

**Environmental  
Resources  
Management**

One Beacon Street, 5<sup>th</sup> Floor  
Boston, MA 02108  
+1 617 646 7800  
+1 617 267 6447 (fax)

<http://www.erm.com>



16 August 2012

Mr. Anthony DeLuca  
The Koffler Group  
10 Memorial Boulevard  
Suite 901  
Providence, RI 02903

RE: Transmittal of Groundwater Analytical Data  
Former Raytheon Facility  
430 Boston Post Road, Wayland, Massachusetts

Dear Mr. DeLuca:

On behalf of Raytheon Company (Raytheon), Environmental Resources Management (ERM) is submitting the results of groundwater sample analyses related to the Former Raytheon Facility located at 430 Boston Post Road in Wayland, Massachusetts (Site). These results are submitted pursuant to 310 CMR 40.1403(10) of the Massachusetts Contingency Plan (MCP).

Innovative Engineering Solutions, Inc. collected groundwater samples from wells on portions of the Site within the boundaries of your property on 23 July 2012. Samples were submitted to TestAmerica Laboratories, Inc. of Westfield, Massachusetts and/or to Bioremediation & Treatability Center in Walpole, Massachusetts. Analytical results are attached to this letter. These analytical data will be provided to the Massachusetts Department of Environmental Protection in the next MCP submittal.

Raytheon has implemented the Public Involvement Process in accordance with 310 CMR 40.1405. Documents pertaining to the Site can be found at the Board of Health Public Involvement Plan files, or at [www.ermne.com](http://www.ermne.com) (username = raytheon, password = wayland).

If you have any questions or comments, please contact the undersigned at (617) 646-7800 or Jonathan Hone, Raytheon Company, at (978) 436-8298.

Sincerely,



John C. Drobinski, P.G., LSP  
*Principal-in-Charge*



Jason D. Flattery, P.E.  
*Project Manager*

enclosures: BWSC-123 – Notice of Environmental Sampling  
Laboratory Analytical Reports

cc: Jonathan Hone, Raytheon Company  
PIP Repositories



**NOTICE OF ENVIRONMENTAL SAMPLING**

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

**BWSC 123**

This Notice is Related to Release Tracking Number

3 13302

**A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):**

1. Street Address: 430 Boston Post Road  
City/Town: Wayland Zip Code: 01778

**B. This notice is being provided to the following party:**

1. Name: The Koffler Group  
2. Street Address: 10 Memorial Boulevard, Suite 901  
City/Town: Providence, RI Zip Code: 02903

**C. This notice is being given to inform its recipient (the party listed in Section B):**

- 1. That environmental sampling will be/has been conducted at property owned by the recipient of this notice.
- 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
- 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

**D. Location of the property where the environmental sampling will be/has been conducted:**

1. Street Address: 430 Boston Post Road  
City/Town: Wayland Zip Code: 01778

2. MCP phase of work during which the sampling will be/has been conducted:

- |   |   |
|---|---|
| <input type="checkbox"/> Immediate Response Action              | <input type="checkbox"/> Phase III Feasibility Evaluation                   |
| <input type="checkbox"/> Release Abatement Measure              | <input type="checkbox"/> Phase IV Remedy Implementation Plan                |
| <input type="checkbox"/> Utility-related Abatement Measure      | <input checked="" type="checkbox"/> Phase V/Remedy Operation Status         |
| <input type="checkbox"/> Phase I Initial Site Investigation     | <input type="checkbox"/> Post-Class C Operation, Maintenance and Monitoring |
| <input type="checkbox"/> Phase II Comprehensive Site Assessment | <input type="checkbox"/> Other _____  |
- (specify)

3. Description of property where sampling will be/has been conducted:

- residential     commercial     industrial     school/playground     Other \_\_\_\_\_
- (specify)

4. Description of the sampling locations and types (e.g., soil, groundwater) to the extent known at the time of this notice.

**Collection of groundwater samples from existing monitoring wells.**

**E. Contact information related to the party providing this notice:**

Contact Name: Louis J. Burkhardt  
Street Address: 880 Technology Park Drive, T-3033  
City/Town: Billerica Zip Code: 01821  
Telephone: (978) 436-8238 Email: louis\_j\_burkhardt@raytheon.com

## **NOTICE OF ENVIRONMENTAL SAMPLING**

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

### MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

### THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the “disposal site”.)

### PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation under the Massachusetts Contingency Plan at a property on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

**Section C** on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

**Section D** on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

### FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/dep/cleanup/oview.htm>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://mass.gov/dep/about/region/schedule.htm> if you would like to make an appointment to see these files. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

**Raytheon, Wayland, MA  
Analytical Report**

**Well Samples**



Prepared By:  
**BTC**  
25 Spring Street,  
Walpole, MA 02081-4301  
Phone (508) 668-0191 • Fax (508) 668-5175

Sampled: 07/23/12  
Analyzed: 07/23/11-07/25/12



25 Spring Street • Walpole, MA 02081-4301 • phone (508) 668-0191 • fax (508) 668-5175

July 25, 2012

IESI  
Sami Fam  
Innovative Engineering Solutions, Inc.  
25 Spring St.  
Walpole, MA 02081-4301

RE: Analytical Data Report  
Raytheon  
Wayland, MA

Dear Mr. Fam,

Enclosed are the results of the sample(s) submitted to our laboratory on July 23, 2012.

All analyses were performed to our laboratory's quality assurance program. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. You may also contact me via email at [G.Pon@Biotreatcenter.com](mailto:G.Pon@Biotreatcenter.com)

Respectfully submitted,  
Bioremediation Treatability Center

George Pon  
Laboratory Director

---Dissolved Gasses---



<b>Project Identification:</b>		Raytheon, Wayland, MA			
<b>Sample ID</b>	MW-552				
<b>Sampler</b>	dj/dr				
<b>Sample Date</b>	7/23/12				
<b>Sample Time</b>	12:00 AM				
<b>Sample Received</b>	7/23/12				
<b>Method</b>	Modified EPA 5021 A				
<b>Compound</b>	<b>Test Value</b>	<b>Units</b>	<b>Detection Limit</b>	<b>Analysis Date</b>	<b>Tech</b>
<b>Dissolved Gasses</b>					
Methane	13493	µg/L	0.3 µg/L	7/23/2012	swd
Ethylene	<0.3	µg/L	0.3 µg/L	7/23/2012	swd
Ethane	<0.3	µg/L	0.3 µg/L	7/23/2012	swd
Acetylene	<2	µg/L	2µg/L	7/23/2012	swd

<b>Project Identification:</b>		Raytheon, Wayland, MA			
<b>Sample ID</b>	MW-553				
<b>Sampler</b>	dj/dr				
<b>Sample Date</b>	7/23/12				
<b>Sample Time</b>	12:00 AM				
<b>Sample Received</b>	7/23/12				
<b>Method</b>	Modified EPA 5021 A				
<b>Compound</b>	<b>Test Value</b>	<b>Units</b>	<b>Detection Limit</b>	<b>Analysis Date</b>	<b>Tech</b>
<b>Dissolved Gasses</b>					
Methane	16304	µg/L	0.3 µg/L	7/23/2012	swd
Ethylene	14.7	µg/L	0.3 µg/L	7/23/2012	swd
Ethane	4.1	µg/L	0.3 µg/L	7/23/2012	swd
Acetylene	<2	µg/L	2µg/L	7/23/2012	swd

---Anions---



---

**Project Identification:** Raytheon, Wayland, MA

---

**Sample ID** MW-553  
**Sampler** dj/dr  
**Sample Date** 7/23/2012  
**Sample Time** 12:00 AM  
**Sample Received** 7/23/2012

**Method** Modified EPA 300

Compound	Test Value	Units	Detection Limit	Analysis Date	Tech
<b>Anions</b>					
Chloride	12	mg/L	1 mg/L	7/23/2012	swd
Nitrate	<1	mg/L	1 mg/L	7/23/2012	swd
Sulfate	2	mg/L	1 mg/L	7/23/2012	swd

---

**Project Identification:** Raytheon, Wayland, MA

---

**Sample ID** MW-562  
**Sampler** dj/dr  
**Sample Date** 7/23/2012  
**Sample Time** 12:00 AM  
**Sample Received** 7/23/2012

**Method** Modified EPA 300

Compound	Test Value	Units	Detection Limit	Analysis Date	Tech
<b>Anions</b>					
Chloride	33	mg/L	1 mg/L	7/23/2012	swd
Nitrate	<1	mg/L	1 mg/L	7/23/2012	swd
Sulfate	1	mg/L	1 mg/L	7/23/2012	swd

---

**Project Identification:** Raytheon, Wayland, MA

---

**Sample ID** REW-1  
**Sampler** dj/dr  
**Sample Date** 7/23/2012  
**Sample Time** 12:00 AM  
**Sample Received** 7/23/2012

**Method** Modified EPA 300

Compound	Test Value	Units	Detection Limit	Analysis Date	Tech
<b>Anions</b>					
Chloride	31	mg/L	1 mg/L	7/23/2012	swd
Nitrate	<1	mg/L	1 mg/L	7/23/2012	swd
Sulfate	3	mg/L	1 mg/L	7/23/2012	swd



---Organic Acids---



<b>Project Identification:</b>		Raytheon, Wayland, MA			
<b>Sample ID</b>	MW-553				
<b>Sampler</b>	dj/dr				
<b>Sample Date</b>	7/23/12				
<b>Sample Time</b>	12:00 AM				
<b>Sample Received</b>	7/23/12				
<b>Method</b>	HPLC / Organic Acid Method				
<b>Compound</b>	<b>Test Value</b>	<b>Units</b>	<b>Detection Limit</b>	<b>Analysis Date</b>	<b>Tech</b>
<b>Organic Acids</b>					
Lactate	<1	mg/L	1 mg/L	7/23/2012	swd
Acetate	277	mg/L	1 mg/L	7/23/2012	swd
Propionate	<1	mg/L	1 mg/L	7/23/2012	swd
Butyrate	1	mg/L	1 mg/L	7/23/2012	swd

<b>Project Identification:</b>		Raytheon, Wayland, MA			
<b>Sample ID</b>	MW-562				
<b>Sampler</b>	dj/dr				
<b>Sample Date</b>	7/23/12				
<b>Sample Time</b>	12:00 AM				
<b>Sample Received</b>	7/23/12				
<b>Method</b>	HPLC / Organic Acid Method				
<b>Compound</b>	<b>Test Value</b>	<b>Units</b>	<b>Detection Limit</b>	<b>Analysis Date</b>	<b>Tech</b>
<b>Organic Acids</b>					
Lactate	<1	mg/L	1 mg/L	7/23/2012	swd
Acetate	117	mg/L	1 mg/L	7/23/2012	swd
Propionate	<1	mg/L	1 mg/L	7/23/2012	swd
Butyrate	<1	mg/L	1 mg/L	7/23/2012	swd

<b>Project Identification:</b>		Raytheon, Wayland, MA			
<b>Sample ID</b>	REW-1				
<b>Sampler</b>	dj/dr				
<b>Sample Date</b>	7/23/12				
<b>Sample Time</b>	12:00 AM				
<b>Sample Received</b>	7/23/12				
<b>Method</b>	HPLC / Organic Acid Method				
<b>Compound</b>	<b>Test Value</b>	<b>Units</b>	<b>Detection Limit</b>	<b>Analysis Date</b>	<b>Tech</b>
<b>Organic Acids</b>					
Lactate	<1	mg/L	1 mg/L	7/23/2012	swd
Acetate	435	mg/L	1 mg/L	7/23/2012	swd
Propionate	<1	mg/L	1 mg/L	7/23/2012	swd
Butyrate	<1	mg/L	1 mg/L	7/23/2012	swd

---Chemistries---



<b>Project Identification:</b>		Raytheon, Wayland, MA				
<b>Sample ID</b>	MW-552					
<b>Sampler</b>	dj/dr					
<b>Sample Date</b>	7/23/2012					
<b>Sample Time</b>	12:00 AM					
<b>Sample Received</b>	7/23/2012					
<b>Chemical Tests</b>	<b>Test Value</b>	<b>Units</b>	<b>Method</b>	<b>Detection Limit</b>	<b>Analysis Date</b>	<b>Tech</b>
Alkalinity	220	mg/L	HACH 8203	5 mg/L	7/23/2012	rdr
Manganese	na	mg/L	HACH 8034	0.12 mg/L	na	na
NH <sub>3</sub> -N	0.34	mg/L	HACH 8155	0.02 mg/L	7/24/2012	rdr
PO <sub>4</sub>	0.67	mg/L	HACH 8048	0.05 mg/L	7/24/2012	rdr
Sulfide	na	mg/L	HACH 8131	0.01 mg/L	na	na
Total Iron	10.1	mg/L	HACH 8008	0.03 mg/L	7/25/2012	rdr
COD	na	mg/L	HACH 8000	<2 mg/L	na	na
TOC	6.3	mg/L	EPA 9060A	<0.3 mg/L	7/24/2012	swd
pH	6.76	pH units	pH probe	<0.01 pH units	7/23/2012	rdr

<b>Project Identification:</b>		Raytheon, Wayland, MA				
<b>Sample ID</b>	MW-553					
<b>Sampler</b>	dj/dr					
<b>Sample Date</b>	7/23/2012					
<b>Sample Time</b>	12:00 AM					
<b>Sample Received</b>	7/23/2012					
<b>Chemical Tests</b>	<b>Test Value</b>	<b>Units</b>	<b>Method</b>	<b>Detection Limit</b>	<b>Analysis Date</b>	<b>Tech</b>
Alkalinity	340	mg/L	HACH 8203	5 mg/L	7/23/2012	rdr
Manganese	na	mg/L	HACH 8034	0.12 mg/L	na	na
NH <sub>3</sub> -N	0.04	mg/L	HACH 8155	0.02 mg/L	7/24/2012	rdr
PO <sub>4</sub>	0.24	mg/L	HACH 8048	0.05 mg/L	7/24/2012	rdr
Sulfide	na	mg/L	HACH 8131	0.01 mg/L	na	na
Total Iron	21.9	mg/L	HACH 8008	0.03 mg/L	7/25/2012	rdr
COD	na	mg/L	HACH 8000	<2 mg/L	na	na
TOC	400	mg/L	EPA 9060A	<0.3 mg/L	7/24/2012	swd
pH	6.90	pH units	pH probe	<0.01 pH units	7/23/2012	rdr

---Table-Summary of Analytical Report---

<b>Project</b>	Raytheon, Wayland, MA			
<b>Date Received</b>	7/23/12	7/23/12	7/23/12	
<b>Sample ID</b>	REW-4	REW-5	Trip	
<b>Date Sampled</b>	7/23/12	7/23/12	na	

**Dissolved Gasses**

<b>Date Analyzed</b>		7/23/12	7/23/12	7/23/12
<b>Sample ID</b>	Units	REW-4	REW-5	Trip
Methane	µg/L	4276	2661	<0.3
Ethylene	µg/L	15.3	14.0	<0.3
Ethane	µg/L	<0.3	0.9	<0.3
Acetylene	µg/L	<2	<2	<2

**Anions**

<b>Date Analyzed</b>		7/23/12	7/23/12	7/23/12
<b>Sample ID</b>	Units	REW-4	REW-5	Trip
Chloride	mg/L	31	41	<1
Nitrate	mg/L	<1	<1	<1
Sulfate	mg/L	14	22	<1

**Organic Acids**

<b>Date Analyzed</b>		7/23/12	7/23/12	7/23/12
Lactate	mg/L	<1	<1	<1
Acetate	mg/L	168	97	<1
Propionate	mg/L	<1	<1	<1
Butyrate	mg/L	<1	<1	<1

**Chemistries**

<b>Date Analyzed</b>	7/23/12-7/25/12			
<b>Sample ID</b>	Units	REW-4	REW-5	Trip
Alkalinity	mg/L	220	200	10
Manganese	mg/L	na	na	na
NH <sub>3</sub> -N	mg/L	2.00	0.29	<0.02
PO <sub>4</sub>	mg/L	3.14	0.12	<0.05
Sulfide	mg/L	na	na	na
Total Iron	mg/L	11.2	16.8	<0.03
COD	mg/L	na	na	na
TOC	mg/L	213	75.0	<0.3
pH	pH units	6.67	6.53	7.80

**H<sub>2</sub>/CO<sub>2</sub> by TCD analysis**

<b>Date Analyzed</b>		na	na	na
<b>Sample ID</b>	Units	REW-4	REW-5	Trip
H <sub>2</sub>	µM	na	na	na
CO <sub>2</sub>	mg/L	na	na	na

## TESTING METHODS

### Ion Analysis

Inorganic anions were analyzed on a Metrohm 761 IC system according to modified EPA Method 300. Organic acids were analyzed by HPLC method with an organic acid column for lactate, acetate, propionate, and butyrate. A sample to be analyzed for anions is diluted with ultra pure water as necessary to obtain the analytes in the working range of the method, and is placed into the instrument, where the sample is introduced by an automated sampling device. All samples were placed sequentially in the auto sampler and the samples were injected sequentially into the ion-exchange column. Flows from the column were directed to a conductivity detector and the peak responses were processed for quantification. Identification of analytes is based on retention times for individual analytes, and quantification is based on analysis of prepared standards.

### Gas Chromatography

Dissolved gasses were analyzed according to modified EPA Method 5021A. 10ml of the sample is transferred from the 40 ml VOA vials to a 20 ml sampling vial for a 1 to 1, headspace to liquid ratio. The headspace sample is analyzed by a HP 7694 Headspace Sampler, injected to a HP 5890 gas chromatograph. Gasses were detected by PID detector and followed by Flame Ionization Detector. Standards were prepared and analyzed in the same manner as samples.

### Total Organic Carbon Analyzer

Organic carbon is measured according to a modified EPA Method 9060A using a Shimadzu TOC-5050A carbonaceous analyzer. This instrument converts the organic carbon in a sample to carbon dioxide (CO<sub>2</sub>) by catalytic combustion. The CO<sub>2</sub> formed is then measured directly by an infrared detector. The amount of CO<sub>2</sub> in a sample is directly proportional to the concentration of carbonaceous material in the sample.

### HACH Colorimeter

Chemical Tests for, Iron (Total), Manganese, Nitrogen (Ammonia), Phosphorous (Orthophosphate), and Sulfide are analyzed with a DR/ 890 Colorimeter. Alkalinity is analyzed with a HACH Alkalinity Digital Titrator. VOA vials for the analysis of these chemical tests have no preservative. The methods used are EPA approved and are as follows:

Alkalinity	Hach Titration
Ammonia Nitrogen	Hach 8155
COD	Hach 8000
Manganese	Hach 8034
Orthophosphate Phosphorous	Hach 8048
Sulfide	Hach 8131
Total Iron	Hach 8008

### pH

The pH of samples is determined using a Corning 313 ATC electrode.

**BTC**

**CHAIN OF CUSTODY RECORD**

Bioremediation Treatability Center • 25 Spring Street • Walpole, MA 02081-4301 • phone (508) 668-0191 • fax (508) 668-5175

Project Name & Project Number		RA-008	
Project Manager		Vicki Parvins	
Company / Address		Innovative Engineering Solutions Inc 25 Spring St Walpole MA 02081	
Phone #		508-668-0033 Fax # 508-668-5175	
Sampler's Signature		<i>[Signature]</i>	
Sampler's Printed Name		Dawn Sore	
Client Sample ID	Sampling		
	Date	Time	
REW-1	7/23/12	1030	
REW-4	7/23/12	0950	
REW-5	7/23/12	0935	
MW-265M	7/23/12	0750	
MW-562	7/23/12	0900	
MW-261S	7/23/12	1110	
MW-552	7/23/12	1205	
MW-553	7/23/12	1240	
MW-562	<i>[Signature]</i>		
Trip Block	-		

Special Instructions / Comments			
Relinquished By	<i>[Signature]</i>	Received By	<i>[Signature]</i>
Printed Name	Dawn Sore	Printed Name	Raquel Robertson
Firm	ESI	Firm	BTC
Date/Time	7/23/12 1410	Date/Time	7/23/12 1410
No. of Sample Bottles per Well	9	Alkalinity	X
Ammonia	X	Anions (Cl, NO <sub>3</sub> , SO <sub>4</sub> )	X
Biotank		Bromide	
COD		Dissolved Gas	X
H2 / CO2		Organic Acid	X
Orthophosphate	X	pH	X
Sulfide		TOC	
Total Iron	X	Total Manganese	
VOC Screen			

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Westfield  
Westfield Executive Park  
53 Southampton Road  
Westfield, MA 01085  
Tel: (413)572-4000

TestAmerica Job ID: 360-41791-1  
Client Project/Site: IDS Wayland

For:  
Innovative Engineering Solutions, Inc  
25 Spring Street  
Walpole, Massachusetts 02081

Attn: Vicki Pariyar



Authorized for release by:  
7/31/2012 1:46:57 PM  
Chris Reynolds  
QA Manager  
[chris.reynolds@testamericainc.com](mailto:chris.reynolds@testamericainc.com)  
Designee for  
Becky Mason  
Project Manager II  
[becky.mason@testamericainc.com](mailto:becky.mason@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

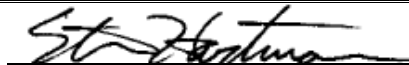
*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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<b>MassDEP Analytical Protocol Certification Form</b>					
Laboratory Name: <b>TestAmerica Westfield</b>		Project #: <b>360-41791-1</b>			
Project Location: <b>IDS Wayland</b>			RTN:		
<b>This form provides certifications for the following data set: list Laboratory Sample ID Number(s):</b>					
<b>360-41791-1 [1-10]</b>					
Matrices: <input checked="" type="checkbox"/> Groundwater/Surface Water <input type="checkbox"/> Soil/Sediment <input type="checkbox"/> Drinking Water <input type="checkbox"/> Air <input type="checkbox"/> Other:					
<b>CAM Protocols (check all that apply below):</b>					
8260 VOC CAM II A <input checked="" type="checkbox"/>	7470/7471 Hg CAM III B <input type="checkbox"/>	Mass DEP VPH CAM IV A <input type="checkbox"/>	8081 Pesticides CAM V B <input type="checkbox"/>	7196 Hex Cr CAM VI B <input type="checkbox"/>	Mass DEP APH CAM IX A <input type="checkbox"/>
8270 SVOC CAM II B <input type="checkbox"/>	7010 Metals CAM III C <input type="checkbox"/>	Mass DEP EPH CAM IV B <input type="checkbox"/>	8151 Herbicides CAM V C <input type="checkbox"/>	8330 Explosives CAM VIII A <input type="checkbox"/>	TO-15 VOC CAM IX B <input type="checkbox"/>
6010 Metals CAM III A <input type="checkbox"/>	6020 Metals CAM III D <input type="checkbox"/>	8082 PCB CAM V A <input type="checkbox"/>	9014 Total Cyanide/PAC CAM VI A <input type="checkbox"/>	6860 Perchlorate CAM VIII B <input type="checkbox"/>	
<b>Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status</b>					
<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding time.				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>D</b>	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>E</b>	a. VPH, EPH and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Responses to Questions G, H and I below are required for "Presumptive Certainty" status</b>					
<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WCS-07-350</b>					
<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s) ?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<sup>1</sup> All negative responses must be addressed in an attached laboratory narrative.					
<b>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, is accurate and complete.</b>					
Signature: 		Position: <u>Laboratory Director</u>			
Printed Name: <u>Steven C. Hartmann</u>		Date: <u>7/31/12 13:44</u>			
This form has been electronically signed and approved					



# Case Narrative

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Job ID: 360-41791-1

### Laboratory: TestAmerica Westfield

#### Narrative

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

#### RECEIPT

The samples were received on 07/23/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.2 C.

Note: All samples that require thermal preservation are considered acceptable if the arrival temperature is within the method's specified temperature range or for general analysis, ranging from 6°C to just above the freezing temperature of water. Samples that are hand delivered, immediately following collection, may not meet these criteria; however, they will be considered acceptable according to NELAC and State standards, if there is evidence that the chilling process has begun, such as stored and transported to the laboratory on ice.

#### VOLATILE ORGANIC COMPOUNDS (GC-MS SIM)

Samples REW-1 (360-41791-1), REW-4 (360-41791-2), REW-5 (360-41791-3), MW-265M (360-41791-4), MW-261S (360-41791-5), MW-552 (360-41791-6), MW-553 (360-41791-7), MW-562 (360-41791-8), TRIP BLANKS (360-41791-9) and DUPX (360-41791-10) were analyzed for volatile organic compounds (GC-MS SIM) in accordance with SW846 8260C SIM. The samples were analyzed on 07/25/2012 and 07/26/2012.

1,4-Dioxane (SIM) exceeded the rpd limit for LCSD 360-93433/21. Refer to the QC report for details.

Samples REW-1 (360-41791-1)[50X], REW-4 (360-41791-2)[10X], REW-5 (360-41791-3)[10X], MW-265M (360-41791-4)[10X], MW-261S (360-41791-5)[100X], MW-552 (360-41791-6)[25X], MW-553 (360-41791-7)[100X], MW-562 (360-41791-8)[100X] and DUPX (360-41791-10)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the volatile organic compounds (GC-MS SIM) analyses.

All other quality control parameters were within the acceptance limits.

#### VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples REW-1 (360-41791-1), REW-4 (360-41791-2), REW-5 (360-41791-3), MW-265M (360-41791-4), MW-261S (360-41791-5), MW-552 (360-41791-6), MW-553 (360-41791-7), MW-562 (360-41791-8), TRIP BLANKS (360-41791-9) and DUPX (360-41791-10) were analyzed for volatile organic compounds (GC-MS) in accordance with SW846 8260C. The samples were analyzed on 07/25/2012 and 07/26/2012.

Dichlorodifluoromethane failed the recovery criteria low for LCS 360-93432/20. 2-Butanone (MEK) and Dichlorodifluoromethane failed the recovery criteria low for LCS 360-93476/3. Dichlorodifluoromethane failed the recovery criteria low for LCSD 360-93432/21. Dichlorodifluoromethane failed the recovery criteria low for LCSD 360-93476/4. Refer to the QC report for details.

Samples REW-1 (360-41791-1)[50X], REW-4 (360-41791-2)[10X], REW-5 (360-41791-3)[10X], MW-265M (360-41791-4)[10X], MW-261S (360-41791-5)[100X], MW-261S (360-41791-5)[250X], MW-552 (360-41791-6)[25X], MW-553 (360-41791-7)[100X], MW-553 (360-41791-7)[250X], MW-562 (360-41791-8)[100X] and DUPX (360-41791-10)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

For batch 93432 the curve dated 7-25-12-12 uses quadratic regressions for Methylene Chloride.

No other difficulties were encountered during the volatile organic compounds (GC-MS) analyses.

## Case Narrative

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

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### Job ID: 360-41791-1 (Continued)

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#### Laboratory: TestAmerica Westfield (Continued)

All other quality control parameters were within the acceptance limits.

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# Detection Summary

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Client Sample ID: REW-1

Lab Sample ID: 360-41791-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	43000		2500		ug/L	50		8260C	Total/NA
cis-1,2-Dichloroethene	210		50		ug/L	50		8260C	Total/NA
Vinyl chloride	99		25		ug/L	50		8260C	Total/NA

## Client Sample ID: REW-4

Lab Sample ID: 360-41791-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2400		500		ug/L	10		8260C	Total/NA
cis-1,2-Dichloroethene	310		10		ug/L	10		8260C	Total/NA
Trichloroethene	32		10		ug/L	10		8260C	Total/NA
Vinyl chloride	79		5.0		ug/L	10		8260C	Total/NA

## Client Sample ID: REW-5

Lab Sample ID: 360-41791-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4100		500		ug/L	10		8260C	Total/NA
cis-1,2-Dichloroethene	330		10		ug/L	10		8260C	Total/NA
Trichloroethene	39		10		ug/L	10		8260C	Total/NA
Vinyl chloride	60		5.0		ug/L	10		8260C	Total/NA

## Client Sample ID: MW-265M

Lab Sample ID: 360-41791-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	790		500		ug/L	10		8260C	Total/NA
cis-1,2-Dichloroethene	170		10		ug/L	10		8260C	Total/NA
Vinyl chloride	250		5.0		ug/L	10		8260C	Total/NA

## Client Sample ID: MW-261S

Lab Sample ID: 360-41791-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	360		100		ug/L	100		8260C	Total/NA
Vinyl chloride	380		50		ug/L	100		8260C	Total/NA
Acetone - DL	190000		13000		ug/L	250		8260C	Total/NA

## Client Sample ID: MW-552

Lab Sample ID: 360-41791-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1200		25		ug/L	25		8260C	Total/NA
Trichloroethene	97		25		ug/L	25		8260C	Total/NA
Vinyl chloride	18		13		ug/L	25		8260C	Total/NA

## Client Sample ID: MW-553

Lab Sample ID: 360-41791-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	200		100		ug/L	100		8260C	Total/NA
Vinyl chloride	180		50		ug/L	100		8260C	Total/NA
Acetone - DL	220000		13000		ug/L	250		8260C	Total/NA

## Client Sample ID: MW-562

Lab Sample ID: 360-41791-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	28000		5000		ug/L	100		8260C	Total/NA
Vinyl chloride	54		50		ug/L	100		8260C	Total/NA

# Detection Summary

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Client Sample ID: TRIP BLANKS

Lab Sample ID: 360-41791-9

No Detections

## Client Sample ID: DUPX

Lab Sample ID: 360-41791-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	880		500		ug/L	10		8260C	Total/NA
cis-1,2-Dichloroethene	250		10		ug/L	10		8260C	Total/NA
Vinyl chloride	200		5.0		ug/L	10		8260C	Total/NA

# Method Summary

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	MA DEP	TAL WFD
8260C SIM	Volatile Organic Compounds (GC/MS)	SW846	TAL WFD

**Protocol References:**

MA DEP = Massachusetts Department Of Environmental Protection

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL WFD = TestAmerica Westfield, Westfield Executive Park, 53 Southampton Road, Westfield, MA 01085, TEL (413)572-4000



# Sample Summary

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
360-41791-1	REW-1	Water	07/23/12 10:20	07/23/12 17:00
360-41791-2	REW-4	Water	07/23/12 08:50	07/23/12 17:00
360-41791-3	REW-5	Water	07/23/12 09:35	07/23/12 17:00
360-41791-4	MW-265M	Water	07/23/12 07:50	07/23/12 17:00
360-41791-5	MW-261S	Water	07/23/12 11:10	07/23/12 17:00
360-41791-6	MW-552	Water	07/23/12 12:05	07/23/12 17:00
360-41791-7	MW-553	Water	07/23/12 12:40	07/23/12 17:00
360-41791-8	MW-562	Water	07/23/12 09:00	07/23/12 17:00
360-41791-9	TRIP BLANKS	Water	07/23/12 07:50	07/23/12 17:00
360-41791-10	DUPX	Water	07/23/12 12:00	07/23/12 17:00

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# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

**Client Sample ID: REW-1**

**Date Collected: 07/23/12 10:20**

**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-1**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane (SIM)	ND	*	150		ug/L			07/25/12 21:01	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		70 - 130					07/25/12 21:01	50
Dibromofluoromethane	102		70 - 130					07/25/12 21:01	50
Toluene-d8 (Surr)	98		70 - 130					07/25/12 21:01	50

**Client Sample ID: REW-4**

**Date Collected: 07/23/12 08:50**

**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-2**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane (SIM)	ND	*	30		ug/L			07/25/12 21:23	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		70 - 130					07/25/12 21:23	10
Dibromofluoromethane	103		70 - 130					07/25/12 21:23	10
Toluene-d8 (Surr)	99		70 - 130					07/25/12 21:23	10

**Client Sample ID: REW-5**

**Date Collected: 07/23/12 09:35**

**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-3**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane (SIM)	ND	*	30		ug/L			07/25/12 21:45	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	102		70 - 130					07/25/12 21:45	10
Dibromofluoromethane	102		70 - 130					07/25/12 21:45	10
Toluene-d8 (Surr)	98		70 - 130					07/25/12 21:45	10

**Client Sample ID: MW-265M**

**Date Collected: 07/23/12 07:50**

**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-4**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane (SIM)	ND	*	30		ug/L			07/25/12 22:07	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		70 - 130					07/25/12 22:07	10
Dibromofluoromethane	105		70 - 130					07/25/12 22:07	10
Toluene-d8 (Surr)	98		70 - 130					07/25/12 22:07	10

**Client Sample ID: MW-261S**

**Date Collected: 07/23/12 11:10**

**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-5**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane (SIM)	ND	*	300		ug/L			07/25/12 22:28	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		70 - 130					07/25/12 22:28	100
Dibromofluoromethane	103		70 - 130					07/25/12 22:28	100
Toluene-d8 (Surr)	98		70 - 130					07/25/12 22:28	100

# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

**Client Sample ID: MW-552**  
**Date Collected: 07/23/12 12:05**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-6**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane (SIM)	ND	*	75		ug/L			07/25/12 22:50	25
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		70 - 130					07/25/12 22:50	25
Dibromofluoromethane	103		70 - 130					07/25/12 22:50	25
Toluene-d8 (Surr)	99		70 - 130					07/25/12 22:50	25

**Client Sample ID: MW-553**  
**Date Collected: 07/23/12 12:40**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-7**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane (SIM)	ND	*	300		ug/L			07/25/12 23:12	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		70 - 130					07/25/12 23:12	100
Dibromofluoromethane	103		70 - 130					07/25/12 23:12	100
Toluene-d8 (Surr)	98		70 - 130					07/25/12 23:12	100

**Client Sample ID: MW-562**  
**Date Collected: 07/23/12 09:00**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-8**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane (SIM)	ND	*	300		ug/L			07/25/12 23:34	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		70 - 130					07/25/12 23:34	100
Dibromofluoromethane	104		70 - 130					07/25/12 23:34	100
Toluene-d8 (Surr)	98		70 - 130					07/25/12 23:34	100

**Client Sample ID: TRIP BLANKS**  
**Date Collected: 07/23/12 07:50**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-9**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane (SIM)	ND	*	3.0		ug/L			07/25/12 23:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	102		70 - 130					07/25/12 23:55	1
Dibromofluoromethane	104		70 - 130					07/25/12 23:55	1
Toluene-d8 (Surr)	98		70 - 130					07/25/12 23:55	1

**Client Sample ID: DUPX**  
**Date Collected: 07/23/12 12:00**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-10**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane (SIM)	ND	*	30		ug/L			07/26/12 00:17	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		70 - 130					07/26/12 00:17	10
Dibromofluoromethane	101		70 - 130					07/26/12 00:17	10
Toluene-d8 (Surr)	99		70 - 130					07/26/12 00:17	10



# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS)

**Client Sample ID: REW-1**

**Date Collected: 07/23/12 10:20**

**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-1**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		50		ug/L			07/25/12 21:01	50
1,1,1-Trichloroethane	ND		50		ug/L			07/25/12 21:01	50
1,1,2,2-Tetrachloroethane	ND		25		ug/L			07/25/12 21:01	50
1,1,2-Trichloroethane	ND		50		ug/L			07/25/12 21:01	50
1,1-Dichloroethane	ND		50		ug/L			07/25/12 21:01	50
1,1-Dichloroethene	ND		50		ug/L			07/25/12 21:01	50
1,1-Dichloropropene	ND		50		ug/L			07/25/12 21:01	50
1,2,3-Trichlorobenzene	ND		50		ug/L			07/25/12 21:01	50
1,2,3-Trichloropropane	ND		50		ug/L			07/25/12 21:01	50
1,2,4-Trichlorobenzene	ND		50		ug/L			07/25/12 21:01	50
1,2,4-Trimethylbenzene	ND		50		ug/L			07/25/12 21:01	50
1,2-Dibromo-3-Chloropropane	ND		250		ug/L			07/25/12 21:01	50
1,2-Dichlorobenzene	ND		50		ug/L			07/25/12 21:01	50
1,2-Dichloroethane	ND		50		ug/L			07/25/12 21:01	50
1,2-Dichloropropane	ND		50		ug/L			07/25/12 21:01	50
1,3,5-Trimethylbenzene	ND		50		ug/L			07/25/12 21:01	50
1,3-Dichlorobenzene	ND		50		ug/L			07/25/12 21:01	50
1,3-Dichloropropane	ND		50		ug/L			07/25/12 21:01	50
1,4-Dichlorobenzene	ND		50		ug/L			07/25/12 21:01	50
1,4-Dioxane	ND		2500		ug/L			07/25/12 21:01	50
2,2-Dichloropropane	ND		50		ug/L			07/25/12 21:01	50
2-Butanone (MEK)	ND		500		ug/L			07/25/12 21:01	50
2-Chlorotoluene	ND		50		ug/L			07/25/12 21:01	50
2-Hexanone	ND		500		ug/L			07/25/12 21:01	50
4-Chlorotoluene	ND		50		ug/L			07/25/12 21:01	50
4-Isopropyltoluene	ND		50		ug/L			07/25/12 21:01	50
4-Methyl-2-pentanone (MIBK)	ND		500		ug/L			07/25/12 21:01	50
<b>Acetone</b>	<b>43000</b>		2500		ug/L			07/25/12 21:01	50
Benzene	ND		50		ug/L			07/25/12 21:01	50
Bromobenzene	ND		50		ug/L			07/25/12 21:01	50
Bromoform	ND		50		ug/L			07/25/12 21:01	50
Bromomethane	ND		100		ug/L			07/25/12 21:01	50
Carbon disulfide	ND		500		ug/L			07/25/12 21:01	50
Carbon tetrachloride	ND		50		ug/L			07/25/12 21:01	50
Chlorobenzene	ND		50		ug/L			07/25/12 21:01	50
Chlorobromomethane	ND		50		ug/L			07/25/12 21:01	50
Chlorodibromomethane	ND		25		ug/L			07/25/12 21:01	50
Chloroethane	ND		100		ug/L			07/25/12 21:01	50
Chloroform	ND		50		ug/L			07/25/12 21:01	50
Chloromethane	ND		100		ug/L			07/25/12 21:01	50
<b>cis-1,2-Dichloroethene</b>	<b>210</b>		50		ug/L			07/25/12 21:01	50
cis-1,3-Dichloropropene	ND		20		ug/L			07/25/12 21:01	50
Dibromomethane	ND		50		ug/L			07/25/12 21:01	50
Dichlorobromomethane	ND		25		ug/L			07/25/12 21:01	50
Dichlorodifluoromethane	ND *		50		ug/L			07/25/12 21:01	50
Ethyl ether	ND		50		ug/L			07/25/12 21:01	50
Ethylbenzene	ND		50		ug/L			07/25/12 21:01	50
Ethylene Dibromide	ND		50		ug/L			07/25/12 21:01	50
Hexachlorobutadiene	ND		20		ug/L			07/25/12 21:01	50
Isopropyl ether	ND		500		ug/L			07/25/12 21:01	50
Isopropylbenzene	ND		50		ug/L			07/25/12 21:01	50

# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Client Sample ID: REW-1**  
**Date Collected: 07/23/12 10:20**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-1**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		100		ug/L			07/25/12 21:01	50
Methyl tert-butyl ether	ND		50		ug/L			07/25/12 21:01	50
Methylene Chloride	ND		100		ug/L			07/25/12 21:01	50
n-Butylbenzene	ND		50		ug/L			07/25/12 21:01	50
N-Propylbenzene	ND		50		ug/L			07/25/12 21:01	50
Naphthalene	ND		250		ug/L			07/25/12 21:01	50
o-Xylene	ND		50		ug/L			07/25/12 21:01	50
sec-Butylbenzene	ND		50		ug/L			07/25/12 21:01	50
Styrene	ND		50		ug/L			07/25/12 21:01	50
Tert-amyl methyl ether	ND		250		ug/L			07/25/12 21:01	50
Tert-butyl ethyl ether	ND		250		ug/L			07/25/12 21:01	50
tert-Butylbenzene	ND		50		ug/L			07/25/12 21:01	50
Tetrachloroethene	ND		50		ug/L			07/25/12 21:01	50
Tetrahydrofuran	ND		500		ug/L			07/25/12 21:01	50
Toluene	ND		50		ug/L			07/25/12 21:01	50
trans-1,2-Dichloroethene	ND		50		ug/L			07/25/12 21:01	50
trans-1,3-Dichloropropene	ND		20		ug/L			07/25/12 21:01	50
Trichloroethene	ND		50		ug/L			07/25/12 21:01	50
Trichlorofluoromethane	ND		50		ug/L			07/25/12 21:01	50
<b>Vinyl chloride</b>	<b>99</b>		25		ug/L			07/25/12 21:01	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		70 - 130		07/25/12 21:01	50
Dibromofluoromethane	102		70 - 130		07/25/12 21:01	50
Toluene-d8 (Surr)	98		70 - 130		07/25/12 21:01	50

**Client Sample ID: REW-4**  
**Date Collected: 07/23/12 08:50**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-2**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		10		ug/L			07/25/12 21:23	10
1,1,1-Trichloroethane	ND		10		ug/L			07/25/12 21:23	10
1,1,2,2-Tetrachloroethane	ND		5.0		ug/L			07/25/12 21:23	10
1,1,2-Trichloroethane	ND		10		ug/L			07/25/12 21:23	10
1,1-Dichloroethane	ND		10		ug/L			07/25/12 21:23	10
1,1-Dichloroethene	ND		10		ug/L			07/25/12 21:23	10
1,1-Dichloropropene	ND		10		ug/L			07/25/12 21:23	10
1,2,3-Trichlorobenzene	ND		10		ug/L			07/25/12 21:23	10
1,2,3-Trichloropropane	ND		10		ug/L			07/25/12 21:23	10
1,2,4-Trichlorobenzene	ND		10		ug/L			07/25/12 21:23	10
1,2,4-Trimethylbenzene	ND		10		ug/L			07/25/12 21:23	10
1,2-Dibromo-3-Chloropropane	ND		50		ug/L			07/25/12 21:23	10
1,2-Dichlorobenzene	ND		10		ug/L			07/25/12 21:23	10
1,2-Dichloroethane	ND		10		ug/L			07/25/12 21:23	10
1,2-Dichloropropane	ND		10		ug/L			07/25/12 21:23	10
1,3,5-Trimethylbenzene	ND		10		ug/L			07/25/12 21:23	10
1,3-Dichlorobenzene	ND		10		ug/L			07/25/12 21:23	10
1,3-Dichloropropane	ND		10		ug/L			07/25/12 21:23	10
1,4-Dichlorobenzene	ND		10		ug/L			07/25/12 21:23	10
1,4-Dioxane	ND		500		ug/L			07/25/12 21:23	10
2,2-Dichloropropane	ND		10		ug/L			07/25/12 21:23	10

# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Client Sample ID: REW-4**

**Date Collected: 07/23/12 08:50**

**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-2**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		100		ug/L			07/25/12 21:23	10
2-Chlorotoluene	ND		10		ug/L			07/25/12 21:23	10
2-Hexanone	ND		100		ug/L			07/25/12 21:23	10
4-Chlorotoluene	ND		10		ug/L			07/25/12 21:23	10
4-Isopropyltoluene	ND		10		ug/L			07/25/12 21:23	10
4-Methyl-2-pentanone (MIBK)	ND		100		ug/L			07/25/12 21:23	10
<b>Acetone</b>	<b>2400</b>		500		ug/L			07/25/12 21:23	10
Benzene	ND		10		ug/L			07/25/12 21:23	10
Bromobenzene	ND		10		ug/L			07/25/12 21:23	10
Bromoform	ND		10		ug/L			07/25/12 21:23	10
Bromomethane	ND		20		ug/L			07/25/12 21:23	10
Carbon disulfide	ND		100		ug/L			07/25/12 21:23	10
Carbon tetrachloride	ND		10		ug/L			07/25/12 21:23	10
Chlorobenzene	ND		10		ug/L			07/25/12 21:23	10
Chlorobromomethane	ND		10		ug/L			07/25/12 21:23	10
Chlorodibromomethane	ND		5.0		ug/L			07/25/12 21:23	10
Chloroethane	ND		20		ug/L			07/25/12 21:23	10
Chloroform	ND		10		ug/L			07/25/12 21:23	10
Chloromethane	ND		20		ug/L			07/25/12 21:23	10
<b>cis-1,2-Dichloroethene</b>	<b>310</b>		10		ug/L			07/25/12 21:23	10
cis-1,3-Dichloropropene	ND		4.0		ug/L			07/25/12 21:23	10
Dibromomethane	ND		10		ug/L			07/25/12 21:23	10
Dichlorobromomethane	ND		5.0		ug/L			07/25/12 21:23	10
Dichlorodifluoromethane	ND *		10		ug/L			07/25/12 21:23	10
Ethyl ether	ND		10		ug/L			07/25/12 21:23	10
Ethylbenzene	ND		10		ug/L			07/25/12 21:23	10
Ethylene Dibromide	ND		10		ug/L			07/25/12 21:23	10
Hexachlorobutadiene	ND		4.0		ug/L			07/25/12 21:23	10
Isopropyl ether	ND		100		ug/L			07/25/12 21:23	10
Isopropylbenzene	ND		10		ug/L			07/25/12 21:23	10
m-Xylene & p-Xylene	ND		20		ug/L			07/25/12 21:23	10
Methyl tert-butyl ether	ND		10		ug/L			07/25/12 21:23	10
Methylene Chloride	ND		20		ug/L			07/25/12 21:23	10
n-Butylbenzene	ND		10		ug/L			07/25/12 21:23	10
N-Propylbenzene	ND		10		ug/L			07/25/12 21:23	10
Naphthalene	ND		50		ug/L			07/25/12 21:23	10
o-Xylene	ND		10		ug/L			07/25/12 21:23	10
sec-Butylbenzene	ND		10		ug/L			07/25/12 21:23	10
Styrene	ND		10		ug/L			07/25/12 21:23	10
Tert-amyl methyl ether	ND		50		ug/L			07/25/12 21:23	10
Tert-butyl ethyl ether	ND		50		ug/L			07/25/12 21:23	10
tert-Butylbenzene	ND		10		ug/L			07/25/12 21:23	10
Tetrachloroethene	ND		10		ug/L			07/25/12 21:23	10
Tetrahydrofuran	ND		100		ug/L			07/25/12 21:23	10
Toluene	ND		10		ug/L			07/25/12 21:23	10
trans-1,2-Dichloroethene	ND		10		ug/L			07/25/12 21:23	10
trans-1,3-Dichloropropene	ND		4.0		ug/L			07/25/12 21:23	10
<b>Trichloroethene</b>	<b>32</b>		10		ug/L			07/25/12 21:23	10
Trichlorofluoromethane	ND		10		ug/L			07/25/12 21:23	10
<b>Vinyl chloride</b>	<b>79</b>		5.0		ug/L			07/25/12 21:23	10

# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		70 - 130		07/25/12 21:23	10
Dibromofluoromethane	103		70 - 130		07/25/12 21:23	10
Toluene-d8 (Surr)	98		70 - 130		07/25/12 21:23	10

**Client Sample ID: REW-5**

**Date Collected: 07/23/12 09:35**

**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-3**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		10		ug/L			07/25/12 21:45	10
1,1,1-Trichloroethane	ND		10		ug/L			07/25/12 21:45	10
1,1,2,2-Tetrachloroethane	ND		5.0		ug/L			07/25/12 21:45	10
1,1,2-Trichloroethane	ND		10		ug/L			07/25/12 21:45	10
1,1-Dichloroethane	ND		10		ug/L			07/25/12 21:45	10
1,1-Dichloroethene	ND		10		ug/L			07/25/12 21:45	10
1,1-Dichloropropene	ND		10		ug/L			07/25/12 21:45	10
1,2,3-Trichlorobenzene	ND		10		ug/L			07/25/12 21:45	10
1,2,3-Trichloropropane	ND		10		ug/L			07/25/12 21:45	10
1,2,4-Trichlorobenzene	ND		10		ug/L			07/25/12 21:45	10
1,2,4-Trimethylbenzene	ND		10		ug/L			07/25/12 21:45	10
1,2-Dibromo-3-Chloropropane	ND		50		ug/L			07/25/12 21:45	10
1,2-Dichlorobenzene	ND		10		ug/L			07/25/12 21:45	10
1,2-Dichloroethane	ND		10		ug/L			07/25/12 21:45	10
1,2-Dichloropropane	ND		10		ug/L			07/25/12 21:45	10
1,3,5-Trimethylbenzene	ND		10		ug/L			07/25/12 21:45	10
1,3-Dichlorobenzene	ND		10		ug/L			07/25/12 21:45	10
1,3-Dichloropropane	ND		10		ug/L			07/25/12 21:45	10
1,4-Dichlorobenzene	ND		10		ug/L			07/25/12 21:45	10
1,4-Dioxane	ND		500		ug/L			07/25/12 21:45	10
2,2-Dichloropropane	ND		10		ug/L			07/25/12 21:45	10
2-Butanone (MEK)	ND		100		ug/L			07/25/12 21:45	10
2-Chlorotoluene	ND		10		ug/L			07/25/12 21:45	10
2-Hexanone	ND		100		ug/L			07/25/12 21:45	10
4-Chlorotoluene	ND		10		ug/L			07/25/12 21:45	10
4-Isopropyltoluene	ND		10		ug/L			07/25/12 21:45	10
4-Methyl-2-pentanone (MIBK)	ND		100		ug/L			07/25/12 21:45	10
<b>Acetone</b>	<b>4100</b>		500		ug/L			07/25/12 21:45	10
Benzene	ND		10		ug/L			07/25/12 21:45	10
Bromobenzene	ND		10		ug/L			07/25/12 21:45	10
Bromoform	ND		10		ug/L			07/25/12 21:45	10
Bromomethane	ND		20		ug/L			07/25/12 21:45	10
Carbon disulfide	ND		100		ug/L			07/25/12 21:45	10
Carbon tetrachloride	ND		10		ug/L			07/25/12 21:45	10
Chlorobenzene	ND		10		ug/L			07/25/12 21:45	10
Chlorobromomethane	ND		10		ug/L			07/25/12 21:45	10
Chlorodibromomethane	ND		5.0		ug/L			07/25/12 21:45	10
Chloroethane	ND		20		ug/L			07/25/12 21:45	10
Chloroform	ND		10		ug/L			07/25/12 21:45	10
Chloromethane	ND		20		ug/L			07/25/12 21:45	10
<b>cis-1,2-Dichloroethene</b>	<b>330</b>		10		ug/L			07/25/12 21:45	10
cis-1,3-Dichloropropene	ND		4.0		ug/L			07/25/12 21:45	10
Dibromomethane	ND		10		ug/L			07/25/12 21:45	10
Dichlorobromomethane	ND		5.0		ug/L			07/25/12 21:45	10
Dichlorodifluoromethane	ND	*	10		ug/L			07/25/12 21:45	10
Ethyl ether	ND		10		ug/L			07/25/12 21:45	10

# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Client Sample ID: REW-5**  
**Date Collected: 07/23/12 09:35**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-3**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		10		ug/L			07/25/12 21:45	10
Ethylene Dibromide	ND		10		ug/L			07/25/12 21:45	10
Hexachlorobutadiene	ND		4.0		ug/L			07/25/12 21:45	10
Isopropyl ether	ND		100		ug/L			07/25/12 21:45	10
Isopropylbenzene	ND		10		ug/L			07/25/12 21:45	10
m-Xylene & p-Xylene	ND		20		ug/L			07/25/12 21:45	10
Methyl tert-butyl ether	ND		10		ug/L			07/25/12 21:45	10
Methylene Chloride	ND		20		ug/L			07/25/12 21:45	10
n-Butylbenzene	ND		10		ug/L			07/25/12 21:45	10
N-Propylbenzene	ND		10		ug/L			07/25/12 21:45	10
Naphthalene	ND		50		ug/L			07/25/12 21:45	10
o-Xylene	ND		10		ug/L			07/25/12 21:45	10
sec-Butylbenzene	ND		10		ug/L			07/25/12 21:45	10
Styrene	ND		10		ug/L			07/25/12 21:45	10
Tert-amyl methyl ether	ND		50		ug/L			07/25/12 21:45	10
Tert-butyl ethyl ether	ND		50		ug/L			07/25/12 21:45	10
tert-Butylbenzene	ND		10		ug/L			07/25/12 21:45	10
Tetrachloroethene	ND		10		ug/L			07/25/12 21:45	10
Tetrahydrofuran	ND		100		ug/L			07/25/12 21:45	10
Toluene	ND		10		ug/L			07/25/12 21:45	10
trans-1,2-Dichloroethene	ND		10		ug/L			07/25/12 21:45	10
trans-1,3-Dichloropropene	ND		4.0		ug/L			07/25/12 21:45	10
<b>Trichloroethene</b>	<b>39</b>		10		ug/L			07/25/12 21:45	10
Trichlorofluoromethane	ND		10		ug/L			07/25/12 21:45	10
<b>Vinyl chloride</b>	<b>60</b>		5.0		ug/L			07/25/12 21:45	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	102		70 - 130		07/25/12 21:45	10
Dibromofluoromethane	102		70 - 130		07/25/12 21:45	10
Toluene-d8 (Surr)	98		70 - 130		07/25/12 21:45	10

**Client Sample ID: MW-265M**  
**Date Collected: 07/23/12 07:50**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-4**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		10		ug/L			07/25/12 22:07	10
1,1,1-Trichloroethane	ND		10		ug/L			07/25/12 22:07	10
1,1,2,2-Tetrachloroethane	ND		5.0		ug/L			07/25/12 22:07	10
1,1,2-Trichloroethane	ND		10		ug/L			07/25/12 22:07	10
1,1-Dichloroethane	ND		10		ug/L			07/25/12 22:07	10
1,1-Dichloroethene	ND		10		ug/L			07/25/12 22:07	10
1,1-Dichloropropene	ND		10		ug/L			07/25/12 22:07	10
1,2,3-Trichlorobenzene	ND		10		ug/L			07/25/12 22:07	10
1,2,3-Trichloropropane	ND		10		ug/L			07/25/12 22:07	10
1,2,4-Trichlorobenzene	ND		10		ug/L			07/25/12 22:07	10
1,2,4-Trimethylbenzene	ND		10		ug/L			07/25/12 22:07	10
1,2-Dibromo-3-Chloropropane	ND		50		ug/L			07/25/12 22:07	10
1,2-Dichlorobenzene	ND		10		ug/L			07/25/12 22:07	10
1,2-Dichloroethane	ND		10		ug/L			07/25/12 22:07	10
1,2-Dichloropropane	ND		10		ug/L			07/25/12 22:07	10
1,3,5-Trimethylbenzene	ND		10		ug/L			07/25/12 22:07	10

# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
 Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Client Sample ID: MW-265M**  
**Date Collected: 07/23/12 07:50**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-4**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		10		ug/L			07/25/12 22:07	10
1,3-Dichloropropane	ND		10		ug/L			07/25/12 22:07	10
1,4-Dichlorobenzene	ND		10		ug/L			07/25/12 22:07	10
1,4-Dioxane	ND		500		ug/L			07/25/12 22:07	10
2,2-Dichloropropane	ND		10		ug/L			07/25/12 22:07	10
2-Butanone (MEK)	ND		100		ug/L			07/25/12 22:07	10
2-Chlorotoluene	ND		10		ug/L			07/25/12 22:07	10
2-Hexanone	ND		100		ug/L			07/25/12 22:07	10
4-Chlorotoluene	ND		10		ug/L			07/25/12 22:07	10
4-Isopropyltoluene	ND		10		ug/L			07/25/12 22:07	10
4-Methyl-2-pentanone (MIBK)	ND		100		ug/L			07/25/12 22:07	10
<b>Acetone</b>	<b>790</b>		500		ug/L			07/25/12 22:07	10
Benzene	ND		10		ug/L			07/25/12 22:07	10
Bromobenzene	ND		10		ug/L			07/25/12 22:07	10
Bromoform	ND		10		ug/L			07/25/12 22:07	10
Bromomethane	ND		20		ug/L			07/25/12 22:07	10
Carbon disulfide	ND		100		ug/L			07/25/12 22:07	10
Carbon tetrachloride	ND		10		ug/L			07/25/12 22:07	10
Chlorobenzene	ND		10		ug/L			07/25/12 22:07	10
Chlorobromomethane	ND		10		ug/L			07/25/12 22:07	10
Chlorodibromomethane	ND		5.0		ug/L			07/25/12 22:07	10
Chloroethane	ND		20		ug/L			07/25/12 22:07	10
Chloroform	ND		10		ug/L			07/25/12 22:07	10
Chloromethane	ND		20		ug/L			07/25/12 22:07	10
<b>cis-1,2-Dichloroethene</b>	<b>170</b>		10		ug/L			07/25/12 22:07	10
cis-1,3-Dichloropropene	ND		4.0		ug/L			07/25/12 22:07	10
Dibromomethane	ND		10		ug/L			07/25/12 22:07	10
Dichlorobromomethane	ND		5.0		ug/L			07/25/12 22:07	10
Dichlorodifluoromethane	ND *		10		ug/L			07/25/12 22:07	10
Ethyl ether	ND		10		ug/L			07/25/12 22:07	10
Ethylbenzene	ND		10		ug/L			07/25/12 22:07	10
Ethylene Dibromide	ND		10		ug/L			07/25/12 22:07	10
Hexachlorobutadiene	ND		4.0		ug/L			07/25/12 22:07	10
Isopropyl ether	ND		100		ug/L			07/25/12 22:07	10
Isopropylbenzene	ND		10		ug/L			07/25/12 22:07	10
m-Xylene & p-Xylene	ND		20		ug/L			07/25/12 22:07	10
Methyl tert-butyl ether	ND		10		ug/L			07/25/12 22:07	10
Methylene Chloride	ND		20		ug/L			07/25/12 22:07	10
n-Butylbenzene	ND		10		ug/L			07/25/12 22:07	10
N-Propylbenzene	ND		10		ug/L			07/25/12 22:07	10
Naphthalene	ND		50		ug/L			07/25/12 22:07	10
o-Xylene	ND		10		ug/L			07/25/12 22:07	10
sec-Butylbenzene	ND		10		ug/L			07/25/12 22:07	10
Styrene	ND		10		ug/L			07/25/12 22:07	10
Tert-amyl methyl ether	ND		50		ug/L			07/25/12 22:07	10
Tert-butyl ethyl ether	ND		50		ug/L			07/25/12 22:07	10
tert-Butylbenzene	ND		10		ug/L			07/25/12 22:07	10
Tetrachloroethene	ND		10		ug/L			07/25/12 22:07	10
Tetrahydrofuran	ND		100		ug/L			07/25/12 22:07	10
Toluene	ND		10		ug/L			07/25/12 22:07	10
trans-1,2-Dichloroethene	ND		10		ug/L			07/25/12 22:07	10

# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Client Sample ID: MW-265M**  
**Date Collected: 07/23/12 07:50**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-4**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		4.0		ug/L			07/25/12 22:07	10
Trichloroethene	ND		10		ug/L			07/25/12 22:07	10
Trichlorofluoromethane	ND		10		ug/L			07/25/12 22:07	10
<b>Vinyl chloride</b>	<b>250</b>		5.0		ug/L			07/25/12 22:07	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		70 - 130					07/25/12 22:07	10
Dibromofluoromethane	105		70 - 130					07/25/12 22:07	10
Toluene-d8 (Surr)	98		70 - 130					07/25/12 22:07	10

**Client Sample ID: MW-261S**  
**Date Collected: 07/23/12 11:10**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-5**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		100		ug/L			07/25/12 22:28	100
1,1,1-Trichloroethane	ND		100		ug/L			07/25/12 22:28	100
1,1,2,2-Tetrachloroethane	ND		50		ug/L			07/25/12 22:28	100
1,1,2-Trichloroethane	ND		100		ug/L			07/25/12 22:28	100
1,1-Dichloroethane	ND		100		ug/L			07/25/12 22:28	100
1,1-Dichloroethene	ND		100		ug/L			07/25/12 22:28	100
1,1-Dichloropropene	ND		100		ug/L			07/25/12 22:28	100
1,2,3-Trichlorobenzene	ND		100		ug/L			07/25/12 22:28	100
1,2,3-Trichloropropane	ND		100		ug/L			07/25/12 22:28	100
1,2,4-Trichlorobenzene	ND		100		ug/L			07/25/12 22:28	100
1,2,4-Trimethylbenzene	ND		100		ug/L			07/25/12 22:28	100
1,2-Dibromo-3-Chloropropane	ND		500		ug/L			07/25/12 22:28	100
1,2-Dichlorobenzene	ND		100		ug/L			07/25/12 22:28	100
1,2-Dichloroethane	ND		100		ug/L			07/25/12 22:28	100
1,2-Dichloropropane	ND		100		ug/L			07/25/12 22:28	100
1,3,5-Trimethylbenzene	ND		100		ug/L			07/25/12 22:28	100
1,3-Dichlorobenzene	ND		100		ug/L			07/25/12 22:28	100
1,3-Dichloropropane	ND		100		ug/L			07/25/12 22:28	100
1,4-Dichlorobenzene	ND		100		ug/L			07/25/12 22:28	100
1,4-Dioxane	ND		5000		ug/L			07/25/12 22:28	100
2,2-Dichloropropane	ND		100		ug/L			07/25/12 22:28	100
2-Butanone (MEK)	ND		1000		ug/L			07/25/12 22:28	100
2-Chlorotoluene	ND		100		ug/L			07/25/12 22:28	100
2-Hexanone	ND		1000		ug/L			07/25/12 22:28	100
4-Chlorotoluene	ND		100		ug/L			07/25/12 22:28	100
4-Isopropyltoluene	ND		100		ug/L			07/25/12 22:28	100
4-Methyl-2-pentanone (MIBK)	ND		1000		ug/L			07/25/12 22:28	100
Benzene	ND		100		ug/L			07/25/12 22:28	100
Bromobenzene	ND		100		ug/L			07/25/12 22:28	100
Bromoform	ND		100		ug/L			07/25/12 22:28	100
Bromomethane	ND		200		ug/L			07/25/12 22:28	100
Carbon disulfide	ND		1000		ug/L			07/25/12 22:28	100
Carbon tetrachloride	ND		100		ug/L			07/25/12 22:28	100
Chlorobenzene	ND		100		ug/L			07/25/12 22:28	100
Chlorobromomethane	ND		100		ug/L			07/25/12 22:28	100
Chlorodibromomethane	ND		50		ug/L			07/25/12 22:28	100
Chloroethane	ND		200		ug/L			07/25/12 22:28	100

# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Client Sample ID: MW-261S**  
**Date Collected: 07/23/12 11:10**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-5**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		100		ug/L			07/25/12 22:28	100
Chloromethane	ND		200		ug/L			07/25/12 22:28	100
<b>cis-1,2-Dichloroethene</b>	<b>360</b>		100		ug/L			07/25/12 22:28	100
cis-1,3-Dichloropropene	ND		40		ug/L			07/25/12 22:28	100
Dibromomethane	ND		100		ug/L			07/25/12 22:28	100
Dichlorobromomethane	ND		50		ug/L			07/25/12 22:28	100
Dichlorodifluoromethane	ND	*	100		ug/L			07/25/12 22:28	100
Ethyl ether	ND		100		ug/L			07/25/12 22:28	100
Ethylbenzene	ND		100		ug/L			07/25/12 22:28	100
Ethylene Dibromide	ND		100		ug/L			07/25/12 22:28	100
Hexachlorobutadiene	ND		40		ug/L			07/25/12 22:28	100
Isopropyl ether	ND		1000		ug/L			07/25/12 22:28	100
Isopropylbenzene	ND		100		ug/L			07/25/12 22:28	100
m-Xylene & p-Xylene	ND		200		ug/L			07/25/12 22:28	100
Methyl tert-butyl ether	ND		100		ug/L			07/25/12 22:28	100
Methylene Chloride	ND		200		ug/L			07/25/12 22:28	100
n-Butylbenzene	ND		100		ug/L			07/25/12 22:28	100
N-Propylbenzene	ND		100		ug/L			07/25/12 22:28	100
Naphthalene	ND		500		ug/L			07/25/12 22:28	100
o-Xylene	ND		100		ug/L			07/25/12 22:28	100
sec-Butylbenzene	ND		100		ug/L			07/25/12 22:28	100
Styrene	ND		100		ug/L			07/25/12 22:28	100
Tert-amyl methyl ether	ND		500		ug/L			07/25/12 22:28	100
Tert-butyl ethyl ether	ND		500		ug/L			07/25/12 22:28	100
tert-Butylbenzene	ND		100		ug/L			07/25/12 22:28	100
Tetrachloroethene	ND		100		ug/L			07/25/12 22:28	100
Tetrahydrofuran	ND		1000		ug/L			07/25/12 22:28	100
Toluene	ND		100		ug/L			07/25/12 22:28	100
trans-1,2-Dichloroethene	ND		100		ug/L			07/25/12 22:28	100
trans-1,3-Dichloropropene	ND		40		ug/L			07/25/12 22:28	100
Trichloroethene	ND		100		ug/L			07/25/12 22:28	100
Trichlorofluoromethane	ND		100		ug/L			07/25/12 22:28	100
<b>Vinyl chloride</b>	<b>380</b>		50		ug/L			07/25/12 22:28	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		70 - 130		07/25/12 22:28	100
Dibromofluoromethane	104		70 - 130		07/25/12 22:28	100
Toluene-d8 (Surr)	98		70 - 130		07/25/12 22:28	100

**Client Sample ID: MW-552**  
**Date Collected: 07/23/12 12:05**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-6**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		25		ug/L			07/25/12 22:50	25
1,1,1-Trichloroethane	ND		25		ug/L			07/25/12 22:50	25
1,1,2,2-Tetrachloroethane	ND		13		ug/L			07/25/12 22:50	25
1,1,2-Trichloroethane	ND		25		ug/L			07/25/12 22:50	25
1,1-Dichloroethane	ND		25		ug/L			07/25/12 22:50	25
1,1-Dichloroethene	ND		25		ug/L			07/25/12 22:50	25
1,1-Dichloropropene	ND		25		ug/L			07/25/12 22:50	25
1,2,3-Trichlorobenzene	ND		25		ug/L			07/25/12 22:50	25



# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Client Sample ID: MW-552**

**Date Collected: 07/23/12 12:05**

**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-6**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		25		ug/L			07/25/12 22:50	25
1,2,4-Trichlorobenzene	ND		25		ug/L			07/25/12 22:50	25
1,2,4-Trimethylbenzene	ND		25		ug/L			07/25/12 22:50	25
1,2-Dibromo-3-Chloropropane	ND		130		ug/L			07/25/12 22:50	25
1,2-Dichlorobenzene	ND		25		ug/L			07/25/12 22:50	25
1,2-Dichloroethane	ND		25		ug/L			07/25/12 22:50	25
1,2-Dichloropropane	ND		25		ug/L			07/25/12 22:50	25
1,3,5-Trimethylbenzene	ND		25		ug/L			07/25/12 22:50	25
1,3-Dichlorobenzene	ND		25		ug/L			07/25/12 22:50	25
1,3-Dichloropropane	ND		25		ug/L			07/25/12 22:50	25
1,4-Dichlorobenzene	ND		25		ug/L			07/25/12 22:50	25
1,4-Dioxane	ND		1300		ug/L			07/25/12 22:50	25
2,2-Dichloropropane	ND		25		ug/L			07/25/12 22:50	25
2-Butanone (MEK)	ND		250		ug/L			07/25/12 22:50	25
2-Chlorotoluene	ND		25		ug/L			07/25/12 22:50	25
2-Hexanone	ND		250		ug/L			07/25/12 22:50	25
4-Chlorotoluene	ND		25		ug/L			07/25/12 22:50	25
4-Isopropyltoluene	ND		25		ug/L			07/25/12 22:50	25
4-Methyl-2-pentanone (MIBK)	ND		250		ug/L			07/25/12 22:50	25
Acetone	ND		1300		ug/L			07/25/12 22:50	25
Benzene	ND		25		ug/L			07/25/12 22:50	25
Bromobenzene	ND		25		ug/L			07/25/12 22:50	25
Bromoform	ND		25		ug/L			07/25/12 22:50	25
Bromomethane	ND		50		ug/L			07/25/12 22:50	25
Carbon disulfide	ND		250		ug/L			07/25/12 22:50	25
Carbon tetrachloride	ND		25		ug/L			07/25/12 22:50	25
Chlorobenzene	ND		25		ug/L			07/25/12 22:50	25
Chlorobromomethane	ND		25		ug/L			07/25/12 22:50	25
Chlorodibromomethane	ND		13		ug/L			07/25/12 22:50	25
Chloroethane	ND		50		ug/L			07/25/12 22:50	25
Chloroform	ND		25		ug/L			07/25/12 22:50	25
Chloromethane	ND		50		ug/L			07/25/12 22:50	25
<b>cis-1,2-Dichloroethene</b>	<b>1200</b>		25		ug/L			07/25/12 22:50	25
cis-1,3-Dichloropropene	ND		10		ug/L			07/25/12 22:50	25
Dibromomethane	ND		25		ug/L			07/25/12 22:50	25
Dichlorobromomethane	ND		13		ug/L			07/25/12 22:50	25
Dichlorodifluoromethane	ND *		25		ug/L			07/25/12 22:50	25
Ethyl ether	ND		25		ug/L			07/25/12 22:50	25
Ethylbenzene	ND		25		ug/L			07/25/12 22:50	25
Ethylene Dibromide	ND		25		ug/L			07/25/12 22:50	25
Hexachlorobutadiene	ND		10		ug/L			07/25/12 22:50	25
Isopropyl ether	ND		250		ug/L			07/25/12 22:50	25
Isopropylbenzene	ND		25		ug/L			07/25/12 22:50	25
m-Xylene & p-Xylene	ND		50		ug/L			07/25/12 22:50	25
Methyl tert-butyl ether	ND		25		ug/L			07/25/12 22:50	25
Methylene Chloride	ND		50		ug/L			07/25/12 22:50	25
n-Butylbenzene	ND		25		ug/L			07/25/12 22:50	25
N-Propylbenzene	ND		25		ug/L			07/25/12 22:50	25
Naphthalene	ND		130		ug/L			07/25/12 22:50	25
o-Xylene	ND		25		ug/L			07/25/12 22:50	25
sec-Butylbenzene	ND		25		ug/L			07/25/12 22:50	25

# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Client Sample ID: MW-552**  
**Date Collected: 07/23/12 12:05**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-6**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		25		ug/L			07/25/12 22:50	25
Tert-amyl methyl ether	ND		130		ug/L			07/25/12 22:50	25
Tert-butyl ethyl ether	ND		130		ug/L			07/25/12 22:50	25
tert-Butylbenzene	ND		25		ug/L			07/25/12 22:50	25
Tetrachloroethene	ND		25		ug/L			07/25/12 22:50	25
Tetrahydrofuran	ND		250		ug/L			07/25/12 22:50	25
Toluene	ND		25		ug/L			07/25/12 22:50	25
trans-1,2-Dichloroethene	ND		25		ug/L			07/25/12 22:50	25
trans-1,3-Dichloropropene	ND		10		ug/L			07/25/12 22:50	25
<b>Trichloroethene</b>	<b>97</b>		25		ug/L			07/25/12 22:50	25
Trichlorofluoromethane	ND		25		ug/L			07/25/12 22:50	25
<b>Vinyl chloride</b>	<b>18</b>		13		ug/L			07/25/12 22:50	25
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		70 - 130					07/25/12 22:50	25
Dibromofluoromethane	103		70 - 130					07/25/12 22:50	25
Toluene-d8 (Surr)	99		70 - 130					07/25/12 22:50	25

**Client Sample ID: MW-553**  
**Date Collected: 07/23/12 12:40**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-7**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		100		ug/L			07/25/12 23:12	100
1,1,1-Trichloroethane	ND		100		ug/L			07/25/12 23:12	100
1,1,2,2-Tetrachloroethane	ND		50		ug/L			07/25/12 23:12	100
1,1,2-Trichloroethane	ND		100		ug/L			07/25/12 23:12	100
1,1-Dichloroethane	ND		100		ug/L			07/25/12 23:12	100
1,1-Dichloroethene	ND		100		ug/L			07/25/12 23:12	100
1,1-Dichloropropene	ND		100		ug/L			07/25/12 23:12	100
1,2,3-Trichlorobenzene	ND		100		ug/L			07/25/12 23:12	100
1,2,3-Trichloropropane	ND		100		ug/L			07/25/12 23:12	100
1,2,4-Trichlorobenzene	ND		100		ug/L			07/25/12 23:12	100
1,2,4-Trimethylbenzene	ND		100		ug/L			07/25/12 23:12	100
1,2-Dibromo-3-Chloropropane	ND		500		ug/L			07/25/12 23:12	100
1,2-Dichlorobenzene	ND		100		ug/L			07/25/12 23:12	100
1,2-Dichloroethane	ND		100		ug/L			07/25/12 23:12	100
1,2-Dichloropropane	ND		100		ug/L			07/25/12 23:12	100
1,3,5-Trimethylbenzene	ND		100		ug/L			07/25/12 23:12	100
1,3-Dichlorobenzene	ND		100		ug/L			07/25/12 23:12	100
1,3-Dichloropropane	ND		100		ug/L			07/25/12 23:12	100
1,4-Dichlorobenzene	ND		100		ug/L			07/25/12 23:12	100
1,4-Dioxane	ND		5000		ug/L			07/25/12 23:12	100
2,2-Dichloropropane	ND		100		ug/L			07/25/12 23:12	100
2-Butanone (MEK)	ND		1000		ug/L			07/25/12 23:12	100
2-Chlorotoluene	ND		100		ug/L			07/25/12 23:12	100
2-Hexanone	ND		1000		ug/L			07/25/12 23:12	100
4-Chlorotoluene	ND		100		ug/L			07/25/12 23:12	100
4-Isopropyltoluene	ND		100		ug/L			07/25/12 23:12	100
4-Methyl-2-pentanone (MIBK)	ND		1000		ug/L			07/25/12 23:12	100
Benzene	ND		100		ug/L			07/25/12 23:12	100
Bromobenzene	ND		100		ug/L			07/25/12 23:12	100

# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Client Sample ID: MW-553**  
**Date Collected: 07/23/12 12:40**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-7**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	ND		100		ug/L			07/25/12 23:12	100
Bromomethane	ND		200		ug/L			07/25/12 23:12	100
Carbon disulfide	ND		1000		ug/L			07/25/12 23:12	100
Carbon tetrachloride	ND		100		ug/L			07/25/12 23:12	100
Chlorobenzene	ND		100		ug/L			07/25/12 23:12	100
Chlorobromomethane	ND		100		ug/L			07/25/12 23:12	100
Chlorodibromomethane	ND		50		ug/L			07/25/12 23:12	100
Chloroethane	ND		200		ug/L			07/25/12 23:12	100
Chloroform	ND		100		ug/L			07/25/12 23:12	100
Chloromethane	ND		200		ug/L			07/25/12 23:12	100
<b>cis-1,2-Dichloroethene</b>	<b>200</b>		100		ug/L			07/25/12 23:12	100
cis-1,3-Dichloropropene	ND		40		ug/L			07/25/12 23:12	100
Dibromomethane	ND		100		ug/L			07/25/12 23:12	100
Dichlorobromomethane	ND		50		ug/L			07/25/12 23:12	100
Dichlorodifluoromethane	ND	*	100		ug/L			07/25/12 23:12	100
Ethyl ether	ND		100		ug/L			07/25/12 23:12	100
Ethylbenzene	ND		100		ug/L			07/25/12 23:12	100
Ethylene Dibromide	ND		100		ug/L			07/25/12 23:12	100
Hexachlorobutadiene	ND		40		ug/L			07/25/12 23:12	100
Isopropyl ether	ND		1000		ug/L			07/25/12 23:12	100
Isopropylbenzene	ND		100		ug/L			07/25/12 23:12	100
m-Xylene & p-Xylene	ND		200		ug/L			07/25/12 23:12	100
Methyl tert-butyl ether	ND		100		ug/L			07/25/12 23:12	100
Methylene Chloride	ND		200		ug/L			07/25/12 23:12	100
n-Butylbenzene	ND		100		ug/L			07/25/12 23:12	100
N-Propylbenzene	ND		100		ug/L			07/25/12 23:12	100
Naphthalene	ND		500		ug/L			07/25/12 23:12	100
o-Xylene	ND		100		ug/L			07/25/12 23:12	100
sec-Butylbenzene	ND		100		ug/L			07/25/12 23:12	100
Styrene	ND		100		ug/L			07/25/12 23:12	100
Tert-amyl methyl ether	ND		500		ug/L			07/25/12 23:12	100
Tert-butyl ethyl ether	ND		500		ug/L			07/25/12 23:12	100
tert-Butylbenzene	ND		100		ug/L			07/25/12 23:12	100
Tetrachloroethene	ND		100		ug/L			07/25/12 23:12	100
Tetrahydrofuran	ND		1000		ug/L			07/25/12 23:12	100
Toluene	ND		100		ug/L			07/25/12 23:12	100
trans-1,2-Dichloroethene	ND		100		ug/L			07/25/12 23:12	100
trans-1,3-Dichloropropene	ND		40		ug/L			07/25/12 23:12	100
Trichloroethene	ND		100		ug/L			07/25/12 23:12	100
Trichlorofluoromethane	ND		100		ug/L			07/25/12 23:12	100
<b>Vinyl chloride</b>	<b>180</b>		50		ug/L			07/25/12 23:12	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		70 - 130					07/25/12 23:12	100
Dibromofluoromethane	103		70 - 130					07/25/12 23:12	100
Toluene-d8 (Surr)	98		70 - 130					07/25/12 23:12	100

# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS)

**Client Sample ID: MW-562**  
**Date Collected: 07/23/12 09:00**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-8**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		100		ug/L			07/25/12 23:34	100
1,1,1-Trichloroethane	ND		100		ug/L			07/25/12 23:34	100
1,1,2,2-Tetrachloroethane	ND		50		ug/L			07/25/12 23:34	100
1,1,2-Trichloroethane	ND		100		ug/L			07/25/12 23:34	100
1,1-Dichloroethane	ND		100		ug/L			07/25/12 23:34	100
1,1-Dichloroethene	ND		100		ug/L			07/25/12 23:34	100
1,1-Dichloropropene	ND		100		ug/L			07/25/12 23:34	100
1,2,3-Trichlorobenzene	ND		100		ug/L			07/25/12 23:34	100
1,2,3-Trichloropropane	ND		100		ug/L			07/25/12 23:34	100
1,2,4-Trichlorobenzene	ND		100		ug/L			07/25/12 23:34	100
1,2,4-Trimethylbenzene	ND		100		ug/L			07/25/12 23:34	100
1,2-Dibromo-3-Chloropropane	ND		500		ug/L			07/25/12 23:34	100
1,2-Dichlorobenzene	ND		100		ug/L			07/25/12 23:34	100
1,2-Dichloroethane	ND		100		ug/L			07/25/12 23:34	100
1,2-Dichloropropane	ND		100		ug/L			07/25/12 23:34	100
1,3,5-Trimethylbenzene	ND		100		ug/L			07/25/12 23:34	100
1,3-Dichlorobenzene	ND		100		ug/L			07/25/12 23:34	100
1,3-Dichloropropane	ND		100		ug/L			07/25/12 23:34	100
1,4-Dichlorobenzene	ND		100		ug/L			07/25/12 23:34	100
1,4-Dioxane	ND		5000		ug/L			07/25/12 23:34	100
2,2-Dichloropropane	ND		100		ug/L			07/25/12 23:34	100
2-Butanone (MEK)	ND		1000		ug/L			07/25/12 23:34	100
2-Chlorotoluene	ND		100		ug/L			07/25/12 23:34	100
2-Hexanone	ND		1000		ug/L			07/25/12 23:34	100
4-Chlorotoluene	ND		100		ug/L			07/25/12 23:34	100
4-Isopropyltoluene	ND		100		ug/L			07/25/12 23:34	100
4-Methyl-2-pentanone (MIBK)	ND		1000		ug/L			07/25/12 23:34	100
<b>Acetone</b>	<b>28000</b>		5000		ug/L			07/25/12 23:34	100
Benzene	ND		100		ug/L			07/25/12 23:34	100
Bromobenzene	ND		100		ug/L			07/25/12 23:34	100
Bromoform	ND		100		ug/L			07/25/12 23:34	100
Bromomethane	ND		200		ug/L			07/25/12 23:34	100
Carbon disulfide	ND		1000		ug/L			07/25/12 23:34	100
Carbon tetrachloride	ND		100		ug/L			07/25/12 23:34	100
Chlorobenzene	ND		100		ug/L			07/25/12 23:34	100
Chlorobromomethane	ND		100		ug/L			07/25/12 23:34	100
Chlorodibromomethane	ND		50		ug/L			07/25/12 23:34	100
Chloroethane	ND		200		ug/L			07/25/12 23:34	100
Chloroform	ND		100		ug/L			07/25/12 23:34	100
Chloromethane	ND		200		ug/L			07/25/12 23:34	100
cis-1,2-Dichloroethene	ND		100		ug/L			07/25/12 23:34	100
cis-1,3-Dichloropropene	ND		40		ug/L			07/25/12 23:34	100
Dibromomethane	ND		100		ug/L			07/25/12 23:34	100
Dichlorobromomethane	ND		50		ug/L			07/25/12 23:34	100
Dichlorodifluoromethane	ND *		100		ug/L			07/25/12 23:34	100
Ethyl ether	ND		100		ug/L			07/25/12 23:34	100
Ethylbenzene	ND		100		ug/L			07/25/12 23:34	100
Ethylene Dibromide	ND		100		ug/L			07/25/12 23:34	100
Hexachlorobutadiene	ND		40		ug/L			07/25/12 23:34	100
Isopropyl ether	ND		1000		ug/L			07/25/12 23:34	100
Isopropylbenzene	ND		100		ug/L			07/25/12 23:34	100

# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Client Sample ID: MW-562**  
**Date Collected: 07/23/12 09:00**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-8**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		200		ug/L			07/25/12 23:34	100
Methyl tert-butyl ether	ND		100		ug/L			07/25/12 23:34	100
Methylene Chloride	ND		200		ug/L			07/25/12 23:34	100
n-Butylbenzene	ND		100		ug/L			07/25/12 23:34	100
N-Propylbenzene	ND		100		ug/L			07/25/12 23:34	100
Naphthalene	ND		500		ug/L			07/25/12 23:34	100
o-Xylene	ND		100		ug/L			07/25/12 23:34	100
sec-Butylbenzene	ND		100		ug/L			07/25/12 23:34	100
Styrene	ND		100		ug/L			07/25/12 23:34	100
Tert-amyl methyl ether	ND		500		ug/L			07/25/12 23:34	100
Tert-butyl ethyl ether	ND		500		ug/L			07/25/12 23:34	100
tert-Butylbenzene	ND		100		ug/L			07/25/12 23:34	100
Tetrachloroethene	ND		100		ug/L			07/25/12 23:34	100
Tetrahydrofuran	ND		1000		ug/L			07/25/12 23:34	100
Toluene	ND		100		ug/L			07/25/12 23:34	100
trans-1,2-Dichloroethene	ND		100		ug/L			07/25/12 23:34	100
trans-1,3-Dichloropropene	ND		40		ug/L			07/25/12 23:34	100
Trichloroethene	ND		100		ug/L			07/25/12 23:34	100
Trichlorofluoromethane	ND		100		ug/L			07/25/12 23:34	100
<b>Vinyl chloride</b>	<b>54</b>		50		ug/L			07/25/12 23:34	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		70 - 130		07/25/12 23:34	100
Dibromofluoromethane	105		70 - 130		07/25/12 23:34	100
Toluene-d8 (Surr)	98		70 - 130		07/25/12 23:34	100

**Client Sample ID: TRIP BLANKS**  
**Date Collected: 07/23/12 07:50**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-9**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			07/25/12 23:55	1
1,1,1-Trichloroethane	ND		1.0		ug/L			07/25/12 23:55	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			07/25/12 23:55	1
1,1,2-Trichloroethane	ND		1.0		ug/L			07/25/12 23:55	1
1,1-Dichloroethane	ND		1.0		ug/L			07/25/12 23:55	1
1,1-Dichloroethene	ND		1.0		ug/L			07/25/12 23:55	1
1,1-Dichloropropene	ND		1.0		ug/L			07/25/12 23:55	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			07/25/12 23:55	1
1,2,3-Trichloropropane	ND		1.0		ug/L			07/25/12 23:55	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			07/25/12 23:55	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			07/25/12 23:55	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			07/25/12 23:55	1
1,2-Dichlorobenzene	ND		1.0		ug/L			07/25/12 23:55	1
1,2-Dichloroethane	ND		1.0		ug/L			07/25/12 23:55	1
1,2-Dichloropropane	ND		1.0		ug/L			07/25/12 23:55	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			07/25/12 23:55	1
1,3-Dichlorobenzene	ND		1.0		ug/L			07/25/12 23:55	1
1,3-Dichloropropane	ND		1.0		ug/L			07/25/12 23:55	1
1,4-Dichlorobenzene	ND		1.0		ug/L			07/25/12 23:55	1
1,4-Dioxane	ND		50		ug/L			07/25/12 23:55	1
2,2-Dichloropropane	ND		1.0		ug/L			07/25/12 23:55	1

# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
 Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Client Sample ID: TRIP BLANKS**

**Date Collected: 07/23/12 07:50**

**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-9**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		10		ug/L			07/25/12 23:55	1
2-Chlorotoluene	ND		1.0		ug/L			07/25/12 23:55	1
2-Hexanone	ND		10		ug/L			07/25/12 23:55	1
4-Chlorotoluene	ND		1.0		ug/L			07/25/12 23:55	1
4-Isopropyltoluene	ND		1.0		ug/L			07/25/12 23:55	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			07/25/12 23:55	1
Acetone	ND		50		ug/L			07/25/12 23:55	1
Benzene	ND		1.0		ug/L			07/25/12 23:55	1
Bromobenzene	ND		1.0		ug/L			07/25/12 23:55	1
Bromoform	ND		1.0		ug/L			07/25/12 23:55	1
Bromomethane	ND		2.0		ug/L			07/25/12 23:55	1
Carbon disulfide	ND		10		ug/L			07/25/12 23:55	1
Carbon tetrachloride	ND		1.0		ug/L			07/25/12 23:55	1
Chlorobenzene	ND		1.0		ug/L			07/25/12 23:55	1
Chlorobromomethane	ND		1.0		ug/L			07/25/12 23:55	1
Chlorodibromomethane	ND		0.50		ug/L			07/25/12 23:55	1
Chloroethane	ND		2.0		ug/L			07/25/12 23:55	1
Chloroform	ND		1.0		ug/L			07/25/12 23:55	1
Chloromethane	ND		2.0		ug/L			07/25/12 23:55	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			07/25/12 23:55	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			07/25/12 23:55	1
Dibromomethane	ND		1.0		ug/L			07/25/12 23:55	1
Dichlorobromomethane	ND		0.50		ug/L			07/25/12 23:55	1
Dichlorodifluoromethane	ND *		1.0		ug/L			07/25/12 23:55	1
Ethyl ether	ND		1.0		ug/L			07/25/12 23:55	1
Ethylbenzene	ND		1.0		ug/L			07/25/12 23:55	1
Ethylene Dibromide	ND		1.0		ug/L			07/25/12 23:55	1
Hexachlorobutadiene	ND		0.40		ug/L			07/25/12 23:55	1
Isopropyl ether	ND		10		ug/L			07/25/12 23:55	1
Isopropylbenzene	ND		1.0		ug/L			07/25/12 23:55	1
m-Xylene & p-Xylene	ND		2.0		ug/L			07/25/12 23:55	1
Methyl tert-butyl ether	ND		1.0		ug/L			07/25/12 23:55	1
Methylene Chloride	ND		2.0		ug/L			07/25/12 23:55	1
n-Butylbenzene	ND		1.0		ug/L			07/25/12 23:55	1
N-Propylbenzene	ND		1.0		ug/L			07/25/12 23:55	1
Naphthalene	ND		5.0		ug/L			07/25/12 23:55	1
o-Xylene	ND		1.0		ug/L			07/25/12 23:55	1
sec-Butylbenzene	ND		1.0		ug/L			07/25/12 23:55	1
Styrene	ND		1.0		ug/L			07/25/12 23:55	1
Tert-amyl methyl ether	ND		5.0		ug/L			07/25/12 23:55	1
Tert-butyl ethyl ether	ND		5.0		ug/L			07/25/12 23:55	1
tert-Butylbenzene	ND		1.0		ug/L			07/25/12 23:55	1
Tetrachloroethene	ND		1.0		ug/L			07/25/12 23:55	1
Tetrahydrofuran	ND		10		ug/L			07/25/12 23:55	1
Toluene	ND		1.0		ug/L			07/25/12 23:55	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			07/25/12 23:55	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			07/25/12 23:55	1
Trichloroethene	ND		1.0		ug/L			07/25/12 23:55	1
Trichlorofluoromethane	ND		1.0		ug/L			07/25/12 23:55	1
Vinyl chloride	ND		0.50		ug/L			07/25/12 23:55	1

# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	102		70 - 130		07/25/12 23:55	1
Dibromofluoromethane	104		70 - 130		07/25/12 23:55	1
Toluene-d8 (Surr)	97		70 - 130		07/25/12 23:55	1

**Client Sample ID: DUPX**

**Date Collected: 07/23/12 12:00**

**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-10**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		10		ug/L			07/26/12 00:17	10
1,1,1-Trichloroethane	ND		10		ug/L			07/26/12 00:17	10
1,1,2,2-Tetrachloroethane	ND		5.0		ug/L			07/26/12 00:17	10
1,1,2-Trichloroethane	ND		10		ug/L			07/26/12 00:17	10
1,1-Dichloroethane	ND		10		ug/L			07/26/12 00:17	10
1,1-Dichloroethene	ND		10		ug/L			07/26/12 00:17	10
1,1-Dichloropropene	ND		10		ug/L			07/26/12 00:17	10
1,2,3-Trichlorobenzene	ND		10		ug/L			07/26/12 00:17	10
1,2,3-Trichloropropane	ND		10		ug/L			07/26/12 00:17	10
1,2,4-Trichlorobenzene	ND		10		ug/L			07/26/12 00:17	10
1,2,4-Trimethylbenzene	ND		10		ug/L			07/26/12 00:17	10
1,2-Dibromo-3-Chloropropane	ND		50		ug/L			07/26/12 00:17	10
1,2-Dichlorobenzene	ND		10		ug/L			07/26/12 00:17	10
1,2-Dichloroethane	ND		10		ug/L			07/26/12 00:17	10
1,2-Dichloropropane	ND		10		ug/L			07/26/12 00:17	10
1,3,5-Trimethylbenzene	ND		10		ug/L			07/26/12 00:17	10
1,3-Dichlorobenzene	ND		10		ug/L			07/26/12 00:17	10
1,3-Dichloropropane	ND		10		ug/L			07/26/12 00:17	10
1,4-Dichlorobenzene	ND		10		ug/L			07/26/12 00:17	10
1,4-Dioxane	ND		500		ug/L			07/26/12 00:17	10
2,2-Dichloropropane	ND		10		ug/L			07/26/12 00:17	10
2-Butanone (MEK)	ND		100		ug/L			07/26/12 00:17	10
2-Chlorotoluene	ND		10		ug/L			07/26/12 00:17	10
2-Hexanone	ND		100		ug/L			07/26/12 00:17	10
4-Chlorotoluene	ND		10		ug/L			07/26/12 00:17	10
4-Isopropyltoluene	ND		10		ug/L			07/26/12 00:17	10
4-Methyl-2-pentanone (MIBK)	ND		100		ug/L			07/26/12 00:17	10
<b>Acetone</b>	<b>880</b>		500		ug/L			07/26/12 00:17	10
Benzene	ND		10		ug/L			07/26/12 00:17	10
Bromobenzene	ND		10		ug/L			07/26/12 00:17	10
Bromoform	ND		10		ug/L			07/26/12 00:17	10
Bromomethane	ND		20		ug/L			07/26/12 00:17	10
Carbon disulfide	ND		100		ug/L			07/26/12 00:17	10
Carbon tetrachloride	ND		10		ug/L			07/26/12 00:17	10
Chlorobenzene	ND		10		ug/L			07/26/12 00:17	10
Chlorobromomethane	ND		10		ug/L			07/26/12 00:17	10
Chlorodibromomethane	ND		5.0		ug/L			07/26/12 00:17	10
Chloroethane	ND		20		ug/L			07/26/12 00:17	10
Chloroform	ND		10		ug/L			07/26/12 00:17	10
Chloromethane	ND		20		ug/L			07/26/12 00:17	10
<b>cis-1,2-Dichloroethene</b>	<b>250</b>		10		ug/L			07/26/12 00:17	10
cis-1,3-Dichloropropene	ND		4.0		ug/L			07/26/12 00:17	10
Dibromomethane	ND		10		ug/L			07/26/12 00:17	10
Dichlorobromomethane	ND		5.0		ug/L			07/26/12 00:17	10
Dichlorodifluoromethane	ND *		10		ug/L			07/26/12 00:17	10
Ethyl ether	ND		10		ug/L			07/26/12 00:17	10

# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Client Sample ID: DUPX**

**Date Collected: 07/23/12 12:00**

**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-10**

**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		10		ug/L			07/26/12 00:17	10
Ethylene Dibromide	ND		10		ug/L			07/26/12 00:17	10
Hexachlorobutadiene	ND		4.0		ug/L			07/26/12 00:17	10
Isopropyl ether	ND		100		ug/L			07/26/12 00:17	10
Isopropylbenzene	ND		10		ug/L			07/26/12 00:17	10
m-Xylene & p-Xylene	ND		20		ug/L			07/26/12 00:17	10
Methyl tert-butyl ether	ND		10		ug/L			07/26/12 00:17	10
Methylene Chloride	ND		20		ug/L			07/26/12 00:17	10
n-Butylbenzene	ND		10		ug/L			07/26/12 00:17	10
N-Propylbenzene	ND		10		ug/L			07/26/12 00:17	10
Naphthalene	ND		50		ug/L			07/26/12 00:17	10
o-Xylene	ND		10		ug/L			07/26/12 00:17	10
sec-Butylbenzene	ND		10		ug/L			07/26/12 00:17	10
Styrene	ND		10		ug/L			07/26/12 00:17	10
Tert-amyl methyl ether	ND		50		ug/L			07/26/12 00:17	10
Tert-butyl ethyl ether	ND		50		ug/L			07/26/12 00:17	10
tert-Butylbenzene	ND		10		ug/L			07/26/12 00:17	10
Tetrachloroethene	ND		10		ug/L			07/26/12 00:17	10
Tetrahydrofuran	ND		100		ug/L			07/26/12 00:17	10
Toluene	ND		10		ug/L			07/26/12 00:17	10
trans-1,2-Dichloroethene	ND		10		ug/L			07/26/12 00:17	10
trans-1,3-Dichloropropene	ND		4.0		ug/L			07/26/12 00:17	10
Trichloroethene	ND		10		ug/L			07/26/12 00:17	10
Trichlorofluoromethane	ND		10		ug/L			07/26/12 00:17	10
<b>Vinyl chloride</b>	<b>200</b>		5.0		ug/L			07/26/12 00:17	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		70 - 130		07/26/12 00:17	10
Dibromofluoromethane	101		70 - 130		07/26/12 00:17	10
Toluene-d8 (Surr)	99		70 - 130		07/26/12 00:17	10



# Client Sample Results

Client: Innovative Engineering Solutions, Inc  
 Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) - DL

**Client Sample ID: MW-261S**  
**Date Collected: 07/23/12 11:10**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-5**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	190000		13000		ug/L			07/26/12 14:57	250
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	102		70 - 130					07/26/12 14:57	250
Dibromofluoromethane	102		70 - 130					07/26/12 14:57	250
Toluene-d8 (Surr)	98		70 - 130					07/26/12 14:57	250

**Client Sample ID: MW-553**  
**Date Collected: 07/23/12 12:40**  
**Date Received: 07/23/12 17:00**

**Lab Sample ID: 360-41791-7**  
**Matrix: Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	220000		13000		ug/L			07/26/12 15:19	250
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	100		70 - 130					07/26/12 15:19	250
Dibromofluoromethane	101		70 - 130					07/26/12 15:19	250
Toluene-d8 (Surr)	99		70 - 130					07/26/12 15:19	250

# Definitions/Glossary

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
*	RPD of the LCS and LCSD exceeds the control limits

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# QC Association Summary

Client: Innovative Engineering Solutions, Inc  
 Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## GC/MS VOA

### Analysis Batch: 93432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
360-41791-1	REW-1	Total/NA	Water	8260C	
360-41791-2	REW-4	Total/NA	Water	8260C	
360-41791-3	REW-5	Total/NA	Water	8260C	
360-41791-4	MW-265M	Total/NA	Water	8260C	
360-41791-5	MW-261S	Total/NA	Water	8260C	
360-41791-6	MW-552	Total/NA	Water	8260C	
360-41791-7	MW-553	Total/NA	Water	8260C	
360-41791-8	MW-562	Total/NA	Water	8260C	
360-41791-9	TRIP BLANKS	Total/NA	Water	8260C	
360-41791-10	DUPX	Total/NA	Water	8260C	
LCS 360-93432/20	Lab Control Sample	Total/NA	Water	8260C	
LCSD 360-93432/21	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 360-93432/23	Method Blank	Total/NA	Water	8260C	

### Analysis Batch: 93433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
360-41791-1	REW-1	Total/NA	Water	8260C SIM	
360-41791-2	REW-4	Total/NA	Water	8260C SIM	
360-41791-3	REW-5	Total/NA	Water	8260C SIM	
360-41791-4	MW-265M	Total/NA	Water	8260C SIM	
360-41791-5	MW-261S	Total/NA	Water	8260C SIM	
360-41791-6	MW-552	Total/NA	Water	8260C SIM	
360-41791-7	MW-553	Total/NA	Water	8260C SIM	
360-41791-8	MW-562	Total/NA	Water	8260C SIM	
360-41791-9	TRIP BLANKS	Total/NA	Water	8260C SIM	
360-41791-10	DUPX	Total/NA	Water	8260C SIM	
LCS 360-93433/20	Lab Control Sample	Total/NA	Water	8260C SIM	
LCSD 360-93433/21	Lab Control Sample Dup	Total/NA	Water	8260C SIM	
MB 360-93433/23	Method Blank	Total/NA	Water	8260C SIM	

### Analysis Batch: 93476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
360-41791-5 - DL	MW-261S	Total/NA	Water	8260C	
360-41791-7 - DL	MW-553	Total/NA	Water	8260C	
LCS 360-93476/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 360-93476/4	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 360-93476/6	Method Blank	Total/NA	Water	8260C	

# Surrogate Summary

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (70-130)	DBFM (70-130)	TOL (70-130)
360-41791-1	REW-1	101	102	98
360-41791-2	REW-4	101	103	98
360-41791-3	REW-5	102	102	98
360-41791-4	MW-265M	101	105	98
360-41791-5	MW-261S	101	104	98
360-41791-5 - DL	MW-261S	102	102	98
360-41791-6	MW-552	100	103	99
360-41791-7	MW-553	101	103	98
360-41791-7 - DL	MW-553	100	101	99
360-41791-8	MW-562	100	105	98
360-41791-9	TRIP BLANKS	102	104	97
360-41791-10	DUPX	101	101	99
LCS 360-93432/20	Lab Control Sample	101	102	101
LCS 360-93476/3	Lab Control Sample	100	101	100
LCSD 360-93432/21	Lab Control Sample Dup	102	101	99
LCSD 360-93476/4	Lab Control Sample Dup	101	101	101
MB 360-93432/23	Method Blank	104	104	98
MB 360-93476/6	Method Blank	101	102	99

### Surrogate Legend

BFB = 4-Bromofluorobenzene  
DBFM = Dibromofluoromethane  
TOL = Toluene-d8 (Surr)

## Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (70-130)	DBFM (70-130)	TOL (70-130)
360-41791-1	REW-1	101	102	98
360-41791-2	REW-4	101	103	99
360-41791-3	REW-5	102	102	98
360-41791-4	MW-265M	101	105	98
360-41791-5	MW-261S	101	103	98
360-41791-6	MW-552	100	103	99
360-41791-7	MW-553	100	103	98
360-41791-8	MW-562	100	104	98
360-41791-9	TRIP BLANKS	102	104	98
360-41791-10	DUPX	101	101	99
LCS 360-93433/20	Lab Control Sample	101	101	102
LCSD 360-93433/21	Lab Control Sample Dup	102	100	100
MB 360-93433/23	Method Blank	103	104	99

### Surrogate Legend

BFB = 4-Bromofluorobenzene  
DBFM = Dibromofluoromethane  
TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 360-93432/23**

**Matrix: Water**

**Analysis Batch: 93432**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			07/25/12 18:29	1
1,1,1-Trichloroethane	ND		1.0		ug/L			07/25/12 18:29	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			07/25/12 18:29	1
1,1,2-Trichloroethane	ND		1.0		ug/L			07/25/12 18:29	1
1,1-Dichloroethane	ND		1.0		ug/L			07/25/12 18:29	1
1,1-Dichloroethene	ND		1.0		ug/L			07/25/12 18:29	1
1,1-Dichloropropene	ND		1.0		ug/L			07/25/12 18:29	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			07/25/12 18:29	1
1,2,3-Trichloropropane	ND		1.0		ug/L			07/25/12 18:29	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			07/25/12 18:29	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			07/25/12 18:29	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			07/25/12 18:29	1
1,2-Dichlorobenzene	ND		1.0		ug/L			07/25/12 18:29	1
1,2-Dichloroethane	ND		1.0		ug/L			07/25/12 18:29	1
1,2-Dichloropropane	ND		1.0		ug/L			07/25/12 18:29	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			07/25/12 18:29	1
1,3-Dichlorobenzene	ND		1.0		ug/L			07/25/12 18:29	1
1,3-Dichloropropane	ND		1.0		ug/L			07/25/12 18:29	1
1,4-Dichlorobenzene	ND		1.0		ug/L			07/25/12 18:29	1
1,4-Dioxane	ND		50		ug/L			07/25/12 18:29	1
2,2-Dichloropropane	ND		1.0		ug/L			07/25/12 18:29	1
2-Butanone (MEK)	ND		10		ug/L			07/25/12 18:29	1
2-Chlorotoluene	ND		1.0		ug/L			07/25/12 18:29	1
2-Hexanone	ND		10		ug/L			07/25/12 18:29	1
4-Chlorotoluene	ND		1.0		ug/L			07/25/12 18:29	1
4-Isopropyltoluene	ND		1.0		ug/L			07/25/12 18:29	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			07/25/12 18:29	1
Acetone	ND		50		ug/L			07/25/12 18:29	1
Benzene	ND		1.0		ug/L			07/25/12 18:29	1
Bromobenzene	ND		1.0		ug/L			07/25/12 18:29	1
Bromoform	ND		1.0		ug/L			07/25/12 18:29	1
Bromomethane	ND		2.0		ug/L			07/25/12 18:29	1
Carbon disulfide	ND		10		ug/L			07/25/12 18:29	1
Carbon tetrachloride	ND		1.0		ug/L			07/25/12 18:29	1
Chlorobenzene	ND		1.0		ug/L			07/25/12 18:29	1
Chlorobromomethane	ND		1.0		ug/L			07/25/12 18:29	1
Chlorodibromomethane	ND		0.50		ug/L			07/25/12 18:29	1
Chloroethane	ND		2.0		ug/L			07/25/12 18:29	1
Chloroform	ND		1.0		ug/L			07/25/12 18:29	1
Chloromethane	ND		2.0		ug/L			07/25/12 18:29	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			07/25/12 18:29	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			07/25/12 18:29	1
Dibromomethane	ND		1.0		ug/L			07/25/12 18:29	1
Dichlorobromomethane	ND		0.50		ug/L			07/25/12 18:29	1
Dichlorodifluoromethane	ND		1.0		ug/L			07/25/12 18:29	1
Ethyl ether	ND		1.0		ug/L			07/25/12 18:29	1
Ethylbenzene	ND		1.0		ug/L			07/25/12 18:29	1
Ethylene Dibromide	ND		1.0		ug/L			07/25/12 18:29	1
Hexachlorobutadiene	ND		0.40		ug/L			07/25/12 18:29	1

# QC Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 360-93432/23**

**Matrix: Water**

**Analysis Batch: 93432**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropyl ether	ND		10		ug/L			07/25/12 18:29	1
Isopropylbenzene	ND		1.0		ug/L			07/25/12 18:29	1
m-Xylene & p-Xylene	ND		2.0		ug/L			07/25/12 18:29	1
Methyl tert-butyl ether	ND		1.0		ug/L			07/25/12 18:29	1
Methylene Chloride	ND		2.0		ug/L			07/25/12 18:29	1
n-Butylbenzene	ND		1.0		ug/L			07/25/12 18:29	1
N-Propylbenzene	ND		1.0		ug/L			07/25/12 18:29	1
Naphthalene	ND		5.0		ug/L			07/25/12 18:29	1
o-Xylene	ND		1.0		ug/L			07/25/12 18:29	1
sec-Butylbenzene	ND		1.0		ug/L			07/25/12 18:29	1
Styrene	ND		1.0		ug/L			07/25/12 18:29	1
Tert-amyl methyl ether	ND		5.0		ug/L			07/25/12 18:29	1
Tert-butyl ethyl ether	ND		5.0		ug/L			07/25/12 18:29	1
tert-Butylbenzene	ND		1.0		ug/L			07/25/12 18:29	1
Tetrachloroethene	ND		1.0		ug/L			07/25/12 18:29	1
Tetrahydrofuran	ND		10		ug/L			07/25/12 18:29	1
Toluene	ND		1.0		ug/L			07/25/12 18:29	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			07/25/12 18:29	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			07/25/12 18:29	1
Trichloroethene	ND		1.0		ug/L			07/25/12 18:29	1
Trichlorofluoromethane	ND		1.0		ug/L			07/25/12 18:29	1
Vinyl chloride	ND		0.50		ug/L			07/25/12 18:29	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	104		70 - 130		07/25/12 18:29	1
Dibromofluoromethane	104		70 - 130		07/25/12 18:29	1
Toluene-d8 (Surr)	98		70 - 130		07/25/12 18:29	1

**Lab Sample ID: LCS 360-93432/20**

**Matrix: Water**

**Analysis Batch: 93432**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	20.0	21.3		ug/L		107	70 - 130
1,1,1-Trichloroethane	20.0	21.2		ug/L		106	70 - 130
1,1,2,2-Tetrachloroethane	20.0	18.9		ug/L		94	70 - 130
1,1,2-Trichloroethane	20.0	20.4		ug/L		102	70 - 130
1,1-Dichloroethane	20.0	21.9		ug/L		109	70 - 130
1,1-Dichloroethane	20.0	20.3		ug/L		101	70 - 130
1,1-Dichloropropene	20.0	20.6		ug/L		103	70 - 130
1,2,3-Trichlorobenzene	20.0	20.8		ug/L		104	70 - 130
1,2,3-Trichloropropane	20.0	20.5		ug/L		102	70 - 130
1,2,4-Trichlorobenzene	20.0	21.9		ug/L		109	70 - 130
1,2,4-Trimethylbenzene	20.0	21.6		ug/L		108	70 - 130
1,2-Dibromo-3-Chloropropane	20.0	19.1		ug/L		96	70 - 130
1,2-Dichlorobenzene	20.0	20.9		ug/L		104	70 - 130
1,2-Dichloroethane	20.0	20.9		ug/L		104	70 - 130
1,2-Dichloropropane	20.0	21.0		ug/L		105	70 - 130
1,3,5-Trimethylbenzene	20.0	21.3		ug/L		106	70 - 130

# QC Sample Results

Client: Innovative Engineering Solutions, Inc  
 Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 360-93432/20**

**Matrix: Water**

**Analysis Batch: 93432**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	20.0	21.1		ug/L		105	70 - 130
1,3-Dichloropropane	20.0	20.4		ug/L		102	70 - 130
1,4-Dichlorobenzene	20.0	20.7		ug/L		103	70 - 130
1,4-Dioxane	200	198		ug/L		99	70 - 130
2,2-Dichloropropane	20.0	19.3		ug/L		97	70 - 130
2-Butanone (MEK)	200	141		ug/L		71	70 - 130
2-Chlorotoluene	20.0	21.2		ug/L		106	70 - 130
2-Hexanone	200	179		ug/L		89	70 - 130
4-Chlorotoluene	20.0	21.3		ug/L		107	70 - 130
4-Isopropyltoluene	20.0	22.6		ug/L		113	70 - 130
4-Methyl-2-pentanone (MIBK)	200	199		ug/L		99	70 - 130
Acetone	200	152		ug/L		76	70 - 130
Benzene	20.0	21.1		ug/L		105	70 - 130
Bromobenzene	20.0	21.0		ug/L		105	70 - 130
Bromoform	20.0	19.7		ug/L		98	70 - 130
Bromomethane	20.0	19.5		ug/L		98	70 - 130
Carbon disulfide	20.0	25.9		ug/L		130	70 - 130
Carbon tetrachloride	20.0	21.5		ug/L		107	70 - 130
Chlorobenzene	20.0	20.6		ug/L		103	70 - 130
Chlorobromomethane	20.0	20.6		ug/L		103	70 - 130
Chlorodibromomethane	20.0	20.1		ug/L		100	70 - 130
Chloroethane	20.0	19.7		ug/L		98	70 - 130
Chloroform	20.0	20.4		ug/L		102	70 - 130
Chloromethane	20.0	17.3		ug/L		87	70 - 130
cis-1,2-Dichloroethene	20.0	21.3		ug/L		106	70 - 130
cis-1,3-Dichloropropene	20.0	18.4		ug/L		92	70 - 130
Dibromomethane	20.0	20.7		ug/L		104	70 - 130
Dichlorobromomethane	20.0	20.1		ug/L		101	70 - 130
Dichlorodifluoromethane	20.0	13.6 *		ug/L		68	70 - 130
Ethyl ether	20.0	21.6		ug/L		108	70 - 130
Ethylbenzene	20.0	20.8		ug/L		104	70 - 130
Ethylene Dibromide	20.0	20.5		ug/L		103	70 - 130
Hexachlorobutadiene	20.0	20.9		ug/L		104	70 - 130
Isopropyl ether	20.0	21.0		ug/L		105	70 - 130
Isopropylbenzene	20.0	21.3		ug/L		107	70 - 130
m-Xylene & p-Xylene	40.0	41.5		ug/L		104	70 - 130
Methyl tert-butyl ether	20.0	21.4		ug/L		107	70 - 130
Methylene Chloride	20.0	19.9		ug/L		99	70 - 130
n-Butylbenzene	20.0	21.3		ug/L		106	70 - 130
N-Propylbenzene	20.0	21.5		ug/L		108	70 - 130
Naphthalene	20.0	20.5		ug/L		103	70 - 130
o-Xylene	20.0	21.0		ug/L		105	70 - 130
sec-Butylbenzene	20.0	21.5		ug/L		108	70 - 130
Styrene	20.0	21.2		ug/L		106	70 - 130
Tert-amyl methyl ether	20.0	21.0		ug/L		105	70 - 130
Tert-butyl ethyl ether	20.0	21.4		ug/L		107	70 - 130
tert-Butylbenzene	20.0	21.6		ug/L		108	70 - 130
Tetrachloroethene	20.0	21.0		ug/L		105	70 - 130
Tetrahydrofuran	200	202		ug/L		101	70 - 130
Toluene	20.0	20.3		ug/L		101	70 - 130

# QC Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 360-93432/20**

**Matrix: Water**

**Analysis Batch: 93432**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	20.0	20.9		ug/L		104	70 - 130
trans-1,3-Dichloropropene	20.0	18.6		ug/L		93	70 - 130
Trichloroethene	20.0	21.6		ug/L		108	70 - 130
Trichlorofluoromethane	20.0	19.6		ug/L		98	70 - 130
Vinyl chloride	20.0	19.4		ug/L		97	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	101		70 - 130
Dibromofluoromethane	102		70 - 130
Toluene-d8 (Surr)	101		70 - 130

**Lab Sample ID: LCSD 360-93432/21**

**Matrix: Water**

**Analysis Batch: 93432**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	20.0	20.5		ug/L		103	70 - 130	4	20
1,1,1-Trichloroethane	20.0	20.3		ug/L		101	70 - 130	5	20
1,1,1,2,2-Tetrachloroethane	20.0	18.7		ug/L		94	70 - 130	1	20
1,1,2-Trichloroethane	20.0	19.9		ug/L		100	70 - 130	3	20
1,1-Dichloroethane	20.0	20.6		ug/L		103	70 - 130	6	20
1,1-Dichloroethene	20.0	19.3		ug/L		96	70 - 130	5	20
1,1-Dichloropropene	20.0	19.2		ug/L		96	70 - 130	7	20
1,2,3-Trichlorobenzene	20.0	20.5		ug/L		102	70 - 130	2	20
1,2,3-Trichloropropane	20.0	20.9		ug/L		104	70 - 130	2	20
1,2,4-Trichlorobenzene	20.0	21.5		ug/L		108	70 - 130	2	20
1,2,4-Trimethylbenzene	20.0	20.7		ug/L		104	70 - 130	4	20
1,2-Dibromo-3-Chloropropane	20.0	19.5		ug/L		98	70 - 130	2	20
1,2-Dichlorobenzene	20.0	20.4		ug/L		102	70 - 130	2	20
1,2-Dichloroethane	20.0	20.2		ug/L		101	70 - 130	3	20
1,2-Dichloropropane	20.0	19.8		ug/L		99	70 - 130	6	20
1,3,5-Trimethylbenzene	20.0	20.4		ug/L		102	70 - 130	4	20
1,3-Dichlorobenzene	20.0	20.5		ug/L		103	70 - 130	3	20
1,3-Dichloropropane	20.0	20.1		ug/L		100	70 - 130	2	20
1,4-Dichlorobenzene	20.0	20.2		ug/L		101	70 - 130	2	20
1,4-Dioxane	200	186		ug/L		93	70 - 130	6	20
2,2-Dichloropropane	20.0	18.3		ug/L		92	70 - 130	5	20
2-Butanone (MEK)	200	141		ug/L		71	70 - 130	0	20
2-Chlorotoluene	20.0	20.3		ug/L		101	70 - 130	4	20
2-Hexanone	200	179		ug/L		90	70 - 130	0	20
4-Chlorotoluene	20.0	20.4		ug/L		102	70 - 130	4	20
4-Isopropyltoluene	20.0	21.8		ug/L		109	70 - 130	4	20
4-Methyl-2-pentanone (MIBK)	200	204		ug/L		102	70 - 130	2	20
Acetone	200	143		ug/L		71	70 - 130	6	20
Benzene	20.0	19.9		ug/L		99	70 - 130	6	20
Bromobenzene	20.0	20.3		ug/L		102	70 - 130	3	20
Bromoform	20.0	19.6		ug/L		98	70 - 130	0	20
Bromomethane	20.0	18.7		ug/L		94	70 - 130	4	20
Carbon disulfide	20.0	25.4		ug/L		127	70 - 130	2	20



# QC Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 360-93432/21

Matrix: Water

Analysis Batch: 93432

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Added	Result	Qualifier				Limits		
Carbon tetrachloride	20.0	20.1		ug/L		101	70 - 130	7	20
Chlorobenzene	20.0	20.1		ug/L		101	70 - 130	2	20
Chlorobromomethane	20.0	20.1		ug/L		100	70 - 130	2	20
Chlorodibromomethane	20.0	19.9		ug/L		99	70 - 130	1	20
Chloroethane	20.0	18.7		ug/L		94	70 - 130	5	20
Chloroform	20.0	19.4		ug/L		97	70 - 130	5	20
Chloromethane	20.0	16.3		ug/L		82	70 - 130	6	20
cis-1,2-Dichloroethene	20.0	20.3		ug/L		102	70 - 130	5	20
cis-1,3-Dichloropropene	20.0	17.6		ug/L		88	70 - 130	5	20
Dibromomethane	20.0	20.0		ug/L		100	70 - 130	4	20
Dichlorobromomethane	20.0	19.5		ug/L		97	70 - 130	3	20
Dichlorodifluoromethane	20.0	12.9	*	ug/L		64	70 - 130	6	20
Ethyl ether	20.0	21.2		ug/L		106	70 - 130	2	20
Ethylbenzene	20.0	19.9		ug/L		100	70 - 130	4	20
Ethylene Dibromide	20.0	20.2		ug/L		101	70 - 130	2	20
Hexachlorobutadiene	20.0	19.9		ug/L		99	70 - 130	5	20
Isopropyl ether	20.0	20.6		ug/L		103	70 - 130	2	20
Isopropylbenzene	20.0	20.4		ug/L		102	70 - 130	5	20
m-Xylene & p-Xylene	40.0	39.7		ug/L		99	70 - 130	4	20
Methyl tert-butyl ether	20.0	21.0		ug/L		105	70 - 130	2	20
Methylene Chloride	20.0	20.0		ug/L		100	70 - 130	0	20
n-Butylbenzene	20.0	20.3		ug/L		101	70 - 130	5	20
N-Propylbenzene	20.0	20.4		ug/L		102	70 - 130	5	20
Naphthalene	20.0	20.9		ug/L		105	70 - 130	2	20
o-Xylene	20.0	20.3		ug/L		101	70 - 130	4	20
sec-Butylbenzene	20.0	20.6		ug/L		103	70 - 130	4	20
Styrene	20.0	20.5		ug/L		102	70 - 130	4	20
Tert-amyl methyl ether	20.0	20.7		ug/L		103	70 - 130	2	20
Tert-butyl ethyl ether	20.0	21.2		ug/L		106	70 - 130	1	20
tert-Butylbenzene	20.0	20.6		ug/L		103	70 - 130	5	20
Tetrachloroethene	20.0	19.9		ug/L		99	70 - 130	5	20
Tetrahydrofuran	20.0	20.1		ug/L		101	70 - 130	0	20
Toluene	20.0	19.0		ug/L		95	70 - 130	7	20
trans-1,2-Dichloroethene	20.0	19.5		ug/L		98	70 - 130	7	20
trans-1,3-Dichloropropene	20.0	18.3		ug/L		91	70 - 130	2	20
Trichloroethene	20.0	20.2		ug/L		101	70 - 130	6	20
Trichlorofluoromethane	20.0	18.9		ug/L		94	70 - 130	4	20
Vinyl chloride	20.0	18.5		ug/L		93	70 - 130	5	20

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	102		70 - 130
Dibromofluoromethane	101		70 - 130
Toluene-d8 (Surr)	99		70 - 130

# QC Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 360-93476/6**

**Matrix: Water**

**Analysis Batch: 93476**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			07/26/12 14:10	1
1,1,1-Trichloroethane	ND		1.0		ug/L			07/26/12 14:10	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			07/26/12 14:10	1
1,1,2-Trichloroethane	ND		1.0		ug/L			07/26/12 14:10	1
1,1-Dichloroethane	ND		1.0		ug/L			07/26/12 14:10	1
1,1-Dichloroethene	ND		1.0		ug/L			07/26/12 14:10	1
1,1-Dichloropropene	ND		1.0		ug/L			07/26/12 14:10	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			07/26/12 14:10	1
1,2,3-Trichloropropane	ND		1.0		ug/L			07/26/12 14:10	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			07/26/12 14:10	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			07/26/12 14:10	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			07/26/12 14:10	1
1,2-Dichlorobenzene	ND		1.0		ug/L			07/26/12 14:10	1
1,2-Dichloroethane	ND		1.0		ug/L			07/26/12 14:10	1
1,2-Dichloropropane	ND		1.0		ug/L			07/26/12 14:10	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			07/26/12 14:10	1
1,3-Dichlorobenzene	ND		1.0		ug/L			07/26/12 14:10	1
1,3-Dichloropropane	ND		1.0		ug/L			07/26/12 14:10	1
1,4-Dichlorobenzene	ND		1.0		ug/L			07/26/12 14:10	1
1,4-Dioxane	ND		50		ug/L			07/26/12 14:10	1
2,2-Dichloropropane	ND		1.0		ug/L			07/26/12 14:10	1
2-Butanone (MEK)	ND		10		ug/L			07/26/12 14:10	1
2-Chlorotoluene	ND		1.0		ug/L			07/26/12 14:10	1
2-Hexanone	ND		10		ug/L			07/26/12 14:10	1
4-Chlorotoluene	ND		1.0		ug/L			07/26/12 14:10	1
4-Isopropyltoluene	ND		1.0		ug/L			07/26/12 14:10	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			07/26/12 14:10	1
Acetone	ND		50		ug/L			07/26/12 14:10	1
Benzene	ND		1.0		ug/L			07/26/12 14:10	1
Bromobenzene	ND		1.0		ug/L			07/26/12 14:10	1
Bromoform	ND		1.0		ug/L			07/26/12 14:10	1
Bromomethane	ND		2.0		ug/L			07/26/12 14:10	1
Carbon disulfide	ND		10		ug/L			07/26/12 14:10	1
Carbon tetrachloride	ND		1.0		ug/L			07/26/12 14:10	1
Chlorobenzene	ND		1.0		ug/L			07/26/12 14:10	1
Chlorobromomethane	ND		1.0		ug/L			07/26/12 14:10	1
Chlorodibromomethane	ND		0.50		ug/L			07/26/12 14:10	1
Chloroethane	ND		2.0		ug/L			07/26/12 14:10	1
Chloroform	ND		1.0		ug/L			07/26/12 14:10	1
Chloromethane	ND		2.0		ug/L			07/26/12 14:10	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			07/26/12 14:10	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			07/26/12 14:10	1
Dibromomethane	ND		1.0		ug/L			07/26/12 14:10	1
Dichlorobromomethane	ND		0.50		ug/L			07/26/12 14:10	1
Dichlorodifluoromethane	ND		1.0		ug/L			07/26/12 14:10	1
Ethyl ether	ND		1.0		ug/L			07/26/12 14:10	1
Ethylbenzene	ND		1.0		ug/L			07/26/12 14:10	1
Ethylene Dibromide	ND		1.0		ug/L			07/26/12 14:10	1
Hexachlorobutadiene	ND		0.40		ug/L			07/26/12 14:10	1

# QC Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 360-93476/6**

**Matrix: Water**

**Analysis Batch: 93476**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropyl ether	ND		10		ug/L			07/26/12 14:10	1
Isopropylbenzene	ND		1.0		ug/L			07/26/12 14:10	1
m-Xylene & p-Xylene	ND		2.0		ug/L			07/26/12 14:10	1
Methyl tert-butyl ether	ND		1.0		ug/L			07/26/12 14:10	1
Methylene Chloride	ND		2.0		ug/L			07/26/12 14:10	1
n-Butylbenzene	ND		1.0		ug/L			07/26/12 14:10	1
N-Propylbenzene	ND		1.0		ug/L			07/26/12 14:10	1
Naphthalene	ND		5.0		ug/L			07/26/12 14:10	1
o-Xylene	ND		1.0		ug/L			07/26/12 14:10	1
sec-Butylbenzene	ND		1.0		ug/L			07/26/12 14:10	1
Styrene	ND		1.0		ug/L			07/26/12 14:10	1
Tert-amyl methyl ether	ND		5.0		ug/L			07/26/12 14:10	1
Tert-butyl ethyl ether	ND		5.0		ug/L			07/26/12 14:10	1
tert-Butylbenzene	ND		1.0		ug/L			07/26/12 14:10	1
Tetrachloroethene	ND		1.0		ug/L			07/26/12 14:10	1
Tetrahydrofuran	ND		10		ug/L			07/26/12 14:10	1
Toluene	ND		1.0		ug/L			07/26/12 14:10	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			07/26/12 14:10	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			07/26/12 14:10	1
Trichloroethene	ND		1.0		ug/L			07/26/12 14:10	1
Trichlorofluoromethane	ND		1.0		ug/L			07/26/12 14:10	1
Vinyl chloride	ND		0.50		ug/L			07/26/12 14:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		70 - 130		07/26/12 14:10	1
Dibromofluoromethane	102		70 - 130		07/26/12 14:10	1
Toluene-d8 (Surr)	99		70 - 130		07/26/12 14:10	1

**Lab Sample ID: LCS 360-93476/3**

**Matrix: Water**

**Analysis Batch: 93476**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	20.0	21.1		ug/L		106	70 - 130
1,1,1-Trichloroethane	20.0	21.2		ug/L		106	70 - 130
1,1,2,2-Tetrachloroethane	20.0	21.3		ug/L		107	70 - 130
1,1,2-Trichloroethane	20.0	20.3		ug/L		101	70 - 130
1,1-Dichloroethane	20.0	21.6		ug/L		108	70 - 130
1,1-Dichloroethene	20.0	19.6		ug/L		98	70 - 130
1,1-Dichloropropene	20.0	20.6		ug/L		103	70 - 130
1,2,3-Trichlorobenzene	20.0	20.7		ug/L		103	70 - 130
1,2,3-Trichloropropane	20.0	20.8		ug/L		104	70 - 130
1,2,4-Trichlorobenzene	20.0	22.0		ug/L		110	70 - 130
1,2,4-Trimethylbenzene	20.0	21.4		ug/L		107	70 - 130
1,2-Dibromo-3-Chloropropane	20.0	19.2		ug/L		96	70 - 130
1,2-Dichlorobenzene	20.0	20.6		ug/L		103	70 - 130
1,2-Dichloroethane	20.0	21.2		ug/L		106	70 - 130
1,2-Dichloropropane	20.0	21.1		ug/L		105	70 - 130
1,3,5-Trimethylbenzene	20.0	21.1		ug/L		105	70 - 130

# QC Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 360-93476/3**

**Matrix: Water**

**Analysis Batch: 93476**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	20.0	21.1		ug/L		105	70 - 130
1,3-Dichloropropane	20.0	20.6		ug/L		103	70 - 130
1,4-Dichlorobenzene	20.0	20.7		ug/L		104	70 - 130
1,4-Dioxane	200	216		ug/L		108	70 - 130
2,2-Dichloropropane	20.0	21.4		ug/L		107	70 - 130
2-Butanone (MEK)	200	137	*	ug/L		69	70 - 130
2-Chlorotoluene	20.0	20.6		ug/L		103	70 - 130
2-Hexanone	200	184		ug/L		92	70 - 130
4-Chlorotoluene	20.0	20.9		ug/L		104	70 - 130
4-Isopropyltoluene	20.0	22.4		ug/L		112	70 - 130
4-Methyl-2-pentanone (MIBK)	200	201		ug/L		100	70 - 130
Acetone	200	153		ug/L		77	70 - 130
Benzene	20.0	21.0		ug/L		105	70 - 130
Bromobenzene	20.0	20.7		ug/L		104	70 - 130
Bromoform	20.0	20.6		ug/L		103	70 - 130
Bromomethane	20.0	19.3		ug/L		96	70 - 130
Carbon disulfide	20.0	25.0		ug/L		125	70 - 130
Carbon tetrachloride	20.0	21.3		ug/L		106	70 - 130
Chlorobenzene	20.0	20.8		ug/L		104	70 - 130
Chlorobromomethane	20.0	20.5		ug/L		102	70 - 130
Chlorodibromomethane	20.0	20.2		ug/L		101	70 - 130
Chloroethane	20.0	19.4		ug/L		97	70 - 130
Chloroform	20.0	20.0		ug/L		100	70 - 130
Chloromethane	20.0	17.1		ug/L		86	70 - 130
cis-1,2-Dichloroethene	20.0	21.3		ug/L		106	70 - 130
cis-1,3-Dichloropropene	20.0	19.2		ug/L		96	70 - 130
Dibromomethane	20.0	20.7		ug/L		104	70 - 130
Dichlorobromomethane	20.0	20.4		ug/L		102	70 - 130
Dichlorodifluoromethane	20.0	13.1	*	ug/L		66	70 - 130
Ethyl ether	20.0	21.6		ug/L		108	70 - 130
Ethylbenzene	20.0	20.8		ug/L		104	70 - 130
Ethylene Dibromide	20.0	20.1		ug/L		101	70 - 130
Hexachlorobutadiene	20.0	21.2		ug/L		106	70 - 130
Isopropyl ether	20.0	21.1		ug/L		105	70 - 130
Isopropylbenzene	20.0	20.9		ug/L		104	70 - 130
m-Xylene & p-Xylene	40.0	41.1		ug/L		103	70 - 130
Methyl tert-butyl ether	20.0	21.4		ug/L		107	70 - 130
Methylene Chloride	20.0	20.5		ug/L		102	70 - 130
n-Butylbenzene	20.0	21.6		ug/L		108	70 - 130
N-Propylbenzene	20.0	21.3		ug/L		106	70 - 130
Naphthalene	20.0	20.5		ug/L		103	70 - 130
o-Xylene	20.0	20.7		ug/L		103	70 - 130
sec-Butylbenzene	20.0	21.4		ug/L		107	70 - 130
Styrene	20.0	21.1		ug/L		105	70 - 130
Tert-amyl methyl ether	20.0	20.8		ug/L		104	70 - 130
Tert-butyl ethyl ether	20.0	21.3		ug/L		106	70 - 130
tert-Butylbenzene	20.0	21.2		ug/L		106	70 - 130
Tetrachloroethene	20.0	20.7		ug/L		104	70 - 130
Tetrahydrofuran	200	209		ug/L		105	70 - 130
Toluene	20.0	20.1		ug/L		100	70 - 130

# QC Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 360-93476/3**

**Matrix: Water**

**Analysis Batch: 93476**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	20.0	20.6		ug/L		103	70 - 130
trans-1,3-Dichloropropene	20.0	19.4		ug/L		97	70 - 130
Trichloroethene	20.0	20.2		ug/L		101	70 - 130
Trichlorofluoromethane	20.0	19.4		ug/L		97	70 - 130
Vinyl chloride	20.0	18.5		ug/L		93	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	100		70 - 130
Dibromofluoromethane	101		70 - 130
Toluene-d8 (Surr)	100		70 - 130

**Lab Sample ID: LCSD 360-93476/4**

**Matrix: Water**

**Analysis Batch: 93476**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	20.0	20.6		ug/L		103	70 - 130	3	20
1,1,1-Trichloroethane	20.0	20.2		ug/L		101	70 - 130	5	20
1,1,1,2,2-Tetrachloroethane	20.0	20.8		ug/L		104	70 - 130	2	20
1,1,2-Trichloroethane	20.0	20.3		ug/L		101	70 - 130	0	20
1,1-Dichloroethane	20.0	20.7		ug/L		103	70 - 130	4	20
1,1-Dichloroethene	20.0	18.7		ug/L		94	70 - 130	4	20
1,1-Dichloropropene	20.0	19.4		ug/L		97	70 - 130	6	20
1,2,3-Trichlorobenzene	20.0	20.4		ug/L		102	70 - 130	1	20
1,2,3-Trichloropropane	20.0	20.9		ug/L		104	70 - 130	0	20
1,2,4-Trichlorobenzene	20.0	21.5		ug/L		107	70 - 130	2	20
1,2,4-Trimethylbenzene	20.0	20.6		ug/L		103	70 - 130	3	20
1,2-Dibromo-3-Chloropropane	20.0	19.6		ug/L		98	70 - 130	2	20
1,2-Dichlorobenzene	20.0	19.9		ug/L		100	70 - 130	3	20
1,2-Dichloroethane	20.0	20.8		ug/L		104	70 - 130	2	20
1,2-Dichloropropane	20.0	20.3		ug/L		102	70 - 130	4	20
1,3,5-Trimethylbenzene	20.0	20.3		ug/L		102	70 - 130	4	20
1,3-Dichlorobenzene	20.0	20.1		ug/L		101	70 - 130	5	20
1,3-Dichloropropane	20.0	20.4		ug/L		102	70 - 130	1	20
1,4-Dichlorobenzene	20.0	20.1		ug/L		100	70 - 130	3	20
1,4-Dioxane	200	214		ug/L		107	70 - 130	1	20
2,2-Dichloropropane	20.0	20.1		ug/L		101	70 - 130	6	20
2-Butanone (MEK)	200	145		ug/L		73	70 - 130	6	20
2-Chlorotoluene	20.0	20.1		ug/L		101	70 - 130	3	20
2-Hexanone	200	185		ug/L		93	70 - 130	1	20
4-Chlorotoluene	20.0	20.2		ug/L		101	70 - 130	3	20
4-Isopropyltoluene	20.0	21.6		ug/L		108	70 - 130	4	20
4-Methyl-2-pentanone (MIBK)	200	203		ug/L		102	70 - 130	1	20
Acetone	200	154		ug/L		77	70 - 130	0	20
Benzene	20.0	20.0		ug/L		100	70 - 130	5	20
Bromobenzene	20.0	20.2		ug/L		101	70 - 130	3	20
Bromoform	20.0	19.5		ug/L		98	70 - 130	5	20
Bromomethane	20.0	19.2		ug/L		96	70 - 130	1	20
Carbon disulfide	20.0	24.6		ug/L		123	70 - 130	1	20

# QC Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 360-93476/4**

**Matrix: Water**

**Analysis Batch: 93476**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Added	Result	Qualifier				Limits		
Carbon tetrachloride	20.0	19.9		ug/L		99	70 - 130	7	20
Chlorobenzene	20.0	20.0		ug/L		100	70 - 130	4	20
Chlorobromomethane	20.0	20.1		ug/L		101	70 - 130	2	20
Chlorodibromomethane	20.0	20.0		ug/L		100	70 - 130	1	20
Chloroethane	20.0	18.8		ug/L		94	70 - 130	3	20
Chloroform	20.0	19.3		ug/L		96	70 - 130	4	20
Chloromethane	20.0	16.1		ug/L		81	70 - 130	6	20
cis-1,2-Dichloroethene	20.0	20.3		ug/L		102	70 - 130	5	20
cis-1,3-Dichloropropene	20.0	18.7		ug/L		93	70 - 130	3	20
Dibromomethane	20.0	20.8		ug/L		104	70 - 130	0	20
Dichlorobromomethane	20.0	20.0		ug/L		100	70 - 130	2	20
Dichlorodifluoromethane	20.0	12.7	*	ug/L		64	70 - 130	3	20
Ethyl ether	20.0	21.5		ug/L		107	70 - 130	1	20
Ethylbenzene	20.0	19.7		ug/L		99	70 - 130	5	20
Ethylene Dibromide	20.0	20.4		ug/L		102	70 - 130	1	20
Hexachlorobutadiene	20.0	19.9		ug/L		100	70 - 130	6	20
Isopropyl ether	20.0	20.5		ug/L		103	70 - 130	3	20
Isopropylbenzene	20.0	20.0		ug/L		100	70 - 130	4	20
m-Xylene & p-Xylene	40.0	39.1		ug/L		98	70 - 130	5	20
Methyl tert-butyl ether	20.0	21.0		ug/L		105	70 - 130	2	20
Methylene Chloride	20.0	19.8		ug/L		99	70 - 130	3	20
n-Butylbenzene	20.0	20.1		ug/L		101	70 - 130	7	20
N-Propylbenzene	20.0	20.2		ug/L		101	70 - 130	5	20
Naphthalene	20.0	20.5		ug/L		103	70 - 130	0	20
o-Xylene	20.0	20.0		ug/L		100	70 - 130	3	20
sec-Butylbenzene	20.0	20.4		ug/L		102	70 - 130	5	20
Styrene	20.0	20.4		ug/L		102	70 - 130	4	20
Tert-amyl methyl ether	20.0	20.8		ug/L		104	70 - 130	0	20
Tert-butyl ethyl ether	20.0	21.1		ug/L		105	70 - 130	1	20
tert-Butylbenzene	20.0	20.4		ug/L		102	70 - 130	4	20
Tetrachloroethene	20.0	19.8		ug/L		99	70 - 130	5	20
Tetrahydrofuran	200	213		ug/L		106	70 - 130	2	20
Toluene	20.0	19.1		ug/L		95	70 - 130	5	20
trans-1,2-Dichloroethene	20.0	19.3		ug/L		96	70 - 130	7	20
trans-1,3-Dichloropropene	20.0	18.9		ug/L		95	70 - 130	2	20
Trichloroethene	20.0	18.9		ug/L		95	70 - 130	7	20
Trichlorofluoromethane	20.0	18.7		ug/L		94	70 - 130	3	20
Vinyl chloride	20.0	17.6		ug/L		88	70 - 130	5	20

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	101		70 - 130
Dibromofluoromethane	101		70 - 130
Toluene-d8 (Surr)	101		70 - 130

# QC Sample Results

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 360-93433/23**

**Matrix: Water**

**Analysis Batch: 93433**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane (SIM)	ND		3.0		ug/L			07/25/12 18:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	103		70 - 130					07/25/12 18:29	1
Dibromofluoromethane	104		70 - 130					07/25/12 18:29	1
Toluene-d8 (Surr)	99		70 - 130					07/25/12 18:29	1

**Lab Sample ID: LCS 360-93433/20**

**Matrix: Water**

**Analysis Batch: 93433**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane (SIM)	200	206		ug/L		103	70 - 130
Surrogate	%Recovery	Qualifier	Limits				
4-Bromofluorobenzene	101		70 - 130				
Dibromofluoromethane	101		70 - 130				
Toluene-d8 (Surr)	102		70 - 130				

**Lab Sample ID: LCSD 360-93433/21**

**Matrix: Water**

**Analysis Batch: 93433**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane (SIM)	200	156	*	ug/L		78	70 - 130	27	20
Surrogate	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene	102		70 - 130						
Dibromofluoromethane	100		70 - 130						
Toluene-d8 (Surr)	100		70 - 130						

# Lab Chronicle

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Client Sample ID: REW-1

Date Collected: 07/23/12 10:20

Date Received: 07/23/12 17:00

## Lab Sample ID: 360-41791-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		50	93432	07/25/12 21:01	TH	TAL WFD
Total/NA	Analysis	8260C SIM		50	93433	07/25/12 21:01	TH	TAL WFD

## Client Sample ID: REW-4

Date Collected: 07/23/12 08:50

Date Received: 07/23/12 17:00

## Lab Sample ID: 360-41791-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		10	93432	07/25/12 21:23	TH	TAL WFD
Total/NA	Analysis	8260C SIM		10	93433	07/25/12 21:23	TH	TAL WFD

## Client Sample ID: REW-5

Date Collected: 07/23/12 09:35

Date Received: 07/23/12 17:00

## Lab Sample ID: 360-41791-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		10	93432	07/25/12 21:45	TH	TAL WFD
Total/NA	Analysis	8260C SIM		10	93433	07/25/12 21:45	TH	TAL WFD

## Client Sample ID: MW-265M

Date Collected: 07/23/12 07:50

Date Received: 07/23/12 17:00

## Lab Sample ID: 360-41791-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		10	93432	07/25/12 22:07	TH	TAL WFD
Total/NA	Analysis	8260C SIM		10	93433	07/25/12 22:07	TH	TAL WFD

## Client Sample ID: MW-261S

Date Collected: 07/23/12 11:10

Date Received: 07/23/12 17:00

## Lab Sample ID: 360-41791-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		100	93432	07/25/12 22:28	TH	TAL WFD
Total/NA	Analysis	8260C SIM		100	93433	07/25/12 22:28	TH	TAL WFD
Total/NA	Analysis	8260C	DL	250	93476	07/26/12 14:57	TH	TAL WFD

## Client Sample ID: MW-552

Date Collected: 07/23/12 12:05

Date Received: 07/23/12 17:00

## Lab Sample ID: 360-41791-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		25	93432	07/25/12 22:50	TH	TAL WFD



# Lab Chronicle

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

**Client Sample ID: MW-552**

**Lab Sample ID: 360-41791-6**

Date Collected: 07/23/12 12:05

Matrix: Water

Date Received: 07/23/12 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		25	93433	07/25/12 22:50	TH	TAL WFD

**Client Sample ID: MW-553**

**Lab Sample ID: 360-41791-7**

Date Collected: 07/23/12 12:40

Matrix: Water

Date Received: 07/23/12 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		100	93432	07/25/12 23:12	TH	TAL WFD
Total/NA	Analysis	8260C SIM		100	93433	07/25/12 23:12	TH	TAL WFD
Total/NA	Analysis	8260C	DL	250	93476	07/26/12 15:19	TH	TAL WFD

**Client Sample ID: MW-562**

**Lab Sample ID: 360-41791-8**

Date Collected: 07/23/12 09:00

Matrix: Water

Date Received: 07/23/12 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		100	93432	07/25/12 23:34	TH	TAL WFD
Total/NA	Analysis	8260C SIM		100	93433	07/25/12 23:34	TH	TAL WFD

**Client Sample ID: TRIP BLANKS**

**Lab Sample ID: 360-41791-9**

Date Collected: 07/23/12 07:50

Matrix: Water

Date Received: 07/23/12 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	93432	07/25/12 23:55	TH	TAL WFD
Total/NA	Analysis	8260C SIM		1	93433	07/25/12 23:55	TH	TAL WFD

**Client Sample ID: DUPX**

**Lab Sample ID: 360-41791-10**

Date Collected: 07/23/12 12:00

Matrix: Water

Date Received: 07/23/12 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		10	93432	07/26/12 00:17	TH	TAL WFD
Total/NA	Analysis	8260C SIM		10	93433	07/26/12 00:17	TH	TAL WFD

**Laboratory References:**

TAL WFD = TestAmerica Westfield, Westfield Executive Park, 53 Southampton Road, Westfield, MA 01085, TEL (413)572-4000

# Certification Summary

Client: Innovative Engineering Solutions, Inc  
Project/Site: IDS Wayland

TestAmerica Job ID: 360-41791-1

## Laboratory: TestAmerica Westfield

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0494	09-30-12
Maine	State Program	1	MA00014	05-03-13
Massachusetts	State Program	1	M-MA014	06-30-13
New Hampshire	NELAC	1	2539	08-08-12
Rhode Island	State Program	1	LAO00057	12-30-12
Vermont	State Program	1	VT-10843	11-18-12

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## State Accreditation Matrix

Method Name	Description	Primary Accreditation	
		New Hampshire (NELAC)	Mass
180.1	Turbidity, Nephelometric	P	P
245.1	Mercury (CVAA)	NP/P	NP
300	Anions, Ion Chromatography	NP/P	NP/P
410.4	COD	NP	NP
524.2	Volatile Org Comp (GC/MS)(list upon request)	P	P
524.2	Trihalomethane compounds	P	P
608	Organochlorine Pest/PCBs (list upon request)	NP	NP
624	Volatile Org Comp (GC/MS)(list upon request)	NP	NP
625	Semivolatile Org Comp (GC/MS)(list upon request)	NP	NP
1010	Ignitability, Pensky-Martens Closed-Cup Method	SW	
1103.1	E.coli		ambient/source
3546	Microwave Extraction	SW	
5035	Closed System Purge and Trap	SW	
6020	Metals (ICP/MS) (list upon request)	NP	
10-107-06-2	Nitrogen, Total Kjeldahl	NP	NP
200.7 Rev 4.4	Metals (ICP)(list upon request)	NP/P	NP/P
200.8 Rev 5.4	Metals (ICP/MS) (list upon request)	NP/P	NP/P
3005A	Preparation, Total Recoverable or Dissolved Metals	NP/P	
3010A	Preparation, Total Metals	NP/P	
3020A	Preparation, Total Metals	NP/P	
3050B	Preparation, Metals	SW	
3510C	Liquid-Liquid Extraction (Separatory Funnel)	NP	
5030B	Purge and Trap	NP	
6010C	Metals (ICP)(list upon request)	NP/SW	
7196A	Chromium, Hexavalent	NP/SW	
7470A	Mercury (CVAA)	NP	
7471A	Mercury (CVAA)	SW	
8081B	Organochlorine Pesticides (GC)(list upon request)	NP/SW	
8082A	PCBs by Gas Chromatography(list upon request)	NP/SW	
8260C	Volatile Org Comp. (GC/MS)(list upon request)	NP/SW	
8270D	Semivolatile Comp.(GC/MS)(list upon request)	NP/SW	
9012A	Cyanide, Total and/or Amenable	NP/SW	
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	NP	
9045C	pH	SW	
CT ETPH	Conn - Ext. Total petroleum Hydrocarbons (GC)	NP/SW	
Enterolert	Enterococcus		ambient/source
L107041C	Nitrogen, Nitrate	NP	
L107-06-1B	Nitrogen Ammonia	NP	NP
L204001A CN	Cyanide, Total	P	NP/P
L210-001A	Phenolics, Total Recoverable	NP	NP
MA-EPH	Mass - Extractable Petroleum Hydrocarbons (GC)	NP/SW	
MAVPH	Mass - Volatile Petroleum Hydrocarbons (GC)	NP/SW	
SM 2320B	Alkalinity	NP/P	NP/P
SM 2340B	Total Hardness (as CaCO3) by calculation	NP/P	NP
SM 2510B	Conductivity, Specific Conductance	NP/P	NP/P
SM 2540C	Solids, Total Dissolved (TDS)	NP/P	NP/P
SM 2540D	Solids, Total Suspended (TSS)	NP	NP
SM 3500 CR D	Chromium, Hexavalent	NP	
SM 4500 Cl F	Chlorine, Residual		NP
SM 4500 H+ B	pH	NP/P	NP/P
SM 4500 NO2 B	Nitrogen, Nitrite	NP	P
SM 4500 P E	Phosphorus, Orthophosphate	NP/P	NP
SM 4500 P E	Phosphorus, Total	NP	NP
SM 4500 S2 D	Sulfide, Total	NP	
SM 5210B	BOD, 5-Day	NP	NP
SM 5310B	Organic Carbon, Total (TOC)	NP/P	NP
SM 9215E	Heterotrophic Plate Count (SimPlate)		P
SM 9222D	Coliforms, Fecal (Membrane Filter)		NP
SM 9223	Coliforms, Total, and E.Coli (Collert-P/A)		P
SM 9223	Coliforms, Total, and E.Coli (Enumeration)		P

Not all organic compounds are accredited under YNI

For methods with multiple compounds all compounds may not meet TNI criteria, a listing should be obtained from the laboratory

The lab carries additional accreditations with several states. This is the laboratories typical listing but is subject to change based on the laboratories current certification standing.

## Login Sample Receipt Checklist

Client: Innovative Engineering Solutions, Inc

Job Number: 360-41791-1

**Login Number: 41791**

**List Number: 1**

**Creator: Ard, Vanessa L**

**List Source: TestAmerica Westfield**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



**TestAmerica Westfield**

Westfield Executive Park 53 Southampton Road  
Westfield, MA 01085  
Phone (413) 572-4000 Fax (413) 572-3707

**Boston Service Center**

240 Bear Hill Rd. Suite 104  
Waltham, MA 02451  
Phone (781) 466-6900 Fax (781) 466-6901

**Chain of Custody Record**

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING

**Client Information**  
Client Contact: Vicki Perrin  
Company: Innovative Engineering Solutions Inc  
Address: 25 Spring St  
City: Waltham  
State, Zip: MA 02451  
Phone: 508-668-0033  
Email: viperrin@iesol.com  
Project Name/Number: RA-008  
Site: Beaumont - Waltham

**Sample Identification**  
Sample ID: RAW-1  
RAW-4  
RAW-5  
MW-261S  
MW-261S  
MW-552  
MW-553  
MW-552  
Top Blank  
DupX

**Sample Date**  
7/23/12  
7/23/12  
7/23/12  
7/23/12  
7/23/12  
7/23/12  
7/23/12  
7/23/12  
7/23/12  
7/23/12

**Sample Time**  
1020  
0850  
0935  
0750  
1100  
1305  
1240  
0900  
-  
-

**Sample Type**  
C  
C  
C  
C  
C  
C  
C  
C  
-  
C

**Matrix**  
W  
W  
W  
W  
W  
W  
W  
W  
-  
W

**Sample Date Requested**  
7/23/12  
**TAT Requested (days)**  
819112

**Quote #**  
RA-008  
**PO #**  
RA-008  
**WO #**  
RA-008  
**SSOW#**  
RA-008

**Client Information**  
Supplier: Sam Jones Process Polts  
Phone: Sam  
E-Mail: Sam

**Lab #**  
Sam

**Carrier Tracking No(s)**  
Sam

**Job #**  
900-41791

**Page**  
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**Preservation Codes:**  
A - HCL  
B - NaOH  
C - Zn Acetate  
D - Nitric Acid  
E - NaHSO4  
F - MeOH  
H - Ascorbic Acid  
I - Ice  
J - DI Water  
M - Hexane  
N - None  
P - Na2O4S  
Q - Na2SO3  
R - Na2SSO3  
S - H2SO4  
Z - other (specify)

**Regulatory programs:**  
MCP  GW/IS   
RCP  CT RSR   
DEP Form  EDD Required

**Analysis Requested**

Sample ID	Sample Date	Sample Time	Sample Type	Matrix	Field Filtered Sample?	Perform MS/MSD?	Analysis Requested	Total Number of Containers	Special Instructions/Note:
RAW-1	7/23/12	1020	C	W	X	X		1	
RAW-4	7/23/12	0850	C	W	X	X		1	
RAW-5	7/23/12	0935	C	W	X	X		1	
MW-261S	7/23/12	0750	C	W	X	X		1	
MW-261S	7/23/12	1100	C	W	X	X		1	
MW-552	7/23/12	1305	C	W	X	X		1	
MW-553	7/23/12	1240	C	W	X	X		1	
MW-552	7/23/12	0900	C	W	X	X		1	
Top Blank	-	-	-	-	X	X		1	
DupX	-	-	C	W	X	X		1	

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

**Special Instructions/QC Requirements:**

**Received by:**  
Date/Time: 7/23/12 1322  
Company: TA

**Received by:**  
Date/Time: 7-23-12 1400  
Company: Company

**Received by:**  
Date/Time: 7/23/12 1700  
Company: TA

**Cooler Temperature(s) °C and Other Remarks:**  
3.2 FCE

