Environmental Resources Management

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

http://www.erm.com

23 February 2015

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. (IESI) collected 13 groundwater samples from wells on portions of the Site within the boundaries of your property from 13 January 2015 to 14 January 2015. Samples were submitted to TestAmerica Laboratories, Inc. of Westfield, Massachusetts, and Spectrum Analytical, Inc. of North Kingstown, RI. Analytical results are attached to this letter. These analytical data from the groundwater monitoring wells 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 http://raytheon.erm.com/home.htm.

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

Lyndsey Colburn, P.G.
Project Manager

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

cc: Jonathan Hone, Raytheon Company
Ben Gould, CMG Environmental
PIP Repositories

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

3 - 13302

NOTICE OF ENVIRONMENTAL SAMPLING

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

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, Inc.

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:

☐ Immediate Response Action
☐ Release Abatement Measure
☐ Utility-related Abatement Measure
☐ Phase I Initial Site Investigation
☐ Phase II Comprehensive Site Assessment
☐ Phase III Feasibility Evaluation
☐ Phase IV Remedy Implementation Plan
☑ Phase V/Remedy Operation Status
☐ Post-Temporary Solution Operation, Maintenance and Monitoring
☐ 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, indoor air, soil gas) 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: 50 Apple Hill Drive

City/Town: Tewksbury Zip Code: 01876

Telephone: (978) 858-1885 Email: louis_j_burkhardt@raytheon.com

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

3 - 13302

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 of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) 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/eea/agencies/massdep/cleanup. 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://public.dep.state.ma.us/SearchableSites2/Search.aspx to view site-specific files on-line or http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html if you would like to make an appointment to see these files in person. 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.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-74193-1
Client Project/Site: IDS Wayland

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

Attn: Vicki Pariyar

Authorized for release by:
1/20/2015 3:25:43 PM

Becky Mason, Project Manager II
(413)572-4000
becky.mason@testamericainc.com

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
*	RPD of the LCS and LCSD exceeds the control limits
F1	MS and/or MSD Recovery exceeds the control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

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
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-74193-1

Laboratory: TestAmerica Buffalo

Narrative

Receipt

The samples were received on 1/15/2015 1:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.0º C.

GC/MS VOA

Due to the dilutions required, per question G on the MassDEP Analytical Protocol Certification Form, the CAM reporting limits specified in this CAM protocol could not be achieved for some or all samples/analytes.

Method 8260C: With the exception of diluted samples, per question G on the MassDEP Analytical Protocol Certification Form, TestAmerica's routine reporting limits do not achieve the CAM reporting limits specified in this CAM protocol for 1,2-dibromo-3-chloropropane, Carbon Disulfide, Isopropyl Ether, Naphthalene, tert-Amyl Methyl Ether and Tetrahydrofuran.

Method 8260C: The continuing calibration verification (CCV) for Acetone associated with batch 223126 recovered above the MCP upper control limit. MCP protocol allows for 20% of the target compounds to be outside the 20% difference but not over 40% difference or 60% difference for difficult analytes. (CCVIS 480-223126/33)

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 223126 exceeded control limits for the following analyte: 2-Butanone and/or 2-Hexanone. Unlike the calibration standards, this is due to the coelution with Ethyl Acetate and n-butyl Acetate in the spiking solution. This does not indicate a performance issue with the spike recovery, but rather the laboratory's ability to measure the two analytes together in a combined spiking solution. Through the use of spectral analysis, the two compounds can be distinguished from one another if present in a client sample. (LCS 480-223126/5), (LCSD 480-223126/6)

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 223126 exceeded control limits for the following analytes: Acetone. MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are over 10%. (LCS 480-223126/5), (LCSD 480-223126/6)

Method 8260C: The matrix spike duplicate (MSD) recoveries for batch 223126 were outside control limits.

Method 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: (480-74193-4 MSD), DUP-20150114 (480-74193-14), MW-268M-20150114 (480-74193-4), REW-11-20150113 (480-74193-12), REW-12-20150113 (480-74193-13), REW-6-20150113 (480-74193-9), REW-7-20150113 (480-74193-10). Elevated reporting limits (RLs) are provided.

Method 8260C: The following sample was diluted due to the abundance of non-target analytes: MW-561-20150114 (480-74193-6). Elevated reporting limits (RLs) are provided.

Method 8260C: The continuing calibration verification (CCV) for Acetone associated with batch 223230 recovered above the MCP upper control limit. MCP protocol allows for 20% of the target compounds to be outside the 20% difference but not over 40% difference. (CCVIS 480-223230/3)

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) and the matrix spike (MS) and / or the matrix spike duplicate (MSD) for batch 223230 exceeded control limits for the following analyte: 2-Butanone. Unlike the calibration standards, this is due to the coelution with Ethyl Acetate in the spiking solution. This does not indicate a performance issue with the spike recovery, but rather the laboratory's ability to measure the two analytes together in a combined spiking solution. Through the use of spectral analysis, the two compounds can be distinguished from one another if present in a client sample. (LCS 480-223230/5), (LCSD 480-223230/6)

Method 8260C: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for batch 223230 recovered outside control limits for the following analytes: 1,4-Dioxane.

Method 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: DUP-20150114 (480-74193-14), MW-265M-20150114 (480-74193-1), MW-267S-20150114 (480-74193-2), MW-268M-20150114 (480-74193-4), REW-11-20150113 (480-74193-12). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

MassDEP Analytical Protocol Certification Form

Laboratory Name: **TestAmerica Buffalo** Project #: **480-74193-1**

Project Location: **Wayland** RTN:

This form provides certifications for the data set for the following Laboratory Sample ID Number(s):

480-74193-1[1-15]

Matrices: ☒ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocols (check all that apply below):

8260 VOC CAM II A ☒	7470/7471 Hg CAM III B ☐	Mass DEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	Mass DEP APH CAM IX A ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	Mass DEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☐	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9012 / 9014/ 4500CN Total Cyanide/PAC CAM VI A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	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.	☒ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☒ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☒ Yes ☐ No
D	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"?	☒ Yes ☐ No
E	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?	☐ Yes ☐ No ☐ Yes ☐ No
F	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)?	☒ Yes ☐ No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☒ No[1]

***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**

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes ☒ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s) ?	☒ Yes ☐ No[1]

[1] All negative responses must be addressed in an attached laboratory narrative.

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

Signature:  Position: Project Manager

Printed Name: Becky Mason Date: 1/20/15 15:24

This form has been electronically signed and approved

Detection Summary

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

TestAmerica Job ID: 480-74193-1

Client Sample ID: MW-265M-20150114 — Lab Sample ID: 480-74193-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	350	*	10		ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	5.5		1.0		ug/L	1		8260C	Total/NA
Ethylbenzene	3.8		1.0		ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	16		2.0		ug/L	1		8260C	Total/NA
o-Xylene	4.5		1.0		ug/L	1		8260C	Total/NA
Tetrahydrofuran	49		10		ug/L	1		8260C	Total/NA
Toluene	15		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	2.3		1.0		ug/L	1		8260C	Total/NA
Vinyl chloride	2.7		1.0		ug/L	1		8260C	Total/NA
Acetone - DL	1800		250		ug/L	5		8260C	Total/NA

Client Sample ID: MW-267S-20150114 — Lab Sample ID: 480-74193-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	200	*	50		ug/L	5		8260C	Total/NA
cis-1,2-Dichloroethene	290		5.0		ug/L	5		8260C	Total/NA
Toluene	240		5.0		ug/L	5		8260C	Total/NA
Vinyl chloride	16		5.0		ug/L	5		8260C	Total/NA

Client Sample ID: MW-267M-20150114 — Lab Sample ID: 480-74193-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	240	*	10		ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	11		1.0		ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	3.8		2.0		ug/L	1		8260C	Total/NA
o-Xylene	1.2		1.0		ug/L	1		8260C	Total/NA
Toluene	47		1.0		ug/L	1		8260C	Total/NA
Vinyl chloride	10		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: MW-268M-20150114 — Lab Sample ID: 480-74193-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	120		20		ug/L	20		8260C	Total/NA
cis-1,2-Dichloroethene - DL	2900		40		ug/L	40		8260C	Total/NA

Client Sample ID: MW-560-20150114 — Lab Sample ID: 480-74193-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	200	*	10		ug/L	1		8260C	Total/NA
Acetone	85		50		ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	2.7		1.0		ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	3.1		2.0		ug/L	1		8260C	Total/NA
Toluene	49		1.0		ug/L	1		8260C	Total/NA
Vinyl chloride	8.5		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: MW-561-20150114 — Lab Sample ID: 480-74193-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	100	*	50		ug/L	5		8260C	Total/NA
Ethylbenzene	6.2		5.0		ug/L	5		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-561-20150114 (Continued) — Lab Sample ID: 480-74193-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
m-Xylene & p-Xylene	26		10		ug/L	5		8260C	Total/NA
o-Xylene	5.3		5.0		ug/L	5		8260C	Total/NA
Toluene	160		5.0		ug/L	5		8260C	Total/NA
Vinyl chloride	61		5.0		ug/L	5		8260C	Total/NA

Client Sample ID: MW-562-20150114 — Lab Sample ID: 480-74193-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	330	*	10		ug/L	1		8260C	Total/NA
Acetone	64	*	50		ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	80		1.0		ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	2.1		2.0		ug/L	1		8260C	Total/NA
Toluene	33		1.0		ug/L	1		8260C	Total/NA
Vinyl chloride	69		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: MW-563-20150114 — Lab Sample ID: 480-74193-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	320	*	10		ug/L	1		8260C	Total/NA
Acetone	100	*	50		ug/L	1		8260C	Total/NA
Benzene	1.0		1.0		ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	61		1.0		ug/L	1		8260C	Total/NA
Ethylbenzene	1.0		1.0		ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	4.2		2.0		ug/L	1		8260C	Total/NA
o-Xylene	1.1		1.0		ug/L	1		8260C	Total/NA
Toluene	46		1.0		ug/L	1		8260C	Total/NA
Vinyl chloride	25		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: REW-6-20150113 — Lab Sample ID: 480-74193-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	110	*	50		ug/L	5		8260C	Total/NA
cis-1,2-Dichloroethene	390		5.0		ug/L	5		8260C	Total/NA
Toluene	110		5.0		ug/L	5		8260C	Total/NA
Trichloroethene	19		5.0		ug/L	5		8260C	Total/NA
Vinyl chloride	25		5.0		ug/L	5		8260C	Total/NA

Client Sample ID: REW-7-20150113 — Lab Sample ID: 480-74193-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	58	*	50		ug/L	5		8260C	Total/NA
cis-1,2-Dichloroethene	230		5.0		ug/L	5		8260C	Total/NA
Toluene	110		5.0		ug/L	5		8260C	Total/NA
Vinyl chloride	77		5.0		ug/L	5		8260C	Total/NA

Client Sample ID: REW-8-20150113 — Lab Sample ID: 480-74193-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	79	*	10		ug/L	1		8260C	Total/NA
Acetone	63	*	50		ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: REW-8-20150113 (Continued) — Lab Sample ID: 480-74193-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	48		1.0		ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	2.6		2.0		ug/L	1		8260C	Total/NA
Toluene	38		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	1.4		1.0		ug/L	1		8260C	Total/NA
Vinyl chloride	42		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: REW-11-20150113 — Lab Sample ID: 480-74193-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	330		10		ug/L	10		8260C	Total/NA
Vinyl chloride	110		10		ug/L	10		8260C	Total/NA
cis-1,2-Dichloroethene - DL	1500		20		ug/L	20		8260C	Total/NA

Client Sample ID: REW-12-20150113 — Lab Sample ID: 480-74193-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	270		5.0		ug/L	5		8260C	Total/NA
Toluene	71		5.0		ug/L	5		8260C	Total/NA
Trichloroethene	18		5.0		ug/L	5		8260C	Total/NA
Vinyl chloride	75		5.0		ug/L	5		8260C	Total/NA

Client Sample ID: DUP-20150114 — Lab Sample ID: 480-74193-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	150		20		ug/L	20		8260C	Total/NA
cis-1,2-Dichloroethene - DL	3000		40		ug/L	40		8260C	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-74193-15

No Detections.

This Detection Summary does not include radiochemical test results.

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

TestAmerica Job ID: 480-74193-1

Client Sample ID: MW-265M-20150114
Date Collected: 01/14/15 11:05
Date Received: 01/15/15 01:45

Lab Sample ID: 480-74193-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/15/15 17:49	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/15/15 17:49	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/15/15 17:49	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/15/15 17:49	1
1,1-Dichloroethane	ND		1.0		ug/L			01/15/15 17:49	1
1,1-Dichloroethene	ND		1.0		ug/L			01/15/15 17:49	1
1,1-Dichloropropene	ND		1.0		ug/L			01/15/15 17:49	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/15/15 17:49	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/15/15 17:49	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/15/15 17:49	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/15/15 17:49	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/15/15 17:49	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/15/15 17:49	1
1,2-Dichloroethane	ND		1.0		ug/L			01/15/15 17:49	1
1,2-Dichloropropane	ND		1.0		ug/L			01/15/15 17:49	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/15/15 17:49	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/15/15 17:49	1
1,3-Dichloropropane	ND		1.0		ug/L			01/15/15 17:49	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/15/15 17:49	1
1,4-Dioxane	ND		50		ug/L			01/15/15 17:49	1
2,2-Dichloropropane	ND		1.0		ug/L			01/15/15 17:49	1
2-Butanone (MEK)	**350**	*	10		ug/L			01/15/15 17:49	1
2-Chlorotoluene	ND		1.0		ug/L			01/15/15 17:49	1
2-Hexanone	ND	*	10		ug/L			01/15/15 17:49	1
4-Chlorotoluene	ND		1.0		ug/L			01/15/15 17:49	1
4-Isopropyltoluene	ND		1.0		ug/L			01/15/15 17:49	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/15/15 17:49	1
Benzene	ND		1.0		ug/L			01/15/15 17:49	1
Bromobenzene	ND		1.0		ug/L			01/15/15 17:49	1
Bromoform	ND		1.0		ug/L			01/15/15 17:49	1
Bromomethane	ND		2.0		ug/L			01/15/15 17:49	1
Carbon disulfide	ND		10		ug/L			01/15/15 17:49	1
Carbon tetrachloride	ND		1.0		ug/L			01/15/15 17:49	1
Chlorobenzene	ND		1.0		ug/L			01/15/15 17:49	1
Chlorobromomethane	ND		1.0		ug/L			01/15/15 17:49	1
Chlorodibromomethane	ND		0.50		ug/L			01/15/15 17:49	1
Chloroethane	ND		2.0		ug/L			01/15/15 17:49	1
Chloroform	ND		1.0		ug/L			01/15/15 17:49	1
Chloromethane	ND		2.0		ug/L			01/15/15 17:49	1
cis-1,2-Dichloroethene	**5.5**		1.0		ug/L			01/15/15 17:49	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/15/15 17:49	1
Dichlorobromomethane	ND		0.50		ug/L			01/15/15 17:49	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/15/15 17:49	1
Ethyl ether	ND		1.0		ug/L			01/15/15 17:49	1
Ethylbenzene	**3.8**		1.0		ug/L			01/15/15 17:49	1
Ethylene Dibromide	ND		1.0		ug/L			01/15/15 17:49	1
Hexachlorobutadiene	ND		0.40		ug/L			01/15/15 17:49	1
Isopropyl ether	ND		10		ug/L			01/15/15 17:49	1
Isopropylbenzene	ND		1.0		ug/L			01/15/15 17:49	1

Client Sample ID: MW-265M-20150114

Lab Sample ID: 480-74193-1

Date Collected: 01/14/15 11:05

Matrix: Water

Date Received: 01/15/15 01:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		1.0		ug/L			01/15/15 17:49	1
Methylene Chloride	ND		1.0		ug/L			01/15/15 17:49	1
m-Xylene & p-Xylene	**16**		2.0		ug/L			01/15/15 17:49	1
Naphthalene	ND		5.0		ug/L			01/15/15 17:49	1
n-Butylbenzene	ND		1.0		ug/L			01/15/15 17:49	1
N-Propylbenzene	ND		1.0		ug/L			01/15/15 17:49	1
o-Xylene	**4.5**		1.0		ug/L			01/15/15 17:49	1
sec-Butylbenzene	ND		1.0		ug/L			01/15/15 17:49	1
Styrene	ND		1.0		ug/L			01/15/15 17:49	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/15/15 17:49	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/15/15 17:49	1
tert-Butylbenzene	ND		1.0		ug/L			01/15/15 17:49	1
Tetrachloroethene	ND		1.0		ug/L			01/15/15 17:49	1
Tetrahydrofuran	**49**		10		ug/L			01/15/15 17:49	1
Toluene	**15**		1.0		ug/L			01/15/15 17:49	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/15/15 17:49	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/15/15 17:49	1
Trichloroethene	**2.3**		1.0		ug/L			01/15/15 17:49	1
Trichlorofluoromethane	ND		1.0		ug/L			01/15/15 17:49	1
Vinyl chloride	**2.7**		1.0		ug/L			01/15/15 17:49	1
Dibromomethane	ND		1.0		ug/L			01/15/15 17:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 130*		*01/15/15 17:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*01/15/15 17:49*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*01/15/15 17:49*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**1800**		250		ug/L			01/16/15 13:14	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 130*		*01/16/15 13:14*	*5*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*		*01/16/15 13:14*	*5*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*01/16/15 13:14*	*5*

Client Sample ID: MW-267S-20150114

Lab Sample ID: 480-74193-2

Date Collected: 01/14/15 09:50

Matrix: Water

Date Received: 01/15/15 01:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0		ug/L			01/16/15 13:39	5
1,1,1-Trichloroethane	ND		5.0		ug/L			01/16/15 13:39	5
1,1,2,2-Tetrachloroethane	ND		2.5		ug/L			01/16/15 13:39	5
1,1,2-Trichloroethane	ND		5.0		ug/L			01/16/15 13:39	5
1,1-Dichloroethane	ND		5.0		ug/L			01/16/15 13:39	5
1,1-Dichloroethene	ND		5.0		ug/L			01/16/15 13:39	5
1,1-Dichloropropene	ND		5.0		ug/L			01/16/15 13:39	5
1,2,3-Trichlorobenzene	ND		5.0		ug/L			01/16/15 13:39	5

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

TestAmerica Job ID: 480-74193-1

Client Sample ID: MW-267S-20150114
Date Collected: 01/14/15 09:50
Date Received: 01/15/15 01:45

Lab Sample ID: 480-74193-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		5.0		ug/L			01/16/15 13:39	5
1,2,4-Trichlorobenzene	ND		5.0		ug/L			01/16/15 13:39	5
1,2,4-Trimethylbenzene	ND		5.0		ug/L			01/16/15 13:39	5
1,2-Dibromo-3-Chloropropane	ND		25		ug/L			01/16/15 13:39	5
1,2-Dichlorobenzene	ND		5.0		ug/L			01/16/15 13:39	5
1,2-Dichloroethane	ND		5.0		ug/L			01/16/15 13:39	5
1,2-Dichloropropane	ND		5.0		ug/L			01/16/15 13:39	5
1,3,5-Trimethylbenzene	ND		5.0		ug/L			01/16/15 13:39	5
1,3-Dichlorobenzene	ND		5.0		ug/L			01/16/15 13:39	5
1,3-Dichloropropane	ND		5.0		ug/L			01/16/15 13:39	5
1,4-Dichlorobenzene	ND		5.0		ug/L			01/16/15 13:39	5
1,4-Dioxane	ND	*	250		ug/L			01/16/15 13:39	5
2,2-Dichloropropane	ND		5.0		ug/L			01/16/15 13:39	5
2-Butanone (MEK)	**200**	*	50		ug/L			01/16/15 13:39	5
2-Chlorotoluene	ND		5.0		ug/L			01/16/15 13:39	5
2-Hexanone	ND		50		ug/L			01/16/15 13:39	5
4-Chlorotoluene	ND		5.0		ug/L			01/16/15 13:39	5
4-Isopropyltoluene	ND		5.0		ug/L			01/16/15 13:39	5
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			01/16/15 13:39	5
Acetone	ND		250		ug/L			01/16/15 13:39	5
Benzene	ND		5.0		ug/L			01/16/15 13:39	5
Bromobenzene	ND		5.0		ug/L			01/16/15 13:39	5
Bromoform	ND		5.0		ug/L			01/16/15 13:39	5
Bromomethane	ND		10		ug/L			01/16/15 13:39	5
Carbon disulfide	ND		50		ug/L			01/16/15 13:39	5
Carbon tetrachloride	ND		5.0		ug/L			01/16/15 13:39	5
Chlorobenzene	ND		5.0		ug/L			01/16/15 13:39	5
Chlorobromomethane	ND		5.0		ug/L			01/16/15 13:39	5
Chlorodibromomethane	ND		2.5		ug/L			01/16/15 13:39	5
Chloroethane	ND		10		ug/L			01/16/15 13:39	5
Chloroform	ND		5.0		ug/L			01/16/15 13:39	5
Chloromethane	ND		10		ug/L			01/16/15 13:39	5
cis-1,2-Dichloroethene	**290**		5.0		ug/L			01/16/15 13:39	5
cis-1,3-Dichloropropene	ND		2.0		ug/L			01/16/15 13:39	5
Dichlorobromomethane	ND		2.5		ug/L			01/16/15 13:39	5
Dichlorodifluoromethane	ND		5.0		ug/L			01/16/15 13:39	5
Ethyl ether	ND		5.0		ug/L			01/16/15 13:39	5
Ethylbenzene	ND		5.0		ug/L			01/16/15 13:39	5
Ethylene Dibromide	ND		5.0		ug/L			01/16/15 13:39	5
Hexachlorobutadiene	ND		2.0		ug/L			01/16/15 13:39	5
Isopropyl ether	ND		50		ug/L			01/16/15 13:39	5
Isopropylbenzene	ND		5.0		ug/L			01/16/15 13:39	5
Methyl tert-butyl ether	ND		5.0		ug/L			01/16/15 13:39	5
Methylene Chloride	ND		5.0		ug/L			01/16/15 13:39	5
m-Xylene & p-Xylene	ND		10		ug/L			01/16/15 13:39	5
Naphthalene	ND		25		ug/L			01/16/15 13:39	5
n-Butylbenzene	ND		5.0		ug/L			01/16/15 13:39	5
N-Propylbenzene	ND		5.0		ug/L			01/16/15 13:39	5
o-Xylene	ND		5.0		ug/L			01/16/15 13:39	5

Client Sample ID: MW-267S-20150114

Lab Sample ID: 480-74193-2

Date Collected: 01/14/15 09:50

Matrix: Water

Date Received: 01/15/15 01:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		5.0		ug/L			01/16/15 13:39	5
Styrene	ND		5.0		ug/L			01/16/15 13:39	5
Tert-amyl methyl ether	ND		25		ug/L			01/16/15 13:39	5
Tert-butyl ethyl ether	ND		25		ug/L			01/16/15 13:39	5
tert-Butylbenzene	ND		5.0		ug/L			01/16/15 13:39	5
Tetrachloroethene	ND		5.0		ug/L			01/16/15 13:39	5
Tetrahydrofuran	ND		50		ug/L			01/16/15 13:39	5
Toluene	**240**		5.0		ug/L			01/16/15 13:39	5
trans-1,2-Dichloroethene	ND		5.0		ug/L			01/16/15 13:39	5
trans-1,3-Dichloropropene	ND		2.0		ug/L			01/16/15 13:39	5
Trichloroethene	ND		5.0		ug/L			01/16/15 13:39	5
Trichlorofluoromethane	ND		5.0		ug/L			01/16/15 13:39	5
Vinyl chloride	**16**		5.0		ug/L			01/16/15 13:39	5
Dibromomethane	ND		5.0		ug/L			01/16/15 13:39	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*01/16/15 13:39*	*5*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*01/16/15 13:39*	*5*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*01/16/15 13:39*	*5*

Client Sample ID: MW-267M-20150114

Lab Sample ID: 480-74193-3

Date Collected: 01/14/15 10:40

Matrix: Water

Date Received: 01/15/15 01:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/15/15 18:39	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/15/15 18:39	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/15/15 18:39	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/15/15 18:39	1
1,1-Dichloroethane	ND		1.0		ug/L			01/15/15 18:39	1
1,1-Dichloroethene	ND		1.0		ug/L			01/15/15 18:39	1
1,1-Dichloropropene	ND		1.0		ug/L			01/15/15 18:39	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/15/15 18:39	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/15/15 18:39	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/15/15 18:39	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/15/15 18:39	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/15/15 18:39	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/15/15 18:39	1
1,2-Dichloroethane	ND		1.0		ug/L			01/15/15 18:39	1
1,2-Dichloropropane	ND		1.0		ug/L			01/15/15 18:39	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/15/15 18:39	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/15/15 18:39	1
1,3-Dichloropropane	ND		1.0		ug/L			01/15/15 18:39	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/15/15 18:39	1
1,4-Dioxane	ND		50		ug/L			01/15/15 18:39	1
2,2-Dichloropropane	ND		1.0		ug/L			01/15/15 18:39	1
2-Butanone (MEK)	**240**	*	10		ug/L			01/15/15 18:39	1
2-Chlorotoluene	ND		1.0		ug/L			01/15/15 18:39	1
2-Hexanone	ND	*	10		ug/L			01/15/15 18:39	1

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

TestAmerica Job ID: 480-74193-1

Client Sample ID: MW-267M-20150114
Date Collected: 01/14/15 10:40
Date Received: 01/15/15 01:45

Lab Sample ID: 480-74193-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1.0		ug/L			01/15/15 18:39	1
4-Isopropyltoluene	ND		1.0		ug/L			01/15/15 18:39	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/15/15 18:39	1
Acetone	ND	*	50		ug/L			01/15/15 18:39	1
Benzene	ND		1.0		ug/L			01/15/15 18:39	1
Bromobenzene	ND		1.0		ug/L			01/15/15 18:39	1
Bromoform	ND		1.0		ug/L			01/15/15 18:39	1
Bromomethane	ND		2.0		ug/L			01/15/15 18:39	1
Carbon disulfide	ND		10		ug/L			01/15/15 18:39	1
Carbon tetrachloride	ND		1.0		ug/L			01/15/15 18:39	1
Chlorobenzene	ND		1.0		ug/L			01/15/15 18:39	1
Chlorobromomethane	ND		1.0		ug/L			01/15/15 18:39	1
Chlorodibromomethane	ND		0.50		ug/L			01/15/15 18:39	1
Chloroethane	ND		2.0		ug/L			01/15/15 18:39	1
Chloroform	ND		1.0		ug/L			01/15/15 18:39	1
Chloromethane	ND		2.0		ug/L			01/15/15 18:39	1
cis-1,2-Dichloroethene	**11**		1.0		ug/L			01/15/15 18:39	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/15/15 18:39	1
Dichlorobromomethane	ND		0.50		ug/L			01/15/15 18:39	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/15/15 18:39	1
Ethyl ether	ND		1.0		ug/L			01/15/15 18:39	1
Ethylbenzene	ND		1.0		ug/L			01/15/15 18:39	1
Ethylene Dibromide	ND		1.0		ug/L			01/15/15 18:39	1
Hexachlorobutadiene	ND		0.40		ug/L			01/15/15 18:39	1
Isopropyl ether	ND		10		ug/L			01/15/15 18:39	1
Isopropylbenzene	ND		1.0		ug/L			01/15/15 18:39	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/15/15 18:39	1
Methylene Chloride	ND		1.0		ug/L			01/15/15 18:39	1
m-Xylene & p-Xylene	**3.8**		2.0		ug/L			01/15/15 18:39	1
Naphthalene	ND		5.0		ug/L			01/15/15 18:39	1
n-Butylbenzene	ND		1.0		ug/L			01/15/15 18:39	1
N-Propylbenzene	ND		1.0		ug/L			01/15/15 18:39	1
o-Xylene	**1.2**		1.0		ug/L			01/15/15 18:39	1
sec-Butylbenzene	ND		1.0		ug/L			01/15/15 18:39	1
Styrene	ND		1.0		ug/L			01/15/15 18:39	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/15/15 18:39	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/15/15 18:39	1
tert-Butylbenzene	ND		1.0		ug/L			01/15/15 18:39	1
Tetrachloroethene	ND		1.0		ug/L			01/15/15 18:39	1
Tetrahydrofuran	ND		10		ug/L			01/15/15 18:39	1
Toluene	**47**		1.0		ug/L			01/15/15 18:39	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/15/15 18:39	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/15/15 18:39	1
Trichloroethene	ND		1.0		ug/L			01/15/15 18:39	1
Trichlorofluoromethane	ND		1.0		ug/L			01/15/15 18:39	1
Vinyl chloride	**10**		1.0		ug/L			01/15/15 18:39	1
Dibromomethane	ND		1.0		ug/L			01/15/15 18:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*70 - 130*		*01/15/15 18:39*	*1*

Client Sample ID: MW-267M-20150114

Lab Sample ID: 480-74193-3

Date Collected: 01/14/15 10:40

Matrix: Water

Date Received: 01/15/15 01:45

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*01/15/15 18:39*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*01/15/15 18:39*	*1*

Client Sample ID: MW-268M-20150114

Lab Sample ID: 480-74193-4

Date Collected: 01/14/15 08:30

Matrix: Water

Date Received: 01/15/15 01:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		20		ug/L			01/15/15 19:04	20
1,1,1-Trichloroethane	ND		20		ug/L			01/15/15 19:04	20
1,1,2,2-Tetrachloroethane	ND		10		ug/L			01/15/15 19:04	20
1,1,2-Trichloroethane	ND		20		ug/L			01/15/15 19:04	20
1,1-Dichloroethane	ND		20		ug/L			01/15/15 19:04	20
1,1-Dichloroethene	ND		20		ug/L			01/15/15 19:04	20
1,1-Dichloropropene	ND		20		ug/L			01/15/15 19:04	20
1,2,3-Trichlorobenzene	ND		20		ug/L			01/15/15 19:04	20
1,2,3-Trichloropropane	ND		20		ug/L			01/15/15 19:04	20
1,2,4-Trichlorobenzene	ND		20		ug/L			01/15/15 19:04	20
1,2,4-Trimethylbenzene	ND		20		ug/L			01/15/15 19:04	20
1,2-Dibromo-3-Chloropropane	ND		100		ug/L			01/15/15 19:04	20
1,2-Dichlorobenzene	ND		20		ug/L			01/15/15 19:04	20
1,2-Dichloroethane	ND		20		ug/L			01/15/15 19:04	20
1,2-Dichloropropane	ND		20		ug/L			01/15/15 19:04	20
1,3,5-Trimethylbenzene	ND		20		ug/L			01/15/15 19:04	20
1,3-Dichlorobenzene	ND		20		ug/L			01/15/15 19:04	20
1,3-Dichloropropane	ND		20		ug/L			01/15/15 19:04	20
1,4-Dichlorobenzene	ND		20		ug/L			01/15/15 19:04	20
1,4-Dioxane	ND		1000		ug/L			01/15/15 19:04	20
2,2-Dichloropropane	ND		20		ug/L			01/15/15 19:04	20
2-Butanone (MEK)	ND	*	200		ug/L			01/15/15 19:04	20
2-Chlorotoluene	ND		20		ug/L			01/15/15 19:04	20
2-Hexanone	ND	*	200		ug/L			01/15/15 19:04	20
4-Chlorotoluene	ND		20		ug/L			01/15/15 19:04	20
4-Isopropyltoluene	ND		20		ug/L			01/15/15 19:04	20
4-Methyl-2-pentanone (MIBK)	ND		200		ug/L			01/15/15 19:04	20
Acetone	ND	*	1000		ug/L			01/15/15 19:04	20
Benzene	ND		20		ug/L			01/15/15 19:04	20
Bromobenzene	ND		20		ug/L			01/15/15 19:04	20
Bromoform	ND		20		ug/L			01/15/15 19:04	20
Bromomethane	ND		40		ug/L			01/15/15 19:04	20
Carbon disulfide	ND		200		ug/L			01/15/15 19:04	20
Carbon tetrachloride	ND		20		ug/L			01/15/15 19:04	20
Chlorobenzene	ND		20		ug/L			01/15/15 19:04	20
Chlorobromomethane	ND		20		ug/L			01/15/15 19:04	20
Chlorodibromomethane	ND		10		ug/L			01/15/15 19:04	20
Chloroethane	ND		40		ug/L			01/15/15 19:04	20
Chloroform	ND		20		ug/L			01/15/15 19:04	20
Chloromethane	ND		40		ug/L			01/15/15 19:04	20

Client Sample ID: MW-268M-20150114
Date Collected: 01/14/15 08:30
Date Received: 01/15/15 01:45

Lab Sample ID: 480-74193-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		8.0		ug/L			01/15/15 19:04	20
Dichlorobromomethane	ND		10		ug/L			01/15/15 19:04	20
Dichlorodifluoromethane	ND		20		ug/L			01/15/15 19:04	20
Ethyl ether	ND		20		ug/L			01/15/15 19:04	20
Ethylbenzene	ND		20		ug/L			01/15/15 19:04	20
Ethylene Dibromide	ND		20		ug/L			01/15/15 19:04	20
Hexachlorobutadiene	ND		8.0		ug/L			01/15/15 19:04	20
Isopropyl ether	ND		200		ug/L			01/15/15 19:04	20
Isopropylbenzene	ND		20		ug/L			01/15/15 19:04	20
Methyl tert-butyl ether	ND		20		ug/L			01/15/15 19:04	20
Methylene Chloride	ND		20		ug/L			01/15/15 19:04	20
m-Xylene & p-Xylene	ND		40		ug/L			01/15/15 19:04	20
Naphthalene	ND		100		ug/L			01/15/15 19:04	20
n-Butylbenzene	ND		20		ug/L			01/15/15 19:04	20
N-Propylbenzene	ND		20		ug/L			01/15/15 19:04	20
o-Xylene	ND		20		ug/L			01/15/15 19:04	20
sec-Butylbenzene	ND		20		ug/L			01/15/15 19:04	20
Styrene	ND		20		ug/L			01/15/15 19:04	20
Tert-amyl methyl ether	ND		100		ug/L			01/15/15 19:04	20
Tert-butyl ethyl ether	ND		100		ug/L			01/15/15 19:04	20
tert-Butylbenzene	ND		20		ug/L			01/15/15 19:04	20
Tetrachloroethene	ND		20		ug/L			01/15/15 19:04	20
Tetrahydrofuran	ND		200		ug/L			01/15/15 19:04	20
Toluene	ND		20		ug/L			01/15/15 19:04	20
trans-1,2-Dichloroethene	ND		20		ug/L			01/15/15 19:04	20
trans-1,3-Dichloropropene	ND		8.0		ug/L			01/15/15 19:04	20
Trichloroethene	ND		20		ug/L			01/15/15 19:04	20
Trichlorofluoromethane	ND		20		ug/L			01/15/15 19:04	20
Vinyl chloride	**120**		20		ug/L			01/15/15 19:04	20
Dibromomethane	ND		20		ug/L			01/15/15 19:04	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*70 - 130*		*01/15/15 19:04*	*20*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*01/15/15 19:04*	*20*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*01/15/15 19:04*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**2900**		40		ug/L			01/16/15 14:04	40

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*70 - 130*		*01/16/15 14:04*	*40*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*01/16/15 14:04*	*40*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*		*01/16/15 14:04*	*40*

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

TestAmerica Job ID: 480-74193-1

Client Sample ID: MW-560-20150114
Date Collected: 01/14/15 11:40
Date Received: 01/15/15 01:45

Lab Sample ID: 480-74193-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/16/15 14:29	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/16/15 14:29	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/16/15 14:29	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/16/15 14:29	1
1,1-Dichloroethane	ND		1.0		ug/L			01/16/15 14:29	1
1,1-Dichloroethene	ND		1.0		ug/L			01/16/15 14:29	1
1,1-Dichloropropene	ND		1.0		ug/L			01/16/15 14:29	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/16/15 14:29	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/16/15 14:29	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/16/15 14:29	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/16/15 14:29	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/16/15 14:29	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/16/15 14:29	1
1,2-Dichloroethane	ND		1.0		ug/L			01/16/15 14:29	1
1,2-Dichloropropane	ND		1.0		ug/L			01/16/15 14:29	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/16/15 14:29	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/16/15 14:29	1
1,3-Dichloropropane	ND		1.0		ug/L			01/16/15 14:29	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/16/15 14:29	1
1,4-Dioxane	ND	*	50		ug/L			01/16/15 14:29	1
2,2-Dichloropropane	ND		1.0		ug/L			01/16/15 14:29	1
2-Butanone (MEK)	**200**	*	10		ug/L			01/16/15 14:29	1
2-Chlorotoluene	ND		1.0		ug/L			01/16/15 14:29	1
2-Hexanone	ND		10		ug/L			01/16/15 14:29	1
4-Chlorotoluene	ND		1.0		ug/L			01/16/15 14:29	1
4-Isopropyltoluene	ND		1.0		ug/L			01/16/15 14:29	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/16/15 14:29	1
Acetone	**85**		50		ug/L			01/16/15 14:29	1
Benzene	ND		1.0		ug/L			01/16/15 14:29	1
Bromobenzene	ND		1.0		ug/L			01/16/15 14:29	1
Bromoform	ND		1.0		ug/L			01/16/15 14:29	1
Bromomethane	ND		2.0		ug/L			01/16/15 14:29	1
Carbon disulfide	ND		10		ug/L			01/16/15 14:29	1
Carbon tetrachloride	ND		1.0		ug/L			01/16/15 14:29	1
Chlorobenzene	ND		1.0		ug/L			01/16/15 14:29	1
Chlorobromomethane	ND		1.0		ug/L			01/16/15 14:29	1
Chlorodibromomethane	ND		0.50		ug/L			01/16/15 14:29	1
Chloroethane	ND		2.0		ug/L			01/16/15 14:29	1
Chloroform	ND		1.0		ug/L			01/16/15 14:29	1
Chloromethane	ND		2.0		ug/L			01/16/15 14:29	1
cis-1,2-Dichloroethene	**2.7**		1.0		ug/L			01/16/15 14:29	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/16/15 14:29	1
Dichlorobromomethane	ND		0.50		ug/L			01/16/15 14:29	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/16/15 14:29	1
Ethyl ether	ND		1.0		ug/L			01/16/15 14:29	1
Ethylbenzene	ND		1.0		ug/L			01/16/15 14:29	1
Ethylene Dibromide	ND		1.0		ug/L			01/16/15 14:29	1
Hexachlorobutadiene	ND		0.40		ug/L			01/16/15 14:29	1
Isopropyl ether	ND		10		ug/L			01/16/15 14:29	1

Client Sample ID: MW-560-20150114

Lab Sample ID: 480-74193-5

Date Collected: 01/14/15 11:40

Matrix: Water

Date Received: 01/15/15 01:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			01/16/15 14:29	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/16/15 14:29	1
Methylene Chloride	ND		1.0		ug/L			01/16/15 14:29	1
m-Xylene & p-Xylene	**3.1**		2.0		ug/L			01/16/15 14:29	1
Naphthalene	ND		5.0		ug/L			01/16/15 14:29	1
n-Butylbenzene	ND		1.0		ug/L			01/16/15 14:29	1
N-Propylbenzene	ND		1.0		ug/L			01/16/15 14:29	1
o-Xylene	ND		1.0		ug/L			01/16/15 14:29	1
sec-Butylbenzene	ND		1.0		ug/L			01/16/15 14:29	1
Styrene	ND		1.0		ug/L			01/16/15 14:29	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/16/15 14:29	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/16/15 14:29	1
tert-Butylbenzene	ND		1.0		ug/L			01/16/15 14:29	1
Tetrachloroethene	ND		1.0		ug/L			01/16/15 14:29	1
Tetrahydrofuran	ND		10		ug/L			01/16/15 14:29	1
Toluene	**49**		1.0		ug/L			01/16/15 14:29	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/16/15 14:29	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/16/15 14:29	1
Trichloroethene	ND		1.0		ug/L			01/16/15 14:29	1
Trichlorofluoromethane	ND		1.0		ug/L			01/16/15 14:29	1
Vinyl chloride	**8.5**		1.0		ug/L			01/16/15 14:29	1
Dibromomethane	ND		1.0		ug/L			01/16/15 14:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*70 - 130*		*01/16/15 14:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*01/16/15 14:29*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*01/16/15 14:29*	*1*

Client Sample ID: MW-561-20150114

Lab Sample ID: 480-74193-6

Date Collected: 01/14/15 08:25

Matrix: Water

Date Received: 01/15/15 01:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0		ug/L			01/15/15 19:54	5
1,1,1-Trichloroethane	ND		5.0		ug/L			01/15/15 19:54	5
1,1,2,2-Tetrachloroethane	ND		2.5		ug/L			01/15/15 19:54	5
1,1,2-Trichloroethane	ND		5.0		ug/L			01/15/15 19:54	5
1,1-Dichloroethane	ND		5.0		ug/L			01/15/15 19:54	5
1,1-Dichloroethene	ND		5.0		ug/L			01/15/15 19:54	5
1,1-Dichloropropene	ND		5.0		ug/L			01/15/15 19:54	5
1,2,3-Trichlorobenzene	ND		5.0		ug/L			01/15/15 19:54	5
1,2,3-Trichloropropane	ND		5.0		ug/L			01/15/15 19:54	5
1,2,4-Trichlorobenzene	ND		5.0		ug/L			01/15/15 19:54	5
1,2,4-Trimethylbenzene	ND		5.0		ug/L			01/15/15 19:54	5
1,2-Dibromo-3-Chloropropane	ND		25		ug/L			01/15/15 19:54	5
1,2-Dichlorobenzene	ND		5.0		ug/L			01/15/15 19:54	5
1,2-Dichloroethane	ND		5.0		ug/L			01/15/15 19:54	5
1,2-Dichloropropane	ND		5.0		ug/L			01/15/15 19:54	5
1,3,5-Trimethylbenzene	ND		5.0		ug/L			01/15/15 19:54	5

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

TestAmerica Job ID: 480-74193-1

Client Sample ID: MW-561-20150114
Date Collected: 01/14/15 08:25
Date Received: 01/15/15 01:45

Lab Sample ID: 480-74193-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		5.0		ug/L			01/15/15 19:54	5
1,3-Dichloropropane	ND		5.0		ug/L			01/15/15 19:54	5
1,4-Dichlorobenzene	ND		5.0		ug/L			01/15/15 19:54	5
1,4-Dioxane	ND		250		ug/L			01/15/15 19:54	5
2,2-Dichloropropane	ND		5.0		ug/L			01/15/15 19:54	5
2-Butanone (MEK)	**100**	*	50		ug/L			01/15/15 19:54	5
2-Chlorotoluene	ND		5.0		ug/L			01/15/15 19:54	5
2-Hexanone	ND	*	50		ug/L			01/15/15 19:54	5
4-Chlorotoluene	ND		5.0		ug/L			01/15/15 19:54	5
4-Isopropyltoluene	ND		5.0		ug/L			01/15/15 19:54	5
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			01/15/15 19:54	5
Acetone	ND	*	250		ug/L			01/15/15 19:54	5
Benzene	ND		5.0		ug/L			01/15/15 19:54	5
Bromobenzene	ND		5.0		ug/L			01/15/15 19:54	5
Bromoform	ND		5.0		ug/L			01/15/15 19:54	5
Bromomethane	ND		10		ug/L			01/15/15 19:54	5
Carbon disulfide	ND		50		ug/L			01/15/15 19:54	5
Carbon tetrachloride	ND		5.0		ug/L			01/15/15 19:54	5
Chlorobenzene	ND		5.0		ug/L			01/15/15 19:54	5
Chlorobromomethane	ND		5.0		ug/L			01/15/15 19:54	5
Chlorodibromomethane	ND		2.5		ug/L			01/15/15 19:54	5
Chloroethane	ND		10		ug/L			01/15/15 19:54	5
Chloroform	ND		5.0		ug/L			01/15/15 19:54	5
Chloromethane	ND		10		ug/L			01/15/15 19:54	5
cis-1,2-Dichloroethene	ND		5.0		ug/L			01/15/15 19:54	5
cis-1,3-Dichloropropene	ND		2.0		ug/L			01/15/15 19:54	5
Dichlorobromomethane	ND		2.5		ug/L			01/15/15 19:54	5
Dichlorodifluoromethane	ND		5.0		ug/L			01/15/15 19:54	5
Ethyl ether	ND		5.0		ug/L			01/15/15 19:54	5
Ethylbenzene	**6.2**		5.0		ug/L			01/15/15 19:54	5
Ethylene Dibromide	ND		5.0		ug/L			01/15/15 19:54	5
Hexachlorobutadiene	ND		2.0		ug/L			01/15/15 19:54	5
Isopropyl ether	ND		50		ug/L			01/15/15 19:54	5
Isopropylbenzene	ND		5.0		ug/L			01/15/15 19:54	5
Methyl tert-butyl ether	ND		5.0		ug/L			01/15/15 19:54	5
Methylene Chloride	ND		5.0		ug/L			01/15/15 19:54	5
m-Xylene & p-Xylene	**26**		10		ug/L			01/15/15 19:54	5
Naphthalene	ND		25		ug/L			01/15/15 19:54	5
n-Butylbenzene	ND		5.0		ug/L			01/15/15 19:54	5
N-Propylbenzene	ND		5.0		ug/L			01/15/15 19:54	5
o-Xylene	**5.3**		5.0		ug/L			01/15/15 19:54	5
sec-Butylbenzene	ND		5.0		ug/L			01/15/15 19:54	5
Styrene	ND		5.0		ug/L			01/15/15 19:54	5
Tert-amyl methyl ether	ND		25		ug/L			01/15/15 19:54	5
Tert-butyl ethyl ether	ND		25		ug/L			01/15/15 19:54	5
tert-Butylbenzene	ND		5.0		ug/L			01/15/15 19:54	5
Tetrachloroethene	ND		5.0		ug/L			01/15/15 19:54	5
Tetrahydrofuran	ND		50		ug/L			01/15/15 19:54	5
Toluene	**160**		5.0		ug/L			01/15/15 19:54	5

Client Sample ID: MW-561-20150114

Lab Sample ID: 480-74193-6

Date Collected: 01/14/15 08:25

Matrix: Water

Date Received: 01/15/15 01:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		5.0		ug/L			01/15/15 19:54	5
trans-1,3-Dichloropropene	ND		2.0		ug/L			01/15/15 19:54	5
Trichloroethene	ND		5.0		ug/L			01/15/15 19:54	5
Trichlorofluoromethane	ND		5.0		ug/L			01/15/15 19:54	5
Vinyl chloride	**61**		5.0		ug/L			01/15/15 19:54	5
Dibromomethane	ND		5.0		ug/L			01/15/15 19:54	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*70 - 130*		*01/15/15 19:54*	*5*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*		*01/15/15 19:54*	*5*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*01/15/15 19:54*	*5*

Client Sample ID: MW-562-20150114

Lab Sample ID: 480-74193-7

Date Collected: 01/14/15 12:35

Matrix: Water

Date Received: 01/15/15 01:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/15/15 20:19	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/15/15 20:19	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/15/15 20:19	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/15/15 20:19	1
1,1-Dichloroethane	ND		1.0		ug/L			01/15/15 20:19	1
1,1-Dichloroethene	ND		1.0		ug/L			01/15/15 20:19	1
1,1-Dichloropropene	ND		1.0		ug/L			01/15/15 20:19	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/15/15 20:19	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/15/15 20:19	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/15/15 20:19	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/15/15 20:19	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/15/15 20:19	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/15/15 20:19	1
1,2-Dichloroethane	ND		1.0		ug/L			01/15/15 20:19	1
1,2-Dichloropropane	ND		1.0		ug/L			01/15/15 20:19	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/15/15 20:19	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/15/15 20:19	1
1,3-Dichloropropane	ND		1.0		ug/L			01/15/15 20:19	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/15/15 20:19	1
1,4-Dioxane	ND		50		ug/L			01/15/15 20:19	1
2,2-Dichloropropane	ND		1.0		ug/L			01/15/15 20:19	1
2-Butanone (MEK)	**330**	*	10		ug/L			01/15/15 20:19	1
2-Chlorotoluene	ND		1.0		ug/L			01/15/15 20:19	1
2-Hexanone	ND	*	10		ug/L			01/15/15 20:19	1
4-Chlorotoluene	ND		1.0		ug/L			01/15/15 20:19	1
4-Isopropyltoluene	ND		1.0		ug/L			01/15/15 20:19	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/15/15 20:19	1
Acetone	**64**	*	50		ug/L			01/15/15 20:19	1
Benzene	ND		1.0		ug/L			01/15/15 20:19	1
Bromobenzene	ND		1.0		ug/L			01/15/15 20:19	1
Bromoform	ND		1.0		ug/L			01/15/15 20:19	1
Bromomethane	ND		2.0		ug/L			01/15/15 20:19	1

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

TestAmerica Job ID: 480-74193-1

Client Sample ID: MW-562-20150114
Date Collected: 01/14/15 12:35
Date Received: 01/15/15 01:45

Lab Sample ID: 480-74193-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		10		ug/L			01/15/15 20:19	1
Carbon tetrachloride	ND		1.0		ug/L			01/15/15 20:19	1
Chlorobenzene	ND		1.0		ug/L			01/15/15 20:19	1
Chlorobromomethane	ND		1.0		ug/L			01/15/15 20:19	1
Chlorodibromomethane	ND		0.50		ug/L			01/15/15 20:19	1
Chloroethane	ND		2.0		ug/L			01/15/15 20:19	1
Chloroform	ND		1.0		ug/L			01/15/15 20:19	1
Chloromethane	ND		2.0		ug/L			01/15/15 20:19	1
cis-1,2-Dichloroethene	**80**		1.0		ug/L			01/15/15 20:19	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/15/15 20:19	1
Dichlorobromomethane	ND		0.50		ug/L			01/15/15 20:19	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/15/15 20:19	1
Ethyl ether	ND		1.0		ug/L			01/15/15 20:19	1
Ethylbenzene	ND		1.0		ug/L			01/15/15 20:19	1
Ethylene Dibromide	ND		1.0		ug/L			01/15/15 20:19	1
Hexachlorobutadiene	ND		0.40		ug/L			01/15/15 20:19	1
Isopropyl ether	ND		10		ug/L			01/15/15 20:19	1
Isopropylbenzene	ND		1.0		ug/L			01/15/15 20:19	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/15/15 20:19	1
Methylene Chloride	ND		1.0		ug/L			01/15/15 20:19	1
m-Xylene & p-Xylene	**2.1**		2.0		ug/L			01/15/15 20:19	1
Naphthalene	ND		5.0		ug/L			01/15/15 20:19	1
n-Butylbenzene	ND		1.0		ug/L			01/15/15 20:19	1
N-Propylbenzene	ND		1.0		ug/L			01/15/15 20:19	1
o-Xylene	ND		1.0		ug/L			01/15/15 20:19	1
sec-Butylbenzene	ND		1.0		ug/L			01/15/15 20:19	1
Styrene	ND		1.0		ug/L			01/15/15 20:19	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/15/15 20:19	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/15/15 20:19	1
tert-Butylbenzene	ND		1.0		ug/L			01/15/15 20:19	1
Tetrachloroethene	ND		1.0		ug/L			01/15/15 20:19	1
Tetrahydrofuran	ND		10		ug/L			01/15/15 20:19	1
Toluene	**33**		1.0		ug/L			01/15/15 20:19	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/15/15 20:19	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/15/15 20:19	1
Trichloroethene	ND		1.0		ug/L			01/15/15 20:19	1
Trichlorofluoromethane	ND		1.0		ug/L			01/15/15 20:19	1
Vinyl chloride	**69**		1.0		ug/L			01/15/15 20:19	1
Dibromomethane	ND		1.0		ug/L			01/15/15 20:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 130*		*01/15/15 20:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*01/15/15 20:19*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*01/15/15 20:19*	*1*

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

TestAmerica Job ID: 480-74193-1

Client Sample ID: MW-563-20150114
Date Collected: 01/14/15 09:50
Date Received: 01/15/15 01:45

Lab Sample ID: 480-74193-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/15/15 20:44	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/15/15 20:44	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/15/15 20:44	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/15/15 20:44	1
1,1-Dichloroethane	ND		1.0		ug/L			01/15/15 20:44	1
1,1-Dichloroethene	ND		1.0		ug/L			01/15/15 20:44	1
1,1-Dichloropropene	ND		1.0		ug/L			01/15/15 20:44	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/15/15 20:44	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/15/15 20:44	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/15/15 20:44	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/15/15 20:44	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/15/15 20:44	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/15/15 20:44	1
1,2-Dichloroethane	ND		1.0		ug/L			01/15/15 20:44	1
1,2-Dichloropropane	ND		1.0		ug/L			01/15/15 20:44	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/15/15 20:44	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/15/15 20:44	1
1,3-Dichloropropane	ND		1.0		ug/L			01/15/15 20:44	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/15/15 20:44	1
1,4-Dioxane	ND		50		ug/L			01/15/15 20:44	1
2,2-Dichloropropane	ND		1.0		ug/L			01/15/15 20:44	1
2-Butanone (MEK)	**320**	*	10		ug/L			01/15/15 20:44	1
2-Chlorotoluene	ND		1.0		ug/L			01/15/15 20:44	1
2-Hexanone	ND	*	10		ug/L			01/15/15 20:44	1
4-Chlorotoluene	ND		1.0		ug/L			01/15/15 20:44	1
4-Isopropyltoluene	ND		1.0		ug/L			01/15/15 20:44	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/15/15 20:44	1
Acetone	**100**	*	50		ug/L			01/15/15 20:44	1
Benzene	**1.0**		1.0		ug/L			01/15/15 20:44	1
Bromobenzene	ND		1.0		ug/L			01/15/15 20:44	1
Bromoform	ND		1.0		ug/L			01/15/15 20:44	1
Bromomethane	ND		2.0		ug/L			01/15/15 20:44	1
Carbon disulfide	ND		10		ug/L			01/15/15 20:44	1
Carbon tetrachloride	ND		1.0		ug/L			01/15/15 20:44	1
Chlorobenzene	ND		1.0		ug/L			01/15/15 20:44	1
Chlorobromomethane	ND		1.0		ug/L			01/15/15 20:44	1
Chlorodibromomethane	ND		0.50		ug/L			01/15/15 20:44	1
Chloroethane	ND		2.0		ug/L			01/15/15 20:44	1
Chloroform	ND		1.0		ug/L			01/15/15 20:44	1
Chloromethane	ND		2.0		ug/L			01/15/15 20:44	1
cis-1,2-Dichloroethene	**61**		1.0		ug/L			01/15/15 20:44	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/15/15 20:44	1
Dichlorobromomethane	ND		0.50		ug/L			01/15/15 20:44	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/15/15 20:44	1
Ethyl ether	ND		1.0		ug/L			01/15/15 20:44	1
Ethylbenzene	**1.0**		1.0		ug/L			01/15/15 20:44	1
Ethylene Dibromide	ND		1.0		ug/L			01/15/15 20:44	1
Hexachlorobutadiene	ND		0.40		ug/L			01/15/15 20:44	1
Isopropyl ether	ND		10		ug/L			01/15/15 20:44	1

Client Sample ID: MW-563-20150114 — **Lab Sample ID: 480-74193-8**
Date Collected: 01/14/15 09:50 — **Matrix: Water**
Date Received: 01/15/15 01:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			01/15/15 20:44	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/15/15 20:44	1
Methylene Chloride	ND		1.0		ug/L			01/15/15 20:44	1
m-Xylene & p-Xylene	**4.2**		2.0		ug/L			01/15/15 20:44	1
Naphthalene	ND		5.0		ug/L			01/15/15 20:44	1
n-Butylbenzene	ND		1.0		ug/L			01/15/15 20:44	1
N-Propylbenzene	ND		1.0		ug/L			01/15/15 20:44	1
o-Xylene	**1.1**		1.0		ug/L			01/15/15 20:44	1
sec-Butylbenzene	ND		1.0		ug/L			01/15/15 20:44	1
Styrene	ND		1.0		ug/L			01/15/15 20:44	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/15/15 20:44	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/15/15 20:44	1
tert-Butylbenzene	ND		1.0		ug/L			01/15/15 20:44	1
Tetrachloroethene	ND		1.0		ug/L			01/15/15 20:44	1
Tetrahydrofuran	ND		10		ug/L			01/15/15 20:44	1
Toluene	**46**		1.0		ug/L			01/15/15 20:44	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/15/15 20:44	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/15/15 20:44	1
Trichloroethene	ND		1.0		ug/L			01/15/15 20:44	1
Trichlorofluoromethane	ND		1.0		ug/L			01/15/15 20:44	1
Vinyl chloride	**25**		1.0		ug/L			01/15/15 20:44	1
Dibromomethane	ND		1.0		ug/L			01/15/15 20:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*70 - 130*		*01/15/15 20:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*01/15/15 20:44*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*01/15/15 20:44*	*1*

Client Sample ID: REW-6-20150113 — **Lab Sample ID: 480-74193-9**
Date Collected: 01/13/15 12:15 — **Matrix: Water**
Date Received: 01/15/15 01:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0		ug/L			01/15/15 21:09	5
1,1,1-Trichloroethane	ND		5.0		ug/L			01/15/15 21:09	5
1,1,2,2-Tetrachloroethane	ND		2.5		ug/L			01/15/15 21:09	5
1,1,2-Trichloroethane	ND		5.0		ug/L			01/15/15 21:09	5
1,1-Dichloroethane	ND		5.0		ug/L			01/15/15 21:09	5
1,1-Dichloroethene	ND		5.0		ug/L			01/15/15 21:09	5
1,1-Dichloropropene	ND		5.0		ug/L			01/15/15 21:09	5
1,2,3-Trichlorobenzene	ND		5.0		ug/L			01/15/15 21:09	5
1,2,3-Trichloropropane	ND		5.0		ug/L			01/15/15 21:09	5
1,2,4-Trichlorobenzene	ND		5.0		ug/L			01/15/15 21:09	5
1,2,4-Trimethylbenzene	ND		5.0		ug/L			01/15/15 21:09	5
1,2-Dibromo-3-Chloropropane	ND		25		ug/L			01/15/15 21:09	5
1,2-Dichlorobenzene	ND		5.0		ug/L			01/15/15 21:09	5
1,2-Dichloroethane	ND		5.0		ug/L			01/15/15 21:09	5
1,2-Dichloropropane	ND		5.0		ug/L			01/15/15 21:09	5
1,3,5-Trimethylbenzene	ND		5.0		ug/L			01/15/15 21:09	5

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

TestAmerica Job ID: 480-74193-1

Client Sample ID: REW-6-20150113
Date Collected: 01/13/15 12:15
Date Received: 01/15/15 01:45

Lab Sample ID: 480-74193-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		5.0		ug/L			01/15/15 21:09	5
1,3-Dichloropropane	ND		5.0		ug/L			01/15/15 21:09	5
1,4-Dichlorobenzene	ND		5.0		ug/L			01/15/15 21:09	5
1,4-Dioxane	ND		250		ug/L			01/15/15 21:09	5
2,2-Dichloropropane	ND		5.0		ug/L			01/15/15 21:09	5
2-Butanone (MEK)	**110**	*	50		ug/L			01/15/15 21:09	5
2-Chlorotoluene	ND		5.0		ug/L			01/15/15 21:09	5
2-Hexanone	ND	*	50		ug/L			01/15/15 21:09	5
4-Chlorotoluene	ND		5.0		ug/L			01/15/15 21:09	5
4-Isopropyltoluene	ND		5.0		ug/L			01/15/15 21:09	5
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			01/15/15 21:09	5
Acetone	ND	*	250		ug/L			01/15/15 21:09	5
Benzene	ND		5.0		ug/L			01/15/15 21:09	5
Bromobenzene	ND		5.0		ug/L			01/15/15 21:09	5
Bromoform	ND		5.0		ug/L			01/15/15 21:09	5
Bromomethane	ND		10		ug/L			01/15/15 21:09	5
Carbon disulfide	ND		50		ug/L			01/15/15 21:09	5
Carbon tetrachloride	ND		5.0		ug/L			01/15/15 21:09	5
Chlorobenzene	ND		5.0		ug/L			01/15/15 21:09	5
Chlorobromomethane	ND		5.0		ug/L			01/15/15 21:09	5
Chlorodibromomethane	ND		2.5		ug/L			01/15/15 21:09	5
Chloroethane	ND		10		ug/L			01/15/15 21:09	5
Chloroform	ND		5.0		ug/L			01/15/15 21:09	5
Chloromethane	ND		10		ug/L			01/15/15 21:09	5
cis-1,2-Dichloroethene	**390**		5.0		ug/L			01/15/15 21:09	5
cis-1,3-Dichloropropene	ND		2.0		ug/L			01/15/15 21:09	5
Dichlorobromomethane	ND		2.5		ug/L			01/15/15 21:09	5
Dichlorodifluoromethane	ND		5.0		ug/L			01/15/15 21:09	5
Ethyl ether	ND		5.0		ug/L			01/15/15 21:09	5
Ethylbenzene	ND		5.0		ug/L			01/15/15 21:09	5
Ethylene Dibromide	ND		5.0		ug/L			01/15/15 21:09	5
Hexachlorobutadiene	ND		2.0		ug/L			01/15/15 21:09	5
Isopropyl ether	ND		50		ug/L			01/15/15 21:09	5
Isopropylbenzene	ND		5.0		ug/L			01/15/15 21:09	5
Methyl tert-butyl ether	ND		5.0		ug/L			01/15/15 21:09	5
Methylene Chloride	ND		5.0		ug/L			01/15/15 21:09	5
m-Xylene & p-Xylene	ND		10		ug/L			01/15/15 21:09	5
Naphthalene	ND		25		ug/L			01/15/15 21:09	5
n-Butylbenzene	ND		5.0		ug/L			01/15/15 21:09	5
N-Propylbenzene	ND		5.0		ug/L			01/15/15 21:09	5
o-Xylene	ND		5.0		ug/L			01/15/15 21:09	5
sec-Butylbenzene	ND		5.0		ug/L			01/15/15 21:09	5
Styrene	ND		5.0		ug/L			01/15/15 21:09	5
Tert-amyl methyl ether	ND		25		ug/L			01/15/15 21:09	5
Tert-butyl ethyl ether	ND		25		ug/L			01/15/15 21:09	5
tert-Butylbenzene	ND		5.0		ug/L			01/15/15 21:09	5
Tetrachloroethene	ND		5.0		ug/L			01/15/15 21:09	5
Tetrahydrofuran	ND		50		ug/L			01/15/15 21:09	5
Toluene	**110**		5.0		ug/L			01/15/15 21:09	5

Client Sample ID: REW-6-20150113

Lab Sample ID: 480-74193-9

Date Collected: 01/13/15 12:15

Matrix: Water

Date Received: 01/15/15 01:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		5.0		ug/L			01/15/15 21:09	5
trans-1,3-Dichloropropene	ND		2.0		ug/L			01/15/15 21:09	5
Trichloroethene	**19**		5.0		ug/L			01/15/15 21:09	5
Trichlorofluoromethane	ND		5.0		ug/L			01/15/15 21:09	5
Vinyl chloride	**25**		5.0		ug/L			01/15/15 21:09	5
Dibromomethane	ND		5.0		ug/L			01/15/15 21:09	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*70 - 130*		*01/15/15 21:09*	*5*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*01/15/15 21:09*	*5*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*01/15/15 21:09*	*5*

Client Sample ID: REW-7-20150113

Lab Sample ID: 480-74193-10

Date Collected: 01/13/15 09:40

Matrix: Water

Date Received: 01/15/15 01:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0		ug/L			01/15/15 21:34	5
1,1,1-Trichloroethane	ND		5.0		ug/L			01/15/15 21:34	5
1,1,2,2-Tetrachloroethane	ND		2.5		ug/L			01/15/15 21:34	5
1,1,2-Trichloroethane	ND		5.0		ug/L			01/15/15 21:34	5
1,1-Dichloroethane	ND		5.0		ug/L			01/15/15 21:34	5
1,1-Dichloroethene	ND		5.0		ug/L			01/15/15 21:34	5
1,1-Dichloropropene	ND		5.0		ug/L			01/15/15 21:34	5
1,2,3-Trichlorobenzene	ND		5.0		ug/L			01/15/15 21:34	5
1,2,3-Trichloropropane	ND		5.0		ug/L			01/15/15 21:34	5
1,2,4-Trichlorobenzene	ND		5.0		ug/L			01/15/15 21:34	5
1,2,4-Trimethylbenzene	ND		5.0		ug/L			01/15/15 21:34	5
1,2-Dibromo-3-Chloropropane	ND		25		ug/L			01/15/15 21:34	5
1,2-Dichlorobenzene	ND		5.0		ug/L			01/15/15 21:34	5
1,2-Dichloroethane	ND		5.0		ug/L			01/15/15 21:34	5
1,2-Dichloropropane	ND		5.0		ug/L			01/15/15 21:34	5
1,3,5-Trimethylbenzene	ND		5.0		ug/L			01/15/15 21:34	5
1,3-Dichlorobenzene	ND		5.0		ug/L			01/15/15 21:34	5
1,3-Dichloropropane	ND		5.0		ug/L			01/15/15 21:34	5
1,4-Dichlorobenzene	ND		5.0		ug/L			01/15/15 21:34	5
1,4-Dioxane	ND		250		ug/L			01/15/15 21:34	5
2,2-Dichloropropane	ND		5.0		ug/L			01/15/15 21:34	5
2-Butanone (MEK)	**58**	*	50		ug/L			01/15/15 21:34	5
2-Chlorotoluene	ND		5.0		ug/L			01/15/15 21:34	5
2-Hexanone	ND	*	50		ug/L			01/15/15 21:34	5
4-Chlorotoluene	ND		5.0		ug/L			01/15/15 21:34	5
4-Isopropyltoluene	ND		5.0		ug/L			01/15/15 21:34	5
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			01/15/15 21:34	5
Acetone	ND	*	250		ug/L			01/15/15 21:34	5
Benzene	ND		5.0		ug/L			01/15/15 21:34	5
Bromobenzene	ND		5.0		ug/L			01/15/15 21:34	5
Bromoform	ND		5.0		ug/L			01/15/15 21:34	5
Bromomethane	ND		10		ug/L			01/15/15 21:34	5

Client Sample ID: REW-7-20150113
Date Collected: 01/13/15 09:40
Date Received: 01/15/15 01:45

Lab Sample ID: 480-74193-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		50		ug/L			01/15/15 21:34	5
Carbon tetrachloride	ND		5.0		ug/L			01/15/15 21:34	5
Chlorobenzene	ND		5.0		ug/L			01/15/15 21:34	5
Chlorobromomethane	ND		5.0		ug/L			01/15/15 21:34	5
Chlorodibromomethane	ND		2.5		ug/L			01/15/15 21:34	5
Chloroethane	ND		10		ug/L			01/15/15 21:34	5
Chloroform	ND		5.0		ug/L			01/15/15 21:34	5
Chloromethane	ND		10		ug/L			01/15/15 21:34	5
cis-1,2-Dichloroethene	**230**		5.0		ug/L			01/15/15 21:34	5
cis-1,3-Dichloropropene	ND		2.0		ug/L			01/15/15 21:34	5
Dichlorobromomethane	ND		2.5		ug/L			01/15/15 21:34	5
Dichlorodifluoromethane	ND		5.0		ug/L			01/15/15 21:34	5
Ethyl ether	ND		5.0		ug/L			01/15/15 21:34	5
Ethylbenzene	ND		5.0		ug/L			01/15/15 21:34	5
Ethylene Dibromide	ND		5.0		ug/L			01/15/15 21:34	5
Hexachlorobutadiene	ND		2.0		ug/L			01/15/15 21:34	5
Isopropyl ether	ND		50		ug/L			01/15/15 21:34	5
Isopropylbenzene	ND		5.0		ug/L			01/15/15 21:34	5
Methyl tert-butyl ether	ND		5.0		ug/L			01/15/15 21:34	5
Methylene Chloride	ND		5.0		ug/L			01/15/15 21:34	5
m-Xylene & p-Xylene	ND		10		ug/L			01/15/15 21:34	5
Naphthalene	ND		25		ug/L			01/15/15 21:34	5
n-Butylbenzene	ND		5.0		ug/L			01/15/15 21:34	5
N-Propylbenzene	ND		5.0		ug/L			01/15/15 21:34	5
o-Xylene	ND		5.0		ug/L			01/15/15 21:34	5
sec-Butylbenzene	ND		5.0		ug/L			01/15/15 21:34	5
Styrene	ND		5.0		ug/L			01/15/15 21:34	5
Tert-amyl methyl ether	ND		25		ug/L			01/15/15 21:34	5
Tert-butyl ethyl ether	ND		25		ug/L			01/15/15 21:34	5
tert-Butylbenzene	ND		5.0		ug/L			01/15/15 21:34	5
Tetrachloroethene	ND		5.0		ug/L			01/15/15 21:34	5
Tetrahydrofuran	ND		50		ug/L			01/15/15 21:34	5
Toluene	**110**		5.0		ug/L			01/15/15 21:34	5
trans-1,2-Dichloroethene	ND		5.0		ug/L			01/15/15 21:34	5
trans-1,3-Dichloropropene	ND		2.0		ug/L			01/15/15 21:34	5
Trichloroethene	ND		5.0		ug/L			01/15/15 21:34	5
Trichlorofluoromethane	ND		5.0		ug/L			01/15/15 21:34	5
Vinyl chloride	**77**		5.0		ug/L			01/15/15 21:34	5
Dibromomethane	ND		5.0		ug/L			01/15/15 21:34	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*70 - 130*		*01/15/15 21:34*	*5*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*		*01/15/15 21:34*	*5*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*01/15/15 21:34*	*5*

Client Sample ID: REW-8-20150113
Date Collected: 01/13/15 10:20
Date Received: 01/15/15 01:45

Lab Sample ID: 480-74193-11
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/15/15 21:59	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/15/15 21:59	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/15/15 21:59	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/15/15 21:59	1
1,1-Dichloroethane	ND		1.0		ug/L			01/15/15 21:59	1
1,1-Dichloroethene	ND		1.0		ug/L			01/15/15 21:59	1
1,1-Dichloropropene	ND		1.0		ug/L			01/15/15 21:59	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/15/15 21:59	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/15/15 21:59	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/15/15 21:59	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/15/15 21:59	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/15/15 21:59	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/15/15 21:59	1
1,2-Dichloroethane	ND		1.0		ug/L			01/15/15 21:59	1
1,2-Dichloropropane	ND		1.0		ug/L			01/15/15 21:59	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/15/15 21:59	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/15/15 21:59	1
1,3-Dichloropropane	ND		1.0		ug/L			01/15/15 21:59	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/15/15 21:59	1
1,4-Dioxane	ND		50		ug/L			01/15/15 21:59	1
2,2-Dichloropropane	ND		1.0		ug/L			01/15/15 21:59	1
2-Butanone (MEK)	**79**	*	10		ug/L			01/15/15 21:59	1
2-Chlorotoluene	ND		1.0		ug/L			01/15/15 21:59	1
2-Hexanone	ND	*	10		ug/L			01/15/15 21:59	1
4-Chlorotoluene	ND		1.0		ug/L			01/15/15 21:59	1
4-Isopropyltoluene	ND		1.0		ug/L			01/15/15 21:59	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/15/15 21:59	1
Acetone	**63**	*	50		ug/L			01/15/15 21:59	1
Benzene	ND		1.0		ug/L			01/15/15 21:59	1
Bromobenzene	ND		1.0		ug/L			01/15/15 21:59	1
Bromoform	ND		1.0		ug/L			01/15/15 21:59	1
Bromomethane	ND		2.0		ug/L			01/15/15 21:59	1
Carbon disulfide	ND		10		ug/L			01/15/15 21:59	1
Carbon tetrachloride	ND		1.0		ug/L			01/15/15 21:59	1
Chlorobenzene	ND		1.0		ug/L			01/15/15 21:59	1
Chlorobromomethane	ND		1.0		ug/L			01/15/15 21:59	1
Chlorodibromomethane	ND		0.50		ug/L			01/15/15 21:59	1
Chloroethane	ND		2.0		ug/L			01/15/15 21:59	1
Chloroform	ND		1.0		ug/L			01/15/15 21:59	1
Chloromethane	ND		2.0		ug/L			01/15/15 21:59	1
cis-1,2-Dichloroethene	**48**		1.0		ug/L			01/15/15 21:59	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/15/15 21:59	1
Dichlorobromomethane	ND		0.50		ug/L			01/15/15 21:59	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/15/15 21:59	1
Ethyl ether	ND		1.0		ug/L			01/15/15 21:59	1
Ethylbenzene	ND		1.0		ug/L			01/15/15 21:59	1
Ethylene Dibromide	ND		1.0		ug/L			01/15/15 21:59	1
Hexachlorobutadiene	ND		0.40		ug/L			01/15/15 21:59	1
Isopropyl ether	ND		10		ug/L			01/15/15 21:59	1

Client Sample ID: REW-8-20150113 — **Lab Sample ID: 480-74193-11**
Date Collected: 01/13/15 10:20 — **Matrix: Water**
Date Received: 01/15/15 01:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			01/15/15 21:59	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/15/15 21:59	1
Methylene Chloride	ND		1.0		ug/L			01/15/15 21:59	1
m-Xylene & p-Xylene	**2.6**		2.0		ug/L			01/15/15 21:59	1
Naphthalene	ND		5.0		ug/L			01/15/15 21:59	1
n-Butylbenzene	ND		1.0		ug/L			01/15/15 21:59	1
N-Propylbenzene	ND		1.0		ug/L			01/15/15 21:59	1
o-Xylene	ND		1.0		ug/L			01/15/15 21:59	1
sec-Butylbenzene	ND		1.0		ug/L			01/15/15 21:59	1
Styrene	ND		1.0		ug/L			01/15/15 21:59	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/15/15 21:59	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/15/15 21:59	1
tert-Butylbenzene	ND		1.0		ug/L			01/15/15 21:59	1
Tetrachloroethene	ND		1.0		ug/L			01/15/15 21:59	1
Tetrahydrofuran	ND		10		ug/L			01/15/15 21:59	1
Toluene	**38**		1.0		ug/L			01/15/15 21:59	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/15/15 21:59	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/15/15 21:59	1
Trichloroethene	**1.4**		1.0		ug/L			01/15/15 21:59	1
Trichlorofluoromethane	ND		1.0		ug/L			01/15/15 21:59	1
Vinyl chloride	**42**		1.0		ug/L			01/15/15 21:59	1
Dibromomethane	ND		1.0		ug/L			01/15/15 21:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*70 - 130*		*01/15/15 21:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*01/15/15 21:59*	*1*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*01/15/15 21:59*	*1*

Client Sample ID: REW-11-20150113 — **Lab Sample ID: 480-74193-12**
Date Collected: 01/13/15 11:25 — **Matrix: Water**
Date Received: 01/15/15 01:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		10		ug/L			01/15/15 22:24	10
1,1,1-Trichloroethane	ND		10		ug/L			01/15/15 22:24	10
1,1,2,2-Tetrachloroethane	ND		5.0		ug/L			01/15/15 22:24	10
1,1,2-Trichloroethane	ND		10		ug/L			01/15/15 22:24	10
1,1-Dichloroethane	ND		10		ug/L			01/15/15 22:24	10
1,1-Dichloroethene	ND		10		ug/L			01/15/15 22:24	10
1,1-Dichloropropene	ND		10		ug/L			01/15/15 22:24	10
1,2,3-Trichlorobenzene	ND		10		ug/L			01/15/15 22:24	10
1,2,3-Trichloropropane	ND		10		ug/L			01/15/15 22:24	10
1,2,4-Trichlorobenzene	ND		10		ug/L			01/15/15 22:24	10
1,2,4-Trimethylbenzene	ND		10		ug/L			01/15/15 22:24	10
1,2-Dibromo-3-Chloropropane	ND		50		ug/L			01/15/15 22:24	10
1,2-Dichlorobenzene	ND		10		ug/L			01/15/15 22:24	10
1,2-Dichloroethane	ND		10		ug/L			01/15/15 22:24	10
1,2-Dichloropropane	ND		10		ug/L			01/15/15 22:24	10
1,3,5-Trimethylbenzene	ND		10		ug/L			01/15/15 22:24	10

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

TestAmerica Job ID: 480-74193-1

Client Sample ID: REW-11-20150113
Date Collected: 01/13/15 11:25
Date Received: 01/15/15 01:45

Lab Sample ID: 480-74193-12
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		10		ug/L			01/15/15 22:24	10
1,3-Dichloropropane	ND		10		ug/L			01/15/15 22:24	10
1,4-Dichlorobenzene	ND		10		ug/L			01/15/15 22:24	10
1,4-Dioxane	ND		500		ug/L			01/15/15 22:24	10
2,2-Dichloropropane	ND		10		ug/L			01/15/15 22:24	10
2-Butanone (MEK)	ND	*	100		ug/L			01/15/15 22:24	10
2-Chlorotoluene	ND		10		ug/L			01/15/15 22:24	10
2-Hexanone	ND	*	100		ug/L			01/15/15 22:24	10
4-Chlorotoluene	ND		10		ug/L			01/15/15 22:24	10
4-Isopropyltoluene	ND		10		ug/L			01/15/15 22:24	10
4-Methyl-2-pentanone (MIBK)	ND		100		ug/L			01/15/15 22:24	10
Acetone	ND	*	500		ug/L			01/15/15 22:24	10
Benzene	ND		10		ug/L			01/15/15 22:24	10
Bromobenzene	ND		10		ug/L			01/15/15 22:24	10
Bromoform	ND		10		ug/L			01/15/15 22:24	10
Bromomethane	ND		20		ug/L			01/15/15 22:24	10
Carbon disulfide	ND		100		ug/L			01/15/15 22:24	10
Carbon tetrachloride	ND		10		ug/L			01/15/15 22:24	10
Chlorobenzene	ND		10		ug/L			01/15/15 22:24	10
Chlorobromomethane	ND		10		ug/L			01/15/15 22:24	10
Chlorodibromomethane	ND		5.0		ug/L			01/15/15 22:24	10
Chloroethane	ND		20		ug/L			01/15/15 22:24	10
Chloroform	ND		10		ug/L			01/15/15 22:24	10
Chloromethane	ND		20		ug/L			01/15/15 22:24	10
cis-1,3-Dichloropropene	ND		4.0		ug/L			01/15/15 22:24	10
Dichlorobromomethane	ND		5.0		ug/L			01/15/15 22:24	10
Dichlorodifluoromethane	ND		10		ug/L			01/15/15 22:24	10
Ethyl ether	ND		10		ug/L			01/15/15 22:24	10
Ethylbenzene	ND		10		ug/L			01/15/15 22:24	10
Ethylene Dibromide	ND		10		ug/L			01/15/15 22:24	10
Hexachlorobutadiene	ND		4.0		ug/L			01/15/15 22:24	10
Isopropyl ether	ND		100		ug/L			01/15/15 22:24	10
Isopropylbenzene	ND		10		ug/L			01/15/15 22:24	10
Methyl tert-butyl ether	ND		10		ug/L			01/15/15 22:24	10
Methylene Chloride	ND		10		ug/L			01/15/15 22:24	10
m-Xylene & p-Xylene	ND		20		ug/L			01/15/15 22:24	10
Naphthalene	ND		50		ug/L			01/15/15 22:24	10
n-Butylbenzene	ND		10		ug/L			01/15/15 22:24	10
N-Propylbenzene	ND		10		ug/L			01/15/15 22:24	10
o-Xylene	ND		10		ug/L			01/15/15 22:24	10
sec-Butylbenzene	ND		10		ug/L			01/15/15 22:24	10
Styrene	ND		10		ug/L			01/15/15 22:24	10
Tert-amyl methyl ether	ND		50		ug/L			01/15/15 22:24	10
Tert-butyl ethyl ether	ND		50		ug/L			01/15/15 22:24	10
tert-Butylbenzene	ND		10		ug/L			01/15/15 22:24	10
Tetrachloroethene	ND		10		ug/L			01/15/15 22:24	10
Tetrahydrofuran	ND		100		ug/L			01/15/15 22:24	10
Toluene	ND		10		ug/L			01/15/15 22:24	10
trans-1,2-Dichloroethene	ND		10		ug/L			01/15/15 22:24	10

Client Sample ID: REW-11-20150113 — **Lab Sample ID: 480-74193-12**
Date Collected: 01/13/15 11:25 — **Matrix: Water**
Date Received: 01/15/15 01:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		4.0		ug/L			01/15/15 22:24	10
Trichloroethene	**330**		10		ug/L			01/15/15 22:24	10
Trichlorofluoromethane	ND		10		ug/L			01/15/15 22:24	10
Vinyl chloride	**110**		10		ug/L			01/15/15 22:24	10
Dibromomethane	ND		10		ug/L			01/15/15 22:24	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*70 - 130*		*01/15/15 22:24*	*10*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*01/15/15 22:24*	*10*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*01/15/15 22:24*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**1500**		20		ug/L			01/16/15 15:20	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*01/16/15 15:20*	*20*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*01/16/15 15:20*	*20*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*01/16/15 15:20*	*20*

Client Sample ID: REW-12-20150113 — **Lab Sample ID: 480-74193-13**
Date Collected: 01/13/15 09:00 — **Matrix: Water**
Date Received: 01/15/15 01:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0		ug/L			01/15/15 22:49	5
1,1,1-Trichloroethane	ND		5.0		ug/L			01/15/15 22:49	5
1,1,2,2-Tetrachloroethane	ND		2.5		ug/L			01/15/15 22:49	5
1,1,2-Trichloroethane	ND		5.0		ug/L			01/15/15 22:49	5
1,1-Dichloroethane	ND		5.0		ug/L			01/15/15 22:49	5
1,1-Dichloroethene	ND		5.0		ug/L			01/15/15 22:49	5
1,1-Dichloropropene	ND		5.0		ug/L			01/15/15 22:49	5
1,2,3-Trichlorobenzene	ND		5.0		ug/L			01/15/15 22:49	5
1,2,3-Trichloropropane	ND		5.0		ug/L			01/15/15 22:49	5
1,2,4-Trichlorobenzene	ND		5.0		ug/L			01/15/15 22:49	5
1,2,4-Trimethylbenzene	ND		5.0		ug/L			01/15/15 22:49	5
1,2-Dibromo-3-Chloropropane	ND		25		ug/L			01/15/15 22:49	5
1,2-Dichlorobenzene	ND		5.0		ug/L			01/15/15 22:49	5
1,2-Dichloroethane	ND		5.0		ug/L			01/15/15 22:49	5
1,2-Dichloropropane	ND		5.0		ug/L			01/15/15 22:49	5
1,3,5-Trimethylbenzene	ND		5.0		ug/L			01/15/15 22:49	5
1,3-Dichlorobenzene	ND		5.0		ug/L			01/15/15 22:49	5
1,3-Dichloropropane	ND		5.0		ug/L			01/15/15 22:49	5
1,4-Dichlorobenzene	ND		5.0		ug/L			01/15/15 22:49	5
1,4-Dioxane	ND		250		ug/L			01/15/15 22:49	5
2,2-Dichloropropane	ND		5.0		ug/L			01/15/15 22:49	5
2-Butanone (MEK)	ND	*	50		ug/L			01/15/15 22:49	5
2-Chlorotoluene	ND		5.0		ug/L			01/15/15 22:49	5
2-Hexanone	ND	*	50		ug/L			01/15/15 22:49	5

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

TestAmerica Job ID: 480-74193-1

Client Sample ID: REW-12-20150113
Date Collected: 01/13/15 09:00
Date Received: 01/15/15 01:45

Lab Sample ID: 480-74193-13
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		5.0		ug/L			01/15/15 22:49	5
4-Isopropyltoluene	ND		5.0		ug/L			01/15/15 22:49	5
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			01/15/15 22:49	5
Acetone	ND	*	250		ug/L			01/15/15 22:49	5
Benzene	ND		5.0		ug/L			01/15/15 22:49	5
Bromobenzene	ND		5.0		ug/L			01/15/15 22:49	5
Bromoform	ND		5.0		ug/L			01/15/15 22:49	5
Bromomethane	ND		10		ug/L			01/15/15 22:49	5
Carbon disulfide	ND		50		ug/L			01/15/15 22:49	5
Carbon tetrachloride	ND		5.0		ug/L			01/15/15 22:49	5
Chlorobenzene	ND		5.0		ug/L			01/15/15 22:49	5
Chlorobromomethane	ND		5.0		ug/L			01/15/15 22:49	5
Chlorodibromomethane	ND		2.5		ug/L			01/15/15 22:49	5
Chloroethane	ND		10		ug/L			01/15/15 22:49	5
Chloroform	ND		5.0		ug/L			01/15/15 22:49	5
Chloromethane	ND		10		ug/L			01/15/15 22:49	5
cis-1,2-Dichloroethene	**270**		5.0		ug/L			01/15/15 22:49	5
cis-1,3-Dichloropropene	ND		2.0		ug/L			01/15/15 22:49	5
Dichlorobromomethane	ND		2.5		ug/L			01/15/15 22:49	5
Dichlorodifluoromethane	ND		5.0		ug/L			01/15/15 22:49	5
Ethyl ether	ND		5.0		ug/L			01/15/15 22:49	5
Ethylbenzene	ND		5.0		ug/L			01/15/15 22:49	5
Ethylene Dibromide	ND		5.0		ug/L			01/15/15 22:49	5
Hexachlorobutadiene	ND		2.0		ug/L			01/15/15 22:49	5
Isopropyl ether	ND		50		ug/L			01/15/15 22:49	5
Isopropylbenzene	ND		5.0		ug/L			01/15/15 22:49	5
Methyl tert-butyl ether	ND		5.0		ug/L			01/15/15 22:49	5
Methylene Chloride	ND		5.0		ug/L			01/15/15 22:49	5
m-Xylene & p-Xylene	ND		10		ug/L			01/15/15 22:49	5
Naphthalene	ND		25		ug/L			01/15/15 22:49	5
n-Butylbenzene	ND		5.0		ug/L			01/15/15 22:49	5
N-Propylbenzene	ND		5.0		ug/L			01/15/15 22:49	5
o-Xylene	ND		5.0		ug/L			01/15/15 22:49	5
sec-Butylbenzene	ND		5.0		ug/L			01/15/15 22:49	5
Styrene	ND		5.0		ug/L			01/15/15 22:49	5
Tert-amyl methyl ether	ND		25		ug/L			01/15/15 22:49	5
Tert-butyl ethyl ether	ND		25		ug/L			01/15/15 22:49	5
tert-Butylbenzene	ND		5.0		ug/L			01/15/15 22:49	5
Tetrachloroethene	ND		5.0		ug/L			01/15/15 22:49	5
Tetrahydrofuran	ND		50		ug/L			01/15/15 22:49	5
Toluene	**71**		5.0		ug/L			01/15/15 22:49	5
trans-1,2-Dichloroethene	ND		5.0		ug/L			01/15/15 22:49	5
trans-1,3-Dichloropropene	ND		2.0		ug/L			01/15/15 22:49	5
Trichloroethene	**18**		5.0		ug/L			01/15/15 22:49	5
Trichlorofluoromethane	ND		5.0		ug/L			01/15/15 22:49	5
Vinyl chloride	**75**		5.0		ug/L			01/15/15 22:49	5
Dibromomethane	ND		5.0		ug/L			01/15/15 22:49	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*70 - 130*		*01/15/15 22:49*	*5*

Client Sample ID: REW-12-20150113 — **Lab Sample ID: 480-74193-13**
Date Collected: 01/13/15 09:00 — **Matrix: Water**
Date Received: 01/15/15 01:45

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*01/15/15 22:49*	*5*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*01/15/15 22:49*	*5*

Client Sample ID: DUP-20150114 — **Lab Sample ID: 480-74193-14**
Date Collected: 01/14/15 00:00 — **Matrix: Water**
Date Received: 01/15/15 01:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		20		ug/L			01/15/15 23:14	20
1,1,1-Trichloroethane	ND		20		ug/L			01/15/15 23:14	20
1,1,2,2-Tetrachloroethane	ND		10		ug/L			01/15/15 23:14	20
1,1,2-Trichloroethane	ND		20		ug/L			01/15/15 23:14	20
1,1-Dichloroethane	ND		20		ug/L			01/15/15 23:14	20
1,1-Dichloroethene	ND		20		ug/L			01/15/15 23:14	20
1,1-Dichloropropene	ND		20		ug/L			01/15/15 23:14	20
1,2,3-Trichlorobenzene	ND		20		ug/L			01/15/15 23:14	20
1,2,3-Trichloropropane	ND		20		ug/L			01/15/15 23:14	20
1,2,4-Trichlorobenzene	ND		20		ug/L			01/15/15 23:14	20
1,2,4-Trimethylbenzene	ND		20		ug/L			01/15/15 23:14	20
1,2-Dibromo-3-Chloropropane	ND		100		ug/L			01/15/15 23:14	20
1,2-Dichlorobenzene	ND		20		ug/L			01/15/15 23:14	20
1,2-Dichloroethane	ND		20		ug/L			01/15/15 23:14	20
1,2-Dichloropropane	ND		20		ug/L			01/15/15 23:14	20
1,3,5-Trimethylbenzene	ND		20		ug/L			01/15/15 23:14	20
1,3-Dichlorobenzene	ND		20		ug/L			01/15/15 23:14	20
1,3-Dichloropropane	ND		20		ug/L			01/15/15 23:14	20
1,4-Dichlorobenzene	ND		20		ug/L			01/15/15 23:14	20
1,4-Dioxane	ND		1000		ug/L			01/15/15 23:14	20
2,2-Dichloropropane	ND		20		ug/L			01/15/15 23:14	20
2-Butanone (MEK)	ND	*	200		ug/L			01/15/15 23:14	20
2-Chlorotoluene	ND		20		ug/L			01/15/15 23:14	20
2-Hexanone	ND	*	200		ug/L			01/15/15 23:14	20
4-Chlorotoluene	ND		20		ug/L			01/15/15 23:14	20
4-Isopropyltoluene	ND		20		ug/L			01/15/15 23:14	20
4-Methyl-2-pentanone (MIBK)	ND		200		ug/L			01/15/15 23:14	20
Acetone	ND	*	1000		ug/L			01/15/15 23:14	20
Benzene	ND		20		ug/L			01/15/15 23:14	20
Bromobenzene	ND		20		ug/L			01/15/15 23:14	20
Bromoform	ND		20		ug/L			01/15/15 23:14	20
Bromomethane	ND		40		ug/L			01/15/15 23:14	20
Carbon disulfide	ND		200		ug/L			01/15/15 23:14	20
Carbon tetrachloride	ND		20		ug/L			01/15/15 23:14	20
Chlorobenzene	ND		20		ug/L			01/15/15 23:14	20
Chlorobromomethane	ND		20		ug/L			01/15/15 23:14	20
Chlorodibromomethane	ND		10		ug/L			01/15/15 23:14	20
Chloroethane	ND		40		ug/L			01/15/15 23:14	20
Chloroform	ND		20		ug/L			01/15/15 23:14	20
Chloromethane	ND		40		ug/L			01/15/15 23:14	20

Client Sample ID: DUP-20150114
Date Collected: 01/14/15 00:00
Date Received: 01/15/15 01:45

Lab Sample ID: 480-74193-14
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		8.0		ug/L			01/15/15 23:14	20
Dichlorobromomethane	ND		10		ug/L			01/15/15 23:14	20
Dichlorodifluoromethane	ND		20		ug/L			01/15/15 23:14	20
Ethyl ether	ND		20		ug/L			01/15/15 23:14	20
Ethylbenzene	ND		20		ug/L			01/15/15 23:14	20
Ethylene Dibromide	ND		20		ug/L			01/15/15 23:14	20
Hexachlorobutadiene	ND		8.0		ug/L			01/15/15 23:14	20
Isopropyl ether	ND		200		ug/L			01/15/15 23:14	20
Isopropylbenzene	ND		20		ug/L			01/15/15 23:14	20
Methyl tert-butyl ether	ND		20		ug/L			01/15/15 23:14	20
Methylene Chloride	ND		20		ug/L			01/15/15 23:14	20
m-Xylene & p-Xylene	ND		40		ug/L			01/15/15 23:14	20
Naphthalene	ND		100		ug/L			01/15/15 23:14	20
n-Butylbenzene	ND		20		ug/L			01/15/15 23:14	20
N-Propylbenzene	ND		20		ug/L			01/15/15 23:14	20
o-Xylene	ND		20		ug/L			01/15/15 23:14	20
sec-Butylbenzene	ND		20		ug/L			01/15/15 23:14	20
Styrene	ND		20		ug/L			01/15/15 23:14	20
Tert-amyl methyl ether	ND		100		ug/L			01/15/15 23:14	20
Tert-butyl ethyl ether	ND		100		ug/L			01/15/15 23:14	20
tert-Butylbenzene	ND		20		ug/L			01/15/15 23:14	20
Tetrachloroethene	ND		20		ug/L			01/15/15 23:14	20
Tetrahydrofuran	ND		200		ug/L			01/15/15 23:14	20
Toluene	ND		20		ug/L			01/15/15 23:14	20
trans-1,2-Dichloroethene	ND		20		ug/L			01/15/15 23:14	20
trans-1,3-Dichloropropene	ND		8.0		ug/L			01/15/15 23:14	20
Trichloroethene	ND		20		ug/L			01/15/15 23:14	20
Trichlorofluoromethane	ND		20		ug/L			01/15/15 23:14	20
Vinyl chloride	**150**		20		ug/L			01/15/15 23:14	20
Dibromomethane	ND		20		ug/L			01/15/15 23:14	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*70 - 130*		*01/15/15 23:14*	*20*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*01/15/15 23:14*	*20*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*01/15/15 23:14*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**3000**		40		ug/L			01/16/15 15:45	40

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*70 - 130*		*01/16/15 15:45*	*40*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*01/16/15 15:45*	*40*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*01/16/15 15:45*	*40*

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

TestAmerica Job ID: 480-74193-1

Client Sample ID: TRIP BLANK
Date Collected: 01/14/15 00:00
Date Received: 01/15/15 01:45

Lab Sample ID: 480-74193-15
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/15/15 23:39	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/15/15 23:39	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/15/15 23:39	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/15/15 23:39	1
1,1-Dichloroethane	ND		1.0		ug/L			01/15/15 23:39	1
1,1-Dichloroethene	ND		1.0		ug/L			01/15/15 23:39	1
1,1-Dichloropropene	ND		1.0		ug/L			01/15/15 23:39	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/15/15 23:39	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/15/15 23:39	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/15/15 23:39	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/15/15 23:39	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/15/15 23:39	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/15/15 23:39	1
1,2-Dichloroethane	ND		1.0		ug/L			01/15/15 23:39	1
1,2-Dichloropropane	ND		1.0		ug/L			01/15/15 23:39	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/15/15 23:39	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/15/15 23:39	1
1,3-Dichloropropane	ND		1.0		ug/L			01/15/15 23:39	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/15/15 23:39	1
1,4-Dioxane	ND		50		ug/L			01/15/15 23:39	1
2,2-Dichloropropane	ND		1.0		ug/L			01/15/15 23:39	1
2-Butanone (MEK)	ND	*	10		ug/L			01/15/15 23:39	1
2-Chlorotoluene	ND		1.0		ug/L			01/15/15 23:39	1
2-Hexanone	ND	*	10		ug/L			01/15/15 23:39	1
4-Chlorotoluene	ND		1.0		ug/L			01/15/15 23:39	1
4-Isopropyltoluene	ND		1.0		ug/L			01/15/15 23:39	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/15/15 23:39	1
Acetone	ND	*	50		ug/L			01/15/15 23:39	1
Benzene	ND		1.0		ug/L			01/15/15 23:39	1
Bromobenzene	ND		1.0		ug/L			01/15/15 23:39	1
Bromoform	ND		1.0		ug/L			01/15/15 23:39	1
Bromomethane	ND		2.0		ug/L			01/15/15 23:39	1
Carbon disulfide	ND		10		ug/L			01/15/15 23:39	1
Carbon tetrachloride	ND		1.0		ug/L			01/15/15 23:39	1
Chlorobenzene	ND		1.0		ug/L			01/15/15 23:39	1
Chlorobromomethane	ND		1.0		ug/L			01/15/15 23:39	1
Chlorodibromomethane	ND		0.50		ug/L			01/15/15 23:39	1
Chloroethane	ND		2.0		ug/L			01/15/15 23:39	1
Chloroform	ND		1.0		ug/L			01/15/15 23:39	1
Chloromethane	ND		2.0		ug/L			01/15/15 23:39	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/15/15 23:39	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/15/15 23:39	1
Dichlorobromomethane	ND		0.50		ug/L			01/15/15 23:39	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/15/15 23:39	1
Ethyl ether	ND		1.0		ug/L			01/15/15 23:39	1
Ethylbenzene	ND		1.0		ug/L			01/15/15 23:39	1
Ethylene Dibromide	ND		1.0		ug/L			01/15/15 23:39	1
Hexachlorobutadiene	ND		0.40		ug/L			01/15/15 23:39	1
Isopropyl ether	ND		10		ug/L			01/15/15 23:39	1

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

TestAmerica Job ID: 480-74193-1

Client Sample ID: TRIP BLANK
Date Collected: 01/14/15 00:00
Date Received: 01/15/15 01:45

Lab Sample ID: 480-74193-15
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			01/15/15 23:39	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/15/15 23:39	1
Methylene Chloride	ND		1.0		ug/L			01/15/15 23:39	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/15/15 23:39	1
Naphthalene	ND		5.0		ug/L			01/15/15 23:39	1
n-Butylbenzene	ND		1.0		ug/L			01/15/15 23:39	1
N-Propylbenzene	ND		1.0		ug/L			01/15/15 23:39	1
o-Xylene	ND		1.0		ug/L			01/15/15 23:39	1
sec-Butylbenzene	ND		1.0		ug/L			01/15/15 23:39	1
Styrene	ND		1.0		ug/L			01/15/15 23:39	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/15/15 23:39	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/15/15 23:39	1
tert-Butylbenzene	ND		1.0		ug/L			01/15/15 23:39	1
Tetrachloroethene	ND		1.0		ug/L			01/15/15 23:39	1
Tetrahydrofuran	ND		10		ug/L			01/15/15 23:39	1
Toluene	ND		1.0		ug/L			01/15/15 23:39	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/15/15 23:39	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/15/15 23:39	1
Trichloroethene	ND		1.0		ug/L			01/15/15 23:39	1
Trichlorofluoromethane	ND		1.0		ug/L			01/15/15 23:39	1
Vinyl chloride	ND		1.0		ug/L			01/15/15 23:39	1
Dibromomethane	ND		1.0		ug/L			01/15/15 23:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*70 - 130*		*01/15/15 23:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*01/15/15 23:39*	*1*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*		*01/15/15 23:39*	*1*

Surrogate Summary

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

TestAmerica Job ID: 480-74193-1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		TOL	12DCE	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
480-74193-1	MW-265M-20150114	98	102	99
480-74193-1 - DL	MW-265M-20150114	98	105	98
480-74193-2	MW-267S-20150114	102	100	100
480-74193-3	MW-267M-20150114	99	104	98
480-74193-4	MW-268M-20150114	96	98	96
480-74193-4 - DL	MW-268M-20150114	96	101	94
480-74193-4 MS	MW-268M-20150114	98	114	96
480-74193-4 MSD	MW-268M-20150114	100	94	99
480-74193-5	MW-560-20150114	99	103	98
480-74193-6	MW-561-20150114	97	106	95
480-74193-7	MW-562-20150114	98	101	98
480-74193-8	MW-563-20150114	99	103	97
480-74193-9	REW-6-20150113	96	101	95
480-74193-10	REW-7-20150113	97	105	98
480-74193-11	REW-8-20150113	97	103	96
480-74193-12	REW-11-20150113	97	98	96
480-74193-12 - DL	REW-11-20150113	100	100	99
480-74193-13	REW-12-20150113	96	101	96
480-74193-14	DUP-20150114	96	103	95
480-74193-14 - DL	DUP-20150114	97	100	96
480-74193-15	TRIP BLANK	97	103	93
LCS 480-223126/5	Lab Control Sample	96	114	96
LCS 480-223230/5	Lab Control Sample	97	99	97
LCSD 480-223126/6	Lab Control Sample Dup	95	113	97
LCSD 480-223230/6	Lab Control Sample Dup	99	114	99
MB 480-223126/8	Method Blank	99	100	98
MB 480-223230/8	Method Blank	98	101	98

Surrogate Legend

TOL = Toluene-d8 (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

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

TestAmerica Job ID: 480-74193-1

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

Lab Sample ID: MB 480-223126/8
Matrix: Water
Analysis Batch: 223126

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			01/15/15 16:20	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/15/15 16:20	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/15/15 16:20	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/15/15 16:20	1
1,1-Dichloroethane	ND		1.0		ug/L			01/15/15 16:20	1
1,1-Dichloroethene	ND		1.0		ug/L			01/15/15 16:20	1
1,1-Dichloropropene	ND		1.0		ug/L			01/15/15 16:20	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/15/15 16:20	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/15/15 16:20	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/15/15 16:20	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/15/15 16:20	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/15/15 16:20	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/15/15 16:20	1
1,2-Dichloroethane	ND		1.0		ug/L			01/15/15 16:20	1
1,2-Dichloropropane	ND		1.0		ug/L			01/15/15 16:20	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/15/15 16:20	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/15/15 16:20	1
1,3-Dichloropropane	ND		1.0		ug/L			01/15/15 16:20	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/15/15 16:20	1
1,4-Dioxane	ND		50		ug/L			01/15/15 16:20	1
2,2-Dichloropropane	ND		1.0		ug/L			01/15/15 16:20	1
2-Butanone (MEK)	ND		10		ug/L			01/15/15 16:20	1
2-Chlorotoluene	ND		1.0		ug/L			01/15/15 16:20	1
2-Hexanone	ND		10		ug/L			01/15/15 16:20	1
4-Chlorotoluene	ND		1.0		ug/L			01/15/15 16:20	1
4-Isopropyltoluene	ND		1.0		ug/L			01/15/15 16:20	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/15/15 16:20	1
Acetone	ND		50		ug/L			01/15/15 16:20	1
Benzene	ND		1.0		ug/L			01/15/15 16:20	1
Bromobenzene	ND		1.0		ug/L			01/15/15 16:20	1
Bromoform	ND		1.0		ug/L			01/15/15 16:20	1
Bromomethane	ND		2.0		ug/L			01/15/15 16:20	1
Carbon disulfide	ND		10		ug/L			01/15/15 16:20	1
Carbon tetrachloride	ND		1.0		ug/L			01/15/15 16:20	1
Chlorobenzene	ND		1.0		ug/L			01/15/15 16:20	1
Chlorobromomethane	ND		1.0		ug/L			01/15/15 16:20	1
Chlorodibromomethane	ND		0.50		ug/L			01/15/15 16:20	1
Chloroethane	ND		2.0		ug/L			01/15/15 16:20	1
Chloroform	ND		1.0		ug/L			01/15/15 16:20	1
Chloromethane	ND		2.0		ug/L			01/15/15 16:20	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/15/15 16:20	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/15/15 16:20	1
Dichlorobromomethane	ND		0.50		ug/L			01/15/15 16:20	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/15/15 16:20	1
Ethyl ether	ND		1.0		ug/L			01/15/15 16:20	1
Ethylbenzene	ND		1.0		ug/L			01/15/15 16:20	1
Ethylene Dibromide	ND		1.0		ug/L			01/15/15 16:20	1
Hexachlorobutadiene	ND		0.40		ug/L			01/15/15 16:20	1

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

Lab Sample ID: MB 480-223126/8
Matrix: Water
Analysis Batch: 223126

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			01/15/15 16:20	1
Isopropylbenzene	ND		1.0		ug/L			01/15/15 16:20	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/15/15 16:20	1
Methylene Chloride	ND		1.0		ug/L			01/15/15 16:20	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/15/15 16:20	1
Naphthalene	ND		5.0		ug/L			01/15/15 16:20	1
n-Butylbenzene	ND		1.0		ug/L			01/15/15 16:20	1
N-Propylbenzene	ND		1.0		ug/L			01/15/15 16:20	1
o-Xylene	ND		1.0		ug/L			01/15/15 16:20	1
sec-Butylbenzene	ND		1.0		ug/L			01/15/15 16:20	1
Styrene	ND		1.0		ug/L			01/15/15 16:20	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/15/15 16:20	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/15/15 16:20	1
tert-Butylbenzene	ND		1.0		ug/L			01/15/15 16:20	1
Tetrachloroethene	ND		1.0		ug/L			01/15/15 16:20	1
Tetrahydrofuran	ND		10		ug/L			01/15/15 16:20	1
Toluene	ND		1.0		ug/L			01/15/15 16:20	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/15/15 16:20	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/15/15 16:20	1
Trichloroethene	ND		1.0		ug/L			01/15/15 16:20	1
Trichlorofluoromethane	ND		1.0		ug/L			01/15/15 16:20	1
Vinyl chloride	ND		1.0		ug/L			01/15/15 16:20	1
Dibromomethane	ND		1.0		ug/L			01/15/15 16:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*70 - 130*		*01/15/15 16:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*01/15/15 16:20*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*01/15/15 16:20*	*1*

Lab Sample ID: LCS 480-223126/5
Matrix: Water
Analysis Batch: 223126

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	25.0	25.7		ug/L		103	70 - 130
1,1,1-Trichloroethane	25.0	26.2		ug/L		105	70 - 130
1,1,2,2-Tetrachloroethane	25.0	25.4		ug/L		102	70 - 130
1,1,2-Trichloroethane	25.0	25.6		ug/L		102	70 - 130
1,1-Dichloroethane	25.0	27.7		ug/L		111	70 - 130
1,1-Dichloroethene	25.0	26.5		ug/L		106	70 - 130
1,1-Dichloropropene	25.0	26.4		ug/L		105	70 - 130
1,2,3-Trichlorobenzene	25.0	25.7		ug/L		103	70 - 130
1,2,3-Trichloropropane	25.0	26.2		ug/L		105	70 - 130
1,2,4-Trichlorobenzene	25.0	25.9		ug/L		104	70 - 130
1,2,4-Trimethylbenzene	25.0	27.2		ug/L		109	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	24.5		ug/L		98	70 - 130
1,2-Dichlorobenzene	25.0	25.5		ug/L		102	70 - 130
1,2-Dichloroethane	25.0	25.8		ug/L		103	70 - 130

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

Lab Sample ID: LCS 480-223126/5
Matrix: Water
Analysis Batch: 223126

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	25.0	27.3		ug/L		109	70 - 130
1,3,5-Trimethylbenzene	25.0	27.0		ug/L		108	70 - 130
1,3-Dichlorobenzene	25.0	25.2		ug/L		101	70 - 130
1,3-Dichloropropane	25.0	25.5		ug/L		102	70 - 130
1,4-Dichlorobenzene	25.0	24.7		ug/L		99	70 - 130
1,4-Dioxane	500	530		ug/L		106	70 - 130
2,2-Dichloropropane	25.0	27.4		ug/L		110	70 - 130
2-Butanone (MEK)	125	223	*	ug/L		178	70 - 130
2-Chlorotoluene	25.0	26.1		ug/L		104	70 - 130
2-Hexanone	125	172	*	ug/L		137	70 - 130
4-Chlorotoluene	25.0	29.1		ug/L		116	70 - 130
4-Isopropyltoluene	25.0	26.3		ug/L		105	70 - 130
4-Methyl-2-pentanone (MIBK)	125	131		ug/L		105	70 - 130
Acetone	125	186	*	ug/L		149	70 - 130
Benzene	25.0	26.4		ug/L		106	70 - 130
Bromobenzene	25.0	25.6		ug/L		102	70 - 130
Bromoform	25.0	25.5		ug/L		102	70 - 130
Bromomethane	25.0	24.7		ug/L		99	70 - 130
Carbon disulfide	25.0	26.5		ug/L		106	70 - 130
Carbon tetrachloride	25.0	26.8		ug/L		107	70 - 130
Chlorobenzene	25.0	25.2		ug/L		101	70 - 130
Chlorobromomethane	25.0	26.5		ug/L		106	70 - 130
Chlorodibromomethane	25.0	26.0		ug/L		104	70 - 130
Chloroethane	25.0	24.8		ug/L		99	70 - 130
Chloroform	25.0	26.3		ug/L		105	70 - 130
Chloromethane	25.0	23.5		ug/L		94	70 - 130
cis-1,2-Dichloroethene	25.0	26.6		ug/L		107	70 - 130
cis-1,3-Dichloropropene	25.0	28.5		ug/L		114	70 - 130
Dichlorobromomethane	25.0	27.4		ug/L		110	70 - 130
Dichlorodifluoromethane	25.0	21.5		ug/L		86	70 - 130
Ethyl ether	25.0	28.0		ug/L		112	70 - 130
Ethylbenzene	25.0	25.4		ug/L		102	70 - 130
Ethylene Dibromide	25.0	25.5		ug/L		102	70 - 130
Hexachlorobutadiene	25.0	25.3		ug/L		101	70 - 130
Isopropyl ether	25.0	25.7		ug/L		103	70 - 130
Isopropylbenzene	25.0	26.2		ug/L		105	70 - 130
Methyl tert-butyl ether	25.0	26.7		ug/L		107	70 - 130
Methylene Chloride	25.0	26.8		ug/L		107	70 - 130
m-Xylene & p-Xylene	25.0	26.2		ug/L		105	70 - 130
Naphthalene	25.0	25.2		ug/L		101	70 - 130
n-Butylbenzene	25.0	27.7		ug/L		111	70 - 130
N-Propylbenzene	25.0	26.1		ug/L		105	70 - 130
o-Xylene	25.0	26.1		ug/L		104	70 - 130
sec-Butylbenzene	25.0	26.2		ug/L		105	70 - 130
Styrene	25.0	26.5		ug/L		106	70 - 130
Tert-amyl methyl ether	25.0	25.0		ug/L		100	70 - 130
Tert-butyl ethyl ether	25.0	24.6		ug/L		98	70 - 130
tert-Butylbenzene	25.0	26.3		ug/L		105	70 - 130

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

Lab Sample ID: LCS 480-223126/5
Matrix: Water
Analysis Batch: 223126

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Tetrachloroethene			25.0	26.2		ug/L		105	70 - 130		
Tetrahydrofuran			50.0	56.5		ug/L		113	70 - 130		
Toluene			25.0	25.3		ug/L		101	70 - 130		
trans-1,2-Dichloroethene			25.0	27.3		ug/L		109	70 - 130		
trans-1,3-Dichloropropene			25.0	27.0		ug/L		108	70 - 130		
Trichloroethene			25.0	26.6		ug/L		106	70 - 130		
Trichlorofluoromethane			25.0	24.6		ug/L		98	70 - 130		
Vinyl chloride			25.0	23.9		ug/L		95	70 - 130		
Dibromomethane			25.0	27.1		ug/L		109	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*96*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 480-223126/6
Matrix: Water
Analysis Batch: 223126

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			25.0	23.3		ug/L		93	70 - 130	10	20
1,1,1-Trichloroethane			25.0	23.9		ug/L		96	70 - 130	9	20
1,1,2,2-Tetrachloroethane			25.0	23.2		ug/L		93	70 - 130	9	20
1,1,2-Trichloroethane			25.0	23.4		ug/L		93	70 - 130	9	20
1,1-Dichloroethane			25.0	24.9		ug/L		100	70 - 130	11	20
1,1-Dichloroethene			25.0	23.7		ug/L		95	70 - 130	11	20
1,1-Dichloropropene			25.0	24.1		ug/L		96	70 - 130	9	20
1,2,3-Trichlorobenzene			25.0	23.3		ug/L		93	70 - 130	10	20
1,2,3-Trichloropropane			25.0	24.0		ug/L		96	70 - 130	8	20
1,2,4-Trichlorobenzene			25.0	23.7		ug/L		95	70 - 130	9	20
1,2,4-Trimethylbenzene			25.0	24.7		ug/L		99	70 - 130	10	20
1,2-Dibromo-3-Chloropropane			25.0	22.5		ug/L		90	70 - 130	8	20
1,2-Dichlorobenzene			25.0	23.0		ug/L		92	70 - 130	10	20
1,2-Dichloroethane			25.0	23.8		ug/L		95	70 - 130	8	20
1,2-Dichloropropane			25.0	25.1		ug/L		100	70 - 130	8	20
1,3,5-Trimethylbenzene			25.0	24.0		ug/L		96	70 - 130	12	20
1,3-Dichlorobenzene			25.0	23.1		ug/L		92	70 - 130	9	20
1,3-Dichloropropane			25.0	23.1		ug/L		93	70 - 130	10	20
1,4-Dichlorobenzene			25.0	22.3		ug/L		89	70 - 130	10	20
1,4-Dioxane			500	580		ug/L		116	70 - 130	9	20
2,2-Dichloropropane			25.0	24.7		ug/L		99	70 - 130	10	20
2-Butanone (MEK)			125	211	*	ug/L		169	70 - 130	5	20
2-Chlorotoluene			25.0	23.6		ug/L		94	70 - 130	10	20
2-Hexanone			125	159		ug/L		127	70 - 130	8	20
4-Chlorotoluene			25.0	26.1		ug/L		105	70 - 130	11	20
4-Isopropyltoluene			25.0	24.0		ug/L		96	70 - 130	9	20
4-Methyl-2-pentanone (MIBK)			125	121		ug/L		97	70 - 130	8	20
Acetone			125	171	*	ug/L		137	70 - 130	8	20

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

Lab Sample ID: LCSD 480-223126/6
Matrix: Water
Analysis Batch: 223126

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
Benzene			25.0	24.2		ug/L		97	70 - 130	9	20
Bromobenzene			25.0	23.0		ug/L		92	70 - 130	11	20
Bromoform			25.0	23.4		ug/L		94	70 - 130	9	20
Bromomethane			25.0	22.4		ug/L		90	70 - 130	10	20
Carbon disulfide			25.0	23.6		ug/L		95	70 - 130	11	20
Carbon tetrachloride			25.0	24.2		ug/L		97	70 - 130	10	20
Chlorobenzene			25.0	22.8		ug/L		91	70 - 130	10	20
Chlorobromomethane			25.0	23.8		ug/L		95	70 - 130	11	20
Chlorodibromomethane			25.0	23.9		ug/L		96	70 - 130	9	20
Chloroethane			25.0	22.2		ug/L		89	70 - 130	11	20
Chloroform			25.0	23.9		ug/L		96	70 - 130	10	20
Chloromethane			25.0	20.8		ug/L		83	70 - 130	12	20
cis-1,2-Dichloroethene			25.0	24.1		ug/L		97	70 - 130	10	20
cis-1,3-Dichloropropene			25.0	26.4		ug/L		106	70 - 130	8	20
Dichlorobromomethane			25.0	24.9		ug/L		100	70 - 130	10	20
Dichlorodifluoromethane			25.0	18.8		ug/L		75	70 - 130	13	20
Ethyl ether			25.0	25.2		ug/L		101	70 - 130	10	20
Ethylbenzene			25.0	22.9		ug/L		91	70 - 130	11	20
Ethylene Dibromide			25.0	23.4		ug/L		94	70 - 130	9	20
Hexachlorobutadiene			25.0	22.7		ug/L		91	70 - 130	11	20
Isopropyl ether			25.0	23.9		ug/L		96	70 - 130	8	20
Isopropylbenzene			25.0	23.3		ug/L		93	70 - 130	12	20
Methyl tert-butyl ether			25.0	24.7		ug/L		99	70 - 130	8	20
Methylene Chloride			25.0	24.6		ug/L		98	70 - 130	9	20
m-Xylene & p-Xylene			25.0	23.2		ug/L		93	70 - 130	12	20
Naphthalene			25.0	23.2		ug/L		93	70 - 130	8	20
n-Butylbenzene			25.0	25.0		ug/L		100	70 - 130	10	20
N-Propylbenzene			25.0	23.5		ug/L		94	70 - 130	11	20
o-Xylene			25.0	23.4		ug/L		94	70 - 130	11	20
sec-Butylbenzene			25.0	23.4		ug/L		94	70 - 130	11	20
Styrene			25.0	23.9		ug/L		95	70 - 130	11	20
Tert-amyl methyl ether			25.0	23.0		ug/L		92	70 - 130	8	20
Tert-butyl ethyl ether			25.0	22.6		ug/L		90	70 - 130	8	20
tert-Butylbenzene			25.0	23.8		ug/L		95	70 - 130	10	20
Tetrachloroethene			25.0	24.0		ug/L		96	70 - 130	9	20
Tetrahydrofuran			50.0	52.9		ug/L		106	70 - 130	7	20
Toluene			25.0	23.0		ug/L		92	70 - 130	10	20
trans-1,2-Dichloroethene			25.0	24.1		ug/L		96	70 - 130	12	20
trans-1,3-Dichloropropene			25.0	24.5		ug/L		98	70 - 130	10	20
Trichloroethene			25.0	24.3		ug/L		97	70 - 130	9	20
Trichlorofluoromethane			25.0	21.6		ug/L		86	70 - 130	13	20
Vinyl chloride			25.0	21.3		ug/L		85	70 - 130	12	20
Dibromomethane			25.0	24.9		ug/L		100	70 - 130	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*95*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*

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

Lab Sample ID: 480-74193-4 MS
Matrix: Water
Analysis Batch: 223126

Client Sample ID: MW-268M-20150114
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		500	507		ug/L		101	70 - 130
1,1,1-Trichloroethane	ND		500	566		ug/L		113	70 - 130
1,1,2,2-Tetrachloroethane	ND		500	473		ug/L		95	70 - 130
1,1,2-Trichloroethane	ND		500	509		ug/L		102	70 - 130
1,1-Dichloroethane	ND		500	585		ug/L		117	70 - 130
1,1-Dichloroethene	ND		500	585		ug/L		117	70 - 130
1,1-Dichloropropene	ND		500	565		ug/L		113	70 - 130
1,2,3-Trichlorobenzene	ND		500	479		ug/L		96	70 - 130
1,2,3-Trichloropropane	ND		500	498		ug/L		100	70 - 130
1,2,4-Trichlorobenzene	ND		500	489		ug/L		98	70 - 130
1,2,4-Trimethylbenzene	ND		500	534		ug/L		107	70 - 130
1,2-Dibromo-3-Chloropropane	ND		500	450		ug/L		90	70 - 130
1,2-Dichlorobenzene	ND		500	494		ug/L		99	70 - 130
1,2-Dichloroethane	ND		500	525		ug/L		105	70 - 130
1,2-Dichloropropane	ND		500	544		ug/L		109	70 - 130
1,3,5-Trimethylbenzene	ND		500	522		ug/L		104	70 - 130
1,3-Dichlorobenzene	ND		500	485		ug/L		97	70 - 130
1,3-Dichloropropane	ND		500	499		ug/L		100	70 - 130
1,4-Dichlorobenzene	ND		500	476		ug/L		95	70 - 130
1,4-Dioxane	ND		10000	8700		ug/L		87	70 - 130
2,2-Dichloropropane	ND		500	506		ug/L		101	70 - 130
2-Butanone (MEK)	ND	*	2500	4240	F1	ug/L		167	70 - 130
2-Chlorotoluene	ND		500	623		ug/L		125	70 - 130
2-Hexanone	ND	*	2500	3150		ug/L		126	70 - 130
4-Chlorotoluene	ND		500	563		ug/L		113	70 - 130
4-Isopropyltoluene	ND		500	520		ug/L		104	70 - 130
4-Methyl-2-pentanone (MIBK)	ND		2500	2500		ug/L		100	70 - 130
Acetone	ND	*	2500	3080		ug/L		123	70 - 130
Benzene	ND		500	550		ug/L		110	70 - 130
Bromobenzene	ND		500	499		ug/L		100	70 - 130
Bromoform	ND		500	495		ug/L		99	70 - 130
Bromomethane	ND		500	518		ug/L		104	70 - 130
Carbon disulfide	ND		500	571		ug/L		114	70 - 130
Carbon tetrachloride	ND		500	594		ug/L		119	70 - 130
Chlorobenzene	ND		500	499		ug/L		100	70 - 130
Chlorobromomethane	ND		500	544		ug/L		109	70 - 130
Chlorodibromomethane	ND		500	515		ug/L		103	70 - 130
Chloroethane	ND		500	542		ug/L		108	70 - 130
Chloroform	ND		500	540		ug/L		108	70 - 130
Chloromethane	ND		500	518		ug/L		104	70 - 130
cis-1,2-Dichloroethene	2500	E	500	2610	E 4	ug/L		13	70 - 130
cis-1,3-Dichloropropene	ND		500	553		ug/L		111	70 - 130
Dichlorobromomethane	ND		500	543		ug/L		109	70 - 130
Dichlorodifluoromethane	ND		500	492		ug/L		98	70 - 130
Ethyl ether	ND		500	565		ug/L		113	70 - 130
Ethylbenzene	ND		500	507		ug/L		101	70 - 130
Ethylene Dibromide	ND		500	491		ug/L		98	70 - 130
Hexachlorobutadiene	ND		500	477		ug/L		95	70 - 130

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

Lab Sample ID: 480-74193-4 MS
Matrix: Water
Analysis Batch: 223126

Client Sample ID: MW-268M-20150114
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl ether	ND		500	522		ug/L		104	70 - 130
Isopropylbenzene	ND		500	519		ug/L		104	70 - 130
Methyl tert-butyl ether	ND		500	540		ug/L		108	70 - 130
Methylene Chloride	ND		500	560		ug/L		112	70 - 130
m-Xylene & p-Xylene	ND		500	518		ug/L		104	70 - 130
Naphthalene	ND		500	467		ug/L		93	70 - 130
n-Butylbenzene	ND		500	525		ug/L		105	70 - 130
N-Propylbenzene	ND		500	512		ug/L		102	70 - 130
o-Xylene	ND		500	517		ug/L		103	70 - 130
sec-Butylbenzene	ND		500	517		ug/L		103	70 - 130
Styrene	ND		500	522		ug/L		104	70 - 130
Tert-amyl methyl ether	ND		500	496		ug/L		99	70 - 130
Tert-butyl ethyl ether	ND		500	493		ug/L		99	70 - 130
tert-Butylbenzene	ND		500	523		ug/L		105	70 - 130
Tetrachloroethene	ND		500	530		ug/L		106	70 - 130
Tetrahydrofuran	ND		1000	1120		ug/L		112	70 - 130
Toluene	ND		500	508		ug/L		102	70 - 130
trans-1,2-Dichloroethene	ND		500	578		ug/L		116	70 - 130
trans-1,3-Dichloropropene	ND		500	515		ug/L		103	70 - 130
Trichloroethene	ND		500	560		ug/L		108	70 - 130
Trichlorofluoromethane	ND		500	569		ug/L		114	70 - 130
Vinyl chloride	120		500	637		ug/L		103	70 - 130
Dibromomethane	ND		500	538		ug/L		108	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 480-74193-4 MSD
Matrix: Water
Analysis Batch: 223126

Client Sample ID: MW-268M-20150114
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		500	516		ug/L		103	70 - 130	2	20
1,1,1-Trichloroethane	ND		500	539		ug/L		108	70 - 130	5	20
1,1,2,2-Tetrachloroethane	ND		500	475		ug/L		95	70 - 130	0	20
1,1,2-Trichloroethane	ND		500	505		ug/L		101	70 - 130	1	20
1,1-Dichloroethane	ND		500	546		ug/L		109	70 - 130	7	20
1,1-Dichloroethene	ND		500	538		ug/L		108	70 - 130	8	20
1,1-Dichloropropene	ND		500	530		ug/L		106	70 - 130	6	20
1,2,3-Trichlorobenzene	ND		500	490		ug/L		98	70 - 130	2	20
1,2,3-Trichloropropane	ND		500	491		ug/L		98	70 - 130	1	20
1,2,4-Trichlorobenzene	ND		500	492		ug/L		98	70 - 130	1	20
1,2,4-Trimethylbenzene	ND		500	525		ug/L		105	70 - 130	2	20
1,2-Dibromo-3-Chloropropane	ND		500	459		ug/L		92	70 - 130	2	20
1,2-Dichlorobenzene	ND		500	489		ug/L		98	70 - 130	1	20
1,2-Dichloroethane	ND		500	502		ug/L		100	70 - 130	5	20

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

Lab Sample ID: 480-74193-4 MSD
Matrix: Water
Analysis Batch: 223126

Client Sample ID: MW-268M-20150114
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dichloropropane	ND		500	537		ug/L		107	70 - 130	1	20
1,3,5-Trimethylbenzene	ND		500	515		ug/L		103	70 - 130	1	20
1,3-Dichlorobenzene	ND		500	481		ug/L		96	70 - 130	1	20
1,3-Dichloropropane	ND		500	502		ug/L		100	70 - 130	1	20
1,4-Dichlorobenzene	ND		500	468		ug/L		94	70 - 130	2	20
1,4-Dioxane	ND		10000	10400		ug/L		104	70 - 130	17	20
2,2-Dichloropropane	ND		500	468		ug/L		94	70 - 130	8	20
2-Butanone (MEK)	ND	*	2500	3990	F1	ug/L		157	70 - 130	6	20
2-Chlorotoluene	ND		500	607		ug/L		121	70 - 130	3	20
2-Hexanone	ND	*	2500	3200		ug/L		128	70 - 130	1	20
4-Chlorotoluene	ND		500	548		ug/L		110	70 - 130	3	20
4-Isopropyltoluene	ND		500	514		ug/L		103	70 - 130	1	20
4-Methyl-2-pentanone (MIBK)	ND		2500	2500		ug/L		100	70 - 130	0	20
Acetone	ND	*	2500	2910		ug/L		116	70 - 130	6	20
Benzene	ND		500	520		ug/L		104	70 - 130	6	20
Bromobenzene	ND		500	484		ug/L		97	70 - 130	3	20
Bromoform	ND		500	504		ug/L		101	70 - 130	2	20
Bromomethane	ND		500	489		ug/L		98	70 - 130	6	20
Carbon disulfide	ND		500	546		ug/L		109	70 - 130	4	20
Carbon tetrachloride	ND		500	560		ug/L		112	70 - 130	6	20
Chlorobenzene	ND		500	504		ug/L		101	70 - 130	1	20
Chlorobromomethane	ND		500	516		ug/L		103	70 - 130	5	20
Chlorodibromomethane	ND		500	517		ug/L		103	70 - 130	0	20
Chloroethane	ND		500	499		ug/L		100	70 - 130	8	20
Chloroform	ND		500	519		ug/L		104	70 - 130	4	20
Chloromethane	ND		500	466		ug/L		93	70 - 130	11	20
cis-1,2-Dichloroethene	2500	E	500	2460	E 4	ug/L		-17	70 - 130	6	20
cis-1,3-Dichloropropene	ND		500	532		ug/L		106	70 - 130	4	20
Dichlorobromomethane	ND		500	529		ug/L		106	70 - 130	3	20
Dichlorodifluoromethane	ND		500	432		ug/L		86	70 - 130	13	20
Ethyl ether	ND		500	533		ug/L		107	70 - 130	6	20
Ethylbenzene	ND		500	509		ug/L		102	70 - 130	0	20
Ethylene Dibromide	ND		500	501		ug/L		100	70 - 130	2	20
Hexachlorobutadiene	ND		500	475		ug/L		95	70 - 130	0	20
Isopropyl ether	ND		500	496		ug/L		99	70 - 130	5	20
Isopropylbenzene	ND		500	505		ug/L		101	70 - 130	3	20
Methyl tert-butyl ether	ND		500	526		ug/L		105	70 - 130	3	20
Methylene Chloride	ND		500	532		ug/L		106	70 - 130	5	20
m-Xylene & p-Xylene	ND		500	526		ug/L		105	70 - 130	2	20
Naphthalene	ND		500	476		ug/L		95	70 - 130	2	20
n-Butylbenzene	ND		500	520		ug/L		104	70 - 130	1	20
N-Propylbenzene	ND		500	499		ug/L		100	70 - 130	3	20
o-Xylene	ND		500	523		ug/L		105	70 - 130	1	20
sec-Butylbenzene	ND		500	509		ug/L		102	70 - 130	1	20
Styrene	ND		500	525		ug/L		105	70 - 130	1	20
Tert-amyl methyl ether	ND		500	478		ug/L		96	70 - 130	4	20
Tert-butyl ethyl ether	ND		500	469		ug/L		94	70 - 130	5	20
tert-Butylbenzene	ND		500	504		ug/L		101	70 - 130	4	20

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

Lab Sample ID: 480-74193-4 MSD
Matrix: Water
Analysis Batch: 223126

Client Sample ID: MW-268M-20150114
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene	ND		500	519		ug/L		104	70 - 130	2	20
Tetrahydrofuran	ND		1000	1070		ug/L		107	70 - 130	5	20
Toluene	ND		500	508		ug/L		102	70 - 130	0	20
trans-1,2-Dichloroethene	ND		500	548		ug/L		110	70 - 130	5	20
trans-1,3-Dichloropropene	ND		500	519		ug/L		104	70 - 130	1	20
Trichloroethene	ND		500	536		ug/L		103	70 - 130	4	20
Trichlorofluoromethane	ND		500	510		ug/L		102	70 - 130	11	20
Vinyl chloride	120		500	583		ug/L		92	70 - 130	9	20
Dibromomethane	ND		500	526		ug/L		105	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: MB 480-223230/8
Matrix: Water
Analysis Batch: 223230

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			01/16/15 12:32	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/16/15 12:32	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			01/16/15 12:32	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/16/15 12:32	1
1,1-Dichloroethane	ND		1.0		ug/L			01/16/15 12:32	1
1,1-Dichloroethene	ND		1.0		ug/L			01/16/15 12:32	1
1,1-Dichloropropene	ND		1.0		ug/L			01/16/15 12:32	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/16/15 12:32	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/16/15 12:32	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/16/15 12:32	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/16/15 12:32	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/16/15 12:32	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/16/15 12:32	1
1,2-Dichloroethane	ND		1.0		ug/L			01/16/15 12:32	1
1,2-Dichloropropane	ND		1.0		ug/L			01/16/15 12:32	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/16/15 12:32	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/16/15 12:32	1
1,3-Dichloropropane	ND		1.0		ug/L			01/16/15 12:32	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/16/15 12:32	1
1,4-Dioxane	ND		50		ug/L			01/16/15 12:32	1
2,2-Dichloropropane	ND		1.0		ug/L			01/16/15 12:32	1
2-Butanone (MEK)	ND		10		ug/L			01/16/15 12:32	1
2-Chlorotoluene	ND		1.0		ug/L			01/16/15 12:32	1
2-Hexanone	ND		10		ug/L			01/16/15 12:32	1
4-Chlorotoluene	ND		1.0		ug/L			01/16/15 12:32	1
4-Isopropyltoluene	ND		1.0		ug/L			01/16/15 12:32	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			01/16/15 12:32	1
Acetone	ND		50		ug/L			01/16/15 12:32	1

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

Lab Sample ID: MB 480-223230/8
Matrix: Water
Analysis Batch: 223230

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0		ug/L			01/16/15 12:32	1
Bromobenzene	ND		1.0		ug/L			01/16/15 12:32	1
Bromoform	ND		1.0		ug/L			01/16/15 12:32	1
Bromomethane	ND		2.0		ug/L			01/16/15 12:32	1
Carbon disulfide	ND		10		ug/L			01/16/15 12:32	1
Carbon tetrachloride	ND		1.0		ug/L			01/16/15 12:32	1
Chlorobenzene	ND		1.0		ug/L			01/16/15 12:32	1
Chlorobromomethane	ND		1.0		ug/L			01/16/15 12:32	1
Chlorodibromomethane	ND		0.50		ug/L			01/16/15 12:32	1
Chloroethane	ND		2.0		ug/L			01/16/15 12:32	1
Chloroform	ND		1.0		ug/L			01/16/15 12:32	1
Chloromethane	ND		2.0		ug/L			01/16/15 12:32	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/16/15 12:32	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			01/16/15 12:32	1
Dichlorobromomethane	ND		0.50		ug/L			01/16/15 12:32	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/16/15 12:32	1
Ethyl ether	ND		1.0		ug/L			01/16/15 12:32	1
Ethylbenzene	ND		1.0		ug/L			01/16/15 12:32	1
Ethylene Dibromide	ND		1.0		ug/L			01/16/15 12:32	1
Hexachlorobutadiene	ND		0.40		ug/L			01/16/15 12:32	1
Isopropyl ether	ND		10		ug/L			01/16/15 12:32	1
Isopropylbenzene	ND		1.0		ug/L			01/16/15 12:32	1
Methyl tert-butyl ether	ND		1.0		ug/L			01/16/15 12:32	1
Methylene Chloride	ND		1.0		ug/L			01/16/15 12:32	1
m-Xylene & p-Xylene	ND		2.0		ug/L			01/16/15 12:32	1
Naphthalene	ND		5.0		ug/L			01/16/15 12:32	1
n-Butylbenzene	ND		1.0		ug/L			01/16/15 12:32	1
N-Propylbenzene	ND		1.0		ug/L			01/16/15 12:32	1
o-Xylene	ND		1.0		ug/L			01/16/15 12:32	1
sec-Butylbenzene	ND		1.0		ug/L			01/16/15 12:32	1
Styrene	ND		1.0		ug/L			01/16/15 12:32	1
Tert-amyl methyl ether	ND		5.0		ug/L			01/16/15 12:32	1
Tert-butyl ethyl ether	ND		5.0		ug/L			01/16/15 12:32	1
tert-Butylbenzene	ND		1.0		ug/L			01/16/15 12:32	1
Tetrachloroethene	ND		1.0		ug/L			01/16/15 12:32	1
Tetrahydrofuran	ND		10		ug/L			01/16/15 12:32	1
Toluene	ND		1.0		ug/L			01/16/15 12:32	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/16/15 12:32	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			01/16/15 12:32	1
Trichloroethene	ND		1.0		ug/L			01/16/15 12:32	1
Trichlorofluoromethane	ND		1.0		ug/L			01/16/15 12:32	1
Vinyl chloride	ND		1.0		ug/L			01/16/15 12:32	1
Dibromomethane	ND		1.0		ug/L			01/16/15 12:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 130*		*01/16/15 12:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*01/16/15 12:32*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*01/16/15 12:32*	*1*

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

Lab Sample ID: LCS 480-223230/5
Matrix: Water
Analysis Batch: 223230

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	25.0	25.2		ug/L		101	70 - 130
1,1,1-Trichloroethane	25.0	27.2		ug/L		109	70 - 130
1,1,2,2-Tetrachloroethane	25.0	24.5		ug/L		98	70 - 130
1,1,2-Trichloroethane	25.0	24.8		ug/L		99	70 - 130
1,1-Dichloroethane	25.0	27.4		ug/L		110	70 - 130
1,1-Dichloroethene	25.0	27.5		ug/L		110	70 - 130
1,1-Dichloropropene	25.0	27.1		ug/L		108	70 - 130
1,2,3-Trichlorobenzene	25.0	25.3		ug/L		101	70 - 130
1,2,3-Trichloropropane	25.0	25.6		ug/L		102	70 - 130
1,2,4-Trichlorobenzene	25.0	25.6		ug/L		103	70 - 130
1,2,4-Trimethylbenzene	25.0	27.2		ug/L		109	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	23.7		ug/L		95	70 - 130
1,2-Dichlorobenzene	25.0	25.0		ug/L		100	70 - 130
1,2-Dichloroethane	25.0	25.7		ug/L		103	70 - 130
1,2-Dichloropropane	25.0	26.8		ug/L		107	70 - 130
1,3,5-Trimethylbenzene	25.0	26.9		ug/L		108	70 - 130
1,3-Dichlorobenzene	25.0	25.1		ug/L		100	70 - 130
1,3-Dichloropropane	25.0	24.5		ug/L		98	70 - 130
1,4-Dichlorobenzene	25.0	24.5		ug/L		98	70 - 130
1,4-Dioxane	500	390		ug/L		78	70 - 130
2,2-Dichloropropane	25.0	28.5		ug/L		114	70 - 130
2-Butanone (MEK)	125	200	*	ug/L		160	70 - 130
2-Chlorotoluene	25.0	25.5		ug/L		102	70 - 130
2-Hexanone	125	158		ug/L		126	70 - 130
4-Chlorotoluene	25.0	28.4		ug/L		114	70 - 130
4-Isopropyltoluene	25.0	26.6		ug/L		106	70 - 130
4-Methyl-2-pentanone (MIBK)	125	125		ug/L		100	70 - 130
Acetone	125	144		ug/L		115	70 - 130
Benzene	25.0	26.7		ug/L		107	70 - 130
Bromobenzene	25.0	25.0		ug/L		100	70 - 130
Bromoform	25.0	24.5		ug/L		98	70 - 130
Bromomethane	25.0	24.3		ug/L		97	70 - 130
Carbon disulfide	25.0	27.3		ug/L		109	70 - 130
Carbon tetrachloride	25.0	27.8		ug/L		111	70 - 130
Chlorobenzene	25.0	24.7		ug/L		99	70 - 130
Chlorobromomethane	25.0	26.3		ug/L		105	70 - 130
Chlorodibromomethane	25.0	25.6		ug/L		102	70 - 130
Chloroethane	25.0	24.8		ug/L		99	70 - 130
Chloroform	25.0	26.0		ug/L		104	70 - 130
Chloromethane	25.0	23.6		ug/L		94	70 - 130
cis-1,2-Dichloroethene	25.0	26.6		ug/L		107	70 - 130
cis-1,3-Dichloropropene	25.0	28.3		ug/L		113	70 - 130
Dichlorobromomethane	25.0	26.7		ug/L		107	70 - 130
Dichlorodifluoromethane	25.0	23.1		ug/L		92	70 - 130
Ethyl ether	25.0	27.6		ug/L		110	70 - 130
Ethylbenzene	25.0	24.9		ug/L		100	70 - 130
Ethylene Dibromide	25.0	24.8		ug/L		99	70 - 130
Hexachlorobutadiene	25.0	25.2		ug/L		101	70 - 130

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

Lab Sample ID: LCS 480-223230/5
Matrix: Water
Analysis Batch: 223230

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl ether	25.0	25.2		ug/L		101	70 - 130
Isopropylbenzene	25.0	26.1		ug/L		104	70 - 130
Methyl tert-butyl ether	25.0	26.1		ug/L		104	70 - 130
Methylene Chloride	25.0	27.3		ug/L		109	70 - 130
m-Xylene & p-Xylene	25.0	25.2		ug/L		101	70 - 130
Naphthalene	25.0	24.5		ug/L		98	70 - 130
n-Butylbenzene	25.0	28.2		ug/L		113	70 - 130
N-Propylbenzene	25.0	26.0		ug/L		104	70 - 130
o-Xylene	25.0	25.2		ug/L		101	70 - 130
sec-Butylbenzene	25.0	26.3		ug/L		105	70 - 130
Styrene	25.0	26.1		ug/L		104	70 - 130
Tert-amyl methyl ether	25.0	24.4		ug/L		98	70 - 130
Tert-butyl ethyl ether	25.0	23.9		ug/L		96	70 - 130
tert-Butylbenzene	25.0	26.6		ug/L		106	70 - 130
Tetrachloroethene	25.0	26.7		ug/L		107	70 - 130
Tetrahydrofuran	50.0	54.1		ug/L		108	70 - 130
Toluene	25.0	25.2		ug/L		101	70 - 130
trans-1,2-Dichloroethene	25.0	26.9		ug/L		107	70 - 130
trans-1,3-Dichloropropene	25.0	26.5		ug/L		106	70 - 130
Trichloroethene	25.0	26.6		ug/L		106	70 - 130
Trichlorofluoromethane	25.0	26.5		ug/L		106	70 - 130
Vinyl chloride	25.0	25.0		ug/L		100	70 - 130
Dibromomethane	25.0	26.8		ug/L		107	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 480-223230/6
Matrix: Water
Analysis Batch: 223230

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	25.0	25.9		ug/L		104	70 - 130	2	20
1,1,1-Trichloroethane	25.0	27.7		ug/L		111	70 - 130	2	20
1,1,2,2-Tetrachloroethane	25.0	24.0		ug/L		96	70 - 130	2	20
1,1,2-Trichloroethane	25.0	25.5		ug/L		102	70 - 130	3	20
1,1-Dichloroethane	25.0	27.7		ug/L		111	70 - 130	1	20
1,1-Dichloroethene	25.0	27.8		ug/L		111	70 - 130	1	20
1,1-Dichloropropene	25.0	27.9		ug/L		111	70 - 130	3	20
1,2,3-Trichlorobenzene	25.0	25.3		ug/L		101	70 - 130	0	20
1,2,3-Trichloropropane	25.0	25.4		ug/L		102	70 - 130	1	20
1,2,4-Trichlorobenzene	25.0	25.7		ug/L		103	70 - 130	0	20
1,2,4-Trimethylbenzene	25.0	27.0		ug/L		108	70 - 130	1	20
1,2-Dibromo-3-Chloropropane	25.0	24.3		ug/L		97	70 - 130	2	20
1,2-Dichlorobenzene	25.0	25.0		ug/L		100	70 - 130	0	20
1,2-Dichloroethane	25.0	25.6		ug/L		102	70 - 130	0	20

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

Lab Sample ID: LCSD 480-223230/6
Matrix: Water
Analysis Batch: 223230

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
1,2-Dichloropropane	25.0	27.0		ug/L		108	70 - 130	1	20
1,3,5-Trimethylbenzene	25.0	26.8		ug/L		107	70 - 130	0	20
1,3-Dichlorobenzene	25.0	24.8		ug/L		99	70 - 130	1	20
1,3-Dichloropropane	25.0	25.0		ug/L		100	70 - 130	2	20
1,4-Dichlorobenzene	25.0	24.3		ug/L		97	70 - 130	1	20
1,4-Dioxane	500	499	*	ug/L		100	70 - 130	25	20
2,2-Dichloropropane	25.0	28.3		ug/L		113	70 - 130	1	20
2-Butanone (MEK)	125	203	*	ug/L		163	70 - 130	1	20
2-Chlorotoluene	25.0	25.9		ug/L		104	70 - 130	2	20
2-Hexanone	125	163		ug/L		130	70 - 130	3	20
4-Chlorotoluene	25.0	28.4		ug/L		114	70 - 130	0	20
4-Isopropyltoluene	25.0	26.7		ug/L		107	70 - 130	0	20
4-Methyl-2-pentanone (MIBK)	125	128		ug/L		102	70 - 130	3	20
Acetone	125	141		ug/L		113	70 - 130	2	20
Benzene	25.0	26.7		ug/L		107	70 - 130	0	20
Bromobenzene	25.0	25.3		ug/L		101	70 - 130	1	20
Bromoform	25.0	24.6		ug/L		98	70 - 130	1	20
Bromomethane	25.0	24.9		ug/L		100	70 - 130	2	20
Carbon disulfide	25.0	27.3		ug/L		109	70 - 130	0	20
Carbon tetrachloride	25.0	28.4		ug/L		114	70 - 130	2	20
Chlorobenzene	25.0	25.1		ug/L		100	70 - 130	2	20
Chlorobromomethane	25.0	26.5		ug/L		106	70 - 130	1	20
Chlorodibromomethane	25.0	25.9		ug/L		104	70 - 130	1	20
Chloroethane	25.0	25.0		ug/L		100	70 - 130	1	20
Chloroform	25.0	26.5		ug/L		106	70 - 130	2	20
Chloromethane	25.0	23.6		ug/L		95	70 - 130	0	20
cis-1,2-Dichloroethene	25.0	27.0		ug/L		108	70 - 130	1	20
cis-1,3-Dichloropropene	25.0	28.3		ug/L		113	70 - 130	0	20
Dichlorobromomethane	25.0	27.1		ug/L		108	70 - 130	1	20
Dichlorodifluoromethane	25.0	22.6		ug/L		91	70 - 130	2	20
Ethyl ether	25.0	27.4		ug/L		109	70 - 130	1	20
Ethylbenzene	25.0	25.7		ug/L		103	70 - 130	3	20
Ethylene Dibromide	25.0	25.1		ug/L		100	70 - 130	1	20
Hexachlorobutadiene	25.0	25.9		ug/L		104	70 - 130	3	20
Isopropyl ether	25.0	25.6		ug/L		102	70 - 130	1	20
Isopropylbenzene	25.0	26.4		ug/L		106	70 - 130	1	20
Methyl tert-butyl ether	25.0	26.4		ug/L		106	70 - 130	1	20
Methylene Chloride	25.0	27.4		ug/L		110	70 - 130	0	20
m-Xylene & p-Xylene	25.0	26.4		ug/L		106	70 - 130	5	20
Naphthalene	25.0	24.5		ug/L		98	70 - 130	0	20
n-Butylbenzene	25.0	28.1		ug/L		112	70 - 130	0	20
N-Propylbenzene	25.0	26.4		ug/L		106	70 - 130	2	20
o-Xylene	25.0	26.2		ug/L		105	70 - 130	4	20
sec-Butylbenzene	25.0	26.6		ug/L		106	70 - 130	1	20
Styrene	25.0	26.6		ug/L		106	70 - 130	2	20
Tert-amyl methyl ether	25.0	24.8		ug/L		99	70 - 130	2	20
Tert-butyl ethyl ether	25.0	24.2		ug/L		97	70 - 130	1	20
tert-Butylbenzene	25.0	26.5		ug/L		106	70 - 130	0	20

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

Lab Sample ID: LCSD 480-223230/6
Matrix: Water
Analysis Batch: 223230

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
Tetrachloroethene			25.0	27.8		ug/L		111	70 - 130	4	20
Tetrahydrofuran			50.0	53.3		ug/L		107	70 - 130	1	20
Toluene			25.0	25.7		ug/L		103	70 - 130	2	20
trans-1,2-Dichloroethene			25.0	27.6		ug/L		111	70 - 130	3	20
trans-1,3-Dichloropropene			25.0	26.7		ug/L		107	70 - 130	1	20
Trichloroethene			25.0	27.5		ug/L		110	70 - 130	3	20
Trichlorofluoromethane			25.0	26.8		ug/L		107	70 - 130	1	20
Vinyl chloride			25.0	24.8		ug/L		99	70 - 130	1	20
Dibromomethane			25.0	26.8		ug/L		107	70 - 130	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*

GC/MS VOA

Analysis Batch: 223126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-74193-1	MW-265M-20150114	Total/NA	Water	8260C	
480-74193-3	MW-267M-20150114	Total/NA	Water	8260C	
480-74193-4	MW-268M-20150114	Total/NA	Water	8260C	
480-74193-4 MS	MW-268M-20150114	Total/NA	Water	8260C	
480-74193-4 MSD	MW-268M-20150114	Total/NA	Water	8260C	
480-74193-6	MW-561-20150114	Total/NA	Water	8260C	
480-74193-7	MW-562-20150114	Total/NA	Water	8260C	
480-74193-8	MW-563-20150114	Total/NA	Water	8260C	
480-74193-9	REW-6-20150113	Total/NA	Water	8260C	
480-74193-10	REW-7-20150113	Total/NA	Water	8260C	
480-74193-11	REW-8-20150113	Total/NA	Water	8260C	
480-74193-12	REW-11-20150113	Total/NA	Water	8260C	
480-74193-13	REW-12-20150113	Total/NA	Water	8260C	
480-74193-14	DUP-20150114	Total/NA	Water	8260C	
480-74193-15	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-223126/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-223126/6	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 480-223126/8	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 223230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-74193-1 - DL	MW-265M-20150114	Total/NA	Water	8260C	
480-74193-2	MW-267S-20150114	Total/NA	Water	8260C	
480-74193-4 - DL	MW-268M-20150114	Total/NA	Water	8260C	
480-74193-5	MW-560-20150114	Total/NA	Water	8260C	
480-74193-12 - DL	REW-11-20150113	Total/NA	Water	8260C	
480-74193-14 - DL	DUP-20150114	Total/NA	Water	8260C	
LCS 480-223230/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-223230/6	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 480-223230/8	Method Blank	Total/NA	Water	8260C	

Client Sample ID: MW-265M-20150114
Lab Sample ID: 480-74193-1

Date Collected: 01/14/15 11:05
Matrix: Water
Date Received: 01/15/15 01:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	223126	01/15/15 17:49	LCH	TAL BUF
Total/NA	Analysis	8260C	DL	5	223230	01/16/15 13:14	LCH	TAL BUF

Client Sample ID: MW-267S-20150114
Lab Sample ID: 480-74193-2

Date Collected: 01/14/15 09:50
Matrix: Water
Date Received: 01/15/15 01:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	223230	01/16/15 13:39	LCH	TAL BUF

Client Sample ID: MW-267M-20150114
Lab Sample ID: 480-74193-3

Date Collected: 01/14/15 10:40
Matrix: Water
Date Received: 01/15/15 01:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	223126	01/15/15 18:39	LCH	TAL BUF

Client Sample ID: MW-268M-20150114
Lab Sample ID: 480-74193-4

Date Collected: 01/14/15 08:30
Matrix: Water
Date Received: 01/15/15 01:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	223126	01/15/15 19:04	LCH	TAL BUF
Total/NA	Analysis	8260C	DL	40	223230	01/16/15 14:04	LCH	TAL BUF

Client Sample ID: MW-560-20150114
Lab Sample ID: 480-74193-5

Date Collected: 01/14/15 11:40
Matrix: Water
Date Received: 01/15/15 01:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	223230	01/16/15 14:29	LCH	TAL BUF

Client Sample ID: MW-561-20150114
Lab Sample ID: 480-74193-6

Date Collected: 01/14/15 08:25
Matrix: Water
Date Received: 01/15/15 01:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	223126	01/15/15 19:54	LCH	TAL BUF

Client Sample ID: MW-562-20150114 — **Lab Sample ID: 480-74193-7**
Date Collected: 01/14/15 12:35 — **Matrix: Water**
Date Received: 01/15/15 01:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	223126	01/15/15 20:19	LCH	TAL BUF

Client Sample ID: MW-563-20150114 — **Lab Sample ID: 480-74193-8**
Date Collected: 01/14/15 09:50 — **Matrix: Water**
Date Received: 01/15/15 01:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	223126	01/15/15 20:44	LCH	TAL BUF

Client Sample ID: REW-6-20150113 — **Lab Sample ID: 480-74193-9**
Date Collected: 01/13/15 12:15 — **Matrix: Water**
Date Received: 01/15/15 01:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	223126	01/15/15 21:09	LCH	TAL BUF

Client Sample ID: REW-7-20150113 — **Lab Sample ID: 480-74193-10**
Date Collected: 01/13/15 09:40 — **Matrix: Water**
Date Received: 01/15/15 01:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	223126	01/15/15 21:34	LCH	TAL BUF

Client Sample ID: REW-8-20150113 — **Lab Sample ID: 480-74193-11**
Date Collected: 01/13/15 10:20 — **Matrix: Water**
Date Received: 01/15/15 01:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	223126	01/15/15 21:59	LCH	TAL BUF

Client Sample ID: REW-11-20150113 — **Lab Sample ID: 480-74193-12**
Date Collected: 01/13/15 11:25 — **Matrix: Water**
Date Received: 01/15/15 01:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		10	223126	01/15/15 22:24	LCH	TAL BUF
Total/NA	Analysis	8260C	DL	20	223230	01/16/15 15:20	LCH	TAL BUF

Lab Chronicle

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

TestAmerica Job ID: 480-74193-1

Client Sample ID: REW-12-20150113

Lab Sample ID: 480-74193-13

Date Collected: 01/13/15 09:00

Matrix: Water

Date Received: 01/15/15 01:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	223126	01/15/15 22:49	LCH	TAL BUF

Client Sample ID: DUP-20150114

Lab Sample ID: 480-74193-14

Date Collected: 01/14/15 00:00

Matrix: Water

Date Received: 01/15/15 01:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	223126	01/15/15 23:14	LCH	TAL BUF
Total/NA	Analysis	8260C	DL	40	223230	01/16/15 15:45	LCH	TAL BUF

Client Sample ID: TRIP BLANK

Lab Sample ID: 480-74193-15

Date Collected: 01/14/15 00:00

Matrix: Water

Date Received: 01/15/15 01:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	223126	01/15/15 23:39	LCH	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

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

TestAmerica Job ID: 480-74193-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0686	07-06-15
California	State Program	9	1169CA	09-30-15
Connecticut	State Program	1	PH-0568	09-30-16
Florida	NELAP	4	E87672	06-30-15
Georgia	State Program	4	N/A	03-31-15
Georgia	State Program	4	956	03-31-15
Illinois	NELAP	5	200003	09-30-15
Iowa	State Program	7	374	03-01-15
Kansas	NELAP	7	E-10187	01-31-15 *
Kentucky (DW)	State Program	4	90029	12-31-15
Kentucky (UST)	State Program	4	30	03-31-15
Kentucky (WW)	State Program	4	90029	12-31-15
Louisiana	NELAP	6	02031	06-30-15
Maine	State Program	1	NY00044	12-04-16
Maryland	State Program	3	294	03-31-15
Massachusetts	State Program	1	M-NY044	06-30-15
Michigan	State Program	5	9937	03-31-15
Minnesota	NELAP	5	036-999-337	12-31-15
New Hampshire	NELAP	1	2337	11-17-15
New Jersey	NELAP	2	NY455	06-30-15
New York	NELAP	2	10026	03-31-15
North Dakota	State Program	8	R-176	03-31-15
Oklahoma	State Program	6	9421	08-31-15
Oregon	NELAP	10	NY200003	06-09-15
Pennsylvania	NELAP	3	68-00281	07-31-15
Rhode Island	State Program	1	LAO00328	12-30-14 *
Tennessee	State Program	4	TN02970	03-31-15
Texas	NELAP	6	T104704412-11-2	07-31-15
USDA	Federal		P330-11-00386	11-26-17
Virginia	NELAP	3	460185	09-14-15
Washington	State Program	10	C784	02-10-15
West Virginia DEP	State Program	3	252	09-30-15
Wisconsin	State Program	5	998310390	08-31-15

* Certification renewal pending - certification considered valid.

Method Summary

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

TestAmerica Job ID: 480-74193-1

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

Protocol References:

MA DEP = Massachusetts Department Of Environmental Protection

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

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

TestAmerica Job ID: 480-74193-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-74193-1	MW-265M-20150114	Water	01/14/15 11:05	01/15/15 01:45
480-74193-2	MW-267S-20150114	Water	01/14/15 09:50	01/15/15 01:45
480-74193-3	MW-267M-20150114	Water	01/14/15 10:40	01/15/15 01:45
480-74193-4	MW-268M-20150114	Water	01/14/15 08:30	01/15/15 01:45
480-74193-5	MW-560-20150114	Water	01/14/15 11:40	01/15/15 01:45
480-74193-6	MW-561-20150114	Water	01/14/15 08:25	01/15/15 01:45
480-74193-7	MW-562-20150114	Water	01/14/15 12:35	01/15/15 01:45
480-74193-8	MW-563-20150114	Water	01/14/15 09:50	01/15/15 01:45
480-74193-9	REW-6-20150113	Water	01/13/15 12:15	01/15/15 01:45
480-74193-10	REW-7-20150113	Water	01/13/15 09:40	01/15/15 01:45
480-74193-11	REW-8-20150113	Water	01/13/15 10:20	01/15/15 01:45
480-74193-12	REW-11-20150113	Water	01/13/15 11:25	01/15/15 01:45
480-74193-13	REW-12-20150113	Water	01/13/15 09:00	01/15/15 01:45
480-74193-14	DUP-20150114	Water	01/14/15 00:00	01/15/15 01:45
480-74193-15	TRIP BLANK	Water	01/14/15 00:00	01/15/15 01:45

Login Sample Receipt Checklist

Client: Innovative Engineering Solutions, Inc

Job Number: 480-74193-1

Login Number: 74193

List Source: TestAmerica Buffalo

List Number: 1

Creator: Williams, Christopher S

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
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	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	IESI
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

480-74193 Chain of Custody

Boston Service Center
240 Bear Hill Road -- Suite 104
Waltham MA 02451
Phone: (781) 466-6900 Fax: (781) 466-6901

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact: Vicki Panigan	Sample Collector's Name (Please Print Neatly): Dewy Jones, Dereck Rolls	Lab PM:	Carrier Tracking No(s):
Company: Innovative Engineering Solutions Inc	Sample Collector's Phone: 508-404-3196	Lab PM's E-Mail:	COC No: 31237
Address: 23 Spring St	PWS ID Number: 1124113		Page: 1 of 2
City: Walpole	Turnaround Time (TAT) Requested (business days): 10 Days		Job #:
State and Zip: MA 02081	Quote #:		
Client's Phone: 508-668-0033	PO #: RA-008		
Client's Contact Email: vipanigan@IESolutions.com	WO #:		
Client's Project Name/Number: Raytheon Wayland RA-008	SSOW#:		
Sample Collection Site Name & Location: RA-008 Wayland MA			

Analyses Requested

Preservation Codes:
A - Hydrochloric Acid; B - Sodium Hydroxide; C - Zinc Acetate; D - Nitric Acid; E - Sodium Bisulfite; F - Methanol; H - Ascorbic Acid; J - Deionized Water; M - Hexane; N - No Preservative; P - Sodium Sulfate; Q - Sodium Sulfite; R - Sodium Thiosulfate; S - Sulfuric Acid; Z - other (specify): _____

Regulatory Programs:
MCP ☐ GW1/S1 ☐ RCP ☐ CT RSR ☐ DEP Form ☐ EDD Required ☐ eDEP Filing ☐ NPDES ☐

SUBCONTRACT POLICY: Unless you provide instructions to the contrary, or specify which sub-contract labs are or are not to be used, you agree in advance to permit Test-America to use certified, subcontract labs, without any additional notification made by us, as necessary to fulfill your work order.

Sample Identification	Sample Collection Date (MM/DD/YY)	Sample Collection Time (24 Hr Clock)	Sample Type: C=Comp G=Grab	Matrix Type **	Was the Sample Field Filtered? (Y / N)	Perform MS/MSD on This Sample? (Y / N)	8260B	Total Number of Containers (per line)	Special Instructions & Notes:
			Preservation Codes ▶				A		
MW-363M - 20150113	1/14/15	1105	G	W	N	N	X	3	
MW-367S - 20150113	1/14/15	0950	G	W	N	N	X	3	
MW-367M - 20150113	1/14/15	1040	G	W	N	N	X	3	
MW-368M - 20150113	1/14/15	0830	G	W	N	N	X	3	
MW-560 - 20150113	1/14/15	1140	G	W	N	N	X	3	
MW-561 - 20150113	1/14/15	0925	G	W	N	N	X	3	
MW-562 - 20150113	1/14/15	1235	G	W	N	N	X	3	
MW-563 - 20150113	1/14/15	0950	G	W	N	N	X	3	
REW-6 - 20150113	1/13/15	1915	G	W	N	N	X	3	
REW-7 - 20150113	1/13/15	0940	G	W	N	N	X	3	

Possible Hazard Identification (please check off each that may apply):
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal Requirements (A fee may be assessed if samples are retained longer than 1 month):
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

** **Matrix Types:** A=Air S=Solid/Soil W=Water O=Oil X=Waste (non-water) Z=Other: _____

► ***NOTE!! ALL SAMPLES MUST BE TRANSPORTED ON ICE !!*** ◄

	Date/Time:	Company		Date/Time:	Company
Relinquished by:	1/14/15 1330	IESI	Received by:	1/14/15 133	TAL
Relinquished by:	1/14/15 163	TAL	Received by:	15 JAN 15 0145	TAL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	1.0 #3	

1/20/2015

WI-QA-010-rev 7

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

Chain of Custody Record

TestAmerica

Client Information	Sampler: Dan Jones Duncan Rolls	Lab PM: Mason, Becky C	Carrier Tracking No(s):	COC No: 480-61783-15799.2
Client Contact: Joseph Higgins	Phone: 404-3196 508-668-0033	E-Mail: becky.mason@testamericainc.com		Page: Page 2 of 2
Company: Innovative Engineering Solutions, Inc		Analysis Requested		Job #:
Address: 25 Spring Street	Due Date Requested: 1/24/15			
City: Walpole	TAT Requested (days): [illegible]			
State, Zip: MA, 02081				
Phone: 781-255-0796(Tel) 781-255-7421(Fax) 508-668-0033	PO #: Purchase Order Requested RA-008			
Email: j.higgins@iesionline.com v.paolucci@IESonline.com	WO #:			
Project Name: RA-008	Project #: 48006598			
Site: Raytheon, Wayland	SSOW#:			

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260MCP - 8260	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
REW-8-20150113	1/13/15	1020	G	Water	N	N	X	3	
REW-11-20150113	1/13/15	1125	G	Water	N	N	X	3	
REW-12-20150113	1/13/15	0907	G	Water	N	N	X	3	
Dup-20150114	1/14/15	—	G	Water	N	N	X	3	
Trip Blank	—	—		Water	N	—	X	2	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	1/14/15 1330	IESI		1/14/15 1330	TAL
Relinquished by:	1/14/15 1630	TAL		1/15/15 0945	TAL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.0 #3

1/20/2015

Report Date:
29-Jan-15 14:44

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

Laboratory Report

Innovative Engineering Solutions, Inc.
25 Spring Street
Walpole, MA 02081

Work Order: P0034
Project : Raytheon - Wayland
Project #:

Attn: Sami Fam

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
P0034-01	REW-6-20150113	Aqueous	13-Jan-15 12:15	14-Jan-15 12:25
P0034-02	REW-7-20150113	Aqueous	13-Jan-15 09:40	14-Jan-15 12:25
P0034-03	REW-8-20150113	Aqueous	13-Jan-15 10:20	14-Jan-15 12:25
P0034-04	REW-11-20150113	Aqueous	13-Jan-15 11:25	14-Jan-15 12:25
P0034-05	REW-12-20150113	Aqueous	13-Jan-15 09:00	14-Jan-15 12:25
P0034-06	MW-265M-20150114	Aqueous	14-Jan-15 11:05	15-Jan-15 10:45
P0034-07	MW-267S-20150114	Aqueous	14-Jan-15 09:50	15-Jan-15 10:45
P0034-08	MW-267M-20150114	Aqueous	14-Jan-15 10:40	15-Jan-15 10:45
P0034-09	MW-268M-20150114	Aqueous	14-Jan-15 08:30	15-Jan-15 10:45
P0034-10	MW-560-20150114	Aqueous	14-Jan-15 11:40	15-Jan-15 10:45
P0034-11	MW-561-20150114	Aqueous	14-Jan-15 08:25	15-Jan-15 10:45
P0034-12	MW-562-20150114	Aqueous	14-Jan-15 12:35	15-Jan-15 10:45
P0034-13	MW-563-20150114	Aqueous	14-Jan-15 09:50	15-Jan-15 10:45

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the samples(s) as received. This report may not be reproduced, except in full, without written approval from Spectrum Analytical.

All applicable NELAC or USEPA CLP requirments have been meet.

Spectrum Analytical (Rhode Island) is accredited under the National Environmental Laboratory Approval Program (NELAP) and DoD Environmental Laboratory Accreditation Program (ELAP), holds Organic and Inorganic contracts under the USEPA CLP Program and is certified under several states. The current list of our laboratory approvals and certifications is available on the Certifications page on our web site at www.spectrum-analytical.com.

Please contact the Laboratory or Technical Director at 401-732-3400 with any questions regarding the data contained in the laboratory report.

Department of Defense	N/A
Connecticut	PH-0153
Delaware	N/A
Florida	E87664
Maine	2007037
Massachusetts	M-RI907
New Hampshire	2631
New Jersey	RI001
New York	11522
Rhode Island	LAI00301
USDA	P330-08-00023
USEPA - ISM	EP-W-09-039
USEPA - SOM	EP-W-11-033

NELAP ACCREDITED TNI LABORATORY

LABORATORY ACCREDITATION BUREAU ACCREDITED
Certificate # L2247 Testing

Authorized by:

Yihai Ding
Laboratory Director

REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : Innovative Engineering Solutions, Inc.

Project: Raytheon - Wayland

Laboratory Workorder / SDG #: P0034

RSK175, Dissolved Gases by GC-FID

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code: RSK175

IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW5030B

V. INSTRUMENTATION

The following instrumentation was used to perform

Instrument Code: V7
Instrument Type: GC-FID

Description: HP5890 II
Manufacturer: Hewlett-Packard
Model: 5890
GC Column used: 30 m X 0.53 mm ID [um thickness] CARBOXEM 1006 capillary column.

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Surrogates:

N/A Supervisor needs to explain why no surrogates were detected during narrative generation.

D. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits with the following exceptions. Please note that most test procedures allow for several compounds outside of the QC limits for the LCS, although this may indicate a bias for this specific compound.

LCS-80843 in batch 80843, recovery is above criteria for Ethene at 127% with criteria of (75-125).

2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

E. Internal Standards:

NA--Supervisor needs to explain why no internal standards were detected during the generation of this narrative.

F. Dilutions:

The following samples were analyzed at dilution:

REW-6-20150113 (P0034-01A) : Dilution Factor: 100
REW-7-20150113 (P0034-02A) : Dilution Factor: 100
REW-8-20150113 (P0034-03A) : Dilution Factor: 100
REW-11-20150113 (P0034-04A) : Dilution Factor: 50
REW-12-20150113 (P0034-05A) : Dilution Factor: 100
MW-265M-20150114 (P0034-06A) : Dilution Factor: 100
MW-267S-20150114 (P0034-07A) : Dilution Factor: 50
MW-267M-20150114 (P0034-08A) : Dilution Factor: 100
MW-268M-20150114 (P0034-09A) : Dilution Factor: 100
MW-560-20150114 (P0034-10A) : Dilution Factor: 100
MW-561-20150114 (P0034-11A) : Dilution Factor: 100
MW-562-20150114 (P0034-12A) : Dilution Factor: 100
MW-563-20150114 (P0034-13A) : Dilution Factor: 100

G. Samples:

No other unusual occurrences were noted during sample analysis.

H. Manual Integration

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

· M1 peak tailing or fronting
· M2 peak co-elution
· M3 rising or falling baseline
· M4 retention time shift
· M5 miscellaneous - under this category, the justification is explained
· M6 software did not integrate peak
· M7 partial peak integration

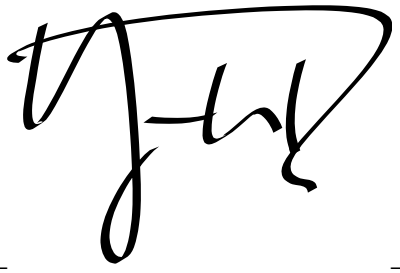
The following samples were manually integrated:

LCS-80816 Methane due to M3

LCS-80843 Ethene due to M3

VSTD005I7 Methane due to M7

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.



Signed:_____ _____

Date:_____1/29/2015_____

REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : Innovative Engineering Solutions, Inc.

Project: Raytheon - Wayland

Laboratory Workorder / SDG #: P0034

SW846 6010C

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code: SW846 6010C

IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW3005A

V. INSTRUMENTATION

The following instrumentation was used:

Instrument Code: OPTIMA3
Instrument Type: ICP

Description: Optima ICP-OES
Manufacturer: Perkin-Elmer
Model: 4300 DV

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for laboratory control samples were within the QC limits.

2. Matrix spike (MS):

A matrix spike was not performed on any sample in this SDG.

D. Post Digestion Spike (PDS):

A post-digestion spike was not performed on any sample in this SDG.

E. Duplicate sample:

A duplicate analysis was not performed on any sample in this SDG.

F. Serial Dilution (SD):

A serial dilution was not performed on any sample in this SDG.

G. Samples:

The samples were analyzed for Iron only.

No other unusual occurrences were noted during sample analysis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Signed: 

Date: 01/26/15

REPORT NARRATIVE

Spectrum Analytical, Inc. Featuring Hanibal Technology, RI Division.

Client : Innovative Engineering Solutions, Inc.

Project: Raytheon - Wayland

Laboratory Workorder / SDG #: P0034

EPA 300.0, SM 2320B,
SM 4500 H+ B, SM 5310B TOC

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test codes: EPA 300.0, SM 2320B, SM 4500 H+ B, SM 5310B TOC

IV. PREPARATION

Samples were prepared following procedures in laboratory test codes: EPA 300.0, SM 2320B, SM 4500 H+ B, SM 5310B TOC

V. INSTRUMENTATION

The following instrumentation was used:

Instrument Code: IC1

Instrument Type: IC
Description: DX-500
Manufacturer: Dionex
Model: DX-500
GC Column used: 0.25 m X 4 mm ID [um thickness] AS14A-7 capillary column.

Instrument Code: TOC1
Instrument Type: TOC
Description: TOC
Manufacturer: Tekmar Dohrman
Model: Apollo 9000

Instrument Code: WC03
Instrument Type: Probe
Description: pH Meter
Manufacturer: Oakton Instruments
Model: Bench 2700 Series

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits.

2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

Matrix spikes were performed on samples: MW-563-20150114 (P0034-13CMS), MW-563-20150114 (P0034-13CMSD), REW-6-20150113 (P0034-01CMS) and REW-6-20150113 (P0034-01CMSD).

Percent recoveries were within the QC limits with the following exceptions:

REW-6-20150113 (P0034-01CMS), recovery is below criteria for

ortho-Phosphate (As P) at 0% with criteria of (80-120).

REW-6-20150113 (P0034-01CMSD), recovery is below criteria for ortho-Phosphate (As P) at 0% with criteria of (80-120).

MW-563-20150114 (P0034-13CMS), recovery is below criteria for ortho-Phosphate (As P) at 0% with criteria of (80-120) and Sulfate at 67% with criteria of (80-120).

MW-563-20150114 (P0034-13CMSD), recovery is below criteria for ortho-Phosphate (As P) at 0% with criteria of (80-120).

D. Duplicate sample:

Duplicate analyses were performed on sample: MW-563-20150114 (P0034-13CDUP).

Relative percent differences were within the QC limits.

E. Dilutions:

The following samples were analyzed at dilution:

REW-6-20150113 (P0034-01B), dilution factor: 10 for Organic Carbon, Total
MW-265M-20150114 (P0034-06B), dilution factor: 10 for Organic Carbon, Total
MW-265M-20150114 (P0034-06C), dilution factor: 2 for Alkalinity, Total (As CaCO3)
MW-267S-20150114 (P0034-07B), dilution factor: 20 for Organic Carbon, Total
MW-267M-20150114 (P0034-08C), dilution factor: 5 for Alkalinity, Total (As CaCO3)
MW-560-20150114 (P0034-10C), dilution factor: 5 for Alkalinity, Total (As CaCO3)
MW-562-20150114 (P0034-12B), dilution factor: 20 for Organic Carbon, Total
MW-563-20150114 (P0034-13B), dilution factor: 10 for Organic Carbon, Total

F. Samples:

No other unusual occurrences were noted during sample analysis.

I certify that this data package is in compliance with the terms and

conditions agreed to by the client and Spectrum, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Signed: 

Date: 01/26/2015

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: REW-6-20150113 **Project:** Raytheon - Wayland
Lab ID: P0034-01 **Collection Date:** 01/13/15 12:15

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	45000		61	µg/L	100	01/21/2015 13:21	80816
Ethane	ND		130	µg/L	100	01/21/2015 13:21	80816
Ethene	ND		160	µg/L	100	01/21/2015 13:21	80816

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: REW-7-20150113 **Project:** Raytheon - Wayland
Lab ID: P0034-02 **Collection Date:** 01/13/15 9:40

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	40000		60	µg/L	100	01/21/2015 13:29	80816
Ethane	ND		120	µg/L	100	01/21/2015 13:29	80816
Ethene	ND		150	µg/L	100	01/21/2015 13:29	80816

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: REW-8-20150113 **Project:** Raytheon - Wayland
Lab ID: P0034-03 **Collection Date:** 01/13/15 10:20

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	48000		60	µg/L	100	01/21/2015 13:36	80816
Ethane	ND		120	µg/L	100	01/21/2015 13:36	80816
Ethene	ND		150	µg/L	100	01/21/2015 13:36	80816

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.

Client Sample ID: REW-11-20150113 **Project:** Raytheon - Wayland

Lab ID: P0034-04 **Collection Date:** 01/13/15 11:25

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	31000		30	µg/L	50	01/21/2015 13:45	80816
Ethane	ND		62	µg/L	50	01/21/2015 13:45	80816
Ethene	ND		77	µg/L	50	01/21/2015 13:45	80816

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quanititation limits

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: REW-12-20150113
Lab ID: P0034-05
Project: Raytheon - Wayland
Collection Date: 01/13/15 9:00

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	55000		61	µg/L	100	01/21/2015 13:53	80816
Ethane	ND		130	µg/L	100	01/21/2015 13:53	80816
Ethene	ND		160	µg/L	100	01/21/2015 13:53	80816

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-265M-20150114
Lab ID: P0034-06
Project: Raytheon - Wayland
Collection Date: 01/14/15 11:05

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	63000		61	µg/L	100	01/21/2015 14:01	80816
Ethane	ND		130	µg/L	100	01/21/2015 14:01	80816
Ethene	ND		160	µg/L	100	01/21/2015 14:01	80816

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-267S-20150114
Lab ID: P0034-07
Project: Raytheon - Wayland
Collection Date: 01/14/15 9:50

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	38000		30	µg/L	50	01/21/2015 14:09	80816
Ethane	ND		62	µg/L	50	01/21/2015 14:09	80816
Ethene	ND		77	µg/L	50	01/21/2015 14:09	80816

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-267M-20150114
Lab ID: P0034-08
Project: Raytheon - Wayland
Collection Date: 01/14/15 10:40

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	57000		60	µg/L	100	01/21/2015 14:20	80816
Ethane	ND		120	µg/L	100	01/21/2015 14:20	80816
Ethene	ND		150	µg/L	100	01/21/2015 14:20	80816

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-268M-20150114
Lab ID: P0034-09
Project: Raytheon - Wayland
Collection Date: 01/14/15 8:30

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	56000		61	µg/L	100	01/21/2015 14:28	80816
Ethane	ND		130	µg/L	100	01/21/2015 14:28	80816
Ethene	ND		160	µg/L	100	01/21/2015 14:28	80816

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-560-20150114 **Project:** Raytheon - Wayland
Lab ID: P0034-10 **Collection Date:** 01/14/15 11:40

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	59000		60	µg/L	100	01/21/2015 14:37	80816
Ethane	ND		120	µg/L	100	01/21/2015 14:37	80816
Ethene	ND		150	µg/L	100	01/21/2015 14:37	80816

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-561-20150114 **Project:** Raytheon - Wayland
Lab ID: P0034-11 **Collection Date:** 01/14/15 8:25

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	52000		61	µg/L	100	01/22/2015 10:02	80843
Ethane	ND		130	µg/L	100	01/22/2015 10:02	80843
Ethene	ND		160	µg/L	100	01/22/2015 10:02	80843

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-562-20150114
Lab ID: P0034-12
Project: Raytheon - Wayland
Collection Date: 01/14/15 12:35

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	47000		60	µg/L	100	01/22/2015 10:18	80843
Ethane	ND		120	µg/L	100	01/22/2015 10:18	80843
Ethene	ND		150	µg/L	100	01/22/2015 10:18	80843

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-563-20150114
Lab ID: P0034-13
Project: Raytheon - Wayland
Collection Date: 01/14/15 9:50

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
RSK175 -- Dissolved Gases by GC-FID							**RSK175**
Methane	45000		61	µg/L	100	01/22/2015 10:38	80843
Ethane	ND		130	µg/L	100	01/22/2015 10:38	80843
Ethene	ND		160	µg/L	100	01/22/2015 10:38	80843

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

CLIENT: Innovative Engineering Solutions, Inc.

Work Order: P0034

Project: Raytheon - Wayland

ANALYTICAL QC SUMMARY REPORT

RSK175

RSK175 -- Dissolved Gases by GC-FID

Sample ID: **MB-80816** SampType: **MBLK** TestCode: **RSK175** Prep Date: **01/21/15 9:28** Run ID: **V7_150121A**

Client ID: **MB-80816** Batch ID: **80816** Units: **µg/L** Analysis Date: **01/21/15 10:49** SeqNo: **2222151**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane	ND	0.36	0.60									
Ethane	ND	0.51	1.2									
Ethene	ND	0.71	1.5									

Sample ID: **MB-80843** SampType: **MBLK** TestCode: **RSK175** Prep Date: **01/22/15 8:56** Run ID: **V7_150122A**

Client ID: **MB-80843** Batch ID: **80843** Units: **µg/L** Analysis Date: **01/22/15 9:41** SeqNo: **2222183**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane	ND	0.35	0.58									
Ethane	ND	0.50	1.2									
Ethene	ND	0.69	1.5									

Sample ID: **LCS-80816** SampType: **LCS** TestCode: **RSK175** Prep Date: **01/21/15 9:28** Run ID: **V7_150121A**

Client ID: **LCS-80816** Batch ID: **80816** Units: **µg/L** Analysis Date: **01/21/15 10:22** SeqNo: **2222148**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane	34.90	0.36	0.60	46.29	0	75.4	75	125	0			
Ethane	74.58	0.51	1.2	87.43	0	85.3	75	125	0			
Ethene	93.39	0.71	1.5	81.26	0	115	75	125	0			

Sample ID: **LCS-80843** SampType: **LCS** TestCode: **RSK175** Prep Date: **01/22/15 8:56** Run ID: **V7_150122A**

Client ID: **LCS-80843** Batch ID: **80843** Units: **µg/L** Analysis Date: **01/22/15 9:11** SeqNo: **2222181**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane	40.90	0.35	0.58	45.00	0	90.9	75	125	0			
Ethane	84.98	0.50	1.2	85.00	0	100	75	125	0			
Ethene	100.7	0.69	1.5	79.00	0	127	75	125	0			S

Sample ID: **LCSD-80816** SampType: **LCSD** TestCode: **RSK175** Prep Date: **01/21/15 9:28** Run ID: **V7_150121A**

Client ID: **LCSD-80816** Batch ID: **80816** Units: **µg/L** Analysis Date: **01/21/15 10:34** SeqNo: **2222150**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane	34.96	0.36	0.60	46.29	0	75.5	75	125	34.90	0.158	30	
Ethane	75.39	0.51	1.2	87.43	0	86.2	75	125	74.58	1.08	30	
Ethene	92.64	0.71	1.5	81.26	0	114	75	125	93.39	0.811	30	

Qualifiers: ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank; J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

CLIENT: Innovative Engineering Solutions, Inc.
Work Order: P0034
Project: Raytheon - Wayland

ANALYTICAL QC SUMMARY REPORT

RSK175

RSK175 -- Dissolved Gases by GC-FID

Sample ID: **LCSD-80843** SampType: **LCSD** TestCode: **RSK175** Prep Date: **01/22/15 8:56** Run ID: **V7_150122A**
Client ID: **LCSD-80843** Batch ID: **80843** Units: **µg/L** Analysis Date: **01/22/15 9:27** SeqNo: **2222182**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane	37.41	0.36	0.60	46.29	0	80.8	75	125	40.90	8.91	30	
Ethane	79.02	0.51	1.2	87.43	0	90.4	75	125	84.98	7.27	30	
Ethene	94.41	0.71	1.5	81.26	0	116	75	125	100.7	6.45	30	

Qualifiers:
ND - Not Detected at the MDL
J - Analyte detected below quanititation limits
S - Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
MDL - Method Detection Limit
RL - Reporting Limit
B - Analyte detected in the associated Method Blank

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: REW-6-20150113 **Project:** Raytheon - Wayland
Lab ID: P0034-01 **Collection Date:** 01/13/15 12:15

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							**SW6010_W**
Iron	130000		200	ug/L	1	01/21/2015 9:24	80805

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: REW-7-20150113 **Project:** Raytheon - Wayland
Lab ID: P0034-02 **Collection Date:** 01/13/15 9:40

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							**SW6010_W**
Iron	79000		200	ug/L	1	01/21/2015 9:27	80805

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: REW-8-20150113 **Project:** Raytheon - Wayland
Lab ID: P0034-03 **Collection Date:** 01/13/15 10:20

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							**SW6010_W**
Iron	75000		200	ug/L	1	01/21/2015 9:31	80805

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: REW-11-20150113
Lab ID: P0034-04
Project: Raytheon - Wayland
Collection Date: 01/13/15 11:25

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							**SW6010_W**
Iron	42000		200	ug/L	1	01/21/2015 9:42	80805

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: REW-12-20150113 **Project:** Raytheon - Wayland
Lab ID: P0034-05 **Collection Date:** 01/13/15 9:00

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							**SW6010_W**
Iron	60000		200	ug/L	1	01/21/2015 9:46	80805

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-265M-20150114
Lab ID: P0034-06
Project: Raytheon - Wayland
Collection Date: 01/14/15 11:05

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							**SW6010_W**
Iron	190000		200	ug/L	1	01/21/2015 9:50	80805

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-267S-20150114
Lab ID: P0034-07
Project: Raytheon - Wayland
Collection Date: 01/14/15 9:50

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							**SW6010_W**
Iron	130000		200	ug/L	1	01/21/2015 9:53	80805

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-267M-20150114
Lab ID: P0034-08
Project: Raytheon - Wayland
Collection Date: 01/14/15 10:40

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							**SW6010_W**
Iron	230000		200	ug/L	1	01/21/2015 9:57	80805

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-268M-20150114
Lab ID: P0034-09
Project: Raytheon - Wayland
Collection Date: 01/14/15 8:30

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							**SW6010_W**
Iron	50000		200	ug/L	1	01/21/2015 10:01	80805

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.

Client Sample ID: MW-560-20150114 **Project:** Raytheon - Wayland

Lab ID: P0034-10 **Collection Date:** 01/14/15 11:40

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							**SW6010_W**
Iron	190000		200	ug/L	1	01/21/2015 10:05	80805

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quanititation limits

B - Analyte detected in the associated Method Blank

DF - Dilution Factor

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-561-20150114
Lab ID: P0034-11
Project: Raytheon - Wayland
Collection Date: 01/14/15 8:25

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							**SW6010_W**
Iron	65000		200	ug/L	1	01/21/2015 10:08	80805

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-562-20150114
Lab ID: P0034-12
Project: Raytheon - Wayland
Collection Date: 01/14/15 12:35

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							**SW6010_W**
Iron	450000		200	ug/L	1	01/21/2015 10:12	80805

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-563-20150114 **Project:** Raytheon - Wayland
Lab ID: P0034-13 **Collection Date:** 01/14/15 9:50

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							**SW6010_W**
Iron	180000		200	ug/L	1	01/21/2015 10:16	80805

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

P0034

CLIENT: Innovative Engineering Solutions, Inc.
Work Order: P0034
Project: Raytheon - Wayland

ANALYTICAL QC SUMMARY REPORT

SW6010_W

SW846 6010C -- Metals by ICP

Sample ID:	**MB-80805**	SampType:	**MBLK**	TestCode:	**SW6010_W**	Prep Date:	**01/20/15 10:00**	Run ID:	**OPTIMA3_150121A**
Client ID:	**MB-80805**	Batch ID:	**80805**	Units:	**ug/L**	Analysis Date:	**01/21/15 9:05**	SeqNo:	**2220802**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	31	200									

Sample ID:	**LCS-80805**	SampType:	**LCS**	TestCode:	**SW6010_W**	Prep Date:	**01/20/15 10:00**	Run ID:	**OPTIMA3_150121A**
Client ID:	**LCS-80805**	Batch ID:	**80805**	Units:	**ug/L**	Analysis Date:	**01/21/15 9:08**	SeqNo:	**2220803**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	4669	31	200	4550	0	103	80	120	0			

Sample ID:	**LCSD-80805**	SampType:	**LCSD**	TestCode:	**SW6010_W**	Prep Date:	**01/20/15 10:00**	Run ID:	**OPTIMA3_150121A**
Client ID:	**LCSD-80805**	Batch ID:	**80805**	Units:	**ug/L**	Analysis Date:	**01/21/15 9:12**	SeqNo:	**2220804**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	4818	31	200	4550	0	106	80	120	4669	3.14	20	

Qualifiers:
ND - Not Detected at the MDL
J - Analyte detected below quanititation limits
S - Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
MDL - Method Detection Limit
RL - Reporting Limit
B - Analyte detected in the associated Method Blank

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: REW-6-20150113 **Project:** Raytheon - Wayland
Lab ID: P0034-01 **Collection Date:** 01/13/15 12:15

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Chloride	38		2.0	mg/L	1	01/14/2015 14:15	80742
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	01/14/2015 14:15	80742
ortho-Phosphate (As P)	ND		0.50	mg/L	1	01/15/2015 11:14	80742
Sulfate	9.7	B	5.0	mg/L	1	01/14/2015 14:15	80742
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	330		20	mg/L CaCO3	1	01/15/2015 10:28	80750
SM 4500 H+ B -- pH VALUE							**SM4500_H+**
pH	6.5		1.0	S.U.	1	01/14/2015 10:45	R86821
SM 5310B TOC -- Total Organic Carbon by combustion							**SM5310B_TOC_W**
Organic Carbon, Total	630		100	mg/L	10	01/22/2015 14:30	80828

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: REW-7-20150113 **Project:** Raytheon - Wayland
Lab ID: P0034-02 **Collection Date:** 01/13/15 9:40

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Chloride	26		2.0	mg/L	1	01/14/2015 14:50	80742
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	01/14/2015 14:50	80742
ortho-Phosphate (As P)	ND		0.50	mg/L	1	01/15/2015 11:49	80742
Sulfate	5.8	B	5.0	mg/L	1	01/14/2015 14:50	80742
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	280		20	mg/L CaCO3	1	01/15/2015 10:35	80750
SM 4500 H+ B -- pH VALUE							**SM4500_H+**
pH	6.9		1.0	S.U.	1	01/14/2015 10:48	R86821
SM 5310B TOC -- Total Organic Carbon by combustion							**SM5310B_TOC_W**
Organic Carbon, Total	190		10	mg/L	1	01/22/2015 13:37	80828

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: REW-8-20150113 **Project:** Raytheon - Wayland
Lab ID: P0034-03 **Collection Date:** 01/13/15 10:20

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Chloride	34		2.0	mg/L	1	01/14/2015 15:02	80742
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	01/14/2015 15:02	80742
ortho-Phosphate (As P)	ND		0.50	mg/L	1	01/15/2015 12:01	80742
Sulfate	5.9	B	5.0	mg/L	1	01/14/2015 15:02	80742
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	280		20	mg/L CaCO3	1	01/15/2015 10:41	80750
SM 4500 H+ B -- pH VALUE							**SM4500_H+**
pH	6.9		1.0	S.U.	1	01/14/2015 10:51	R86821
SM 5310B TOC -- Total Organic Carbon by combustion							**SM5310B_TOC_W**
Organic Carbon, Total	ND		10	mg/L	1	01/21/2015 17:50	80828

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: REW-11-20150113 **Project:** Raytheon - Wayland
Lab ID: P0034-04 **Collection Date:** 01/13/15 11:25

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Chloride	21		2.0	mg/L	1	01/14/2015 15:13	80742
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	01/14/2015 15:13	80742
ortho-Phosphate (As P)	ND		0.50	mg/L	1	01/15/2015 12:13	80742
Sulfate	19	B	5.0	mg/L	1	01/14/2015 15:13	80742
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	180		20	mg/L CaCO3	1	01/15/2015 10:47	80750
SM 4500 H+ B -- pH VALUE							**SM4500_H+**
pH	6.6		1.0	S.U.	1	01/14/2015 10:54	R86821
SM 5310B TOC -- Total Organic Carbon by combustion							**SM5310B_TOC_W**
Organic Carbon, Total	180		10	mg/L	1	01/21/2015 18:10	80828

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: REW-12-20150113 **Project:** Raytheon - Wayland
Lab ID: P0034-05 **Collection Date:** 01/13/15 9:00

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Chloride	35		2.0	mg/L	1	01/14/2015 15:25	80742
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	01/14/2015 15:25	80742
ortho-Phosphate (As P)	ND		0.50	mg/L	1	01/15/2015 12:25	80742
Sulfate	13	B	5.0	mg/L	1	01/14/2015 15:25	80742
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	250		20	mg/L CaCO3	1	01/15/2015 10:53	80750
SM 4500 H+ B -- pH VALUE							**SM4500_H+**
pH	6.7		1.0	S.U.	1	01/14/2015 10:57	R86821
SM 5310B TOC -- Total Organic Carbon by combustion							**SM5310B_TOC_W**
Organic Carbon, Total	180		10	mg/L	1	01/21/2015 18:36	80828

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-265M-20150114
Lab ID: P0034-06
Project: Raytheon - Wayland
Collection Date: 01/14/15 11:05

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Chloride	26		2.0	mg/L	1	01/15/2015 13:43	80754
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	01/15/2015 13:43	80754
ortho-Phosphate (As P)	0.28	J	0.50	mg/L	1	01/15/2015 13:43	80754
Sulfate	0.22	BJ	5.0	mg/L	1	01/15/2015 13:43	80754
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	840		40	mg/L CaCO3	2	01/21/2015 13:16	80835
SM 4500 H+ B -- pH VALUE							**SM4500_H+**
pH	5.8		1.0	S.U.	1	01/15/2015 14:00	R86861
SM 5310B TOC -- Total Organic Carbon by combustion							**SM5310B_TOC_W**
Organic Carbon, Total	1400		100	mg/L	10	01/22/2015 14:56	80828

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-267S-20150114
Lab ID: P0034-07
Project: Raytheon - Wayland
Collection Date: 01/14/15 9:50

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Chloride	37		2.0	mg/L	1	01/15/2015 13:55	80754
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	01/15/2015 13:55	80754
ortho-Phosphate (As P)	ND		0.50	mg/L	1	01/15/2015 13:55	80754
Sulfate	0.27	BJ	5.0	mg/L	1	01/15/2015 13:55	80754
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	390		20	mg/L CaCO3	1	01/21/2015 13:21	80835
SM 4500 H+ B -- pH VALUE							**SM4500_H+**
pH	5.7		1.0	S.U.	1	01/15/2015 14:02	R86861
SM 5310B TOC -- Total Organic Carbon by combustion							**SM5310B_TOC_W**
Organic Carbon, Total	3100		200	mg/L	20	01/22/2015 15:23	80828

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-267M-20150114 **Project:** Raytheon - Wayland
Lab ID: P0034-08 **Collection Date:** 01/14/15 10:40

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Chloride	28		2.0	mg/L	1	01/15/2015 14:07	80754
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	01/15/2015 14:07	80754
ortho-Phosphate (As P)	0.13	J	0.50	mg/L	1	01/15/2015 14:07	80754
Sulfate	0.20	BJ	5.0	mg/L	1	01/15/2015 14:07	80754
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	550		100	mg/L CaCO3	5	01/21/2015 13:27	80835
SM 4500 H+ B -- pH VALUE							**SM4500_H+**
pH	6.8		1.0	S.U.	1	01/15/2015 14:04	R86861
SM 5310B TOC -- Total Organic Carbon by combustion							**SM5310B_TOC_W**
Organic Carbon, Total	ND		10	mg/L	1	01/21/2015 19:46	80828

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-268M-20150114 **Project:** Raytheon - Wayland
Lab ID: P0034-09 **Collection Date:** 01/14/15 8:30

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Chloride	25		2.0	mg/L	1	01/15/2015 14:18	80754
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	01/15/2015 14:18	80754
ortho-Phosphate (As P)	ND		0.50	mg/L	1	01/15/2015 14:18	80754
Sulfate	0.73	BJ	5.0	mg/L	1	01/15/2015 14:18	80754
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	260		20	mg/L CaCO3	1	01/21/2015 13:32	80835
SM 4500 H+ B -- pH VALUE							**SM4500_H+**
pH	6.5		1.0	S.U.	1	01/15/2015 14:06	R86861
SM 5310B TOC -- Total Organic Carbon by combustion							**SM5310B_TOC_W**
Organic Carbon, Total	310		10	mg/L	1	01/21/2015 20:05	80828

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-560-20150114 **Project:** Raytheon - Wayland
Lab ID: P0034-10 **Collection Date:** 01/14/15 11:40

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Chloride	23		2.0	mg/L	1	01/15/2015 14:30	80754
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	01/15/2015 14:30	80754
ortho-Phosphate (As P)	0.12	J	0.50	mg/L	1	01/15/2015 14:30	80754
Sulfate	0.16	BJ	5.0	mg/L	1	01/15/2015 14:30	80754
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	1200		100	mg/L CaCO3	5	01/21/2015 13:38	80835
SM 4500 H+ B -- pH VALUE							**SM4500_H+**
pH	6.8		1.0	S.U.	1	01/15/2015 14:08	R86861
SM 5310B TOC -- Total Organic Carbon by combustion							**SM5310B_TOC_W**
Organic Carbon, Total	220		10	mg/L	1	01/21/2015 21:22	80828

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-561-20150114 **Project:** Raytheon - Wayland
Lab ID: P0034-11 **Collection Date:** 01/14/15 8:25

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Chloride	22		2.0	mg/L	1	01/15/2015 14:42	80754
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	01/15/2015 14:42	80754
ortho-Phosphate (As P)	ND		0.50	mg/L	1	01/15/2015 14:42	80754
Sulfate	0.37	BJ	5.0	mg/L	1	01/15/2015 14:42	80754
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	340		20	mg/L CaCO3	1	01/21/2015 13:43	80835
SM 4500 H+ B -- pH VALUE							**SM4500_H+**
pH	5.7		1.0	S.U.	1	01/15/2015 14:11	R86861
SM 5310B TOC -- Total Organic Carbon by combustion							**SM5310B_TOC_W**
Organic Carbon, Total	350		10	mg/L	1	01/21/2015 21:41	80828

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-562-20150114
Lab ID: P0034-12
Project: Raytheon - Wayland
Collection Date: 01/14/15 12:35

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Chloride	30		2.0	mg/L	1	01/15/2015 15:17	80754
Nitrogen, Nitrate (As N)	0.087	J	0.13	mg/L	1	01/15/2015 15:17	80754
ortho-Phosphate (As P)	0.52		0.50	mg/L	1	01/16/2015 12:31	80754
Sulfate	0.15	BJ	5.0	mg/L	1	01/15/2015 15:17	80754
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	720		20	mg/L CaCO3	1	01/21/2015 13:49	80835
SM 4500 H+ B -- pH VALUE							**SM4500_H+**
pH	5.3		1.0	S.U.	1	01/15/2015 14:13	R86861
SM 5310B TOC -- Total Organic Carbon by combustion							**SM5310B_TOC_W**
Organic Carbon, Total	3500		200	mg/L	20	01/22/2015 15:49	80828

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

Client: Innovative Engineering Solutions, Inc.
Client Sample ID: MW-563-20150114 **Project:** Raytheon - Wayland
Lab ID: P0034-13 **Collection Date:** 01/14/15 9:50

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
EPA 300.0 -- Anions by Ion Chromotography (LOW)							**E300IC_W**
Chloride	35		2.0	mg/L	1	01/15/2015 15:29	80754
Nitrogen, Nitrate (As N)	ND		0.13	mg/L	1	01/15/2015 15:29	80754
ortho-Phosphate (As P)	ND		0.50	mg/L	1	01/16/2015 12:43	80754
Sulfate	0.15	BJ	5.0	mg/L	1	01/15/2015 15:29	80754
SM 2320B -- Alkalinity (Total)							**SM2320_W**
Alkalinity, Total (As CaCO3)	220		20	mg/L CaCO3	1	01/21/2015 13:54	80835
SM 4500 H+ B -- pH VALUE							**SM4500_H+**
pH	6.1		1.0	S.U.	1	01/15/2015 14:15	R86861
SM 5310B TOC -- Total Organic Carbon by combustion							**SM5310B_TOC_W**
Organic Carbon, Total	500		100	mg/L	10	01/22/2015 16:16	80828

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
DF - Dilution Factor
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
RL - Reporting Limit

CLIENT: Innovative Engineering Solutions, Inc.
Work Order: P0034
Project: Raytheon - Wayland

ANALYTICAL QC SUMMARY REPORT

E300IC_W

EPA 300.0 -- Anions by Ion Chromotography (LOW)

Sample ID: **MB-80742**	SampType: **MBLK**	TestCode: **E300IC_W**	Prep Date: **01/14/15 13:00**	Run ID: **IC1_150114A**
Client ID: **MB-80742**	Batch ID: **80742**	Units: **mg/L**	Analysis Date: **01/14/15 13:51**	SeqNo: **2218228**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.28	2.0									
Nitrogen, Nitrate (As N)	ND	0.083	0.13									
Sulfate	0.2239	0.15	5.0									J

Sample ID: **MB-80742**	SampType: **MBLK**	TestCode: **E300IC_W**	Prep Date: **01/14/15 13:00**	Run ID: **IC1_150115B**
Client ID: **MB-80742**	Batch ID: **80742**	Units: **mg/L**	Analysis Date: **01/15/15 10:51**	SeqNo: **2218620**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
ortho-Phosphate (As P)	0.1377	0.10	0.50									J

Sample ID: **MB-80754**	SampType: **MBLK**	TestCode: **E300IC_W**	Prep Date: **01/15/15 13:13**	Run ID: **IC1_150115B**
Client ID: **MB-80754**	Batch ID: **80754**	Units: **mg/L**	Analysis Date: **01/15/15 13:20**	SeqNo: **2218614**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.28	2.0									
Nitrogen, Nitrate (As N)	ND	0.083	0.13									
ortho-Phosphate (As P)	ND	0.10	0.50									
Sulfate	0.2687	0.15	5.0									J

Sample ID: **LCS-80742**	SampType: **LCS**	TestCode: **E300IC_W**	Prep Date: **01/14/15 13:00**	Run ID: **IC1_150114A**
Client ID: **LCS-80742**	Batch ID: **80742**	Units: **mg/L**	Analysis Date: **01/14/15 14:03**	SeqNo: **2218229**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	15.47	0.28	2.0	16.00	0	96.7	90	110	0			
Nitrogen, Nitrate (As N)	0.9018	0.083	0.13	1.000	0	90.2	90	110	0			
Sulfate	38.38	0.15	5.0	40.00	0	95.9	90	110	0			B

Sample ID: **LCS-80742**	SampType: **LCS**	TestCode: **E300IC_W**	Prep Date: **01/14/15 13:00**	Run ID: **IC1_150115B**
Client ID: **LCS-80742**	Batch ID: **80742**	Units: **mg/L**	Analysis Date: **01/15/15 11:02**	SeqNo: **2218621**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
ortho-Phosphate (As P)	4.104	0.10	0.50	4.000	0	103	90	110	0			B

Qualifiers: ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank; J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

CLIENT: Innovative Engineering Solutions, Inc.
Work Order: P0034
Project: Raytheon - Wayland

ANALYTICAL QC SUMMARY REPORT

E300IC_W

EPA 300.0 -- Anions by Ion Chromotography (LOW)

Sample ID: **LCS-80754** SampType: **LCS** TestCode: **E300IC_W** Prep Date: **01/15/15 13:13** Run ID: **IC1_150115B**
Client ID: **LCS-80754** Batch ID: **80754** Units: **mg/L** Analysis Date: **01/15/15 13:31** SeqNo: **2218615**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	15.13	0.28	2.0	16.00	0	94.6	90	110	0			
Nitrogen, Nitrate (As N)	0.9006	0.083	0.13	1.000	0	90.1	90	110	0			
ortho-Phosphate (As P)	4.110	0.10	0.50	4.000	0	103	90	110	0			
Sulfate	37.79	0.15	5.0	40.00	0	94.5	90	110	0			B

Sample ID: **P0034-01CMS** SampType: **MS** TestCode: **E300IC_W** Prep Date: **01/14/15 13:00** Run ID: **IC1_150114A**
Client ID: **REW-6-20150113** Batch ID: **80742** Units: **mg/L** Analysis Date: **01/14/15 14:26** SeqNo: **2218231**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	53.40	0.28	2.0	16.00	37.83	97.3	80	120	0			
Nitrogen, Nitrate (As N)	0.9866	0.083	0.13	1.000	0	98.7	80	120	0			
Sulfate	51.54	0.15	5.0	40.00	9.710	105	80	120	0			B

Sample ID: **P0034-01CMS** SampType: **MS** TestCode: **E300IC_W** Prep Date: **01/14/15 13:00** Run ID: **IC1_150115B**
Client ID: **REW-6-20150113** Batch ID: **80742** Units: **mg/L** Analysis Date: **01/15/15 11:26** SeqNo: **2218623**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
ortho-Phosphate (As P)	ND	0.10	0.50	4.000	0	0	80	120	0			S

Sample ID: **P0034-13CMS** SampType: **MS** TestCode: **E300IC_W** Prep Date: **01/15/15 13:13** Run ID: **IC1_150115B**
Client ID: **MW-563-20150114** Batch ID: **80754** Units: **mg/L** Analysis Date: **01/15/15 15:41** SeqNo: **2218639**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	49.82	0.28	2.0	16.00	35.40	90.2	80	120	0			
Nitrogen, Nitrate (As N)	0.8759	0.083	0.13	1.000	0	87.6	80	120	0			
Sulfate	26.85	0.15	5.0	40.00	0.1512	66.7	80	120	0			BS

Sample ID: **P0034-13CMS** SampType: **MS** TestCode: **E300IC_W** Prep Date: **01/15/15 13:13** Run ID: **IC1_150116A**
Client ID: **MW-563-20150114** Batch ID: **80754** Units: **mg/L** Analysis Date: **01/16/15 12:55** SeqNo: **2218653**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
ortho-Phosphate (As P)	ND	0.10	0.50	4.000	0	0	80	120	0			S

Qualifiers: ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank; J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

CLIENT: Innovative Engineering Solutions, Inc.
Work Order: P0034
Project: Raytheon - Wayland

ANALYTICAL QC SUMMARY REPORT

E300IC_W

EPA 300.0 -- Anions by Ion Chromotography (LOW)

Sample ID: **P0034-01CMSD** SampType: **MSD** TestCode: **E300IC_W** Prep Date: **01/14/15 13:00** Run ID: **IC1_150114A**
Client ID: **REW-6-20150113** Batch ID: **80742** Units: **mg/L** Analysis Date: **01/14/15 14:38** SeqNo: **2218232**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	52.30	0.28	2.0	16.00	37.83	90.4	80	120	53.40	2.09	20	
Nitrogen, Nitrate (As N)	1.002	0.083	0.13	1.000	0	100	80	120	0.9866	1.59	20	
Sulfate	51.67	0.15	5.0	40.00	9.710	105	80	120	51.54	0.238	20	B

Sample ID: **P0034-01CMSD** SampType: **MSD** TestCode: **E300IC_W** Prep Date: **01/14/15 13:00** Run ID: **IC1_150115B**
Client ID: **REW-6-20150113** Batch ID: **80742** Units: **mg/L** Analysis Date: **01/15/15 11:38** SeqNo: **2218624**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
ortho-Phosphate (As P)	ND	0.10	0.50	4.000	0	0	80	120	0	0	20	S

Sample ID: **P0034-13CMSD** SampType: **MSD** TestCode: **E300IC_W** Prep Date: **01/15/15 13:13** Run ID: **IC1_150115B**
Client ID: **MW-563-20150114** Batch ID: **80754** Units: **mg/L** Analysis Date: **01/15/15 15:52** SeqNo: **2218640**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	52.54	0.28	2.0	16.00	35.40	107	80	120	49.82	5.31	20	
Nitrogen, Nitrate (As N)	0.9547	0.083	0.13	1.000	0	95.5	80	120	0.8759	8.61	20	
Sulfate	32.31	0.15	5.0	40.00	0.1512	80.4	80	120	26.85	18.5	20	B

Sample ID: **P0034-13CMSD** SampType: **MSD** TestCode: **E300IC_W** Prep Date: **01/15/15 13:13** Run ID: **IC1_150116A**
Client ID: **MW-563-20150114** Batch ID: **80754** Units: **mg/L** Analysis Date: **01/16/15 13:07** SeqNo: **2218645**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
ortho-Phosphate (As P)	ND	0.10	0.50	4.000	0	0	80	120	0	0	20	S

Qualifiers:
ND - Not Detected at the MDL
J - Analyte detected below quanititation limits
S - Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
MDL - Method Detection Limit
RL - Reporting Limit
B - Analyte detected in the associated Method Blank

CLIENT: Innovative Engineering Solutions, Inc.
Work Order: P0034
Project: Raytheon - Wayland

ANALYTICAL QC SUMMARY REPORT

SM2320_W
SM 2320B -- Alkalinity (Total)

Sample ID: **MB-80750**	SampType: **MBLK**	TestCode: **SM2320_W**	Prep Date: **01/15/15 10:00**	Run ID: **MANUAL_150115A**
Client ID: **MB-80750**	Batch ID: **80750**	Units: **mg/L CaCO3**	Analysis Date: **01/15/15 10:10**	SeqNo: **2218417**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	20	20									

Sample ID: **MB-80835**	SampType: **MBLK**	TestCode: **SM2320_W**	Prep Date: **01/21/15 13:00**	Run ID: **MANUAL_150121A**
Client ID: **MB-80835**	Batch ID: **80835**	Units: **mg/L CaCO3**	Analysis Date: **01/21/15 13:00**	SeqNo: **2221434**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	20	20									

Sample ID: **LCS-80750**	SampType: **LCS**	TestCode: **SM2320_W**	Prep Date: **01/15/15 10:00**	Run ID: **MANUAL_150115A**
Client ID: **LCS-80750**	Batch ID: **80750**	Units: **mg/L CaCO3**	Analysis Date: **01/15/15 10:16**	SeqNo: **2218418**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	101.0	20	20	100.0	0	101	80	120	0			

Sample ID: **LCS-80835**	SampType: **LCS**	TestCode: **SM2320_W**	Prep Date: **01/21/15 13:00**	Run ID: **MANUAL_150121A**
Client ID: **LCS-80835**	Batch ID: **80835**	Units: **mg/L CaCO3**	Analysis Date: **01/21/15 13:05**	SeqNo: **2221435**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	101.0	20	20	100.0	0	101	80	120	0			

Sample ID: **LCSD-80750**	SampType: **LCSD**	TestCode: **SM2320_W**	Prep Date: **01/15/15 10:00**	Run ID: **MANUAL_150115A**
Client ID: **LCSD-80750**	Batch ID: **80750**	Units: **mg/L CaCO3**	Analysis Date: **01/15/15 10:22**	SeqNo: **2218419**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	101.0	20	20	100.0	0	101	80	120	101.0	0	20	

Sample ID: **LCSD-80835**	SampType: **LCSD**	TestCode: **SM2320_W**	Prep Date: **01/21/15 13:00**	Run ID: **MANUAL_150121A**
Client ID: **LCSD-80835**	Batch ID: **80835**	Units: **mg/L CaCO3**	Analysis Date: **01/21/15 13:10**	SeqNo: **2221436**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	101.0	20	20	100.0	0	101	80	120	101.0	0	20	

Qualifiers: ND - Not Detected at the MDL; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank; J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

CLIENT: Innovative Engineering Solutions, Inc.
Work Order: P0034
Project: Raytheon - Wayland

ANALYTICAL QC SUMMARY REPORT

SM4500_H+
SM 4500 H+ B -- pH VALUE

Sample ID: **P0034-13CDUP** SampType: **DUP** TestCode: **SM4500_H+** Prep Date: **01/15/15 14:00** Run ID: **WC03_150115A**
Client ID: **MW-563-20150114** Batch ID: **R86861** Units: **S.U.** Analysis Date: **01/15/15 14:17** SeqNo: **2218408**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	6.140	1.0	1.0	0	0	0	0	0	6.130	0.163	20	

Qualifiers:
ND - Not Detected at the MDL
J - Analyte detected below quanititation limits
S - Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
MDL - Method Detection Limit
RL - Reporting Limit
B - Analyte detected in the associated Method Blank

CLIENT: Innovative Engineering Solutions, Inc.
Work Order: P0034
Project: Raytheon - Wayland

ANALYTICAL QC SUMMARY REPORT

SM5310B_TOC_W

SM 5310B TOC -- Total Organic Carbon by combustion

Sample ID: **MB-80828**	SampType: **MBLK**	TestCode: **SM5310B_TOC_W**	Prep Date: **01/21/15 10:46**	Run ID: **TOC1_150121A**
Client ID: **MB-80828**	Batch ID: **80828**	Units: **mg/L**	Analysis Date: **01/21/15 11:17**	SeqNo: **2221661**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	ND	2.0	10									

Sample ID: **LCS-80828**	SampType: **LCS**	TestCode: **SM5310B_TOC_W**	Prep Date: **01/21/15 10:46**	Run ID: **TOC1_150121A**
Client ID: **LCS-80828**	Batch ID: **80828**	Units: **mg/L**	Analysis Date: **01/21/15 11:44**	SeqNo: **2221662**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	50.53	2.0	10	60.00	0	84.2	80	120	0			

Sample ID: **LCSD-80628**	SampType: **LCSD**	TestCode: **SM5310B_TOC_W**	Prep Date:	Run ID: **TOC1_150122A**
Client ID: **LCSD-80628**	Batch ID: **80828**	Units: **mg/L**	Analysis Date: **01/22/15 13:11**	SeqNo: **2221756**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Organic Carbon, Total	52.76	2.0	10	60.00	0	87.9	80	120	50.53	4.3	20	

Qualifiers:
ND - Not Detected at the MDL
J - Analyte detected below quanititation limits
S - Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
MDL - Method Detection Limit
RL - Reporting Limit
B - Analyte detected in the associated Method Blank

Report Date:
23-Jan-15 14:35

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

Spectrum Analytical, Inc.
646 Camp Ave.
North Kingstown, RI 02852
Attn: Agnes Huntley

Project: Raytheon-Wayland
Project #: P0034

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC02473-01	REW-6-20150113	Aqueous	13-Jan-15 12:15	16-Jan-15 15:15
SC02473-02	REW-7-20150113	Aqueous	13-Jan-15 09:40	16-Jan-15 15:15
SC02473-03	REW-8-20150113	Aqueous	13-Jan-15 10:20	16-Jan-15 15:15
SC02473-04	REW-11-20150113	Aqueous	13-Jan-15 11:25	16-Jan-15 15:15
SC02473-05	REW-12-20150113	Aqueous	13-Jan-15 09:00	16-Jan-15 15:15
SC02473-06	MW-265M-20150114	Aqueous	14-Jan-15 11:05	16-Jan-15 15:15
SC02473-07	MW-267S-20150114	Aqueous	14-Jan-15 09:50	16-Jan-15 15:15
SC02473-08	MW-267M-20150114	Aqueous	14-Jan-15 10:40	16-Jan-15 15:15
SC02473-09	MW-268M-20150114	Aqueous	14-Jan-15 08:30	16-Jan-15 15:15
SC02473-10	MW-560-20150114	Aqueous	14-Jan-15 11:40	16-Jan-15 15:15
SC02473-11	MW-561-20150114	Aqueous	14-Jan-15 08:25	16-Jan-15 15:15
SC02473-12	MW-562-20150114	Aqueous	14-Jan-15 12:35	16-Jan-15 15:15
SC02473-13	MW-563-20150114	Aqueous	14-Jan-15 09:50	16-Jan-15 15:15

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435

Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 9 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our 'Quality' web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, NJ-MA012, PA-68-04426 and FL-E87936).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

Data has been reported to the RDL. This report includes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the detection limit are reported as "<" (less than) the detection limit in this report.

The samples were received 0.1 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

There is no relevant protocol-specific QC and/or performance standards non-conformances to report.

Sample Acceptance Check Form

Client:	Spectrum Analytical, Inc. - North Kingstown, RI
Project:	Raytheon-Wayland / P0034
Work Order:	SC02473
Sample(s) received on:	1/16/2015

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☑	☐	☐
Were samples refrigerated upon transfer to laboratory representative?	☑	☐	☐
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☐	☑	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Sample Identification
REW-6-20150113
SC02473-01

Client Project #	Matrix	Collection Date/Time	Received
P0034	Aqueous	13-Jan-15 12:15	16-Jan-15

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
General Chemistry Parameters													
	Ammonia as N	**0.280**		mg/l	0.200	0.118	1	SM4500-NH3 C.	20-Jan-15	20-Jan-15	EEM	1501258	X

Sample Identification
REW-7-20150113
SC02473-02

Client Project #	Matrix	Collection Date/Time	Received
P0034	Aqueous	13-Jan-15 09:40	16-Jan-15

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
General Chemistry Parameters													
	Ammonia as N	< 0.200	U	mg/l	0.200	0.118	1	SM4500-NH3 C.	20-Jan-15	20-Jan-15	EEM	1501258	X

Sample Identification
REW-8-20150113
SC02473-03

Client Project #	Matrix	Collection Date/Time	Received
P0034	Aqueous	13-Jan-15 10:20	16-Jan-15

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
General Chemistry Parameters													
	Ammonia as N	< 0.200	U	mg/l	0.200	0.118	1	SM4500-NH3 C.	20-Jan-15	20-Jan-15	EEM	1501258	X

Sample Identification
REW-11-20150113
SC02473-04

Client Project #	Matrix	Collection Date/Time	Received
P0034	Aqueous	13-Jan-15 11:25	16-Jan-15

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
General Chemistry Parameters													
	Ammonia as N	< 0.200	U	mg/l	0.200	0.118	1	SM4500-NH3 C.	20-Jan-15	20-Jan-15	EEM	1501258	X

Sample Identification
REW-12-20150113
SC02473-05

Client Project #	Matrix	Collection Date/Time	Received
P0034	Aqueous	13-Jan-15 09:00	16-Jan-15

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
General Chemistry Parameters													
	Ammonia as N	< 0.200	U	mg/l	0.200	0.118	1	SM4500-NH3 C.	20-Jan-15	20-Jan-15	EEM	1501258	X

Sample Identification
MW-265M-20150114
SC02473-06

Client Project #	Matrix	Collection Date/Time	Received
P0034	Aqueous	14-Jan-15 11:05	16-Jan-15

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
General Chemistry Parameters													
	Ammonia as N	< 0.200	U	mg/l	0.200	0.118	1	SM4500-NH3 C.	20-Jan-15	20-Jan-15	EEM	1501258	X

Sample Identification
MW-267S-20150114
SC02473-07

Client Project #	Matrix	Collection Date/Time	Received
P0034	Aqueous	14-Jan-15 09:50	16-Jan-15

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
General Chemistry Parameters													
	Ammonia as N	**0.420**		mg/l	0.200	0.118	1	SM4500-NH3 C.	20-Jan-15	20-Jan-15	EEM	1501258	X

Sample Identification
MW-267M-20150114
SC02473-08

Client Project #	Matrix	Collection Date/Time	Received
P0034	Aqueous	14-Jan-15 10:40	16-Jan-15

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
General Chemistry Parameters													
	Ammonia as N	**0.630**		mg/l	0.200	0.118	1	SM4500-NH3 C.	20-Jan-15	20-Jan-15	EEM	1501258	X

Sample Identification
MW-268M-20150114
SC02473-09

Client Project #	Matrix	Collection Date/Time	Received
P0034	Aqueous	14-Jan-15 08:30	16-Jan-15

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
General Chemistry Parameters													
	Ammonia as N	< 0.200	U	mg/l	0.200	0.118	1	SM4500-NH3 C.	20-Jan-15	20-Jan-15	EEM	1501258	X

Sample Identification
MW-560-20150114
SC02473-10

Client Project #	Matrix	Collection Date/Time	Received
P0034	Aqueous	14-Jan-15 11:40	16-Jan-15

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
General Chemistry Parameters													
	Ammonia as N	**0.210**		mg/l	0.200	0.118	1	SM4500-NH3 C.	20-Jan-15	20-Jan-15	EEM	1501258	X

Sample Identification
MW-561-20150114
SC02473-11

Client Project #	Matrix	Collection Date/Time	Received
P0034	Aqueous	14-Jan-15 08:25	16-Jan-15

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
General Chemistry Parameters													
	Ammonia as N	**0.280**		mg/l	0.200	0.118	1	SM4500-NH3 C.	20-Jan-15	20-Jan-15	EEM	1501258	X

Sample Identification
MW-562-20150114
SC02473-12

Client Project #	Matrix	Collection Date/Time	Received
P0034	Aqueous	14-Jan-15 12:35	16-Jan-15

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
General Chemistry Parameters													
	Ammonia as N	**0.420**		mg/l	0.200	0.118	1	SM4500-NH3 C.	20-Jan-15	20-Jan-15	EEM	1501258	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-563-20150114 SC02473-13	P0034	Aqueous	14-Jan-15 09:50	16-Jan-15

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
General Chemistry Parameters													
	Ammonia as N	**0.140**	J	mg/l	0.200	0.118	1	SM4500-NH3 C.	20-Jan-15	20-Jan-15	EEM	1501258	X

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

* Reportable Detection Limit

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1501258 - General Preparation										
Blank (1501258-BLK1)						Prepared & Analyzed: 20-Jan-15				
Ammonia as N	< 0.200	U	mg/l	0.200						
LCS (1501258-BS1)						Prepared & Analyzed: 20-Jan-15				
Ammonia as N	**5.32**		mg/l	0.200	5.00		106	90-110		
Reference (1501258-SRM1)						Prepared & Analyzed: 20-Jan-15				
Ammonia as N	**1.75**		mg/l	0.200	1.92		91	84-116		

Notes and Definitions

J	Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
U	Analyte included in the analysis, but not detected at or above the MDL.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

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

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

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

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

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

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

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

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
Nicole Leja

SC02473 By

CHAIN-OF-CUSTODY RECORD

SPECTRUM ANALYTICAL, INC. Featuring HANIBAL TECHNOLOGY

WorkOrder : P0034
Project: Raytheon - Wayland
Report Type : LEVEL 2
Due Date : 1/27/2015
FAX Due Date :
Report To : Agnes R Huntley
Purchase Order : P0034
EDD Types : **Please generate a Little PEL EDD**

Subcontractor:
Spectrum Analytical, Inc. - Agawam, MA
11 Almgren Drive
Agawam, Massachusetts 01001

Phone: (413) 789-9018

EQuISFacilityCode: N/A

= number of containers

Client Sample ID		Collection Date	#	Matrix	DUP/MS/MSD	Mitkem Sample ID	SM4500_NH3_W
REW-6-20150113	01	01/13/2015 12:15	1	Aqueous		P0034-01E	X
REW-7-20150113	02	01/13/2015 09:40	1	Aqueous		P0034-02E	X
REW-8-20150113	03	01/13/2015 10:20	1	Aqueous		P0034-03E	X
REW-11-20150113	04	01/13/2015 11:25	1	Aqueous		P0034-04E	X
REW-12-20150113	05	01/13/2015 09:00	1	Aqueous		P0034-05E	X
MW-265M-20150114	06	01/14/2015 11:05	1	Aqueous		P0034-06E	X

1) SM4500_NH3_W, NITROGEN (AMMONIA)

'Use 'Client Sample IDs' when reporting data. If needed, truncate 'Client Sample IDs' to fit on reports. Use full 'Client Sample ID' when generating EDD.

Comments: MCP/CAM reporting

1.1 /-1/ 0.1 IR
1/16/15

		Date/Time			Date/Time
Relinquished by:	Agnes R Huntley	01/16/15 12:00	**Received by:**	[signature]	1/16/15 12:00
Relinquished by:	[signature]		**Received by:**	[signature]	1/16/15 1515

01/15/2015
Page 1 of 3

646 Camp Ave * North Kingstown * RI * 028524008 * 401-732-3400 * 401-732-3499
www.spectrum-analytical.com

Ref.

SC02473

CHAIN-OF-CUSTODY RECORD

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

WorkOrder : P0034
Project: Raytheon - Wayland
Report Type : LEVEL 2
Due Date : 1/27/2015
FAX Due Date :
Report To : Agnes R Huntley
Purchase Order : P0034
EDD Types : **Please generate a Little PEL EDD**

Subcontractor:
Spectrum Analytical, Inc. - Agawam, MA
11 Almgren Drive
Agawam, Massachusetts 01001

Phone: (413) 789-9018

EQuISFacilityCode: N/A

= number of containers

Client Sample ID	Collection Date	#	Matrix	DUP/MS/MSD	Mitkem Sample ID	Requested Test: SM4500_NH3_W
MW-267S-20150114 07	01/14/2015 09:50	1	Aqueous		P0034-07E	X
MW-267M-20150114 08	01/14/2015 10:40	1	Aqueous		P0034-08E	X
MW-268M-20150114 09	01/14/2015 08:30	1	Aqueous		P0034-09E	X
MW-560-20150114 10	01/14/2015 11:40	1	Aqueous		P0034-10E	X
MW-561-20150114 11	01/14/2015 08:25	1	Aqueous		P0034-11E	X
MW-562-20150114 12	01/14/2015 12:35	1	Aqueous		P0034-12E	X

1) SM4500_NH3_W, NITROGEN (AMMONIA)

Use 'Client Sample IDs' when reporting data. If needed, truncate 'Client Sample IDs' to fit on reports. Use full 'Client Sample ID' when generating EDD.

Comments: MCP/CAM reporting

11-1/0-1 IR 1/16/15

		Date/Time			Date/Time
Relinquished by:	Agnes R Huntley	01/16/15 12:00	**Received by:**		1/16/15 12:00
Relinquished by:			**Received by:**		1/16/15 15:15

01/15/2015 Page 2 of 3

SC02473

CHAIN-OF-CUSTODY RECORD

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Subcontractor:
Spectrum Analytical, Inc. - Agawam, MA
11 Almgren Drive
Agawam, Massachusetts 01001

Phone: (413) 789-9018

EQuISFacilityCode: N/A

WorkOrder : P0034
Project: Raytheon - Wayland
Report Type : LEVEL 2
Due Date : 1/27/2015
FAX Due Date :
Report To : Agnes R Huntley
Purchase Order : P0034
EDD Types : **Please generate a Little PEL EDD**

= number of containers

Requested Test

SM4500_NH3_W

Client Sample ID	Collection Date	#	Matrix	DUP/MS/MSD	Mitkem Sample ID	SM4500_NH3_W
MW-563-20150114 -13	01/14/2015 09:50	1	Aqueous		P0034-13E	X

1) SM4500_NH3_W, NITROGEN (AMMONIA)

Use 'Client Sample IDs' when reporting data. If needed, truncate 'Client Sample IDs' to fit on reports. Use full 'Client Sample ID' when generating EDD.

Comments: MCP/CAM reporting

11/2/01 IR02
1/16/15

		Date/Time			Date/Time
Relinquished by:	Agnes R Huntley	01/16/15 12:00	**Received by:**		1/16/15 12:[illegible]
Relinquished by:			**Received by:**		1/16/15 15:15

01/15/2015
Page 3 of 3

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

WorkOrder: P0034

Client ID: IESI
Project: Raytheon - Wayland
WO Name: Raytheon - Wayland
Location: IESI_WAYLAND,
Comments: VFA on hold per client request.

Case:
SDG:
PO: RA-008

HC Due: 01/27/15
Fax Due:
Fax Report: ☐

Report Level: LEVEL 2
Special Program:
EDD: CLF

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
P0034-01A	REW-6-20150113	01/13/2015 12:15	01/14/2015	Aqueous	RSK175	/					VOA
P0034-01B	REW-6-20150113	01/13/2015 12:15	01/14/2015	Aqueous	SM5310B_TOC_W	/					R22
P0034-01C	REW-6-20150113	01/13/2015 12:15	01/14/2015	Aqueous	E300_VOA_W	/		Y		Y	K3
P0034-01C	REW-6-20150113	01/13/2015 12:15	01/14/2015	Aqueous	E300IC_W	/ NO3,Cl,SO4,ortho-PO4				Y	K3
P0034-01C	REW-6-20150113	01/13/2015 12:15	01/14/2015	Aqueous	SM2320_W	/					K3
P0034-01C	REW-6-20150113	01/13/2015 12:15	01/14/2015	Aqueous	SM4500_H+	/					K3
P0034-01D	REW-6-20150113	01/13/2015 12:15	01/14/2015	Aqueous	SW6010_W	/ Fe only				Y	M1
P0034-01E	REW-6-20150113	01/13/2015 12:15	01/14/2015	Aqueous	SM4500_NH3_W	/ SPECTRUM--sub to Agawam					SUB
P0034-02A	REW-7-20150113	01/13/2015 09:40	01/14/2015	Aqueous	RSK175	/					VOA
P0034-02B	REW-7-20150113	01/13/2015 09:40	01/14/2015	Aqueous	SM5310B_TOC_W	/					R22
P0034-02C	REW-7-20150113	01/13/2015 09:40	01/14/2015	Aqueous	E300_VOA_W	/		Y		Y	K3
P0034-02C	REW-7-20150113	01/13/2015 09:40	01/14/2015	Aqueous	E300IC_W	/ NO3,Cl,SO4,ortho-PO4				Y	K3
P0034-02C	REW-7-20150113	01/13/2015 09:40	01/14/2015	Aqueous	SM2320_W	/					K3
P0034-02C	REW-7-20150113	01/13/2015 09:40	01/14/2015	Aqueous	SM4500_H+	/					K3
P0034-02D	REW-7-20150113	01/13/2015 09:40	01/14/2015	Aqueous	SW6010_W	/ Fe only				Y	M1
P0034-02E	REW-7-20150113	01/13/2015 09:40	01/14/2015	Aqueous	SM4500_NH3_W	/ SPECTRUM--sub to Agawam					SUB
P0034-03A	REW-8-20150113	01/13/2015 10:20	01/14/2015	Aqueous	RSK175	/					VOA
P0034-03B	REW-8-20150113	01/13/2015 10:20	01/14/2015	Aqueous	SM5310B_TOC_W	/					R22
P0034-03C	REW-8-20150113	01/13/2015 10:20	01/14/2015	Aqueous	E300_VOA_W	/		Y		Y	K3
P0034-03C	REW-8-20150113	01/13/2015 10:20	01/14/2015	Aqueous	E300IC_W	/ NO3,Cl,SO4,ortho-PO4				Y	K3

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

01/15/2015 16:55

Lab Client Rep: Agnes R Huntley

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

WorkOrder: P0034

Client ID: IESI
Project: Raytheon - Wayland
WO Name: Raytheon - Wayland
Location: IESI_WAYLAND,
Comments: VFA on hold per client request.

Case:
SDG:
PO: RA-008

HC Due: 01/27/15
Fax Due:
Fax Report: ☐

Report Level: LEVEL 2
Special Program:
EDD: CLF

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
P0034-03C	REW-8-20150113	01/13/2015 10:20	01/14/2015	Aqueous	SM2320_W	/					K3
P0034-03C	REW-8-20150113	01/13/2015 10:20	01/14/2015	Aqueous	SM4500_H+	/					K3
P0034-03D	REW-8-20150113	01/13/2015 10:20	01/14/2015	Aqueous	SW6010_W	/ Fe only				Y	M1
P0034-03E	REW-8-20150113	01/13/2015 10:20	01/14/2015	Aqueous	SM4500_NH3_W	/ SPECTRUM--sub to Agawam					SUB
P0034-04A	REW-11-20150113	01/13/2015 11:25	01/14/2015	Aqueous	RSK175	/					VOA
P0034-04B	REW-11-20150113	01/13/2015 11:25	01/14/2015	Aqueous	SM5310B_TOC_W	/					R22
P0034-04C	REW-11-20150113	01/13/2015 11:25	01/14/2015	Aqueous	E300_VOA_W	/		Y		Y	K3
P0034-04C	REW-11-20150113	01/13/2015 11:25	01/14/2015	Aqueous	E300IC_W	/ NO3,Cl,SO4,ortho-PO4				Y	K3
P0034-04C	REW-11-20150113	01/13/2015 11:25	01/14/2015	Aqueous	SM2320_W	/					K3
P0034-04C	REW-11-20150113	01/13/2015 11:25	01/14/2015	Aqueous	SM4500_H+	/					K3
P0034-04D	REW-11-20150113	01/13/2015 11:25	01/14/2015	Aqueous	SW6010_W	/ Fe only				Y	M1
P0034-04E	REW-11-20150113	01/13/2015 11:25	01/14/2015	Aqueous	SM4500_NH3_W	/ SPECTRUM--sub to Agawam					SUB
P0034-05A	REW-12-20150113	01/13/2015 09:00	01/14/2015	Aqueous	RSK175	/					VOA
P0034-05B	REW-12-20150113	01/13/2015 09:00	01/14/2015	Aqueous	SM5310B_TOC_W	/					R22
P0034-05C	REW-12-20150113	01/13/2015 09:00	01/14/2015	Aqueous	E300_VOA_W	/		Y		Y	K3
P0034-05C	REW-12-20150113	01/13/2015 09:00	01/14/2015	Aqueous	E300IC_W	/ NO3,Cl,SO4,ortho-PO4				Y	K3
P0034-05C	REW-12-20150113	01/13/2015 09:00	01/14/2015	Aqueous	SM2320_W	/					K3
P0034-05C	REW-12-20150113	01/13/2015 09:00	01/14/2015	Aqueous	SM4500_H+	/					K3
P0034-05D	REW-12-20150113	01/13/2015 09:00	01/14/2015	Aqueous	SW6010_W	/ Fe only				Y	M1
P0034-05E	REW-12-20150113	01/13/2015 09:00	01/14/2015	Aqueous	SM4500_NH3_W	/ SPECTRUM--sub to Agawam					SUB

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

WorkOrder: P0034

Client ID: IESI
Project: Raytheon - Wayland
WO Name: Raytheon - Wayland
Location: IESI_WAYLAND,
Comments: VFA on hold per client request.

Case:
SDG:
PO: RA-008

HC Due: 01/27/15
Fax Due:
Fax Report: ☐

Report Level: LEVEL 2
Special Program:
EDD: CLF

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
P0034-06A	MW-265M-20150114	01/14/2015 11:05	01/15/2015	Aqueous	RSK175	/					VOA
P0034-06B	MW-265M-20150114	01/14/2015 11:05	01/15/2015	Aqueous	SM5310B_TOC_W	/					R22
P0034-06C	MW-265M-20150114	01/14/2015 11:05	01/15/2015	Aqueous	E300_VOA_W	/		Y		Y	K3
P0034-06C	MW-265M-20150114	01/14/2015 11:05	01/15/2015	Aqueous	E300IC_W	/ NO3,Cl,SO4,ortho-PO4				Y	K3
P0034-06C	MW-265M-20150114	01/14/2015 11:05	01/15/2015	Aqueous	SM2320_W	/					K3
P0034-06C	MW-265M-20150114	01/14/2015 11:05	01/15/2015	Aqueous	SM4500_H+	/					K3
P0034-06D	MW-265M-20150114	01/14/2015 11:05	01/15/2015	Aqueous	SW6010_W	/ Fe only				Y	M1
P0034-06E	MW-265M-20150114	01/14/2015 11:05	01/15/2015	Aqueous	SM4500_NH3_W	/ SPECTRUM--sub to Agawam					SUB
P0034-07A	MW-267S-20150114	01/14/2015 09:50	01/15/2015	Aqueous	RSK175	/					VOA
P0034-07B	MW-267S-20150114	01/14/2015 09:50	01/15/2015	Aqueous	SM5310B_TOC_W	/					R22
P0034-07C	MW-267S-20150114	01/14/2015 09:50	01/15/2015	Aqueous	E300_VOA_W	/		Y		Y	K3
P0034-07C	MW-267S-20150114	01/14/2015 09:50	01/15/2015	Aqueous	E300IC_W	/ NO3,Cl,SO4,ortho-PO4				Y	K3
P0034-07C	MW-267S-20150114	01/14/2015 09:50	01/15/2015	Aqueous	SM2320_W	/					K3
P0034-07C	MW-267S-20150114	01/14/2015 09:50	01/15/2015	Aqueous	SM4500_H+	/					K3
P0034-07D	MW-267S-20150114	01/14/2015 09:50	01/15/2015	Aqueous	SW6010_W	/ Fe only				Y	M1
P0034-07E	MW-267S-20150114	01/14/2015 09:50	01/15/2015	Aqueous	SM4500_NH3_W	/ SPECTRUM--sub to Agawam					SUB
P0034-08A	MW-267M-20150114	01/14/2015 10:40	01/15/2015	Aqueous	RSK175	/					VOA
P0034-08B	MW-267M-20150114	01/14/2015 10:40	01/15/2015	Aqueous	SM5310B_TOC_W	/					R22
P0034-08C	MW-267M-20150114	01/14/2015 10:40	01/15/2015	Aqueous	E300_VOA_W	/		Y		Y	K3
P0034-08C	MW-267M-20150114	01/14/2015 10:40	01/15/2015	Aqueous	E300IC_W	/ NO3,Cl,SO4,ortho-PO4				Y	K3

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

01/15/2015 16:55 Lab Client Rep: Agnes R Huntley

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

WorkOrder: P0034

Client ID: IESI
Project: Raytheon - Wayland
WO Name: Raytheon - Wayland
Location: IESI_WAYLAND,
Comments: VFA on hold per client request.

Case:
SDG:
PO: RA-008

HC Due: 01/27/15
Fax Due:
Fax Report: ☐

Report Level: LEVEL 2
Special Program:
EDD: CLF

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
P0034-08C	MW-267M-20150114	01/14/2015 10:40	01/15/2015	Aqueous	SM2320_W	/					K3
P0034-08C	MW-267M-20150114	01/14/2015 10:40	01/15/2015	Aqueous	SM4500_H+	/					K3
P0034-08D	MW-267M-20150114	01/14/2015 10:40	01/15/2015	Aqueous	SW6010_W	/ Fe only				Y	M1
P0034-08E	MW-267M-20150114	01/14/2015 10:40	01/15/2015	Aqueous	SM4500_NH3_W	/ SPECTRUM--sub to Agawam					SUB
P0034-09A	MW-268M-20150114	01/14/2015 08:30	01/15/2015	Aqueous	RSK175	/					VOA
P0034-09B	MW-268M-20150114	01/14/2015 08:30	01/15/2015	Aqueous	SM5310B_TOC_W	/					R22
P0034-09C	MW-268M-20150114	01/14/2015 08:30	01/15/2015	Aqueous	E300_VOA_W	/		Y		Y	K3
P0034-09C	MW-268M-20150114	01/14/2015 08:30	01/15/2015	Aqueous	E300IC_W	/ NO3,Cl,SO4,ortho-PO4				Y	K3
P0034-09C	MW-268M-20150114	01/14/2015 08:30	01/15/2015	Aqueous	SM2320_W	/					K3
P0034-09C	MW-268M-20150114	01/14/2015 08:30	01/15/2015	Aqueous	SM4500_H+	/					K3
P0034-09D	MW-268M-20150114	01/14/2015 08:30	01/15/2015	Aqueous	SW6010_W	/ Fe only				Y	M1
P0034-09E	MW-268M-20150114	01/14/2015 08:30	01/15/2015	Aqueous	SM4500_NH3_W	/ SPECTRUM--sub to Agawam					SUB
P0034-10A	MW-560-20150114	01/14/2015 11:40	01/15/2015	Aqueous	RSK175	/					VOA
P0034-10B	MW-560-20150114	01/14/2015 11:40	01/15/2015	Aqueous	SM5310B_TOC_W	/					R22
P0034-10C	MW-560-20150114	01/14/2015 11:40	01/15/2015	Aqueous	E300_VOA_W	/		Y		Y	K3
P0034-10C	MW-560-20150114	01/14/2015 11:40	01/15/2015	Aqueous	E300IC_W	/ NO3,Cl,SO4,ortho-PO4				Y	K3
P0034-10C	MW-560-20150114	01/14/2015 11:40	01/15/2015	Aqueous	SM2320_W	/					K3
P0034-10C	MW-560-20150114	01/14/2015 11:40	01/15/2015	Aqueous	SM4500_H+	/					K3
P0034-10D	MW-560-20150114	01/14/2015 11:40	01/15/2015	Aqueous	SW6010_W	/ Fe only				Y	M1
P0034-10E	MW-560-20150114	01/14/2015 11:40	01/15/2015	Aqueous	SM4500_NH3_W	/ SPECTRUM--sub to Agawam					SUB

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

01/15/2015 16:55 Lab Client Rep: Agnes R Huntley

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

WorkOrder: P0034

Client ID: IESI
Project: Raytheon - Wayland
WO Name: Raytheon - Wayland
Location: IESI_WAYLAND,
Comments: VFA on hold per client request.

Case:
SDG:
PO: RA-008

HC Due: 01/27/15
Fax Due:
Fax Report: ☐

Report Level: LEVEL 2
Special Program:
EDD: CLF

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
P0034-11A	MW-561-20150114	01/14/2015 08:25	01/15/2015	Aqueous	RSK175	/					VOA
P0034-11B	MW-561-20150114	01/14/2015 08:25	01/15/2015	Aqueous	SM5310B_TOC_W	/					R22
P0034-11C	MW-561-20150114	01/14/2015 08:25	01/15/2015	Aqueous	E300_VOA_W	/		Y		Y	K3
P0034-11C	MW-561-20150114	01/14/2015 08:25	01/15/2015	Aqueous	E300IC_W	/ NO3,Cl,SO4,ortho-PO4				Y	K3
P0034-11C	MW-561-20150114	01/14/2015 08:25	01/15/2015	Aqueous	SM2320_W	/					K3
P0034-11C	MW-561-20150114	01/14/2015 08:25	01/15/2015	Aqueous	SM4500_H+	/					K3
P0034-11D	MW-561-20150114	01/14/2015 08:25	01/15/2015	Aqueous	SW6010_W	/ Fe only				Y	M1
P0034-11E	MW-561-20150114	01/14/2015 08:25	01/15/2015	Aqueous	SM4500_NH3_W	/ SPECTRUM--sub to Agawam					SUB
P0034-12A	MW-562-20150114	01/14/2015 12:35	01/15/2015	Aqueous	RSK175	/					VOA
P0034-12B	MW-562-20150114	01/14/2015 12:35	01/15/2015	Aqueous	SM5310B_TOC_W	/					R22
P0034-12C	MW-562-20150114	01/14/2015 12:35	01/15/2015	Aqueous	E300_VOA_W	/		Y		Y	K3
P0034-12C	MW-562-20150114	01/14/2015 12:35	01/15/2015	Aqueous	E300IC_W	/ NO3,Cl,SO4,ortho-PO4				Y	K3
P0034-12C	MW-562-20150114	01/14/2015 12:35	01/15/2015	Aqueous	SM2320_W	/					K3
P0034-12C	MW-562-20150114	01/14/2015 12:35	01/15/2015	Aqueous	SM4500_H+	/					K3
P0034-12D	MW-562-20150114	01/14/2015 12:35	01/15/2015	Aqueous	SW6010_W	/ Fe only				Y	M1
P0034-12E	MW-562-20150114	01/14/2015 12:35	01/15/2015	Aqueous	SM4500_NH3_W	/ SPECTRUM--sub to Agawam					SUB
P0034-13A	MW-563-20150114	01/14/2015 09:50	01/15/2015	Aqueous	RSK175	/					VOA
P0034-13B	MW-563-20150114	01/14/2015 09:50	01/15/2015	Aqueous	SM5310B_TOC_W	/					R22
P0034-13C	MW-563-20150114	01/14/2015 09:50	01/15/2015	Aqueous	E300_VOA_W	/		Y		Y	K3
P0034-13C	MW-563-20150114	01/14/2015 09:50	01/15/2015	Aqueous	E300IC_W	/ NO3,Cl,SO4,ortho-PO4				Y	K3

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

01/15/2015 16:55 Lab Client Rep: Agnes R Huntley

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

WorkOrder: P0034

Client ID: IESI
Project: Raytheon - Wayland
WO Name: Raytheon - Wayland
Location: IESI_WAYLAND,
Comments: VFA on hold per client request.

Case:
SDG:
PO: RA-008

HC Due: 01/27/15
Fax Due:
Fax Report: ☐

Report Level: LEVEL 2
Special Program:
EDD: CLF

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
P0034-13C	MW-563-20150114	01/14/2015 09:50	01/15/2015	Aqueous	SM2320_W	/					K3
P0034-13C	MW-563-20150114	01/14/2015 09:50	01/15/2015	Aqueous	SM4500_H+	/					K3
P0034-13D	MW-563-20150114	01/14/2015 09:50	01/15/2015	Aqueous	SW6010_W	/ Fe only				Y	M1
P0034-13E	MW-563-20150114	01/14/2015 09:50	01/15/2015	Aqueous	SM4500_NH3_W	/ SPECTRUM--sub to Agawam					SUB

HF = Fraction logged in but all tests have been placed on hold

HT = Test logged in but has been placed on hold

P0034

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Page 1 of 1

CHAIN OF CUSTODY RECORD

☐ 11 Almgren Drive, Agawam, MA 01001, (413) 789-9018
☐ 8405 Benjamin Road, Ste A, Tampa, FL 33634, (813) 888-9507
☒ 646 Camp Avenue, N Kingstown, RI 02852, (401) 732-3400

Special Handling:

TAT- Indicate Date Needed: ______
- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: Innovative Engineering Solutions Inc, 35 Spring St, Walpole MA 02081
Telephone #: 508-668-0033
Project Mgr. Vicki Parrington

Invoice To: Same
P.O. No.: RA-008 RQN: ______

Project No.: RA-008
Site Name: Raytheon - Wayland
Location: Wayland State: MA
Sampler(s): Danny Jones

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8=$NaHSO_4$ 9= Deionized Water 10=H_3PO_4 11= ICE 12= ______

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

P0034 G=Grab C=Composite

List preservative code below: 3, 4, 10, 9, 11

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Nitrogen (NH3)	Metals	TOC	Dissolved Gases		Anions, Acids, Alkalinity, pH, PO4		
01	REW-6-20150113	1/13/15	1215	G	GW	4			3	X	X	X	X		X		
02	REW-7-20150113	1/13/15	0940	G	GW	4			3	X	X	X	X		X		
03	REW-8-20150113	1/13/15	1020	G	GW	4			3	X	X	X	X		X		
04	REW-11-20150113	1/13/15	1125	G	GW	4			3	X	X	X	X		X		
05	REW-12-20150113	1/13/15	0900	G	GW	4			3	X	X	X	X		X		

QA/QC Reporting Notes:

QA/QC Reporting Level
☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☐ Other ______

State-specific reporting standards: ______

1.7 / 0 / 1.7 IR 01 1/13/15

Relinquished by:	Received by:	Date:	Time:	Temp°C
[signature]	[signature]	1/13/15	1940	
[signature]	[signature]	1/13/15	1430	
[signature]	[signature]	1-14-15	0848	
[signature]	[signature]	1/14/15	12:25	3.1°C

☐ EDD Format ______
☒ E-mail to viparrington@IESIonline.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☒ Iced ☐ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

www.spectrum-analytical.com

Revised Feb 2013

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Page 1 of 1

CHAIN OF CUSTODY RECORD

☐ 11 Almgren Drive, Agawam, MA 01001, (413) 789-9018
☐ 8405 Benjamin Road, Ste A, Tampa, FL 33634, (813) 888-9507
☐ 646 Camp Avenue, N Kingstown, RI 02852, (401) 732-3400

Special Handling:

TAT- Ind icate Date Needed: ________

- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: Innovative Engineering Solutions Inc, 25 Spring St, Walpole MA 02081
Telephone #: 508-668-0033
Project Mgr.: Vicki Parrington

Invoice To: same
P.O. No.: RA-008 RQN:

Project No.: RA-008
Site Name: Raytheon Wayland
Location: Wayland State: MA
Sampler(s): Danny Jones, Darren Rollo

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9= Deionized Water 10=H_3PO_4 11= ICE 12=

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

G=Grab C=Composite

P0034

List preservative code below: 3, 4, 10, 2, 11

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Nitrogen (NH3)	Metals	TOC	Dissolved Gases	Anions, Alkalinity, pH, PO4
06	mw-265m-20150114	1/14/15	1105	G	GW	4			3	X	X	X	X	X
07	mw-267s-20150114	1/14/15	0950	G	GW	4			3	X	X	X	X	X
08	mw-267m-20150114	1/14/15	1040	G	GW	4			3	X	X	X	X	X
09	mw-268m-20150114	1/14/15	0830	G	GW	4			3	X	X	X	X	X
10	mw-560-20150114	1/14/15	1140	G	GW	4			3	X	X	X	X	X
11	mw-561-20150114	1/14/15	0895	G	GW	4			3	X	X	X	X	X
12	mw-562-20150114	1/14/15	1235	G	GW	4			3	X	X	X	X	X
13	mw-563-20150114	1/14/15	0950	G	GW	4			3	X	X	X	X	X
	~~Trip Blank~~													

QA/QC Reporting Notes:

QA/QC Reporting Level
☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☐ Other ________

State-specific reporting standards:

1-9/0/1-9 IR 1/14/15

Relinquished by:	Received by:	Date:	Time:	Temp°C
[signature]	[signature]	1/15/14	1315	
[signature]	[signature]	1-15-15	800	
	[signature]	1/15/15	10:45	2.0

☐ EDD Format
☒ E-mail to v.parrington@IESolutions.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☒ Iced ☐ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

www.spectrum-analytical.com

JR

Revised Feb 2013

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

Received By: KP	Page 01 of 00
Reviewed By: BD	Log-in Date 01/14/2015
Work Order: P0034	Client Name: Innovative Engineering Solutions, Inc.
Project Name/Event: Raytheon - Wayland	

Remarks: (1/2) Please see associated sample/extract transfer logbook pages submitted with this data package.

1. Custody Seal(s)	Present / Absent
	Intact / Broken
2. Custody Seal Nos.	N/A
3. Traffic Reports/ Chain of Custody Records (TR/COCs) or Packing Lists	Present / Absent
4. Airbill	AirBill / Sticker Present / Absent
5. Airbill No.	Courier N/A
6. Sample Tags	Present / Absent
Sample Tag Numbers	Listed / Not Listed on Chain-of-Custody
7. Sample Condition	Intact / Broken / Leaking
8. Cooler Temperature Indicator Bottle	Present / Absent
9. Cooler Temperature	3.1 °C
10. Does information on TR/COCs and sample tags agree?	Yes / No
11. Date Received at Laboratory	01/14/2015
12. Time Received	12:25

Sample Transfer	
Fraction (1) TVOA/VOA	Fraction (2) SVOA/PEST/ARO
Area #	Area #
By	By
On	On

Lab Sample ID	Preservation (pH) HNO3	H2SO4	HCl	NaOH	H3PO4	VOA Matrix	Soil HeadSpace or Air Bubble > or equal to 1/4"
P0034-01	<2	<2				H	
P0034-02	<2	<2				H	
P0034-03	<2	<2				H	
P0034-04	<2	<2				H	
P0034-05	<2	<2				H	

IR Temp Gun ID:MT-74

CoolantCondition: ICE

Preservative Name/Lot No:

VOA Matrix Key:

US = Unpreserved Soil	A= Air
UA = Unpreserved Aqueous	H = HCl
M = MeOH	E = Encore
N = NaHSO4	F = Freeze

See Sample Condition Notification/Corrective Action Form Yes / No

Rad OK Yes / No

Received By: KP	Page 01 of 00
Reviewed By: WJC	Log-in Date 01/15/2015
Work Order: P0034	Client Name: Innovative Engineering Solutions, Inc.
Project Name/Event: Raytheon - Wayland	

Remarks: (1/2) Please see associated sample/extract transfer logbook pages submitted with this data package.

1. Custody Seal(s) — Present / Absent (Absent circled); Intact / Broken (Broken circled)
2. Custody Seal Nos. — N/A
3. Traffic Reports/ Chain of Custody Records (TR/COCs) or Packing Lists — Present / Absent (Present circled)
4. Airbill — AirBill / Sticker; Present / Absent (Absent circled)
5. Airbill No. — Courier N/A
6. Sample Tags — Present / Absent (Absent circled)
   Sample Tag Numbers — Listed / Not Listed on Chain-of-Custody (Not Listed on Chain-of-Custody circled)
7. Sample Condition — Intact / Broken/ Leaking (Intact circled)
8. Cooler Temperature Indicator Bottle — Present / Absent (Absent circled)

9. Cooler Temperature	2.2 °C
10. Does information on TR/COCs and sample tags agree?	Yes / No (No circled)
11. Date Received at Laboratory	01/15/2015
12. Time Received	10:45

Lab Sample ID	Preservation (pH) HNO3	H2SO4	HCl	NaOH	H3PO4	VOA Matrix	Soil HeadSpace or Air Bubble > or equal to 1/4"
P0034-06	<2	<2				H	
P0034-07	<2	<2				H	
P0034-08	<2	<2				H	
P0034-09	<2	<2				H	
P0034-10	<2	<2				H	
P0034-11	<2	<2				H	
P0034-12	<2	<2				H	
P0034-13	<2	<2				H	

Sample Transfer

Fraction (1) TVOA/VOA	Fraction (2) SVOA/PEST/ARO
Area #	Area #
By	By
On	On

IR Temp Gun ID:MT-74

CoolantCondition: ICE

Preservative Name/Lot No:

VOA Matrix Key:

US = Unpreserved Soil — A= Air
UA = Unpreserved Aqueous — H = HCl
M = MeOH — E = Encore
N = NaHSO4 — F = Freeze

See Sample Condition Notification/Corrective Action Form Yes / No (No circled)

Rad OK Yes / No (Yes circled)

Agnes Huntley [Warwick]

From: Sami Fam [Sami@IESIonline.com]
Sent: Thursday, January 15, 2015 2:32 PM
To: Agnes Huntley [RI]
Subject: RE: Sampling- Raytheon

Thanks; for Lowell and wayland, pls. add the dissolved gases but not the VFA

From: Agnes Huntley [RI] [mailto:ahuntley@spectrum-analytical.com]
Sent: Thursday, January 15, 2015 2:31 PM
To: Sami Fam
Subject: RE: Sampling- Raytheon

Hi Sami,

For Wayland, the analyses listed are pH, alkalinity, anions (NO3,Cl, SO4, orthophosphate), ammonia, TOC and total iron.

In the past, we have analyzed for dissolved gasses and volatile fatty acids. Are these two analyses needed?

Thank you,
Agnes

Agnes Huntley
CLP Project Manager
Spectrum Analytical, featuring Hanibal Technology
Rhode Island Division
646 Camp Avenue
North Kingstown, RI 02852
(P) 401-732-3400
(F) 401-732-3499

From: Sami Fam [mailto:Sami@IESIonline.com]
Sent: Tuesday, January 06, 2015 1:45 PM
To: Agnes Huntley [RI]
Subject: FW: Sampling- Raytheon

Hi Agnus- please deliver these bottles to our Walpole office by Friday of this week. Thanks

Sami

From: Sami Fam
Sent: Tuesday, January 06, 2015 1:45 PM
To: Davy Jones
Subject: Sampling- Raytheon

Lowell:

EWD-1
EWD-2

EWD-3
EWD-4
06-02
06-05
06-06S
06-06D
06-07S
06-07D
09-01
03-03

Pls. order the VOC bottles…. I will order the biogeochem: pH, alkalinity, anions (sulfate, chloride, nitrate) ortho-phoshate, ammonia, total iron, TOC

Wayland:

562
265M
563
REW-6
REW-7
REW-8
REW-11
REW-12
268M
267S
267M
560
561

Pls. order the VOC bottles…. I will order the biogeochem: pH, alkalinity, anions (sulfate, chloride, nitrate) ortho-phoshate, ammonia, total iron, TOC

Sami Fam
Innovative Engineering Solutions Inc.
25 Spring Street
Walpole, MA 02081
Direct Line- 508-623-1221
Email: Sami@IESIonline.com
Website: IESIonline.com

Last Page of Data Report