sample Matrix: Solid  
Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

Carbon Disulfide	ND	mg/kg	0.005		1	08/24/07
Carbon Tetrachloride	ND	mg/kg	0.005	10	1	08/24/07
Chlorobenzene	ND	mg/kg	0.005	1	1	08/24/07
Chloroethane	ND	mg/kg	0.01		1	08/24/07
Chloroform	ND	mg/kg	0.005	0.1	1	08/24/07
Chloromethane	ND	mg/kg	0.01		1	08/24/07
cis-1,2-Dichloroethene	ND	mg/kg	0.005	0.3	1	08/24/07
cis-1,3-Dichloropropene	ND	mg/kg	0.005	0.01	1	08/24/07
Dibromochloromethane	ND	mg/kg	0.005	0.005	1	08/24/07
Dibromomethane	ND	mg/kg	0.005		1	08/24/07
Dichlorodifluoromethane	ND	mg/kg	0.01		1	08/24/07
Diethyl Ether	ND	mg/kg	0.005		1	08/24/07
Di-isopropyl ether	ND	mg/kg	0.005		1	08/24/07
Ethyl tertiary-butyl ether	ND	mg/kg	0.005		1	08/24/07
Ethylbenzene	ND	mg/kg	0.005	80	1	08/24/07
Hexachlorobutadiene	ND	mg/kg	0.005	90	1	08/24/07
Isopropylbenzene	ND	mg/kg	0.005	100	1	08/24/07
Methyl tert-Butyl Ether	ND	mg/kg	0.005	0.1	1	08/24/07
Methylene Chloride	ND	mg/kg	0.02	0.1	1	08/24/07
Naphthalene	ND	mg/kg	0.005	4	1	08/24/07
n-Butylbenzene	ND	mg/kg	0.005	100	1	08/24/07
n-Propylbenzene	ND	mg/kg	0.005	100	1	08/24/07
sec-Butylbenzene	ND	mg/kg	0.005	100	1	08/24/07
Styrene	ND	mg/kg	0.005	3	1	08/24/07
tert-Butylbenzene	ND	mg/kg	0.005	100	1	08/24/07
Tertiary-amyl methyl ether	ND	mg/kg	0.005		1	08/24/07
Tetrachloroethene	ND	mg/kg	0.005	1	1	08/24/07
Tetrahydrofuran	ND	mg/kg	0.005		1	08/24/07
Toluene	ND	mg/kg	0.005	30	1	08/24/07
trans-1,2-Dichloroethene	ND	mg/kg	0.005	1	1	08/24/07
trans-1,3-Dichloropropene	ND	mg/kg	0.005	0.01	1	08/24/07
Trichloroethene	ND	mg/kg	0.005	0.3	1	08/24/07
Trichlorofluoromethane	ND	mg/kg	0.005		1	08/24/07
Vinyl Chloride	ND	mg/kg	0.01	0.9	1	08/24/07
Xylene O	ND	mg/kg	0.005	400	1	08/24/07
Xylene P,M	ND	mg/kg	0.01	400	1	08/24/07



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
Client Project ID: Alpha Analytical Sampling  
Client Sample ID: Trip Blank L0712213-08  
Date Sampled: 08/22/07 00:00  
Percent Solids: N/A  
Initial Volume: 5  
Final Volume: 10  
Extraction Method: 5035

ESS Laboratory Work Order: 0708357  
ESS Laboratory Sample ID: 0708357-08  
Sample Matrix: Solid  
Analyst: RES

### 5035/8260B Volatile Organic Compounds / Low Level

Xylenes (Total) ND mg/kg 0.008 400 0 08/24/07

	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.6 %	+	70-130
<i>Surrogate: 4-Bromofluorobenzene</i>	0.4 %	+	70-130
<i>Surrogate: Dibromofluoromethane</i>	0.7 %	+	70-130
<i>Surrogate: Toluene-d8</i>	0.08 %	+	70-130



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
Client Project ID: Alpha Analytical Sampling

ESS Laboratory Work Order: 0708357

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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#### 5035/8260B Volatile Organic Compounds / Low Level

#### Batch BH72405 - 5035

#### Blank

1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane - Screen	ND	0.250	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0500	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							
2-Hexanone	ND	0.0500	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0500	mg/kg wet							
Acetone	ND	0.0500	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							
Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Dibromochloromethane	ND	0.0050	mg/kg wet							
Dibromomethane	ND	0.0050	mg/kg wet							



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
 Client Project ID: Alpha Analytical Sampling

ESS Laboratory Work Order: 0708357

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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#### 5035/8260B Volatile Organic Compounds / Low Level

#### Batch BH72405 - 5035

Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0250	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.200		ug/L	25.0		0.8	70-130			+
Surrogate: 4-Bromofluorobenzene	0.100		ug/L	25.0		0.4	70-130			+
Surrogate: Dibromofluoromethane	0.220		ug/L	25.0		0.9	70-130			+
Surrogate: Toluene-d8	0.0300		ug/L	25.0		0.1	70-130			+

#### LCS

1,1,1,2-Tetrachloroethane	23.6		ug/L	25.0		94	70-130			
1,1,1-Trichloroethane	23.6		ug/L	25.0		94	70-130			
1,1,2,2-Tetrachloroethane	22.6		ug/L	25.0		90	70-130			
1,1,2-Trichloroethane	23.1		ug/L	25.0		92	70-130			
1,1-Dichloroethane	23.4		ug/L	25.0		94	70-130			
1,1-Dichloroethene	23.7		ug/L	25.0		95	70-130			
1,1-Dichloropropene	23.8		ug/L	25.0		95	70-130			
1,2,3-Trichlorobenzene	23.2		ug/L	25.0		93	70-130			
1,2,3-Trichloropropane	22.6		ug/L	25.0		90	70-130			
1,2,4-Trichlorobenzene	23.2		ug/L	25.0		93	70-130			
1,2,4-Trimethylbenzene	23.6		ug/L	25.0		94	70-130			
1,2-Dibromo-3-Chloropropane	22.8		ug/L	25.0		91	70-130			
1,2-Dibromoethane	23.3		ug/L	25.0		93	70-130			
1,2-Dichlorobenzene	22.8		ug/L	25.0		91	70-130			
1,2-Dichloroethane	22.5		ug/L	25.0		90	70-130			



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical

Client Project ID: Alpha Analytical Sampling

ESS Laboratory Work Order: 0708357

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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#### 5035/8260B Volatile Organic Compounds / Low Level

#### Batch BH72405 - 5035

1,2-Dichloropropane	23.5		ug/L	25.0		94	70-130			
1,3,5-Trimethylbenzene	23.5		ug/L	25.0		94	70-130			
1,3-Dichlorobenzene	22.4		ug/L	25.0		90	70-130			
1,3-Dichloropropane	23.7		ug/L	25.0		95	70-130			
1,4-Dichlorobenzene	22.4		ug/L	25.0		90	70-130			
1,4-Dioxane - Screen	465		ug/L	500		93	70-130			
2,2-Dichloropropane	26.4		ug/L	25.0		106	70-130			
2-Butanone	113		ug/L	125		90	70-130			
2-Chlorotoluene	22.6		ug/L	25.0		90	70-130			
2-Hexanone	113		ug/L	125		90	70-130			
4-Chlorotoluene	22.8		ug/L	25.0		91	70-130			
4-Isopropyltoluene	22.8		ug/L	25.0		91	70-130			
4-Methyl-2-Pentanone	110		ug/L	125		88	70-130			
Acetone	122		ug/L	125		98	70-130			
Benzene	23.4		ug/L	25.0		94	70-130			
Bromobenzene	23.4		ug/L	25.0		94	70-130			
Bromochloromethane	24.8		ug/L	25.0		99	70-130			
Bromodichloromethane	23.1		ug/L	25.0		92	70-130			
Bromoform	23.6		ug/L	25.0		94	70-130			
Bromomethane	31.3		ug/L	25.0		125	70-130			
Carbon Disulfide	26.3		ug/L	25.0		105	70-130			
Carbon Tetrachloride	23.4		ug/L	25.0		94	70-130			
Chlorobenzene	23.0		ug/L	25.0		92	70-130			
Chloroethane	30.2		ug/L	25.0		121	70-130			
Chloroform	23.4		ug/L	25.0		94	70-130			
Chloromethane	25.1		ug/L	25.0		100	70-130			
cis-1,2-Dichloroethene	23.3		ug/L	25.0		93	70-130			
cis-1,3-Dichloropropene	22.8		ug/L	25.0		91	70-130			
Dibromochloromethane	22.8		ug/L	25.0		91	70-130			
Dibromomethane	22.9		ug/L	25.0		92	70-130			
Dichlorodifluoromethane	28.0		ug/L	25.0		112	70-130			
Diethyl Ether	23.8		ug/L	25.0		95	70-130			
Di-isopropyl ether	23.7		ug/L	25.0		95	70-130			
Ethyl tertiary-butyl ether	22.7		ug/L	25.0		91	70-130			
Ethylbenzene	23.8		ug/L	25.0		95	70-130			
Hexachlorobutadiene	23.7		ug/L	25.0		95	70-130			
Isopropylbenzene	21.3		ug/L	25.0		85	70-130			
Methyl tert-Butyl Ether	23.1		ug/L	25.0		92	70-130			
Methylene Chloride	25.9		ug/L	25.0		104	70-130			
Naphthalene	23.2		ug/L	25.0		93	70-130			
n-Butylbenzene	23.7		ug/L	25.0		95	70-130			
n-Propylbenzene	23.5		ug/L	25.0		94	70-130			
sec-Butylbenzene	23.0		ug/L	25.0		92	70-130			
Styrene	24.0		ug/L	25.0		96	70-130			
tert-Butylbenzene	23.0		ug/L	25.0		92	70-130			
Tertiary-amyl methyl ether	23.0		ug/L	25.0		92	70-130			



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical

Client Project ID: Alpha Analytical Sampling

ESS Laboratory Work Order: 0708357

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>5035/8260B Volatile Organic Compounds / Low Level</b>										
<b>Batch BH72405 - 5035</b>										
Tetrachloroethene	24.5		ug/L	25.0		98	70-130			
Tetrahydrofuran	23.3		ug/L	25.0		93	70-130			
Toluene	23.2		ug/L	25.0		93	70-130			
trans-1,2-Dichloroethene	23.7		ug/L	25.0		95	70-130			
trans-1,3-Dichloropropene	21.3		ug/L	25.0		85	70-130			
Trichloroethene	23.4		ug/L	25.0		94	70-130			
Trichlorofluoromethane	21.2		ug/L	25.0		85	70-130			
Vinyl Chloride	25.1		ug/L	25.0		100	70-130			
Xylene O	23.4		ug/L	25.0		94	70-130			
Xylene P,M	46.8		ug/L	50.0		94	70-130			
Surrogate: 1,2-Dichloroethane-d4	23.3		ug/L	25.0		93	70-130			
Surrogate: 4-Bromofluorobenzene	24.3		ug/L	25.0		97	70-130			
Surrogate: Dibromofluoromethane	25.1		ug/L	25.0		100	70-130			
Surrogate: Toluene-d8	24.8		ug/L	25.0		99	70-130			
<b>LCS Dup</b>										
1,1,1,2-Tetrachloroethane	23.9		ug/L	25.0		96	70-130	1	20	
1,1,1-Trichloroethane	23.5		ug/L	25.0		94	70-130	0.4	20	
1,1,2,2-Tetrachloroethane	23.7		ug/L	25.0		95	70-130	5	20	
1,1,2-Trichloroethane	23.6		ug/L	25.0		94	70-130	2	20	
1,1-Dichloroethane	23.4		ug/L	25.0		94	70-130	0	20	
1,1-Dichloroethene	23.5		ug/L	25.0		94	70-130	0.8	20	
1,1-Dichloropropene	23.6		ug/L	25.0		94	70-130	0.8	20	
1,2,3-Trichlorobenzene	23.0		ug/L	25.0		92	70-130	0.9	20	
1,2,3-Trichloropropane	23.1		ug/L	25.0		92	70-130	2	20	
1,2,4-Trichlorobenzene	22.9		ug/L	25.0		92	70-130	1	20	
1,2,4-Trimethylbenzene	23.7		ug/L	25.0		95	70-130	0.4	20	
1,2-Dibromo-3-Chloropropane	23.3		ug/L	25.0		93	70-130	2	20	
1,2-Dibromoethane	23.7		ug/L	25.0		95	70-130	2	20	
1,2-Dichlorobenzene	23.4		ug/L	25.0		94	70-130	3	20	
1,2-Dichloroethane	22.8		ug/L	25.0		91	70-130	1	20	
1,2-Dichloropropane	23.7		ug/L	25.0		95	70-130	0.8	20	
1,3,5-Trimethylbenzene	23.8		ug/L	25.0		95	70-130	1	20	
1,3-Dichlorobenzene	22.8		ug/L	25.0		91	70-130	2	20	
1,3-Dichloropropane	24.0		ug/L	25.0		96	70-130	1	20	
1,4-Dichlorobenzene	22.8		ug/L	25.0		91	70-130	2	20	
1,4-Dioxane - Screen	479		ug/L	500		96	70-130	3	20	
2,2-Dichloropropane	27.1		ug/L	25.0		108	70-130	3	20	
2-Butanone	115		ug/L	125		92	70-130	2	20	
2-Chlorotoluene	24.8		ug/L	25.0		99	70-130	9	20	
2-Hexanone	115		ug/L	125		92	70-130	2	20	
4-Chlorotoluene	23.1		ug/L	25.0		92	70-130	1	20	
4-Isopropyltoluene	22.9		ug/L	25.0		92	70-130	0.4	20	
4-Methyl-2-Pentanone	117		ug/L	125		94	70-130	6	20	
Acetone	117		ug/L	125		94	70-130	4	20	
Benzene	23.6		ug/L	25.0		94	70-130	0.9	20	
Bromobenzene	23.6		ug/L	25.0		94	70-130	0.9	20	





# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical

Client Project ID: Alpha Analytical Sampling

ESS Laboratory Work Order: 0708357

### Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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#### 5035/8260B Volatile Organic Compounds / Low Level

#### Batch BH72405 - 5035

Bromochloromethane	25.2		ug/L	25.0		101	70-130	2	20	
Bromodichloromethane	23.3		ug/L	25.0		93	70-130	0.9	20	
Bromoform	24.1		ug/L	25.0		96	70-130	2	20	
Bromomethane	30.4		ug/L	25.0		122	70-130	3	20	
Carbon Disulfide	25.5		ug/L	25.0		102	70-130	3	20	
Carbon Tetrachloride	23.5		ug/L	25.0		94	70-130	0.4	20	
Chlorobenzene	23.2		ug/L	25.0		93	70-130	0.9	20	
Chloroethane	29.3		ug/L	25.0		117	70-130	3	20	
Chloroform	23.4		ug/L	25.0		94	70-130	0	20	
Chloromethane	24.8		ug/L	25.0		99	70-130	1	20	
cis-1,2-Dichloroethene	23.4		ug/L	25.0		94	70-130	0.4	20	
cis-1,3-Dichloropropene	23.1		ug/L	25.0		92	70-130	1	20	
Dibromochloromethane	23.1		ug/L	25.0		92	70-130	1	20	
Dibromomethane	23.6		ug/L	25.0		94	70-130	3	20	
Dichlorodifluoromethane	28.0		ug/L	25.0		112	70-130	0	20	
Diethyl Ether	24.1		ug/L	25.0		96	70-130	1	20	
Di-isopropyl ether	24.2		ug/L	25.0		97	70-130	2	20	
Ethyl tertiary-butyl ether	23.3		ug/L	25.0		93	70-130	3	20	
Ethylbenzene	23.9		ug/L	25.0		96	70-130	0.4	20	
Hexachlorobutadiene	23.8		ug/L	25.0		95	70-130	0.4	20	
Isopropylbenzene	21.7		ug/L	25.0		87	70-130	2	20	
Methyl tert-Butyl Ether	23.5		ug/L	25.0		94	70-130	2	20	
Methylene Chloride	25.9		ug/L	25.0		104	70-130	0	20	
Naphthalene	23.0		ug/L	25.0		92	70-130	0.9	20	
n-Butylbenzene	23.7		ug/L	25.0		95	70-130	0	20	
n-Propylbenzene	22.7		ug/L	25.0		91	70-130	3	20	
sec-Butylbenzene	23.3		ug/L	25.0		93	70-130	1	20	
Styrene	24.1		ug/L	25.0		96	70-130	0.4	20	
tert-Butylbenzene	23.7		ug/L	25.0		95	70-130	3	20	
Tertiary-amyl methyl ether	23.8		ug/L	25.0		95	70-130	3	20	
Tetrachloroethene	23.1		ug/L	25.0		92	70-130	6	20	
Tetrahydrofuran	24.6		ug/L	25.0		98	70-130	5	20	
Toluene	23.4		ug/L	25.0		94	70-130	0.9	20	
trans-1,2-Dichloroethene	23.9		ug/L	25.0		96	70-130	0.8	20	
trans-1,3-Dichloropropene	21.7		ug/L	25.0		87	70-130	2	20	
Trichloroethene	23.5		ug/L	25.0		94	70-130	0.4	20	
Trichlorofluoromethane	21.0		ug/L	25.0		84	70-130	0.9	20	
Vinyl Chloride	25.0		ug/L	25.0		100	70-130	0.4	20	
Xylene O	23.3		ug/L	25.0		93	70-130	0.4	20	
Xylene P,M	47.0		ug/L	50.0		94	70-130	0.4	20	
Surrogate: 1,2-Dichloroethane-d4	23.7		ug/L	25.0		95	70-130			
Surrogate: 4-Bromofluorobenzene	24.2		ug/L	25.0		97	70-130			
Surrogate: Dibromofluoromethane	24.8		ug/L	25.0		99	70-130			
Surrogate: Toluene-d8	24.6		ug/L	25.0		98	70-130			



# ESS Laboratory

Division of Thielsch Engineering, Inc.

## CERTIFICATE OF ANALYSIS

Client Name: Alpha Analytical  
Client Project ID: Alpha Analytical Sampling

ESS Laboratory Work Order: 0708357

### Notes and Definitions

- U Analyte included in the analysis, but not detected
- IM Internal Standard was outside of criteria due to matrix (UCM present).
- 7 Due to equipment malfunction, surrogates were not added to any of the low level VOA samples. Only 1 vial was received.
- + Outside QC Limits.
- 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
- mg/kg Results reported as wet weight
- TCLP Toxicity Characteristic Leachate Procedure
- I/V Initial Volume
- F/V Final Volume
- § Subcontracted analysis; see attached report
- TIC A forward library search of the NBS Mass Spectral Library was performed on this sample using the McLafferty Probability Base Matching (PBM) Algorithm. An estimated concentration of non-TCL compounds tentatively identified is quantified by the internal standard method. The nearest internal standard free of interferences was used to quantify. A response factor of one was assumed. This search was inclusive of the ten largest peaks greater than ten percent of the nearest internal standard.
- 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.
- NR No Recovery
- ¶ The state of RI does not grant certification for this method for non-potables.



# ESS Laboratory

*Division of Thielsch Engineering, Inc.*

## *CERTIFICATE OF ANALYSIS*

Client Name: Alpha Analytical  
Client Project ID: Alpha Analytical Sampling

ESS Laboratory Work Order: 0708357

### **ESS LABORATORY CERTIFICATIONS**

U.S. Army Corps of Engineers  
Soil and Water

Navy Installation Restoration QA Program  
Soil and Water

Rhode Island: A-179

Connecticut: PH-0750

Maine: RI002

Massachusetts: M-RI002

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

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

United States Department of Agriculture  
Soil Permit: S-54210

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

Maryland: 301  
Potable Water





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

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

# CHAIN OF CUSTODY

PAGE 1 OF 1

To: ESS, Cranston

0708857  
ALPHA Job #:

### Project Information

Project Name: \_\_\_\_\_  
Project Location: \_\_\_\_\_

### Report Information - Data Deliverables

FAX  EMAIL  
 ADEX  Add'l Deliverables

### Billing Information

Same as Client info  
PO #:

### Client Information

Client: Alpha Analytical  
Address: 8 Wakeup Dr  
Westborough MA  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

Project #: \_\_\_\_\_  
Project Manager: P. Henriksen  
ALPHA Quote #: \_\_\_\_\_  
Turn-Around Time

### State / Fed Program

MA MCP Unlined Landfill Reuse Criteria  
MAMCP PRESUMPTIVE CERTAINTY --- CT REASONABLE CONFIDENCE PROTOCOLS

Standard  PRUSH (only confirmed if pre-approved!)  
Date Due: 8/27/07 Time: \_\_\_\_\_

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		Sample Matrix	Sampler's Initials	ANALYSIS			Sample Specific Comments
		Date	Time			VOC's (High) 8260	VOC's (Low) 8260	Total Solids	
	LD712213-01	8/23/07	0915	S					
1	-02		0920						
2	-03		0925						
3	-04		0930						
4	-05		0935						
5	-06		0940						
6	-07		2400						
7	-08	8/23/07	1445						
8	TRIP ANAL (NO 8/23/07)								

Cooler temp 5.0°C

### PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT  
MA MCP or CT RCP?

Relinquished By:	Date/Time	Container Type	Preservative	Received By:	Date/Time
<u>Paul Miller</u>	8/23/07 1410	V V P	Met H2O/NA	<u>Paul Miller</u>	8/23/07 14:20

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.

TOTAL # BOTTLES